



**AVS
RÖMER**



Product catalog

“

**AVS RÖMER, YOUR SPECIALIST
FOR CUSTOMIZED SOLUTIONS!**



About us

Connecting – Controlling – Measuring

Founded in 1970 by Joachim C. Römer, today AVS Römer is one of the world's leading manufacturers in the field of fluid technology. As an owner-managed family business, we focus on highest quality and customer satisfaction.



Fittings

ELSA Push-in and RAPID Push-on fittings for fluids and gases



Function fittings

Flow and stop valves, pressure relief and multi-function valves, couplings and filters for various applications



Valves

Indirect and direct-acting valves and solenoid valves for controlling fluids and gases



Measurement and control technology

Temperature sensors, pressure sensors, conductivity sensors and motorized dispensing valves for precise measurement for the control of fluid flow



Custom solutions

High-quality solutions for individual requirements and applications in fluid technology

Market segments

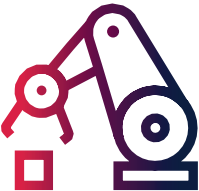
The best solution for your requirements

Customers worldwide rely on the quality, expertise and products of AVS Römer. Our products are used in various industries and market segments.



Food & Beverage

Production processes in the food and beverage industry are characterized by strict hygiene regulations and extreme conditions.



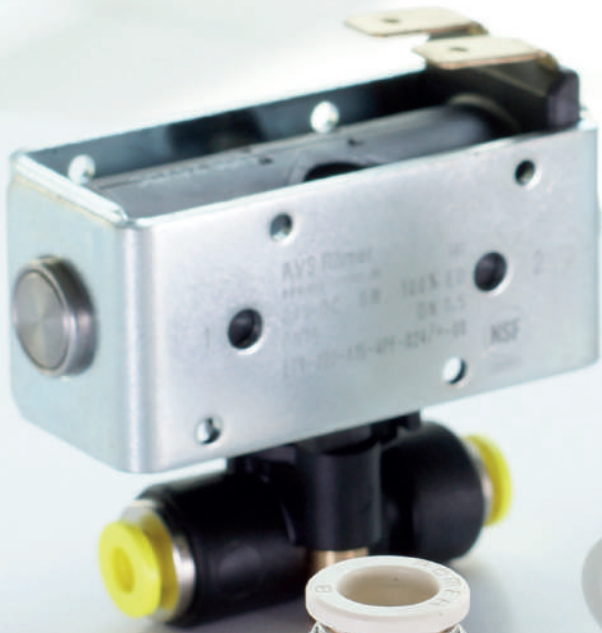
Industrial

Requirements in industrial applications are most diverse. Heavy machinery and industrial plants are complex and must be optimally adapted to the prevailing conditions.



Life Science

Life science applications are demanding and must meet a wide range of requirements. Hygiene, quality, reliability and safety are paramount. At the same time, high performance, precision and accuracy are required.



All from a single source

The high demands and expectations of our national and international customers are both an obligation and a challenge for us. Our experience and expertise in fluid technology in combination with the high vertical range of manufacture and in-house processes enable the production of standard products and customer-specific solutions at the highest level.



Service & Customer Orientation

- Technical consulting and training by personal contacts
- Project planning of customer-specific requirements
- Development of individual product solutions
- Certifications and approvals

Research & Development

- Development support through software tools and simulations
- In-house test laboratory with high-precision measuring equipment
- Proven methods

Manufacturing

- High in-house production depth throughout the entire work process
- Specialization in machining of metals and plastics
- Expert in plastic and metal powder injection molding (MIM)
- Experience and know-how in processing elastomers

Sample Making & Prototypes

- Production of samples and prototypes according to individual requirements
- Fast and reliable sample delivery

Toolmaking & Equipment Manufacturing

- Flexibility through in-house production
- High precision manufacturing of assembly and testing equipment

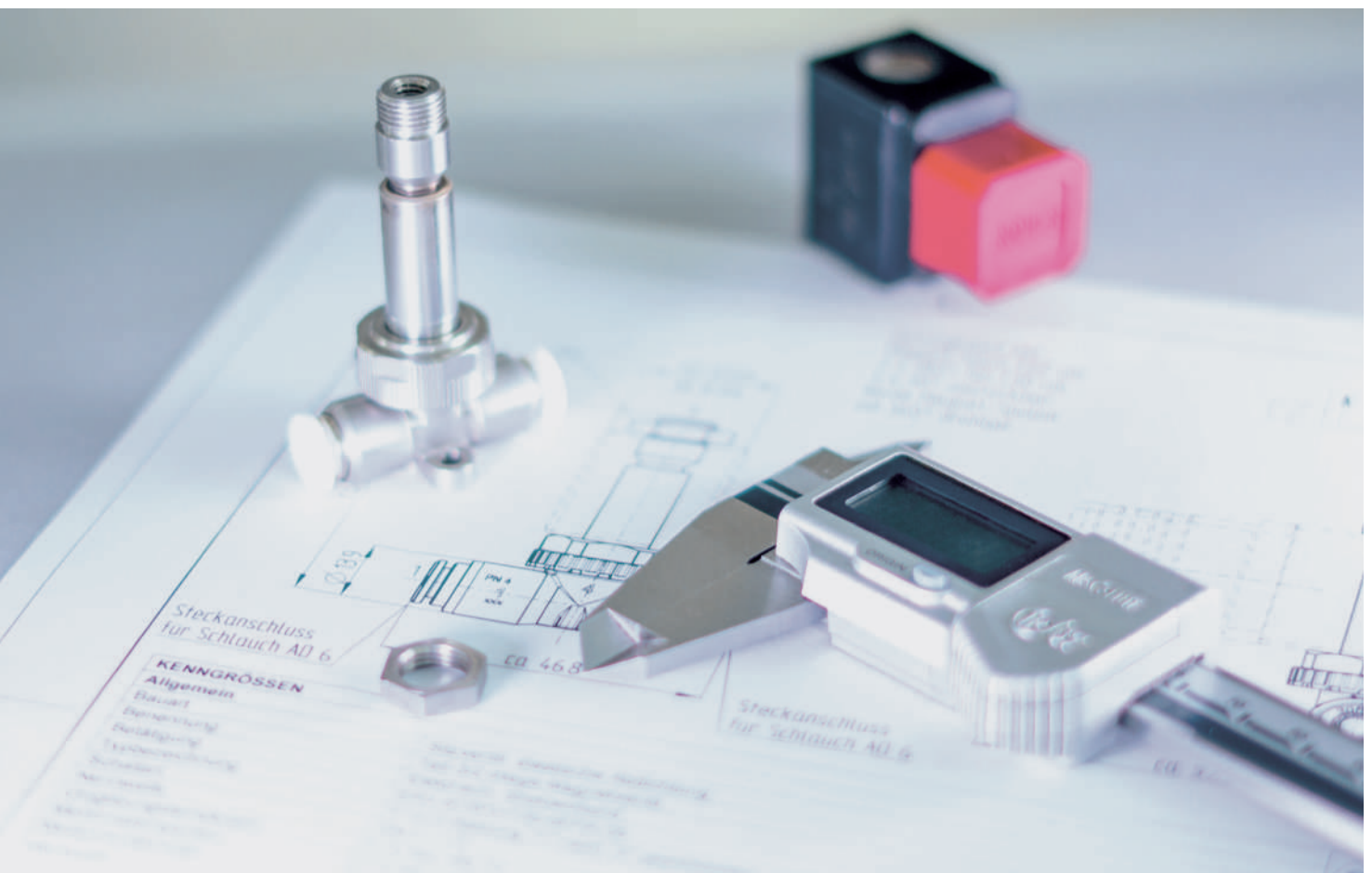
Assembly & Logistics

- In-house assembly in EPA and clean room
- State-of-the-art inspection and testing facilities for highest quality requirements
- Automatic small parts warehouse for fast and flexible deliveries

Your specialist for custom solutions

From the original idea to serial production

AVS Römer is the specialist for individual solutions in fluid technology. According to your technical requirements, we develop and produce custom products in any quantity. Our high in-house production depth, extensive expertise and well thought-out structures ensure successful implementation right through to the serial product.



Your individual product in highest quality

1

Requirement

Your specific requirement is the starting point for your custom product

2

Project planning

The product concept is developed in close coordination and direct cooperation with you

3

Prototyping

We manufacture product samples and test them for your specific requirements

4

Industrialization

For the manufacturing of your products we produce tools, assembly and testing equipment in-house

5

Series production

From small to large series, we realize your product in flexible quantities



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More information and terms at www.avs-roemer.de

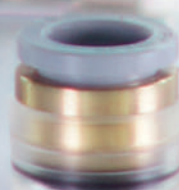
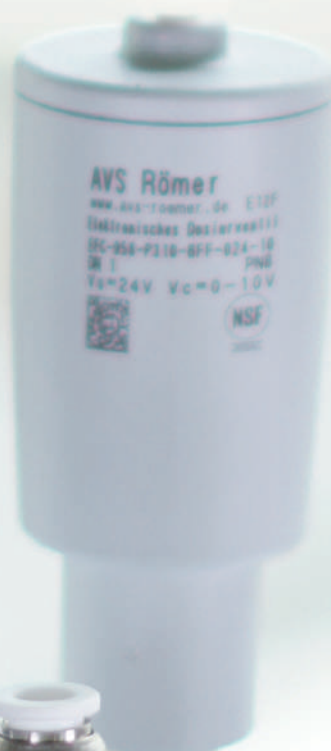
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ELSA Fittings Nickel-Plated Brass (Push-in)

ELSA the perfect push-in fitting from AVS Römer



Nickel-plated brass version

Operating pressure: Technical vacuum up to maximum pressure as stated in the respective specification table under OP.

Temperature range: -20 °C to +80 °C

(for restrictions see specification table)

Application

ELSA push-in fittings can be used with the most varied of gaseous and liquid media. So long as the fitting materials are suitable. application with aggressive media is also possible. See also the information under characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Nickel-plated brass	CuZn39Pb3, galvanically nickel-plated. Suitable for many neutral gaseous and liquid media, especially compressed air, water, hydraulic oil etc. Special version chemically nickel-plated with FKM seal ring.
Other materials	see relevant products

TUBE

Outside diameter [mm]	4, 6 and 8	10, 12, 14 and 16	22
Permitted tolerance [mm]	±0.1	±0.15	±0.2
Permitted grades	Polyamide (PA), polyurethane (PU), fluoropolymer (FEP) (PFA)		

THREAD

External thread	"M" cylindrical thread: Metric ISO thread M5, M7
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/4
External thread	"R" conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 to R 3/4 Designed for pairing with internal thread according to DIN ISO 228-1.
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/4

OPERATING PRESSURE / TEMPERATURE

Metal version	<table border="1"> <tr> <td>PN</td> <td>T_{min} -20 °C</td> <td rowspan="2">Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".</td> </tr> <tr> <td>16</td> <td>T_{max} +80 °C</td> </tr> </table>	PN	T _{min} -20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".	16	T _{max} +80 °C
PN	T _{min} -20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".				
16	T _{max} +80 °C					
Permitted operating pressure and temperature of pipe/tube must be observed!						

THREAD SEAL

Cylindrical threaded nipple	Thread sealed by a NBR O-Ring in recess	applies to all cylindrical threaded nipples
Conical threaded nipple	Thread self-sealing with pre-coating "D"	Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, engine oils etc. in temperature range of -20 °C - +80 °C

"POSITIONABLE" VERSION

90° elbow, T and Y adaptors, male	not suitable for rotating or oscill. movements	Some types of fittings are 360°-positionable in order to facilitate alignment.
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SPECIAL VERSIONS (VERSIONS NOT INCLUDED IN THE CATALOG)

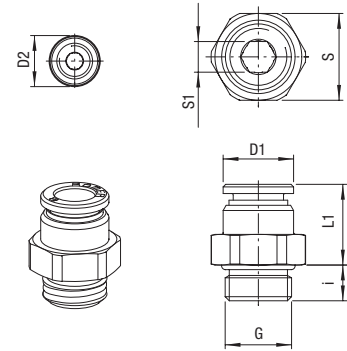
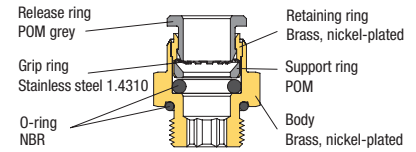
We also manufacture ELSA push-in fittings in various customer-specific versions.

- other O-ring materials, e.g. EPDM, FKM
- for pipe/tube with imperial sizes

Straight Adaptor - Male

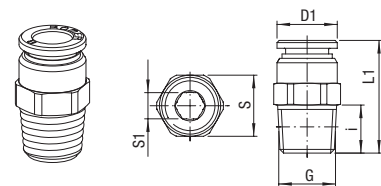
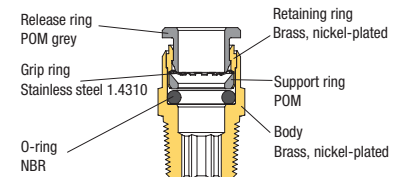
Price group	12	PN 20	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Thread sealed by a NBR O-ring in recess	Nickel-plated brass
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for tube D	G	i	L1	D1	D2	S1	S	Weight in [g]	Type	Order number	Price
4	M 5	3.5	16.6	8	-	2.5	8	3.5	951M-4-M5	340004	o. r.
4	M 7	4.5	15.1	8	10	3	-	3.9	951M-4-M7-I	340237	o. r.
4	G 1/8	5	14	9.8	-	3	13	8.9	951M-4-1/8	340006	o. r.
4	G 1/4	7	11.8	9.8	-	3	17	17	951M-4-1/4	340007	o. r.
6	M 5	3.5	17.5	10	-	2.5	10	4.7	951M-6-M5	340010	o. r.
6	M 7	4.5	17.2	10	10	3	-	5	951M-6-M7-I	340238	o. r.
6	G 1/8	5	15.2	11.8	-	4	13	8.6	951M-6-1/8	340012	o. r.
6	G 1/4	7	14.7	11.8	-	4	17	17.2	951M-6-1/4	340013	o. r.
6	G 3/8	8	12	11.8	-	4	19	24	951M-6-3/8	340014	o. r.
8	G 1/8	5	20.2	13.8	-	5	14	12.7	951M-8-1/8	340016	o. r.
8	G 1/4	7	15.9	13.8	-	6	17	15.7	951M-8-1/4	340017	o. r.
8	G 3/8	8	15.9	13.8	-	6	19	24.5	951M-8-3/8	340018	o. r.
10	G 1/4	7	22.3	16.4	-	7	17	21.4	951M-10-1/4	340021	o. r.
10	G 3/8	8	17.6	16.4	-	8	19	22.7	951M-10-3/8	340022	o. r.
10	G 1/2	9	15.6	16.4	-	8	24*	38.1	951M-10-1/2	340023	o. r.
12	G 1/4	7	25	19.8	-	7	22	35.4	951M-12-1/4	340024	o. r.
12	G 3/8	8	19.5	19.8	-	10	22	27.5	951M-12-3/8	340025	o. r.
12	G 1/2	9	18.5	19.8	-	10	24*	39	951M-12-1/2	340026	o. r.
14	G 3/8	8	25.5	21.8	-	10	22	39.5	951M-14-3/8	340027	o. r.
14	G 1/2	9	19.5	21.8	-	12	24*	34.5	951M-14-1/2	340028	o. r.
16	G 3/8	8	26.5	23.8	-	10	24*	45	951M-16-3/8	340029	o. r.
16	G 1/2	9	19.5	23.8	-	12	24*	30.8	951M-16-1/2	340030	o. r.
22	G 1/2	9	32.1	31.6	-	-	32	91.7	951M-22-1/2	340032	o. r.
22	G 3/4	11	31.1	31.6	-	-	32	94.3	951M-22-3/4	340033	o. r.

Illustration

Straight Adaptor - Male

Price group	12	PN 20	T _{min} -20 °C T _{max} +80 °C	Conical thread	Thread self-sealing with pre-coating "D"	Nickel-plated brass
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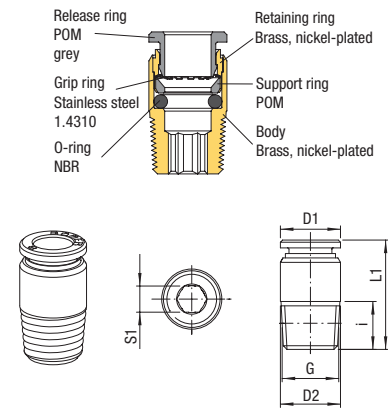
for tube D	G	i	L1	D1	S1	S	Weight in [g]	Type	Order number	Price
4	R 1/8	7.5	20.5	9.8	3	10	7.2	951M-4-D1/8K	340506	o. r.
6	R 1/8	7.5	21.6	11.8	4	12	8.2	951M-6-D1/8K	340512	o. r.
6	R 1/4	11	24.6	11.8	4	14	16.2	951M-6-D1/4K	340513	o. r.
6	R 3/8	11.5	22.4	11.8	4	17	25.4	951M-6-D3/8K	340514	o. r.
8	R 1/8	7.5	27.2	13.8	5	14	13.8	951M-8-D1/8K	340516	o. r.
8	R 1/4	11	26.7	13.8	6	14	15	951M-8-D1/4K	340517	o. r.
8	R 3/8	11.5	24.7	13.8	6	17	23.7	951M-8-D3/8K	340518	o. r.
10	R 1/8	7.5	29.1	16.4	5	17	19.2	951M-10-D1/8K	340520	o. r.
10	R 1/4	11	32.6	16.4	7	17	23.2	951M-10-D1/4K	340521	o. r.
10	R 3/8	11.5	28.1	16.4	8	17	23.7	951M-10-D3/8K	340522	o. r.
10	R 1/2	14	26.6	16.4	8	22	42	951M-10-D1/2K	340523	o. r.
12	R 1/4	11	35	19.8	7	22	36.3	951M-12-D1/4K	340524	o. r.
12	R 3/8	11.5	30	19.8	10	22	29.8	951M-12-D3/8K	340525	o. r.
12	R 1/2	14	31.5	19.8	10	22	44.7	951M-12-D1/2K	340526	o. r.
14	R 3/8	11.5	36	21.8	10	22	o. r.	951M-14-D3/8K	340527	o. r.
14	R 1/2	14	32.5	21.8	12	22	38.3	951M-14-D1/2K	340528	o. r.
16	R 3/8	11.5	37	23.8	10	24*	47.4	951M-16-D3/8K	340529	o. r.
16	R 1/2	16	30.5	23.8	12	27	67.6	951M-16-D1/4K	340530	o. r.
16	R 3/4	16	30.5	23.8	12	27	67.6	951M-16-D3/4K	340531	o. r.
22	R 3/4	16	47.1	31.6	-	32	64.8	951M-22-D3/4K	340533	o. r.

Illustration


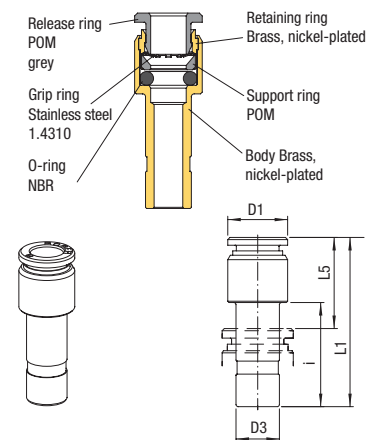
* S24 = octagon

Straight Adaptor - Male

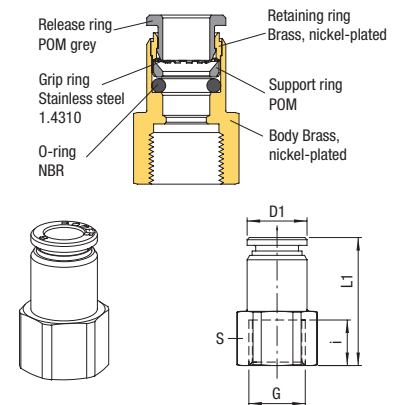
Price group	12	PN 20	T _{min} -20 °C T _{max} +80 °C	Conical thread	Thread self-sealing with pre-coating "D"	Nickel-plated brass				
for tube D	G	i	L1	D1	D2	S1	Weight in [g]	Type	Order number	Price
4	R 1/8	7.5	20	9.8	9.8	3	6.5	951M-4-D1/8K-I	340306	o. r.
4	R 1/4	11	20	19.8	13.5	3	11.6	951M-4-D1/4K-I	340307	o. r.
6	R 1/8	7.5	21.1	11.8	11.8	4	7.4	951M-6-D1/8K-I	340312	o. r.
6	R 1/4	11	21.6	11.8	13.5	4	11.3	951M-6-D1/4K-I	340313	o. r.
8	R 1/8	7.5	26.2	13.8	13.8	5	11.8	951M-8-D1/8K-I	340316	o. r.
8	R 1/4	11	25.2	13.8	13.8	6	12.4	951M-8-D1/4K-I	340317	o. r.
10	R 1/4	11	30.1	16.4	16.4	7	18	951M-10-D1/4K-I	340321	o. r.

Illustration

Straight Stem Reducer

Price group	12	PN 20	T _{min} -20 °C T _{max} +80 °C	Nickel-plated brass						
for tube D	D3	I	L1	L5	D1	Weight in [g]	Type	Order number	Price	
4	6	18	31.3	15.6	9.8	6.5	947M-4-D6	339702	o. r.	
6	8	20	34.1	16.5	11.8	9.5	947M-6-D8	339706	o. r.	
6	10	24	38.1	18	11.8	16.1	947M-6-D10	339707	o. r.	
8	10	24	39.1	19	13.8	13.4	947M-8-D10	339710	o. r.	
8	12	26	41.1	19.1	13.8	21	947M-8-D12	339711	o. r.	
8	14	26.5	40.2	17.7	13.8	29.3	947M-8-D14	339712	o. r.	
10	12	26	42.6	20.6	16.4	18.5	947M-10-D12	339714	o. r.	
10	14	26.5	43.1	20.6	16.4	27.8	947M-10-D14	339715	o. r.	
12	14	26.5	50	27.5	19.8	36.3	947M-12-D14	339718	o. r.	

Illustration

Straight Adaptor - Female

Price group	12	PN 20	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Nickel-plated brass					
for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price	
4	G 1/8	7	23.8	9.8	13	10.9	946M-4-1/8	340806	o. r.	
4	G 1/4	9	26.8	9.8	17	18.6	946M-4-1/4	340807	o. r.	
6	G 1/8	7	25.1	11.8	13	12.4	946M-6-1/8	340812	o. r.	
6	G 1/4	9	27.6	11.9	17	20.1	946M-6-1/4	340813	o. r.	
8	G 1/8	7	27.1	13.8	14	16.4	946M-8-1/8	340816	o. r.	
8	G 1/4	9	29.6	13.8	17	22	946M-8-1/4	340817	o. r.	
8	G 3/8	10	30.6	13.8	19	22.9	946M-8-3/8	340818	o. r.	
10	G 1/4	9	32.1	16.4	17	26.6	946M-10-1/4	340821	o. r.	
10	G 3/8	10	33.1	16.4	19	26.7	946M-10-3/8	340822	o. r.	
10	G 1/2	13	36.6	16.4	24*	38.8	946M-10-1/2	340823	o. r.	
12	G 3/8	10	35	19.8	22	46.5	946M-12-3/8	340827	o. r.	
12	G 1/2	13	38.5	19.8	24*	47.9	946M-12-1/2	340828	o. r.	

Illustration


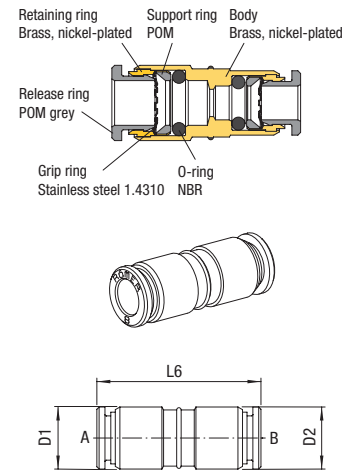
* S24 = octagon

Straight Connector

 Price group **12** PN 20 T_{min} -20 °C T_{max} +80 °C

Nickel-plated brass

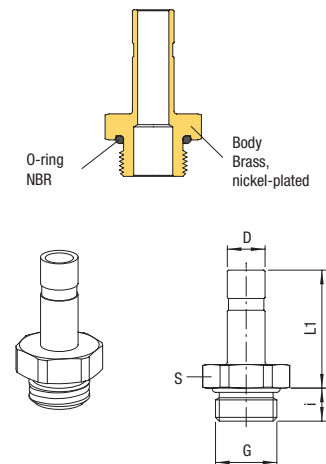
for tube AD	for tube BD	L6	D1	D2	Weight in [g]	Type	Order number	Price
4	4	31	9.8	9.8	8.5	958M-4	347004	o. r.
6	4	32.4	11.8	9.8	9.8	958M-6-4	347008	o. r.
6	6	33.8	11.8	11.8	11.3	958M-6	347010	o. r.
8	6	34.7	13.8	11.8	14.6	958M-8-6	347011	o. r.
8	8	36.7	13.8	13.8	16.4	958M-8	347012	o. r.
10	8	39.7	16.4	13.8	19.3	958M-10-8	347014	o. r.
10	10	41.7	16.4	16.4	21.2	958M-10	347015	o. r.

Illustration

Straight Stem Adaptor

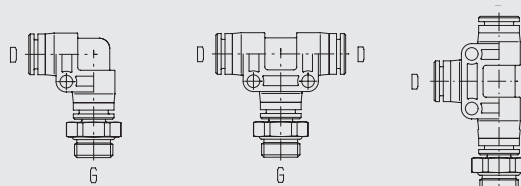
 Price group **12** PN 20 Cylindrical thread T_{min} -20 °C T_{max} +80 °C Thread sealed by a NBR O-ring in recess

Nickel-plated brass

for stem D	G	i	L1	S	Weight in [g]	Type	Order number	Price
4	G 1/8	5	21.5	13	7.1	908M-4-1/8	337506	o. r.
4	G 1/4	7	22	17	14.3	908M-4-1/4	337507	o. r.
6	G 1/8	5	22.5	13	8	908M-6-1/8	337512	o. r.
6	G 1/4	7	23	17	14.3	908M-6-1/4	337513	o. r.
8	G 1/8	5	24.5	13	9.3	908M-8-1/8	337516	o. r.
8	G 1/4	7	25	17	15.9	908M-8-1/4	337517	o. r.
10	G 1/4	7	29	17	16.5	908M-10-1/4	337521	o. r.
10	G 3/8	8	29	19	19.5	908M-10-3/8	337522	o. r.
10	G 1/2	9	29.5	24*	o. r.	908M-10-1/2	337523	o. r.
12	G 1/4	7	31	17	25.8	908M-12-1/4	337524	o. r.
12	G 3/8	8	31	19	23.7	908M-12-3/8	337525	o. r.
12	G 1/2	9	31.5	24*	36	908M-12-1/2	337526	o. r.
14	G 3/8	8	31.5	19	27	908M-14-3/8	337527	o. r.
14	G 1/2	9	32	24*	37.9	908M-14-1/2	337528	o. r.
16	G 1/2	9	32.5	24*	39.6	908M-16-1/2	337530	o. r.

Illustration


Examples of possible combinations with ELSA push-in connectors to get rotatable connections



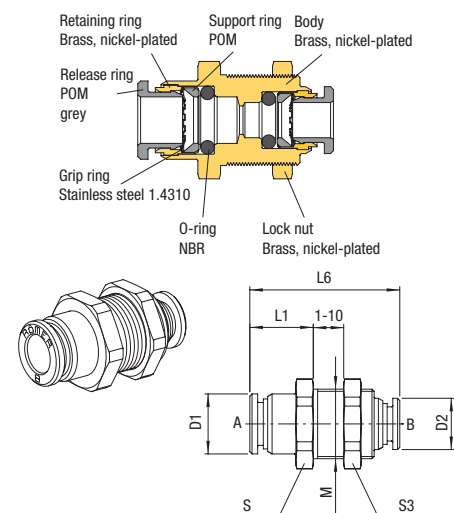
* S24 = octagon

Straight Bulkhead Connector

 Price group **12** PN 20 $T_{min} -20\text{ °C}$ $T_{max} +80\text{ °C}$
Nickel-plated brass

for tube AD	for tube BD	M	L1	L6	D1	D2	S	S3	Weight in [g]	Type	Order number	Price
4	4	M12x1	12.3	31.1	9.8	9.8	14	17	17.3	959M-4	348704	o. r.
6	4	M14x1	12.6	31.4	11.8	9.8	17	17	23.7	959M-6-4	348708	o. r.
6	6	M14x1	13.6	32.5	11.8	11.8	17	17	22.3	959M-6	348710	o. r.
8	6	M16x1	14.7	34.6	13.8	11.8	19	19	30.8	959M-8-6	348711	o. r.
8	8	M16x1	16.5	36.7	13.8	13.8	19	19	29.6	959M-8	348712	o. r.
10	8	M20x1	19	39.2	16.4	13.8	22	24*	51.3	959M-10-8	348714	o. r.
10	10	M20x1	19.9	41	16.4	16.4	22	24*	50.9	959M-10	348715	o. r.
12	12	M22x1.5	22.3	45.6	19.8	19.8	24*	27	68.8	959M-12	348717	o. r.
14	14	M24x1.5	23.3	46.6	21.8	21.8	27	27	84	959M-14	348719	o. r.

Illustration



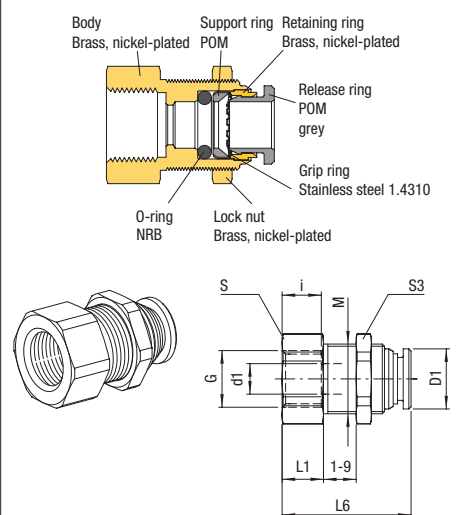
Straight Bulkhead Adaptor

 Price group **12** PN 20 $T_{min} -20\text{ °C}$ $T_{max} +80\text{ °C}$ Cylindrical thread

Nickel-plated brass

for tube D	G	M	L1	i	L6	d1	D1	S4	S3	Weight in [g]	Type	Order number	Price
4	G 1/8	M12x1	6.5	7	25.3	3	9.8	14	17	17.5	945M-4-1/8	348806	o. r.
6	G 1/8	M14x1	6.5	7	25.4	5	11.8	17	17	22.6	945M-6-1/8	348812	o. r.
6	G 1/4	M14x1	12	9	30.9	5	11.8	17	17	27.4	945M-6-1/4	348813	o. r.
8	G 1/8	M16x1	7	7	27.2	7	13.8	19	19	30.9	945M-8-1/8	348816	o. r.
8	G 1/4	M16x1	9.5	9	29.7	7	13.8	19	19	31.6	945M-8-1/4	348817	o. r.
10	G 1/4	M20x1	11	9	32.1	9	16.4	22	24*	56.2	945M-10-1/4	348821	o. r.
10	G 3/8	M20x1	12	10	33.1	9	16.4	22	24*	50.4	945M-10-3/8	348822	o. r.
22	G 3/4	M33x1.5	18.2	15.5	48.1	20	31.6	36	41	198.9	945M-22-3/4	348833	o. r.

Illustration



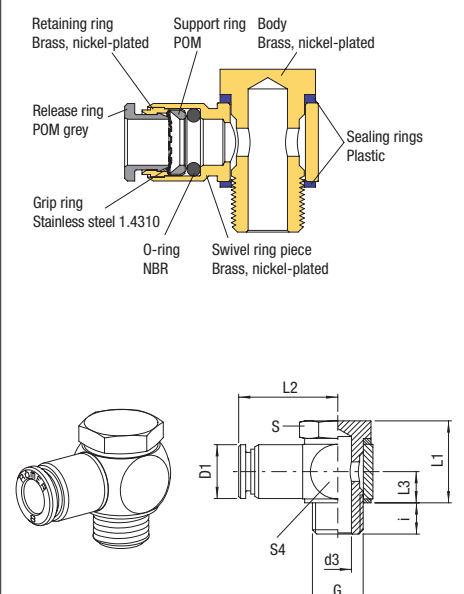
Banjo Fitting

 Price group **12** PN 20 $T_{min} -20\text{ °C}$ $T_{max} +80\text{ °C}$ Cylindrical thread

Nickel-plated brass

for tube D	G	i**	L1**	L2	L3**	d3	D1	S4	S	Weight in [g]	Type	Order number	Price
4	M 5	4.5	13.5	17.1	5	2	8	9	8	9	952M-4-M5N	370004	o. r.
4	G 1/8	6	20.5	20.8	8	5	9.8	14	14	28.5	952M-4-1/8N	370006	o. r.
6	M 5	4.5	14.5	18.7	5.5	2	10	10	8	12.3	952M-6-M5N	370010	o. r.
6	G 1/8	6	20.5	21.6	8	5	11.8	14	14	29.9	952M-6-1/8N	370012	o. r.
6	G 1/4	8	21	23.6	8	7	11.8	18	17	46.6	952M-6-1/4N	370013	o. r.
8	G 1/8	6	20.5	23.6	8	5	13.8	14	14	31.5	952M-8-1/8N	370016	o. r.
8	G 1/4	8	21	25.6	8	7	13.8	18	17	48.6	952M-8-1/4N	370017	o. r.

Illustration



* S24 = octagon * Approximate dimensions with tightened union nut ** Approximate dimensions with tightened screw connection



ELSA Fittings POM (Push-in)

ELSA the perfect push-in fitting from AVS Römer


POM version

Operating pressure: Technical vacuum up to maximum pressure as stated in the respective specification table under OP.

Temperature range: -20 °C to + 80 °C

(for restrictions see specification table)

Application

ELSA push-in fittings can be used with the most varied of gaseous and liquid media. So long as the fitting materials are suitable. application with aggressive media is also possible. See also the information under characteristics.

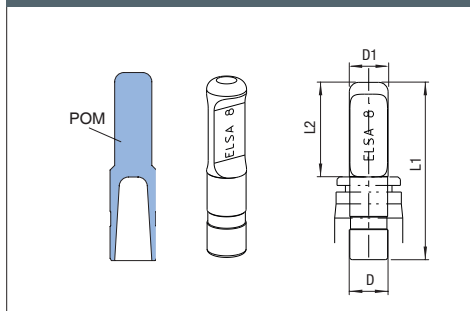
CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Plastic POM	Polyoxymethylene. UV-resistant. Suitable for neutral gaseous and liquid media. especially compressed air. water etc.		
Other materials	see relevant products		
TUBE			
Outside diameter [mm]	4. 6 and 8	10. 12. 14 and 16	20, 22
Permitted tolerance [mm]	±0.1	±0.15	±0.2
Permitted grades	Polyamide (PA). polyurethane (PU). fluoropolymer (FEP) (PFA)		
THREAD			
External thread	"M" cylindrical thread: Metric ISO thread M5		
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/4		
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/8		
OPERATING PRESSURE / TEMPERATURE			
Plastic version	permitted Operating pressure OP at the stated ambient temp. and medium temp. according to Table	Means that the permitted operating pressure OP within the permitted ambient temperature also depends on the medium temperature according to the table.	
Permitted operating pressure and temperature of pipe/tube must be observed!			
THREAD SEAL			
Cylindrical threaded nipple	Thread sealed by a NBR O-ring in recess	applies to all cylindrical threaded nipples	
"POSITIONABLE" VERSION			
90° elbow, T and Y adaptors, male	not suitable for rotating or oscill. movements	Some types of fittings are 360°-positionable in order to facilitate alignment.	
SPECIAL VERSIONS (VERSIONS NOT INCLUDED IN THE CATALOG)			
We also manufacture ELSA push-in fittings in various customer-specific versions. <ul style="list-style-type: none"> • other O-ring materials. e.g. FKM, EPDM • for pipes/tubes with imperial measures 			

Push-in Plug

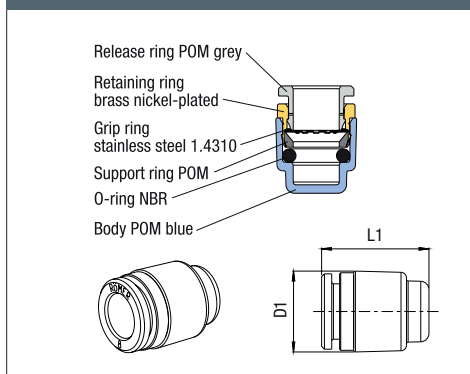
 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
Plastic POM

for push-in connector D	permitted OP [bar] at medium temp.			L1	L2 approx.	D1	Weight in [g]	Type	Order number	Price
	20 °C	60 °C	80 °C							
4	16	16	12	31.5	16.7	6.2	0.6	971P-4	237404	o. r.
6	16	16	12	34.5	18.9	8.2	1	971P-6	237410	o. r.
8	16	16	12	37.5	19.9	8.2	1.4	971P-8	237412	o. r.
10	16	16	12	40.5	20.4	8	2	971P-10	237415	o. r.
12	16	12	10	44	22	8	2.5	971P-12	237417	o. r.
14	12	10	8	44.5	22	8	2.4	971P-14	237419	o. r.
16	12	8	6	45	22	8	3.6	971P-16	237422	o. r.

Illustration

Tube Cap

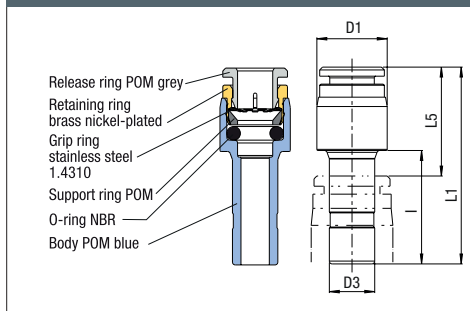
 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
Plastic POM

for tube D	permitted OP [bar] at medium temp.			L1	D1	Weight in [g]	Type	Order number	Price
	20 °C	60 °C	80 °C						
6	16	12	10	19.5	12.6	3.6	972P-6	337427	o. r.
8	16	12	10	19.1	14.4	4.1	972P-8	337429	o. r.
10	16	12	10	21.6	17.2	6	972P-10	337430	o. r.
12	16	12	10	24	21	10.4	972P-12	337431	o. r.
16	12	10	8	25	25	19.4	972P-16	337433	o. r.

Illustration

Straight Stem Connector

 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
Plastic POM

for tube D	D3	permitted OP [bar] at medium temp.			l	L1	L5 approx.	D1	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C								
4	6	16	12	12	18	31.6	16	10.4	7.2	947P-4-D6	339802	o. r.
6	8	16	12	10	20	34.7	17.1	12.4	1.4	947P-6-D8	339806	o. r.
6	10	16	12	10	23.8	40.3	20.2	14.4	5.9	947P-6-D10	339807	o. r.
8	10	16	12	10	23.8	40.7	20.6	14.4	5.3	947P-8-D10	339810	o. r.
8	12	16	12	10	26	43.3	21.3	17.2	7.1	947P-8-D12	339811	o. r.
10	12	16	12	10	26	44	22	17.2	7.8	947P-10-D12	339814	o. r.

Illustration

90° Elbow Adaptor - Male - Positionable

 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

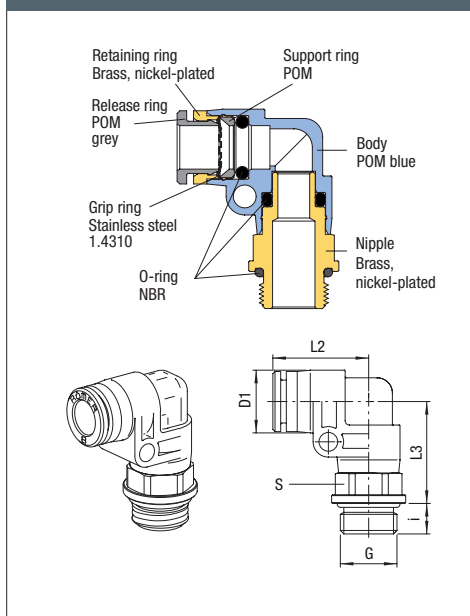
Cylindrical thread

Thread sealed by a NBR O-Ring in recess

not suitable for rotating or oscill. movement

Plastic POM

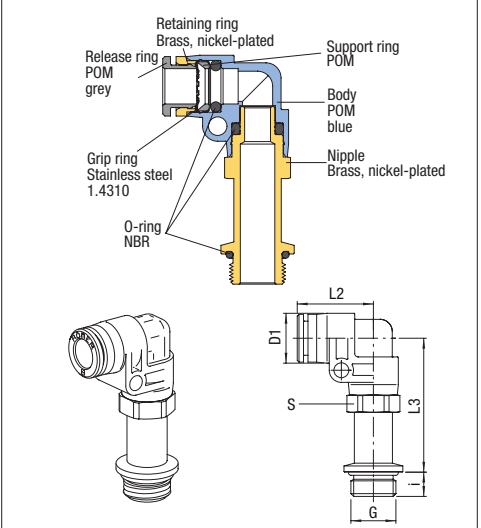
for tube D	G	permitted OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	M 5	16	16	12	3.5	14.7	11	9.8	8	3.8	930P-4-M5	342004	o. r.
4	G 1/8	16	16	12	5	18.6	20.3	12.4	12	12.7	930P-4-1/8	342006	o. r.
4	G 1/4	16	12	10	7	18.5	20.3	12.4	12	15.7	930P-4-1/4	342007	o. r.
6	M 5	16	16	12	3.5	16.6	11	11.8	8	4.5	930P-6-M5	342010	o. r.
6	G 1/8	16	12	10	5	19	20.3	12.4	12	14.1	930P-6-1/8	342012	o. r.
6	G 1/4	16	12	10	7	19	20.3	12.4	12	15.9	930P-6-1/4	342013	o. r.
8	G 1/8	16	12	10	5	22.1	21.9	14.4	14	19.1	930P-8-1/8	342016	o. r.
8	G 1/4	16	12	10	7	22.1	23.4	14.4	14	22.3	930P-8-1/4	342017	o. r.
8	G 3/8	16	12	10	8	22.1	23.9	14.4	14	22.7	930P-8-3/8	342018	o. r.
10	G 1/8	16	12	10	5	26.1	25.2	17.2	14	25	930P-10-1/8	342020	o. r.
10	G 1/4	16	12	10	7	26.1	25.7	17.2	17	30	930P-10-1/4	342021	o. r.
10	G 3/8	16	12	10	8	26.1	27.2	17.2	17	30.9	930P-10-3/8	342022	o. r.
10	G 1/2	16	12	10	9	26.1	26.2	17.2	24*	48.3	930P-10-1/2	342023	o. r.
12	G 3/8	16	12	10	8	31	30.5	23	22	50.8	930P-12-3/8	342025	o. r.
12	G 1/2	16	12	10	9	31	31	23	24*	57	930P-12-1/2	342026	o. r.
14	G 3/8	12	10	8	8	31	30.5	23	22	51.6	930P-14-3/8	342027	o. r.
14	G 1/2	12	10	8	8	31	31	23	24*	57.8	930P-14-1/2	342028	o. r.
16	G 3/8	12	8	6	8	32	32	25	24*	66.2	930P-16-3/8	342029	o. r.
16	G 1/2	12	8	6	9	32	32	25	24*	64.6	930P-16-1/2	342030	o. r.
22	G 1/2	12	8	6	9	40.1	41	33.8	32	128	930P-22-1/2	342032	o. r.
22	G 3/4	12	8	6	11	40.1	40	33.8	32	128.8	930P-22-3/4	342033	o. r.

Illustration


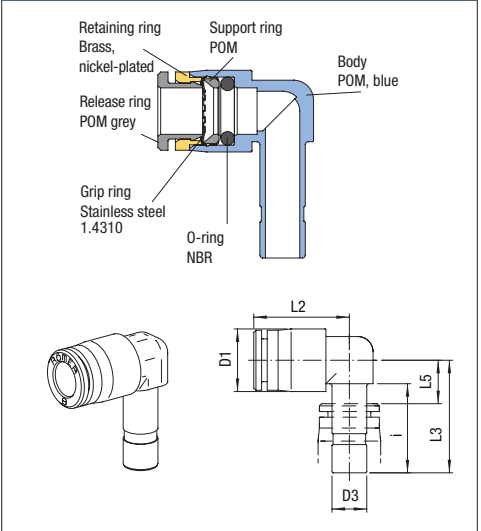
* S24 = octagon

90° Elbow Adaptor - Male - Positionable

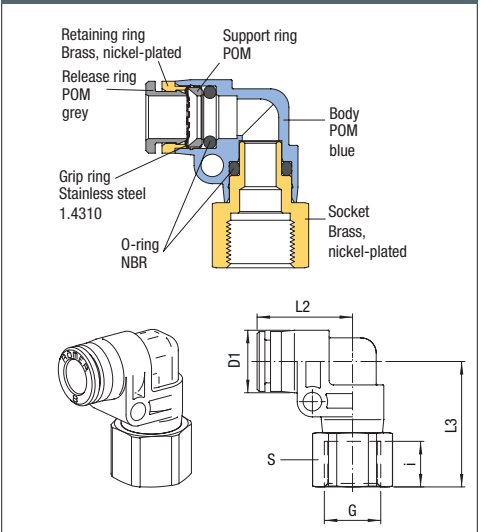
Price group	12	permitted OP at ambient temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$			Cylindrical thread	Thread sealed by a NBR O-Ring in recess		not suitable for rotating or oscill. movement		Plastic POM			
for tube D	G	permitted OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	G 1/8	16	16	12	5	18.6	33.8	12.4	12	17.2	980P-4-1/8	342206	o. r.
4	G 1/4	16	12	10	7	18.6	34.3	12.4	12	22	980P-4-1/4	342207	o. r.
6	G 1/8	16	12	10	5	19	33.8	12.4	12	20.9	980P-6-1/8	342212	o. r.
6	G 1/4	16	12	10	7	19	34.3	12.4	12	21.9	980P-6-1/4	342213	o. r.
8	G 1/8	16	12	10	5	22.1	37.4	14.4	14	27.9	980P-8-1/8	342216	o. r.
8	G 1/4	16	12	10	7	22.1	38.9	14.4	14	28.6	980P-8-1/4	342217	o. r.
8	G 3/8	16	12	10	8	22.1	39.4	14.4	14	37.9	980P-8-3/8	342218	o. r.
10	G 1/4	16	12	10	7	26.1	42.7	17.2	17	38.8	980P-10-1/4	342221	o. r.
10	G 3/8	16	12	10	8	26.1	45.5	17.2	17	50.5	980P-10-3/8	342222	o. r.

Illustration

90° Elbow Stem Connector

Price group	12	permitted OP at ambient temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$			Plastic POM								
for tube D	Stem D3	permitted OP [bar] at medium temp.			l	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	4	16	16	12	17	18.6	21.4	12.4	6.6	3.5	911P-4-D4	348454	o. r.
4	6	16	16	12	18	18.6	22.4	12.4	6.8	3.6	911P-4-D6	348458	o. r.
6	4	16	12	10	17	19	21.4	12.4	6.6	4.1	911P-6-D4	348459	o. r.
6	6	16	12	10	18	19.1	22.4	12.4	6.8	3.7	911P-6-D6	348460	o. r.
6	8	16	12	10	20.5	21.6	25.9	14.4	8.3	5.7	911P-6-D8	348461	o. r.
8	8	16	12	10	20.5	22.1	25.9	14.4	8.3	5.3	911P-8-D8	348462	o. r.
8	10	16	12	10	24	25.4	32.1	17.2	12	8.4	911P-8-D10	348464	o. r.
10	10	16	12	10	24	26.1	32.1	17.2	12	11.1	911P-10-D10	348465	o. r.

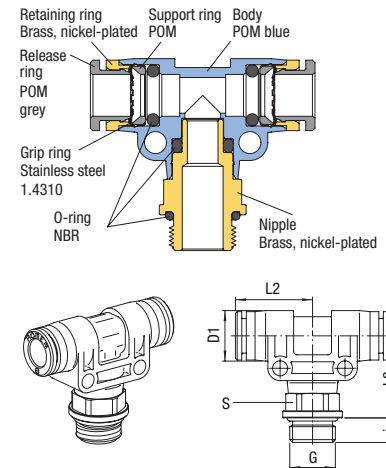
Illustration

90° Elbow Adaptor - Female - Positionable

Price group	12	permitted OP at ambient temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$			Cylindrical thread	not suitable for rotating or oscill. movement		Plastic POM					
for tube D	G	permitted OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	G 1/8	16	16	12	7	18.6	23.8	12.4	13	15	979P-4-1/8	343206	o. r.
4	G 1/4	16	12	10	9	18.6	26.3	12.4	17	22.1	979P-4-1/4	343207	o. r.
4	G 3/8	16	12	10	10	18.6	27.3	12.4	19	24.9	979P-4-3/8	343208	o. r.
6	G 1/8	16	12	10	7	19	23.8	12.4	13	14.4	979P-6-1/8	343212	o. r.
6	G 1/4	16	12	10	9	19	26.3	12.4	17	22.3	979P-6-1/4	343213	o. r.
6	G3/8	16	12	10	10	19	27.3	12.4	19	25	979P-6-3/8	343214	o. r.
8	G 1/8	16	12	10	7	22.1	27.9	14.4	14	20.4	979P-8-1/8	343216	o. r.
8	G 1/4	16	12	10	9	22.1	30.4	14.4	17	27.5	979P-8-1/4	343217	o. r.
10	G3/8	16	12	10	10	26.1	33.2	17.2	19	29.5	979P-10-3/8	343222	o. r.
10	G1/2	16	12	10	13	26.1	37.2	17.2	24	43.7	979P-10-1/2	343223	o. r.

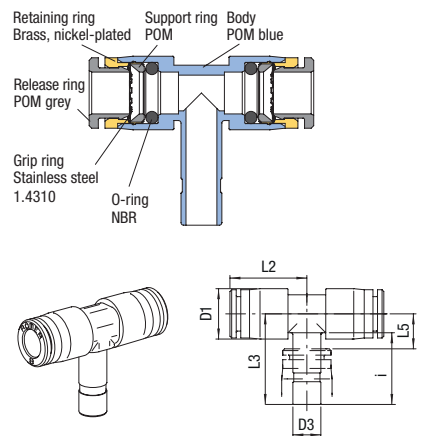
Illustration


T-Adaptor - Male - Positionable

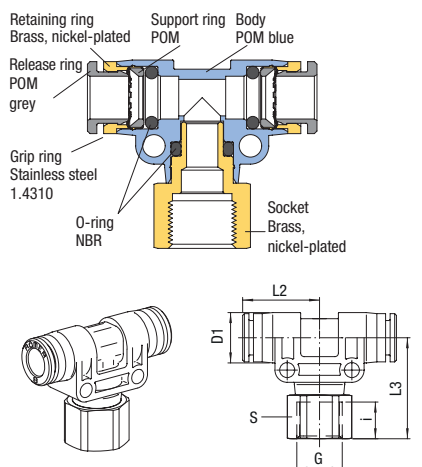
Price group	12	permitted OP at ambient temp. T _{min} -20 °C. T _{max} +60 °C			Cylindrical thread	Thread sealed by a NBR O-Ring in recess	not suitable for rotating or oscill. movement		Plastic POM				
for tube D	G	permitted OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	G 1/8	16	12	10	5	18.6	20.3	12.4	12	16	921P-4-1/8	344006	o. r.
4	G 1/4	16	12	10	7	18.6	20.3	12.4	12	19	921P-4-1/4	344007	o. r.
6	G 1/8	16	12	10	5	19	20.3	12.4	12	20	921P-6-1/8	344012	o. r.
6	G 1/4	16	12	10	7	19	20.3	12.4	12	22.2	921P-6-1/4	344013	o. r.
8	G 1/8	16	12	10	5	22.1	21.9	14.4	14	23.4	921P-8-1/8	344016	o. r.
8	G 1/4	16	12	10	7	22.1	23.4	14.4	14	26.1	921P-8-1/4	344017	o. r.
8	G 3/8	16	12	10	8	22.1	23.9	14.4	14	26.9	921P-8-3/8	344018	o. r.
10	G 1/4	16	12	10	7	26.1	25.7	17.2	17	38.8	921P-10-1/4	344021	o. r.
10	G 3/8	16	12	10	8	26.1	27.2	17.2	17	46.4	921P-10-3/8	344022	o. r.
10	G 1/2	16	12	10	9	26.1	26.2	17.2	24	46.4	921P-10-1/2	344023	o. r.
12	G 3/8	16	12	10	8	31	30.5	23	22	64.8	921P-12-3/8	344025	o. r.
12	G 1/2	16	12	10	9	31	31	23	24*	74.1	921P-12-1/2	344026	o. r.
14	G 3/8	12	10	8	8	31	30.5	23	22	63.3	921P-14-3/8	344027	o. r.
14	G 1/2	12	10	8	9	31	31	23	24*	76.1	921P-14-1/2	344028	o. r.
16	G 3/8	12	8	6	8	32	32	25	24*	83	921P-16-3/8	344029	o. r.
16	G 1/2	12	8	6	9	32	32	25	24*	80.2	921P-16-1/2	344030	o. r.
22	G 1/2	12	8	6	9	40.1	41	33.8	32	157	921P-22-1/2	344032	o. r.
22	G 3/4	12	8	6	11	40.1	40	33.8	32	159.9	921P-22-3/4	344033	o. r.

Illustration

T-Stem Connector

Price group	12	permitted OP at ambient temp. T _{min} -20 °C. T _{max} +60 °C			Plastic POM								
for tube D	Stem D3	permitted OP [bar] at medium temp.			i	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	4	16	16	12	17	18.6	21.4	12.4	6.6	6	912P-4-D4	348504	o. r.
4	6	16	16	12	18	18.6	22.4	12.4	6.8	6	912P-4-D6	348508	o. r.
6	4	16	12	10	17	19	21.4	12.4	6.6	o. r.	912P-6-D4	348509	o. r.
6	6	16	12	10	18	19	22.4	12.4	6.8	6.4	912P-6-D6	348510	o. r.
6	8	16	12	10	20.5	21.6	25.9	14.4	8.3	8	912P-6-D8	348511	o. r.
8	8	16	12	10	20.5	22.1	25.9	14.4	8.3	8	912P-8-D8	348512	o. r.
8	10	16	12	10	24	25.4	32.1	17.2	12	o. r.	912P-8-D10	348514	o. r.
10	10	16	12	10	24	26.1	32.1	17.2	12	15.1	912P-10-D10	348515	o. r.

Illustration

T-Adaptor - Female - Positionable

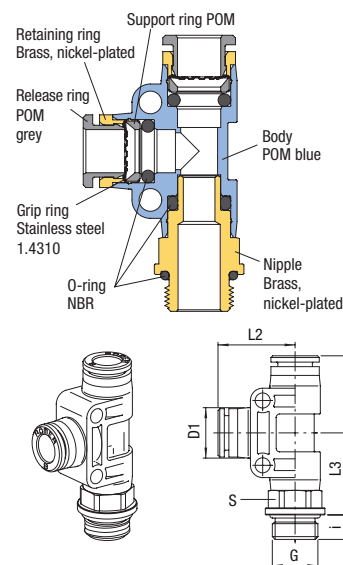
Price group	12	permitted OP at ambient temp. T _{min} -20 °C. T _{max} +60 °C			Cylindrical thread	not suitable for rotating or oscill. movement	Plastic POM						
for tube D	G	permitted OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	G 1/8	16	12	10	7	18.6	23.8	12.4	13	18	970P-4-1/8	345306	o. r.
4	G 1/4	16	12	10	9	18.6	26.3	12.4	17	24.8	970P-4-1/4	345307	o. r.
6	G 1/8	16	12	10	7	19	23.8	12.4	13	18.4	970P-6-1/8	345312	o. r.
6	G 1/4	16	12	10	9	19	26.3	12.4	17	26	970P-6-1/4	345313	o. r.
8	G 1/8	16	12	10	7	22.1	27.9	14.4	14	24	970P-8-1/8	345316	o. r.
8	G 1/4	16	12	10	9	22.1	30.4	14.4	17	on rep.	970P-8-1/4	345317	o. r.
10	G1/2	16	12	10	13	26.1	37.2	17.2	24	26	970P-10-1/2	345323	o. r.

Illustration


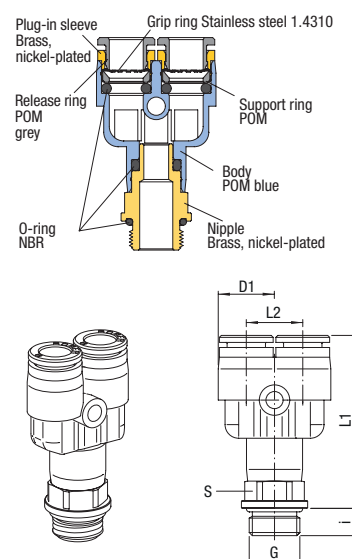
* S24 = octagon

Side T-Adaptor - Male - Positionable

for tube D	G	permitted OP [bar] at medium temp.			i	L1	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C										
4	G 1/8	16	12	10	5	38.9	18.6	20.3	12.4	12	16.5	922P-4-1/8	345006	o. r.
4	G 1/4	16	12	10	7	38.9	18.6	20.3	12.4	12	19.4	922P-4-1/4	345007	o. r.
6	G 1/8	16	12	10	5	39.3	19	20.3	12.4	12	17.3	922P-6-1/8	345012	o. r.
6	G 1/4	16	12	10	7	39.3	19	20.3	12.4	12	19.1	922P-6-1/4	345013	o. r.
8	G 1/8	16	12	10	5	44	22.1	21.9	14.4	14	23.2	922P-8-1/8	345016	o. r.
8	G 1/4	16	12	10	7	45.5	22.1	23.4	14.4	14	26.7	922P-8-1/4	345017	o. r.
8	G 3/8	16	12	10	8	46	22.1	23.9	14.4	14	26.9	922P-8-3/8	345018	o. r.
10	G 1/4	16	12	10	7	51.8	26.1	25.7	17.2	17	38.3	922P-10-1/4	345021	o. r.
10	G 3/8	16	12	10	8	53.3	26.1	27.2	17.2	17	46.8	922P-10-3/8	345022	o. r.
10	G 1/2	16	12	10	9	52.3	26.1	26.2	17.4	24	46.8	922P-10-1/2	345023	o. r.
12	G 3/8	16	12	10	8	61.5	31	30.5	23	22	65	922P-12-3/8	345025	o. r.
12	G 1/2	16	12	10	9	62	31	31	23	24*	71.4	922P-12-1/2	345026	o. r.
14	G 1/2	12	10	8	9	62	31	31	23	24*	73.2	922P-14-1/2	345028	o. r.
16	G 3/8	12	8	6	8	64	32	32	25	24*	83.1	922P-16-3/8	345029	o. r.
16	G 1/2	12	8	6	9	64	32	32	25	24*	80.3	922P-16-1/2	345030	o. r.
22	G 1/2	12	8	6	9	81.1	40.1	41	33.8	32	157	922P-22-1/2	345032	o. r.
22	G 3/4	12	8	6	11	80.1	40.1	40	33.8	32	158	922P-22-3/4	345033	o. r.

Illustration

Y-Adaptor - Male - Positionable

for tube D	G	permitted OP [bar] at medium temp.			i	L1	L2	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C									
4	G 1/8	16	12	10	5	38.9	12.5	12.4	12	17.5	992P-4-1/8	345406	o. r.
4	G 1/4	16	12	10	7	38.9	12.5	12.4	12	18.7	992P-4-1/4	345407	o. r.
6	G 1/8	16	12	10	5	39.3	12.5	12.4	12	17	992P-6-1/8	345412	o. r.
6	G 1/4	16	12	10	7	39.3	12.5	12.4	12	19.8	992P-6-1/4	345413	o. r.
8	G 1/8	16	12	10	5	43	14.5	14.4	14	23.8	992P-8-1/8	345416	o. r.
8	G 1/4	16	12	10	7	44.5	14.5	14.4	14	29.8	992P-8-1/4	345417	o. r.
8	G 3/8	16	12	10	8	45	14.5	14.4	14	27.1	992P-8-3/8	345418	o. r.
10	G 1/4	16	12	10	7	48.8	17	17.2	17	38	992P-10-1/4	345421	o. r.
10	G 3/8	16	12	10	8	50.3	17	17.2	17	37.5	992P-10-3/8	345422	o. r.
10	G 1/2	16	12	10	9	49.3	17	17	24	54.9	992P-10-1/2	345423	o. r.
12	G 3/8	16	12	10	8	54	20.5	21	22	60.4	992P-12-3/8	345425	o. r.
12	G 1/2	16	12	10	9	55.5	20.5	21	24*	65.6	992P-12-1/2	345426	o. r.

Illustration


* S24 = octagon

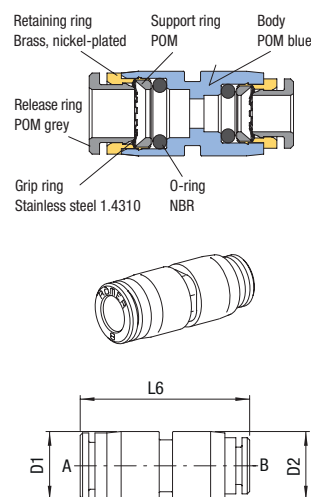
Straight Connector

Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic
POM

for tube AD	for tube BD	permitted OP [bar] at medium temp.			L6	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C							
4	4	16	16	12	30.1	10.4	10.4	4.2	958P-4	347104	o. r.
6	4	16	12	10	31.8	12.4	12.4	6.1	958P-6-4	347108	o. r.
6	6	16	12	10	32.2	12.4	12.4	5.7	958P-6	347110	o. r.
8	4	16	12	10	35.3	14.4	14.4	7.7	958P-8-4	347101	o. r.
8	6	16	12	10	35.8	14.4	14.4	7.9	958P-8-6	347111	o. r.
8	8	16	12	10	36.2	14.4	14.4	8.2	958P-8	347112	o. r.
10	6	16	12	10	40	17.2	17.2	11.9	958P-10-6	347113	o. r.
10	8	16	12	10	40.5	17.2	17.2	12.2	958P-10-8	347114	o. r.
10	10	16	12	10	41.2	17.2	17.2	12.3	958P-10	347115	o. r.
12	10	16	12	10	44.9	21	21	19.4	958P-12-10	347116	o. r.
12	12	16	12	10	45	21	21	19.8	958P-12	347117	o. r.
14	12	12	10	8	46	23	23	24.6	958P-14-12	347118	o. r.
14	14	12	10	8	46	23	23	22.8	958P-14	347119	o. r.
16	12	12	8	6	47	25	25	28	958P-16-12	347120	o. r.
16	14	12	8	6	47	25	25	26.2	958P-16-14	347121	o. r.
16	16	12	8	6	47	25	25	25.5	958P-16	347122	o. r.
20	20	12	8	6	54.5	31.8	31.8	53.6	958P-20	347123	o. r.
22	22	12	8	6	57.2	33.8	33.8	59.1	958P-22	347124	o. r.

Illustration



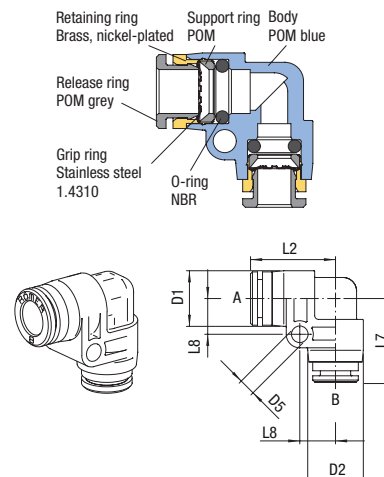
90° Elbow Connector

Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic
POM

for tube AD	for tube BD	permitted OP [bar] at medium temp.			L2	L7	L8	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C										
4	4	16	16	12	18.6	18.6	8.3	12.4	12.4	4.3	6.3	955P-4	347304	o. r.
6	4	16	12	10	19	18.6	8.3	12.4	12.4	4.3	6.4	955P-6-4	347308	o. r.
6	6	16	12	10	19	19	8.3	12.4	12.4	4.3	6.4	955P-6	347310	o. r.
8	6	16	12	10	22.1	21.3	9.3	14.4	14.4	4.3	9.2	955P-8-6	347311	o. r.
8	8	16	12	10	22.1	22.1	9.3	14.4	14.4	4.3	9.6	955P-8	347312	o. r.
10	6	16	12	10	26.1	25	12	17.2	17.2	4.3	14.4	955P-10-6	347313	o. r.
10	8	16	12	10	26.1	25.4	12	17.2	17.2	4.3	15.1	955P-10-8	347314	o. r.
10	10	16	12	10	26.1	26.1	12	17.2	17.2	4.3	15	955P-10	347315	o. r.
12	10	16	12	10	31	30.9	12	23	23	4.3	27.9	955P-12-10	347316	o. r.
12	12	16	12	10	31	31	12	23	23	4.3	28.4	955P-12	347317	o. r.
14	12	12	10	8	31	31	12	23	23	4.3	o. r.	955P-14-12	347318	o. r.
14	14	12	10	8	31	31	12	23	23	4.3	27.3	955P-14	347319	o. r.
14	10	12	10	8	31	30.9	12	23	23	4.3	27.5	955P-14-10	347309	o. r.
16	16	12	8	6	32	32	12	25	25	4.3	30.6	955P-16	347322	o. r.
22	22	12	8	6	40.1	40.1	16	33.8	33.8	5.4	71.8	955P-22	347324	o. r.

Illustration



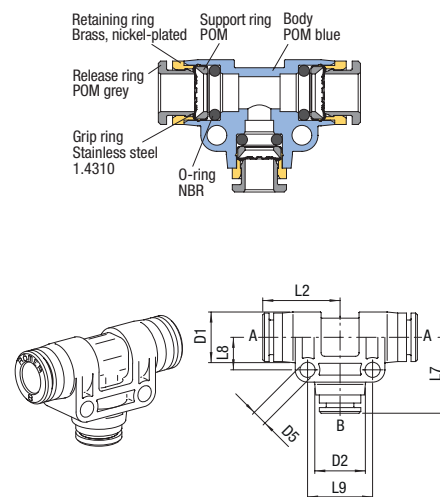
T-Connector

Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic
POM

for tube AD	for tube BD	permitted OP [bar] at medium temp.			L2	L7	L8	L9	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C											
4	4	16	16	12	18.6	18.6	8.3	16.5	12.4	12.4	4.3	9.2	954P-4	347504	o. r.
4	6	16	12	10	18.6	19	8.3	16.5	12.4	12.4	4.3	9.6	954P-4-6	347358	o. r.
6	4	16	12	10	19	18.6	8.3	16.5	12.4	12.4	4.3	9.6	954P-6-4	347508	o. r.
6	6	16	12	10	19	19	8.3	16.5	12.4	12.4	4.3	9.6	954P-6	347510	o. r.
6	8	16	12	10	21.6	22.1	9.3	18.5	14.4	14.4	4.3	13.3	954P-6-8	347361	o. r.
8	6	16	12	10	22.1	21.6	9.3	18.5	14.4	14.4	4.3	13.5	954P-8-6	347511	o. r.
8	8	16	12	10	22.1	22.1	9.3	18.5	14.4	14.4	4.3	13.8	954P-8	347512	o. r.
8	10	16	12	10	25.4	26.1	12	24	17.2	17.2	4.3	21.2	954P-8-10	347364	o. r.
10	6	16	12	10	26.1	25	12	24	17.2	17.2	4.3	21.8	954P-10-6	347513	o. r.
10	8	16	12	10	26.1	25.4	12	24	17.2	17.2	4.3	21.5	954P-10-8	347514	o. r.
10	10	16	12	10	26.1	26.1	12	24	17.2	17.2	4.3	22.4	954P-10	347515	o. r.
10	12	16	12	10	30.9	31	12	24	23	23	4.3	39.8	954P-10-12	347366	o. r.
12	10	16	12	10	31	31	12	24	23	23	4.3	38.7	954P-12-10	347516	o. r.
12	12	16	12	10	31	31	12	24	23	23	4.3	44	954P-12	347517	o. r.
14	14	12	10	8	31	31	12	24	23	23	4.3	43.6	954P-14	347519	o. r.
14	10	12	10	8	31	30.9	12	24	23	23	4.3	39.1	954P-14-10	347509	o. r.
16	16	12	8	6	32	32	12	24	25	25	4.3	44.3	954P-16	347522	o. r.
16	12	12	8	6	32	32	12	24	25	25	4.3	44	954P-16-12	347520	o. r.
22	16	12	8	6	40.1	39.5	16	32	33.8	33.8	5.4	99.9	954P-22-16	347523	o. r.
22	22	12	8	6	40.1	40.1	16	32	33.8	33.8	5.4	103	954P-22	347524	o. r.

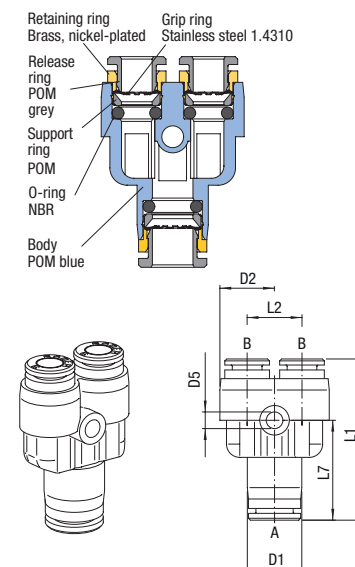
Illustration



Y-Connector

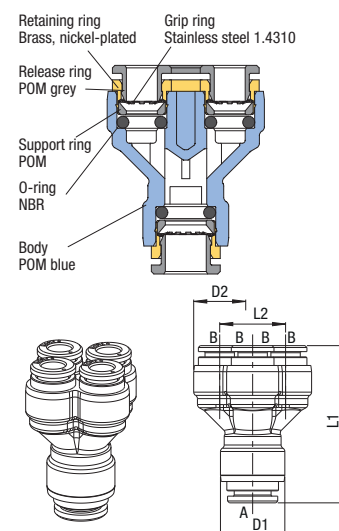
 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
Plastic POM

for tube AD	for tube BD	permitted OP [bar] at medium temp.			L1	L2	L7	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C										
4	4	16	16	12	37.2	12.5	22.6	12.4	12.4	3.3	9.3	982P-4	347604	o. r.
6	4	16	12	10	37.6	12.5	23.1	12.4	12.4	3.3	9.7	982P-6-4	347608	o. r.
6	6	16	12	10	38.2	12.5	23.1	12.4	12.4	3.3	9.6	982P-6	347610	o. r.
8	4	16	12	10	42.3	14.5	26.5	14.4	14.4	4.3	13.4	982P-8-4	347626	o. r.
8	6	16	12	10	42.8	14.5	26.5	14.4	14.4	4.3	13.5	982P-8-6	347611	o. r.
8	8	16	12	10	43.2	14.5	26.5	14.4	14.4	4.3	14	982P-8	347612	o. r.
10	8	16	12	10	48.5	17	31.1	17.2	14.4	4.3	19.8	982P-10-8	347614	o. r.
10	10	16	12	10	49.2	17	31.1	17.2	17.2	4.3	21.6	982P-10	347615	o. r.
12	8	16	12	10	54.7	20.5	35.5	21	21	4.3	33	982P-12-8	347627	o. r.
12	10	16	12	10	55.4	20.5	35.5	21	21	4.3	36	982P-12-10	347616	o. r.
12	12	16	12	10	55.5	20.5	35.5	21	21	4.3	39.5	982P-12	347617	o. r.
14	12	12	10	8	56.5	22	36.5	23	23	4.3	44.9	982P-14-12	347618	o. r.
14	14	12	10	8	56.5	22	36.5	23	23	4.3	40.1	982P-14	347619	o. r.

Illustration

Double Y-Connector

 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
Plastic POM

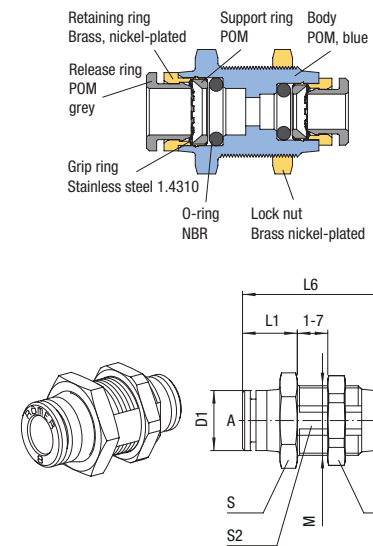
for tube AD	for tube BD	permitted OP [bar] at medium temp.			L1	L2	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C								
6	6	16	12	10	40.8	17.6	17	13.7	19,5	984P-6	347660	o. r.
8	6	16	12	10	41.2	17.6	17	13.7	19,8	984P-8-6	347661	o. r.

Illustration


Straight Bulkhead Connector

 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$. $T_{max} +60\text{ °C}$
Plastic POM

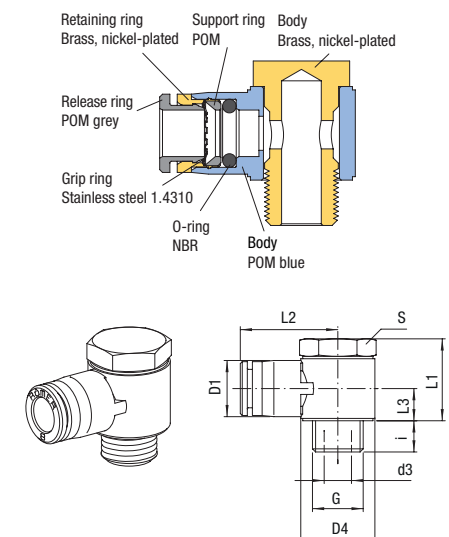
for tube AD	for tube BD	permitted OP [bar] at medium temp.			M	L1	L6	D1	D2	S	S2	S3	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C												
4	4	16	16	12	M14x1	10.5	31.4	9.4	9.4	17	12.5	17	9	959P-4	348604	o. r.
6	4	16	12	10	M14x1	11	32	11.4	9.4	17	12.5	17	9.2	959P-6-4	348608	o. r.
6	6	16	12	10	M14x1	11	32	11.4	11.4	17	12.5	17	9.4	959P-6	348610	o. r.
8	6	16	12	10	M16x1	13	36	13.8	11.4	19	14.5	19	12.4	959P-8-6	348611	o. r.
8	8	16	12	10	M16x1	12.7	36.2	13.8	13.8	19	14.5	17	12.8	959P-8	348612	o. r.
10	8	16	12	10	M20x1	13.4	40.5	16.4	13.8	22	18	24*	20.3	959P-10-8	348614	o. r.
10	10	16	12	10	M20x1	13	41	16.4	16.4	22	18	24*	20.8	959P-10	348615	o. r.

Illustration

Banjo Fitting

 Price group **12** permitted OP at ambient temp.
 $T_{min} -20\text{ °C}$. $T_{max} +60\text{ °C}$ Cylindrical thread

Plastic POM

for tube D	G	permitted OP [bar] at medium temp.			i**	L1**	L2	L3**	d3	D1	D4	S	Weight in [g]	Type	Order number	Price
		20 °C	60 °C	80 °C												
4	M 5	16	12	10	3.5	14	17.1	5.5	2	8	9	8	5.4	952P-4-M5	370404	o. r.
4	G 1/8	16	12	10	6	20.5	22.2	8.3	5	14.4	15	14	18.1	952P-4-1/8	370406	o. r.
6	M 5	16	12	10	3.5	14.5	17.9	5.5	2	10	9	8	5.7	952P-6-M5	370410	o. r.
6	G 1/8	16	12	10	6	20.5	22.6	8.3	5	14.4	15	14	18.3	952P-6-1/8	370412	o. r.
6	G 1/4	16	12	10	8	20.5	24.6	8.3	7	14.4	19	17	30.1	952P-6-1/4	370413	o. r.
8	G 1/8	16	12	10	6	20.5	23.1	8.3	5	14.4	15	14	18.4	952P-8-1/8	370416	o. r.
8	G 1/4	16	12	10	8	21	25.1	8.3	7	14.4	19	17	30	952P-8-1/4	370417	o. r.
8	G 3/8	16	12	10	8	26.5	28.5	10.8	9.5	17.2	22.4	19	49.1	952P-8-3/8	370418	o. r.
10	G 1/4	16	12	10	7.5	25	27.5	10.3	7	17.2	19	17	35.7	952P-10-1/4	370421	o. r.
10	G 3/8	16	12	10	8	26.5	29.2	10.5	9.5	17.2	22.4	19	50.8	952P-10-3/8	370422	o. r.
10	G 1/2	16	12	10	7.8	27.7	33.2	11.4	12	21	27	27	87	952P-10-1/2	370423	o. r.
12	G 3/8	16	12	10	6.8	27.7	31	11.4	9.5	21	22.4	19	56	952P-12-3/8	370425	o. r.
12	G 1/2	16	12	10	7.8	27.7	33.3	11.4	12	21	27	27	89.5	952P-12-1/2	370426	o. r.
14	G 1/2	12	10	8	8.8	31.7	34.2	13.4	12	25	27	27	103	952P-14-1/2	370428	o. r.
16	G 1/2	12	8	6	8.8	31.7	34.2	13.4	12	25	27	27	101.4	952P-16-1/2	370430	o. r.

Illustration


* S24 = octagon **Approximate dimensions with tightened screw connection

ELSA Fittings PVDF (Push-in)

ELSA the Established push-in connector from AVS Römer


PVDF version

Operating pressure Technical vacuum up to maximum pressure as stated in the respective specification table under OP. Temperature range 0 °C to +120 °C (for restrictions see specification table)

Application

ELSA push-in fittings made of PVDF, due to their very high chemical resistance even at high temperatures, are mainly used in the chemical industries. These push-in fittings are equipped with FDA-compliant FKM sealing rings as standard, on request, these are also available with FDA-compliant EPDM sealing rings approved according to the UBA elastomer guidelines.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

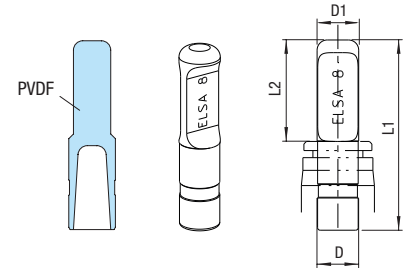
Plastic PVDF	Polyvinylidene fluoride. Suitable for many aggressive media. The FKM sealing ring is FDA-compliant and can be used in the food and pharmaceutical industries.	
Other materials	see relevant products	
Approval	NSF/ANSI 169, PVDF body conforms to KTW-BWGL	
TUBE		
Outside diameter [mm]	4, 6 and 8	10, 12
Permitted tolerance [mm]	±0.1	±0.15
Permitted grades	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
THREAD		
External thread	"M" cylindrical thread: Metric ISO thread M5	
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 3/8	
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 1/4	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Max. Operating pressure OP at the stated ambient temp. and medium temp. according to table	Means that the allowable operating pressure OP within the allowable ambient temperature also depends on the medium temperature in accordance with the specification table.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		
THREAD SEAL		
Cylindrical threaded nipple	Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples
"ROTATABLE" VERSION		
90° elbow-, T- and Y-adaptors, male	not suitable for rotating or oscill. movements	Some types of fittings rotate 360° in order to facilitate alignment during assembly.
SPECIAL VERSIONS (NOT INCLUDED IN THE CATALOG)		
We also manufacture ELSA push-in fittings in various customer-specific versions. <ul style="list-style-type: none"> • other O-ring materials such as EPDM, FDA-compliant • for pipes/tubes with inch dimensions • "R" conical threaded fitting • Execution according to ASTM G93 or EN ISO 15001 for oxygen use 		

Push-in Plug

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic PVDF

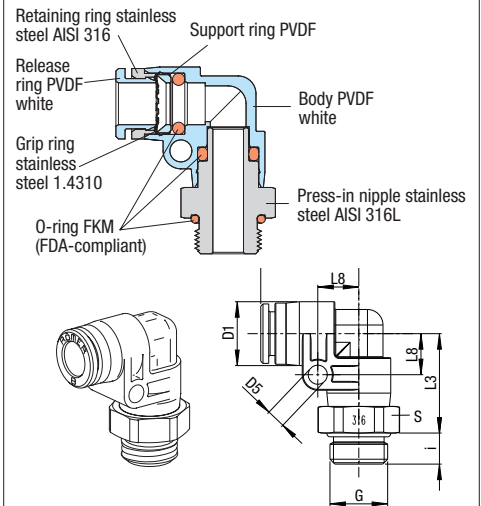
for push-in connector D	Max. allow. OP [bar] at medium temp.			L1	L2 approx.	D1	Weight in [g]	Type	Order number	Price
	20 °C	100 °C	120 °C							
4	16	16	10	31.5	16.8	6.2	0.7	971V-4	237454	o. r.
6	16	16	10	34.5	18.9	8.2	1.3	971V-6	237460	o. r.
8	16	12	10	37.5	20	8.2	1.7	971V-8	237462	o. r.
10	16	12	10	40.5	21	8	2.4	971V-10	237465	o. r.
12	12	6	3	44	22	8	3.1	971V-12	237467	o. r.
14	12	6	3	44.5	22	8	3.7	971V-14	237469	o. r.

Illustration

90° Elbow Adaptor - Male - Positionable

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$ Thread cylindrical Thread sealed by a FKM O-Ring in recess not suitable for rotating or oscill. movement

Plastic PVDF

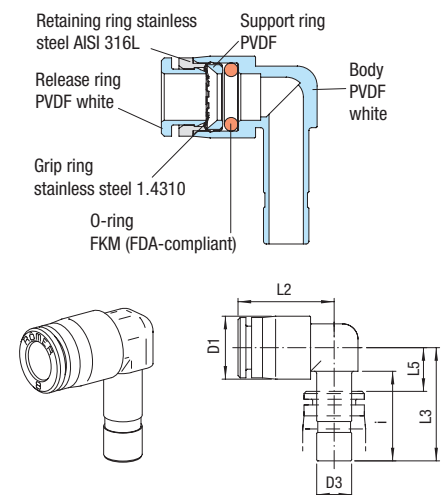
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	L8	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C										
4	M 5	16	10	3	3.5	14.7	11	-	9.8	-	8	3.9	930V-4FF-M5	367334
4	G 1/8	16	10	3	5	18.6	19.3	8.2	12.4	4.3	13	14.8	930V-4FF-1/8	367335
4	G 1/4	16	10	3	7	18.6	19.8	8.2	12.4	4.3	17	24.6	930V-4FF-1/4	367348
6	M 5	16	10	3	3.5	16.7	11	-	11.8	-	8	4.7	930V-6FF-M5	367336
6	G 1/8	16	10	3	5	19	19.3	8.2	12.4	4.3	13	15.7	930V-6FF-1/8	367337
6	G 1/4	16	10	3	7	19	19.8	8.2	12.4	4.3	17	24.9	930V-6FF-1/4	367338
8	G 1/8	16	8	3	5	22.1	21.9	9.2	14.4	4.3	14	19	930V-8FF-1/8	367339
8	G 1/4	16	8	3	7	22.1	22.4	9.2	14.4	4.3	17	26.8	930V-8FF-1/4	367340
8	G 3/8	16	8	3	8	22.1	22.4	9.2	14.4	4.3	19	35.2	930V-8FF-3/8	367341
10	G 1/4	12	6	3	7	26.1	25.7	12	17.2	4.3	17	31.8	930V-10FF-1/4	367342
10	G 3/8	12	6	3	8	26	25.7	12	17.2	4.3	19	40.1	930V-10FF-3/8	367343
12	G 1/4	12	6	3	7	31	30.5	12	23	4.3	22	58.1	930V-12FF-1/4	367349
12	G 3/8	12	6	3	8	31	30.5	12	23	4.3	22	58	930V-12FF-3/8	367350

Illustration

90° Elbow Connector with Stem

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$

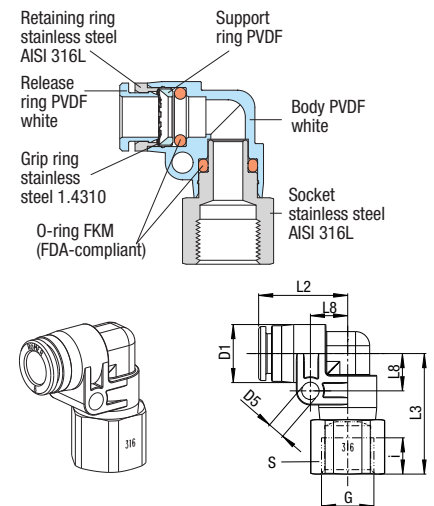
Plastic PVDF

for tube D	Stem D3	Max. allow. OP [bar] at medium temp.			l	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C									
4	4	16	10	3	17	18.6	21.4	12.4	6.6	4	911V-4FF-D4	367028	o. r.
4	6	16	10	3	18	18.6	22.4	12.4	6.8	3.8	911V-4FF-D6	367029	o. r.
6	4	16	10	3	17	19	21.4	12.4	6.6	4.2	911V-6FF-D4	367030	o. r.
6	6	16	10	3	18	19	22.4	12.4	6.8	4.3	911V-6FF-D6	367031	o. r.
6	8	16	10	3	20.5	21.6	25.9	14.4	8.3	6.3	911V-6FF-D8	367032	o. r.
8	8	16	8	3	20.5	22.1	25.9	14.4	8.3	6.4	911V-8FF-D8	367033	o. r.
8	10	16	8	3	24	25.4	32.1	17.2	12	9.8	911V-8FF-D10	367034	o. r.
10	10	12	6	3	24	26.1	32.1	17.2	12	10.2	911V-10FF-D10	367035	o. r.

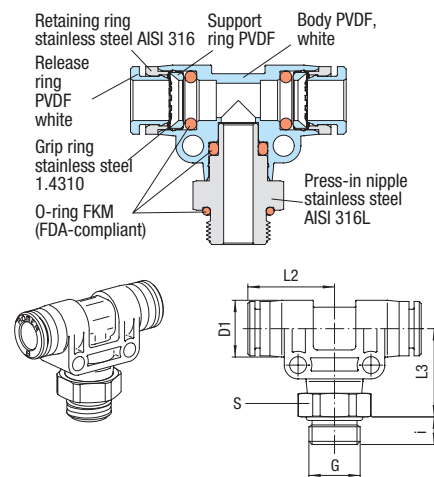
Illustration


90° Elbow Adaptor - Female - Positionable

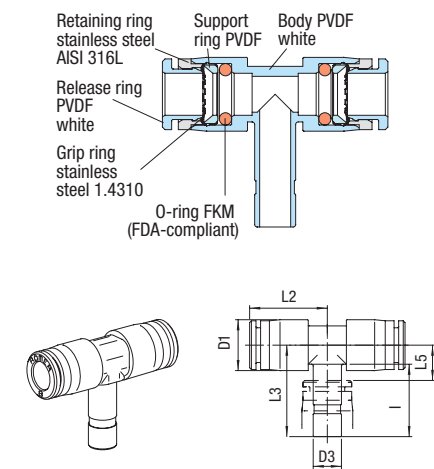
Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$			Thread cylindrical	not suitable for rotating or oscill. movement						Plastic PVDF		
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	L8	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C										
4	G 1/8	16	10	3	6.5	18.6	24.3	8.2	12.4	4.3	13	16.3	979V-4FF-1/8	367880
4	G 1/4	16	10	3	9	18.6	27.3	8.2	12.4	4.3	17	24.7	979V-4FF-1/4	367881
6	G 1/8	16	10	3	6.5	19	24.3	8.2	12.4	4.3	13	16.3	979V-6FF-1/8	367882
6	G 1/4	16	10	3	9	19	27.3	8.2	12.4	4.3	17	24.7	979V-6FF-1/4	367883
8	G 1/8	16	8	3	6.5	22.1	26.2	9.2	14.4	4.3	17	24.9	979V-8FF-1/8	367884
8	G 1/4	16	8	3	9	22.1	31.4	9.2	14.4	4.3	17	26.6	979V-8FF-1/4	367885

Illustration

T-Adaptor - Male - Positionable

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$			Thread cylindrical	Thread sealed by a FKM O-Ring in recess					not suitable for rotating or oscill. movement			Plastic PVDF	
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	L8	L9	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C											
4	G 1/8	16	10	3	5	18.6	19.3	8.2	16.5	12.4	4.3	13	19.4	921V-4FF-1/8	367356
4	G 1/4	16	10	3	7	18.6	19.8	8.2	16.5	12.4	4.3	17	28.5	921V-4FF-1/4	367357
6	G 1/8	16	10	3	5	19	19.3	8.2	16.5	12.4	4.3	13	19.7	921V-6FF-1/8	367362
6	G 1/4	16	10	3	7	19	19.8	8.2	16.5	12.4	4.3	17	28.4	921V-6FF-1/4	367363
8	G 1/8	16	8	3	5	22.1	21.9	9.2	18.5	14.4	4.3	14	24	921V-8FF-1/8	367366
8	G 1/4	16	8	3	7	22.1	22.4	9.2	18.5	14.4	4.3	17	31.4	921V-8FF-1/4	367367
8	G 3/8	16	8	3	8	22.1	22.4	9.2	18.5	14.4	4.3	19	39.9	921V-8FF-3/8	367368
10	G 1/4	12	6	3	7	26.1	25.7	12	24	17.2	4.3	17	40.2	921V-10FF-1/4	367371
10	G 3/8	12	6	3	8	26.1	25.7	12	24	17.2	4.3	19	48.3	921V-10FF-3/8	367372
12	G 1/4	12	6	3	7	31	30.5	12	24	21	4.3	22	68.5	921V-12FF-1/4	367374
12	G 3/8	12	6	3	8	31	30.5	12	24	21	4.3	22	8.8	921V-12FF-3/8	367375

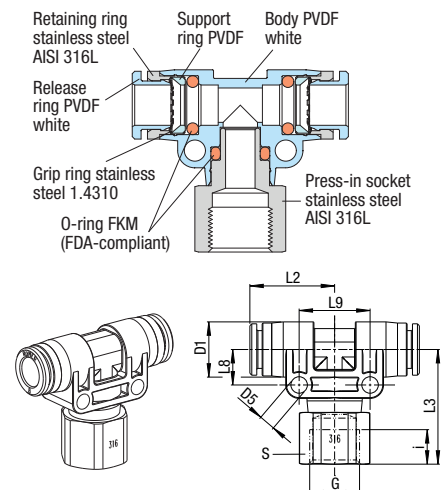
Illustration

T-Stem Connector

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$									Plastic PVDF		
for tube D	Stem D3	Max. allow. OP [bar] at medium temp.			l	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C									
4	4	16	10	3	17	18.6	21.4	12.4	6.6	7.1	912V-4FF-D4	367036	o. r.
4	6	16	10	3	18	18.6	22.4	12.4	6.8	7	912V-4FF-D6	367037	o. r.
6	4	16	10	3	17	19	21.4	12.4	6.6	7.1	912V-6FF-D4	367038	o. r.
6	6	16	10	3	18	19	22.4	12.4	6.8	7.2	912V-6FF-D6	367039	o. r.
6	8	16	10	3	20.5	21.6	25.9	14.4	8.3	10.2	912V-6FF-D8	367040	o. r.
8	8	16	8	3	20.5	22.1	25.9	14.4	8.3	10.7	912V-8FF-D8	367041	o. r.
8	10	16	8	3	24	25.4	32.1	17.2	12	15.9	912V-8FF-D10	367042	o. r.
10	10	12	6	3	24	26.1	32.1	17.2	12	16.8	912V-10FF-D10	367043	o. r.

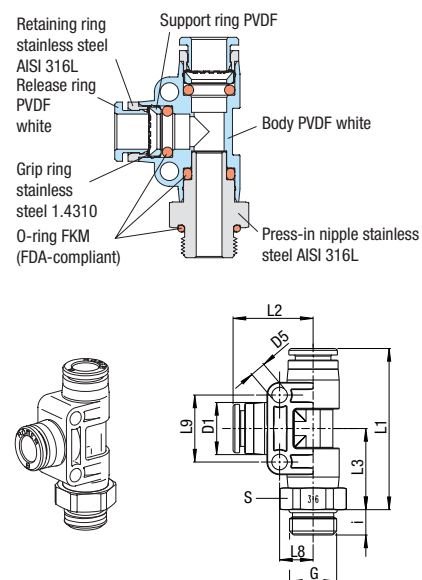
Illustration


T-Adaptor - Female - Positionable

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$			Thread cylindrical		not suitable for rotating or oscill. movement								Plastic PVDF
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	L8	L9	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C											
4	G 1/8	16	10	3	6.5	18.6	24.3	8.2	16.5	12.4	4.3	13	19.9	970V-4FF-1/8	367888
4	G 1/4	16	10	3	9	18.6	27.3	8.2	16.5	12.4	4.3	17	28.3	970V-4FF-1/4	367889
6	G 1/8	16	10	3	6.5	19	24.3	8.2	16.5	12.4	4.3	13	19.9	970V-6FF-1/8	367890
6	G 1/4	16	10	3	9	19	27.3	8.2	16.5	12.4	4.3	17	28.3	970V-6FF-1/4	367891
8	G 1/8	16	8	3	6.5	22.1	26.2	9.2	18.5	14.4	4.3	17	29.9	970V-8FF-1/8	367892
8	G 1/4	16	8	3	9	22.1	29.9	9.2	18.5	14.4	4.3	17	32	970V-8FF-1/4	367893

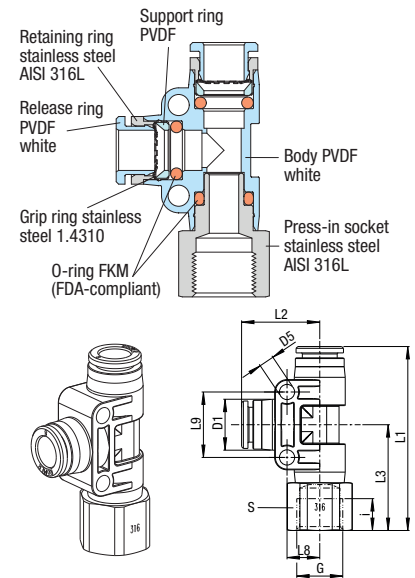
Illustration

Side T-Adaptor - Male - Positionable

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$			Thread cylindrical		Thread sealed by a FKM O-Ring in recess		not suitable for rotating or oscill. movement								Plastic PVDF
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L3	L8	L9	D1	D5	S	Weight in [g]	Type	Order number	
		20 °C	100 °C	120 °C													
4	G 1/8	16	10	3	5	37.9	18.6	19.3	8.2	16.5	12.4	4.3	13	19.2	922V-4FF-1/8	367406	
4	G 1/4	16	10	3	7	38.4	18.6	19.8	8.2	16.5	12.4	4.3	17	28.3	922V-4FF-1/4	367407	
6	G 1/8	16	10	3	5	38.3	19	19.3	8.2	16.5	12.4	4.3	13	19.7	922V-6FF-1/8	367412	
6	G 1/4	16	10	3	7	38.8	19	19.8	8.2	16.5	12.4	4.3	17	28.4	922V-6FF-1/4	367413	
8	G 1/8	16	8	3	5	44	22.1	21.9	9.2	18.5	14.4	4.3	14	23.8	922V-8FF-1/8	367416	
8	G 1/4	16	8	3	7	44.5	22.1	22.4	9.2	18.5	14.4	4.3	17	31.5	922V-8FF-1/4	367417	
8	G 3/8	16	8	3	8	44.5	22.1	22.4	9.2	18.5	14.4	4.3	19	39.8	922V-8FF-3/8	367418	
10	G 1/4	12	6	3	7	51.8	26.1	25.7	12	24	17.4	4.3	17	39.8	922V-10FF-1/4	367421	
10	G 3/8	12	6	3	8	51.8	26.1	25.7	12	24	17.2	4.3	19	48.4	922V-10FF-3/8	367422	
12	G 1/4	12	6	3	7	61.5	31	30.5	12	24	21	4.3	22	68.5	922V-12FF-1/4	367424	
12	G 3/8	12	6	3	8	61.5	31	30.5	12	24	21	4.3	22	68.8	922V-12FF-3/8	367425	

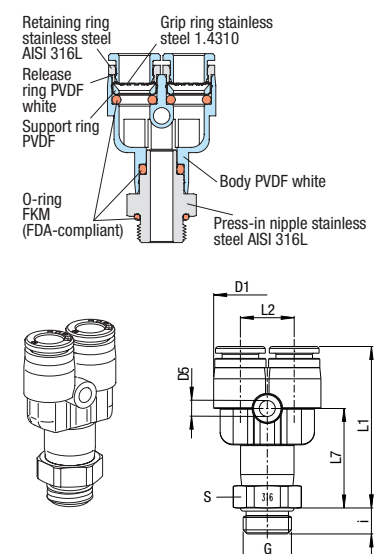
Illustration


Side T-Adaptor - Female - Positionable

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$			Thread cylindrical	not suitable for rotating or oscill. movement						Plastic PVDF				
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L3	L8	L9	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C												
4	G 1/8	16	10	3	6.5	42.9	18.6	24.3	8.2	16.5	12.4	4.3	13	19.9	923V-4FF-1/8	367810
4	G 1/4	16	10	3	9	45.9	18.6	27.3	8.2	16.5	12.4	4.3	17	28.3	923V-4FF-1/4	367811
6	G 1/8	16	10	3	6.5	43.3	19	24.3	8.2	16.5	12.4	4.3	13	19.9	923V-6FF-1/8	367812
6	G 1/4	16	10	3	9	46.3	19	27.3	8.2	16.5	12.4	4.3	17	28.3	923V-6FF-1/4	367813
8	G 1/8	16	8	3	6.5	48.3	22.1	25.2	9.2	18.5	14.4	4.3	17	29.9	923V-8FF-1/8	367814
8	G 1/4	16	8	3	9	53.5	22.1	31.4	9.2	18.5	14.4	4.3	17	32	923V-8FF-1/4	367815

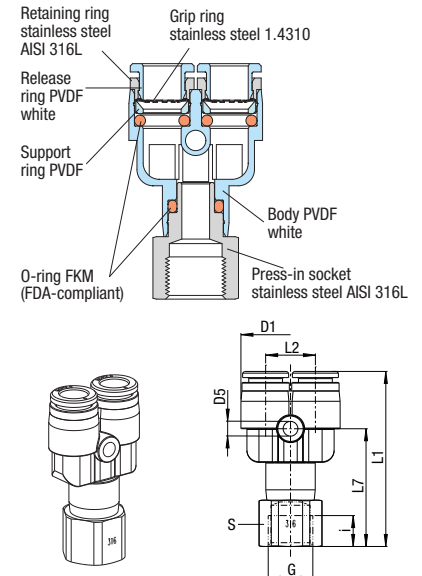
Illustration

Y-Adaptor - Male - Positionable

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$			Thread cylindrical	Thread sealed by a FKM O-Ring in recess	not suitable for rotating or oscill. movement						Plastic PVDF	
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L7	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C										
4	G 1/8	16	10	3	5	37.9	12.5	23.3	12.4	3.3	13	19.1	992V-4FF-1/8	367456
4	G 1/4	16	10	3	7	38.4	12.5	23.8	12.5	3.3	17	28	992V-4FF-1/4	367457
6	G 1/8	16	10	3	5	38.3	12.5	23.3	12.4	3.3	13	19.6	992V-6FF-1/8	367462
6	G 1/4	16	10	3	7	38.8	12.5	23.8	12.4	3.3	17	28.3	992V-6FF-1/4	367463
8	G 1/8	16	8	3	5	43	14.5	26.3	14.4	4.3	14	24.1	992V-8FF-1/8	367466
8	G 1/4	16	8	3	7	43.5	14.5	26.8	14.5	4.3	17	31.9	992V-8FF-1/4	367467
8	G 3/8	16	8	3	8	43.5	14.5	26.8	14.5	4.3	19	40.2	992V-8FF-3/8	367468
10	G 1/4	12	6	3	7	48.9	17	30.7	17.2	4.3	17	38.6	992V-10FF-1/4	367471
10	G 3/8	12	6	3	8	48.9	17	30.7	17.2	4.3	19	47.1	992V-10FF-3/8	367472
12	G 1/4	12	6	3	7	55	20.5	35	21	4.3	22	65.1	992V-12FF-1/4	367474
12	G 3/8	12	6	3	8	55	20.5	35	21	4.3	22	74.1	992V-12FF-3/8	367475

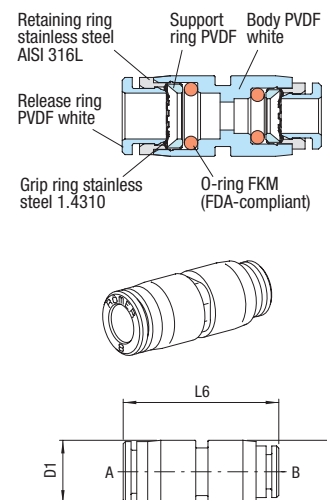
Illustration


Y-Adaptor - Female - Positionable

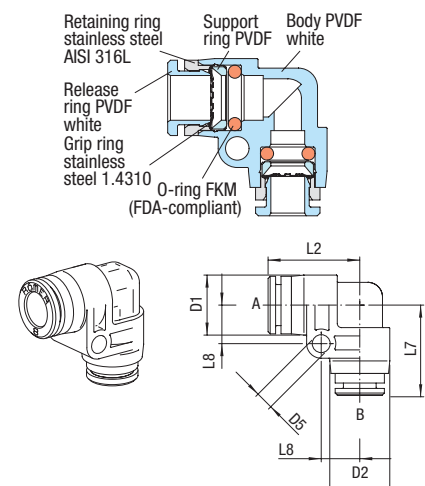
Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$			Thread cylindrical	not suitable for rotating or oscill. movement							Plastic PVDF	
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L7	D1	D5	S	Weight in [g]	Type	Order number
		20 °C	100 °C	120 °C										
4	G 1/8	16	10	3	6.5	42.9	12.5	28.3	12.4	3.3	13	19.9	993V-4FF-1/8	367820
4	G 1/4	16	10	3	9	45.9	12.5	31.3	12.4	3.3	17	28.4	993V-4FF-1/4	367821
6	G 1/8	16	10	3	6.5	43.3	12.5	28.3	12.4	3.3	13	19.7	993V-6FF-1/8	367822
6	G 1/4	16	10	3	9	46.3	12.5	31.3	12.4	3.3	17	28.1	993V-6FF-1/4	367823
8	G 1/8	16	8	3	6.5	47.3	14.5	30.6	14.4	4.3	17	30	993V-8FF-1/8	367824
8	G 1/4	16	8	3	9	52.5	14.5	35.8	14.4	4.3	17	32.1	993V-8FF-1/4	367825

Illustration

Straight Adaptor

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$				Plastic PVDF					
for tube D	for tube BD	Max. allow. OP [bar] at medium temp.			L6	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C							
4	4	16	10	3	30.1	10.4	10.4	6.4	958V-4FF	367504	o. r.
6	4	16	10	3	31.8	12.4	12.4	6.2	958V-6-4FF	367508	o. r.
6	6	16	10	3	32.2	12.4	12.4	6.2	958V-6FF	367510	o. r.
8	6	16	8	3	35.7	14.4	14.4	8.7	958V-8-6FF	367511	o. r.
8	8	16	8	3	36.2	14.4	14.4	8.9	958V-8FF	367512	o. r.
10	8	12	6	3	40.5	17.2	17.2	12.9	958V-10-8FF	367514	o. r.
10	10	12	6	3	41.2	17.2	17.2	13.6	958V-10FF	367515	o. r.
12	10	12	6	3	44.9	21	21	24.4	958V-12-10FF	367516	o. r.
12	12	12	6	3	45	21	21	21.4	958V-12FF	367517	o. r.

Illustration

90° Elbow Connector

Price group	12	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$				Plastic PVDF								
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L2	L7	L8	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C										
4	4	16	10	3	18.6	18.6	8.3	12.4	12.4	4.3	7.2	955V-4FF	367554	o. r.
6	4	16	10	3	19	18.6	8.3	12.4	12.4	4.3	7.2	955V-6-4FF	367558	o. r.
6	6	16	10	3	19	19	8.3	12.4	12.4	4.3	7.1	955V-6FF	367560	o. r.
8	6	16	8	3	22.1	21.6	9.3	14.4	14.4	4.3	10.2	955V-8-6FF	367561	o. r.
8	8	16	8	3	22.1	22.1	9.3	14.4	14.4	4.3	10.5	955V-8FF	367562	o. r.
10	6	12	6	3	26.1	24.9	12	17.2	17.2	4.3	16.3	955V-10-6FF	367563	o. r.
10	8	12	6	3	26.1	25.4	12	17.2	17.2	4.3	19.3	955V-10-8FF	367564	o. r.
10	10	12	6	3	26.1	26.1	12	17.2	17.2	4.3	17	955V-10FF	367565	o. r.
12	12	12	6	3	31	31	12	23	23	4.3	32.5	955V-12FF	367567	o. r.

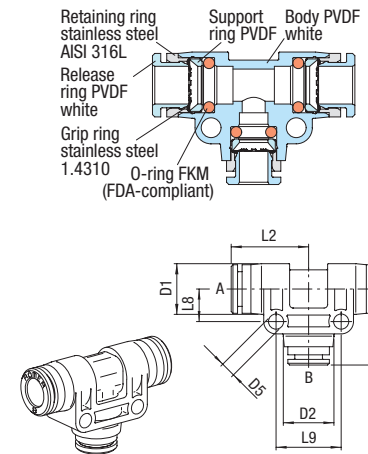
Illustration


T-Connector

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PVDF

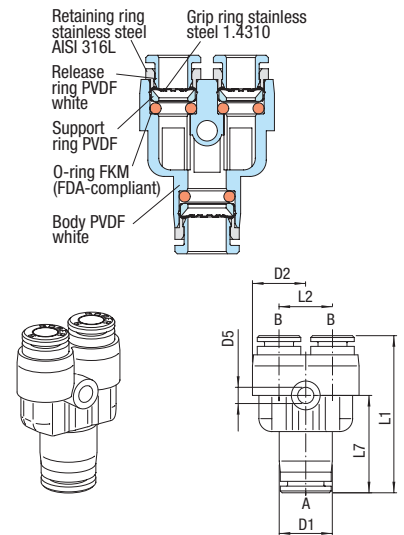
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L2	L7	L8	L9	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C											
4	4	16	10	3	18.6	18.6	8.3	16.5	12.4	12.4	4.3	10.7	954V-4FF	367604	o. r.
6	4	16	10	3	19	18.6	8.3	16.5	12.4	12.4	4.3	10.6	954V-6-4FF	367608	o. r.
6	6	16	10	3	19	19	8.3	16.5	12.4	12.4	4.3	10.9	954V-6FF	367610	o. r.
6	8	16	8	3	21.6	22.1	9.3	18.5	14.4	14.4	4.3	15.4	954V-6-8FF	367639	o. r.
8	6	16	8	3	22.1	21.6	9.3	18.5	14.4	14.4	4.3	15.1	954V-8-6FF	367611	o. r.
8	8	16	8	3	22.1	22.1	9.3	18.5	14.4	14.4	4.3	15.2	954V-8FF	367612	o. r.
10	6	12	6	3	26.1	24.9	12	24	17.2	17.2	4.3	24.5	954V-10-6FF	367613	o. r.
10	8	12	6	3	26.1	25.4	12	24	17.2	17.2	4.3	24.7	954V-10-8FF	367614	o. r.
10	10	12	6	3	26.1	26.1	12	24	17.2	17.2	4.3	25	954V-10FF	367615	o. r.
12	12	12	6	3	31	31	12	24	21	21	4.3	41.9	954V-12FF	367617	o. r.

Illustration

Y-Connector

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PVDF

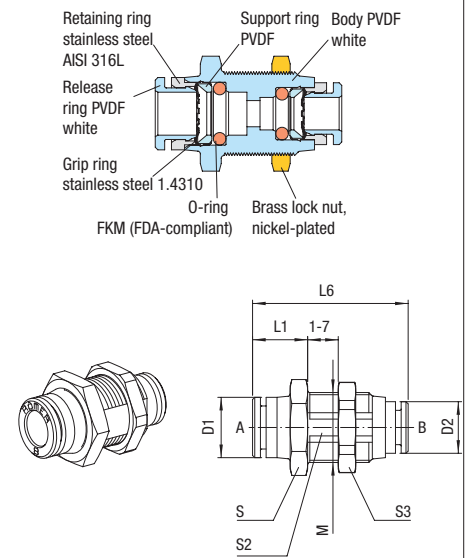
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L1	L2	L7	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C										
4	4	16	10	3	37.2	12.5	22.6	12.4	12.5	3.3	10.5	982V-4FF	367654	o. r.
6	4	16	10	3	37.6	12.5	23	12.4	12.5	3.3	10.6	982V-6-4FF	367658	o. r.
6	6	16	10	3	38	12.5	23	12.4	12.5	3.3	10.7	982V-6FF	367660	o. r.
8	6	16	8	3	42.7	14.5	26.5	14.4	14.5	4.3	15.6	982V-8-6FF	367661	o. r.
8	8	16	8	3	43.2	14.5	26.5	14.4	14.4	4.3	16	982V-8FF	367662	o. r.
10	8	12	6	3	48.5	17	31.1	17.2	17.2	4.3	23.3	982V-10-8FF	367664	o. r.
10	10	12	6	3	49.2	17	31.1	17.2	17.2	4.3	24.4	982V-10FF	367665	o. r.
12	12	12	6	3	55.5	20.5	35.5	21	21	4.3	38.4	982V-12FF	367667	o. r.

Illustration

Straight Bulkhead Connector

 Price group **12** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PVDF

for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			M	L1	L6	D1	D2	S	S2	S3	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	120 °C												
4	4	16	10	3	M14x1	10	31	9.4	9.4	17	12.5	17	10	959V-4FF	367704	o. r.
6	4	16	10	3	M14x1	11	31.8	11.4	9.4	17	12.5	17	10.1	959V-6-4FF	367708	o. r.
6	6	16	10	3	M14x1	11	32.2	11.4	11.4	17	12.5	17	10.2	959V-6FF	367710	o. r.
8	6	16	8	3	M16x1	12.7	35.7	13.8	11.4	19	14.5	19	13.7	959V-8-6FF	367711	o. r.
8	8	16	8	3	M16x1	13	36	13.8	13.8	19	14.5	19	13.6	959V-8FF	367712	o. r.
10	8	12	6	3	M20x1	13.4	40.5	16.4	13.8	22	18	24*	22.6	959V-10-8FF	367714	o. r.
10	10	12	6	3	M20x1	13	41	16.4	16.4	22	18	24*	23.1	959V-10FF	367715	o. r.

Illustration


* S24 = Octagon



ELSA Fittings PPSU (Push-in)

ELSA the Established push-in connector from AVS Römer



PPSU version

Operating pressure Technical vacuum up to maximum pressure as stated in the respective specification table under OP.

Temperature range 0 °C to +140 °C (for restrictions see specification table)

Application

ELSA push-in connectors made from PPSU are used mainly in the food industries for liquids with temperatures up to 140 °C. (hot water, coffee, steam,...). These push-in connectors are equipped with FDA-compliant FKM sealing rings as standard, on request, these are also available with FDA-compliant EPDM sealing rings approved according to the UBA elastomer guidelines. These high-tech plastic fittings are a low-cost alternative to stainless steel fittings in many areas of application.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Plastic PPSU	Polyphenylsulfone. Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). The FKM sealing ring is FDA-compliant and can be used in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!
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Other materials	see relevant products
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Approval	NSF/ANSI 169, PPSU body conforms to KTW-BWGL
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TUBE

Outside diameter [mm]	4, 6, 8 and 10
Permitted tolerance [mm]	±0.1
Permitted grades	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)

THREAD

External thread	"M" cylindrical thread: Metric ISO thread M5
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 3/8
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 1/4

OPERATING PRESSURE / TEMPERATURE

Plastic version	Max. Operating pressure OP at the stated ambient temp. and medium temp. according to table	Means that the allowable operating pressure OP within the allowable ambient temperature also depends on the medium temperature in accordance with the specification table.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		

THREAD SEAL

Cylindrical threaded nipple	Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples
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"ROTATABLE" VERSION

90° elbow-, T- and Y-adaptors, male	not suitable for rotating or oscill. movements	Some types of fittings rotate 360° in order to facilitate alignment during assembly.
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SPECIAL VERSIONS (NOT INCLUDED IN THE CATALOG)

We also manufacture ELSA push-in fittings in various customer-specific versions.

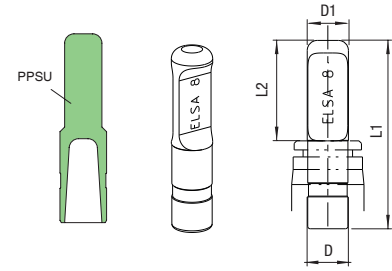
- other O-ring materials such as EPDM, FDA-compliant
- for pipe/tube with inch dimensions
- "R" conical threaded fitting
- Execution according to ASTM G93 or EN ISO 15001 for oxygen use

Push-in Plug

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic PPSU

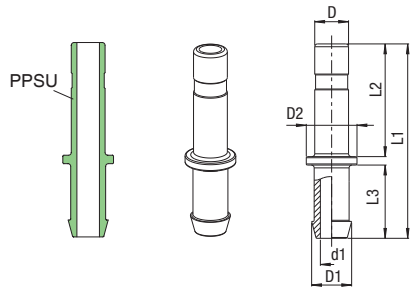
for push-in connector D	Max. allow. OP [bar] at medium temp.			L1	L2	D1	Weight in [g]	Type	Order number	Price
	20 °C	100 °C	140 °C							
4	20	16	10	31.5	16.7	6.2	0.5	971P3-4	237495	o. r.
6	20	16	10	34.5	18.9	8.2	1.1	971P3-6	237496	o. r.
8	16	12	10	37.5	19.9	8.2	1.3	971P3-8	237497	o. r.

Illustration

Straight Stem Connector with Hose Tail

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$

Plastic PPSU

for push-in connection	for tube LW	Max. allow. OP [bar] at medium temp.			d1	L1	L2	L3	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C										
4	2.7-3	20	16	10	1.8	27	17	8.5	3.6	5.5	0.3	907P3-D4-3	281181	o. r.
4	3.5-4	20	16	10	2.5	28.5	17	10	5.1	6	0.4	907P3-D4-4	281182	o. r.
6	2.7-3	20	16	10	1.8	28.5	20	8.5	3.6	6	0.5	907P3-D6-3	281183	o. r.
6	3.5-4	20	16	10	2.8	30	20	10	5.1	6	0.6	907P3-D6-4	281184	o. r.
6	5-6	20	16	10	4	34.5	20	13	7.1	9	0.9	907P3-D6-7	281185	o. r.
6	7-8	20	16	10	4	39	18	19.5	9.5	13	1.3	907P3-D6-9	281187	o. r.

Illustration

Straight Adaptor - Male

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$

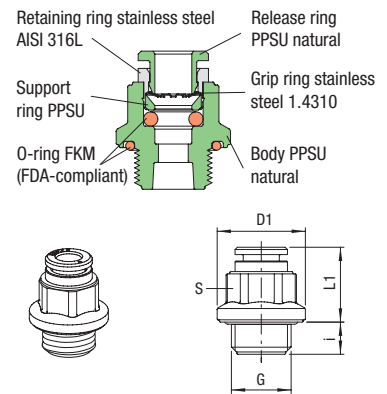
Thread cylindrical

Thread sealed by a FKM O-Ring in recess

Tightening torque 3-3.5 Nm


Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C								
4	G 1/8	20	16	10	6	16.8	15.8	14	4.1	951P3-4FF-1/8	367051	o. r.
4	G 1/4	20	16	10	7	15.8	19.2	14	5	951P3-4FF-1/4	367052	o. r.
6	G 1/8	20	16	10	6	17.3	15.8	14	4.3	951P3-6FF-1/8	367053	o. r.
6	G 1/4	20	16	10	7	16.3	19.2	14	4.9	951P3-6FF-1/4	367054	o. r.
8	G 1/4	16	12	6	7	19.2	19.2	17	a. A.	951P3-8FF-1/4	367055	o. r.
8	G 3/8	16	12	6	8	17.2	22.8	17	a. A.	951P3-8FF-3/8	367056	o. r.

Illustration

90° Elbow Adaptor - Male - Positionable

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$

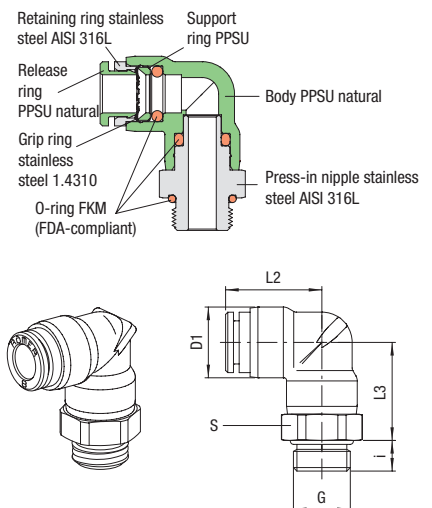
Thread cylindrical

Thread sealed by a FKM O-Ring in recess

not suitable for rotating or oscill. movement


Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	M 5	20	16	10	3.5	14.9	11.1	10	8	3.7	930P3-4FF-M5	367057	o. r.
4	G 1/8	20	16	10	5	17.7	18.4	11.9	13	12.8	930P3-4FF-1/8	367058	o. r.
4	G 1/4	20	16	10	7	18.9	20.1	13.9	17	24.6	930P3-4FF-1/4	367059	o. r.
6	M 5	20	16	10	3.5	16.9	11.1	12	8	4.3	930P3-6FF-M5	367060	o. r.
6	G 1/8	20	16	10	5	19.4	19.6	13.9	13	15.9	930P3-6FF-1/8	367061	o. r.
6	G 1/4	20	16	10	7	19.4	20.1	13.9	17	24.7	930P3-6FF-1/4	367062	o. r.
8	G 1/8	16	12	6	5	22.4	22.7	17.2	17	24.2	930P3-8FF-1/8	366805	o. r.
8	G 1/4	16	12	6	7	22.4	22.7	17.2	17	40.0	930P3-8FF-1/4	366806	o. r.
8	G 3/8	16	12	6	8	22.4	22.7	17.2	19	36.7	930P3-8FF-3/8	366807	o. r.

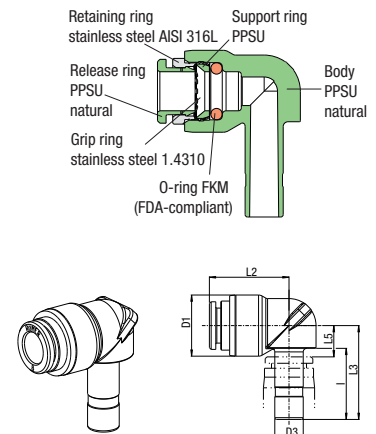
Illustration


90° Elbow Connector with Stem

 Price group **15** Max. allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C

Plastic PPSU

for tube D	Stem D3	Max. allow. OP [bar] at medium temp.			l	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	4	20	16	10	17	17.7	21.8	11.9	7	o. r.	911P3-4FF-D4	367001	o. r.
4	6	20	16	10	18	17.7	22.9	11.9	7.3	o. r.	911P3-4FF-D6	367002	o. r.
6	4	20	16	10	17	19.4	21.8	13.9	7	4	911P3-6FF-D4	367003	o. r.
6	6	20	16	10	18	19.4	22.9	13.9	7.3	4	911P3-6FF-D6	367004	o. r.
6	8	16	12	6	20	19.3	26.4	13.9	8.8	4.7	911P3-6FF-D8	367005	o. r.
8	8	16	12	6	20	22.4	26.4	17.2	8.8	7.6	911P3-8FF-D8	367006	o. r.

Illustration

90° Elbow Adaptor - Female - Positionable

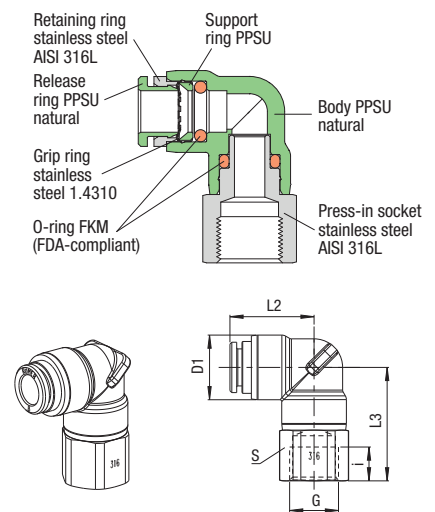
 Price group **15** Max. allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C

Thread cylindrical

not suitable for rotating or oscill. movement


Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	G 1/8	20	16	10	6.5	18.9	24.6	13.9	13	15.9	979P3-4FF-1/8	366762	o. r.
4	G 1/4	20	16	10	9	18.9	27.6	13.9	17	24.3	979P3-4FF-1/4	366763	o. r.
6	G 1/8	20	16	10	6.5	19.4	24.6	13.9	13	16.4	979P3-6FF-1/8	366764	o. r.
6	G 1/4	20	16	10	9	19.4	27.6	13.9	17	22.5	979P3-6FF-1/4	366765	o. r.
8	G 1/8	16	12	6	6.5	22.4	25	17.2	17	26.4	979P3-8FF-1/8	366766	o. r.
8	G 1/4	16	12	6	9	22.4	30.2	17.2	17	30.3	979P3-8FF-1/4	366767	o. r.

Illustration

T-Adaptor - Male - Positionable

 Price group **15** Max. allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C

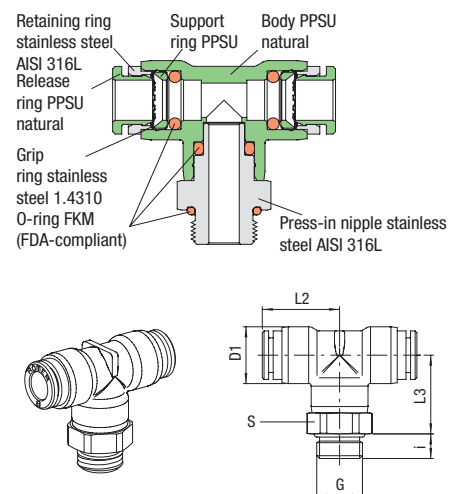
Thread cylindrical

Thread sealed by a FKM O-Ring in recess

not suitable for rotating or oscill. movement


Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	G 1/8	20	16	10	5	18.9	19.6	13.9	13	18.3	921P3-4FF-1/8	367065	o. r.
4	G 1/4	20	16	10	7	18.9	20.1	13.9	17	27.3	921P3-4FF-1/4	367066	o. r.
6	G 1/8	20	16	10	5	19.4	19.6	13.9	13	18.6	921P3-6FF-1/8	367067	o. r.
6	G 1/4	20	16	10	7	19.4	20.1	13.9	17	27.4	921P3-6FF-1/4	367068	o. r.
8	G 1/8	16	12	6	5	22.4	22.7	17.2	17	28.8	921P3-8FF-1/8	366810	o. r.
8	G 1/4	16	12	6	7	22.4	22.7	17.2	17	33.3	921P3-8FF-1/4	366811	o. r.
8	G 3/8	16	12	6	8	22.4	22.7	17.2	19	42.2	921P3-8FF-3/8	366812	o. r.

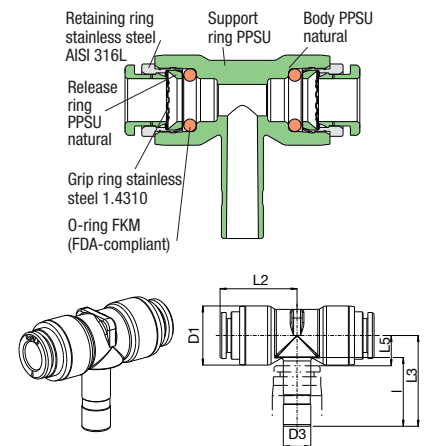
Illustration


T-Stem Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PPSU

for tube D	Stem D3	Max. allow. OP [bar] at medium temp.			l	L2	L3	D1	L5 approx.	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	4	20	16	10	17	17.7	21.8	12.7	7	6.2	912P3-4FF-D4	367007	o. r.
4	6	20	16	10	18	17.7	22.9	11.9	7.3	6.2	912P3-4FF-D6	367008	o. r.
6	4	20	16	10	17	19.3	21.8	13.9	7	6.3	912P3-6FF-D4	367009	o. r.
6	6	20	16	10	18	19.3	22.9	13.9	7.3	7.1	912P3-6FF-D6	367010	o. r.
6	8	16	12	6	20	19.3	26.4	13.9	8.8	8	912P3-6FF-D8	367011	o. r.
8	8	16	12	6	20	22.4	26.4	16.8	8.8	12.7	912P3-8FF-D8	367012	o. r.

Illustration

T-Adaptor - Female - Positionable

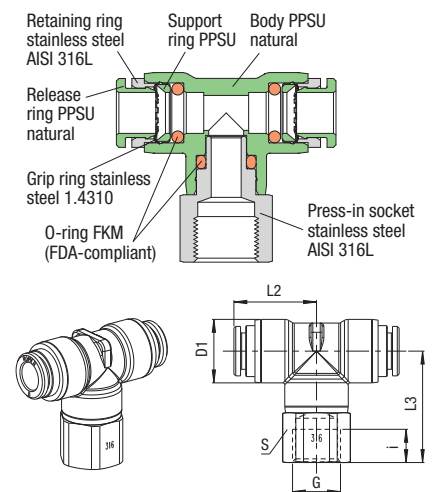
 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$

Thread cylindrical

not suitable for rotating or oscill. movement


Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	G 1/8	20	16	10	6.5	18.9	24.6	13.9	13	18.7	970P3-4FF-1/8	366770	o. r.
4	G 1/4	20	16	10	9	18.9	27.6	13.9	17	27.1	970P3-4FF-1/4	366771	o. r.
6	G 1/8	20	16	10	6.5	19.4	24.6	13.9	13	18	970P3-6FF-1/8	366772	o. r.
6	G 1/4	20	16	10	9	19.4	27.6	13.9	17	25.1	970P3-6FF-1/4	366773	o. r.
8	G 1/8	16	12	6	6.5	22.4	25	17.2	17	30.4	970P3-8FF-1/8	366774	o. r.
8	G 1/4	16	12	6	9	22.4	30.2	17.2	17	34.3	970P3-8FF-1/4	366775	o. r.

Illustration

Side T-Adaptor - Male - Positionable

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$

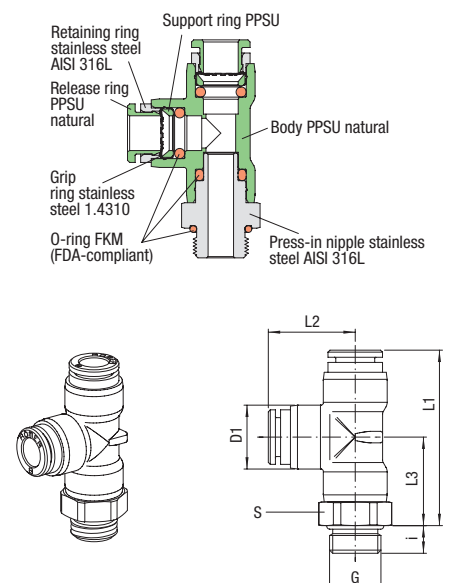
Thread cylindrical

Thread sealed by a FKM O-Ring in recess

not suitable for rotating or oscill. movement

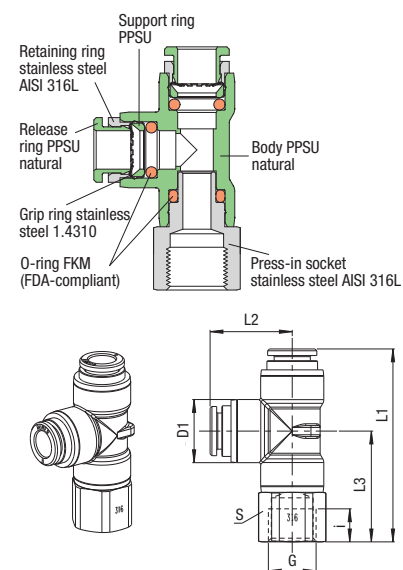

Plastic PPSU

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C										
4	G 1/8	20	16	10	5	38.5	18.9	19.6	13.9	13	18.3	922P3-4FF-1/8	367071	o. r.
4	G 1/4	20	16	10	7	39	18.9	20.1	13.9	17	27.3	922P3-4FF-1/4	367072	o. r.
6	G 1/8	20	16	10	5	39	19.4	19.6	13.9	13	18.6	922P3-6FF-1/8	367073	o. r.
6	G 1/4	20	16	10	7	39.5	19.4	20.1	13.9	17	27.6	922P3-6FF-1/4	367074	o. r.
8	G 1/8	16	12	6	6	44.1	22.4	21.7	17.2	17	28.8	922P3-8FF-1/8	366815	o. r.
8	G 1/4	16	12	6	7	45.1	22.4	22.7	17.2	17	33.3	922P3-8FF-1/4	366816	o. r.
8	G 3/8	16	12	6	8	45.1	22.4	22.7	17.2	19	42.2	922P3-8FF-3/8	366817	o. r.

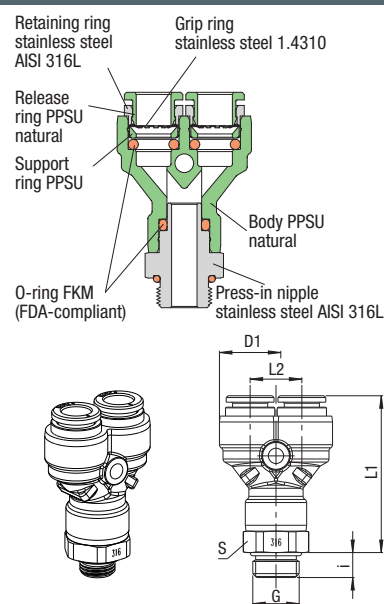
Illustration


Side T-Adaptor - Female - Positionable

for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C										
4	G 1/8	20	16	10	6.5	43.5	18.9	24.6	13.9	13	17.8	923P3-4FF-1/8	366778	o. r.
4	G 1/4	20	16	10	9	46.5	18.9	27.6	13.9	17	27.1	923P3-4FF-1/4	366779	o. r.
6	G 1/8	20	16	10	6.5	44	19.4	24.6	13.9	13	17.9	923P3-6FF-1/8	366780	o. r.
6	G 1/4	20	16	10	9	47	19.4	27.6	13.9	17	27.4	923P3-6FF-1/4	366781	o. r.
8	G 1/8	16	12	6	6.5	47.4	22.4	25	17.2	13	30.4	923P3-8FF-1/8	366782	o. r.
8	G 1/4	16	12	6	9	52.6	22.4	30.2	17.2	17	32	923P3-8FF-1/4	366783	o. r.

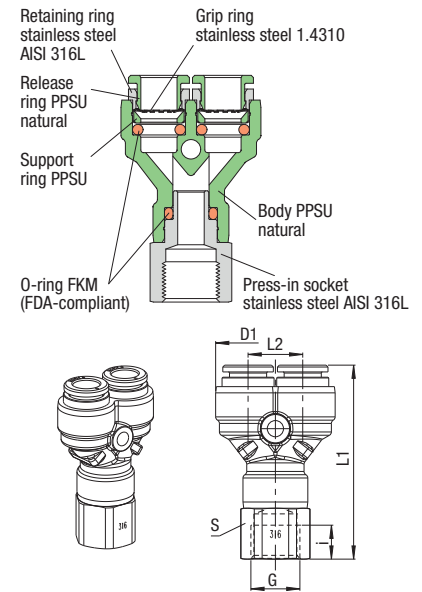
Illustration

Y-Adaptor - Male - Positionable

for tube D	G	Max. allow. OP at ambient temp. T _{min} 0 °C, T _{max} +60 °C			i	L1	L2	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	G 1/8	20	16	10	5	38.5	12.5	13.9	13	19.2	992P3-4FF-1/8	367077	o. r.
4	G 1/4	20	16	10	7	39	12.5	13.9	17	28.5	992P3-4FF-1/4	367078	o. r.
6	G 1/8	20	16	10	5	38.9	12.5	13.9	13	20.2	992P3-6FF-1/8	367079	o. r.
6	G 1/4	20	16	10	7	39.4	12.5	13.9	17	28.9	992P3-6FF-1/4	367080	o. r.
8	G 1/8	16	12	6	5	44	14.5	17.2	17	29.1	992P3-8FF-1/8	366820	o. r.
8	G 1/4	16	12	6	7	44	14.5	17.2	17	33.7	992P3-8FF-1/4	366821	o. r.
8	G 3/8	16	12	6	8	44	14.5	17.2	19	42.6	992P3-8FF-3/8	366822	o. r.

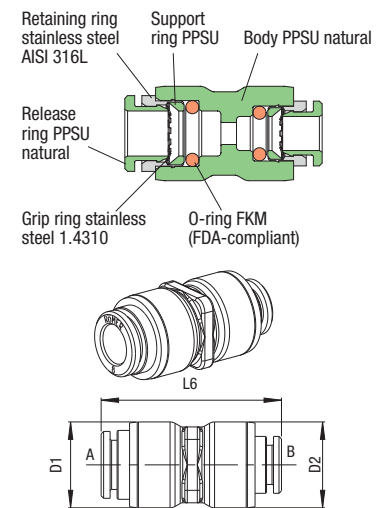
Illustration


Y-Adaptor - Female - Positionable

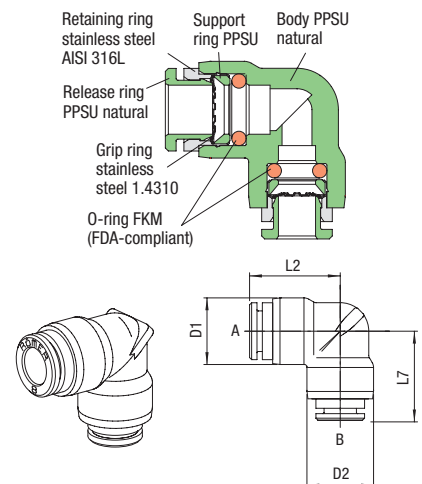
Price group	15	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$			Thread cylindrical	not suitable for rotating or oscill. movement					Plastic PPSU		
for tube D	G	Max. allow. OP [bar] at medium temp.			i	L1	L2	D1	S	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C									
4	G 1/8	20	16	10	6.5	43.5	12.5	13.2	13	18.6	993P3-4FF-1/8	366786	o. r.
4	G 1/4	20	16	10	9	46.5	12.5	13.2	17	27.9	993P3-4FF-1/4	366787	o. r.
6	G 1/8	20	16	10	6.5	43.9	12.5	13.2	13	19.7	993P3-6FF-1/8	366788	o. r.
6	G 1/4	20	16	10	9	46.9	12.5	13.2	17	28.1	993P3-6FF-1/4	366789	o. r.
8	G 1/8	16	12	6	6.5	47.8	14.5	15.9	17	31.3	993P3-8FF-1/8	366790	o. r.
8	G 1/4	16	12	6	9	53	14.5	15.9	17	33.7	993P3-8FF-1/4	366791	o. r.

Illustration

Straight Connector

Price group	15	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$					Plastic PPSU				
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L6	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C							
4	4	20	16	10	31.8	11.9	11.9	4.9	958P3-4FF	367083	o. r.
6	4	20	16	10	32.2	13.6	13.6	6	958P3-6-4FF	367084	o. r.
6	6	20	16	10	32.6	13.6	13.6	6.2	958P3-6FF	367085	o. r.
8	6	16	12	6	36.1	17.2	17.2	10.4	958P3-8-6FF	367086	o. r.
8	8	16	12	6	36.5	17.2	17.2	10	958P3-8FF	367087	o. r.

Illustration

90° Elbow Connector

Price group	15	Max. allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$					Plastic PPSU					
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L2	L7	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C								
4	4	20	16	10	17.7	17.7	11.9	11.9	5.2	955P3-4FF	367088	o. r.
6	4	20	16	10	19.4	18.9	13.9	13.9	7	955P3-6-4FF	367089	o. r.
6	6	20	16	10	19.4	19.4	13.9	13.9	7.5	955P3-6FF	367090	o. r.
8	6	16	12	6	22.4	22	17.2	17.2	11.3	955P3-8-6FF	367091	o. r.
8	8	16	12	6	22.4	22.4	17.2	17.2	12.7	955P3-8FF	367092	o. r.

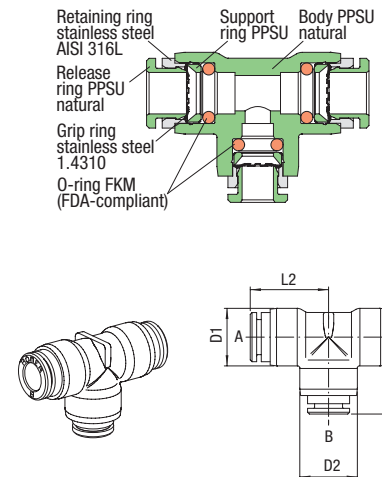
Illustration


T-Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PPSU

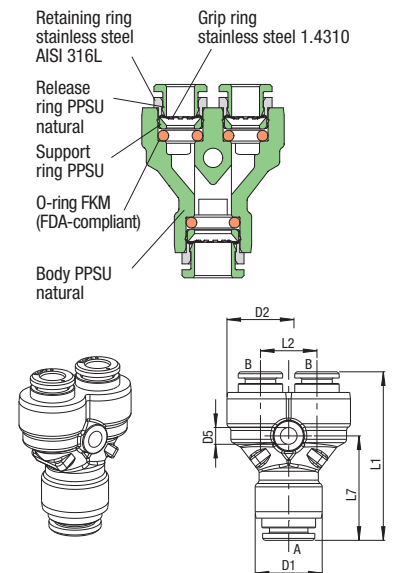
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L2	L7	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C								
4	4	20	16	10	17.7	17.7	11.9	11.9	7.3	954P3-4FF	367093	o. r.
6	4	20	16	10	19.4	18.9	13.9	13.9	10.6	954P3-6-4FF	367094	o. r.
6	6	20	16	10	19.4	19.4	13.9	13.9	9.8	954P3-6FF	367095	o. r.
6	8	16	12	6	22	22.4	17.2	17.2	15.5	954P3-6-8FF	367082	o. r.
8	6	16	12	6	22.4	22	17.2	17.2	16	954P3-8-6FF	367096	o. r.
8	8	16	12	6	22.4	22.4	17.2	17.2	16.1	954P3-8FF	367097	o. r.
10	8	16	12	6	26.4	25.7	20	20	23.8	954P3-10-8FF	367950	o. r.
10	10	16	12	6	26.4	26.4	20	20	24.3	954P3-10FF	367951	o. r.

Illustration

Y-Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PPSU

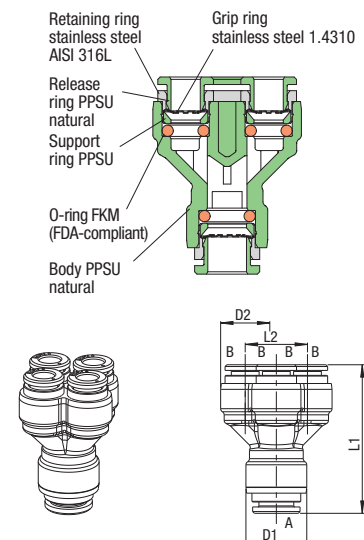
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L1	L2	L7	D1	D2	D5	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C										
4	4	20	16	10	37.8	12.5	23	12.7	12.7	3.3	9.5	982P3-4FF	367098	o. r.
6	4	20	16	10	38.3	12.5	23.5	13.9	13.9	3.3	10.4	982P3-6-4FF	367099	o. r.
6	6	20	16	10	38.3	12.5	23.5	13.9	13.9	3.3	10.4	982P3-6FF	367100	o. r.
8	6	16	12	6	43.3	14.5	26.8	17.2	17.2	4.3	16	982P3-8-6FF	366801	o. r.
8	8	16	12	6	43.7	14.5	26.8	17.2	17.2	4.3	18	982P3-8FF	366802	o. r.

Illustration

Double Y-Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PPSU

for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L1	L2	D1	D2	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C								
6	6	20	16	10	41.6	17.6	17.2	13.9	17.8	984P3-6FF	366803	o. r.
8	6	16	12	6	41.9	17.6	17.2	13.9	19.9	984P3-8-6FF	366804	o. r.

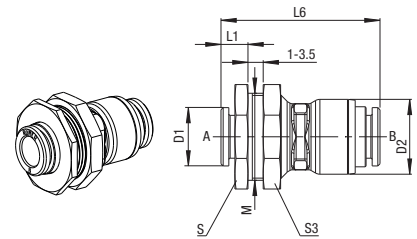
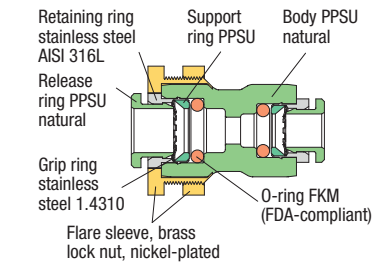
Illustration


Straight Bulkhead Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$

Plastic PPSU

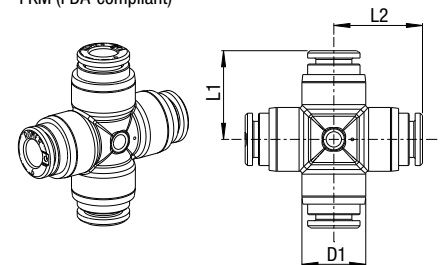
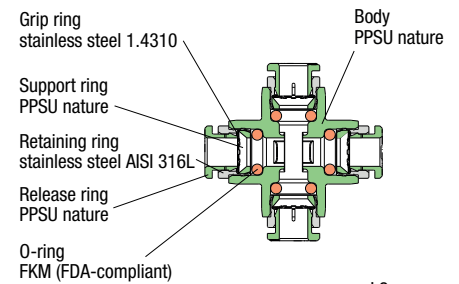
for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			M	L1	L6	D2	S	S3	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C										
4	4	20	16	10	M16x1	5.4	31.8	11.7	19	19	18.2	959P3-4FF	366794	o. r.
6	6	20	16	10	M16x1	6	32.6	13.6	19	19	17.1	959P3-6FF	366795	o. r.
8	8	16	12	6	M20x1	7.8	36.5	17.2	24	24	28.1	959P3-8FF	366796	o. r.

Illustration

Cross Connector

 Price group **15** Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$

Plastic PPSU

for tube AD	for tube BD	Max. allow. OP [bar] at medium temp.			L1	L2	D1	Weight in [g]	Type	Order number	Price
		20 °C	100 °C	140 °C							
4	4	20	16	10	18,9	18,9	13,9	11,8	960P3-4FF	366210	a. A.
4	6	20	16	10	19,3	18,9	13,9	12,2	960P3-6-4FF	366211	a. A.
6	6	20	16	10	19,3	19,3	13,9	12,4	960P3-6FF	366212	a. A.

Illustration


ELSA Fittings Stainless Steel AISI 316L (1.4404) (Push-in)

ELSA the Established push-in connector from AVS Römer


Stainless steel version

Operating pressure Technical vacuum up to maximum pressure as stated in the respective specification table under PN.
Temperature range 0 °C to +200 °C (for restrictions see specification table)

Application

ELSA push-in fittings made of stainless steel 1.4404 are used in particular for aggressive gases and liquid media under harsh operating conditions. These push-in fittings are equipped with FDA-compliant FKM sealing rings as standard, on request, these are also available with FDA-compliant EPDM sealing rings approved according to the UBA elastomer guidelines.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures. The FKM seal is FDA-compliant and can be used in the food and pharmaceutical industries.	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	4, 6 and 8	10, 12
Permitted tolerance [mm]	±0.1	±0.15
Permitted grades	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
THREAD		
External thread	"M" cylindrical thread: Metric ISO thread M5	
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 3/8	
External thread	"R" conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 up to R 1/2. Designed for pairing with internal thread according to DIN ISO 228-1.	
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 1/2	

OPERATING PRESSURE / TEMPERATURE

Metal version	<table border="1"> <tr> <td>PN</td> <td>T_{min}</td> <td>0 °C</td> </tr> <tr> <td>20</td> <td>T_{max}</td> <td>+140 °C</td> </tr> </table>	PN	T _{min}	0 °C	20	T _{max}	+140 °C	Means that the allowable operating pressure OP corresponds to the given nominal pressure PN in the specified temperature range "T". Can be loaded up to 200 °C for a short time (see information on data sheet)
PN	T _{min}	0 °C						
20	T _{max}	+140 °C						
Allowable operating pressure and operating temperature of pipe/tube must be observed!								

THREAD SEAL

Cylindrical threaded nipple	Thread seal FKM O-ring	applies to all cylindrical threaded nipples
Conical threaded nipple	Seal with Teflon tape winding (FDA-compliant) on request	

"ROTATABLE" VERSION

90° elbow- and T- adaptor, male	not suitable for rotating or oscill. movements	Some types of fittings rotate 360° in order to facilitate alignment during assembly.
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SPECIAL VERSIONS (NOT INCLUDED IN THE CATALOG)

We also manufacture ELSA push-in fittings in various customer-specific versions.

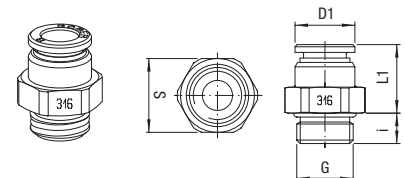
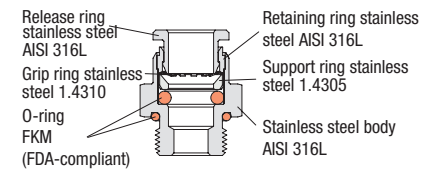
- other O-ring materials such as EPDM, FDA-compliant
- for pipe/tube with inch dimensions
- threaded connection, metric
- Versions according to ASTM G93 and EN ISO 15001 for oxygen use
- PVDF/PPSU release ring

Straight Adaptor - Male

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C	Thread	cylindrical	Thread sealed by a	FKM O-Ring in recess			Stainless steel	AISI 316L
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for tube D	G	i	L1	D1	D2	S	Weight in [g]	Type	Order number	Price
4	M 5	3.5	16.8	8	9.4	8	4.4	951X44-4FF-M5	385021	o. r.
4	G 1/8	5	14	9.8	-	13	9.9	951X44-4FF-1/8	385022	o. r.
4	G 1/4	7	11.8	9.8	-	17	17.7	951X44-4FF-1/4	385023	o. r.
6	M 5	3.5	17.7	10	11.4	10	6.1	951X44-6FF-M5	385024	o. r.
6	G 1/8	5	15.2	11.8	-	13	15	951X44-6FF-1/8	385025	o. r.
6	G 1/4	7	14.7	11.8	-	17	18.6	951X44-6FF-1/4	385026	o. r.
6	G 3/8	8	12	11.8	-	19	25.6	951X44-6FF-3/8	385019	o. r.
8	G 1/8	5	20.2	13.8	-	14	14.6	951X44-8FF-1/8	385027	o. r.
8	G 1/4	7	15.9	13.8	-	17	11.9	951X44-8FF-1/4	385028	o. r.
8	G 3/8	8	15.9	13.8	-	19	26.8	951X44-8FF-3/8	385029	o. r.
10	G 1/4	7	22.3	16.4	-	17	24.9	951X44-10FF-1/4	385030	o. r.
10	G 3/8	8	17.6	16.4	-	19	25.4	951X44-10FF-3/8	385031	o. r.
10	G 1/2	9	15.6	16.4	-	24	43.6	951X44-10FF-1/2	385032	o. r.
12	G 1/4	7	25	19.8	-	22	39.3	951X44-12FF-1/4	385033	o. r.
12	G 3/8	8	19.5	19.8	-	22	32.2	951X44-12FF-3/8	385034	o. r.
12	G 1/2	9	18.5	19.8	-	24	45.21	951X44-12FF-1/2	385035	o. r.

Illustration

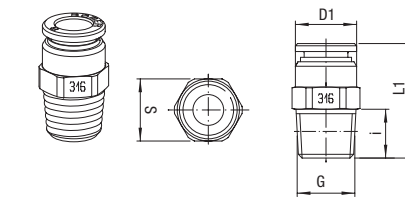
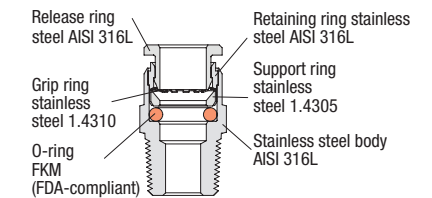


Straight Adaptor - Male

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C	Thread	conical			Stainless steel	AISI 316L
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for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price
4	R 1/8	7.5	20.5	9.8	10	8.3	951X44-4FF-1/8K	385040	o. r.
4	R 1/4	11	22.8	9.8	14	17.9	951X44-4FF-1/4K	385041	o. r.
6	R 1/8	7.5	21.7	11.8	12	9.9	951X44-6FF-1/8K	385042	o. r.
6	R 1/4	11	24.7	11.8	14	18.1	951X44-6FF-1/4K	385043	o. r.
8	R 1/8	7.5	27.2	13.8	14	15.3	951X44-8FF-1/8K	385044	o. r.
8	R 1/4	11	26.7	13.8	14	16.2	951X44-8FF-1/4K	385045	o. r.
8	R 3/8	11.5	24.7	13.8	17	26.5	951X44-8FF-3/8K	385046	o. r.
10	R 1/4	11	32.6	16.4	17	27.3	951X44-10FF-1/4K	385047	o. r.
10	R 3/8	11.5	28.1	16.4	17	27.7	951X44-10FF-3/8K	385048	o. r.
10	R 1/2	14	26.6	16.4	22	47.5	951X44-10FF-1/2K	385049	o. r.
12	R 1/4	11	34.8	19.8	22	41.2	951X44-12FF-1/4K	385050	o. r.
12	R 3/8	11.5	30	19.8	22	35.9	951X44-12FF-3/8K	385051	o. r.
12	R 1/2	14	31.5	19.8	22	50.9	951X44-12FF-1/2K	385052	o. r.

Illustration

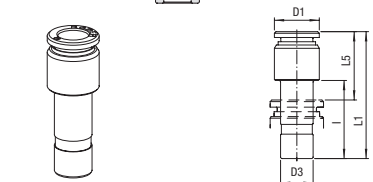
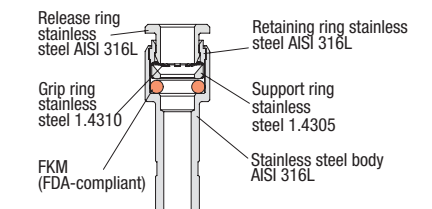


Straight Stem Reducer

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C			Stainless steel	AISI 316L
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for tube D	D3	i	L1	L5	D1	Weight in [g]	Type	Order number	Price
4	6	18	31.3	15.7	9.8	7.26	947X44-4FF-D6	385390	o. r.
6	8	20	34.2	16.6	11.8	10.8	947X44-6FF-D8	385391	o. r.
8	10	24	39.1	19	13.8	15.4	947X44-8FF-D10	385392	o. r.
10	12	26	42.6	20.6	16.4	21.9	947X44-10FF-D12	385393	o. r.
4	8	20	34	16.5	9.8	11.5	947X44-4FF-D8	385396	o. r.
6	10	24	39	18.9	11.8	17.7	947X44-6FF-D10	385397	o. r.
8	12	26	42	13.9	13.8	23.8	947X44-8FF-D12	385398	o. r.

Illustration

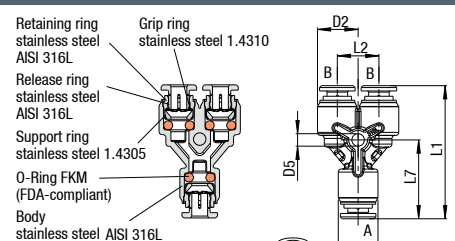


Y-Connector

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C			Stainless steel	AISI 316L
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for tube D	D3	L1	L2	L7	D1	D2	D5	Weight in [g]	Type	Order number	Price
4	4	35.2	11	20.9	10.5	10.5	3.3	19.5	982X44M-4FF	385230	o. r.
6	6	39.1	13	24.1	12.5	12.5	3.3	28.5	982X44M-6FF	385232	o. r.
8	8	45.5	15.5	28.8	14.5	14.5	4.3	41	982X44M-8FF	385234	o. r.
10	10	51.8	18	33.7	17	17	4.3	61.9	982X44M-10FF	385236	o. r.
12	12	57.2	21.5	37.4	20.5	20.5	4.3	97.2	982X44M-12FF	385238	o. r.

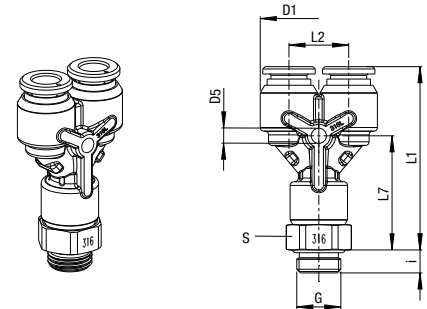
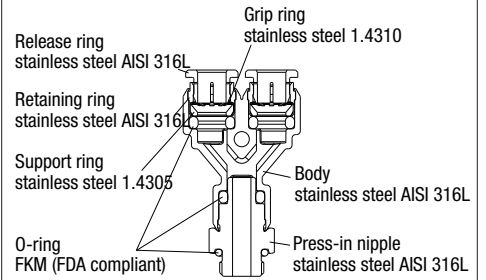
Illustration



Y-Adaptor - Male - Positionable

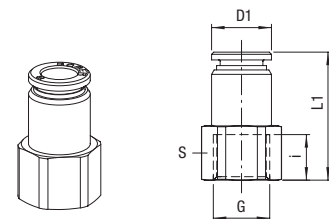
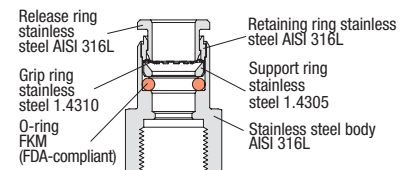
Preis Gruppe	13	PN 16	T _{min} 0 °C T _{max} +140 °C	Thread cylindrical	Thread sealed by a FKM O-Ring in recess	not suitable for rotating or oscill. movement		Edelstahl AISI 316L
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für Schlauch D	G	D1	D5	L1	L2	L7	S	i	Gewicht in [g]	Typ	Bestellnummer
4	G 1/8	10.5	3.3	35.7	11	21.4	13	5	27.6	992X44M-4FF-1/8	385420
4	G 1/4	10.5	3.3	37	11	22	17	7	37.9	992X44M-4FF-1/4	385421
6	G 1/8	12.5	3.3	39.9	13	24.9	13	5	36.5	992X44M-6FF-1/8	385422
6	G 1/4	12.5	3.3	39.6	13	24.6	17	7	45.5	992X44M-6FF-1/4	385423
6	G 3/8	12.5	3.3	39.6	13	24.6	19	8	54.6	992X44M-6FF-3/8	385424
8	G 1/8	14.5	4.3	44.1	15.5	27.4	15	5	49.6	992X44M-8FF-1/8	385425
8	G 1/4	14.5	4.3	45.6	15.5	28.9	17	7	56.9	992X44M-8FF-1/4	385426
8	G 3/8	14.5	4.3	45.6	15.5	28.9	19	8	65.8	992X44M-8FF-3/8	385427
10	G 1/4	17	4.3	51.2	18	33.1	17	7	74.3	992X44M-10FF-1/4	385428
10	G 3/8	17	4.3	52	18	33.9	19	8	84.2	992X44M-10FF-3/8	385429
10	G 1/2	17	4.3	52.9	18	34.8	24	9	105.6	992X44M-10FF-1/2	385430
12	G 1/2	20.5	4.3	56.7	21.5	36.9	22	7	124.9	992X44M-12FF-1/4	385431
12	G 3/8	20.5	4.3	56.7	21.5	36.9	22	8	128.1	992X44M-12FF-3/8	385432
12	G 1/2	20.5	4.3	58.2	21.5	38.4	24	9	143	992X44M-12FF-1/2	385433

Illustration

Straight Adaptor - Female

Price group	13	PN 20	T _{min} 0 °C T _{max} +140 °C	Thread cylindrical		Stainless steel AISI 316L
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for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price
4	G 1/8	7	23.8	9.8	13	11.1	946X44-4FF-1/8	385061	o. r.
4	G 1/4	9	26.8	9.8	17	21.7	946X44-4FF-1/4	385062	o. r.
6	G 1/8	7	25.2	11.8	13	13.2	946X44-6FF-1/8	385063	o. r.
6	G 1/4	9	27.7	11.9	17	23.6	946X44-6FF-1/4	385064	o. r.
6	G 3/8	10	28.7	11.8	19	24.5	946X44-6FF-3/8	385065	o. r.
8	G 1/8	7	27.1	13.8	14	19.6	946X44-8FF-1/8	385066	o. r.
8	G 1/4	9	29.6	13.8	17	26.2	946X44-8FF-1/4	385067	o. r.
8	G 3/8	10	30.6	13.8	19	27.2	946X44-8FF-3/8	385068	o. r.
10	G 1/4	9	32.1	16.4	17	31.8	946X44-10FF-1/4	385069	o. r.
10	G 3/8	10	33.1	16.4	19	33.2	946X44-10FF-3/8	385070	o. r.
10	G 1/2	13	36.6	16.4	24	51.6	946X44-10FF-1/2	385071	o. r.
12	G 1/4	9	35	19.8	22	62.3	946X44-12FF-1/4	385072	o. r.
12	G 3/8	10	36	19.8	22	57.3	946X44-12FF-3/8	385073	o. r.
12	G 1/2	13	39.5	19.8	24	63	946X44-12FF-1/2	385074	o. r.

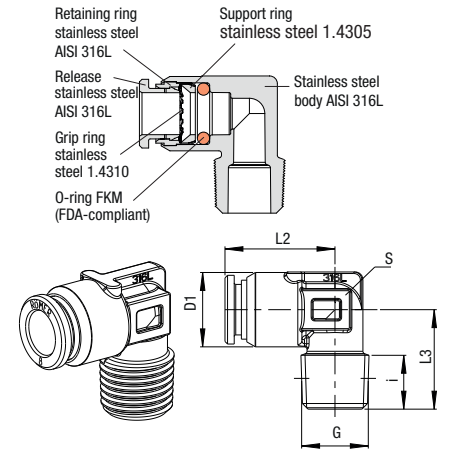
Illustration


90° Elbow Adaptor - Male

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C	Thread	conical
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 Stainless steel
AISI 316L

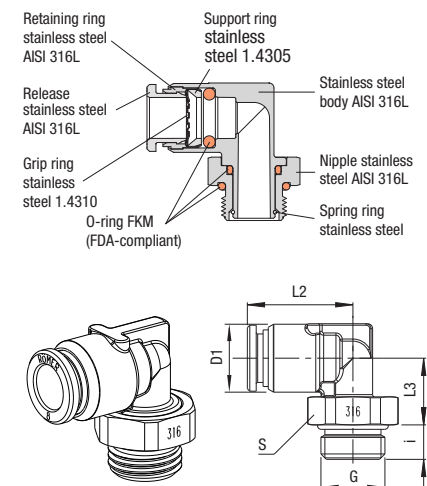
for tube D	G	i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
4	R 1/8	7.5	16.8	14.4	10.5	8	10.3	950X44M-4FF-1/8K	385081	o. r.
4	R 1/4	10.5	16.8	17.4	10.5	8	14.8	950X44M-4FF-1/4K	385082	o. r.
6	R 1/8	7.5	18.4	15.4	12.5	8	13.5	950X44M-6FF-1/8K	385083	o. r.
6	R 1/4	10.5	18.5	18.4	12.5	9	18.3	950X44M-6FF-1/4K	385084	o. r.
8	R 1/8	7.5	20.2	16.4	14.5	12	20.6	950X44M-8FF-1/8K	385085	o. r.
8	R 1/4	10.5	21.5	19.4	14.5	12	24.7	950X44M-8FF-1/4K	385086	o. r.
8	R 3/8	11	21.4	19.9	14.5	12	29.4	950X44M-8FF-3/8K	385087	o. r.
10	R 1/4	10.5	24	20.7	17	14	34.2	950X44M-10FF-1/4K	385088	o. r.
10	R 3/8	11	24.9	21.2	17	14	38.1	950X44M-10FF-3/8K	385089	o. r.
10	R 1/2	14	24.9	24.2	17	14	48.6	950X44M-10FF-1/2K	385090	o. r.
12	R 1/4	10.5	26.8	22.4	20.5	17	50	950X44M-12FF-1/4K	385091	o. r.
12	R 3/8	11	27.8	22.9	20.5	17	52	950X44M-12FF-3/8K	385092	o. r.
12	R 1/2	14	27.8	25.9	20.5	17	61.7	950X44M-12FF-1/2K	385093	o. r.

Illustration

90° Elbow Adaptor - Male - Positionable

Price group	13	PN	16	T _{min}	0 °C	T _{max}	+140 °C	Thread	cylindrical	Thread sealed by a FKM O-Ring in recess	not suitable for rotating or oscill. movement
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 Stainless steel
AISI 316L

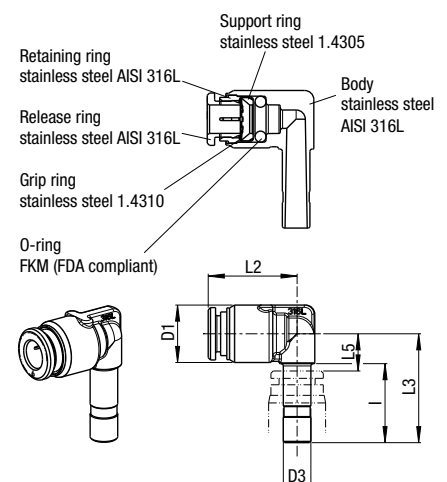
for tube D	G	i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
4	M 5	3.5	16.6	11.1	10.5	8	10.7	930X44M-4FF-M5	385101	o. r.
4	G 1/8	5	16.8	11.5	10.5	13	15.2	930X44M-4FF-1/8	385102	o. r.
4	G 1/4	7	16.8	11.6	10.5	17	21.3	930X44M-4FF-1/4	385103	o. r.
6	M 5	3.5	17.6	12.1	12.5	8	13.4	930X44M-6FF-M5	385104	o. r.
6	G 1/8	5	18.3	12.4	12.5	13	16.1	930X44M-6FF-1/8	385105	a. A.
6	G 1/4	7	18.5	12.7	12.5	17	25	930X44M-6FF-1/4	385106	o. r.
6	G 3/8	8	18.5	13.1	12.5	19	30.2	930X44M-6FF-3/8	385098	o. r.
8	G 1/8	5	20.2	13.4	14.5	13	19.9	930X44M-8FF-1/8	385107	o. r.
8	G 1/4	7	21.5	13.6	14.5	17	27.8	930X44M-8FF-1/4	385108	o. r.
8	G 3/8	8	21.4	13.9	14.5	19	34.5	930X44M-8FF-3/8	385109	o. r.
10	G 1/4	7	24	14.9	17	17	35.4	930X44M-10FF-1/4	385110	o. r.
10	G 3/8	8	24.9	15.3	17	19	41.8	930X44M-10FF-3/8	385111	o. r.
10	G 1/2	9	24.9	16.3	17	24	62	930X44M-10FF-1/2	385112	o. r.
12	G 1/4	7	25.8	16.6	20.5	17	48.1	930X44M-12FF-1/4	385113	o. r.
12	G 3/8	8	26.8	17	20.5	19	54.7	930X44M-12FF-3/8	385114	o. r.
12	G 1/2	9	26.8	18	20.5	24	74.9	930X44M-12FF-1/2	385115	o. r.

Illustration

Elbow Straight Stem

Price group	13	PN	16	T _{min}	0 °C	T _{max}	+140 °C	Thread	cylindrical	Thread sealed by a FKM O-Ring in recess	not suitable for rotating or oscill. movement
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 Edelstahl
AISI 316L

for tube D	i	D1	D3	L2	L3	L5	Weight in [g]	Type	Order number	Price
4	16.3	10.5	4	17.3	21.8	7	8.0	911X44M-4FF-D4	385250	o. r.
6	17.2	12.5	6	19.4	23.7	8	12.2	911X44M-6FF-D6	385253	o. r.
8	19.1	14.5	8	22.3	26.6	9	19.4	911X44M-8FF-D8	385255	o. r.
10	21.6	17	10	25.8	30.35	10	29.3	911X44M-10FF-D10	385257	o. r.
12	23.5	20.5	12	28.8	34	12	44.3	911X44M-12FF-D12	385259	o. r.

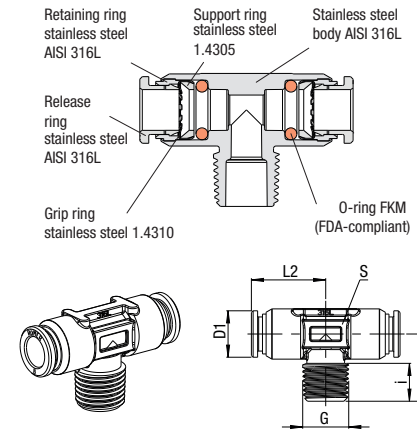
Illustration


T-Adaptor - Male

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C	Thread	conical
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 Stainless steel
AISI 316L

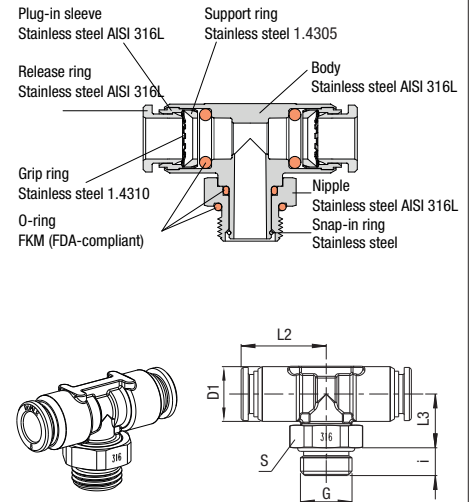
for tube D	G	i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
4	R 1/8	7.5	16.8	14.4	10.5	8	15.2	941X44M-4FF-1/8K	385305	o. r.
4	R 1/4	10.5	16.8	17.4	10.5	8	20	941X44M-4FF-1/4K	385306	o. r.
6	R 1/8	7.5	18.4	15.4	12.5	8	20.4	941X44M-6FF-1/8K	385307	o. r.
6	R 1/4	10.5	18.5	18.4	12.5	9	25.4	941X44M-6FF-1/4K	385308	o. r.
8	R 1/8	7.5	20.2	16.4	14.5	12	29.2	941X44M-8FF-1/8K	385309	o. r.
8	R 1/4	10.5	21.5	19.4	14.5	12	34.3	941X44M-8FF-1/4K	385310	o. r.
8	R 3/8	11	21.4	19.9	14.5	12	38.8	941X44M-8FF-3/8K	385311	o. r.
10	R 1/4	10.5	24	20.7	17	14	47.9	941X44M-10FF-1/4K	385312	o. r.
10	R 3/8	11	24.9	21.2	17	14	52.4	941X44M-10FF-3/8K	385313	o. r.
10	R 1/2	14	24.9	24.2	17	14	62.6	941X44M-10FF-1/2K	385314	o. r.
12	R 1/4	10.5	26.8	22.4	20.5	17	71.6	941X44M-12FF-1/4K	385315	o. r.
12	R 3/8	11	27.8	22.9	20.5	17	74.6	941X44M-12FF-3/8K	385316	o. r.
12	R 1/2	14	27.8	25.9	20.5	17	84.5	941X44M-12FF-1/2K	385317	o. r.

Illustration

T-Adaptor - Male - Positionable

Price group	13	PN	16	T _{min}	0 °C	T _{max}	+140 °C	Thread	cylindrical	Thread sealed by a FKM O-Ring in recess	not suitable for rotating or oscill. movement
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 Stainless steel
AISI 316L

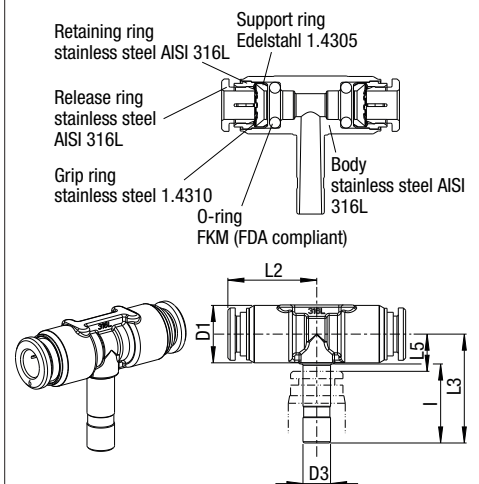
for tube D	G	i	L2	L3	D1	S	Weight in [g]	Type	Order number	Price
4	M 5	3.5	16.6	11.1	10.5	8	15.7	921X44M-4FF-M5	385121	o. r.
4	G 1/8	5	17.3	11.5	10.5	13	19.8	921X44M-4FF-1/8	385122	o. r.
4	G 1/4	7	17.3	11.6	10.5	17	26.3	921X44M-4FF-1/4	385123	o. r.
6	M 5	3.5	17.6	12.1	12.5	8	19.9	921X44M-6FF-M5	385124	o. r.
6	G 1/8	5	18.3	12.4	12.5	13	24.2	921X44M-6FF-1/8	385125	o. r.
6	G 1/4	7	19.5	12.7	12.5	17	31.8	921X44M-6FF-1/4	385126	o. r.
6	G 3/8	8	22.2	13.1	12.5	19	42.5	921X44M-6FF-3/8	385127	o. r.
8	G 1/8	5	20.2	13.4	14.5	13	30.7	921X44M-8FF-1/8	385128	o. r.
8	G 1/4	7	21.5	13.6	14.5	17	38.1	921X44M-8FF-1/4	385129	o. r.
8	G 3/8	8	22.4	13.9	14.5	19	45.6	921X44M-8FF-3/8	385130	o. r.
10	G 1/4	7	24	14.9	17	17	50.7	921X44M-10FF-1/4	385131	o. r.
10	G 3/8	8	24.9	15.3	17	19	56.8	921X44M-10FF-3/8	385132	o. r.
10	G 1/2	9	24.9	16.3	17	24	76.9	921X44M-10FF-1/2	385133	o. r.
12	G 1/4	7	25.8	16.6	20.5	17	70.7	921X44M-12FF-1/4	385134	o. r.
12	G 3/8	8	26.8	17	20.5	19	77.5	921X44M-12FF-3/8	385135	o. r.
12	G 1/2	9	26.8	18	20.5	24	97.7	921X44M-12FF-1/2	385136	o. r.

Illustration

T-Straight-Stem

Price group	13	PN	20	T _{min}	0 °C	T _{max}	+140 °C
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 Stainless steel
AISI 316L

for tube D	i	L2	L3	D1	D3	Weight in [g]	Type	Order number	Price
4	16.3	17.3	21.8	10.5	4	13.7	912X44M-4FF-D4	385265	o. r.
6	17.2	19	23.7	12.5	6	19.8	912X44M-6FF-D6	385268	o. r.
8	19.1	22.3	26.6	14.5	8	29.9	912X44M-8FF-D8	385270	o. r.
10	21.6	25.8	30.4	17	10	44.8	912X44M-10FF-D10	385272	o. r.
12	23.5	28.8	34	20.5	12	69.4	912X44M-12FF-D12	385274	o. r.

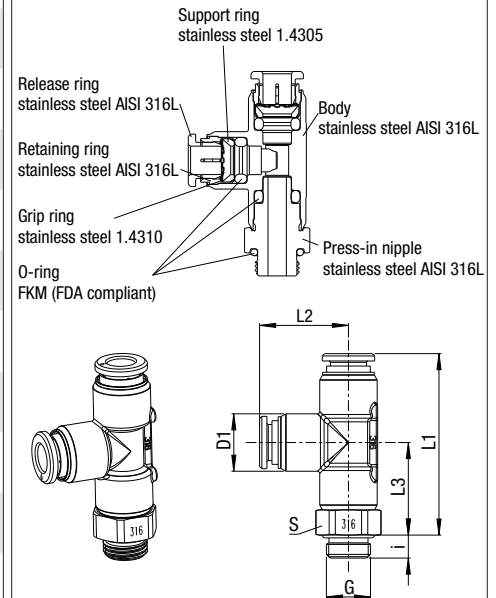
Illustration


Side T-Adaptor - Male - Positionable

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C

 Stainless steel
AISI 316L

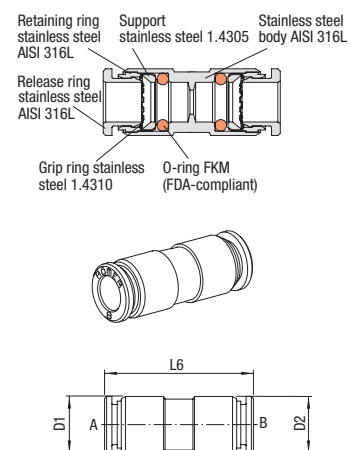
for tube D	G	L1	L2	L3	D1	S	i	Weight in [g]	Type	Order number	Price
4	G1/8	35	17	18	10,5	13	5	25,2	922X44M-4FF-1/8	385280	a. A.
4	G1/4	36	17	19	10,5	17	7	35,5	922X44M-4FF-1/4	385281	a. A.
6	G1/8	40	19	20	12,5	13	5	32,4	922X44M-6FF-1/8	385282	a. A.
6	G1/4	39	19	20	12,5	17	7	41,2	922X44M-6FF-1/4	385283	a. A.
6	G3/8	39	19	20	12,5	19	8	-	922X44M-6FF-3/8	385284	a. A.
8	G1/8	43,1	22	21	14,5	15	6	42,6	922X44M-8FF-1/8	385285	a. A.
8	G1/4	45	22	22	14,5	17	7	49,9	922X44M-8FF-1/4	385286	a. A.
8	G3/8	45	22	22	14,5	19	8	58,8	922X44M-8FF-3/8	385287	a. A.
10	G1/4	51	26	25	17	17	7	64,4	922X44M-10FF-1/4	385288	a. A.
10	G3/8	52	26	26	17	19	8	73,7	922X44M-10FF-3/8	385289	a. A.
10	G1/2	53	26	27	17	24	9	91,8	922X44M-10FF-1/2	385290	a. A.
12	G1/4	57	29	28	20,5	22	8	101,2	922X44M-12FF-1/4	385291	a. A.
12	G3/8	57	29	28	20,5	22	9	104,4	922X44M-12FF-3/8	385292	a. A.
12	G1/2	59	29	30	20,5	24	9	119,3	922X44M-12FF-1/2	385293	a. A.

Illustration

Straight Connector

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C

 Stainless steel
AISI 316L

for tube AD	for tube BD	L6	D1	D2	Weight in [g]	Type	Order number	Price
4	4	31	9.8	9.8	10.2	958X44-4FF	385161	o. r.
4	6	33	9.8	11.8	11.2	958X44-6-4FF	385162	o. r.
6	6	33	11.8	11.8	10.4	958X44-6FF	385163	o. r.
6	8	35	11.8	13.8	18.7	958X44-8-6FF	385164	o. r.
8	8	36.7	13.8	13.8	17.7	958X44-8FF	385165	o. r.
8	10	40	13.8	16.4	24.5	958X44-10-8FF	385166	o. r.
10	10	41.7	16.4	16.4	27.3	958X44-10FF	385167	o. r.
10	12	46	16.4	19.8	39.8	958X44-12-10FF	385168	o. r.
12	12	45.6	19.8	19.8	49	958X44-12FF	385169	o. r.

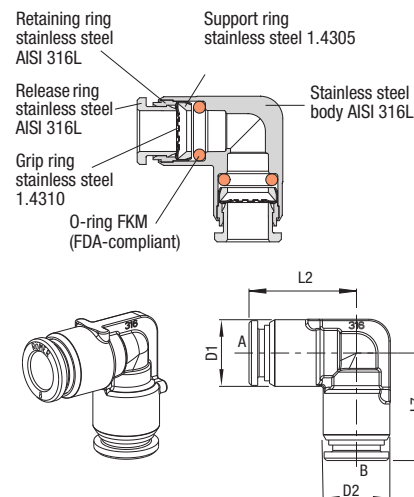
Illustration


90° Elbow Connector

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C

 Stainless steel AISI 316L

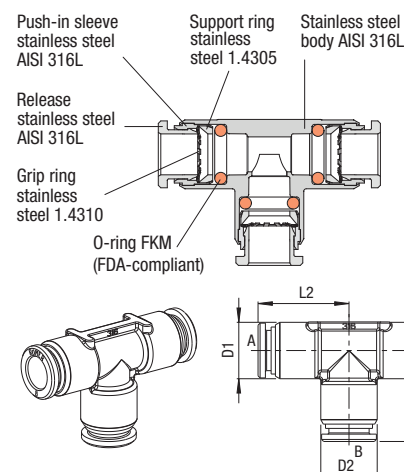
for tube AD	for tube BD	L2	L7	D1	D2	Weight in [g]	Type	Order number	Price
4	4	17.5	17.5	10.5	10.5	12.2	955X44M-4FF	385141	o. r.
6	6	19.4	19.4	12.5	12.5	17.6	955X44M-6FF	385142	o. r.
8	8	22.3	22.3	14.5	14.5	24.7	955X44M-8FF	385143	o. r.
10	10	25.8	25.8	17	17	37.2	955X44M-10FF	385144	o. r.
12	12	28.8	28.8	20.5	20.5	57.4	955X44M-12FF	385145	o. r.

Illustration

T-Connector

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C

 Stainless steel AISI 316L

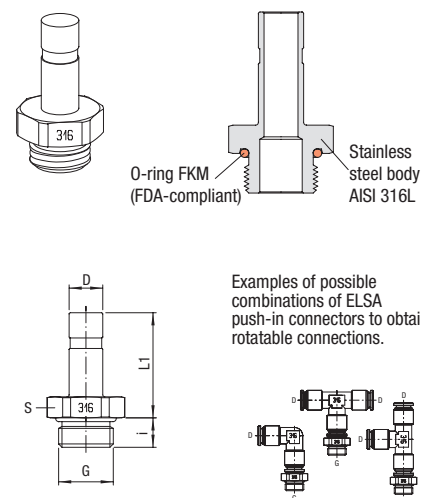
for tube AD	for tube BD	L2	L7	D1	D2	Weight in [g]	Type	Order number	Price
4	4	17.5	17.5	10.5	10.5	17.1	954X44M-4FF	385151	o. r.
6	6	19.4	19.4	12.5	12.5	24.3	954X44M-6FF	385152	o. r.
8	8	22.3	22.3	14.5	14.5	34.1	954X44M-8FF	385153	o. r.
10	10	25.8	25.8	17	17	51.4	954X44M-10FF	385154	o. r.
12	12	28.8	28.8	20.5	20.5	79.6	954X44M-12FF	385155	o. r.

Illustration

Straight Stem Adaptor

 Price group **13** PN 20 T_{min} -20 °C T_{max} +140 °C Thread cylindrical Thread sealed by a FKM O-Ring in recess

 Stainless steel AISI 316L

connection D	G	i	L1	S	Weight in [g]	Type	Order number	Price
4	M 5	3.5	21.5	8	2.99	908X4-4FF-M5	383805	o. r.
4	G 1/8	5	21.5	13	6.5	908X4-4FF-1/8	383806	o. r.
4	G 1/4	7	22	17	12.9	908X4-4FF-1/4	383807	o. r.
6	M 5	3.5	21.5	8	3.8	908X4-6FF-M5	383811	o. r.
6	G 1/8	5	22.5	13	8.5	908X4-6FF-1/8	383812	o. r.
6	G 1/4	7	23	17	16.6	908X4-6FF-1/4	383813	o. r.
6	G 3/8	8	25	19	23	908X4-6FF-3/8	383814	o. r.
8	G 1/8	5	24.5	13	8	908X4-8FF-1/8	383816	o. r.
8	G 1/4	7	25	17	15.8	908X4-8FF-1/4	383817	o. r.
8	G 3/8	8	25	19	25.4	908X4-8FF-3/8	383818	o. r.
10	G 1/4	7	29	17	15.9	908X4-10FF-1/4	383821	o. r.
10	G 3/8	8	29	19	23.4	908X4-10FF-3/8	383822	o. r.
10	G 1/2	9	29.5	24	33.5	908X4-10FF-1/2	383823	o. r.
12	G 1/4	7	31	17	24.3	908X4-12FF-1/4	383824	o. r.
12	G 3/8	8	31	19	26.3	908X4-12FF-3/8	383825	o. r.
12	G 1/2	9	31.5	24	38.1	908X4-12FF-1/2	383826	o. r.

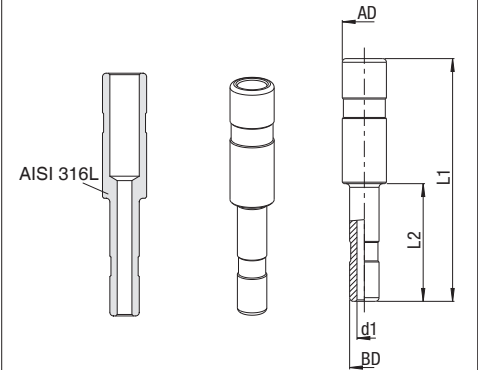
Illustration


Straight Double Stem Connector

 Price group **13** PN 20 T_{min} -40 °C T_{max} +200 °C

 Stainless steel AISI 316L

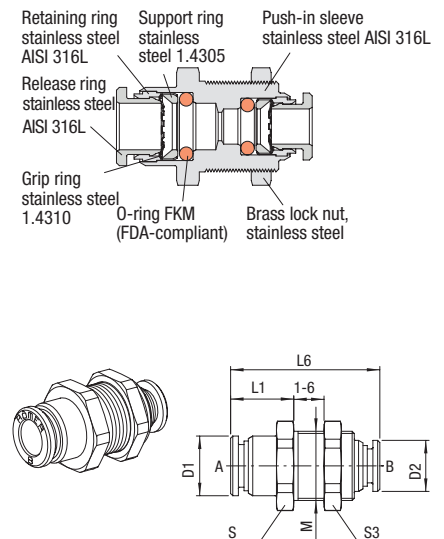
Connection AD	Connection BD	d1	L1	L2	Weight in [g]	Type	Order number	Price
6	4	2	33	16	3.3	904X4-D6-D4	283852	o. r.
6	6	4	34.5	-	4.2	904X4-D6	283853	o. r.
8	6	4	37.5	18	6.5	904X4-D8-D6	283858	o. r.
8	8	6	37.5	-	6.2	904X4-D8	283854	o. r.
10	8	6	45.5	18	10.9	904X4-D10-D8	283859	o. r.
10	10	8	45.5	-	9.7	904X4-D10	283857	o. r.
12	10	8	50	24	14	904X4-D12-D10	283860	o. r.
12	12	10	50	-	14.2	904X4-D12	283861	o. r.

Illustration

Straight Bulkhead Connector

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C

 Stainless steel AISI 316L

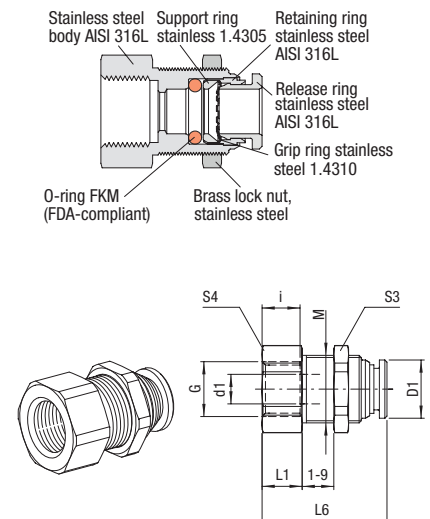
for tube AD	for tube BD	M	L1	L6	D1	D2	S	S3	Weight in [g]	Type	Order number	Price
4	4	M12x1	12.3	31.1	9.8	9.8	14	17	20.4	959X44-4FF	385410	o. r.
6	6	M14x1	13.7	32.7	11.8	11.8	17	17	26.2	959X44-6FF	385411	o. r.
8	8	M16x1	16.5	36.7	13.8	13.8	19	19	35.1	959X44-8FF	385412	o. r.
10	10	M20x1	20.8	41.9	16.4	16.4	22	24	55.9	959X44-10FF	385413	o. r.
12	12	M22x1,5	22.3	45.6	19.8	19.8	24	27	87.6	959X44-12FF	385414	o. r.

Illustration

Straight Bulkhead Adaptor - Female

 Price group **13** PN 20 T_{min} 0 °C T_{max} +140 °C Thread cylindrical

 Stainless steel AISI 316L

for tube D	G	M	L1	i	L6	d1	D1	S4	S3	Weight in [g]	Type	Order number	Price
4	G 1/8	M12x1	6,5	7	25,3	3	9,8	14	17	19,4	945X44-4FF-1/8	385351	o. r.
4	G 1/4	M14x1	12,5	9	31,3	3	9,8	17	17	33,1	945X44-4FF-1/4	385352	o. r.
6	G 1/8	M14x1	6,5	7	25,5	5	11,8	17	17	25,5	945X44-6FF-1/8	385353	o. r.
6	G 1/4	M14x1	12	9	31	5	11,8	17	17	30,8	945X44-6FF-1/4	385354	o. r.
6	G 3/8	M14x1	13	10	32	5	11,8	19	17	31,5	945X44-6FF-3/8	385355	o. r.
8	G 1/8	M16x1	7	7	27,2	7	13,8	19	19	34,9	945X44-8FF-1/8	385356	o. r.
8	G 1/4	M16x1	9,5	9	29,7	7	13,8	19	19	36,1	945X44-8FF-1/4	385357	o. r.
8	G 3/8	M16x1	12	10	32,2	7	13,8	19	19	34,1	945X44-8FF-3/8	385358	o. r.
10	G 1/4	M20x1	12	9	33,1	9	16,4	22	24	64,4	945X44-10FF-1/4	385359	o. r.
10	G 3/8	M20x1	13	10	34,1	9	16,4	22	24	60	945X44-10FF-3/8	385360	o. r.
10	G 1/2	M20x1	16,5	13	37,6	9	16,4	24	24	64,9	945X44-10FF-1/2	385361	o. r.
12	G 1/4	M22x1,5	13	9	35,8	10	19,8	24	27	88,3	945X44-12FF-1/4	385362	o. r.
12	G 3/8	M22x1,5	13,2	10	36	10	19,8	24	27	82	945X44-12FF-3/8	385363	o. r.
12	G 1/2	M22x1,5	16,7	13	39,5	10	19,8	24	27	78,7	945X44-12FF-1/2	385364	o. r.

Illustration


RAPID Fittings Nickel-Plated Brass (Push-on)

Rapid brass

Operating pressure: Technical vacuum up to maximum pressure as stated in the respective specification table under PN.

Temperature range: -40 °C to +120 °C

(for restrictions see specification table)

Application

RAPID fittings are used with aggressive gaseous and liquid media, where elastomer seals are not resistant. With guide cone and Cap nut these fittings are particularly suited to very harsh operating conditions.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Nickel-plated brass	CuZn39Pb3, galvanically nickel-plated. Suitable for many neutral gaseous and liquid media, especially compressed air, water, hydraulic oil etc. Special version chemically nickel-plated with FKM seal ring, FDA compliant.
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Other materials	see relevant products
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TUBE

Outside diameter [mm]	4.3/3 5/3 6/4 8/6 10/8	11.5/9 12/9 12/10 15/12.5 17.6/13
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Permitted tolerance outside D	±0.1	±0.15
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Permitted tolerance inside d	±0.1	±0.15
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Permitted wall thickness tolerance	±0.1	±0.15
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With very soft tubes, for example PVC tubes, variations in the outside diameter or wall thickness of up to + 5/10 are allowable. In case of doubt please ask.

Permitted grades	Polyamide (PA), polyurethane (PU), polyethylene (PE), fabric reinforced PVC, fluoropolymer (FEP) (PFA)
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THREAD

External thread	"M" cylindrical thread: Metric ISO thread M5, M6 and M7.
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External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2.
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External thread	"R" cylindrical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 to R 1/2. Dimensions constructed so there can be pairing with internal thread according to DIN ISO 228-1.
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Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2.
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OPERATING PRESSURE / TEMPERATURE

Metal version	<table border="1"> <tr> <td>PN</td> <td>T_{min} -40 °C</td> <td rowspan="2">Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range "T". Allowable operating pressure and operating temperature of pipe/tube must be observed!</td> </tr> <tr> <td>25</td> <td>T_{max} +120 °C</td> </tr> </table>	PN	T _{min} -40 °C	Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range "T". Allowable operating pressure and operating temperature of pipe/tube must be observed!	25	T _{max} +120 °C
PN	T _{min} -40 °C	Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range "T". Allowable operating pressure and operating temperature of pipe/tube must be observed!				
25	T _{max} +120 °C					

THREAD SEAL

Cylindrical threaded nipple	Seal with sealing rings made of copper, fibre, aluminium, polyamide or hard PVC.
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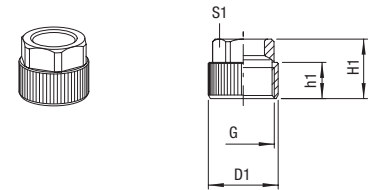
Conical threaded nipple	<table border="1"> <tr> <td>External thread self-sealing with pre-coating "D"</td> <td>Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, motor oils etc. in temperature range of -40 °C to +120 °C.</td> </tr> </table>	External thread self-sealing with pre-coating "D"	Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, motor oils etc. in temperature range of -40 °C to +120 °C.
External thread self-sealing with pre-coating "D"	Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, motor oils etc. in temperature range of -40 °C to +120 °C.		

Straight, 90° elbow and T-adaptors, male	<table border="1"> <tr> <td>not suitable for rotating or oscill. movements</td> <td>Some types of fittings are 360°-swivelling to facilitate adjustment during assembly.</td> </tr> </table>	not suitable for rotating or oscill. movements	Some types of fittings are 360°-swivelling to facilitate adjustment during assembly.
not suitable for rotating or oscill. movements	Some types of fittings are 360°-swivelling to facilitate adjustment during assembly.		

Cap Nut

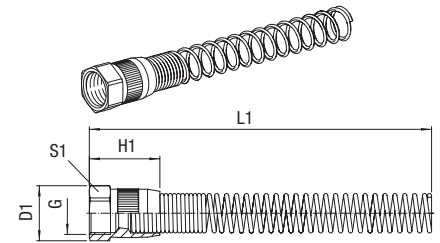
 Price group **11** PN 25 $T_{min} -40\text{ °C}$
 $T_{max} +120\text{ °C}$
Nickel-plated brass

for tube D/d	G	Exchangeable possible with	H1	h1	D1	S1	Weight in [g]	Type	Order number	Price
4.3/3	M7x0.75	250003	8.5	5	8	7	1.3	170M-43/0-M7x0.75	250002	o. r.
5/3	M7x0.75	250002	8.5	5	8	7	1.2	170M-5/0-M7x0.75	250003	o. r.
6/4	M8x0.75	-	10	6.5	9	8	1.7	170M-6/0-M8x0.75	250004	o. r.
6/4	M10x1	250017	11.5	7	11.5	10	3.8	170M-6/0-M10x1	250005	o. r.
8/6	M12x1	250018	11.5	7	13.5	12	4.5	170M-8/0-M12x1	250008	o. r.
10/8	M14x1	-	13.5	9	15.5	13	5.8	170M-10/0-M14x1	250010	o. r.
11.5/9	M16x1	250012	14.5	9	17.5	15	7.7	170M-115/0-M16x1	250011	o. r.
12/9	M16x1	250011	14.5	9	17.5	15	7.4	170M-12/0-M16x1	250012	o. r.
12/10	M16x1	250019	14.5	9	17.5	15	7.4	170M-12/0-M16x1	250012	o. r.
15/12.5	M20x1	250014	16.5	10.5	22	19	13.2	170M-15/12.5-M20x1	250013	o. r.
17.6/13	M20x1	250013	16.5	10.5	22	19	11.8	170M-176/0-M20x1	250014	o. r.
1/4/1/8	M10x1	250005	11.5	7	11.5	10	3.4	170M-64/0-M10x1	250017	o. r.
3/8/1/4	M12x1	250008	11.5	7	13.5	12	3.9	170M-96/0-M12x1	250018	o. r.
1/2/3/8	M16x1	250012	14.5	9	17.5	15	6.5	170M-13/0-M16x1	250019	o. r.

Illustration

Cap Nut with Anti-kink Protection

 Price group **11** PN 25 $T_{min} -40\text{ °C}$
 $T_{max} +120\text{ °C}$
Nickel-plated brass

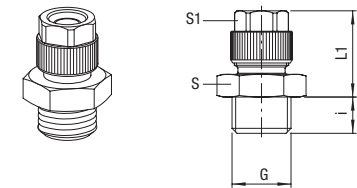
for tube D/d	G	Exchange possible with	L1*	H1	D1	S1	Weight in [g]	Type	Order number	Price
6/4	M10x1	250005	96	19	13.1	12	15.4	172M-6/0-M10x1	331005	o. r.
8/6	M12x1	250008	97	20	15.6	14	19.4	172M-8/0-M12x1	331008	o. r.
10/8	M14x1	250010	97	20	17.5	16	24.3	172M-10/0-M14x1	331010	o. r.
12/9	M16x1	250012	97	20	21.2	19	30.7	172M-12/0-M16x1	331012	o. r.
12/10	M16x1	250012	97	20	21.2	19	30.7	172M-12/0-M16x1	331012	o. r.

Illustration

Straight Adaptor - Male

 Price group **11** PN 25 $T_{min} -40\text{ °C}$
 $T_{max} +120\text{ °C}$ Cylindrical thread

Nickel-plated brass

for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
4.3/3	M 5	6	15.5	7	13	9.6	151M-43/3-M5	300004	o. r.
4.3/3	G 1/8	4	14.5	7	8	4.3	151M-43/3-1/8	300006	o. r.
5/3	M 5	5	14.5	7	8	4.7	151M-5/3-M5	300007	o. r.
5/3	M 6	6	15.5	7	13	9.6	151M-5/3-M6	300499	o. r.
5/3	G 1/8	4	15.5	8	8	5.1	151M-5/3-1/8	300009	o. r.
6/4	M 5	5	15.5	8	8	5.2	151M-6/4-M5	300010	o. r.
6/4	M 6	6	18.5	10	13	13.6	151M-6/4-M6	300500	o. r.
6/4	G 1/8	8	19	10	17	20.8	151M-6/4-1/8	300014	o. r.
6/4	G 1/4	9	19	10	19	25.7	151M-6/4-1/4	300015	o. r.
6/4	G 3/8	10	19.5	10	24	34.6	151M-6/4-3/8	300016	o. r.
6/4	G 1/2	6	18.5	12	13	15.7	151M-6/4-1/2	300017	o. r.
8/6	G 1/8	8	19	12	17	22.1	151M-8/6-1/8	300020	o. r.
8/6	G 1/4	9	19	12	19	26.9	151M-8/6-1/4	300021	o. r.
8/6	G 3/8	10	19.5	12	24	37.1	151M-8/6-3/8	300022	o. r.
8/6	G 1/2	6	20	13	14	19.7	151M-8/6-1/2	300023	o. r.
10/8	G 1/8	8	20.5	13	17	26.5	151M-10/8-1/8	300029	o. r.
10/8	G 1/4	9	20.5	13	19	31.8	151M-10/8-1/4	300030	o. r.
10/8	G 3/8	10	21	13	24	39.9	151M-10/8-3/8	300031	o. r.
10/8	G 1/2	8	22	15	17	30.3	151M-10/8-1/2	300032	o. r.
11.5/9	G 1/4	9	22	15	19	36.4	151M-115/9-1/4	300033	o. r.
11.5/9	G 3/8	8	22	15	17	29.9	151M-115/9-3/8	300034	o. r.
12/9	G 1/4	9	22	15	19	33.3	151M-12/9-1/4	300036	o. r.
12/9	G 3/8	9	22	15	19	33.6	151M-12/9-3/8	300037	o. r.
12/10	G 3/8	10	22.5	15	24**	44	151M-12/10-3/8	300043	o. r.
12/10	G 1/2	10	25	19	24**	53.4	151M-12/10-1/2	300044	o. r.
15/12.5	G 1/2	10	25	22	24**	51.2	151M-15/125-1/2	300048	o. r.
17.6/13	G 1/2	10	25	22	24**	51.2	151M-176/13-1/2	300050	o. r.

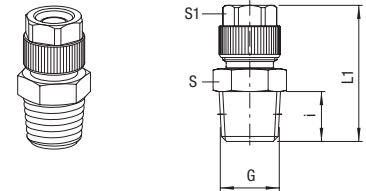
Illustration


* approximate with fastened cap nut ** S24 = octagon

Straight Adaptor - Male

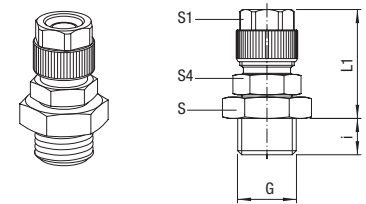
Price group	11	PN	25	T _{min}	-40 °C	T _{max}	+120 °C	Conical thread	Thread "D" self-sealing	T _{max}	+100 °C	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S	self-sealing opt. "D"	Weight in [g]	Type	Order number	Price
4.3/3	R 1/8	7.5	23	7	10	-	7.5	151M-43/3-1/8K	300506	o. r.
5/3	R 1/8	7.5	23	7	10	-	7.5	151M-5/3-1/8K	300509	o. r.
6/4	R 1/8	7.5	26	10	12	-	12.5	151M-6/4-1/8K	300514	o. r.
6/4	R 1/8	7.5	26	10	12	D	12.5	151M-6/4-D1/8K	306514	o. r.
6/4	R 1/4	11	30	10	14	-	17.3	151M-6/4-1/4K	300515	o. r.
6/4	R 1/4	11	30	10	14	D	17.3	151M-6/4-D1/4K	306515	o. r.
6/4	R 3/8	11.5	30.5	10	17	-	26.2	151M-6/4-3/8K	300516	o. r.
8/6	R 1/8	7.5	26	12	12	-	17.2	151M-8/6-1/8K	300520	o. r.
8/6	R 1/8	7.5	26	12	12	D	17.2	151M-8/6-D1/8K	306520	o. r.
8/6	R 1/4	11	30	12	14	-	18.1	151M-8/6-1/4K	300521	o. r.
8/6	R 1/4	11	30	12	14	D	18.1	151M-8/6-D1/4K	306521	o. r.
8/6	R 3/8	11.5	30.5	12	17	-	28.4	151M-8/6-3/8K	300522	o. r.
8/6	R 3/8	11.5	30.5	12	17	D	28.4	151M-8/6-D3/8K	306522	o. r.
10/8	R 1/8	7.5	27.5	13	14	-	20.8	151M-10/8-1/8K	300529	o. r.
10/8	R 1/4	11	31.5	13	14	-	22.6	151M-10/8-1/4K	300530	o. r.
10/8	R 1/4	11	31.5	13	14	D	22.6	151M-10/8-D1/4K	306530	o. r.
10/8	R 3/8	11.5	32	13	17	-	27.9	151M-10/8-3/8K	300531	o. r.
10/8	R 1/2	14	35	13	22	-	41	151M-10/8-1/2K	300532	o. r.
12/10	R 3/8	11.5	33.5	15	17	-	30.5	151M-12/10-3/8K	300543	o. r.
12/10	R 1/2	14	36.5	15	22	-	46.1	151M-12/10-1/2K	300544	o. r.
15/12.5	R 1/2	14	39	19	22	-	58	151M-15/12.5-1/2K	300548	o. r.
17.6/13	R 1/2	14	39	22	22	-	59.2	151M-17.6/13-1/2K	300550	o. r.

Illustration

Straight Adaptor - Male - Positionable

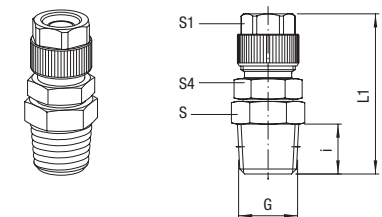
Price group	11	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Sealing ring: NBR	not suitable for rotating or oscill. movement	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	6	24.5	10	13	13	20.3	131M-6/4-1/8	300414	o. r.
6/4	G 1/4	8	23.5	10	13	17	25.4	131M-6/4-1/4	300415	o. r.
8/6	G 1/8	6	24.5	12	13	13	20.5	131M-8/6-1/8	300420	o. r.
8/6	G 1/4	8	23.5	12	13	17	28.3	131M-8/6-1/4	300421	o. r.
10/8	G 1/4	8	25	13	14	17	32.3	131M-10/8-1/4	300430	o. r.
12/9	G 3/8	9	28.5	15	17	19	45.5	131M-12/9-3/8	300437	o. r.
12/10	G 3/8	9	28.5	15	17	19	46.2	131M-12/10-3/8	300443	o. r.

Illustration

Straight Adaptor - Male - Positionable

Price group	11	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Conical thread	Sealing ring: NBR	Thread "D" self-sealing	not suitable for rotating or oscill. movement	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S4	S	self-sealing opt. "D"	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	31.5	10	13	13	-	20	131M-6/4-1/8K	300714	o. r.
6/4	R 1/8	7.5	31.5	10	13	13	D	20	131M-6/4-D1/8K	306714	o. r.
6/4	R 1/4	11	34.5	10	13	14	-	25	131M-6/4-1/4K	300715	o. r.
6/4	R 1/4	11	34.5	10	13	14	D	26	131M-6/4-D1/4K	306715	o. r.
8/6	R 1/8	7.5	31.5	12	13	13	-	21.5	131M-8/6-1/8K	300720	o. r.
8/6	R 1/8	7.5	31.5	12	13	13	D	21.5	131M-8/6-D1/8K	306720	o. r.
8/6	R 1/4	11	34.5	12	13	14	-	27	131M-8/6-1/4K	300721	o. r.
8/6	R 1/4	11	34.5	12	13	14	D	27	131M-8/6-D1/4K	306721	o. r.
10/8	R 1/4	11	36	13	14	14	-	30.8	131M-10/8-1/4K	300730	o. r.
10/8	R 1/4	11	36	13	14	14	D	30.8	131M-10/8-D1/4K	306730	o. r.

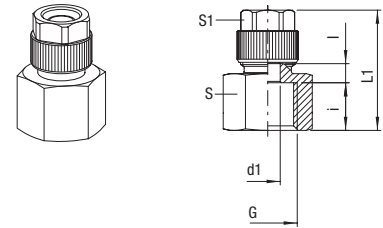
Illustration


* approximate with fastened cap nut ** S24 = octagon

Straight Adaptor - Female

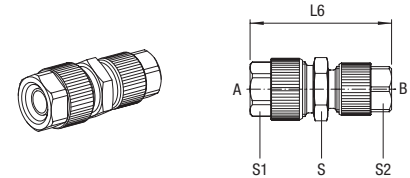
Price group	11	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread	Nickel-plated brass
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for tube D/d	G	i	L1*	l	d1	S1	S	Weight in [g]	Type	Order number	Price
4.3/3	G 1/8	7	21	5.5	2.2	7	13	9.9	146M-43/3-1/8	300806	o. r.
5/3	G 1/8	7	21	5.5	2.2	7	13	9.9	146M-5/3-1/8	300809	o. r.
6/4	G 1/8	7	24	5.6	5.5	10	13	13.6	146M-6/4-1/8	300814	o. r.
6/4	G 1/4	9	26.5	6.1	5.5	10	17	21.4	146M-6/4-1/4	300815	o. r.
8/6	G 1/4	7	24	5.6	5.5	12	13	15.8	146M-8/6-1/8	300820	o. r.
8/6	G 1/8	9	26.5	6.1	5.5	12	17	26.4	146M-8/6-1/4	300821	o. r.
8/6	G 3/8	10	27.5	6.1	6.5	12	19	23.4	146M-8/6-3/8	300822	o. r.
8/6	G 1/2	13.5	31.5	6.6	6.5	12	24	38.2	146M-8/6-1/2	300823	o. r.
10/8	G 1/4	9	28	5.5	6.8	13	17	26.6	146M-10/8-1/4	300830	o. r.
10/8	G 3/8	10	29	5.5	6.8	13	19	27.4	146M-10/8-3/8	300831	o. r.
10/8	G 1/2	13.5	33	6	6.8	13	24**	42	146M-10/8-1/2	300832	o. r.
11.5/9	G 3/8	10	30.5	6	7.6	15	19	32.2	146M-115/9-3/8	300834	o. r.
12/9	G 3/8	10	30.5	6	7.6	15	19	31.9	146M-12/9-3/8	300837	o. r.

Illustration

Straight Fitting

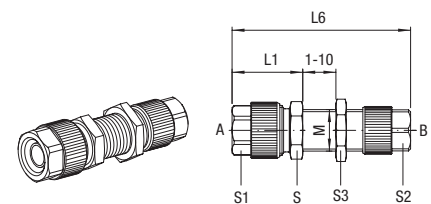
Price group	11	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Nickel-plated brass
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for tube A D/d	for tube B D/d	L6*	S1	S2	S	Weight in [g]	Type	Order number	Price
4.3/3	4.3/3	25	7	7	8	6.4	158M-43/3	302203	o. r.
5/3	4.3/3	25	7	7	8	6.4	158M-5/3-43/3	302205	o. r.
5/3	5/3	25	7	7	8	6.2	158M-5/3	302206	o. r.
6/4	4.3/3	28	10	7	12	12.3	158M-6/4-43/3	302208	o. r.
6/4	5/3	28	10	7	12	12.2	158M-6/4-5/3	302209	o. r.
6/4	6/4	31	10	10	12	16.9	158M-6/4	302210	o. r.
8/6	6/4	31	12	10	12	18	158M-8/6-6/4	302211	o. r.
8/6	8/6	31	12	12	12	20.9	158M-8/6	302212	o. r.
10/8	6/4	33	13	10	14	21.7	158M-10/8-6/4	302213	o. r.
10/8	8/6	33	13	12	14	24.7	158M-10/8-8/6	302214	o. r.
10/8	10/8	34.5	13	13	14	28.9	158M-10/8	302215	o. r.
12/10	12/10	38	15	15	17	39.8	158M-12/10	302219	o. r.
15/12.5	15/12.5	43.5	19	19	22	68.9	158M-15/125	302223	o. r.
17.6/13	17.6/13	43.5	22	22	22	65.4	158M-176/13	302225	o. r.

Illustration

Straight Bulkhead Fitting

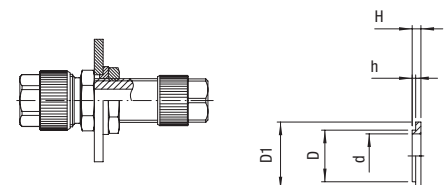
Price group	11	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Nickel-plated brass
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for tube A D/d	for tube B D/d	M	L1*	L6*	S1	S2	S3	S	Weight in [g]	Type	Order number	Price
4.3/3	4.3/3	M7x0.75	14	35	7	7	10	8	9.7	159M-43/3	303003	o. r.
5/3	4.3/3	M7x0.75	14	35	7	7	10	8	9.7	159M-5/3-43/3	303005	o. r.
5/3	5/3	M7x0.75	14	35	7	7	10	8	9.5	159M-5/3	303006	o. r.
6/4	4.3/3	M7x0.75	17	38	10	7	10	12	15.2	159M-6/4-43/3	303008	o. r.
6/4	5/3	M7x0.75	17	38	10	7	10	12	15.1	159M-6/4-5/3	303009	o. r.
6/4	6/4	M10x1	17	43	10	10	13	12	24.2	159M-6/4	303010	o. r.
8/6	6/4	M10x1	17	43	12	10	13	12	24.3	159M-8/6-6/4	303011	o. r.
8/6	8/6	M12x1	17.5	43.5	12	12	17	14	34.2	159M-8/6	303012	o. r.
10/8	6/4	M10x1	19	45	13	10	13	14	30.3	159M-10/8-6/4	303013	o. r.
10/8	8/6	M12x1	19	45	13	12	17	14	37.7	159M-10/8-8/6	303014	o. r.
10/8	10/8	M14x1	19.5	47.5	13	13	17	17	44.9	159M-10/8	303015	o. r.
11.5/9	11.5/9	M16x1	21	50	15	15	19	19	63	159M-115/9	303016	o. r.
12/9	12/9	M16x1	21	50	15	15	19	19	60.8	159M-12/9	303017	o. r.
12/10	12/10	M16x1	21	50	15	15	19	19	58	159M-12/10	303019	o. r.
15/12.5	15/12.5	M20x1	24	55	19	19	24**	22	96	159M-15/125	303023	o. r.
17.6/13	17.6/13	M20x1	24	55	22	22	24**	22	106	159M-176/13	303025	o. r.

Illustration

Bulkhead Fitting Accessories

Price group	11	Nickel-plated brass
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D1	D	d	H	h	Weight in [g]	Type	Order number	Price
15.5	9.8	7.1	2	0.8	1.8	258M-10-7	251991	o. r.
15.5	11.8	10.1	2	0.8	1.3	258M-12-10	251992	o. r.
17.5	13.8	10.1	2	0.8	2.1	258M-14-10	251993	o. r.
17.5	13.8	12.1	2	0.8	1.6	258M-14-12	251994	o. r.

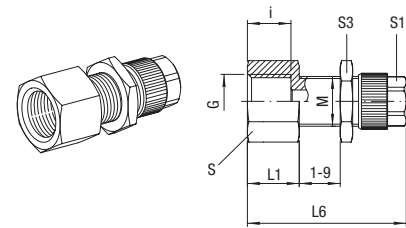
Illustration


* approximate with fastened cap nut ** S24 = octagon

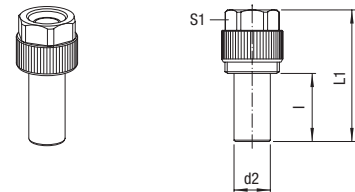
* approximate with fastened cap nut

Bulkhead Adaptor also Suitable for Pressure Gauge

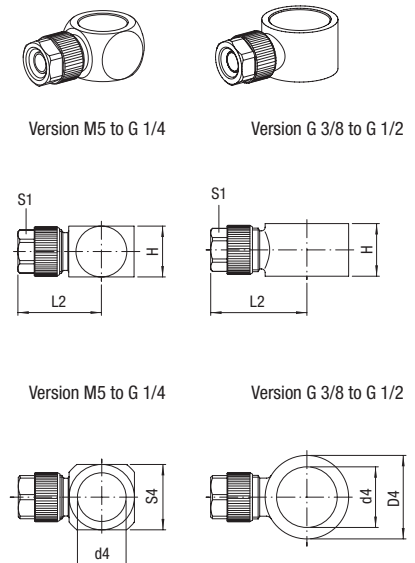
Price group	11	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread M,G	Nickel-plated brass			
for tube D/d	G	M	i	L1	L6*	S1	S3	S	Weight in [g]	Type	Order number	Price
4.3/3	M 5	M7x0.75	4.5	7	28	7	10	8	7.4	145M-43/3-M5	303104	o. r.
5/3	M 5	M7x0.75	4.5	7	28	7	10	8	7.4	145M-5/3-M5	303107	o. r.
6/4	G 1/8	M10x1	7	10	36	10	13	13	20.1	145M-6/4-1/8	303114	o. r.
8/6	G 1/4	M12x1	9	12.5	38.5	12	17	17	34.9	145M-8/6-1/4	303121	o. r.
10/8	G 1/4	M14x1	9	12.5	40.5	13	17	17	40.5	145M-10/8-1/4	303130	o. r.
11.5/9	G 3/8	M16x1	10	13.5	42.5	15	19	19	48.6	145M-115/9-3/8	303134	o. r.
12/9	G 3/8	M16x1	10	13.5	42.5	15	19	19	48.5	145M-12/9-3/8	303137	o. r.

Illustration

Straight Solder-in Fitting

Price group	11	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Bright brass
for tube D/d	d2	L1*	l	S1	Weight in [g]	Type	Order number	Price
4.3/3	6	26	15	7	4.6	147Y-43/3-6	303353	o. r.
5/3	6	26	15	7	4.6	147Y-5/3-6	303356	o. r.
6/4	6	29	15	10	9.7	147Y-6/4-6	303360	o. r.
8/6	8	29	15	12	14	147Y-8/6-8	303362	o. r.
10/8	10	35.5	20	13	19.3	147Y-10/8-10	303365	o. r.
12/10	12	37	20	15	25.8	147Y-12/10-12	303369	o. r.
15/12.5	15	39.5	20	19	46.9	147Y-15/125-15	303373	o. r.
17.6/13	15	39.5	20	22	44.5	147Y-176/13-15	303375	o. r.

Illustration

Banjo Ring Piece

Price group	11	PN	25	T_{min}	-20 °C	T_{max}	+120 °C	Nickel-plated brass		
for tube D/d	for hollow screw	L2*	H	d4	S1	S4 and D4	Weight in [g]	Type	Order number	Price
4.3/3	M 5	15.5	9	5.1	7	9	6.8	161M-43/3S-M5	303404	o. r.
4.3/3	G 1/8	18	14	10.1	7	14	15.3	161M-43/3S-1/8	303406	o. r.
5/3	M 5	15.5	8.6	5.1	7	9	6.7	161M-5/3S-M5	303407	o. r.
5/3	G 1/8	18	14	10.1	7	14	15.1	161M-5/3S-1/8	303409	o. r.
6/4	M 5	16.5	8.6	5.1	8	9	7.5	161M-6/4S-M5	303410	o. r.
6/4	G 1/8	21	14	10.1	10	14	20	161M-6/4S-1/8	303414	o. r.
6/4	G 1/4	23	14	13.4	10	18	25.5	161M-6/4S-1/4	303415	o. r.

Illustration


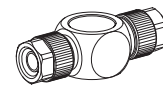
* approximate with fastened cap nut ** S24 = octagon

Banjo T-Ring Piece

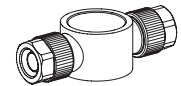
Price group	11	PN 25	T _{min} -20 °C T _{max} +120 °C
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Nickel-plated brass

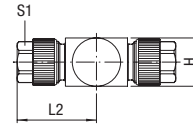
for tube D/d	for hollow screw	L2*	H	d4	S1	S4 and D4	Weight in [g]	Type	Order number	Price
4.3/3	M 5	15.5	8.6	5.1	7	9	9.2	162M-43/3S-M5	303704	o. r.
4.3/3	G 1/8	18	14	10.1	7	14	17.6	162M-43/3S-1/8	303706	o. r.
5/3	M 5	15.5	8.6	5.1	7	9	9	162M-5/3S-M5	303707	o. r.
5/3	G 1/8	18	14	10.1	7	14	17.1	162M-5/3S-1/8	303709	o. r.
6/4	M 5	16.5	9.6	5.1	8	9	10.5	162M-6/4S-M5	303710	o. r.
6/4	G 1/8	21	14	10.1	10	14	26.6	162M-6/4S-1/8	303714	o. r.
6/4	G 1/4	23	14	13.4	10	18	32.1	162M-6/4S-1/4	303715	o. r.

Illustration


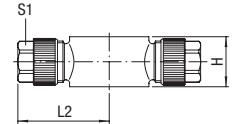
Version M5 to G 1/4



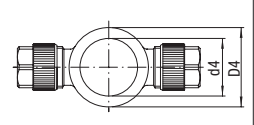
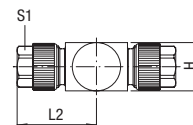
Version G 3/8 to G 1/2



Version M5 to G 1/4



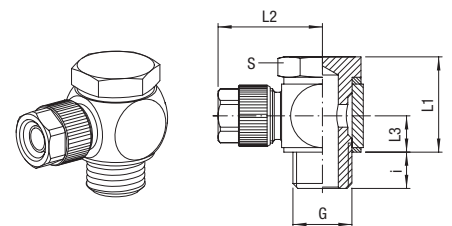
Version G 3/8 to G 1/2


Banjo - Short

Price group	11	PN 25	Seal: A = Alu T _{min} -20 °C, T _{max} +120 °C	Seal: N = polyamide T _{min} -20 °C, T _{max} +90 °C
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Nickel-plated brass

for tube D/d	G	i**	L1**	L2*	L3**	S	Weight in [g]	Type	Order number	Price
4.3/3	M 5	4.5	13.5	15.5	5	8	10.4	152M-43/3S-M5N	325014	o. r.
4.3/3	G 1/8	6	20.5	18	8	14	28.6	152M-43/3S-1/8A	325021	o. r.
4.3/3	G 1/8	6	20.5	18	8	14	28.6	152M-43/3S-1/8N	325022	o. r.
5/3	M 5	4.5	13.5	15.5	5	8	9.8	152M-5/3S-M5N	325026	o. r.
5/3	G 1/8	6	20.5	18	8	14	28.1	152M-5/3S-1/8A	325033	o. r.
5/3	G 1/8	6	20.5	18	8	14	28.1	152M-5/3S-1/8N	325034	o. r.
6/4	M 5	4.5	13.5	16.5	5	8	10.4	152M-6/4S-M5N	325038	o. r.
6/4	G 1/8	6	20.5	21	8	14	32.8	152M-6/4S-1/8A	325061	o. r.
6/4	G 1/8	6	20.5	21	8	14	31.8	152M-6/4S-1/8N	325062	o. r.
6/4	G 1/4	8	21	23	8	17	49.2	152M-6/4S-1/4A	325065	o. r.
6/4	G 1/4	8	21	23	8	17	49.2	152M-6/4S-1/4N	325066	o. r.

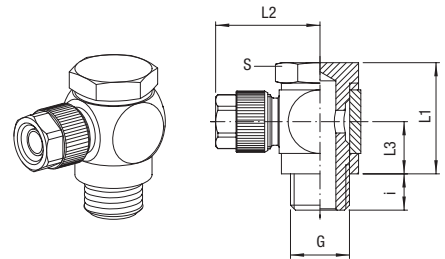
Illustration


* approximate with fastened cap nut ** approximate with fastened fitting

Banjo - Long

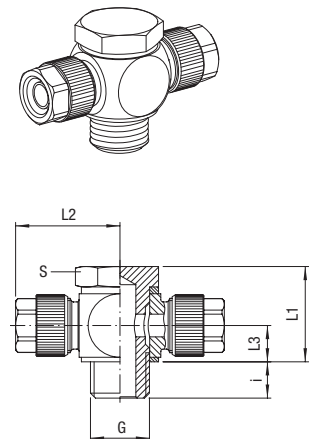
Price group	11	PN 25	Seal: N = polyamide $T_{min} -20\text{ °C}$, $T_{max} +90\text{ °C}$	Cylindrical thread	Nickel-plated brass
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for tube D/d	G	i**	L1**	L2*	L3**	S	Weight in [g]	Type	Order number	Price
4.3/3	G 1/8	6.5	24	18	12	14	29.4	156M-43/3S-1/8N	326522	o. r.
5/3	G 1/8	6.5	24	18	12	14	29.4	156M-5/3S-1/8N	326534	o. r.
6/4	G 1/8	6.5	24	21	12	14	34.7	156M-6/4S-1/8N	326562	o. r.
6/4	G 1/4	8	24.5	23	12	17	51.8	156M-6/4S-1/4N	326566	o. r.

Illustration

T-Banjo - Short

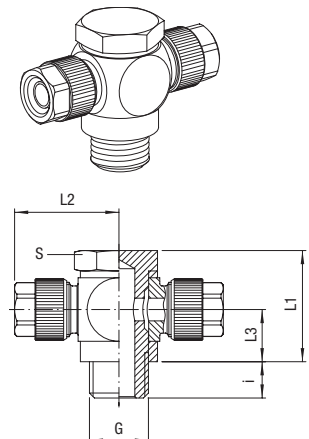
Price group	11	PN 25	Seal: A = Alu $T_{min} -20\text{ °C}$, $T_{max} +120\text{ °C}$	Seal: N = polyamide $T_{min} -20\text{ °C}$, $T_{max} +90\text{ °C}$	Nickel-plated brass
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for tube D/d	G	i**	L1**	L2*	L3**	S	Weight in [g]	Type	Order number	Price
4.3/3	M 5	4.5	13.5	15.5	5	8	13	153M-43/3S-M5N	328014	o. r.
4.3/3	G 1/8	6	20.5	18	8	14	30.3	153M-43/3S-1/8A	328021	o. r.
4.3/3	G 1/8	6	20.5	18	8	14	30.3	153M-43/3S-1/8N	328022	o. r.
5/3	M 5	4.5	13.5	15.5	5	8	13.2	153M-5/3S-M5N	328026	o. r.
5/3	G 1/8	6	20.5	18	8	14	30.9	153M-5/3S-1/8A	328033	o. r.
5/3	G 1/8	6	20.5	19	8	14	30.9	153M-5/3S-1/8N	328034	o. r.
6/4	M 5	4.5	13.5	16.5	5	8	13.9	153M-6/4S-M5N	328038	o. r.
6/4	G 1/8	6	20.5	21	8	14	40.3	153M-6/4S-1/8A	328061	o. r.
6/4	G 1/8	6	20.5	21	8	14	39.4	153M-6/4S-1/8N	328062	o. r.
6/4	G 1/4	8	21	23	8	17	56	153M-6/4S-1/4A	328065	o. r.
6/4	G 1/4	8	21	23	8	17	55.1	153M-6/4S-1/4N	328066	o. r.

Illustration

T-Banjo - Long

Price group	11	PN 25	Seal: N = polyamide $T_{max} -20\text{ °C}$, $T_{max} +90\text{ °C}$	Cylindrical thread	Nickel-plated brass
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for tube D/d	G	i***	L1***	L2*	L3***	S	Weight in [g]	Type	Order number	Price
4.3/3	G 1/8	6.5	24	18	12	14	32.3	157M-43/3S-1/8N	329522	o. r.
5/3	G 1/8	6.5	24	18	12	14	32.3	157M-5/3S-1/8N	329534	o. r.
6/4	G 1/8	6.5	24	21	12	14	41.6	157M-6/4S-1/8N	329562	o. r.
6/4	G 1/4	8	24.5	23	12	17	59	157M-6/4S-1/4N	329566	o. r.

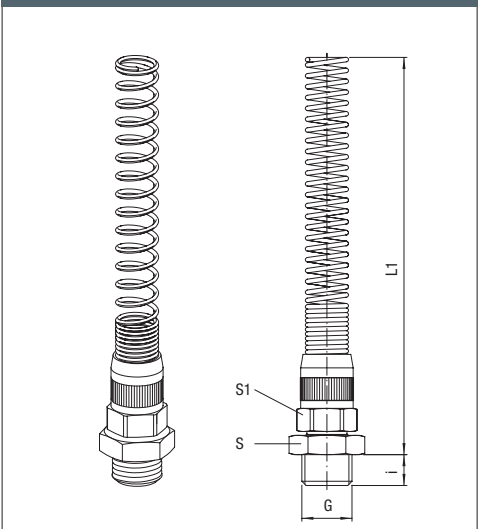
Illustration


* approximate with fastened cap nut ** approximate with fastened fitting

Straight Adaptor - Male with Anti-kink Protection

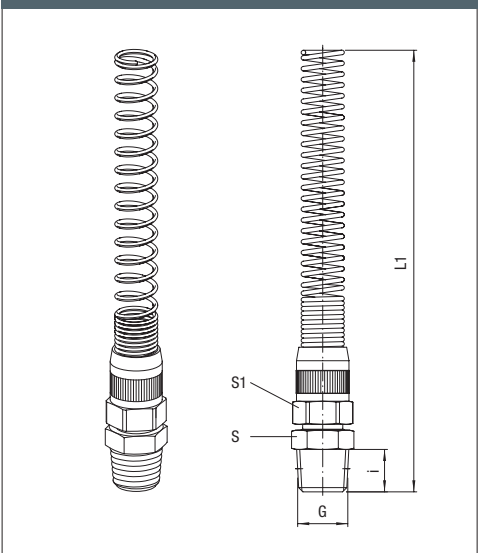
Price group	11	PN 25	T _{mix} -40 °C T _{max} +120 °C	Cylindrical thread	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	6	102	12	13	27.1	151M-6/4KS-1/8	300364	o. r.
6/4	G 1/4	8	102.5	12	17	34.3	151M-6/4KS-1/4	300365	o. r.
6/4	G 3/8	9	102.5	12	19	38.6	151M-6/4KS-3/8	300366	o. r.
6/4	G 1/2	10	103	12	24**	53.1	151M-6/4KS-1/2	300367	o. r.
8/6	G 1/8	6	103	14	13	31.3	151M-8/6KS-1/8	300370	o. r.
8/6	G 1/4	8	103	14	17	37.2	151M-8/6KS-1/4	300371	o. r.
8/6	G 3/8	9	103.5	14	19	43.5	151M-8/6KS-3/8	300372	o. r.
8/6	G 1/2	10	104	14	24**	58.4	151M-8/6KS-1/2	300373	o. r.
10/8	G 1/8	6	103.5	16	14	39.2	151M-10/8KS-1/8	300379	o. r.
10/8	G 1/4	8	104	16	17	44.7	151M-10/8KS-1/4	300380	o. r.
10/8	G 3/8	9	104	16	19	50.7	151M-10/8KS-3/8	300381	o. r.
10/8	G 1/2	10	104.5	16	24**	65.1	151M-10/8KS-1/2	300382	o. r.
12/9	G 1/4	8	104	19	17	47	151M-12/9KS-1/4	300386	o. r.
12/9	G 3/8	9	104	19	19	56.1	151M-12/9KS-3/8	300387	o. r.
12/10	G 3/8	9	104	19	19	56.8	151M-12/10KS-3/8	300393	o. r.
12/10	G 1/2	10	104.5	19	24**	68	151M-12/10KS-1/2	300394	o. r.

Illustration

Straight Adaptor - Male with Anti-kink Protection

Price group	11	PN 25	T _{mix} -40 °C T _{max} +120 °C	Conical thread	Thread "D" self-sealing T _{max} +100 °C	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S	self-sealing opt. "D"	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	109.5	12	12	-	24.5	151M-6/4KS-1/8K	300664	o. r.
6/4	R 1/8	7.5	109.5	12	12	D	24.5	151M-6/4KS-D1/8K	306664	o. r.
6/4	R 1/4	11	113.5	12	14	-	29.8	151M-6/4KS-1/4K	300665	o. r.
6/4	R 1/4	11	113.5	12	14	D	29.8	151M-6/4KS-D1/4K	306665	o. r.
6/4	R 3/8	11.5	114	12	17	-	36.7	151M-6/4KS-3/8K	300666	o. r.
8/6	R 1/8	7.5	110.5	14	12	-	30.4	151M-8/6KS-1/8K	300670	o. r.
8/6	R 1/8	7.5	110.5	14	12	D	30.4	151M-8/6KS-D1/8K	306670	o. r.
8/6	R 1/4	11	114.5	14	14	-	35.3	151M-8/6KS-1/4K	300671	o. r.
8/6	R 1/4	11	114.5	14	14	D	35.3	151M-8/6KS-D1/4K	306671	o. r.
8/6	R 3/8	11.5	115	14	17	-	41.6	151M-8/6KS-3/8K	300672	o. r.
10/8	R 1/8	7.5	111	16	14	-	38.3	151M-10/8KS-1/8K	300679	o. r.
10/8	R 1/4	11	115	16	14	-	41.3	151M-10/8KS-1/4K	300680	o. r.
10/8	R 1/4	11	115	16	14	D	41.3	151M-10/8KS-D1/4K	306680	o. r.
10/8	R 3/8	11.5	115.5	16	17	-	48.2	151M-10/8KS-3/8K	300681	o. r.
10/8	R 1/2	14	118.5	16	22	-	61	151M-10/8KS-1/2K	300682	o. r.
12/10	R 3/8	11.5	115.5	19	17	-	55.8	151M-12/10KS-3/8K	300693	o. r.
12/10	R 1/2	14	118.5	19	22	-	67.9	151M-12/10KS-1/2K	300694	o. r.

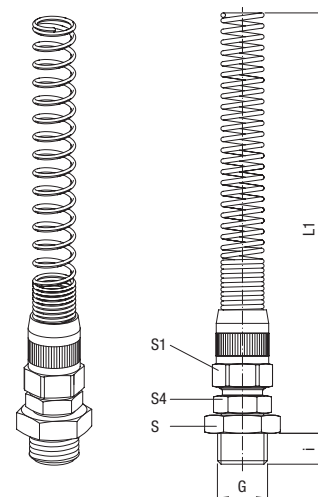
Illustration


* approximate with fastened cap nut ** S24 = octagon *** approximate with fastened fitting

Straight Adaptor - Male - Positionable with Anti-kink Protection

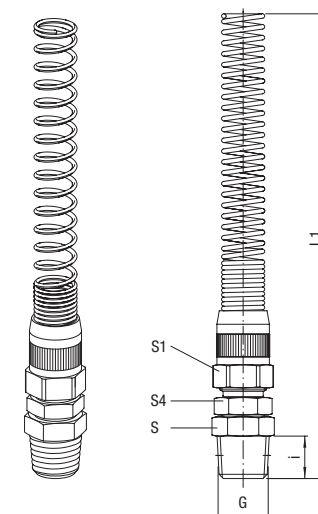
Price group	11	PN 16	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Sealing ring: NBR	not suitable for rotating or oscill. movement	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	6	108	12	13	13	31,6	131M-6/4KS-1/8	300464	o. r.
6/4	G 1/4	8	108,5	12	13	17	37,3	131M-6/4KS-1/4	300465	o. r.
8/6	G 1/8	6	109	14	13	13	34,6	131M-8/6KS-1/8	300470	o. r.
8/6	G 1/4	8	109	14	13	17	42,7	131M-8/6KS-1/4	300471	o. r.
10/8	G 1/4	8	110	16	14	17	49,2	131M-10/8KS-1/4	300480	o. r.
12/9	G 3/8	9	110	19	17	19	67,9	131M-12/9KS-3/8	300487	o. r.
12/10	G 3/8	9	110	19	17	19	67,8	131M-12/10KS-3/8	300493	o. r.

Illustration

Straight Adaptor - Male - Positionable with Anti-kink Protection

Price group	11	PN 16	T _{min} -20 °C T _{max} +80 °C	Conical thread	Sealing ring: NBR	Thread "D" self-sealing	not suitable for rotating or oscill. movement	Nickel-plated brass
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for tube D/d	G	i	L1*	S1	S4	S	self-sealing opt. "D"	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	115.5	12	13	13	-	28.2	131M-6/4KS-1/8K	300764	o. r.
6/4	R 1/8	7.5	115.5	12	13	13	D	28.2	131M-6/4KS-D1/8K	306764	o. r.
6/4	R 1/4	11	119.5	12	13	14	-	35.9	131M-6/4KS-1/4K	300765	o. r.
6/4	R 1/4	11	119.5	12	13	14	D	35.9	131M-6/4KS-D1/4K	306765	o. r.
8/6	R 1/8	7.5	116.5	14	13	13	-	33.7	131M-8/6KS-1/8K	300770	o. r.
8/6	R 1/8	7.5	116.5	14	13	13	D	33.7	131M-8/6KS-D1/8K	306770	o. r.
8/6	R 1/4	11	120.5	14	13	14	-	41.9	131M-8/6KS-1/4K	300771	o. r.
8/6	R 1/4	11	120.5	14	13	14	D	41.9	131M-8/6KS-D1/4K	306771	o. r.
10/8	R 1/4	11	121	16	14	14	-	48.9	131M-10/8KS-1/4K	300780	o. r.
10/8	R 1/4	11	121	16	14	14	D	48.9	131M-10/8KS-D1/4K	306780	o. r.

Illustration


* approximate with fastened cap nut ** S24 = octagon



RAPID Fittings Stainless Steel AISI 316L (1.4404) with Union Nut Nickel-Plated Brass (Push-on)

Rapid version with Union nut (nickel-plated brass)

Operating pressure: Technical vacuum up to maximum pressure as stated in the respective specification table under PN.

Temperature range: -40 °C to +140 °C
(for restrictions see specification table)

Application

RAPID fittings are used with aggressive gaseous and liquid media, where elastomer seals are not resistant. With guide cone and Union nut these fittings are particularly suited to very harsh operating conditions.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	corresponds to stainless steel 1.4404 . Suitable for many aggressive media. The FKM seal ring is FDA-compliant and can be used in the food and pharmaceutical industries.
Union nut: Nickel-plated brass	CuZn39Pb3, galvanically nickel-plated. Union nut not in contact with the medium.
Other materials	see relevant products
Approval	NSF/ANSI 169

TUBE

Outside diameter D [mm] Inside diameter d [mm]	6/4 8/6 10/8	12/10
Permitted tolerance outside D	±0.1	±0.15
Permitted tolerance inside d	±0.1	±0.15
Permitted wall thickness tolerance	±0.1 With very soft tubes, for example PVC tubes, variations in the outside diameter or wall thickness of up to + 5/10 are allowable. In case of doubt please ask.	
Permitted grades	Polyamide (PA), polyurethane (PU), polyethylene (PE), fabric reinforced PVC, fluoropolymer (FEP) (PFA)	

THREAD

External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2
External thread	"R" Conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 to R 1/2. Dimensions constructed so there can be pairing with internal thread according to DIN ISO 228-1.

OPERATING PRESSURE / TEMPERATURE

Metal version	<table border="1"> <tr> <td>PN 25</td> <td> $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$ </td> </tr> </table> Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range "T". Allowable operating pressure and operating temperature of pipe/tube must be observed!	PN 25	$T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$
PN 25	$T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$		

THREAD SEAL

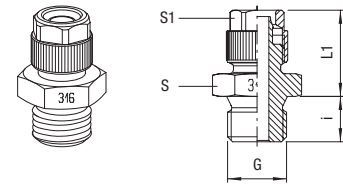
Cylindrical threaded nipple	Seal with sealing rings made of copper, fibre, aluminium, polyamide or hard PVC. Seal with chambered O-ring (FDA-compliant) on request
Conical threaded nipple	Seal with Teflon tape winding (FDA-compliant) on request

Straight, 90° elbow and T-adaptors, male	<table border="1"> <tr> <td>not suitable for rotating or oscill. movements</td> </tr> </table> Some types of fittings are 360°-swivelling to facilitate adjustment during assembly.	not suitable for rotating or oscill. movements
not suitable for rotating or oscill. movements		

Straight Adaptor - Male

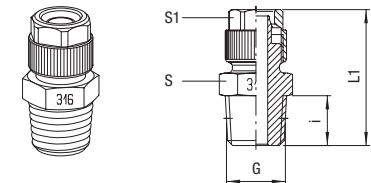
Price group	13	PN 25	T _{min} -40 °C T _{max} +140 °C	Cylindrical thread		Union nut: Nickel-plated brass	Stainless steel AISI 316L
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for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	8	18.5	10	13	13.2	151X4-6/4M-1/8	360064	o. r.
6/4	G 1/4	10	19	10	17	22.8	151X4-6/4M-1/4	360065	o. r.
8/6	G 1/8	8	18.5	12	13	15.9	151X4-8/6M-1/8	360070	o. r.
8/6	G 1/4	10	19	12	17	25	151X4-8/6M-1/4	360071	o. r.
10/8	G 1/8	8	20	13	14	21.2	151X4-10/8M-1/8	360079	o. r.
10/8	G 1/4	10	20.5	13	17	26.2	151X4-10/8M-1/4	360080	o. r.
10/8	G 3/8	10	20.5	13	19	34.4	151X4-10/8M-3/8	360081	o. r.
12/10	G 1/4	10	22	15	17	27.9	151X4-12/10M-1/4	360092	o. r.
12/10	G 3/8	10	22	15	19	36.1	151X4-12/10M-3/8	360093	o. r.
12/10	G 1/2	12	22.5	15	24**	52.9	151X4-12/10M-1/2	360094	o. r.

Illustration

Straight Adaptor - Male

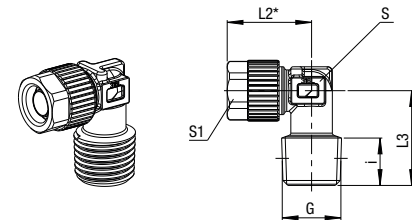
Price group	13	PN 25	T _{min} -40 °C T _{max} +140 °C	Conical thread		Union nut: Nickel-plated brass	Stainless steel AISI 316L
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for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	26	10	12	12	151X4-6/4M-1/8K	360464	o. r.
6/4	R 1/4	11	30	10	14	19	151X4-6/4M-1/4K	360465	o. r.
8/6	R 1/8	7.5	26	12	12	14.6	151X4-8/6M-1/8K	360470	o. r.
8/6	R 1/4	11	30	12	14	22	151X4-8/6M-1/4K	360471	o. r.
10/8	R 1/8	7.5	27.5	13	14	21.4	151X4-10/8M-1/8K	360479	o. r.
10/8	R 1/4	11	31.5	13	14	24	151X4-10/8M-1/4K	360480	o. r.
10/8	R 3/8	11.5	32	13	17	33.2	151X4-10/8M-3/8K	360481	o. r.
12/10	R 3/8	11.5	33.5	15	17	35.2	151X4-12/10M-3/8K	360493	o. r.
12/10	R 1/2	14	36.5	15	22	on req.	151X4-12/10M-1/2K	360494	o. r.

Illustration

90° Elbow Adaptor - Male

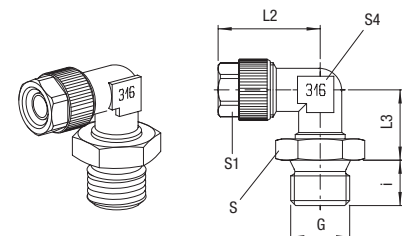
Price group	13	PN 25	T _{min} -40 °C T _{max} +140 °C	Conical thread		Union nut: Nickel-plated brass	Stainless steel AISI 316L
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for tube D/d	G	i	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	17.5	16.9	10	8	13.5	150X4M-6/4M-1/8K	361321	o. r.
6/4	R 1/4	10.5	17.5	19.9	10	9	18.4	150X4M-6/4M-1/4K	361322	o. r.
8/6	R 1/8	7.5	18.5	18	12	9	16.9	150X4M-8/6M-1/8K	361323	o. r.
8/6	R 1/4	10.5	18.5	21	12	10	22.1	150X4M-8/6M-1/4K	361324	o. r.
8/6	R 3/8	10.8	26.5	24.5	12	13	39.4	150X4-8/6M-3/8K	361072	o. r.
10/8	R 1/8	9	24.5	18.5	13	10	29.5	150X4-10/8M-1/8K	361079	o. r.
10/8	R 1/4	10.5	24.5	21	13	10	24.5	150X4-10/8M-1/4K	361080	o. r.
10/8	R 3/8	10.8	27	24.5	13	13	39.6	150X4-10/8M-3/8K	361081	o. r.
12/10	R 3/8	11.5	29	25	15	13	42.2	150X4-12/10M-3/8K	361093	o. r.
12/10	R 1/2	14.2	30.5	29	15	17	58.5	150X4-12/10M-1/2K	361094	o. r.


Illustration

90° Elbow Adaptor - Male - Positionable

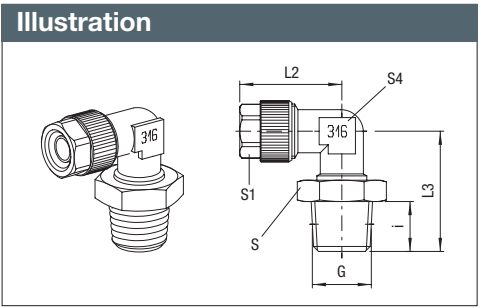
Price group	13	PN 16	T _{min} 0 °C T _{max} +140 °C	Cylindrical thread	Seal: FKM FDA-compliant	not suitable for rotating or oscill. movement		Union nut: Nickel-plated brass	Stainless steel AISI 316L
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for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	8	22.5	14	10	10	13	23.4	130X4-6/4M-1/8FF	361164	o. r.
6/4	G 1/4	10	22.5	14.5	10	10	17	26.8	130X4-6/4M-1/4FF	361165	o. r.
8/6	G 1/8	8	22.5	14	12	10	13	24	130X4-8/6M-1/8FF	361170	o. r.
8/6	G 1/4	10	22.5	14.5	12	10	17	28.2	130X4-8/6M-1/4FF	361171	o. r.
10/8	G 1/4	10	24	14.5	13	10	17	29.7	130X4-10/8M-1/4FF	361180	o. r.

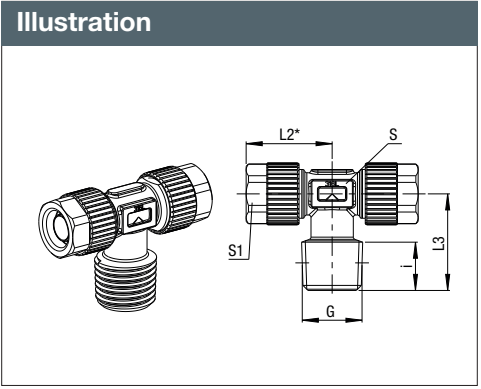
Illustration



* approximate with fastened Union nut ** S24 = octagon

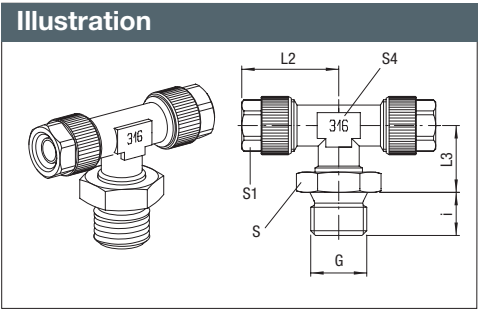
90° Elbow Adaptor - Male - Positionable											
Price group	13		PN 16	T _{min} 0 °C	0 °C	Conical thread	Seal: FKM FDA-compliant	not suitable for rotating or oscill. movement		Union nut: Nickel-plated brass	Stainless steel AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	22.5	21.5	10	10	13	22.5	130X4-6/4M-1/8KFF	361264	o. r.
6/4	R 1/4	11	22.5	25.5	10	10	17	26.6	130X4-6/4M-1/4KFF	361265	o. r.
8/6	R 1/8	7.5	22.5	21.5	12	10	13	23.6	130X4-8/6M-1/8KFF	361270	o. r.
8/6	R 1/4	11	22.5	25.5	12	10	17	28.1	130X4-8/6M-1/4KFF	361271	o. r.
10/8	R 1/4	11	24	25.5	13	10	17	29.4	130X4-10/8M-1/4KFF	361280	o. r.




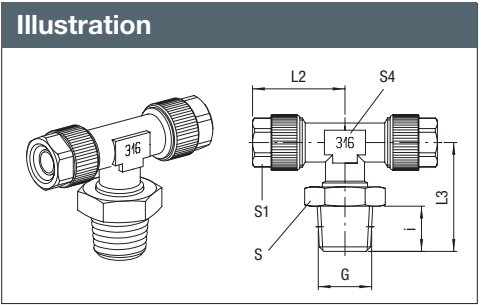
T-Adaptor - Male												
Price group	13		PN 25	T _{min} -40 °C	0 °C	Conical thread					Union nut: Nickel-plated brass	Stainless steel AISI 316L
for tube D/d	G	i	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price		
6/4	R 1/8	7.5	17.5	16.9	10	8	20.8	141X4M-6/4M-1/8K	361821	o. r.		
6/4	R 1/4	10.5	17.5	19.9	10	9	25.7	141X4M-6/4M-1/4K	361822	o. r.		
8/6	R 1/8	7.5	18.5	18	12	9	26	141X4M-8/6M-1/8K	361823	o. r.		
8/6	R 1/4	10.5	18.5	21	12	10	31.4	141X4M-8/6M-1/4K	361824	o. r.		
10/8	R 1/8	9	25	18.5	13	10	34.1	141X4-10/8M-1/8K	361479	o. r.		
10/8	R 1/4	10.5	25	21	13	10	37.9	141X4-10/8M-1/4K	361480	o. r.		
10/8	R 3/8	11.3	27	25	13	13	39.6	141X4-10/8M-3/8K	361481	o. r.		
12/10	R 3/8	11.3	29	25	15	13	59.9	141X4-12/10M-3/8K	361493	o. r.		
12/10	R 1/2	14.2	30.5	29	15	17	91	141X4-12/10M-1/2K	361494	o. r.		




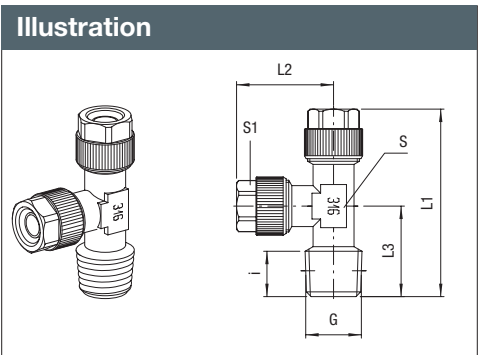
T-Adaptor - Male - Positionable											
Price group	13		PN 16	T _{min} 0 °C	0 °C	Cylindrical thread	Seal: FKM FDA-compliant	not suitable for rotating or oscill. movement		Union nut: Nickel-plated brass	Stainless steel AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	8	22.5	14	10	10	13	32.3	121X4-6/4M-1/8FF	361564	o. r.
6/4	G 1/4	10	22.5	14.5	10	10	17	35.1	121X4-6/4M-1/4FF	361565	o. r.
8/6	G 1/8	8	22.5	14	12	10	13	34.2	121X4-8/6M-1/8FF	361570	o. r.
8/6	G 1/4	10	22.5	14.5	12	10	17	38.2	121X4-8/6M-1/4FF	361571	o. r.
10/8	G 1/4	10	24	14.5	13	10	17	41.5	121X4-10/8M-1/4FF	361580	o. r.



T-Adaptor - Male - Positionable											
Price group	13		PN 16	T _{min} 0 °C	0 °C	Conical thread	Seal: FKM FDA-compliant	not suitable for rotating or oscill. movement		Union nut: Nickel-plated brass	Stainless steel AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	22.5	21.5	10	10	13	32.2	121X4-6/4M-1/8KFF	361664	o. r.
6/4	R 1/4	11	22.5	25.5	10	10	17	36.4	121X4-6/4M-1/4KFF	361665	o. r.
8/6	R 1/8	7.5	22.5	21.5	12	10	13	34.3	121X4-8/6M-1/8KFF	361670	o. r.
8/6	R 1/4	11	22.5	25.5	12	10	17	38.9	121X4-8/6M-1/4KFF	361671	o. r.
10/8	R 1/4	11	24	25.5	13	10	17	40.9	121X4-10/8M-1/4KFF	361680	o. r.



Side T-Adaptor - Male											
Price group	13		PN 25	T _{min} -40 °C	0 °C					Union nut: Nickel-plated brass	Stainless steel AISI 316L
for tube D/d	G	i	L1*	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	9	41	22.5	18.5	10	10	26.8	142X4-6/4M-1/8K	361764	o. r.
6/4	R 1/4	10.5	43.5	22.5	21	10	10	29.5	142X4-6/4M-1/4K	361765	o. r.
8/6	R 1/8	9	41	22.5	18.5	12	10	28.9	142X4-8/6M-1/8K	361770	o. r.
8/6	R 1/4	10.5	43.5	22.5	21	12	10	31.6	142X4-8/6M-1/4K	361771	o. r.
10/8	R 1/8	9	43.5	25	18.5	13	10	on req.	142X4-10/8M-1/8K	361779	o. r.
10/8	R 1/4	10.5	46	25	21	13	10	on req.	142X4-10/8M-1/4K	361780	o. r.
10/8	R 3/8	11.5	52	27	25	13	13	on req.	142X4-10/8M-3/8K	361781	o. r.



* approximate with fastened Union nut

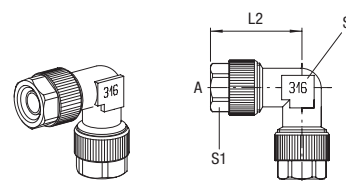
90° Elbow Connector

 Price group **13** PN 25 $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$


Union nut: Nickel-plated brass

Stainless steel AISI 316L

for tube A D/d	for tube B D/d	L2*	S1	S	Weight in [g]	Type	Order number	Price
6/4	6/4	22.5	10	10	23.4	155X4-6/4M	362185	o. r.
8/6	8/6	22.5	12	10	24.6	155X4-8/6M	362187	o. r.
10/8	10/8	25	13	10	29.2	155X4-10/8M	362190	o. r.
12/10	12/10	29	15	13	on req.	155X4-12/10M	362194	o. r.

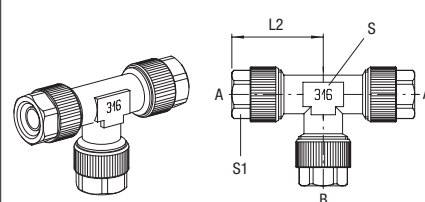
Illustration

T-Connector

 Price group **13** PN 25 $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$


Union nut: Nickel-plated brass

Stainless steel AISI 316L

for tube A D/d	for tube B D/d	L2*	S1	S	Weight in [g]	Type	Order number	Price
6/4	6/4	22.5	10	10	31.7	154X4-6/4M	362385	o. r.
8/6	8/6	22.5	12	10	34.1	154X4-8/6M	362387	o. r.
10/8	10/8	25	13	10	42.7	154X4-10/8M	362390	o. r.
12/10	12/10	29	15	13	63.9	154X4-12/10M	362394	o. r.

Illustration


* approximate with fastened Union nut

RAPID Fittings Stainless Steel AISI 316L (1.4404) (Push-on)

Rapid version

Operating pressure Technical vacuum up to maximum pressure as stated in the respective specification table under PN.

Temperature range: -40 °C to +140 °C (for restrictions see specification table)

Application

Rapid fittings are used with aggressive gaseous and liquid media, where elastomer seals are not resistant. With guide cone and cap nut these fittings are particularly suited to very harsh operating conditions.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media. The FKM sealing ring is FDA-compliant and can be used in the food and pharmaceutical industries.
Other materials	see relevant products
Approval	NSF/ANSI 169

TUBE

Outside diameter D [mm] Inside diameter d [mm]	6/4 8/6 10/8	12/10
Perm. tolerance outside D	±0.1	±0.15
Perm. tolerance inside d	±0.1	±0.15
Max. wall thickness tolerance	±0.1 With very soft tubes, for example PVC tubes, variations in the outside diameter or wall thickness of up to + 5/10 are allowable. In case of doubt please ask.	
Permitted grades	Polyamide (PA), polyurethane (PU), polyethylene (PE), fabric reinforced PVC, fluorine polymer (FEP and PFA)	

THREAD

External thread	“G” cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 1/2
External thread	“R” conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 up to R 1/2. Designed for pairing with internal thread according to DIN ISO 228-1.

OPERATING PRESSURE / TEMPERATURE

Metal version	PN 25 $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$ Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range “T”. Allowable operating pressure and operating temperature of pipe/tube must be observed!
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THREAD SEAL

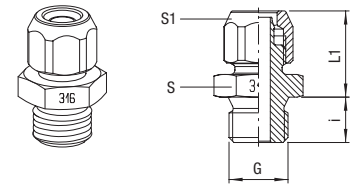
Cylindrical threaded nipple	Seal with sealing rings made of copper, fiber, aluminium, polyamide or hard PVC. Seal with chambered O-ring (FDA-compliant) on request
Tapered threaded nipple	Seal with Teflon tape winding (FDA-compliant) on request
Straight, 90° elbow and T-adaptors, male	not suitable for rotating or oscill. movements Some types of fittings rotate 360° in order to facilitate alignment during assembly or for compensating movement.

Straight Adaptor - Male

Price group	13	PN	25	T _{min}	-40 °C	T _{max}	+140 °C	Thread	cylindrical
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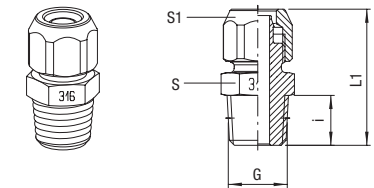
for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	8	18.5	12	13	14.8	151X4-6/4-1/8	360014	o. r.
6/4	G 1/4	10	19	12	17	23.9	151X4-6/4-1/4	360015	o. r.
8/6	G 1/8	8	18.5	14	13	17.5	151X4-8/6-1/8	360020	o. r.
8/6	G 1/4	10	19	14	17	26.8	151X4-8/6-1/4	360021	o. r.
10/8	G 1/8	8	20	17	14	27.5	151X4-10/8-1/8	360029	o. r.
10/8	G 1/4	10	20.5	17	17	32	151X4-10/8-1/4	360030	o. r.
10/8	G 3/8	10	20.5	17	19	40.7	151X4-10/8-3/8	360031	o. r.
12/10	G 3/8	10	22	19	19	43.8	151X4-12/10-3/8	360043	o. r.
12/10	G 1/2	12	22.5	19	24	47.3	151X4-12/10-1/2	360044	o. r.

Illustration

Straight Adaptor - Male

Price group	13	PN	25	T _{min}	-40 °C	T _{max}	+140 °C	Thread	conical
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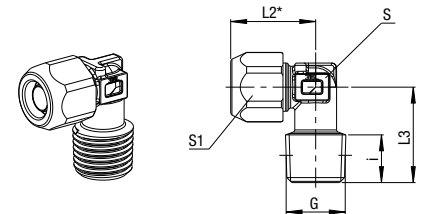
for tube D/d	G	i	L1*	S1	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	26	12	12	14.2	151X4-6/4-1/8K	360414	o. r.
6/4	R 1/4	11	30	12	14	21.8	151X4-6/4-1/4K	360415	o. r.
8/6	R 1/8	7.5	26	14	12	16.7	151X4-8/6-1/8K	360420	o. r.
8/6	R 1/4	11	30	14	14	25.1	151X4-8/6-1/4K	360421	o. r.
10/8	R 1/8	7.5	27.5	17	14	27.9	151X4-10/8-1/8K	360429	o. r.
10/8	R 1/4	11	31.5	17	14	30.7	151X4-10/8-1/4K	360430	o. r.
10/8	R 3/8	11.5	32	17	17	41.2	151X4-10/8-3/8K	360431	o. r.
12/10	R 3/8	11.5	33.5	19	17	34	151X4-12/10-3/8K	360443	o. r.
12/10	R 1/2	14	36.5	19	22	34.0	151X4-12/10-1/2K	360444	o. r.

Illustration

90° Elbow Adaptor - Male

Price group	13	PN	25	T _{min}	-40 °C	T _{max}	+140 °C	Thread	conical
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for tube D/d	G	i	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price
6/4	R 1/8	7.5	17.5	16.9	12	8	15.2	150X4M-6/4-1/8K	361301	o. r.
6/4	R 1/4	10.5	17.5	19.9	12	9	20.1	150X4M-6/4-1/4K	361302	o. r.
8/6	R 1/8	7.5	18.5	18	14	9	19	150X4M-8/6-1/8K	361303	o. r.
8/6	R 1/4	10.5	18.5	21	14	10	24.3	150X4M-8/6-1/4K	361304	o. r.
8/6	R 3/8	10.8	26.5	24.5	14	13	41.4	150X4-8/6-3/8K	361022	o. r.
10/8	R 1/8	9	24.5	18.5	17	10	27	150X4-10/8-1/8K	361029	o. r.
10/8	R 1/4	10.5	24.5	21	17	10	30.6	150X4-10/8-1/4K	361030	o. r.
10/8	R 3/8	10.8	27	24.5	17	13	46.2	150X4-10/8-3/8K	361031	o. r.
12/10	R 3/8	11.3	29	25	19	13	48.6	150X4-12/10-3/8K	361043	o. r.
12/10	R 1/2	14.2	30.5	29	19	17	66.1	150X4-12/10-1/2K	361044	o. r.

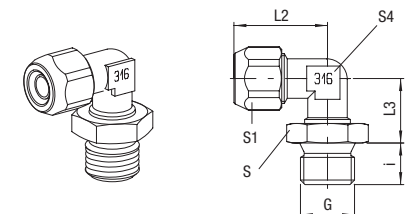
Illustration

90° Elbow Adaptor - Male - Positionable

Price group	13	PN	16	T _{min}	0 °C	T _{max}	+140 °C	Thread	cylindrical
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Seal: FKM (FDA-compliant) not suitable for rotating or oscill. movement



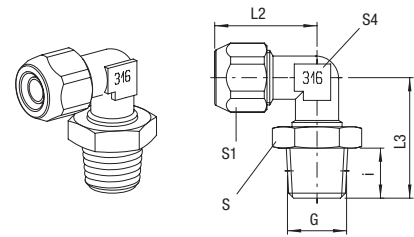
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price
6/4	G 1/8	8	22.5	14	12	10	13	24.9	130X4-6/4-1/8FF	361114	o. r.
6/4	G 1/4	10	22.5	14.5	12	10	17	28.6	130X4-6/4-1/4FF	361115	o. r.
8/6	G 1/8	8	22.5	14	14	10	13	25.6	130X4-8/6-1/8FF	361120	o. r.
8/6	G 1/4	10	22.5	14.5	14	10	17	30.2	130X4-8/6-1/4FF	361121	o. r.
10/8	G 1/4	10	24	14.5	17	10	17	36.1	130X4-10/8-1/4FF	361130	o. r.

Illustration


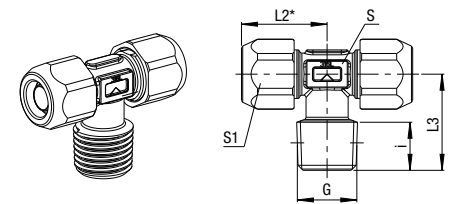
* Approx. dimension with cap nut tightened

90° Elbow Adaptor - Male - Positionable

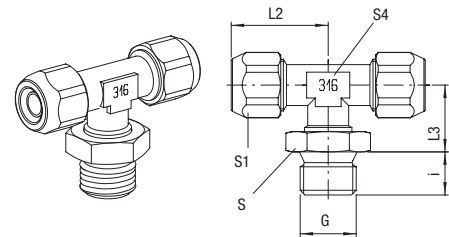
Price group	13	PN	16	T _{min}	0 °C	Thread	conical	Seal: FKM (FDA-compliant)	not suitable for rotating or oscill. movement		NSF	Stainless steel	AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price		
6/4	R 1/8	7.5	22.5	21.5	12	10	13	26	130X4-6/4-1/8KFF	361214	o. r.		
6/4	R 1/4	11	22.5	25.5	12	10	17	29.4	130X4-6/4-1/4KFF	361215	o. r.		
8/6	R 1/8	7.5	22.5	21.5	14	10	13	25.2	130X4-8/6-1/8KFF	361220	o. r.		
8/6	R 1/4	11	22.5	25.5	14	10	17	30.4	130X4-8/6-1/4KFF	361221	o. r.		
10/8	R 1/4	11	24	25.5	17	10	17	36.7	130X4-10/8-1/4KFF	361230	o. r.		

Illustration

T-Adaptor - Male

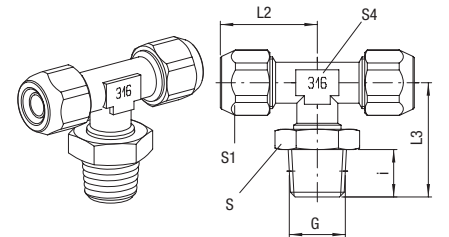
Price group	13	PN	25	T _{min}	-40 °C	Thread	conical				NSF	Stainless steel	AISI 316L
for tube D/d	G	i	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price			
6/4	R 1/8	7.5	17.5	17	12	8	24.2	141X4M-6/4-1/8K	361801	o. r.			
6/4	R 1/4	10.5	17.5	20	12	9	29.1	141X4M-6/4-1/4K	361802	o. r.			
8/6	R 1/8	7.5	18.5	18	14	9	30.3	141X4M-8/6-1/8K	361803	o. r.			
8/6	R 1/4	10.5	18.5	21	14	10	35.7	141X4M-8/6-1/4K	361804	o. r.			
10/8	R 1/8	9	25	18.5	17	10	46.9	141X4-10/8-1/8K	361429	o. r.			
10/8	R 1/4	10.5	25	21	17	10	50.8	141X4-10/8-1/4K	361430	o. r.			
10/8	R 3/8	11.3	27	25	17	13	69.5	141X4-10/8-3/8K	361431	o. r.			
12/10	R 3/8	11.3	29	25	19	13	74.2	141X4-12/10-3/8K	361443	o. r.			
12/10	R 1/2	14.2	30.5	29	19	17	106	141X4-12/10-1/2K	361444	o. r.			

Illustration

T-Adaptor - Male - Positionable

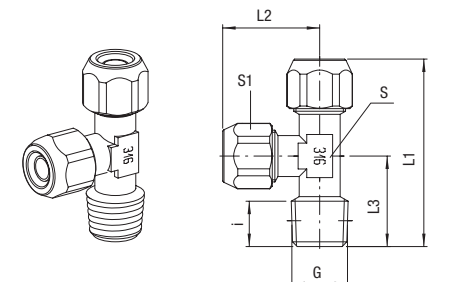
Price group	13	PN	16	T _{min}	0 °C	Thread	cylindrical	Seal: FKM (FDA-compliant)	not suitable for rotating or oscill. movement		NSF	Stainless steel	AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price		
6/4	G 1/8	8	22.5	14	12	10	13	35.8	121X4-6/4-1/8FF	361514	o. r.		
6/4	G 1/4	10	22.5	14.5	12	10	17	38.3	121X4-6/4-1/4FF	361515	o. r.		
8/6	G 1/8	8	22.5	14	14	10	13	37.5	121X4-8/6-1/8FF	361520	o. r.		
8/6	G 1/4	10	22.5	14.5	14	10	17	41.4	121X4-8/6-1/4FF	361521	o. r.		
10/8	G 1/4	10	24	14.5	17	10	17	55.0	121X4-10/8-1/4FF	361530	o. r.		

Illustration

T-Adaptor - Male - Positionable

Price group	13	PN	16	T _{min}	0 °C	Thread	conical	Seal: FKM (FDA-compliant)	not suitable for rotating or oscill. movement		NSF	Stainless steel	AISI 316L
for tube D/d	G	i	L2*	L3	S1	S4	S	Weight in [g]	Type	Order number	Price		
6/4	R 1/8	7.5	22.5	21.5	12	10	13	35.8	121X4-6/4-1/8KFF	361614	o. r.		
6/4	R 1/4	11	22.5	25.5	12	10	17	39.6	121X4-6/4-1/4KFF	361615	o. r.		
8/6	R 1/8	7.5	22.5	21.5	14	10	13	37.5	121X4-8/6-1/8KFF	361620	o. r.		
8/6	R 1/4	11	22.5	25.5	14	10	17	42.1	121X4-8/6-1/4KFF	361621	o. r.		
10/8	R 1/4	11	24	25.5	17	10	17	55	121X4-10/8-1/4KFF	361630	o. r.		

Illustration

Side T-Adaptor - Male

Price group	13	PN	25	T _{min}	-40 °C	Thread	conical				NSF	Stainless steel	AISI 316L
for tube D/d	G	i	L1*	L2*	L3	S1	S	Weight in [g]	Type	Order number	Price		
6/4	R 1/8	9	41	22.5	18.5	12	10	30	142X4-6/4-1/8K	361714	o. r.		
6/4	R 1/4	10.5	43.5	22.5	21	12	10	32.8	142X4-6/4-1/4K	361715	o. r.		
8/6	R 1/8	9	41	22.5	18.5	14	10	32.1	142X4-8/6-1/8K	361720	o. r.		
8/6	R 1/4	10.5	43.5	22.5	21	14	10	34.8	142X4-8/6-1/4K	361721	o. r.		
10/8	R 1/8	9	43.5	25	18.5	17	10	44.4	142X4-10/8-1/8K	361729	o. r.		
10/8	R 1/4	10.5	46	25	21	17	10	55.4	142X4-10/8-1/4K	361730	o. r.		
10/8	R 3/8	11.3	52	27	25	17	13	68	142X4-10/8-3/8K	361731	o. r.		

Illustration


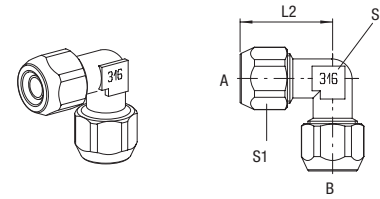
* Approx. dimension with cap nut tightened

90° Elbow Connector

 Price group **13** PN 25 $T_{min} -40\text{ °C}$
 $T_{max} +140\text{ °C}$

 Stainless steel
 AISI 316L

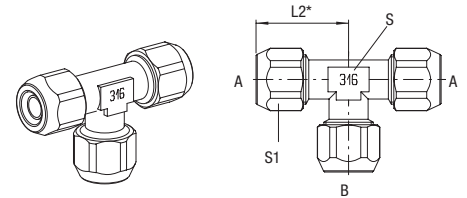
for pipe A D/d	for pipe B D/d	L2*	S1	S	Weight in [g]	Type	Order number	Price
6/4	6/4	22.5	12	10	26.2	155X4-6/4	362135	o. r.
8/6	8/6	22.5	14	10	28.3	155X4-8/6	362137	o. r.
10/8	10/8	25	17	10	41.4	155X4-10/8	362140	o. r.
12/10	12/10	29	19	13	60	155X4-12/10	362144	o. r.

Illustration

T-Connector

 Price group **13** PN 25 $T_{min} -40\text{ °C}$
 $T_{max} +140\text{ °C}$

 Stainless steel
 AISI 316L

for pipe A D/d	for pipe B D/d	L2*	S1	S	Weight in [g]	Type	Order number	Price
6/4	6/4	22.5	12	10	37	154X4-6/4	362335	o. r.
8/6	8/6	22.5	14	10	40.7	154X4-8/6	362337	o. r.
10/8	10/8	25	17	10	61	154X4-10/8	362340	o. r.
12/10	12/10	29	19	13	115	154X4-12/10	362344	o. r.

Illustration


* Approx. dimension with cap nut tightened

Fitting Accessories Nickel-Plated Brass / Alu

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Nickel-plated brass	CuZn39Pb3, electrolytically nickel-plated (on request also chemically nickel-plated)
Aluminium	Aluminium alloy AlCuMgPbF37

THREAD

External thread	“M” cylindrical thread: Metric ISO thread M5
External thread	“G” cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/4
External thread	“R” conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 to R 3/4. Dimensions constructed so with inner thread there can be pairing according to DIN ISO 228-1.
Internal thread	“M” cylindrical thread: Metric ISO thread M5
Internal thread	“G” cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2

OPERATING PRESSURE / TEMPERATURE

Metal version	<table border="1"> <tr> <td>PN</td> <td>$T_{min} -40\text{ °C}$</td> <td rowspan="2">Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range “T”.</td> </tr> <tr> <td>50</td> <td>$T_{max} +120\text{ °C}$</td> </tr> </table>	PN	$T_{min} -40\text{ °C}$	Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range “T”.	50	$T_{max} +120\text{ °C}$
PN	$T_{min} -40\text{ °C}$	Means that the fitting can be used up to the given nominal pressure PN within the specified temperature range “T”.				
50	$T_{max} +120\text{ °C}$					
Permitted operating pressure and temperature of pipe/tube must be observed.						

THREAD SEAL

Cylindrical threaded nipple	Seal with sealing rings made of copper, fibre, aluminium, polyamide or hard PVC	
Conical threaded nipple	“G” cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 3/4	
	<table border="1"> <tr> <td>Option: “D” self-sealing</td> <td>Seal with sealant Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, motor oils etc.</td> </tr> </table>	Option: “D” self-sealing
Option: “D” self-sealing	Seal with sealant Film with non-reactive mineral solid materials, non-adhesive. Resistant to air, water, motor oils etc.	

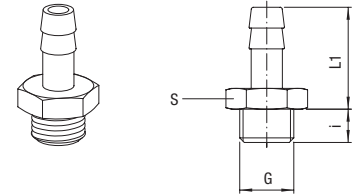
“POSITIONABLE” VERSION

Reducer nipple type 232 see “Reducer - Positionable”	<table border="1"> <tr> <td>Not suitable for rotating or oscill. movements.</td> <td>This nipple is 360°-positionable to facilitate adjustment during assembly.</td> </tr> </table>	Not suitable for rotating or oscill. movements.	This nipple is 360°-positionable to facilitate adjustment during assembly.
Not suitable for rotating or oscill. movements.	This nipple is 360°-positionable to facilitate adjustment during assembly.		

Hosetail Adaptor

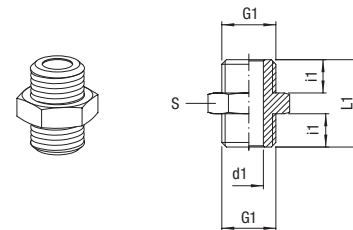
Price group	16	PN 50	Cylindrical thread	T_{min} -40 °C T_{max} +120 °C	Nickel-plated brass
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for tube LW	G	i	L1	S	Weight in [g]	Type	Order number	Price
1.6 - 2	M 5	4	12	8	2	260M-2-M5	250150	o. r.
2.7 - 3	M 5	4	12	8	2.2	260M-3-M5	250151	o. r.
3.5 - 4	M 5	4	12	8	2.6	260M-4-M5	250152	o. r.
5 - 6	G 1/8	6	24	13	10.9	260M-7-1/8	250169	o. r.
5 - 6	G 1/4	8	24.5	17	18.4	260M-7-1/4	250170	o. r.
6 - 7	G 1/8	6	24	13	20.7	260M-8-1/8	250178	o. r.
6 - 7	G 1/4	8	24.5	17	19.2	260M-8-1/4	250179	o. r.
7 - 8	G 1/8	6	24	13	11.4	260M-9-1/8	250187	o. r.
7 - 8	G 1/4	8	24.5	17	19.3	260M-9-1/4	250188	o. r.
7 - 8	G 3/8	9	24.5	19	24.5	260M-9-3/8	250189	o. r.
9 - 10	G 1/4	8	24.5	17	19.9	260M-10-1/4	250194	o. r.
10 - 11	G 1/4	8	24.5	17	21.1	260M-12-1/4	250206	o. r.
10 - 11	G 3/8	9	24.5	19	25.8	260M-12-3/8	250207	o. r.
10 - 11	G 1/2	10	25	24*	42.2	260M-12-1/2	250208	o. r.
12 - 13	G 1/4	8	24.5	17	24.5	260M-14-1/4	250210	o. r.
12 - 13	G 3/8	9	24.5	19	29.3	260M-14-3/8	250211	o. r.
12 - 13	G 1/2	10	25	24*	39.1	260M-14-1/2	250212	o. r.
15 -16	G 3/8	9	29	19	34.6	260M-17-3/8	250217	o. r.
15 -16	G 1/2	10	29.5	24*	47.5	260M-17-1/2	250218	o. r.
18 - 19	G 1/2	10	29.5	24*	44.7	260M-20-1/2	250222	o. r.

Illustration

Double Nipple

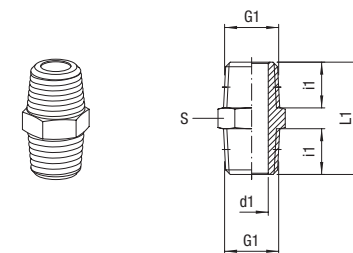
Price group	16	PN 50	Cylindrical thread	T_{min} -40 °C T_{max} +120 °C	Nickel-plated brass
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G1	i1	L1	d1	S	Weight in [g]	Type	Order number	Price
M 5	4	11.5	2	8	2.4	250M-M5	250251	o. r.
G 1/8	6	16.5	5	13	9.2	250M-1/8	250253	o. r.
G 1/4	8	21	7	17	19.1	250M-1/4	250257	o. r.
G 3/8	9	23	10	19	26	250M-3/8	250260	o. r.
G 1/2	10	25.5	13	24*	44.3	250M-1/2	250262	o. r.

Illustration

Double Nipple

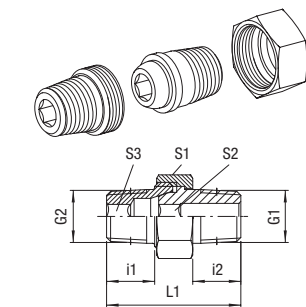
Price group	16	PN 50	Conical thread	T_{min} -40 °C T_{max} +120 °C	Thread self-sealing by pre-coating "D"	Option "D" T_{max} +100 °C	Nickel-plated brass
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G1	i1	L1	d1	S	self-sealing "D"	Weight in [g]	Type	Order number	Price
R 1/8	7.5	19.5	5.5	10	-	7.5	250M-1/8K	250353	o. r.
R 1/8	7.5	19.5	5.5	10	D	7.7	250M-D1/8K	260353	o. r.
R 1/4	11	27	8.2	14	-	16.8	250M-1/4K	250357	o. r.
R 1/4	11	27	8.2	14	D	20.1	250M-D1/4K	260357	o. r.
R 3/8	11.5	28	11	17	-	26.2	250M-3/8K	250360	o. r.
R 3/8	11.5	28	11	17	D	26.4	250M-D3/8K	260360	o. r.
R 1/2	14	33.5	15	22	-	41.6	250M-1/2K	250362	o. r.
R 1/2	14	33.5	15	22	D	42.1	250M-D1/2K	260362	o. r.
R 3/4	16	39	19	27	-	84	250M-3/4K	250364	o. r.

Illustration

Double Nipple - Union

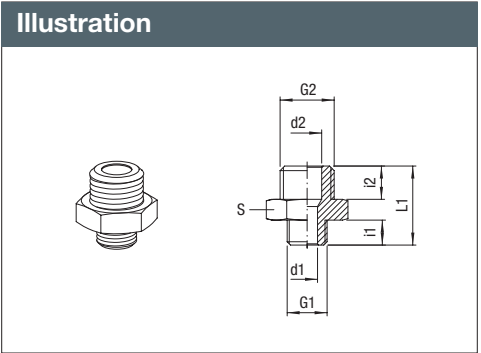
Price group	16	PN 16	Conical thread	T_{min} -40 °C T_{max} +120 °C	Nickel-plated brass
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G1+G2	i1	i2	L1	S1	S2	S3	Weight in [g]	Type	Order number	Price
R 1/8	9	9	27.5	15	5	5	17.1	230M-1/8K	319903	o. r.
R 1/4	12	12	34	19	6	6	35	230M-1/4K	319907	o. r.
R 3/8	13	13	37	22	8	8	53.8	230M-3/8K	319910	o. r.
R 1/2	15.5	16	44.5	27	12	12	87.4	230M-1/2K	319912	o. r.

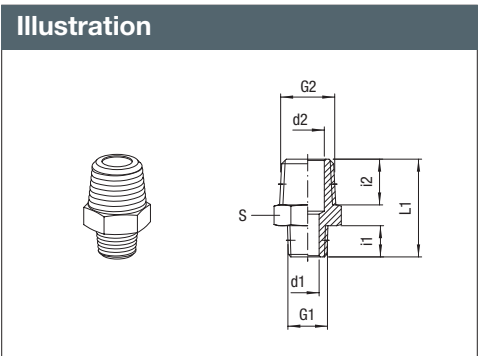
Illustration


* S24 = octagon

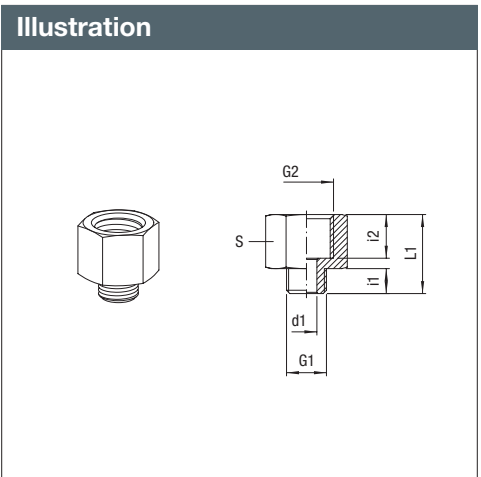
Double Reducing Nipple												
Price group	16	PN 50	$T_{min} -40\text{ °C}$ $T_{max} +120\text{ °C}$	Cylindrical thread M,G								Nickel-plated brass
G1	G2	i1	i2	L1	d1	d2	S	Weight in [g]	Type	Order number	Price	
M 5	G 1/8	4	6	14.5	2	5	13	7.7	251M-M5-1/8	250452	o. r.	
G 1/8	G 1/4	6	8	19	5	7	17	16.6	251M-1/8-1/4	250454	o. r.	
G 1/8	G 3/8	6	9	20	5	9.5	19	22	251M-1/8-3/8	250455	o. r.	
G 1/8	G 1/2	6	10	21.5	5	14	24*	32.6	251M-1/8-1/2	250456	o. r.	
G 1/4	G 3/8	8	9	22	7	10	19	24.1	251M-1/4-3/8	250458	o. r.	
G 1/4	G 1/2	8	10	23.5	7	14	24*	34.3	251M-1/4-1/2	250459	o. r.	
G 3/8	G 1/2	9	10	24.5	10	14	24*	36.5	251M-3/8-1/2	250461	o. r.	



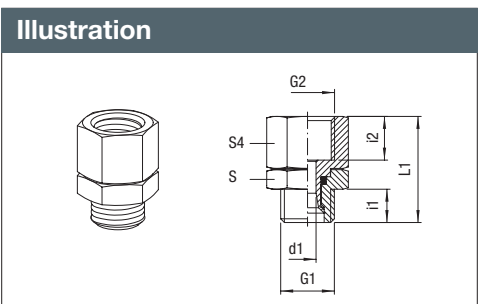
Double Reducer Nipple												
Price group	16	PN 50	$T_{min} -40\text{ °C}$ $T_{max} +120\text{ °C}$	Conical thread								Nickel-plated brass
G1	G2	i1	i2	L1	d1	d2	S	Weight in [g]	Type	Order number	Price	
R 1/8	R 1/4	7.5	11	23.5	5.5	8.2	14	14.3	251M-1/8K-1/4K	250554	o. r.	
R 1/8	R 3/8	7.5	11.5	24	5.5	11	17	21.1	251M-1/8K-3/8K	250555	o. r.	
R 1/8	R 1/2	7.5	14	27	5.5	15	22	33.7	251M-1/8K-1/2K	250556	o. r.	
R 1/4	R 3/8	11	11.5	27.5	8.2	11	17	23	251M-1/4K-3/8K	250558	o. r.	
R 1/4	R 1/2	11	14	30.5	8.2	15	22	36.5	251M-1/4K-1/2K	250559	o. r.	
R 3/8	R 1/2	11.5	14	31	11	15	22	39.5	251M-3/8K-1/2K	250561	o. r.	
R 1/2	R 3/4	14	16	37	15	19	27	69.4	251M-1/2K-3/4K	250563	o. r.	



Reducer												
Price group	16	PN 50	$T_{min} -40\text{ °C}$ $T_{max} +120\text{ °C}$	Cylindrical thread M,G								Nickel-plated brass
G1	G2	i1	i2	L1	d1	S	Weight in [g]	Type	Order number	Price		
M5	M 5	4	5	11	2	8	2.9	252M-M5-M5	250651	o. r.		
M5	G 1/8	4	7	14	2	13	8.3	252M-M5-1/8	250652	o. r.		
G 1/8	G 1/8	6	7	16	6	13	8.8	252M-1/8-1/8	250653	o. r.		
G 1/8	G 1/4	6	9	19	6	17	17.3	252M-1/8-1/4	250654	o. r.		
G 1/8	G 3/8	6	10	20	6	19	17.6	252M-1/8-3/8	250655	o. r.		
G 1/8	G 1/2	6	13.5	24	6	24*	32.8	252M-1/8-1/2	250656	o. r.		
G 1/4	G 1/4	8	9	21	8	17	19.5	252M-1/4-1/4	250657	o. r.		
G 1/4	G 3/8	8	10	22	8	19	20.4	252M-1/4-3/8	250658	o. r.		
G 1/4	G 1/2	8	13.5	26	8	24*	34.2	252M-1/4-1/2	250659	o. r.		
G 3/8	G 3/8	9	10	23	12	19	20.4	252M-3/8-3/8	250660	o. r.		
G 3/8	G 1/2	9	13.5	27	12	24*	38.7	252M-3/8-1/2	250661	o. r.		
G 1/2	G 1/2	10	13.5	28	14	24*	39.7	252M-1/2-1/2	250662	o. r.		



Reducer - Positionable											
Price group	16	PN 16	$T_{min} -20\text{ °C}$ $T_{max} +80\text{ °C}$	Cylindrical thread G	Sealing ring: NBR	not suitable for rotating or oscill. movements			Nickel-plated brass		
G1	G2	i1	i2	L1	d1	S4	S	Weight in [g]	Type	Order number	Price
G 1/8	G 1/8	6	7	20.6	4	13	13	13.6	232M-1/8-1/8	320003	o. r.
G 1/4	G 1/4	8	9	25.7	6.5	17	17	27.4	232M-1/4-1/4	320007	o. r.
G 3/8	G 3/8	9	10	27.7	8.6	19	19	32.3	232M-3/8-3/8	320010	o. r.



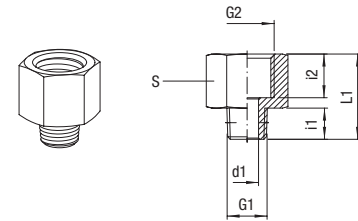
* S24 = octagon

Reducer

Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Thread R conical, thread G cylindr.	Nickel-plated brass
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G1	G2	i1	i2	L1	d1	S	Weight in [g]	Type	Order number	Price
R 1/8	G 1/8	7.5	7	17.5	5.5	13	9.6	252M-1/8K-1/8	250753	o. r.
R 1/8	G 1/4	7.5	9	20.5	5.5	17	18.5	252M-1/8K-1/4	250754	o. r.
R 1/8	G 3/8	7.5	10	21.5	5.5	19	19	252M-1/8K-3/8	250755	o. r.
R 1/8	G 1/2	7.5	13.5	25.5	5.5	24*	33.7	252M-1/8K-1/2	250756	o. r.
R 1/4	G 1/4	11	9	24	8.2	17	21.2	252M-1/4K-1/4	250757	o. r.
R 1/4	G 3/8	11	10	25	8.2	19	21.6	252M-1/4K-3/8	250758	o. r.
R 1/4	G 1/2	11	13.5	29	8.2	24*	36.7	252M-1/4K-1/2	250759	o. r.
R 3/8	G 3/8	11.5	10	25.5	11	19	24	252M-3/8K-3/8	250760	o. r.
R 3/8	G 1/2	11.5	13.5	29.5	11	24*	39.4	252M-3/8K-1/2	250761	o. r.
R 1/2	G 1/2	14	13.5	32	15	24*	44.3	252M-1/2K-1/2	250762	o. r.

Illustration

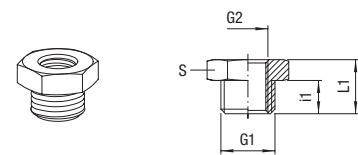


Reducer

Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread	Nickel-plated brass
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G1	G2	i1	L1	S	Weight in [g]	Type	Order number	Price
G 1/8	M5	6	10.5	13	7.3	253M-1/8-M5	250852	o. r.
G 1/4	G 1/8	8	13	17	10.6	253M-1/4-1/8	250854	o. r.
G 3/8	G 1/8	9	14	19	19.5	253M-3/8-1/8	250855	o. r.
G 1/2	G 1/8	10	15.5	24*	37.4	253M-1/2-1/8	250856	o. r.
G 3/8	G 1/4	9	14	19	12.6	253M-3/8-1/4	250858	o. r.
G 1/2	G 1/4	10	15.5	24*	30.7	253M-1/2-1/4	250859	o. r.
G 1/2	G 3/8	10	15.5	24*	20.6	253M-1/2-3/8	250861	o. r.

Illustration

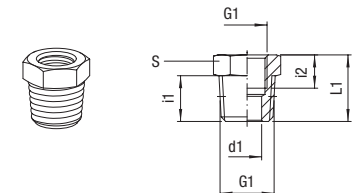


Reducer

Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Thread R conical, thread G cylindr.	Option "D" self-sealing	Option "D" T _{max} +100 °C	Nickel-plated brass
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G1	G2	i1	i2	L1	d1	S	Option "D"	Weight in [g]	Type	Order number	Price
R 1/4	G 1/8	11	7.5	16	8.6	14	-	9.4	253M-1/4K-1/8	250954	o. r.
R 1/4	G 1/8	11	7.5	16	8.6	14	D	9	253M-D1/4K-1/8	260954	o. r.
R 3/8	G 1/8	11.5	7.5	16.5	8.6	17	-	20.6	253M-3/8K-1/8	250955	o. r.
R 3/4	G 1/8	11.5	7.5	16.5	8.6	17	D	20.7	253M-D3/8K-1/8	250985	o. r.
R 1/2	G 1/8	14	7.5	19.5	8.6	22	-	45.5	253M-1/2K-1/8	250956	o. r.
R 3/8	G 1/4	11.5	9	16.5	8.7	17	-	15.2	253M-3/8K-1/4	250958	o. r.
R 3/8	G 1/4	11.5	9	16.5	8.7	17	D	16.3	253M-D3/8K-1/4	260958	o. r.
R 1/2	G 1/4	14	11.5	19.5	11.5	22	-	35.9	253M-1/2K-1/4	250959	o. r.
R 1/2	G 3/8	14	11.5	19.5	15	22	-	23.7	253M-1/2K-3/8	250961	o. r.
R 1/2	G 3/8	14	11.5	19.5	15	22	D	23.7	253M-D1/2K-3/8	260961	o. r.
R 3/4	G 1/2	16	13.5	23	18.8	27	-	45	253M-3/4K-1/2	250963	o. r.

Illustration

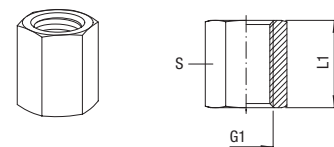


Socket

Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread	Nickel-plated brass
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G1	L1	S	Weight in [g]	Type	Order number	Price
M 5	10	8	3.3	254M-M5	251051	o. r.
G 1/8	15	13	9.7	254M-1/8	251053	o. r.
G 1/4	21	17	22.3	254M-1/4	251057	o. r.
G 3/8	23	19	21.3	254M-3/8	251060	o. r.
G 1/2	30	24*	39.3	254M-1/2	251062	o. r.

Illustration

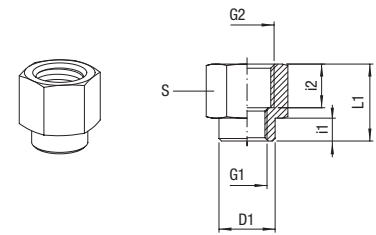


* S24 = octagon

Reducing Socket

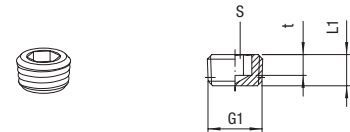
Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread	Nickel-plated brass
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G1	G2	i1	i2	L1	D1	S	Weight in [g]	Type	Order number	Price
M5	G 1/8	3	7	13	8	13	8.2	255M-M5-1/8	251152	o. r.
G 1/8	G 1/4	5.5	9	18.5	13.5	17	18.2	255M-1/8-1/4	251154	o. r.
G 1/8	G 3/8	5.5	10	19.5	13.5	19	18.7	255M-1/8-3/8	251155	o. r.
G 1/8	G 1/2	5	13.5	23	13.5	24*	33.9	255M-1/8-1/2	251156	o. r.
G 1/4	G 3/8	8	10	22	17	19	21.3	255M-1/4-3/8	251158	o. r.
G 1/4	G 1/2	7.5	13.5	25.5	17	24*	34.3	255M-1/4-1/2	251159	o. r.
G 3/8	G 1/2	8.5	13.5	26.5	21	24*	37.4	255M-3/8-1/2	251161	o. r.

Illustration

Blind Plug

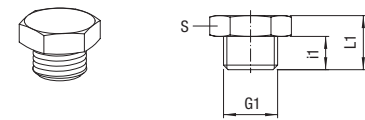
Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Conical thread	Brass
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G1	L1	t	S	Weight in [g]	Type	Order number	Price
R 1/8	5	3	5	1.9	257U-1/8K	251303	o. r.
R 1/4	7.5	5	7	5	257U-1/4K	251307	o. r.
R 3/8	8	5	8	10.1	257U-3/8K	251310	o. r.
R 1/2	9	5	10	17.3	257U-1/2K	251312	o. r.
R 3/4	10	7	12	31.1	257U-1/2K	251314	o. r.

Illustration

Plug

Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread	Nickel-plated brass
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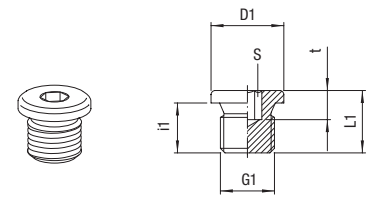
G1	i1	L1	S	Weight in [g]	Type	Order number	Price
M 5	4	7.5	8	2.2	261M-M5	251401	o. r.
G 1/8	6	10.5	13	7.6	261M-1/8	251403	o. r.
G 1/4	8	13	17	14.9	261M-1/4	251407	o. r.
G 3/8	9	14	19	20.6	261M-3/8	251410	o. r.
G 1/2	10	15.5	24*	32.8	261M-1/2	251412	o. r.

Illustration


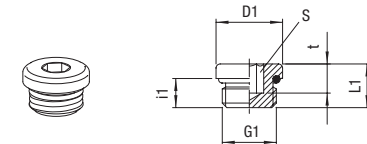
* S24 = octagon

Plug with Internal Hexagon - DIN 908

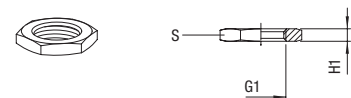
Price group	16	PN 50	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread		Nickel-plated steel	Brass			
G1	i1	L1	D1	t	S	Weight in [g]	Type	Order number	Price	
G 1/8	8	11	14	5	5	6.6	262U-1/8	251553	o. r.	
G 1/4	12	15	17.5	7	6	14.6	262U-1/4	251557	o. r.	
G 3/8	12	15	22	7.5	8	22.7	262U-3/8	251560	o. r.	

Illustration

Plug with Internal Hexagon

Price group	16	PN 25	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Sealing thread NBR		Nickel-plated brass			
G1	i1	L1	D1	t	S	Weight in [g]	Type	Order number	Price	
M5	3.5	6.7	7.9	2	3	2	262M-M5B	251533	o. r.	
G 1/8	5	8	13	4	5	4.5	262M-1/8B	251543	o. r.	
G 1/4	7	10.5	16	5.5	6	9.9	262M-1/4B	251549	o. r.	
G 3/8	8	11.5	20	6	8	17.2	262M-3/8B	251547	o. r.	
G 1/2	9	13	25	6	10	31.1	262M-1/2B	251545	o. r.	

Illustration

Lock Nut

Price group	16	T _{min} -40 °C T _{max} +120 °C	Cylindrical thread M,G		Nickel-plated brass					
G1	H1	S	Weight in [g]	Type	Order number	Price				
M7x0.75	2	10	0.9	256M-M7x0.75	251701	o. r.				
M10x1	2.5	13	1.6	256M-M10x1	251702	o. r.				
M12x1	3	17	3.7	256M-M12x1	251703	o. r.				
M14x1	3	17	2.6	256M-M14x1	251704	o. r.				
M16x1	3.5	19	3.5	256M-M16x1	251705	o. r.				
M20x1	4	24*	5.7	256M-M20x1	251706	o. r.				
M20x1.5	4	24*	5.9	256M-M20x1.5	251707	o. r.				
G 1/8	3.6	13	2.3	256M-1/8	251708	o. r.				
G 1/4	4	17	4.2	256M-1/4	251709	o. r.				
G 3/8	4.5	22	8.1	256M-3/8	251710	o. r.				
G 1/2	5	24*	6.5	256M-1/2	251711	o. r.				

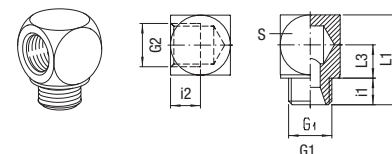
Illustration


* S24 = octagon

90° Elbow Compact

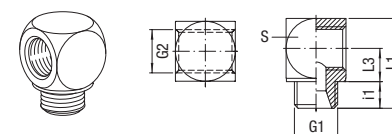
Price group	16	PN	50	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread	Nickel-plated brass
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G1	G2	i1	i2	L1	L3	S	Weight in [g]	Type	Order number	Price
M 5	M 5	4	4.5	13	4.5	9	5.2	302M-M5	254021	o. r.
G 1/8	G 1/8	6	7	21	8	14	18.5	302M-1/8	254031	o. r.
G 1/4	G 1/4	8	9	27	10	18	38.6	302M-1/4	254032	o. r.

Illustration

T-Piece - Compact

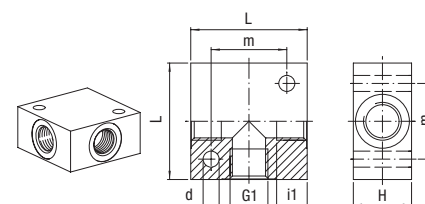
Price group	16	PN	50	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread	Nickel-plated brass
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G1	G2	i1	L1	L3	S	Weight in [g]	Type	Order number	Price
M 5	M 5	4	13	4.5	9	4.7	306M-M5	254071	o. r.
G 1/8	G 1/8	6	21	8	14	16.5	306M-1/8	254081	o. r.
G 1/4	G 1/4	8	27	10	18	34.5	306M-1/4	254082	o. r.

Illustration

Cross-Manifold

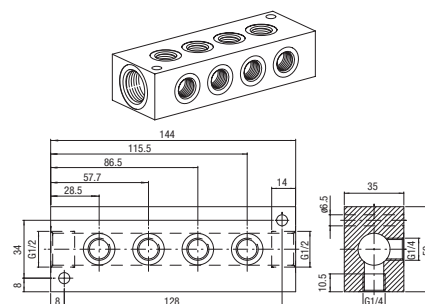
Price group	16	PN	50	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread	Aluminium bright	Nickel-plated brass
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G1	material	i1	L	m	d	H	Weight in [g]	Type	Order number	Price
M 5	Nickel-plated brass	5	18	11	3.3	10	21.3	303M-M5	254221	o. r.
G 1/8	Aluminium alloy	6.5	25	17	4.5	16	17.6	303A-1/8	254211	o. r.
G 1/4	Aluminium alloy	10.5	40	26	5.5	20	63.6	303A-1/4	254212	o. r.
G 3/8	Aluminium alloy	11.5	50	34	5.5	26	130	303A-3/8	254213	o. r.
G 1/2	Aluminium alloy	13.5	50	34	5.5	32	148	303A-1/2	254214	o. r.

Illustration

Manifold

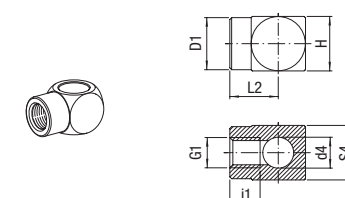
Price group	16	PN	25	T_{min}	-40 °C	T_{max}	+120 °C	Cylindrical thread	Aluminium bright
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Connector inlet	Connector outlet	Weight in [g]	Type	Order number	Price
G 1/2	G 1/4	545	383A-1/2-1/4	255859	o. r.

Illustration

Banjo Ring Piece

Price group	16	PN	16	T_{min}	-20 °C	T_{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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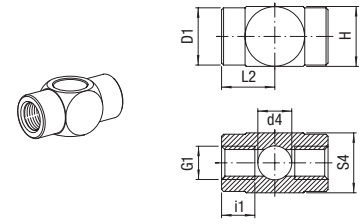
G1	for hollow screw	i1	L2	H	D1	d4	S4	Weight in [g]	Type	Order number	Price
M 5	M 5	5	8	8.6	8.6	5.1	9	5	322M-M5S-M5	254321	o. r.
G 1/8	G 1/8 M10	7	15	14	13.5	10.1	14	17.1	322M-1/8S-1/8	254331	o. r.

Illustration


T-Banjo Ring Piece

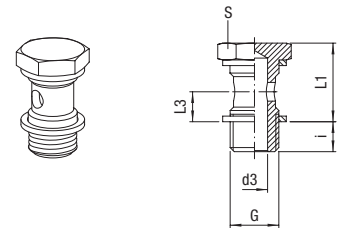
Price group	16	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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G1	for hollow screw	i1	L2	H	D1	d4	S4	Weight in [g]	Type	Order number	Price
M 5	M5	5	8	9	8.6	5.1	9	6	326M-M5S-M5	254421	o. r.
G 1/8	G1/8 M10	7	15	14	13.5	10.1	14	21.6	326M-1/8S-1/8	254431	o. r.

Illustration

Banjo Bolt - Short

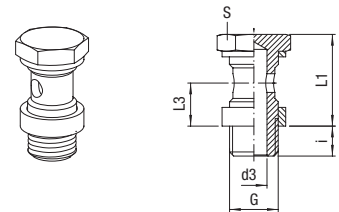
Price group	16	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1*	L3*	d3	S	Weight in [g]	Type	Order number	Price
M 5	Polyamide	4.5	13.5	5	2	8	3.1	163M-11-M5N	304002	o. r.
M 10x1	Aluminium	6.5	20.5	8	5	13	12.8	163M-11-M10x1A	304005	o. r.
M 10x1	Polyamide	6.5	20.5	8	5	13	12.6	163M-11-M10x1N	304006	o. r.
G 1/8	Aluminium	6	20.5	8	5	14	13.1	163M-11-1/8A	304025	o. r.
G 1/8	Polyamide	6	20.5	8	5	14	13	163M-11-1/8N	304026	o. r.
G 1/4	Aluminium	8	21	8	7	17	23.9	163M-11-1/4A	304029	o. r.
G 1/4	Polyamide	8	21	8	7	17	23.5	163M-11-1/4N	304030	o. r.
G 3/8	Aluminium	9	22	8.5	9.5	19	35.8	163M-11-3/8A	304033	o. r.
G 3/8	Polyamide	9	22	8.5	9.5	19	35.3	163M-11-3/8N	304034	o. r.
G 1/2	Aluminium	9.5	22	8.5	12	27	65.1	163M-11-1/2A	304037	o. r.
G 1/2	Polyamide	9.5	22	8.5	12	27	64.8	163M-11-1/2N	304038	o. r.

Illustration

Banjo Bolt - Long

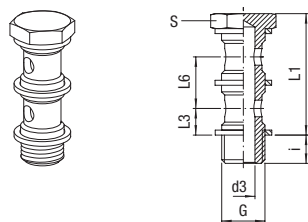
Price group	16	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1*	L3*	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Polyamide	6.5	24	11.5	5	14	14.8	163M-15-1/8N	304226	o. r.
G 1/4	Polyamide	8	24.5	11.5	7	17	26.9	163M-15-1/4N	304230	o. r.
G 3/8	Polyamide	9	25.5	12	9.5	19	40.6	163M-15-3/8N	304234	o. r.
G 1/2	Polyamide	10	25.5	12	12	27	72.3	163M-15-1/2N	304238	o. r.

Illustration

Banjo Bolt - Double Stacking - Short

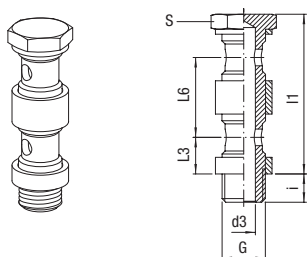
Price group	16	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1*	L3*	L6	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Aluminium	6.5	36	8	15.5	5	14	18.3	163M-21-1/8A	304425	o. r.
G 1/8	Polyamide	6.5	36	8	15.5	5	14	17.8	163M-21-1/8N	304426	o. r.
G 1/4	Aluminium	8.5	36.5	8	15.5	7	17	33.6	163M-21-1/4A	304429	o. r.
G 1/4	Polyamide	8.5	36.5	8	15.5	7	17	33.1	163M-21-1/4N	304430	o. r.
G 3/8	Aluminium	8.5	37.5	8.5	15.5	9.5	19	49.1	163M-21-3/8A	304433	o. r.
G 3/8	Polyamide	8.5	37.5	8.5	15.5	9.5	19	48.3	163M-21-3/8N	304434	o. r.
G 1/2	Aluminium	9.5	37.5	8.5	15.5	12	27	85.8	163M-21-1/2A	304437	o. r.
G 1/2	Polyamide	9.5	37.5	8.5	15.5	12	27	85.3	163M-21-1/2N	304438	o. r.

Illustration

Banjo Bolt - Double Stacking - Long

Price group	16	PN	16	T _{min}	-20 °C	T _{max}	+80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1	L3*	L6	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Polyamide	6.5	47	10.5	24	5	14	23.7	163M-25-1/8N	304626	o. r.
G 1/4	Polyamide	8.5	48	11	24	7	17	43.9	163M-25-1/4N	304630	o. r.
G 3/8	Polyamide	8.5	49.5	12	24	9.5	19	64.7	163M-25-3/8N	304634	o. r.
G 1/2	Polyamide	9.5	49.5	12	24	12	27	112.1	163M-25-1/2N	304638	o. r.

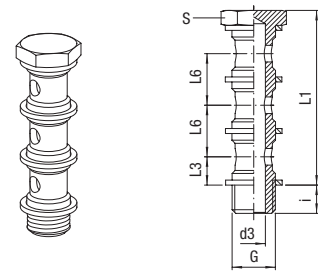
Illustration


* Approximate dimension with tightened screw connection

Banjo Bolt - Triple Stacking - Short

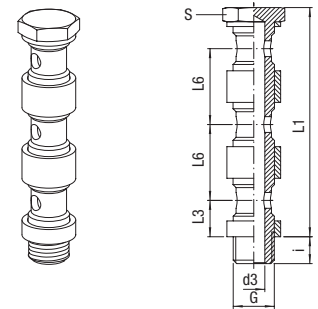
Price group	16	PN 16	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1*	L3*	L6	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Aluminium	6.5	51	7.5	15.5	5	14	23.2	163M-31-1/8A	304825	o. r.
G 1/8	Polyamide	6.5	51	7.5	15.5	5	14	22.6	163M-31-1/8N	304826	o. r.
G 1/4	Aluminium	8.5	51.5	7.5	15.5	7	17	42	163M-31-1/4A	304829	o. r.
G 1/4	Polyamide	8.5	51.5	7.5	15.5	7	17	42.3	163M-31-1/4N	304830	o. r.
G 3/8	Aluminium	8.5	53.5	9	15.5	9.5	19	62.9	163M-31-3/8A	304833	o. r.
G 3/8	Polyamide	8.5	53.5	9	15.5	9.5	19	61.8	163M-31-3/8N	304834	o. r.
G 1/2	Aluminium	9.5	53.5	9	15.5	12	27	109.7	163M-31-1/2A	304837	o. r.
G 1/2	Polyamide	9.5	53.5	9	15.5	12	27	108.9	163M-31-1/2N	304838	o. r.

Illustration

Banjo Bolt - Triple Stacking - Long

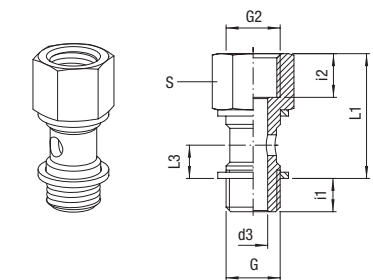
Price group	16	PN 16	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	Nickel-plated brass
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G	Sealing rings	i*	L1*	L3*	L6	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Polyamide	6.5	71.5	11	24	5	14	32.3	163M-35-1/8N	305026	o. r.
G 1/4	Polyamide	8	72	11	24	7	17	59.8	163M-35-1/4N	305030	o. r.
G 3/8	Polyamide	8.5	74	12.5	24	9.5	19	88.4	163M-35-3/8N	305034	o. r.
G 1/2	Polyamide	9.5	74	12.5	24	12	27	153	163M-35-1/2N	305038	o. r.

Illustration

Banjo Bolt with Top Port - Short

Price group	16	PN 16	T _{min} -20 °C T _{max} +80 °C	Cylindrical thread	* = approximate for fastened fitting with ring pieces	Nickel-plated brass
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G	Sealing rings	i1*	i2	L1*	L3*	d3	S	Weight in [g]	Type	Order number	Price
G 1/8	Aluminium	6.5	7	27	8	5	14	17.3	164M-11-1/8A	305225	o. r.
G 1/8	Polyamide	6.5	7	27	8	5	14	17	164M-11-1/8N	305226	o. r.
G 1/4	Aluminium	8	9	30	8	7	17	30.8	164M-11-1/4A	305229	o. r.
G 1/4	Polyamide	8	9	30	8	7	17	30.5	164M-11-1/4N	305230	o. r.

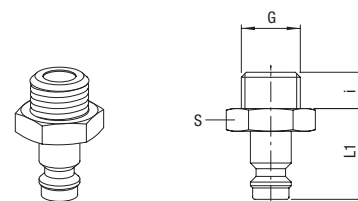
Illustration


* Approximate dimension with tightened screw connection

Quick Release Coupling Plug with Male Thread - NG 5 and NG 8

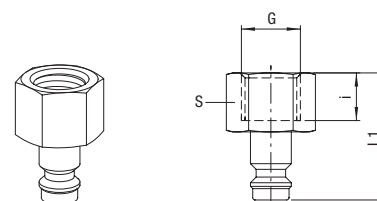
 Price group **17** PN 16 $T_{min} -20\text{ °C}$
 $T_{max} +80\text{ °C}$
Nickel-plated brass

Nominal size	G	i	L1	S	Type	Order number	Price
5	G 1/8	6	19.5	13	515M-1/8	258009	o. r.
5	G 1/4	8	20	17	515M-1/4	258010	o. r.
8	G 1/4	8	25	17	518M-1/4	258018	o. r.
8	G 3/8	9	25	19	518M-3/8	258019	o. r.
8	G 1/2	10	25.5	24**	518M-1/2	258020	o. r.

Illustration

Quick Release Coupling Plug with Female Thread - NG 5 and NG 8

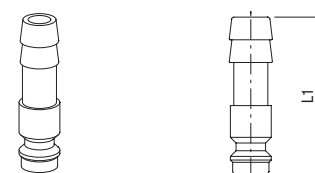
 Price group **17** PN 16 $T_{min} -20\text{ °C}$
 $T_{max} +80\text{ °C}$
Nickel-plated brass

Nominal size	G	i	L1	S	Type	Order number	Price
5	G 1/8	7	25	13	535M-1/8	258209	o. r.
5	G 1/4	9	28	17	535M-1/4	258210	o. r.
8	G 1/4	9	33	17	538M-1/4	258218	o. r.
8	G 3/8	10	34	19	538M-3/8	258219	o. r.
8	G 1/2	13.5	38	24**	538M-1/2	258220	o. r.

Illustration

Quick Release Coupling Plug with Hosetail - NG 5 and NG 8

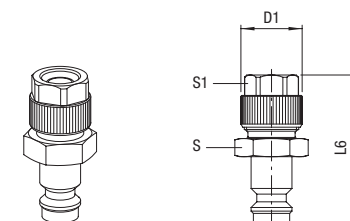
 Price group **17** PN 16 $T_{min} -20\text{ °C}$
 $T_{max} +80\text{ °C}$
Nickel-plated brass

Nominal size	for tube LW	L1	Type	Order number	Price
5	4 - 5	33.5	565M-6	258406	o. r.
5	7 - 8	33.5	565M-9	258409	o. r.
8	4 - 5	39.5	568M-6	258411	o. r.
8	7 - 8	39.5	568M-9	258414	o. r.
8	10 - 11	39.5	568M-12	258417	o. r.
8	12 - 13	39.5	568M-14	258418	o. r.

Illustration

Quick Release Coupling Plug with Push-on Connector - NG 5 and NG 8

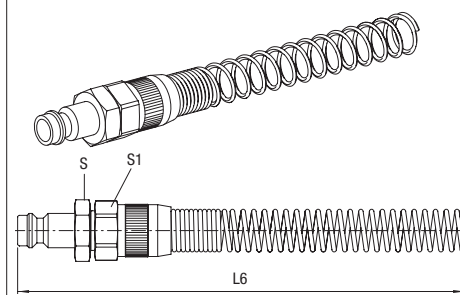
 Price group **17** PN 16 $T_{min} -20\text{ °C}$
 $T_{max} +80\text{ °C}$
Nickel-plated brass

Nominal size	for tube D/d	L6*	D1	S1	S	Type	Order number	Price
5	6/4	33	11.5	10	12	545M-6/4	358608	o. r.
5	8/6	33	13.5	12	14	545M-8/6	358609	o. r.
8	8/6	39	13.5	12	14	548M-8/6	358615	o. r.
8	10/8	40.5	15.5	13	14	548M-10/8	358616	o. r.

Illustration

Quick Release Coupling Plug with Push-on Connector and Anti-kink Protection - NG 5 and NG 8

 Price group **17** PN 16 $T_{min} -20\text{ °C}$
 $T_{max} +80\text{ °C}$
Nickel-plated brass

Nominal size	for tube D/d	L6*	S1	S	Type	Order number	Price
5	6/4	118	12	12	585M-6/4	358908	o. r.
5	8/6	119	14	14	585M-8/6	358909	o. r.
8	8/6	125	14	14	588M-8/6	358915	o. r.
8	10/8	125	16	14	588M-10/8	358916	o. r.

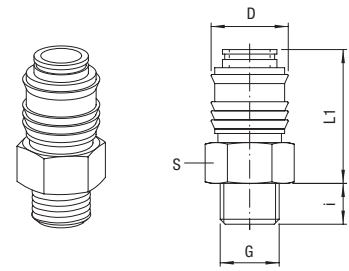
Illustration


* Approximate dimension with the union nut pulled ** S24 octagon

Quick Release Coupling with Male Thread - NG 5 and NG 8

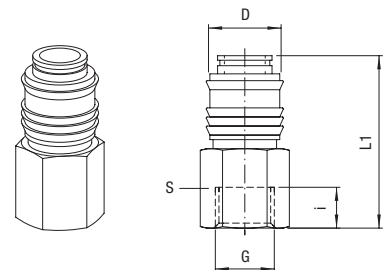
Price group	17	PN 16	T _{min} -20 °C T _{max} +80 °C	Seal: NBR	Valve type: one-way shut-off	Nickel-plated brass
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Nominal size	G	i	L1	D	S	Type	Order number	Price
5	G 1/8	7	29.5	17	14	551M-1/8	359009	o. r.
5	G 1/4	9	29	17	17	551M-1/4	359010	o. r.
8	G 1/4	9	31	27	22	581M-1/4	359018	o. r.
8	G 3/8	10	31	27	22	581M-3/8	359019	o. r.
8	G 1/2	10	31	27	24**	581M-1/2	359020	o. r.

Illustration

Quick Release Coupling with Female Thread - NG 5 and NG 8

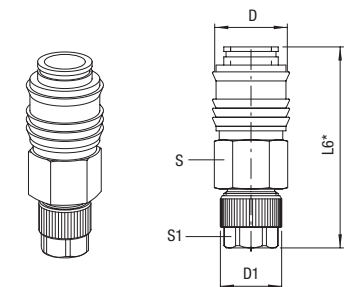
Price group	17	PN 16	T _{min} -20 °C T _{max} +80 °C	Seal: NBR	Valve type: one-way shut-off	Nickel-plated brass
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Nominal size	G	i	L1	D	S	Type	Order number	Price
5	G 1/8	9	37	17	14	553M-1/8	359209	o. r.
5	G 1/4	8	38	17	17	553M-1/4	359210	o. r.
8	G 1/4	8	41	27	22	583M-1/4	359218	o. r.
8	G 3/8	9	41	27	22	583M-3/8	359219	o. r.
8	G 1/2	10	41	27	24**	583M-1/2	359220	o. r.

Illustration

Quick Release Coupling with Push-on Connector - NG 5

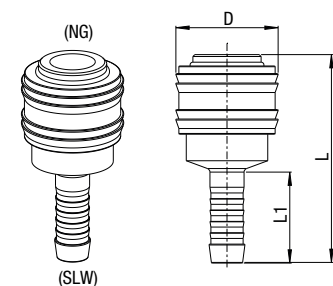
Price group	17	PN 35	T _{min} -20 °C T _{max} +80 °C	Seal: NBR	Valve type: one-way shut-off	Nickel-plated brass
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Nominal size	for tube D/d	L6*	D	D1	S1	S	Type	Order number	Price
5	6/4	44.5	16	11.5	10	14	554M-6/4	359308	o. r.
5	8/6	44.5	17	13.5	12	14	554M-8/6	359309	o. r.

Illustration

Quick Release Coupling with Push-on Connector - NG 5

Price group	17	PN 16	T _{min} -20 °C T _{max} +80 °C	Seal: NBR	Valve type: free passage	Nickel-plated brass
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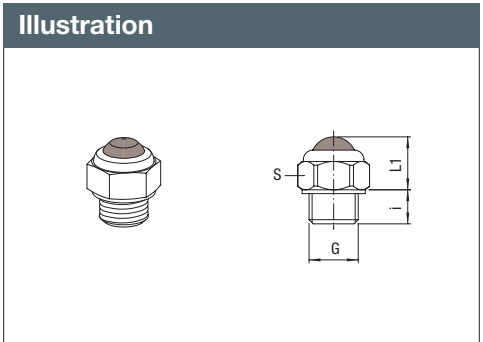
Nominal size	tube LW	L	L1	D	weight in [g]	Type	Order number	Price
8	5	55	23	27	68	586M-5	359511	o. r.
8	8	55	24	27	67	586M-8	359514	o. r.
8	13	55	25	27	75	586M-13	359518	o. r.

Illustration


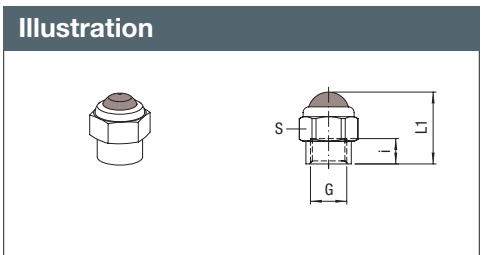
Caution! To ensure safe operation, the attached hose must be clamped, e.g. B. hose clamp, ear clamp, fastening clamp (not included in delivery!).

* Approximate for union nut ** S24 octagon

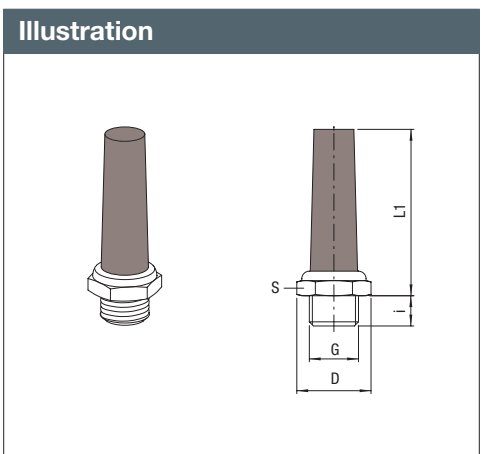
Silencer						
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$	Silencer insert wire mesh	Brass Nickel-plated brass	
G	i	L1	S	Type	Order number	Price
G 1/8	6	8.5	13	290M-1/8	395028	o. r.
G 1/4	8	11	16	290M-1/4-16	395032	o. r.
G 3/8	7.5	11.5	19	290U-3/8	395035	o. r.
G 1/2	8.5	14.5	24	290U-1/2	395037	o. r.
G 3/4	10	15.5	30	290U-3/4	395039	o. r.



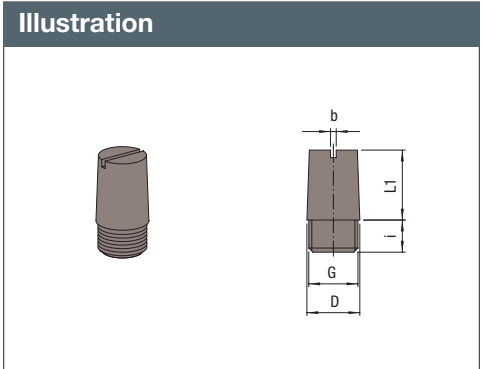
Silencer						
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$	Silencer insert wire mesh	Brass	
G	i	L1	S	Type	Order number	Price
G 1/8	6.5	14	13	291U-1/8	395128	o. r.



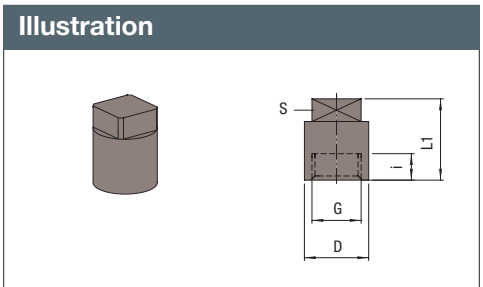
Silencer							
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$	Silencer insert wire mesh	Brass		
G	i	L1	D	S	Type	Order number	Price
M5	4	20	9.2	8	293U-M5	395226	o. r.
G 1/8	6	36	15	13	293U-1/8	395228	o. r.
G 1/4	8	44	18.5	16	293U-1/4	395232	o. r.
G 3/8	8	47	21.9	19	293U-3/8	395235	o. r.
G 1/2	10	57	27.7	24	293U-1/2	395237	o. r.
G 3/4	10	57	34.6	30	293U-3/4	395239	o. r.
G 1	12	67	41.6	36	293U-1	395241	o. r.



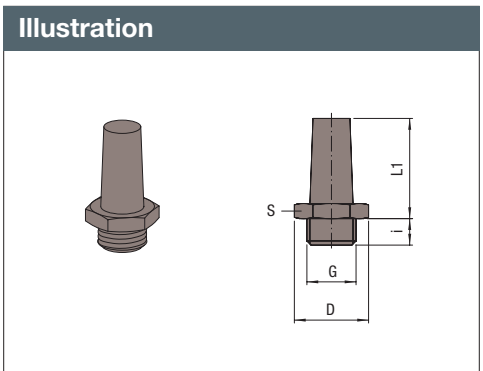
Silencer								
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$					Sinter metal
G	i	L1	D	b	Type	Order number	Price	
G 1/8	5.5	15.5	11	1.5	294C-1/8	295003	o. r.	
G 1/4	8.5	18.5	14	1.5	294C-1/4	295007	o. r.	
G 3/8	11	25	18	2	294C-3/8	295010	o. r.	
G 1/2	11	32.5	24	2	294C-1/2	295012	o. r.	
G 3/4	12	53	29.5	2.5	294C-3/4	295014	o. r.	
G 1	15	60	35.5	4	294C-1	295016	o. r.	



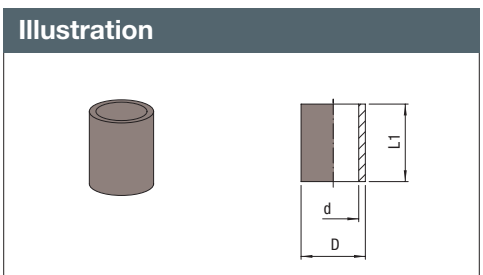
Silencer								
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$					Sinter metal
G	i	L1	D	S	Type	Order number	Price	
G 1/8	5	13.5	13	9	295C-1/8	295053	o. r.	



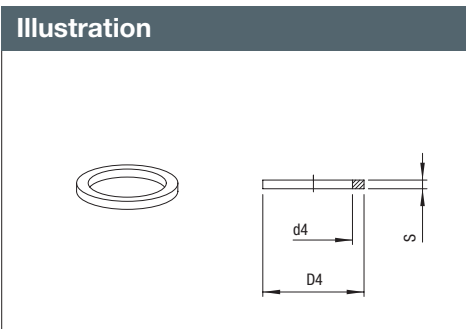
Silencer								
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$					Sinter metal
G	i	L1	D	S	Type	Order number	Price	
G 1/8	5.5	22.5	14.5	13	298C-1/8	295103	o. r.	
G 1/4	7	26.5	18.5	17	298C-1/4	295107	o. r.	
G 3/8	8.9	24	24.5	22	298C-3/8	295110	o. r.	
G 1/2	10	32	30	27	298C-1/2	295112	o. r.	
G 3/4	15	40	35.5	32	298C-3/4	295114	o. r.	
G 1	15	50	44.5	40	298C-1	295116	o. r.	



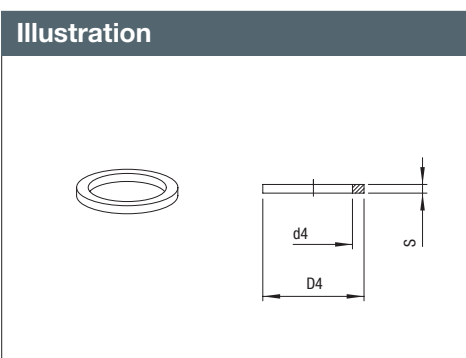
Silencer								
Price group	19	PN 10	$T_{min} -40\text{ °C}$ $T_{max} +130\text{ °C}$					Sinter metal
G	L1	D	S	Type	Order number	Price		
G 1/8	20.5	14	10	299C-1/8	295153	o. r.		
G 1/4	20.5	17	14	299C-1/4	295157	o. r.		



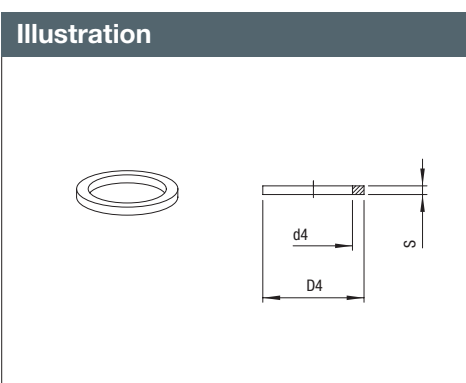
Sealing Ring										
Price group	16	Copper T _{max} +120 °C								Copper
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
G1/8 and M10	-	14	10.3	1	100	44	263C-1/8x1	252771	o. r.	
G 1/4	-	18	14	1	100	61	263C-1/4x1	252776	o. r.	
G 3/8	-	21	17	1	100	74.7	263C-3/8x1	252781	o. r.	
G 3/8	-	21	17	1.5	100	118	263C-3/8x1.5	252782	o. r.	
G 1/2	-	26	21.3	1	100	142	263C-1/2x1	252786	o. r.	
G 3/4	-	32	27.2	1	100	178.5	263C-3/4x1	252791	o. r.	



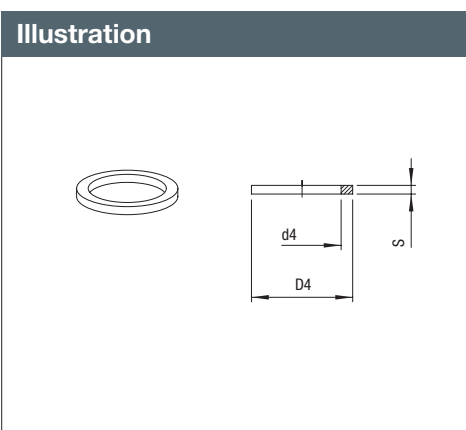
Sealing Ring										
Price group	16	Fibre T _{max} +90 °C								Fibre
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
G1/8 and M10	-	14	10	1.5	100	12	264V-1/8x1.5	252821	o. r.	
G 1/4	-	17.5	13.5	1.5	100	16.3	264V-1/4x1.5	252826	o. r.	
G 3/8	-	21	16.7	1.5	100	25.6	264V-3/8x1.5	252831	o. r.	
G 1/2	-	25	21.3	1.5	100	24.6	264V-1/2x1.5	252836	o. r.	



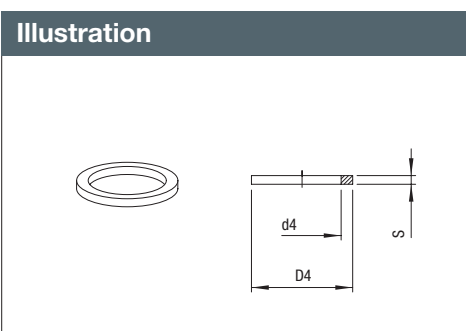
Sealing Ring										
Price group	16	Aluminium T _{max} +120 °C								Aluminium
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
M5	-	7.5	5.1	0.5	100	3.2	265A-M5x0.5	252851	o. r.	
M5	-	7.5	5.1	1	100	6.2	265A-M5x1	252852	o. r.	
M5	-	8	5.1	1.5	100	11.4	265A-M5x1.5	252853	o. r.	
G1/8 + M10	-	14	10.3	1.5	100	25	265A-1/8x1.5	252871	o. r.	
G 1/4	-	17	13.5	1.5	100	33	265A-1/4x1.5	252876	o. r.	
G 3/8	-	21	16.7	1.5	100	47	265A-3/8x1.5	252881	o. r.	
G 1/2	-	25	21.3	1.5	100	48	265A-1/2x1.5	252886	o. r.	
G 3/4	-	32	27.2	1.5	100	84	265A-3/4x1.5	252891	o. r.	



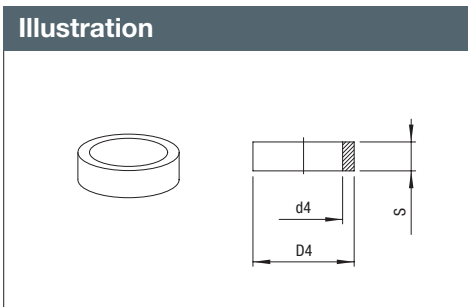
Sealing Ring										
Price group	16	Polyamide T _{max} +90 °C								Polyamide
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
M5	-	8	5.1	1	100	3	266N-M5x1	252902	o. r.	
M5	und detachable	8	4.8	1	100	5.2	266N-M5x1x4.8	252904	o. r.	
G1/8 + M10	-	14	10.2	1.5	100	11	266N-1/8x1.5	252921	o. r.	
G1/8 + M10	und detachable	14	10.3	1.5	100	11.3	266N-1/8x1.5x9	252922	o. r.	
G 1/4	-	17	13.5	1.5	100	16	266N-1/4x1.5	252926	o. r.	
G 1/4	und detachable	17	13.5	1.5	100	13	266N-1/4x1.5x12	252927	o. r.	
G 3/8	-	21	16.7	1.5	100	21	266N-3/8x1.5	252931	o. r.	
G 3/8	und detachable	21	17	1.5	100	38	266N-3/8x1.5x15	252932	o. r.	
G 1/2	-	26	21.3	1.5	100	27	266N-1/2x1.5	252936	o. r.	
G 1/2	und detachable	26	21.5	1.5	100	29	266N-1/2x1.5x19	252937	o. r.	



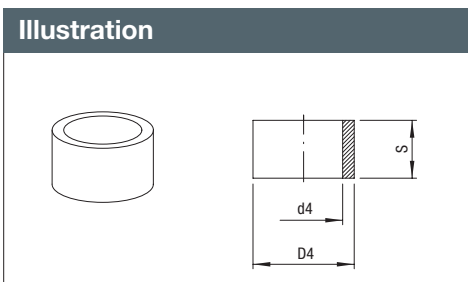
Sealing Ring										
Price group	16	Hard PVC T _{max} +70 °C								Hard PVC
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
M5	-	8	5.1	1	100	5	269N-M5x1	252952	o. r.	
M5	und detachable	8	4.8	1	100	4	269N-M5x1x4.8	252954	o. r.	
G1/8 + M10	-	14	10	1.5	100	16.9	269N-1/8x1.5	252971	o. r.	
G 1/4	-	17.5	13.5	1.5	100	18	269N-1/4x1.5	252976	o. r.	
G 3/8	-	21	16.7	1.5	100	28.5	269N-3/8x1.5	252981	o. r.	
G 1/2	-	26	21.3	1.5	100	35	269N-1/2x1.5	252986	o. r.	



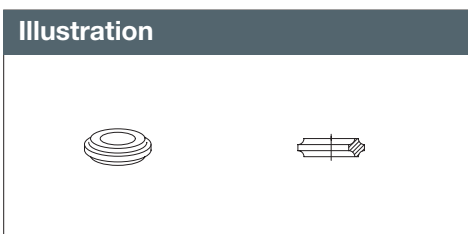
Distance Ring										
Price group	16	Polyamide T _{max} +90 °C								Polyamide
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price / 100	
G1/8 + M10	und detachable	13.8	10.3	4		31	266N-1/8x4x9	252906	o. r.	
G1/8 + M10	und detachable	13.8	10.3	5		38	266N-1/8x5x9	252923	o. r.	
G1/4	und detachable	17	13.5	5		41	266N-1/4x5x12	252928	o. r.	
G3/8	und detachable	21	17	5		61	266N-3/8x5x15	252933	o. r.	
G 1/2	und detachable	26	21.5	5		90	266N-1/2x5x19	252938	o. r.	



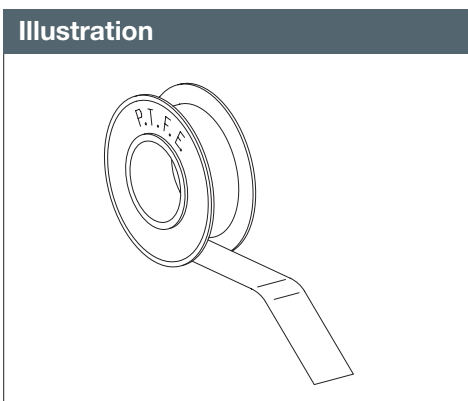
Distance Ring										
Price group	16	Polyamide T _{max} +90 °C								Polyamide
for thread	special feature	D4	d4	s	Pack unit	Weight in [g/100]	Type	Order number	Price	
G 1/8 + M10	-	13.8	10.3	10		70	266N-1/8x10	252925	o. r.	
G 1/4	-	17	13.5	10		85	266N-1/4x10	252930	o. r.	
G 3/8	-	21	17	10		125	266N-3/8x10	252935	o. r.	
G 1/2	-	26	21.5	10		178	266N-1/2x10	252940	o. r.	



Pressure Gauge Sealing Ring							
Price group	16	Copper T _{max} +120 °C					Copper
for inner thread	special feature	Pack unit	Weight in [g/100]	Type	Order number	Price	
G 1/8	-		60	275C-1/8	252991	o. r.	
G 1/4	-		86	275C-1/4	252992	o. r.	



PTFE Band						
Price group	18					PTFE
Length [m]	Width [mm]	Thickness [mm]	Type	Order number	Price	
12	12	0.08	420P-12-12	296401	o. r.	





Fitting Accessories Stainless Steel AISI 316L (1.4404)

Stainless steel version

Operating pressure Technical vacuum up to maximum pressure as stated in the respective specification table under PN.

Temperature range: -40 °C to +140 °C (for restrictions see specification table)

Application

Fitting accessories made of stainless steel 1.4404 are used in particular for aggressive gaseous and liquid media under harsh operating conditions. These connectors are equipped with FDA-compliant FKM sealing rings, on request they are available with FDA-compliant and KTW-approved EPDM sealing rings.

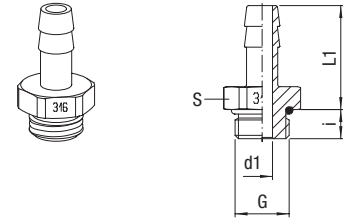
CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures. The FKM seal is FDA-compliant and can be used in the food and pharmaceutical industries.							
Approval	NSF/ANSI 169							
THREAD								
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8-G 1/2							
External thread	"R" conical thread: Whitworth pipe thread DIN 2999-1 and ISO 7/1 R 1/8 up to R 1/2. Designed so it can be paired with internal thread according to DIN ISO 228-1.							
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 up to G 1/2							
OPERATING PRESSURE / TEMPERATURE								
Metal version	<table border="1"> <tr> <td>PN</td> <td>T_{min}</td> <td>-40 °C</td> </tr> <tr> <td>50</td> <td>T_{max}</td> <td>+140 °C</td> </tr> </table>	PN	T _{min}	-40 °C	50	T _{max}	+140 °C	Means that the fitting can be used up to the shown nominal pressure PN in the specified temperature range "T".
PN	T _{min}	-40 °C						
50	T _{max}	+140 °C						
Allowable operating pressure and operating temperature of pipe/tube must be complied with.								
THREAD SEAL								
Cylindrical threaded nipple	Seal with FKM sealing rings (FDA-compliant)							
Conical threaded nipple	Seal with Teflon tape winding (FDA-compliant) on request							

Hose Tail Adaptor

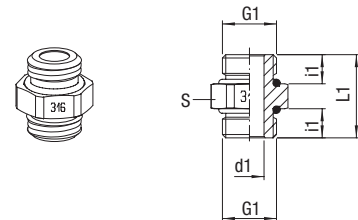
Price group	13	PN 25	$T_{min} -20\text{ °C}$ $T_{max} +140\text{ °C}$	Thread cylindrical	Seal FKM (FDA-compliant)		Stainless steel AISI 316L
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for tube LW	G	i	L1	d1	S	Weight in [g]	Type	Order number	Price
3.5-4	M 5	3.5	12.5	-	-	2.5	260X4-4-M5FF	356553	o. r.
5-6	G 1/8	5	24	4	13	10	260X4-7-1/8FF	356561	o. r.
5-6	G 1/4	7	24.5	4	17	34.7	260X4-7-1/4FF	356562	o. r.
6-7	G 1/8	5	24	5	13	10.1	260X4-8-1/8FF	356563	o. r.
6-7	G 1/4	7	24.5	5	17	18.8	260X4-8-1/4FF	356564	o. r.
7-8	G 1/8	5	24	6	13	18.7	260X4-9-1/8FF	356565	o. r.
7-8	G 1/4	7	24.5	6	17	17.9	260X4-9-1/4FF	356566	o. r.
7-8	G 3/8	8	24.5	6	19	44.9	260X4-9-3/8FF	356567	o. r.
9-10	G 1/4	7	24.5	7	17	34.7	260X4-10-1/4FF	356568	o. r.
10-11	G 1/4	7	24.5	8	17	20	260X4-12-1/4FF	356570	o. r.
10-11	G 3/8	8	24.5	9	19	24.1	260X4-12-3/8FF	356571	o. r.
10-11	G 1/2	9	25	9	24	41.8	260X4-12-1/2FF	356572	o. r.
12-13	G 1/4	7	24.5	8	17	26.2	260X4-14-1/4FF	356573	o. r.
12-13	G 3/8	8	24.5	11	19	22.7	260X4-14-3/8FF	356574	o. r.
12-13	G 1/2	9	25	11	24	39.5	260X4-14-1/2FF	356575	o. r.
15-16	G 3/8	8	29	11	19	50.4	260X4-17-3/8FF	356576	o. r.
15-16	G 1/2	9	29.5	14	24	36.9	260X4-17-1/2FF	356577	o. r.
18-19	G 1/2	9	29.5	15	24	44.6	260X4-20-1/2FF	356578	o. r.

Illustration

Double Nipple

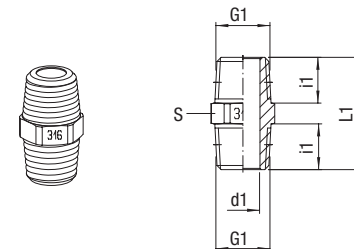
Price group	13	PN 25	$T_{min} -20\text{ °C}$ $T_{max} +140\text{ °C}$	Thread cylindrical	Seal FKM (FDA-compliant)		Stainless steel AISI 316L
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G1	i1	L1	d1	S	Weight in [g]	Type	Order number	Price
G 1/8	5	15.5	6	13	7	250X4-1/8FF	356603	o. r.
G 1/4	7	20	8	17	15.5	250X4-1/4FF	356604	o. r.
G 3/8	8	22	11	19	20.7	250X4-3/8FF	356605	o. r.
G 1/2	9	24.5	14	24	55	250X4-1/2FF	356606	o. r.

Illustration

Double Nipple

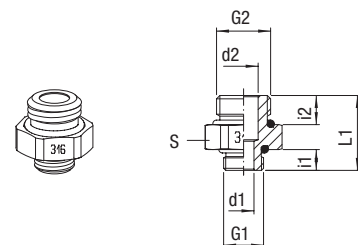
Price group	13	PN 50	$T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$	Thread conical			Stainless steel AISI 316L
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G1	i1	L1	d1	S	Weight in [g]	Type	Order number	Price
R 1/8	7.5	19.5	5.5	10	7	250X4-1/8K	256621	o. r.
R 1/4	11	27	8	14	15.4	250X4-1/4K	256622	o. r.
R 3/8	11.5	28	11	17	24.3	250X4-3/8K	256623	o. r.
R 1/2	14	33.5	15	22	38.4	250X4-1/2K	256624	o. r.

Illustration

Double Reducing Nipple

Price group	13	PN 25	$T_{min} -20\text{ °C}$ $T_{max} +140\text{ °C}$	Thread cylindrical	Seal FKM (FDA-compliant)		Stainless steel AISI 316L
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G1	G2	i1	i2	L1	d1	d2	S	Weight in [g]	Type	Order number	Price
G 1/8	G 1/4	5	7	18	6	8	17	20.9	251X4-1/8-1/4FF	356652	o. r.
G 1/8	G 3/8	5	8	19	6	11	19	27.5	251X4-1/8-3/8FF	356653	o. r.
G 1/8	G 1/2	5	9	20.5	6	14	24	46.7	251X4-1/8-1/2FF	356654	o. r.
G 1/4	G 3/8	7	8	21	8	11	19	18	251X4-1/4-3/8FF	356655	o. r.
G 1/4	G 1/2	7	9	22.5	8	14	24	31	251X4-1/4-1/2FF	356656	o. r.
G 3/8	G 1/2	8	9	23.5	11	14	24	32.1	251X4-3/8-1/2FF	356657	o. r.

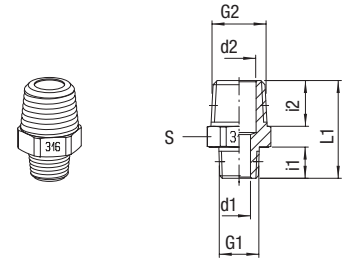
Illustration


Double Reducing Nipple

 Price group **13** PN 50 $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$ Thread "R" conical

Stainless steel AISI 316L

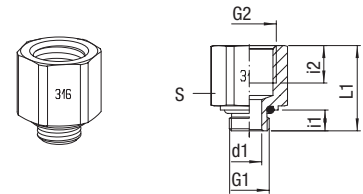
G1	G2	i1	i2	L1	d1	d2	S	Weight in [g]	Type	Order number	Price
R 1/8	R 1/4	7.5	11	23.5	5.5	8.2	14	13.1	251X4-1/8K-1/4K	256671	o. r.
R 1/8	R 3/8	7.5	11.5	24	5.5	11	17	19.2	251X4-1/8K-3/8K	256672	o. r.
R 1/8	R 1/2	7.5	14	27	5.5	15	22	31.9	251X4-1/8K-1/2K	256673	o. r.
R 1/4	R 3/8	11	11.5	27.5	8.2	11	17	21.3	251X4-1/4K-3/8K	256674	o. r.
R 1/4	R 1/2	11	14	30.5	8.2	15	22	34.6	251X4-1/4K-1/2K	256675	o. r.
R 3/8	R 1/2	11.5	14	31	11	15	22	35.7	251X4-3/8K-1/2K	256676	o. r.

Illustration

Reducer

 Price group **13** PN 25 $T_{min} -20\text{ °C}$ $T_{max} +140\text{ °C}$ Thread "G" cylindrical Seal FKM (FDA-compliant)

Stainless steel AISI 316L

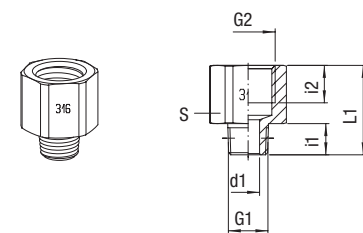
G1	G2	i1	i2	L1	d1	S	Weight in [g]	Type	Order number	Price
G 1/8	G 1/8	5	6.5	17	6	13	8.9	252X4-1/8FF-1/8	356703	o. r.
G 1/8	G 1/4	5	9	20.5	6	17	23.4	252X4-1/8FF-1/4	356704	o. r.
G 1/8	G 3/8	5	9.5	21.5	6	19	18	252X4-1/8FF-3/8	356705	o. r.
G 1/8	G 1/2	5	12.5	26.5	6	24	40.7	252X4-1/8FF-1/2	356706	o. r.
G 1/4	G 1/4	7	9	21.5	8	17	45.6	252X4-1/4FF-1/4	356707	o. r.
G 1/4	G 3/8	7	9.5	23	8	19	20	252X4-1/4FF-3/8	356708	o. r.
G 1/4	G 1/2	7	12.5	27.5	8	24	61.3	252X4-1/4FF-1/2	356709	o. r.
G 3/8	G 3/8	8	9.5	23	11	19	20.2	252X4-3/8FF-3/8	356710	o. r.
G 3/8	G 1/2	8	12.5	28	11	24	39.5	252X4-3/8FF-1/2	356711	o. r.
G 1/2	G 1/2	9	12.5	28.5	14	24	63.2	252X4-1/2FF-1/2	356712	o. r.

Illustration

Reducer

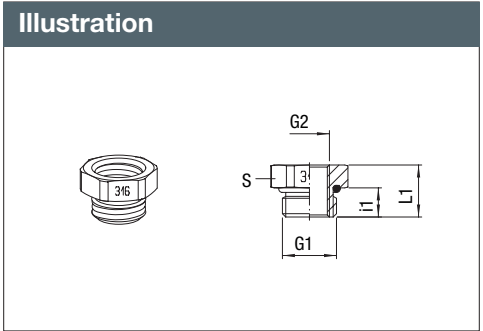
 Price group **13** PN 50 $T_{min} -40\text{ °C}$ $T_{max} +140\text{ °C}$ Thread "R" conical, Thread "G" cylindrical

Stainless steel AISI 316L

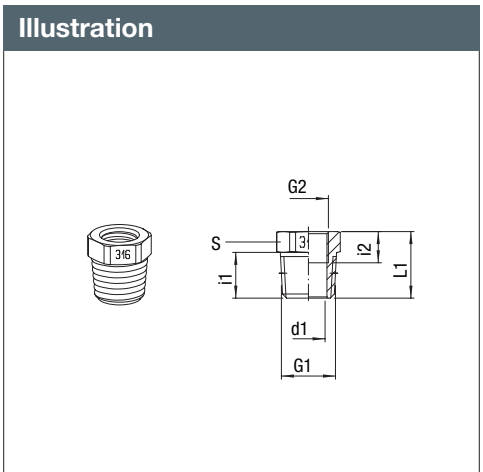
G1	G2	i1	i2	L1	d1	S	Weight in [g]	Type	Order number	Price
R 1/8	G 1/8	7.5	6.5	18	5.5	13	9.2	252X4-1/8K-1/8	256751	o. r.
R 1/8	G 1/4	7.5	9	21.5	5.5	17	17.7	252X4-1/8K-1/4	256752	o. r.
R 1/8	G 3/8	7.5	9.5	23	5.5	19	18.9	252X4-1/8K-3/8	256753	o. r.
R 1/8	G 1/2	7.5	12.5	27.5	5.5	24	38.9	252X4-1/8K-1/2	256754	o. r.
R 1/4	G 1/4	11	9	25	8.2	17	20.4	252X4-1/4K-1/4	256755	o. r.
R 1/4	G 3/8	11	9.5	26	8.2	19	18.3	252X4-1/4K-3/8	256756	o. r.
R 1/4	G 1/2	11	12.5	30.5	8.2	24	39.5	252X4-1/4K-1/2	256757	o. r.
R 3/8	G 3/8	11.5	9.5	26.5	11	19	23.4	252X4-3/8K-3/8	256758	o. r.
R 3/8	G 1/2	11.5	12.5	31	11	24	40.8	252X4-3/8K-1/2	256759	o. r.
R 1/2	G 1/2	14	12.5	33.5	15	24	45.1	252X4-1/2K-1/2	256760	o. r.

Illustration


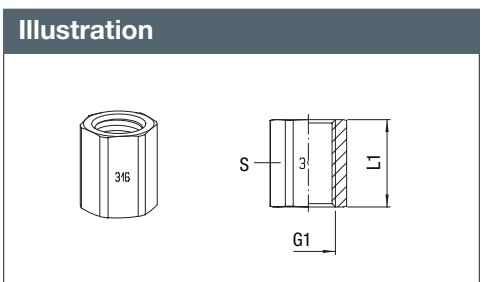
Reducer									
Price group	13	PN 25	T _{min} -20 °C T _{max} +140 °C	Thread cylindrical	Seal FKM (FDA-compliant)		Stainless steel AISI 316L		
G1	G2	i1	L1	S	Weight in [g]	Type	Order number	Price	
G 1/4	G 1/8	7	12.5	17	10.1	253X4-1/4FF-1/8	356802	o. r.	
G 3/8	G 1/8	8	13.5	19	17.7	253X4-3/8FF-1/8	356803	o. r.	
G 1/2	G 1/8	9	15.5	24	36.9	253X4-1/2FF-1/8	356804	o. r.	
G 3/8	G 1/4	8	13.5	19	11.7	253X4-3/8FF-1/4	356805	o. r.	
G 1/2	G 1/4	9	15.5	24	30.1	253X4-1/2FF-1/4	356806	o. r.	
G 1/2	G 3/8	9	15.5	24	20.3	253X4-1/2FF-3/8	356807	o. r.	



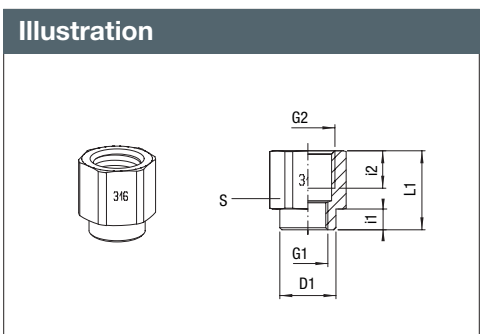
Reducer										
Price group	13	PN 50	T _{min} -40 °C T _{max} +140 °C	Thread "R" conical, Thread "G" cylindrical			Stainless steel AISI 316L			
G1	G2	i1	i2	L1	d1	S	Weight in [g]	Type	Order number	Price
R 1/4	G 1/8	11	7.5	16	8.9	14	8.6	253X4-1/4K-1/8	256852	o. r.
R 3/8	G 1/8	11.5	7.5	16.5	8.9	17	18.4	253X4-3/8K-1/8	256853	o. r.
R 1/2	G 1/8	14	7.5	19.5	8.9	22	41.7	253X4-1/2K-1/8	256854	o. r.
R 3/8	G 1/4	11.5	9	16.5	8.9	17	13.5	253X4-3/8K-1/4	256855	o. r.
R 1/2	G 1/4	14	11.5	19.5	12	22	33.5	253X4-1/2K-1/4	256856	o. r.
R 1/2	G 3/8	14	11.5	19.5	15.5	22	37.7	253X4-1/2K-3/8	256857	o. r.



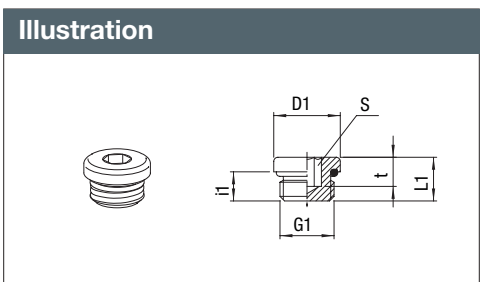
Socket									
Price group	13	PN 50	T _{min} -40 °C T _{max} +140 °C	Thread cylindrical		Stainless steel AISI 316L			
G1	L1	S	Weight in [g]	Type	Order number	Price			
G 1/8	15	13	8.8	254X4-1/8	256902	o. r.			
G 1/4	21	17	20	254X4-1/4	256903	o. r.			
G 3/8	23	19	20	254X4-3/8	256904	o. r.			
G 1/2	30	24	41.5	254X4-1/2	256905	o. r.			



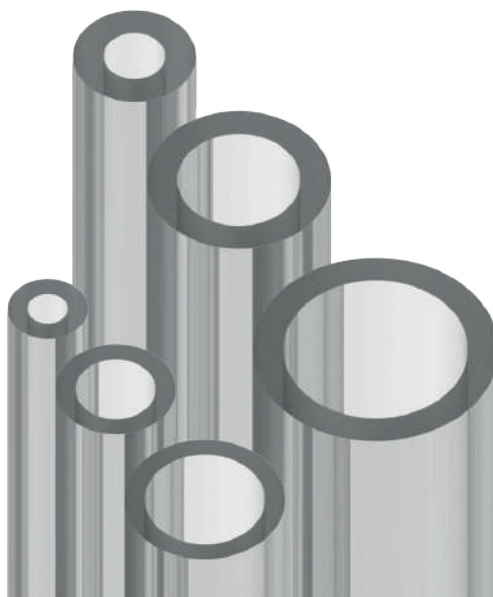
Reducing Socket										
Price group	13	PN 50	T _{min} -40 °C T _{max} +140 °C	Thread cylindrical		Stainless steel AISI 316L				
G1	G2	i1	i2	L1	D1	S	Weight in [g]	Type	Order number	Price
G 1/8	G 1/4	5	9	19	13.5	17	17.9	255X4-1/8-1/4	256922	o. r.
G 1/8	G 3/8	5.5	9.5	20.5	13.5	19	18	255X4-1/8-3/8	256923	o. r.
G 1/8	G 1/2	5	12.5	25	13.5	24	38.9	255X4-1/8-1/2	256924	o. r.
G 1/4	G 3/8	7.5	9.5	22	17	19	19.7	255X4-1/4-3/8	256925	o. r.
G 1/4	G 1/2	7.5	12.5	27	17	24	39.3	255X4-1/4-1/2	256926	o. r.
G 3/8	G 1/2	7	12.5	27	21	24	38.9	255X4-3/8-1/2	256927	o. r.



Blind Plug									
Price group	13	PN 25	T _{min} -20 °C T _{max} +140 °C	Thread cylindrical	Seal FKM (FDA-compliant)		Stainless steel AISI 316L		
G1	i1	L1	D1	t	S	Weight in [g]	Type	Order number	Price
G 1/8	5	8	13	4	5	4.2	262X4-1/8FF	356522	o. r.
G 1/4	7	10.5	16	5.5	6	9.2	262X4-1/4FF	356526	o. r.
G 3/8	8	11.5	20	5.5	8	16.2	262X4-3/8FF	356529	o. r.
G 1/2	9	13	25	5.5	10	29.4	262X4-1/2FF	356532	o. r.



Tubes



CHARACTERISTICS

MATERIAL / SUITABILITY

Polyamid PA12-PHL	Polyamide 12w (PA) is marked by high robustness and comparatively good chemical resistance and is well suited for damp environments. The thermoplastic absorbs little water.
Polyethylen LD-PE	Polyethylene LD (PE-LD) is marked by high chemical resistance, good electrical insulation capabilities and good gliding behaviour.
Polyurethan PUR	Polyurethane (PU) is marked by special flexibility and has very good cold flexibility and recovery properties. It is resistant to aliphatic hydrocarbons, most lubricants and age-resistant in oxygen.
Polyvinylchlorid PVC Gewebe	PVC fabric tubes for air, gases, water and a great number of liquids. The tube is used as a compressed air tube in industry and as conveying hose in the chemical industry.
Fluorethylenpropylen FEP	Fluoroethylenpropylen (FEP) is mainly used for transparent tube materials. They have poreless, anti-adhesive interior walls and can be put through all usual sterilisation procedures. Since FEP in addition meets FDA requirements, the synthetic material is permitted for use in all areas of the food and pharma industries as well as medical technology.
Perfluoralkoxy- Copolymer PFA	Perfluoralkoxy-copolymer (PFA) has low resistance and hardness. It is resistant to nearly all chemicals, has a very high resistance to temperature and is flame-resistant. PFA has a low friction co-efficient and is suitable for food.

TUBE

Outside diameter D [mm] / Inside diameter d [mm]	4/2 4/2.5 4.3/3 5/3 6/4 6.2/4 8/6 8.2/6 10/8 10.2/8 11.6/9 12/9 12/10 12.5/10 14/11 14/12 15/12.5 16/13 16/14 17.6/13 22/18
Permitted Ø tolerance	see relevant table
Permitted wall thickness tolerance (s)	

OPERATING PRESSURE / TEMPERATURE

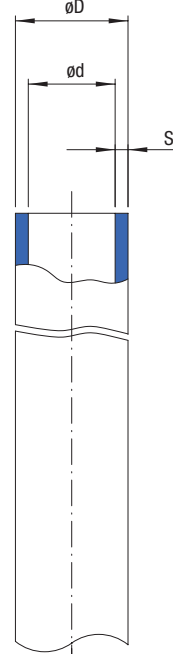
All versions	<table border="1"> <tr> <td>Maximum operating pressure in bar at temperature</td> <td>Displays the permitted operating pressure in bar at specified temperature.</td> </tr> </table>	Maximum operating pressure in bar at temperature	Displays the permitted operating pressure in bar at specified temperature.
Maximum operating pressure in bar at temperature	Displays the permitted operating pressure in bar at specified temperature.		

Polyamide Tube - Flexible

 Price group **18** T_{min} -60 °C
 T_{max} +100 °C

Polyamide PA12-PHL

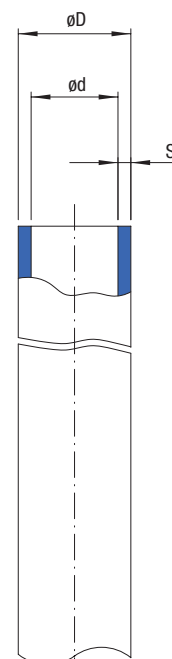
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at temperature					Package Length [m]	Type	Order number	Price /100 m				
	$\varnothing D$	Wall thickness s		20 °C	40 °C	60 °C	80 °C	100 °C								
4 / 2.5	± 0.07	± 0.1	20	31	22.5	17.5	14.5	11.0	50	PA-4/25-transp.	295501	o. r.				
4 / 2.5			20	31	22.5	17.5	14.5	11.0	50	PA-4/25-blue	295502	o. r.				
4 / 2.5			20	31	22.5	17.5	14.5	11.0	50	PA-4/25-black	295506	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-transp.	295521	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-blue	295522	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-red	295523	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-green	295524	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-yellow	295525	o. r.				
5 / 3			25	34	25.0	19.0	15.5	12.0	50	PA-5/3-black	295526	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-transp.	295531	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-blue	295532	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-red	295533	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-green	295534	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-yellow	295535	o. r.				
6 / 4			30	27	19.5	15.0	12.5	9.5	50	PA-6/4-black	295536	o. r.				
8 / 6			± 0.1	± 0.1	40	19	14.0	10.5	8.5	6.5	50	PA-8/6-transp.	295541	o. r.		
8 / 6	40	19			14.0	10.5	8.5	6.5	50	PA-8/6-blue	295542	o. r.				
8 / 6	40	19			14.0	10.5	8.5	6.5	50	PA-8/6-red	295543	o. r.				
8 / 6	40	19			14.0	10.5	8.5	6.5	50	PA-8/6-green	295544	o. r.				
8 / 6	40	19			14.0	10.5	8.5	6.5	50	PA-8/6-yellow	295545	o. r.				
8 / 6	40	19			14.0	10.5	8.5	6.5	50	PA-8/6-black	295546	o. r.				
10 / 8	± 0.1	± 0.1			60	15	11.0	8.5	7.0	5.0	50	PA-10/8-transp.	295551	o. r.		
10 / 8					60	15	11.0	8.5	7.0	5.0	50	PA-10/8-blue	295552	o. r.		
10 / 8					60	15	11.0	8.5	7.0	5.0	50	PA-10/8-red	295553	o. r.		
10 / 8					60	15	11.0	8.5	7.0	5.0	50	PA-10/8-green	295554	o. r.		
10 / 8					60	15	11.0	8.5	7.0	5.0	50	PA-10/8-yellow	295555	o. r.		
10 / 8					60	15	11.0	8.5	7.0	5.0	50	PA-10/8-black	295556	o. r.		
12 / 9					± 0.15	± 0.15	60	19	14.0	10.5	8.5	6.5	50	PA-12/9-blue	295572	o. r.
12 / 10							85	12	8.5	6.5	5.5	4.0	50	PA-12/10-transp.	295581	o. r.
12 / 10							85	12	8.5	6.5	5.5	4.0	50	PA-12/10-blue	295582	o. r.
14 / 11							± 0.15	± 0.15	80	16	11.5	9.0	7.5	5.5	50	PA-14/11-transp.
14 / 11			80	16	11.5	9.0			7.5	5.5	50	PA-14/11-blue	295588	o. r.		
14 / 11			80	16	11.5	9.0			7.5	5.5	50	PA-14/11-black	295590	o. r.		
15 / 12.5	90	13	9.5	7.0	6.0	4.5			50	PA-15/125-transp.	295591	o. r.				
16 / 13	90	14	10.0	7.5	6.5	5.0			50	PA-16/13-transp.	295597	o. r.				
16 / 13	90	14	10.0	7.5	6.5	5.0			50	PA-16/13-blue	295598	o. r.				
16 / 13	90	14	10.0	7.5	6.5	5.0	50	PA-16/13-black	295600	o. r.						
22 / 18	± 0.15	± 0.20	150	13	9.5	7.0	6.0	4.5	50	PA-22/18-transp.	296211	o. r.				
22 / 18			150	13	9.5	7.0	6.0	4.5	50	PA-22/18-blue	296212	o. r.				
22 / 18			150	13	9.5	7.0	6.0	4.5	50	PA-22/18-black	296214	o. r.				

Illustration

Polyethylene Tube - Flexible - High Pressure

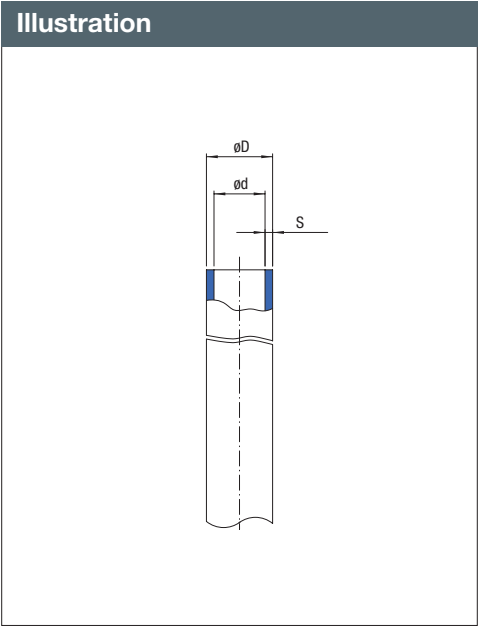
 Price group **18** T_{min} -10 °C
 T_{max} +40 °C

Polyethylene LD-PE

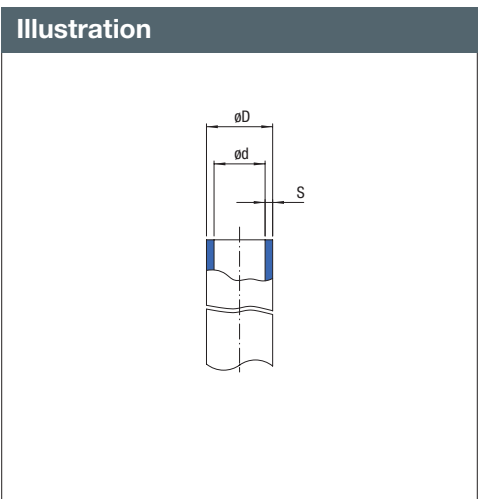
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at perature			Package Length [m]	Type	Order number	Price /100 m
	$\varnothing D$	Wall thickness s		20 °C	30 °C	40 °C				
5 / 3	± 0.1	± 0.1	25	15.0	12.0	10.5	50	PE-5/3-transp.	295621	o. r.
5 / 3			25	15.0	12.0	10.5	50	PE-5/3-blue	295622	o. r.
5 / 3			25	15.0	12.0	10.5	50	PE-5/3-red	295623	o. r.
5 / 3			25	15.0	12.0	10.5	50	PE-5/3-green	295624	o. r.
5 / 3			25	15.0	12.0	10.5	50	PE-5/3-yellow	295625	o. r.
5 / 3			25	15.0	12.0	10.5	50	PE-5/3-black	295626	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-transp.	295631	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-blue	295632	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-red	295633	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-green	295634	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-yellow	295635	o. r.
6 / 4			30	13.0	10.5	9.0	50	PE-6/4-black	295636	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-transp.	295641	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-blue	295642	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-red	295643	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-green	295644	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-yellow	295645	o. r.
8 / 6			40	8.0	6.5	5.5	50	PE-8/6-black	295646	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-transp.	295651	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-blue	295652	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-red	295653	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-green	295654	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-yellow	295655	o. r.
10 / 8			60	6.0	4.5	4.0	50	PE-10/8-black	295656	o. r.

Illustration


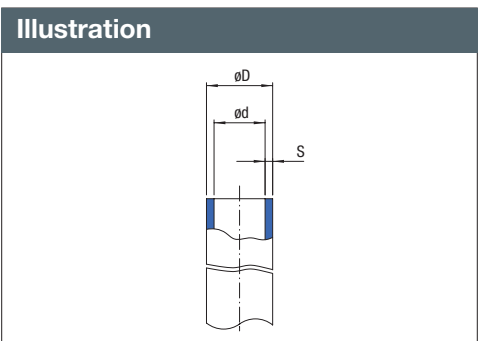
Polyurethane Tube - Flexible												
Price group 18		T _{min} -35 °C T _{max} +60 °C		Polyurethane PUR								
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at temperature					Package Length [m]	Type	Order number	Price /100 m
	ø D	Wall thickness s		20 °C	30 °C	40 °C	50 °C	60 °C				
4 / 2.5	±0.1	±0.15	13	15	12.5	11.0	10.0	9.0	50	PU-4/25-transp.	295701	o. r.
4 / 2.5			13	15	12.5	11.0	10.0	9.0	50	PU-4/25-blue	295702	o. r.
4 / 2.5			13	15	12.5	11.0	10.0	9.0	50	PU-4/25-black	295706	o. r.
4.3 / 3			14	12	10.0	9.0	8.0	7.0	50	PU-43/3-transp.	295711	o. r.
4.3 / 3			14	12	10.0	9.0	8.0	7.0	50	PU-43/3-blue	295712	o. r.
4.3 / 3			14	12	10.0	9.0	8.0	7.0	50	PU-43/3-black	295716	o. r.
5 / 3			12	16	13.5	12.0	10.5	9.5	50	PU-5/3-transp.	295721	o. r.
5 / 3			12	16	13.5	12.0	10.5	9.5	50	PU-5/3-blue	295722	o. r.
5 / 3			12	16	13.5	12.0	10.5	9.5	50	PU-5/3-black	295726	o. r.
6 / 4			20	14	12.0	10.5	9.5	8.5	50	PU-6/4-transp.	295731	o. r.
6 / 4			20	14	12.0	10.5	9.5	8.5	50	PU-6/4-blue	295732	o. r.
6 / 4			20	14	12.0	10.5	9.5	8.5	50	PU-6/4-black	295736	o. r.
8 / 6			30	12	10.0	9.0	8.0	7.0	50	PU-8/6-transp.	295741	o. r.
8 / 6			30	12	10.0	9.0	8.0	7.0	50	PU-8/6-blue	295742	o. r.
8 / 6			30	12	10.0	9.0	8.0	7.0	50	PU-8/6-black	295746	o. r.
10 / 8			60	9	7.5	6.5	6.0	5.5	50	PU-10/8-transp.	295751	o. r.
10 / 8			60	9	7.5	6.5	6.0	5.5	50	PU-10/8-blue	295752	o. r.
10 / 8			60	9	7.5	6.5	6.0	5.5	50	PU-10/8-black	295756	o. r.



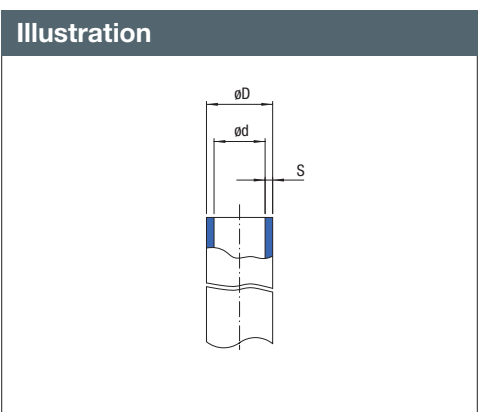
PVC-Braid Tube - Flexible												
Price group 18		T _{min} -20 °C T _{max} +60 °C		Polyvinylchlorid PVC-Braid								
Due to the braid the tube shrinks by pressuration. Therefore it is recommended that up to 10 % excess length should be used.												
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at temperature					Package Length [m]	Type	Order number	Price /100 m
	ø D	Wall thickness s		20 °C	30 °C	40 °C	50 °C	60 °C				
6.2 / 4	±0.15	±0.1	50	40	37,0	33,0	28,0	21,0	50	PV-62/4-blue	295832	o. r.
8.2 / 6	±0.2	±0.1	60	38	35,0	31,5	26,5	19,0	50	PV-82/6-blue	295842	o. r.
10.2 / 8			65	30	27,5	24,5	21,0	15,0	50	PV-102/8-blue	295852	o. r.
11.6 / 9	±0.25	±0.15	70	30	27,5	24,5	21,0	15,0	50	PV-116/9 -blue	295862	o. r.
12.5 / 10			80	24	22,0	19,5	17,0	13,0	50	PV-125/10-blue	295882	o. r.
15 / 12.5			90	18	16,5	14,5	12,5	10,0	50	PV-15/125-blue	295892	o. r.
17.6 / 13	±0.3	±0.2	100	18	16,5	14,5	12,5	10,0	50	PV-176/13-blue	295897	o. r.



Plastic Tube - Flexible													
Price group 18		T _{min} -200 °C T _{max} +205 °C		Fluoroethylenpropylene FEP									
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at temperature					Package Length [m]	Type	Order number	Price /100 m	
	ø D	ø d		20 °C	50 °C	75 °C	100 °C	150 °C					200 °C
4 / 2	±0.1	±0.1	16	31.5	23.5	19	12.5	5.0	1.5	50	FEP-4/2-natural	296001	o. r.
6 / 4			36	21	15.5	12.5	8.5	3.0	1.0	50	FEP-6/4-natural	296002	o. r.
8 / 6			64	15.5	11.5	9.5	6.0	2.5	0.5	50	FEP-8/6-natural	296003	o. r.
10 / 8			100	12.5	9.5	7.5	5.0	2.0	0.5	50	FEP-10/8-natural	296004	o. r.



Plastic Tube - Flexible														
Price group 18		T _{min} -200 °C T _{max} +260 °C		Perfluoroalkoxy-copolymer PFA										
Diameter D/d	Tolerance		Min. bending radius [mm]	Maximum operating pressure in bar at temperature					Package Length [m]	Type	Order number	Price /100 m		
	ø D	ø d		20 °C	50 °C	75 °C	100 °C	150 °C					200 °C	250 °C
4 / 2	±0.1	±0.1	16	27	23.0	20.5	18.0	14.0	10.5	7.5	50	PFA-4/2-natural	296006	o. r.
6 / 4			36	18	15.5	13.5	12.0	9.5	7.0	5.0	50	PFA-6/4-natural	296007	o. r.
8 / 6			64	13.5	11.5	10.0	9.0	7.0	5.0	3.5	50	PFA-8/6-natural	296008	o. r.
10 / 8			100	10.5	9.0	8.0	7.0	5.5	4.0	3.0	50	PFA-10/8-natural	296009	o. r.
12 / 10			144	9.0	7.5	6.5	6.0	4.5	3.5	2.5	50	PFA-12/10-natural	296011	o. r.
14 / 12			196	7	6	5	5	4	3	2	50	PFA-14/12-natur	296012	o. r.
16 / 14			±0.15	±0.15	256	6.5	5.5	5	4.5	3.5	2.5	1.5	50	PFA-16/14-natur

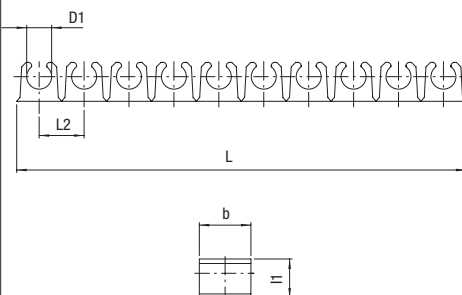
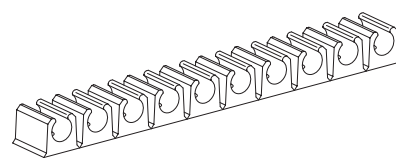


10-fold Tube Terminal

 Price group **18**
 T_{min} -20 °C
 T_{max} +50 °C

Polyethylene

for tube D	L	L2	l1	D1	b	Type	Order number	Price
6	110	11	9	6	14	410N-6	296304	o. r.
8	140.5	14	12.5	7.5	15	410N-8	296305	o. r.

Illustration


Function Fittings Nickel-Plated Brass / POM / Alu (Push-in)

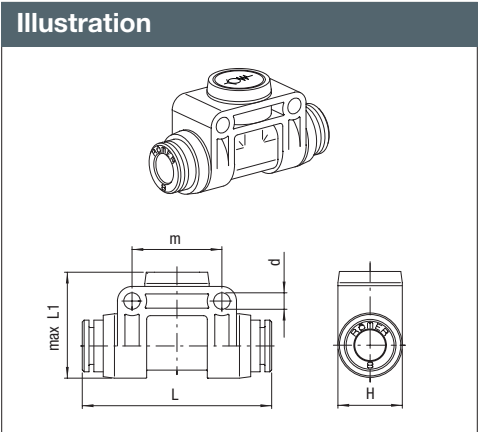
Application

AVS Römer Function Fittings can be used with the most varied of neutral gaseous and liquid media. So long as the fitting materials are suitable, application with aggressive media is also possible. See also the information under characteristics.

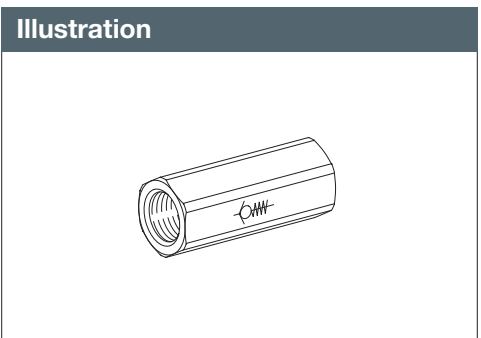
CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Nickel-plated brass	CuZn39Pb3, galvanically nickel-plated. Suitable for many neutral gaseous and liquid media, especially compressed air, water, hydraulic oil etc. Special version chemically nickel-plated with FKM seal ring, FDA compliant.							
Plastic POM	Polyoxymethylene, UV-resistant. Suitable for neutral gaseous and liquid media, especially compressed air, water etc.							
Aluminium bright	AlCuMgPbF37, aluminium alloy							
Other materials	see relevant products							
TUBE								
Outside diameter D [mm]	4, 6 and 8							
Permitted tolerance [mm]	±0.1							
Permitted grades	Polyamide (PA), polyurethane (PU), fluoropolymer (FEP) (PFA)							
THREAD								
External thread	"M" cylindrical thread: Metric ISO thread M5							
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2							
Internal thread	"M" cylindrical thread: Metric ISO thread M5							
Internal thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8 to G 1/2							
OPERATING PRESSURE / TEMPERATURE								
Plastic version	<table border="1"> <tr> <td>PN</td> <td>T_{min}</td> <td>-20 °C</td> <td rowspan="2">Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".</td> </tr> <tr> <td>10</td> <td>T_{max}</td> <td>+60 °C</td> </tr> </table>	PN	T_{min}	-20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".	10	T_{max}	+60 °C
PN	T_{min}	-20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".					
10	T_{max}	+60 °C						
Metal version	<table border="1"> <tr> <td>PN</td> <td>T_{min}</td> <td>-20 °C</td> <td rowspan="2">Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".</td> </tr> <tr> <td>16</td> <td>T_{max}</td> <td>+60 °C</td> </tr> </table>	PN	T_{min}	-20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".	16	T_{max}	+60 °C
PN	T_{min}	-20 °C	Means that the permitted operating pressure OP corresponds to the given nominal pressure PN within the specified temperature range "T".					
16	T_{max}	+60 °C						
Permitted operating pressure and temperature of pipe/tube must be observed!								

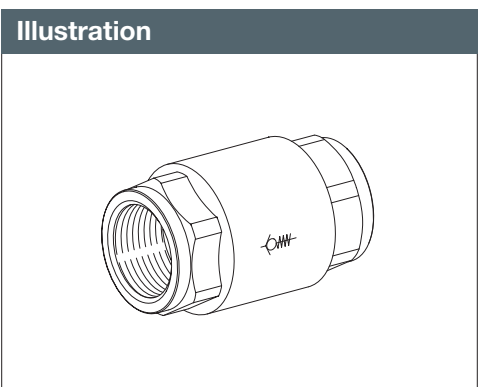
Non-Return Valve with ELSA Push-in Connector												
Price group	23	PN 10		Constructional design: Spring loaded disc	Application: Compressed air	T_{min} -20 °C T_{max} +60 °C						Plastic POM
Material: Body POM (blue), plate holder: Brass (bright), Seal: NBR (nitrile rubber)												
DN	for tube D	Qn-value air [l/min]	Operating pressure [bar]	L	L1 max.	H	m	d	Type	Order number	Price	
2.5	4	max. 100	0.2 - 10	49	28.3	17.2	24	4.3	VNR-958-P25-4	635061	o. r.	
4.0	6	max. 264	0.2 - 10	49.8	28.3	17.2	24	4.3	VNR-958-P40-6	635062	o. r.	
4.0	8	max. 306	0.2 - 10	50.8	28.3	17.2	24	4.3	VNR-958-P40-8	635063	o. r.	



Non-Return Valve											
Price group	23	PN 16		Constructional design: Spring-loaded ball	Application: neutral media						Nickel-plated brass
Operating pressure: 0.2 to 16 bar											
Material: Body brass (nickel-plated), ball: Stainless steel 1.4034, spring: Stainless steel 1.4310, seal: NBR (nitrile rubber) or FKM (fluorinated rubber)											
DN	Kv-value water [m³/h]	G	Sealing material	Temperature range [°C]	Total length	Thread length	Width across flats	Type	Order number	Price	
4	0.5	G 1/8	NBR	-10 to + 90	35	8	13	VNR-133-M40-1/8B	635001	o. r.	
4	0.5	G 1/8	FKM	-10 to + 130	35	8	13	VNR-133-M40-1/8F	635002	o. r.	
6	0.9	G 1/4	NBR	-10 to + 90	42	9	17	VNR-133-M60-1/4B	635004	o. r.	
6	0.9	G 1/4	FKM	-10 to + 130	42	9	17	VNR-133-M60-1/4F	635005	o. r.	



Non-Return Valve											
Price group	23		Constructional design: Spring-loaded disc	Application: neutral media	T_{min} -20 °C T_{max} +90 °C						Nickel-plated brass
Operating pressure: 0.02 to 25 bar to G 1											
Operating pressure: 0,02 bis 18 bar G 1 1/4 bis G 1 1/2											
Material: Body: Brass (nickel-plated), closure plates: Hostaform, Spring: Stainless steel 1.4310, seal: NBR (nitrile rubber)											
DN	Kv-value water [m³/h]	G	Weight in [g]	Total length	Thread length	Largest outer DIAMETER	Type	Order number	Price		
10	3	G 3/8	115	52	11	29	VSR-333-3/8	635111	o. r.		
15	4.1	G 1/2	150	58	13	32	VSR-333-1/2	635112	o. r.		
20	9	G 3/4	226	65	14	39	VSR-333-3/4	635113	o. r.		
25	12	G 1	330	75	17	48	VSR-333-1	635114	o. r.		
32	20	G 1 1/4	545	80	18	60	VSR-333-1 1/4	635115	o. r.		
40	31	G 1 1/2	685	86	19	68	VSR-333-1 1/2	635116	o. r.		

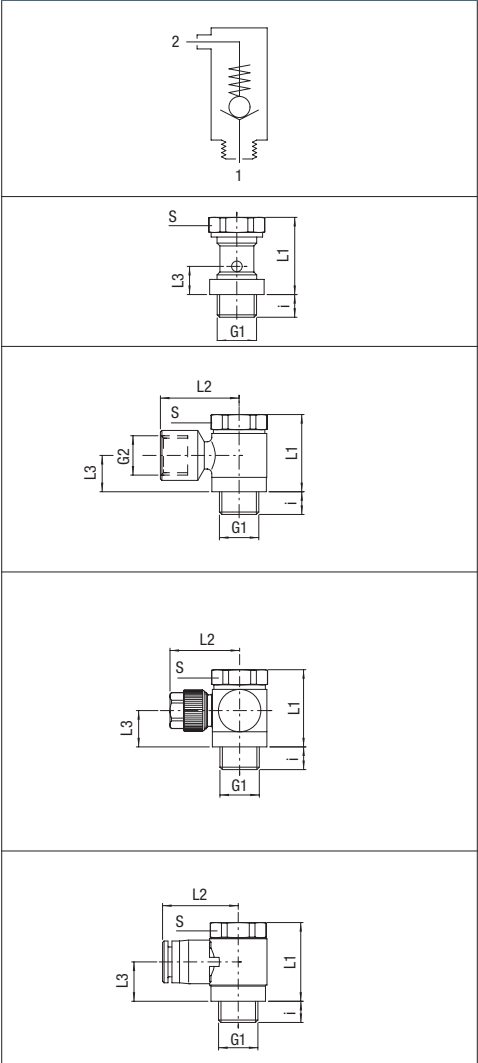


Banjo Non-Return Valve - Supply Air Closing

Price group	24	PN 10		Constructional design: Lip seal, blocking supply air	Application: Compressed air	Operating pressure: 0.2 to 10 bar	Nickel-plated brass
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T _{min}	-10 °C	Material: Valve body: Brass (nickel-plated), Seal: NBR (Perbunan)
T _{max}	+80 °C	

DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	280	G 1/8	ohne Ringstück		5.8	24.2	-	9.4	14	VCR-219M-1/8N	636502	o. r.
4.5	400	G 1/4	ohne Ringstück		7	26	-	9.8	17	VCR-219M-1/4N	636503	o. r.
1.5	70	M5	M5	-	4	15.5	10	7.5	8	VCR-219M-M5N-M5	636511	o. r.
2.5	280	G 1/8	G 1/8	-	6	24	15	11	14	VCR-219M-1/8N-1/8	636512	o. r.
4.5	400	G 1/4	G 1/4	-	7	26	26	12	17	VCR-219M-1/4N-1/4	636513	o. r.
1.5	70	M5	-	4. 3/3	4	15.5	15.5*	7.5	8	VCR-219M-M5N-43/3	636552	o. r.
1.5	70	M5	-	5/3	4	15.5	15.5*	7.5	8	VCR-219M-M5N-5/3	636553	o. r.
1.5	70	M5	-	6/4	4	15.5	16.6*	7.5	8	VCR-219M-M5N-6/4	636554	o. r.
2.5	280	G 1/8	-	4. 3/3	6	24	18*	11	14	VCR-219M-1/8N-43/3	636562	o. r.
2.5	280	G 1/8	-	5/3	6	24	18*	11	14	VCR-219M-1/8N-5/3	636563	o. r.
2.5	280	G 1/8	-	6/4	6	24	21.1*	11	14	VCR-219M-1/8N-6/4	636564	o. r.
2.5	280	G 1/8	-	8/6	6	24	21.1*	11	14	VCR-219M-1/8N-8/6	636565	o. r.
4.5	400	G 1/4	-	6/4	7.5	25.6	23.1*	12	17	VCR-219M-1/4N-6/4	636571	o. r.
4.5	400	G 1/4	-	8/6	7.5	25.6	23.1*	12	17	VCR-219M-1/4N-8/6	636572	o. r.
4.5	400	G 1/4	-	10/8	7.5	25.6	24.5*	12	17	VCR-219M-1/4N-10/8	636573	o. r.
1.5	70	M5	-	4	4	15.5	17.6	7.5	8	VCR-219M-M5-4P	636601	o. r.
1.5	70	M5	-	6	4	15.5	18.4	7.5	8	VCR-219M-M5-6P	636603	o. r.
2.5	280	G 1/8	-	4	5	25.1	22.2	12.3	14	VCR-219M-1/8N-4P	636611	o. r.
2.5	280	G 1/8	-	6	5	25.1	22.6	12.3	14	VCR-219M-1/8N-6P	636613	o. r.
2.5	280	G 1/8	-	8	5	25.1	23.1	12.3	14	VCR-219M-1/8N-8P	636614	o. r.
4.5	400	G 1/4	-	6	6.5	26.6	24.6	13.3	17	VCR-219M-1/4N-6P	636623	o. r.
4.5	400	G 1/4	-	8	6.5	26.6	25.1	13.3	17	VCR-219M-1/4N-8P	636624	o. r.

Illustration


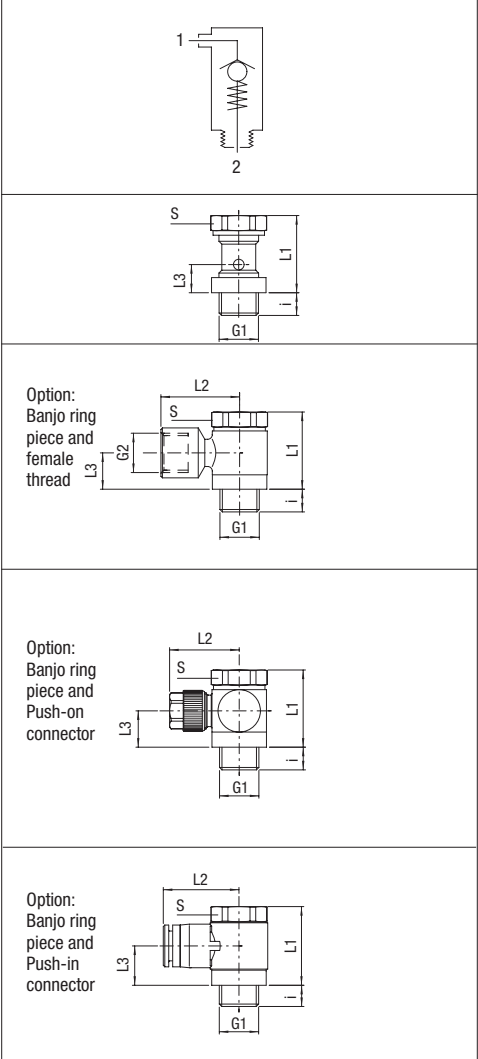
* Approximately with tightened union nut ** approximate with fastened fitting

Banjo Non-Return Valve - Exhaust Air Closing

Price group	24	PN 10		Constructional design: Lip seal, blocking exhaust air	Application: Compressed air	Operating pressure: 0.2 to 10 bar	Nickel-plated brass
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T _{min}	-10 °C	Material: Valve body: Brass (nickel-plated) Seal: NBR (Perbunan)
T _{max}	+80 °C	

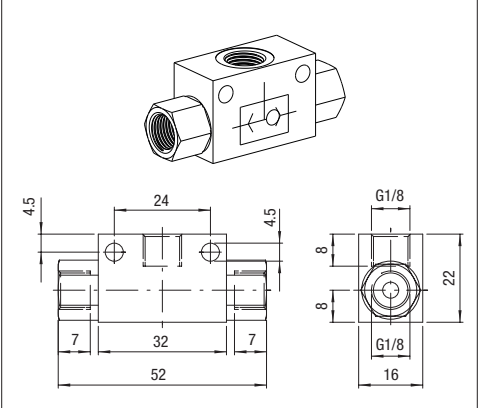
DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	280	G 1/8	without ring piece		5.8	24.2	-	9.4	14	VRC-219M-1/8N	636507	o. r.
4.5	400	G 1/4	without ring piece		7.0	26	-	9.8	17	VRC-219M-1/4N	636508	o. r.
1.5	70	M5	M5	-	4	15.5	10	7.5	8	VRC-219M-M5N-M5	636516	o. r.
2.5	280	G 1/8	G 1/8	-	6	24	15	11	14	VRC-219M-1/8N-1/8	636517	o. r.
4.5	400	G 1/4	G 1/4	-	7	26	26	12	17	VRC-219M-1/4N-1/4	636518	o. r.
1.5	70	M5	-	4.3/3	4	15.5	15.5*	7.5	8	VRC-219M-M5N-43/3	636557	o. r.
1.5	70	M5	-	5/3	4	15.5	15.5*	7.5	8	VRC-219M-M5N-5/3	636558	o. r.
1.5	70	M5	-	6/4	4	15.5	16.5*	7.5	8	VRC-219M-M5N-6/4	636559	o. r.
2.5	280	G 1/8	-	4.3/3	6	24	18*	11	14	VRC-219M-1/8N-43/3	636567	o. r.
2.5	280	G 1/8	-	5/3	6	24	18*	11	14	VRC-219M-1/8N-5/3	636568	o. r.
2.5	280	G 1/8	-	6/4	6	24	21*	11	14	VRC-219M-1/8N-6/4	636569	o. r.
2.5	280	G 1/8	-	8/6	6	24	21*	11	14	VRC-219M-1/8N-8/6	636570	o. r.
4.5	400	G 1/4	-	6/4	7.5	25.5	23*	12	17	VRC-219M-1/4N-6/4	636576	o. r.
4.5	400	G 1/4	-	8/6	7.5	25.5	23*	12	17	VRC-219M-1/4N-8/6	636577	o. r.
4.5	400	G 1/4	-	10/8	7.5	25.5	24.5*	12	17	VRC-219M-1/4N-10/8	636578	o. r.
1.5	70	M5	-	4	4	15.5	17.5	7.5	8	VRC-219M-M5-4P	636606	o. r.
1.5	70	M5	-	6	4	15.5	18.5	7.5	8	VRC-219M-M5-6P	636608	o. r.
2.5	280	G 1/8	-	4	5	25	22	12	14	VRC-219M-1/8N-4P	636616	o. r.
2.5	280	G 1/8	-	6	5	25	22.7	12.3	14	VRC-219M-1/8N-6P	636618	o. r.
2.5	280	G 1/8	-	8	5	25	23	12	14	VRC-219M-1/8N-8P	636619	o. r.
4.5	400	G 1/4	-	6	6.5	26.5	24.5	13	17	VRC-219M-1/4N-6P	636628	o. r.
4.5	400	G 1/4	-	8	6.5	26.5	25	13	17	VRC-219M-1/4N-8P	636629	o. r.

Illustration

Double Non-Return Valve

Price group	24	PN 10		Constructional design: Spool valve, non-overlapping	Application: Compressed air	Aluminium
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Material: Aluminium alloy body, Spindle: Brass, Thread socket: Brass (nickel-plated), seal: NBR (nitrile rubber)

DN	G	Qn-value air [l/min]	Operating pressure [bar]	Operating temperature [°C]	Type	Order number	Price
4	G 1/8	600	0.5 - 10	-20 to +90	SCS-233-A40-1/8B	636231	o. r.

Illustration


* Approximately with tightened union nut ** approximate with fastened fitting

Quick Relief Valve

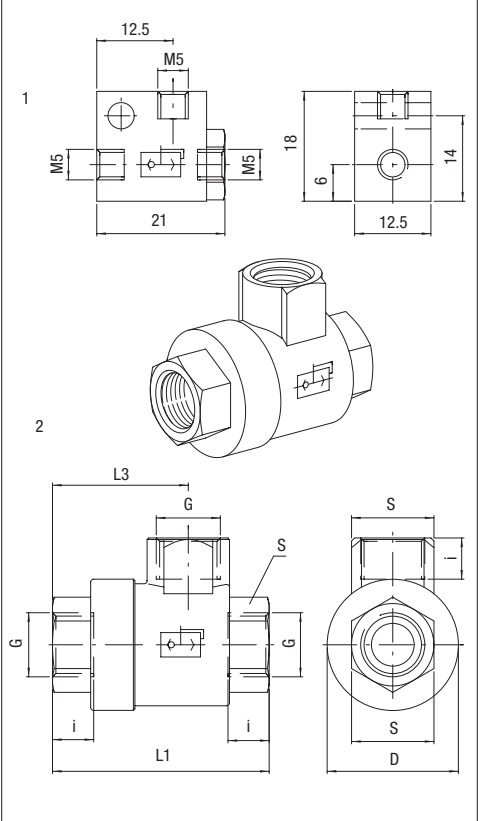
Price group **25** PN 10 Constructional design: Lip seal Application: Compressed air Operating pressure: 0.2 to 10 bar **Nickel-plated brass**

T_{min} -20 °C Body material: DN 3: Brass (bright), DN 6 to DN 14: Brass (nickel-plated) Lip seal material: DN 3: NBR (nitrile rubber), DN 6 to DN 14: AU (Vulkollan), FKM (fluorinated rubber) on request

Sealing ring material: PA (polyamide)

DN	Dimension drawing	G	Q _{Nn} -value air [l/min]		i	L1	L3	D	S	Type	Order number	Price
			P>A	A>R								
3	1	M5	200	230	-	-	-	-	-	VSC-233-U30-M05B	636291	o. r.
6	2	G 1/8	600	900	7	43	28	28	14	VSC-133-M60-1/8L	636261	o. r.
9	2	G 1/4	1,200	2,000	9	53	34	33	19	VSC-133-M90-1/4L	636262	o. r.
14	2	G 1/2	4,000	6,800	12	71	45	44	26	VSC-133-M14-1/2L	636264	o. r.

Illustration



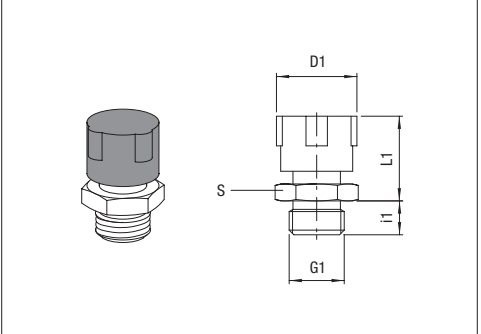
Throttle - Male

Price group **26** PN 16 Constructional design: Conical with silencer Application: Compressed air Operating pressure: 0 to 16 bar **Nickel-plated brass**

Material: Throttle body: Brass (nickel-plated), regulator cone: Brass, Spring: stainless steel, Silencer: Sinter bronze T_{min} -50 °C T_{max} +100 °C

DN	G	Air flow [l/min]	i1	L1	D1	S	Type	Order number	Price
3.5	G 1/8	max. 450	8	19	15	14	RSS-111-M35-1/8	635352	o. r.
4.5	G 1/4	max. 700	8	22	18.5	17	RSS-111-M45-1/4	635353	o. r.
6.5	G 1/4	max. 2,000	8	22	18.5	17	RSS-111-M65-1/4	635363	o. r.
10	G 1/2	max. 3,500	12	31	29	27	RSS-111-M10-1/2	635355	o. r.
13	G 1/2	max. 5,000	12	31	29	27	RSS-111-M13-1/2	635365	o. r.
18	G 3/4	max. 9,500	15	39	35	32	RSS-111-M18-3/4	635366	o. r.

Illustration



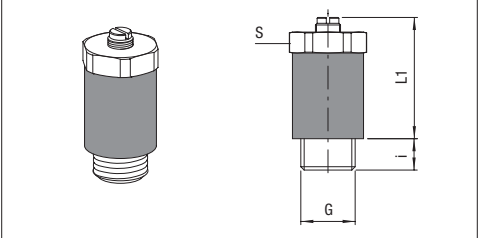
Throttle - Male

Price group **26** PN 12 Constructional design: Precision throttle with silencer Application: Compressed air Operating pressure: 0 to 12 bar **Nickel-plated brass**

Material: Body: Brass (nickel-plated), spindle: Brass, silencer pipe: Sinter bronze, seal: NBR (nitrile rubber) T_{min} -10 °C T_{max} +80 °C

DN	G	Air flow [l/min]	i	L1	S	Type	Order number	Price
2.5	G 1/8	max. 320	5	30	14	SSC-219M-1/8	635522	o. r.
4.5	G 1/4	max. 650	7.5	31	17	SSC-219M-1/4	635523	o. r.

Illustration

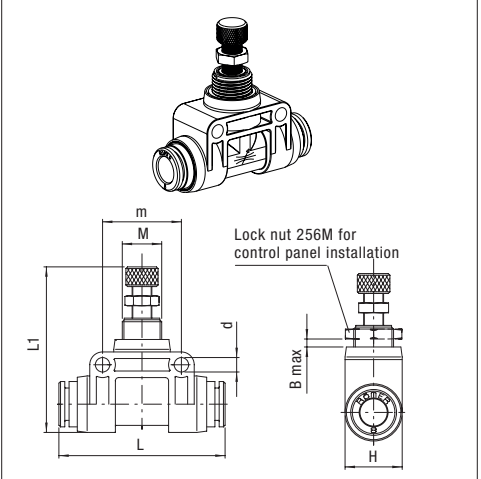


Throttle Valve with ELSA Push-in Connector

Price group	27	PN 10		Constructional design: Precision cone throttle	Application: Compressed air	Operating pressure: 0 to 10 bar	Plastic POM
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T _{min}	-20 °C	Material: Body POM (blue), spindle: brass (bright), Headstock: Brass (bright), seal: NBR (nitrile rubber)
T _{max}	+60 °C	

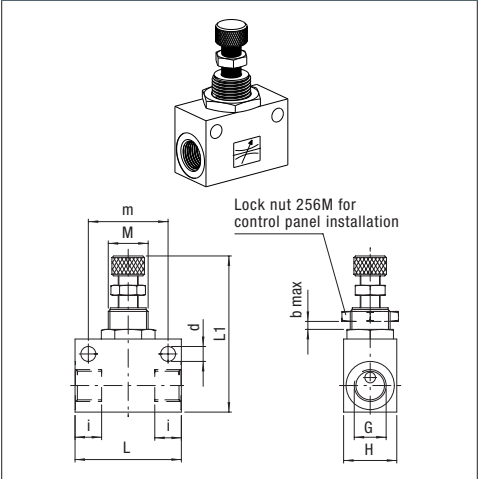
DN	for tube D	QnN-value air [l/min]	L	L1	M	B	H	m	d	Type	Order number	Price
2	4	0 - 100	49	50	M 12 x1	4	17.2	24	4.3	RFO-958-P20-4	635621	o. r.
2	6	0 - 100	50	47.1	M 12 x1	4	17.2	24	4.3	RFO-958-P20-6	635622	o. r.
2	8	0 - 100	51	50.5	M 12 x1	4	17.2	24	4.3	RFO-958-P20-8	635623	o. r.
3	4	0 - 200	49	50.5	M 12 x1	4	17.2	24	4.3	RFO-958-P30-4	635624	o. r.
3	6	0 - 200	50	50.5	M 12 x1	4	17.2	24	4.3	RFO-958-P30-6	635625	o. r.
3	8	0 - 200	50.8	50.5	M 12 x1	4	17.2	24	4.3	RFO-958-P30-8	635626	o. r.

Illustration

Throttle Valve

Price group	27	PN 10		Constructional design DN 2 and DN 3: Precision cone throttle	Constructional design DN 6: Precision slotted throttle	Aluminium
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Application: Compressed air	Material: Body: Aluminium alloy, spindle: Brass (bright), Headstock: Brass (bright), seal: NBR (nitrile rubber)	Operating pressure: 0 to 10 bar	T _{min} -20 °C T _{max} +80 °C
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DN	G	QnN-value air [l/min]	i	L	L1	M	B	H	m	d	Type	Order number	Price
2	G 1/8	0 - 100	7	32	48	M 12 x1	4	16	24	4.5	RFO-133-A20-1/8	635661	o. r.
3	G 1/8	0 - 200	7	32	48	M 12 x1	4	16	24	4.5	RFO-133-A30-1/8	635681	o. r.
6	G 1/4	0 - 900	10.5	46	58	M 20 x1.5	8	20	35	6.4	RFO-133-A60-1/4	635682	o. r.

Illustration


Swivel Throttle Valve with Screw Slot

 Price group **24**

PN 10


 Application:
Compressed air

 Operating pressure:
0 to 10 bar

 T_{min} -10 °C
 T_{max} +80 °C

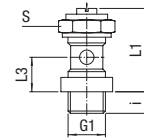
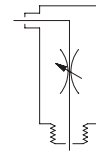
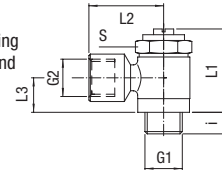
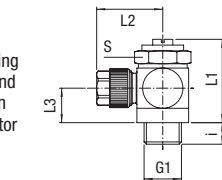
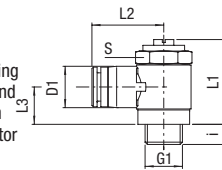
Nickel-plated brass

 Material: Valve body: Brass (nickel-plated),
Seal: NBR (nitrile rubber)

DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	0-280	G 1/8	without ring piece		6	29	-	9	14	SCO-219M-1/8N	636702	o. r.
4.5	0-400	G 1/4	without ring piece		7.5	27.5	-	9.3	17	SCO-219M-1/4N	636703	o. r.
1.5	0-70	M5	M5	-	4	21.5	10	7.5	8	SCO-219M-M5N-M5	636711	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	29	15	11	14	SCO-219M-1/8N-1/8	636712	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	31	26	12	17	SCO-219M-1/4N-1/4	636713	o. r.
1.5	0-70	M5	-	4, 3/3	4	21.5	15.5*	7.5	8	SCO-219M-M5N-43/3	636752	o. r.
1.5	0-70	M5	-	5/3	4	21.5	15.5*	7.5	8	SCO-219M-M5N-5/3	636753	o. r.
1.5	0-70	M5	-	6/4	4	21.5	16.5*	7.5	8	SCO-219M-M5N-6/4	636754	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	29	18*	11	14	SCO-219M-1/8N-43/3	636762	o. r.
2.5	0-280	G 1/8	-	5/3	6	29	18*	11	14	SCO-219M-1/8N-5/3	636763	o. r.
2.5	0-280	G 1/8	-	6/4	6	26	21*	11	14	SCO-219M-1/8N-6/4	636764	o. r.
2.5	0-280	G 1/8	-	8/6	6	29	21*	11	14	SCO-219M-1/8N-8/6	636765	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	31	23*	12	17	SCO-219M-1/4N-6/4	636771	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	31	23*	12	17	SCO-219M-1/4N-8/6	636772	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	31	24.5*	12	17	SCO-219M-1/4N-10/8	636773	o. r.
1.5	0-70	M5	-	4	4	21.5	17.5	7.5	8	SCO-219M-M5-4P	636801	o. r.
1.5	0-70	M5	-	6	4	21.5	18.5	7.5	8	SCO-219M-M5-6P	636803	o. r.
2.5	0-280	G 1/8	-	4	5	27	22.2	12.3	14	SCO-219M-1/8N-4P	636811	o. r.
2.5	0-280	G 1/8	-	6	5	27	22.7	12.3	14	SCO-219M-1/8N-6P	636813	o. r.
2.5	0-280	G 1/8	-	8	5	27	23.1	12.3	14	SCO-219M-1/8N-8P	636814	o. r.
4.5	0-400	G 1/4	-	6	6.5	32	24.5	13.3	17	SCO-219M-1/4N-6P	636823	o. r.
4.5	0-400	G 1/4	-	8	6.5	28.5	25.1	13.3	17	SCO-219M-1/4N-8P	636824	o. r.

Illustration

Screw Slot


 Option:
Banjo ring piece and female thread

 Option:
Banjo ring piece and Push-on connector

 Option:
Banjo ring piece and Push-in connector


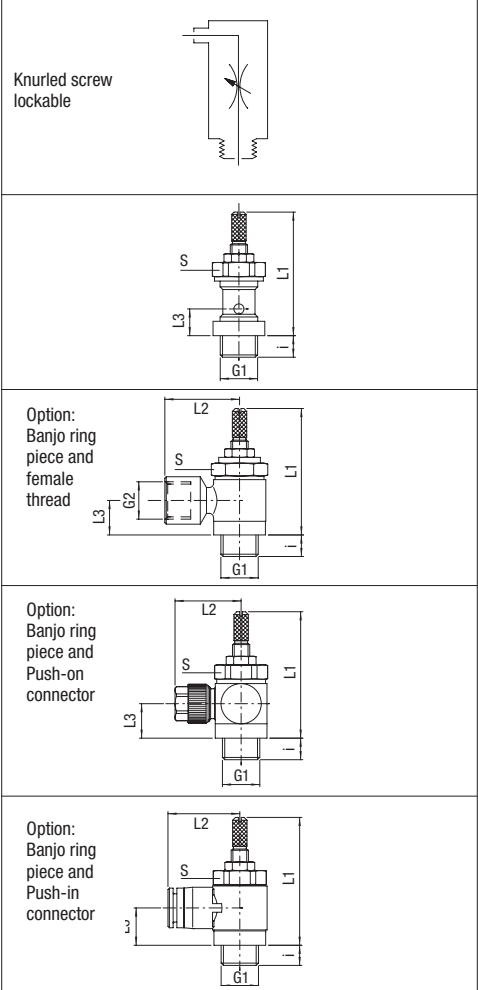
* Approximately with tightened union nut ** approximate with fastened fitting

Banjo Throttle Valve - Knurled Screw Lockable

Price group	24	PN 10		Application: Compressed air	Operating pressure: 0 to 10 bar	T_{min} -10 °C T_{max} +80 °C	Nickel-plated brass
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Material: Valve body: Brass (nickel-plated), Seal: NBR (nitrile rubber)

DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i	L1 max.	L2	L3	S	Type	Order number	Price
2.5	0-280	G 1/8	without ring piece		6	43	-	9	14	RCO-219M-1/8N	636707	o. r.
4.5	0-400	G 1/4	without ring piece		7.5	46	-	9.5	17	RCO-219M-1/4N	636708	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	43	15	11	14	RCO-219M-1/8N-1/8	636717	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	46	26	12	17	RCO-219M-1/4N-1/4	636718	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	43	18*	11	14	RCO-219M-1/8N-43/3	636767	o. r.
2.5	0-280	G 1/8	-	5/3	6	43	18*	11	14	RCO-219M-1/8N-5/3	636768	o. r.
2.5	0-280	G 1/8	-	6/4	6	43	21*	11	14	RCO-219M-1/8N-6/4	636769	o. r.
2.5	0-280	G 1/8	-	8/6	6	43	21*	11	14	RCO-219M-1/8N-8/6	636770	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	46	23*	12	17	RCO-219M-1/4N-6/4	636776	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	46	23*	12	17	RCO-219M-1/4N-8/6	636777	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	46	24.5*	12	17	RCO-219M-1/4N-10/8	636778	o. r.
2.5	0-280	G 1/8	-	4	5	44	22	12	14	RCO-219M-1/8N-4P	636816	o. r.
2.5	0-280	G 1/8	-	6	5	44	22.5	12	14	RCO-219M-1/8N-6P	636818	o. r.
2.5	0-280	G 1/8	-	8	5	44	23.1	12.3	14	RCO-219M-1/8N-8P	636819	o. r.
4.5	0-400	G 1/4	-	6	6.5	47	24.5	13	17	RCO-219M-1/4N-6P	636828	o. r.
4.5	0-400	G 1/4	-	8	6.5	47	25	13	17	RCO-219M-1/4N-8P	636829	o. r.

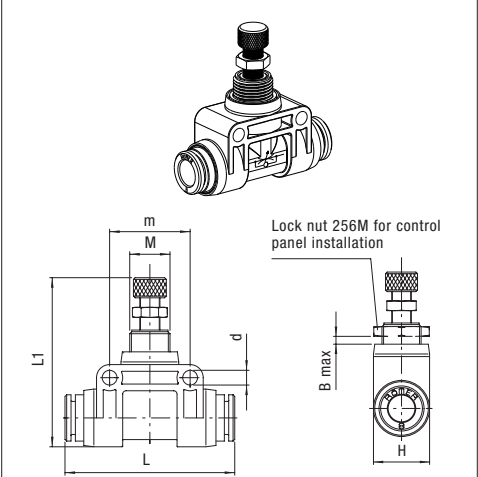
Illustration

Throttle Non-Return Valve with ELSA Push-in Connector

Price group	28	PN 10		Constructional design: Precision cone throttle with plate non-return valve	Application: Compressed air	Plastic POM
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Operating pressure: 0.2 to 10 bar
Material: Body: POM (blue), spindle: Brass (bright), Headstock: Brass (bright), seal: NBR (nitrile rubber)

T_{min} -20 °C
 T_{max} +60 °C

DN	D	Qn-value air [l/min]	L	L1 max.	M	B	H	m	d	Type	Order number	Price
2	4	0 - 100	49	50.5	M 12 x1	4	17.2	24	4.3	RFU-958-P20-4	635921	o. r.
2	6	0 - 100	50	50.5	M 12 x1	4	17.2	24	4.3	RFU-958-P20-6	635922	o. r.
2	8	0 - 100	50.8	50	M 12 x1	4	17.2	24	4.3	RFU-958-P20-8	635923	o. r.
3	4	0 - 200	49	50.5	M 12 x1	4	17.2	24	4.3	RFU-958-P30-4	635924	o. r.
3	6	0 - 200	50	50.5	M 12 x1	4	17.2	24	4.3	RFU-958-P30-6	635925	o. r.
3	8	0 - 200	51	50.5	M 12 x1	4	17.2	24	4.3	RFU-958-P30-8	635926	o. r.

Illustration


* Approximately with tightened union nut ** approximate with fastened fitting

Throttle Non-Return Valve

 Price group **28**

PN 10


Aluminium

 Constructional design DN 2 and DN 3: Precision cone throttle
 Constructional design DN 6: Precision slotted throttle (all with disc non-return valve)

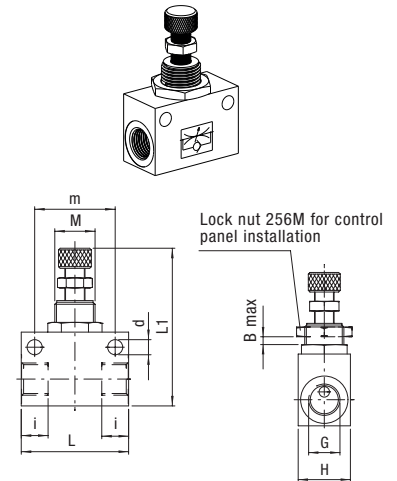
 Application:
 Compressed air

 Material: Body: Aluminium alloy, spindle: Brass (bright),
 Headstock: Brass (bright), seal: NBR (nitrile rubber)

 Operating pressure:
 0.2 to 10 bar

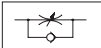
 T_{min} -20 °C
 T_{max} +80 °C

DN	G	QnN-value air [l/min]	i	L	L1 max.	M	B	H	m	d	Type	Order number	Price
2	G 1/8	0 - 100	8	32	48	M12x1	4	16	24	4.5	RFU-133-A20-1/8	635961	o. r.
3	G 1/8	0 - 200	7	32	48	M12x1	4	16	24	4.5	RFU-133-A30-1/8	635981	o. r.
6	G 1/4	0 - 900	10.5	46	58	M20x1.5	7	20	35	6.4	RFU-133-A60-1/4	635982	o. r.

Illustration

Banjo Throttle Non-Return Valve - Exhaust Air Restricting - Screw Slot

 Price group **24**

PN 10


 Application:
 Compressed air

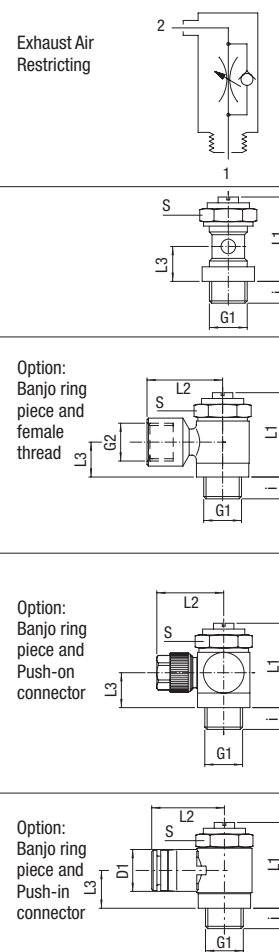
 Operating pressure:
 0.2 to 10 bar

 T_{min} -10 °C
 T_{max} +80 °C

Nickel-plated brass

 Material: Valve body: Brass (nickel-plated),
 Seal: NBR (nitrile rubber)

DN	QnN-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d	i**	L1**	L2	L3**	S	Type	Order number	Price		
2.5	0-280	G 1/8	without ring piece	6	29	-	9	14	SCU-219M-1/8N	636902	o. r.		
4.5	0-400	G 1/4	without ring piece	7.5	31	-	9.5	17	SCU-219M-1/4N	636903	o. r.		
1.5	0-70	M5	M5	-	4	21.5	10	7.5	8	8	SCU-219M-M5N-M5	636911	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	29	15	11	14	14	SCU-219M-1/8N-1/8	636912	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	31	26	12	17	17	SCU-219M-1/4N-1/4	636913	o. r.
1.5	0-70	M5	-	4, 3/3	4	21.5	15.5*	7.5	8	8	SCU-219M-M5N-43/3	636952	o. r.
1.5	0-70	M5	-	5/3	4	21.5	15.5*	7.5	8	8	SCU-219M-M5N-5/3	636953	o. r.
1.5	0-70	M5	-	6/4	4	21.5	16.5*	7.5	8	8	SCU-219M-M5N-6/4	636954	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	29	18*	11	14	14	SCU-219M-1/8N-43/3	636962	o. r.
2.5	0-280	G 1/8	-	5/3	6	29	18*	11	14	14	SCU-219M-1/8N-5/3	636963	o. r.
2.5	0-280	G 1/8	-	6/4	6	29	21*	11	14	14	SCU-219M-1/8N-6/4	636964	o. r.
2.5	0-280	G 1/8	-	8/6	6	29	21*	11	14	14	SCU-219M-1/8N-8/6	636965	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	31	23*	12	17	17	SCU-219M-1/4N-6/4	636971	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	31	23*	12	17	17	SCU-219M-1/4N-8/6	636972	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	31	24.5*	12	17	17	SCU-219M-1/4N-10/8	636973	o. r.
1.5	0-70	M5	-	4	4	21.5	17.4	7.5	8	8	SCU-219M-M5-4P	637001	o. r.
1.5	0-70	M5	-	6	4	21.5	18.8	7.5	8	8	SCU-219M-M5-6P	637003	o. r.
2.5	0-280	G 1/8	-	4	5	27	22.2	12.3	14	14	SCU-219M-1/8N-4P	637011	o. r.
2.5	0-280	G 1/8	-	6	5	30	22.6	12.2	14	14	SCU-219M-1/8N-6P	637013	o. r.
2.5	0-280	G 1/8	-	8	5	30	23.1	12.3	14	14	SCU-219M-1/8N-8P	637014	o. r.
4.5	0-400	G 1/4	-	6	6.5	32	24.6	13.2	17	17	SCU-219M-1/4N-6P	637023	o. r.
4.5	0-400	G 1/4	-	8	6.5	32	25.1	13.3	17	17	SCU-219M-1/4N-8P	637024	o. r.

Illustration


* Approximately with tightened union nut ** approximate with fastened fitting

Banjo Throttle Non-Return Valve - Exhaust Air Restricting - Knurled Screw Lockable
Illustration

 Price group **24**

PN 10



Application: Compressed air

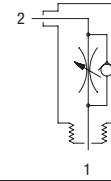
Operating pressure: 0.2 to 10 bar

 T_{min} -10 °C
 T_{max} +80 °C

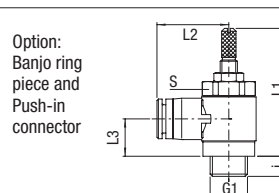
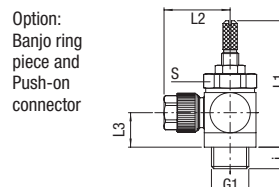
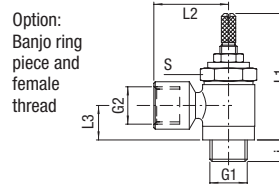
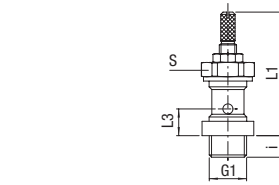
Nickel-plated brass

Material: Valve body: Brass (nickel-plated), seal: NBR (nitrile rubber)

Exhaust air restricting, knurled screw lockable



DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	0-280	G 1/8	without ring piece		6	43	-	9	14	RCU-219M-1/8N	637102	o. r.
4.5	0-400	G 1/4	without ring piece		7.5	46	-	9.5	17	RCU-219M-1/4N	637103	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	43	15	11	14	RCU-219M-1/8N-1/8	637112	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	46	26	12	17	RCU-219M-1/4N-1/4	637113	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	43	18*	11	14	RCU-219M-1/8N-43/3	637162	o. r.
2.5	0-280	G 1/8	-	5/3	6	43	18*	11	14	RCU-219M-1/8N-5/3	637163	o. r.
2.5	0-280	G 1/8	-	6/4	6	43	21*	11	14	RCU-219M-1/8N-6/4	637164	o. r.
2.5	0-280	G 1/8	-	8/6	6	43	21*	11	14	RCU-219M-1/8N-8/6	637165	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	46	23*	12	17	RCU-219M-1/4N-6/4	637171	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	46	23*	12	17	RCU-219M-1/4N-8/6	637172	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	46	24.5*	12	17	RCU-219M-1/4N-10/8	637173	o. r.
2.5	0-280	G 1/8	-	4	5	44	22	12	14	RCU-219M-1/8N-4P	637211	o. r.
2.5	0-280	G 1/8	-	6	5	44	22.5	12	14	RCU-219M-1/8N-6P	637213	o. r.
2.5	0-280	G 1/8	-	8	5	44	23	12	14	RCU-219M-1/8N-8P	637214	o. r.
4.5	0-400	G 1/4	-	6	6.5	47	24.5	13	17	RCU-219M-1/4N-6P	637223	o. r.
4.5	0-400	G 1/4	-	8	6.5	47	25	13	17	RCU-219M-1/4N-8P	637224	o. r.



* Approximately with tightened union nut ** approximate with fastened fitting

Banjo Throttle Non-Return Valve - Supply Air Restricting

 Price group **24**

PN 10


 Application:
Compressed air

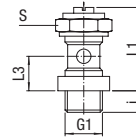
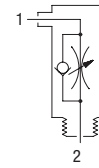
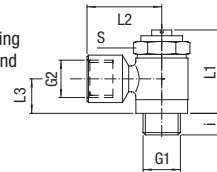
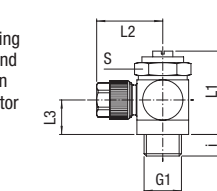
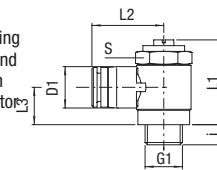
 Operating pressure:
0.2 to 10 bar

 T_{min} -10 °C
 T_{max} +80 °C

Nickel-plated brass

 Material: Valve body: Brass (nickel-plated),
Seal: NBR (nitrile rubber)

DN	Qn-value air [l/min]	G1	Connector on banjo ring piece G2 or tube D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	0-280	G 1/8	without ring piece		6	29	-	9	14	SUC-219M-1/8N	636907	o. r.
4.5	0-400	G 1/4	without ring piece		7.5	31	-	9.5	17	SUC-219M-1/4N	636908	o. r.
1.5	0-70	M5	M5	-	4	21.5	10	7.5	8	SUC-219M-M5N-M5	636916	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	29	15	11	14	SUC-219M-1/8N-1/8	636917	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	31	26	12	17	SUC-219M-1/4N-1/4	636918	o. r.
1.5	0-70	M5	-	4, 3/3	4	21.5	15.5*	7.5	8	SUC-219M-M5N-43/3	636957	o. r.
1.5	0-70	M5	-	5/3	4	21.5	15.5*	7.5	8	SUC-219M-M5N-5/3	636958	o. r.
1.5	0-70	M5	-	6/4	4	21.5	16.5*	7.5	8	SUC-219M-M5N-6/4	636959	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	29	18*	11	14	SUC-219M-1/8N-43/3	636967	o. r.
2.5	0-280	G 1/8	-	5/3	6	29	18*	11	14	SUC-219M-1/8N-5/3	636968	o. r.
2.5	0-280	G 1/8	-	6/4	6	29	21*	11	14	SUC-219M-1/8N-6/4	636969	o. r.
2.5	0-280	G 1/8	-	8/6	6	29	21*	11	14	SUC-219M-1/8N-8/6	636970	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	31	23*	12	17	SUC-219M-1/4N-6/4	636976	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	31	23*	12	17	SUC-219M-1/4N-8/6	636977	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	31	24.5*	12	17	SUC-219M-1/4N-10/8	636978	o. r.
1.5	0-70	M5	-	4	4	21.5	17.5	7.5	8	SUC-219M-M5-4P	637006	o. r.
1.5	0-70	M5	-	6	4	21.5	18.5	7.5	8	SUC-219M-M5-6P	637008	o. r.
2.5	0-280	G 1/8	-	4	5	30	22	12	14	SUC-219M-1/8N-4P	637016	o. r.
2.5	0-280	G 1/8	-	6	5	30	22.7	12.3	14	SUC-219M-1/8N-6P	637018	o. r.
2.5	0-280	G 1/8	-	8	5	30	23	12	14	SUC-219M-1/8N-8P	637019	o. r.
4.5	0-400	G 1/4	-	6	6.5	32	24.5	13	17	SUC-219M-1/4N-6P	637028	o. r.
4.5	0-400	G 1/4	-	8	6.5	32	25	13	17	SUC-219M-1/4N-8P	637029	o. r.

Illustration

 Option:
Banjo ring piece and female thread

 Option:
Banjo ring piece and Push-on connector

 Option:
Banjo ring piece and Push-in connector


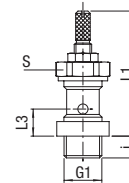
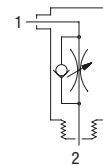
* Approximately with tightened union nut ** approximate with fastened fitting

Swivel Throttle Non-Return Valve - Air Inlet Throttling - Knurled Screw Lockable
Illustration

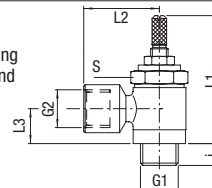
Price group	24	PN 10		Application: Compressed air	Operating pressure: 0.2 to 10 bar	T _{min} -10 °C T _{max} +80 °C	Nickel-plated brass
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Material: Valve body: Brass (nickel-plated),
Seal: NBR (nitrile rubber)

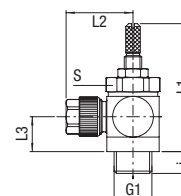
DN	Qn-value air [l/min]	G1	Connector on ring piece G2 or D/d		i**	L1**	L2	L3**	S	Type	Order number	Price
2.5	0-280	G 1/8	without ring piece		6	43	-	9	14	RUC-219M-1/8N	637107	o. r.
4.5	0-400	G 1/4	without ring piece		7.5	46	-	9.5	17	RUC-219M-1/4N	637108	o. r.
2.5	0-280	G 1/8	G 1/8	-	6	43	15	11	14	RUC-219M-1/8N-1/8	637117	o. r.
4.5	0-400	G 1/4	G 1/4	-	7.5	31	26	12	17	RUC-219M-1/4N-1/4	637118	o. r.
2.5	0-280	G 1/8	-	4, 3/3	6	43	18*	11	14	RUC-219M-1/8N-43/3	637167	o. r.
2.5	0-280	G 1/8	-	5/3	6	43	18*	11	14	RUC-219M-1/8N-5/3	637168	o. r.
2.5	0-280	G 1/8	-	6/4	6	43	21*	11	14	RUC-219M-1/8N-6/4	637169	o. r.
2.5	0-280	G 1/8	-	8/6	6	43	21*	11	14	RUC-219M-1/8N-8/6	637170	o. r.
4.5	0-400	G 1/4	-	6/4	7.5	46	23*	12	17	RUC-219M-1/4N-6/4	637176	o. r.
4.5	0-400	G 1/4	-	8/6	7.5	46	23*	12	17	RUC-219M-1/4N-8/6	637177	o. r.
4.5	0-400	G 1/4	-	10/8	7.5	46	24.5*	12	17	RUC-219M-1/4N-10/8	637178	o. r.
2.5	0-280	G 1/8	-	4	5	44	22	12	14	RUC-219M-1/8N-4P	637216	o. r.
2.5	0-280	G 1/8	-	6	5	44	22.5	12	14	RUC-219M-1/8N-6P	637218	o. r.
2.5	0-280	G 1/8	-	8	5	44	23	12	14	RUC-219M-1/8N-8P	637219	o. r.
4.5	0-400	G 1/4	-	6	6.5	47	24.5	13	17	RUC-219M-1/4N-6P	637228	o. r.
4.5	0-400	G 1/4	-	8	6.5	47	25	13	17	RUC-219M-1/4N-8P	637229	o. r.



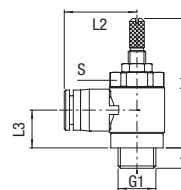
Option:
Banjo ring piece and female thread



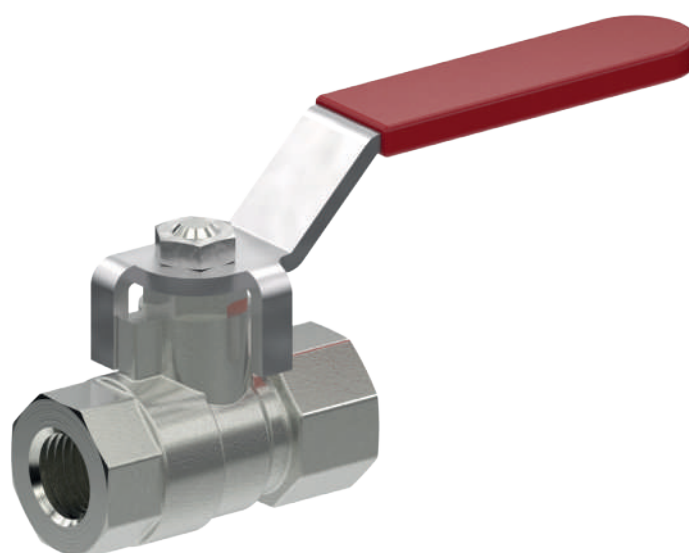
Option:
Banjo ring piece and Push-on connector



Option:
Banjo ring piece and Push-in connector



* Approximately with tightened union nut ** approximate with fastened fitting

Ball Valves Brass

CHARACTERISTICS
GENERAL

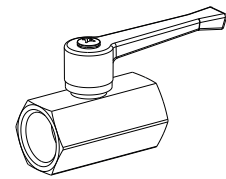
Constructional design	Ball valve with float-mounted precision ball				Ball and shaft one-piece
Application	Neutral gaseous or fluids				
Product name	2-way ball valve			3-way ball valve	
Product type	LKH-177/178	LKH-321/322/324	LKH-100	LKH-333/334	GKH-234/236
	GKH-175/176	GKH-321/322	GKH-100		OKH-234/236
Thread connector	G 1/4 - G 1/2	G 1/4 - G 4	RP 3/8 - RP 2	G 1/4 - G 2	G 1/4
Clear span (cs)	8 - 10	10 - 95	10 - 50	9.5 - 40.7	3.2 - 6
Temperature range	-20 °C to +140 °C	-10 °C to +180 °C	-10 °C to +110 °C	-10 °C to +180 °C	-10 °C to +130 °C
Body material	CW617N, chromium-plated	CW617N, outer nickel-plated		CW614N, nickel-plated	
Ball material	CW617N, chromium-plated	CW617N, chromium-plated			CW614N
Ball seal material	PTFE (Teflon)	PTFE (Teflon)		PTFE (Teflon)	
Shaft seal material	FKM	FKM		FKM	
O-ring material	FKM				
Hand lever material	plastic	Steel, plastic-sheathed, red	Steel, plastic-sheathed, yellow	Steel, plastic-sheathed, red	-
Handle material	plastic	Aluminium, powder-coated, red	Aluminium, powder-coated, yellow	-	plastic
PNEUMATIC - HYDRAULIC					
Nominal pressure	10	40 / 32	1 (gas) / 25	50 / 40 / 32 / 25	10
Pressure range	Rough vacuum up to permitted excess operating pressure PB according to table				

2-Way Ball Valve - Small Series

 Price group **31** PN 10

Chromium-plated brass

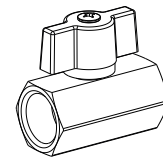
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length inner thread	Type	Order number	Price
				90 °C	140 °C					
8	8	G 1/4	10	10	-	41.5	10	LKH-177-1/4	637502	o. r.
8	8	G 1/4	10	10	6	41.5	10	LKH-177-1/4-S	637504	o. r.
10	8	G 3/8	10	10	-	41.5	10	LKH-177-3/8	637507	o. r.
10	8	G 3/8	10	10	6	41.5	10	LKH-177-3/8-S	637509	o. r.
15	10	G 1/2	10	8	-	49	10.5	LKH-177-1/2	637512	o. r.
15	10	G 1/2	10	8	6	49	10.5	LKH-177-1/2-S	637514	o. r.

Illustration

2-Way Ball Valve - Small Series

 Price group **31** PN 10

Chromium-plated brass

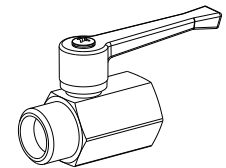
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length inner thread	Type	Order number	Price
				90 °C	140 °C					
8	8	G 1/4	10	10	-	41.5	10	GKH-175-1/4	637503	o. r.
8	8	G 1/4	10	10	6	41.5	10	GKH-175-1/4-S	637505	o. r.
10	8	G 3/8	10	10	-	41.5	10	GKH-175-3/8	637508	o. r.
10	8	G 3/8	10	10	6	41.5	10	GKH-175-3/8-S	637510	o. r.
15	10	G 1/2	10	8	-	49	10.5	GKH-175-1/2	637513	o. r.
15	10	G 1/2	10	8	6	49	10.5	GKH-175-1/2-S	637515	o. r.

Illustration

2-Way Ball Valve - Small Series

 Price group **31** PN 10

Chromium-plated brass

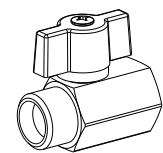
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length outer thread	Length inner thread	Type	Order number	Price
				90 °C	140 °C						
8	8	G 1/4	10	10	-	41.5	9.5	10	LKH-178-1/4	637517	o. r.
8	8	G 1/4	10	10	6	41.5	9.5	10	LKH-178-1/4-S	637519	o. r.
10	8	G 3/8	10	10	-	41.5	9.5	10	LKH-178-3/8	637522	o. r.
10	8	G 3/8	10	10	6	41.5	9.5	10	LKH-178-3/8-S	637524	o. r.
15	10	G 1/2	10	8	-	49	13	10.5	LKH-178-1/2	637527	o. r.
15	10	G 1/2	10	8	6	49	13	10.5	LKH-178-1/2-S	637529	o. r.

Illustration

2-Way Ball Valve - Small Series

 Price group **31** PN 10

Chromium-plated brass

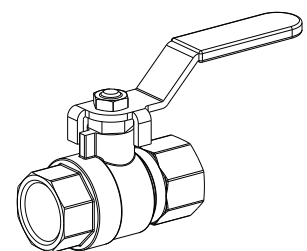
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length outer thread	Length inner thread	Type	Order number	Price
				90 °C	140 °C						
8	8	G 1/4	10	10	-	41.5	9.5	10	GKH-176-1/4	637518	o. r.
8	8	G 1/4	10	10	6	41.5	9.5	10	GKH-176-1/4-S	637520	o. r.
10	8	G 3/8	10	10	-	41.5	9.5	10	GKH-176-3/8	637523	o. r.
10	8	G 3/8	10	10	6	41.5	9.5	10	GKH-176-3/8-S	637525	o. r.
15	10	G 1/2	10	8	-	49	13	10.5	GKH-176-1/2	637528	o. r.
15	10	G 1/2	10	8	6	49	13	10.5	GKH-176-1/2-S	637530	o. r.

Illustration

2-Way Ball Valve - Full Flow - however DN 65 to 100 slightly reduced

 Price group **31** PN 40/25

Nickel-plated brass

DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length inner thread	Type	Order number	Price
				90 °C	140 °C	180 °C					
8	10	G 1/4	40	36	22	12	45	10	LKH-321-1/4	637902	o. r.
10	10	G 3/8	40	36	22	12	45	10	LKH-321-3/8	637906	o. r.
15	15	G 1/2	40	36	22	12	63	12	LKH-321-1/2	637910	o. r.
20	20	G 3/4	40	29	18	10	71	16	LKH-321-3/4	637914	o. r.
25	25	G 1	40	29	18	10	83	18	LKH-321-1	637918	o. r.
32	32	G 1 1/4	32	23	16	8	92	20	LKH-321-1 1/4	637922	o. r.
40	40	G 1 1/2	32	19	12	6	104	21	LKH-321-1 1/2	637926	o. r.
50	50	G 2	32	19	12	6	124	24	LKH-321-2	637930	o. r.
65	61	G 2 1/2	25	12	8	4	141	24	LKH-324-2 1/2	638034	o. r.
80	74	G 3	25	12	8	4	160	26	LKH-324-3	638038	o. r.
100	95	G 4	25	12	8	4	196	30	LKH-324-4	638042	o. r.

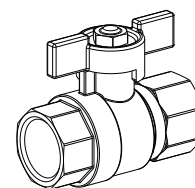
Illustration


2-Way Ball Valve

 Price group **31** PN 40

Nickel-plated brass

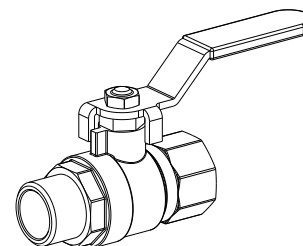
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length outer thread	Length inner thread	Type	Order number	Price
				90 °C	140 °C	180 °C						
8	10	G 1/4	40	36	22	12	46	10	GKH-321-1/4	637903	o. r.	
10	10	G 3/8	40	36	22	12	45	10	GKH-321-3/8	637907	o. r.	
15	15	G 1/2	40	36	22	12	64	12	GKH-321-1/2	637911	o. r.	
20	20	G 3/4	40	29	18	10	72	16	GKH-321-3/4	637915	o. r.	
25	25	G 1	40	29	18	10	83	18	GKH-321-1	637919	o. r.	

Illustration

2-Way Ball Valve

 Price group **31** PN 40/32

Nickel-plated brass

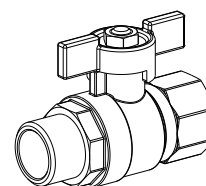
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length outer thread	Length inner thread	Type	Order number	Price
				90 °C	140 °C	180 °C						
10	10	G 3/8	40	36	22	12	54	12	10	LKH-322-3/8	637956	o. r.
15	15	G 1/2	40	36	22	12	70	15	12	LKH-322-1/2	637960	o. r.
20	20	G 3/4	40	29	18	10	80	16	16	LKH-322-3/4	637964	o. r.
25	25	G 1	40	29	18	10	92	20.5	18	LKH-322-1	637968	o. r.
32	32	G 1 1/4	32	23	16	8	102	20.5	20.5	LKH-322-1 1/4	637972	o. r.
40	40	G 1 1/2	32	19	12	6	117	21.5	21	LKH-322-1 1/2	637976	o. r.
50	50	G 2	32	19	12	6	136	23	24	LKH-322-2	637980	o. r.

Illustration

2-Way Ball Valve

 Price group **31** PN 40

Nickel-plated brass

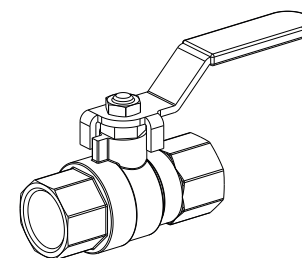
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length outer thread	Length inner thread	Type	Order number	Price
				90 °C	140 °C	180 °C						
10	10	G 3/8	40	36	22	12	54	12	10	GKH-322-3/8	637957	o. r.
15	15	G 1/2	40	36	22	12	70	15	12	GKH-322-1/2	637961	o. r.
20	20	G 3/4	40	29	18	10	80	16	16	GKH-322-3/4	637965	o. r.
25	25	G 1	40	29	18	10	92	20.5	18	GKH-322-1	637969	o. r.

Illustration

2-Way Ball Valve - DIN-DVGW Reg. No. 92.01 e 770 (full flow)

 Price group **31** PN 20 PN with gas: Also gases according to DVGW worksheet G260/1 nominal pressure level PN1

Nickel-plated brass

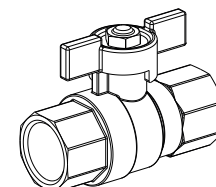
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length outer thread	Length inner thread	Type	Order number	Price
				80 °C	110 °C						
10	10	Rp 3/8	1 / 20	18	16	60	14	14	LKH-100-3/8	637806	o. r.
15	15	Rp 1/2	1 / 20	18	16	75	18	18	LKH-100-1/2	637811	o. r.
20	20	Rp 3/4	1 / 20	18	16	80	18	18	LKH-100-3/4	637814	o. r.
25	25	Rp 1	1 / 20	18	16	90	19	19	LKH-100-1	637818	o. r.
32	32	Rp 1 1/4	1 / 20	18	16	110	22	22	LKH-100-1 1/4	637822	o. r.
40	40	Rp 1 1/2	1 / 20	18	16	120	25	25	LKH-100-1 1/2	637826	o. r.
50	50	Rp 2	1 / 20	18	16	140	25	25	LKH-100-2	637830	o. r.

Illustration

2-Way Ball Valve, DIN-DVGW Reg. No. 92.01 e 770 (full flow)

 Price group **31** PN 20 PN with gas: Also gases according to DVGW worksheet G260/1 Nominal pressure level PN1

Nickel-plated brass

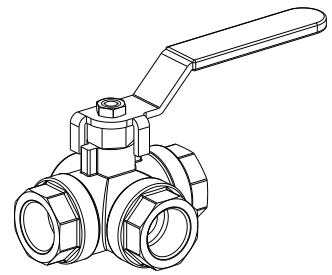
DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature		Total length	Length outer thread	Length inner thread	Type	Order number	Price
				80 °C	110 °C						
10	10	Rp 3/8	1 / 20	18	16	60	14	14	GKH-100-3/8	637807	o. r.
15	15	Rp 1/2	1 / 20	18	16	75	18	18	GKH-100-1/2	637812	o. r.
20	20	Rp 3/4	1 / 20	18	16	80	18	18	GKH-100-3/4	637815	o. r.
25	25	Rp 1	1 / 20	18	16	90	19	19	GKH-100-1	637819	o. r.

Illustration


3-Way Ball Valve with T-bore - Reduced Flow

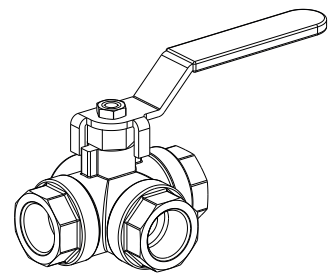
Price group	33	PN	32/25	Ball bore: T-bore		Nickel-plated brass
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DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length inner thread	Type	Order number	Price
				80 °C	130 °C	180 °C					
8	10	G 1/4	32	32	22	10	74	12	LKH-333-1/4	639102	o. r.
10	9.5	G 3/8	32	32	22	10	74	13	LKH-333-3/8	639106	o. r.
15	12	G 1/2	32	32	22	10	80	14	LKH-333-1/2	639110	o. r.
20	15.5	G 3/4	32	32	22	10	90	16	LKH-333-3/4	639114	o. r.
25	20	G 1	32	32	22	10	106	20	LKH-333-1	639118	o. r.
32	25	G 1 1/4	25	25	16	7	115	21	LKH-333-1 1/4	639122	o. r.
40	32	G 1 1/2	25	25	16	7	138	23	LKH-333-1 1/2	639126	o. r.
50	40	G 2	25	25	16	7	161	26	LKH-333-2	639130	o. r.

Illustration

3-Way Ball Valve with Side T-bore - Reduced Flow

Price group	33	PN	32/25	Ball bore: Side T-bore		Nickel-plated brass
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DN	CS	G	PN	Permitted excess operating pressure [bar] at temperature			Total length	Length inner thread	Type	Order number	Price
				80 °C	130 °C	180 °C					
8	9.5	G 1/4	32	32	22	10	74	12	LKH-334-1/4	639152	o. r.
10	9.5	G 3/8	32	32	22	10	74	13	LKH-334-3/8	639156	o. r.
15	12	G 1/2	32	32	22	10	80	13	LKH-334-1/2	639160	o. r.
20	15.5	G 3/4	32	32	22	10	90	16	LKH-334-3/4	639164	o. r.
25	20	G 1	32	32	22	10	106	20	LKH-334-1	639168	o. r.
32	25	G 1 1/4	25	25	16	7	117	21.5	LKH-334-1 1/4	639172	o. r.
40	32	G 1 1/2	25	25	16	7	138	23	LKH-334-1 1/2	639176	o. r.
50	40.7	G 2	25	25	16	7	161	25	LKH-334-2	639180	o. r.

Illustration

3-Way Small Ball Valve

Price group	32	PN	10	T _{min} -10 °C T _{max} +130 °C	Nickel-plated brass
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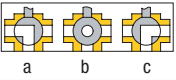
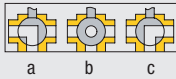
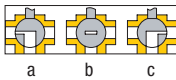
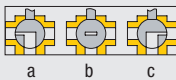
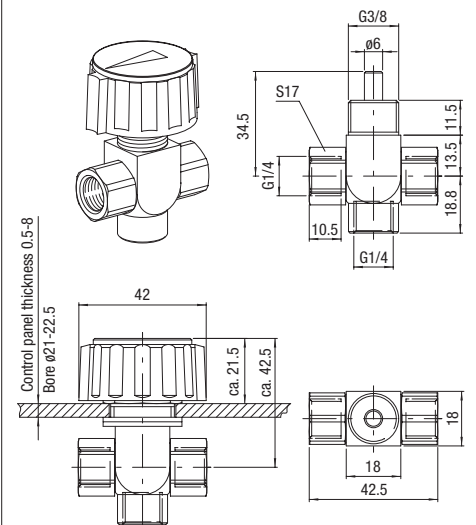
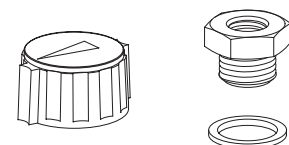
Version	DN	CS	G	PN PB	Type	Order number	Price
3/3-way ball valve with Side T-bore, without toggle and accessories  Position (locking)	6	5	G 1/4	10	OKH-234-M60-1/4F	638902	o. r.
3/3-way ball valve with Side T-bore, with toggle and accessories  Position (locking)	6	6	G 1/4	10	GKH-234-M60-1/4F	638910	o. r.
3/3-way dispensing ball valve, without toggle and accessories  Position (locking)	6	3.2	G 1/4	10	OKH-236-M32-1/4F	638922	o. r.
3/3-way dispensing ball valve, with toggle and accessories  Position (locking)	6	3.2	G 1/4	10	GKH-236-M32-1/4F	638930	o. r.

Illustration

3-Way Small Ball Valve Accessories

Price group	32	PN	10
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Product name	Scope of delivery for Type GKH	Type	Order number	Price
Toggle	1 piece	ZKH-130-G-6x42	617517	o. r.
Cover (black)	1 piece	ZKH-130-A-black	617518	o. r.
Cover (red)		ZKH-130-A-red	617519	o. r.
Cover (blue)		ZKH-130-A-blue	617520	o. r.
Cover (yellow)		ZKH-130-A-yellow	617521	o. r.
Reducer nipple	1 piece	253M-1/2-3/8-S2	250900	o. r.
Sealing ring	5 pieces	265A-1/2x1.5	252886	o. r.

Illustration


Shut-off Valves POM



CHARACTERISTICS

GENERAL

Constructional design	Shut-off valve
Application	Neutral gaseous or fluids
Product name	2-way Shut-off Valve
Product type	ASH-958P
Shaft thread	M22x1,5
Nominal diameter	8 - 10
Ambient temperature	-20 °C to +60 °C
Media temperature	-10 °C to +80 °C
Body material	POM blue
Seal material	NBR
Release ring	POM grey
Grip ring	Stainless steel 1.4310
Retaining ring	Nickel-plated brass
PNEUMATIC - HYDRAULIC	
Nominal pressure	PN 10
Pressure range	Rough vacuum up to 10 bar
Medium	Gases or liquids which do not corrode the materials specified.

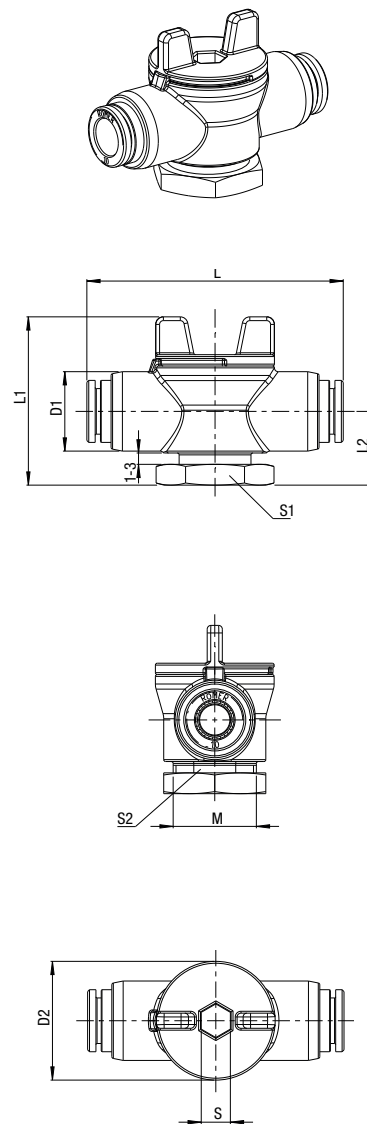
2-Way Shut-off Valve
Illustration

 Price group **34** PN 10

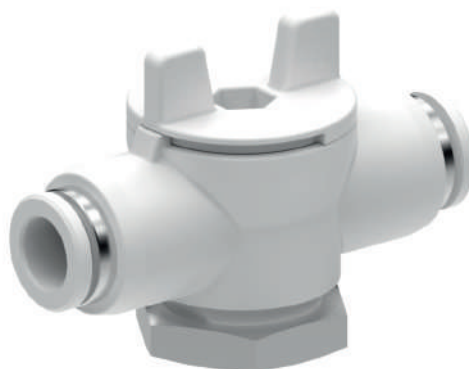
 Ambient-Temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$
 Med.-Temp. $T_{min} -10\text{ °C}$, $T_{max} +80\text{ °C}$

 Plastic
 POM

for tube OD	L	L1	L2	D1	D2	M	S	S1	S2	Weight in [g]	Type	Order number	Price
10	68	44,5	19,5	21	31,4	M22x1,5	8	27	19	55,0	ASH-958P-10	637779	o. r.
12	68	44,5	19,5	21	31,4	M22x1,5	8	27	19	57,4	ASH-958P-12	637780	o. r.



Shut-off Valves PVDF



CHARACTERISTICS

GENERAL

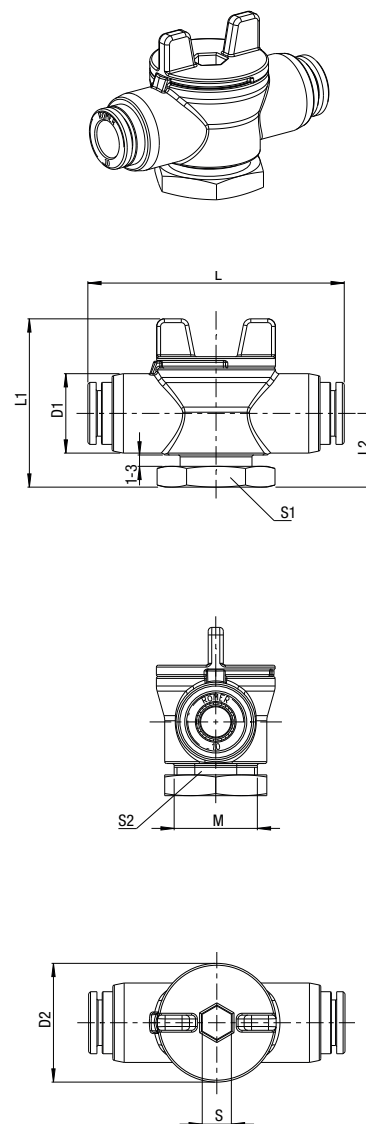
Constructional design	Shut-off valve
Application	Neutral gaseous or fluids
Product name	2-way Shut-off Valve
Product type	ASH-958V
Shaft thread	M22x1.5
Nominal diameter	7-10
Ambient temperature	0 °C to +60 °C
Media temperature	0 °C to +120 °C
Body material	PVDF white
Seal material	FKM
Release ring	PVDF white
Grip ring	Stainless steel 1.4310
Retaining ring	1.4404

PNEUMATIC - HYDRAULIC

Nominal pressure	PN 10
Pressure range	Rough vacuum up to 10 bar
Medium	Gases or liquids which do not corrode the materials specified.

2-Way Shut-off Valve
Abbildung

Price group	34	PN 10	Ambient-Temp. T_{min} 0 °C, T_{max} +60 °C Med.-Temp. T_{min} 0 °C, T_{max} +80 °C								Plastic PVDF			
for tube OD	L	L1	L2	D1	D2	M	S	S1	S2	Weight in [g]	Type	Order number	Price	
8	73.4	44.9	19.5	21	31.8	M22x1.5	8	27	19	75,6	ASH-958V-8FF	637756	a.A.	
10	68	44,9	19.5	21	31,8	M22x1.5	8	27	19	68,6	ASH-958V-10FF	637757	a. A.	
12	68	44.9	19.5	21	31.8	M22x1.5	8	27	19	65.5	ASH-958V-12FF	637756	a. A.	



Filter with Push-in Connector



AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application

AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.
Plastic PPSU	Polyphenylsulfone . Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!
Other materials	see relevant products
Approval	NSF/ANSI 169

TUBE

Outside diameter [mm]	4 and 6
Perm. tolerance [mm]	±0.1
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)

OPERATING PRESSURE / TEMPERATURE

Plastic version	Operating pressure 0 to 16 bar Temperature-dependent	Means that the allowable operating pressure OP is also dependent on the medium temperature within the allowable ambient temperature. Values on request.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		

Filter with Push-in Connector and Stem

 Price group **23**

PN 16

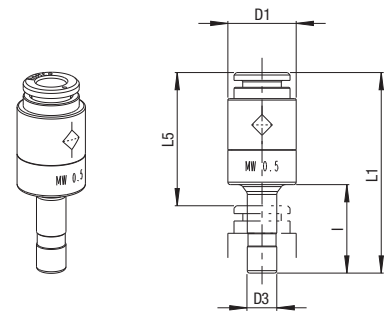

 Amb. temp. T_{\min} 0 °C, T_{\max} +60 °C
 Med.-Temp. T_{\min} 0 °C, T_{\max} +140 °C


Plastic PPSU

 Operating pressure 0 to max. 16 bar
 Temperature-dependent

 Material: Body: PPSU, filter: 1.4301,
 Seal: EPDM (KTW-approved)

DN	KV value water [m³/h]	for tube D	D3	I	L1	L5	D1	Mesh size MW [mm]	Weight in [g]	Type	Order number	Price
2.5	0.15	4	4	17	40.3	25.5	13.9	0.1	4.5	SMF-947P3-4PF-D4-100	498143	o. r.
2.5	0.15	4	4	17	40.3	25.5	13.9	0.5	4.6	SMF-947P3-4PF-D4-500	498144	o. r.
4	0.45	6	6	18	40.8	25.2	13.9	0.1	4.6	SMF-947P3-6PF-D6-100	498145	o. r.
4	0.5	6	6	18	40.8	25.2	13.9	0.5	4.8	SMF-947P3-6PF-D6-500	498146	o. r.

Illustration

Filter with Push-in Connectors

 Price group **23**

PN 16

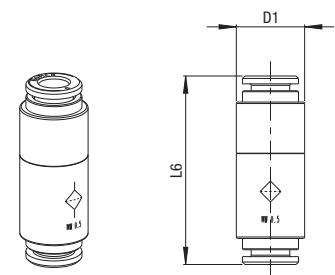

 Amb. temp. T_{\min} 0 °C, T_{\max} +60 °C
 Med.-Temp. T_{\min} 0 °C, T_{\max} +140 °C


Plastic PPSU

 Operating pressure 0 to max. 16 bar
 Temperature-dependent

 Material: Body: PPSU, filter: 1.4301,
 Seal: EPDM (KTW-approved)

DN	KV value water [m³/h]	for tube D	L6	D1	Mesh size MW [mm]	Weight in [g]	Type	Order number	Price
2.5	0.18	4	37.4	13.9	0.1	7	SMF-958P3-4PF-100	498147	o. r.
2.5	0.18	4	37.5	13.9	0.5	7.1	SMF-958P3-4PF-500	498148	o. r.
4	0.55	6	38.3	13.9	0.1	7.1	SMF-958P3-6PF-100	498149	o. r.
4	0.60	6	38.4	13.9	0.5	7.3	SMF-958P3-6PF-500	498150	o. r.

Illustration


Throttle Valve with Push-in Connectors



AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application



AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.	
Plastic PPSU	Polyphenylsulfone . Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	4 and 6	
Perm. tolerance [mm]	±0.1	
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Operating pressure 0 to 20 bar Temperature-dependent	Means that the allowable operating pressure OP is also dependent on the medium temperature within the allowable ambient temperature. Values on request.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		

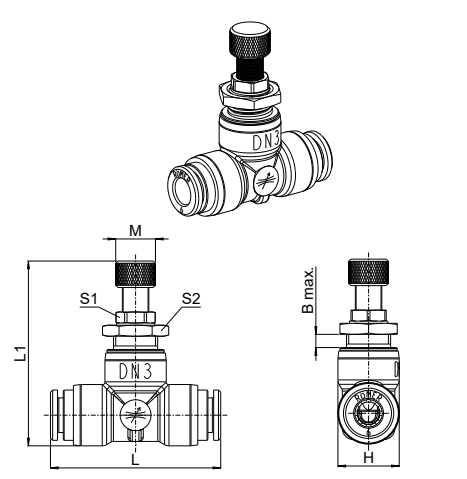
Throttle Valve with Push-in Connectors

Price group	27	PN 20		Constr. design: Precision cone throttle	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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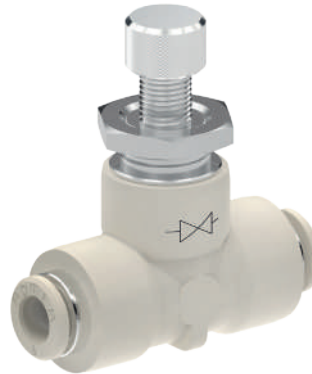
Operating pressure 0 to max. 20 bar
Temperature-dependent

Material: Body: PPSU, spindle 1.4404,
seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	L	L1	M	B	H	S1	S2	Weight in [g]	Type	Order number	Price
1.5	0 - 0.05	4	37.8	42.2	M10x1	3.5	13.9	8	13	22	RFO-958-P315-4FF	635635	o. r.
1.5	0 - 0.05	6	38.8	42.2	M10x1	3.5	13.9	8	13	23.2	RFO-958-P315-6FF	635636	o. r.
2	0 - 0.05	4	37.8	42	M10x1	3.5	13.9	8	13	23.1	RFO-958-P320-4FF	635637	o. r.
2	0 - 0.05	6	38.8	42	M10x1	3.5	13.9	8	13	22.4	RFO-958-P320-6FF	635638	o. r.
3	0 - 0.15	6	38.8	42	M10x1	3.5	13.9	8	13	23.4	RFO-958-P330-6FF	635639	o. r.

Illustration


Shut-Off Valve with Push-in Connectors



AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application

AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.	
Plastic PPSU	Polyphenylsulfone . Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	6	
Perm. tolerance [mm]	±0.1	
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Operating pressure 0 to 16 bar Temperature-dependent	Means that the allowable operating pressure OP is also dependent on the medium temperature within the allowable ambient temperature. Values on request.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		

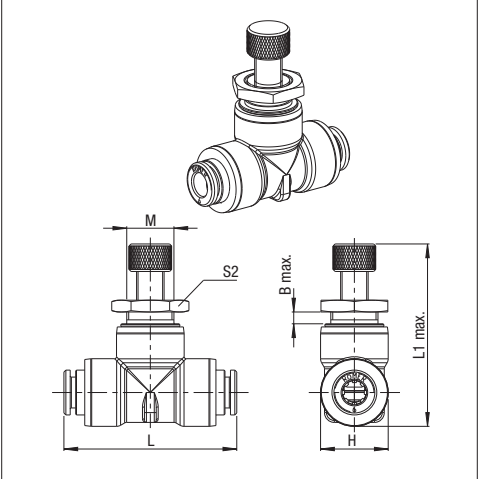
Shut-Off Valve with Push-in Connectors
Illustration

Price group	27	PN 16		Constr. design: Cone poppet valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0 to max. 16 bar
Temperature-dependent

Material: Body: PPSU, spindle 1.4404,
Seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	L	L1 max.	M	B	H	S2	Weight in [g]	Type	Order number	Price
4	0-0.22	6	44	48.1	M12x1	3.5	17,2	17	35.3	AFO-958-P340-6FF	694949	o. r.



Non-Return Valves with Push-in Connectors



AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application
AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

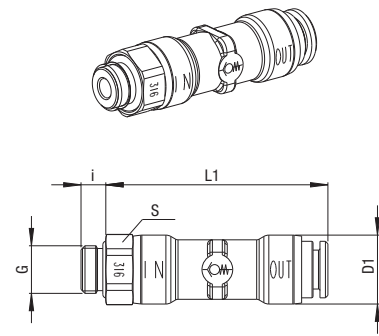
Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.	
Plastic PPSU	Polyphenylsulfone. Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	4, 6 and 8	
Perm. tolerance [mm]	±0.1	
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
THREAD		
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8-G 1/4	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Operating pressure 0 to 16 bar Temperature-dependent	Means that the allowable operating pressure OP is also dependent on the medium temperature within the allowable ambient temperature. Values on request.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		
THREAD SEAL		
Cylindrical threaded nipple	Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples

Non-Return Valve with Push-in Connector on Outlet

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar, Temperature-dependent
 Thread sealed by a FKM O-Ring in recess
 Material: Body: PPSU, nipple: 1.4404, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

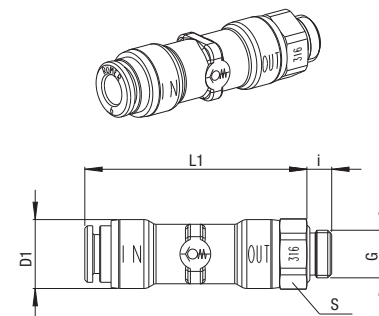
DN	KV value water [m³/h]	for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price
2.5	0.15	4	1/8	5	48	13.9	13	20.2	VNR-951-P325-4FF-1/8	634901	o. r.
2.5	0.15	4	1/4	7	48.5	13.9	17	28.7	VNR-951-P325-4FF-1/4	634902	o. r.
4	0.4	6	1/8	5	44.8	13.9	13	16.7	VNR-951-P340-6FF-1/8	634903	o. r.
4	0.4	6	1/4	7	45.3	13.9	17	26.4	VNR-951-P340-6FF-1/4	634904	o. r.

Illustration

Non-Return Valve with Push-in Connector on Inlet

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar, Temperature-dependent
 Thread sealed by a FKM O-Ring in recess
 Material: Body: PPSU, nipple: 1.4404, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

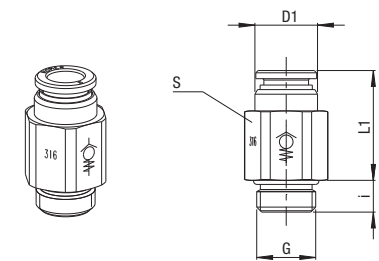
DN	KV value water [m³/h]	for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price
2.5	0.15	4	1/8	5	44.5	13.9	13	16.6	VRN-951-P325-4FF-1/8	634909	o. r.
2.5	0.15	4	1/4	7	45	13.9	17	25.7	VRN-951-P325-4FF-1/4	634910	o. r.
4	0.4	6	1/8	5	44.8	13.9	13	17	VRN-951-P340-6FF-1/8	634911	o. r.
4	0.4	6	1/4	7	45.3	13.9	17	25.8	VRN-951-P340-6FF-1/4	634912	o. r.

Illustration

Non-Return Valve with Push-in Connector on Inlet

Price group	23	PN 8		Constr. design: spring-loaded cone non-return valve	T_{min} 0 °C T_{max} +140 °C		Stainless steel AISI 316L
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Operating pressure 0.1 to max. 8 bar
 Thread sealed by a FKM O-Ring in recess
 Material: Body: 1.4404, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

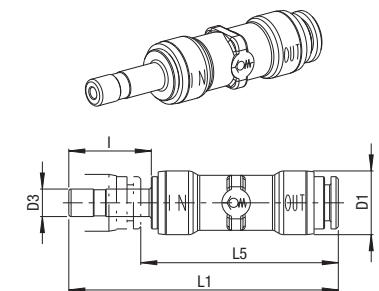
DN	KV value water [m³/h]	for tube D	G	i	L1	D1	S	Weight in [g]	Type	Order number	Price
4	0.45	6	1/4	7	22.2	11.8	17	25.3	VRN-951-X440-6FF-1/4-S1	634941	o. r.
4	0.45	6	3/8	8	21.2	11.8	19	35.2	VRN-951-X440-6FF-3/8-S1	634942	o. r.
4	0.45	8	1/4	7	24.2	13.8	17	26.5	VRN-951-X440-8FF-1/4-S1	634943	o. r.
4	0.45	8	3/8	8	23.2	13.8	19	37.3	VRN-951-X440-8FF-3/8-S1	634944	o. r.

Illustration

Non-Return Valve with Plug-in Connector - Stem on Inlet

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar, Temperature-dependent
 Material: Body: PPSU, Stem: 1.4404, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	D3	l	L1	L5	D1	Weight in [g]	Type	Order number	Price
2.5	0.15	4	4	17	60.5	47	13.9	14.3	VNR-947-P325-4FF-D4	634917	o. r.
2.5	0.15	4	6	18	61.5	46	13.9	15.1	VNR-947-P325-4FF-D6	634918	o. r.
2.5	0.15	6	4	17	57.3	42.6	13.9	11.3	VNR-947-P325-6FF-D4	634919	o. r.
4	0.4	6	6	18	58.3	43.7	13.9	11	VNR-947-P340-6FF-D6	634920	o. r.

Illustration


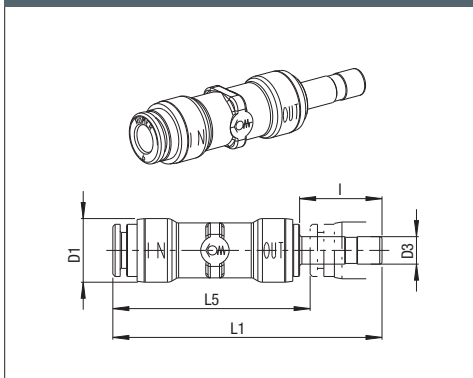
Non-Return Valve with Plug-in Connector - Stem on Outlet

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar
Temperature-dependent

Material: Body: PPSU, Stem: 1.4404, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	D3	I	L1	L5	D1	Weight in [g]	Type	Order number	Price
2.5	0.15	4	4	17	56.8	42.1	13.9	11.2	VRN-947-P325-4FF-D4	634925	o. r.
2.5	0.15	4	6	18	57.8	42.2	13.9	12	VRN-947-P325-4FF-D6	634926	o. r.
2.5	0.15	6	4	17	57.3	43.6	13.9	11.3	VRN-947-P325-6FF-D4	634927	o. r.
4	0.4	6	6	18	58.3	43.7	13.9	10	VRN-947-P340-6FF-D6	634928	o. r.

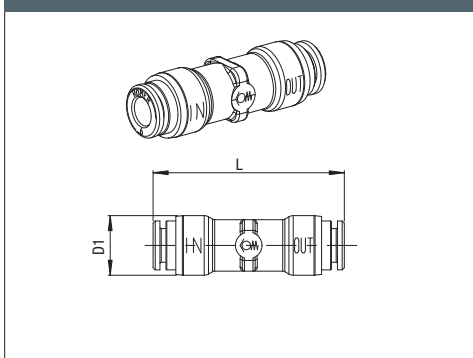
Illustration

Non-Return Valve with Push-in Connectors

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar
Temperature-dependent

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	L	D1	Temperature [°C]	Operating pressure Temperature-dependent [bar]	Weight in [g]	Type	Order number	Price
2.5	0.15	4	47.3	13.9	0 bis +140	0.1 bis max. 16	10.9	VNR-958-P325-4FF	635077	o. r.
4	0.4	6	44.6	13.9	0 bis +140	0.1 bis max. 16	8.2	VNR-958-P340-6FF	635080	o. r.
6	0.8	8	50.2	17.2	0 bis +140	0.1 bis max. 16	13.1	VNR-958-P360-8FF	634803	o. r.

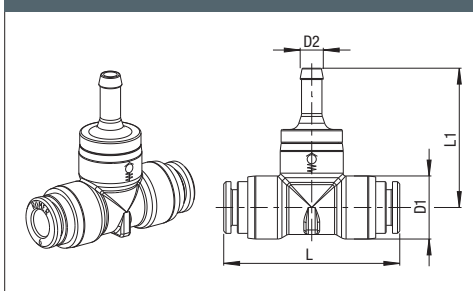
Illustration

Non-Return Valve with Push-in Connectors and Hose Tail

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar
Temperature-dependent

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	for tube LW	L	L1	D1	D2	Weight in [g]	Type	Order number	Price
2.5	0.12	4	3.5-4	37.8	30.7	13.9	5.1	9.1	VNR-956-P325-4FF-4	634933	o. r.
3	0.2	6	3.5-4	39	30.5	13.9	5.1	25	VNR-956-P330-6FF-4	634934	o. r.

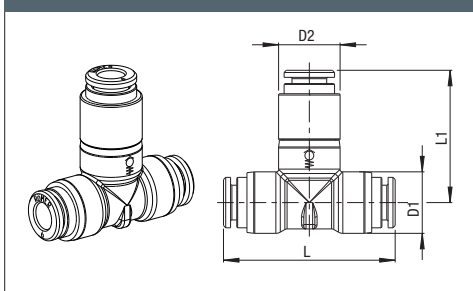
Illustration

Non-Return Valve with Push-in Connectors

Price group	23	PN 16		Constr. design: spring-loaded cone non-return valve	Amb. temp. T_{min} 0 °C, T_{max} +60 °C Med. temp. T_{min} 0 °C, T_{max} +140 °C		Plastic PPSU
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Operating pressure 0.1 to max. 16 bar
Temperature-dependent

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

DN	KV value water [m³/h]	for tube D	L	L1	D1	D2	Weight in [g]	Type	Order number	Price
2.5	0.12	4	37.8	29.4	13.9	13.9	11.3	VNR-954-P325-4FF	634937	o. r.
4	0.3	6	38.8	29.9	13.9	13.9	11.6	VNR-954-P340-6FF	634938	o. r.

Illustration




Quick Coupling with Push-in Connectors


AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application

AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.	
Plastic PPSU	Polyphenylsulfone . Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	4 and 6	
Perm. tolerance [mm]	±0.1	
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Max. Operating pressure OP at the stated ambient temp. and medium temp. according to table	Means that the permissible operating pressure OP also depends on the average temperature within the permissible ambient temperature according to the table.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		

Quick Coupling with Push-in Connectors - int. NRV

 Price group **23**

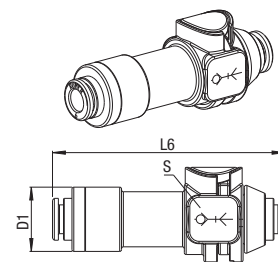
 Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$

Plastic PPSU

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

Constr. design: Quick-release coupling with single-sided integrated non-return valve

DN	KV value water [m³/h]	for tube D	Max. allow. OP [bar] at medium temp.			L6	D1	S	Weight in [g]	Type	Order number	Price
			20 °C	100 °C	140 °C							
2.5	0.16	4	12	8	4	62.3	17.5	20	18.4	SVK-958-P325-4FF	359320	o. r.
4	0.35	6	12	8	4	63.1	17.5	20	18.3	SVK-958-P340-6FF	359321	o. r.

Illustration

Bulkhead Quick Coupling with Push-in Connectors, int. NRV

 Price group **23**

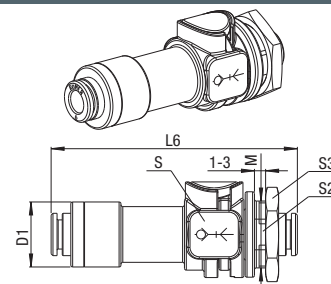
 Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$

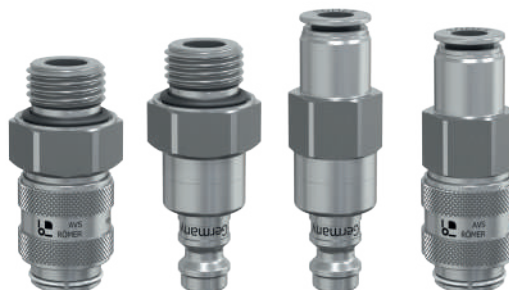
Plastic PPSU

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

Constr. design: Schott quick-release coupling with single-sided integrated non-return valve

DN	KV value water [m³/h]	for tube D	Max. allow. OP [bar] at medium temp.			L6	M	D1	S	S2	S3	Weight in [g]	Type	Order number	Price
			20 °C	100 °C	140 °C										
2.5	0.16	4	12	8	4	65.3	M18x1	17.5	20	16	22	25.5	SVK-959-P325-4FF	359322	o. r.
4	0.35	6	12	8	4	66.3	M18x1	17.5	20	16	22	24.5	SVK-959-P340-6FF	359323	o. r.

Illustration


Stainless steel quick release couplings (coupling plug. coupling socket. push-in)

Version

Coupling plug and socket made of stainless steel in nominal size 5 with different thread sizes or with our proven ELSA hose connection.

Application

ELSA push-in connectors made from PPSU are used mainly in the food industries for liquids with temperatures up to 140 °C. (hot water, coffee, steam...). These push-in connectors are equipped with FDA-compliant FKM sealing rings as standard. on request, these are also available with FDA-compliant EPDM sealing rings approved according to the UBA elastomer guidelines. These high-tech plastic fittings are a low-cost alternative to stainless steel fittings in many areas of application.

CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Absperrend und leakagearm (L)

Stainless steel AISI 316L	corresponds to stainless steel 1.4404. Maximum corrosion resistance when pumping aggressive and critical media, especially at higher pressures and temperatures.
Stainless steel AISI 303	corresponds to stainless steel 1.4305. High corrosion resistance when conveying a wide variety of media, especially water.
Plastic PPSU	Polyphenylsulfone. Suitable for many aggressive media with temperatures up to 140°C. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidizing acids, acetone, chlorinated hydrocarbons, ether and ketones! Also, PPSU should not be brought into direct contact with anaerobic adhesives!
Approval	FKM FDA compliant, others on request

TUBE

Outside diameter [mm]	6
Permitted tolerance [mm]	±0.1
Permitted grades	Polyamid (PA), Polyurethan (PU), Fluorethylenpropylen (FEP), Perfluoralkoxy-Copolymer (PFA)

THREAD

External thread	Thread "G" cylindrical: Whitworth pipe thread DIN ISO 228-1 G1/8 to G3/8
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OPERATING PRESSURE / TEMPERATURE

Metal fitting	<table border="1" style="display: inline-table;"> <tr> <td>PN</td> <td>$T_{min} 0^{\circ}C$</td> <td rowspan="2">Means that the permissible operating pressure PB within the permissible ambient temperature also depends on the medium temperature according to the table.</td> </tr> <tr> <td>20</td> <td>$T_{max} +140^{\circ}C$</td> </tr> </table>	PN	$T_{min} 0^{\circ}C$	Means that the permissible operating pressure PB within the permissible ambient temperature also depends on the medium temperature according to the table.	20	$T_{max} +140^{\circ}C$
PN	$T_{min} 0^{\circ}C$	Means that the permissible operating pressure PB within the permissible ambient temperature also depends on the medium temperature according to the table.				
20	$T_{max} +140^{\circ}C$					
with ELSA push-in	Allowable operating pressure and operating temperature of pipe/tube must be observed!					

THREAD SEAL

Cylindrical threaded nipple	<table border="1" style="display: inline-table;"> <tr> <td>Thread sealed by a FKM O-Ring in recess</td> <td rowspan="2">applies to all cylindrical threaded nipples</td> </tr> <tr> <td></td> </tr> </table>	Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples	
Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples			

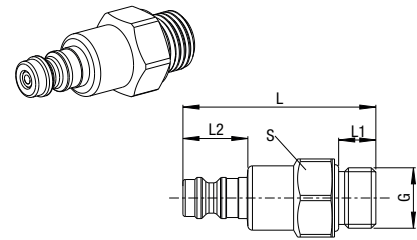
SPECIAL VERSIONS (NOT INCLUDED IN THE CATALOG)

Customer-specific special versions, such as other O-ring materials (EPDM) on request

Coupling plug NG5 - isolating

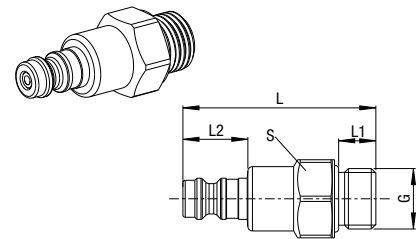
Price group	17 VA	PN 35	$T_{min} 0^{\circ}C$ $T_{max} +140^{\circ}C$	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 303		
Nominal size	G	L1	L2	L	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	14	40	14	22	515X5-S1/8FF	258028	o. r.
5	G 1/4	9	14	42	17	31	515X5-S1/4FF	258038	o. r.
5	G 3/8	9	14	42	19	37	515X5-S3/8FF	258048	o. r.

Only available in shut-off version! Applicable for low-leakage version/series!

Illustration

Coupling plug NG5 - isolating

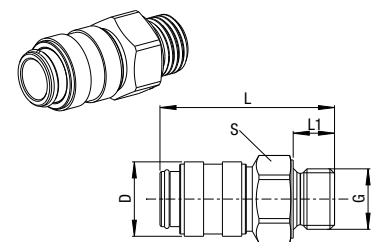
Price group	17 VA	PN 35	$T_{min} 0^{\circ}C$ $T_{max} +140^{\circ}C$	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 316L		
Nominal size	G	L1	L2	L	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	14	40	14	22	515X4-S1/8FF	258026	o. r.
5	G 1/4	9	14	42	17	31	515X4-S1/4FF	258036	o. r.
5	G 3/8	9	14	42	19	37	515X4-S3/8FF	258046	o. r.

Only available in shut-off version! Applicable for low-leakage version/series!

Illustration

Coupling plug NG5 - isolating

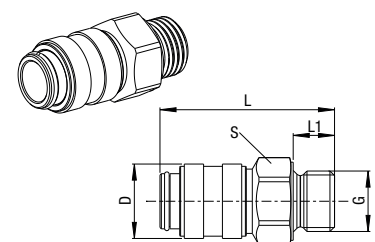
Price group	17 VA	PN 35	$T_{min} 0^{\circ}C$ $T_{max} +140^{\circ}C$	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 303		
Nominal size	G	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	36	16.2	14	28	551X5-1/8FF	359024	o. r.
5	G 1/4	9	38	16.2	17	37	551X5-1/4FF	359044	o. r.
5	G 3/8	9	38	16.2	19	43	551X5-3/8FF	359054	o. r.

Only to be used in combination with locking plugs!

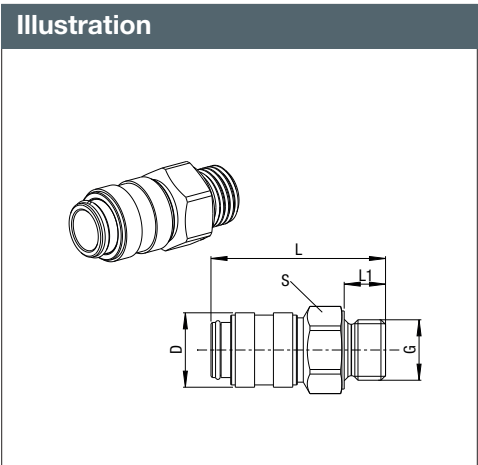
Illustration

Coupling plug NG5 - isolating

Price group	17 VA	PN 35	$T_{min} 0^{\circ}C$ $T_{max} +140^{\circ}C$	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 316L		
Nominal size	G	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	36	16.2	14	28	551X4-1/8FF	359025	o. r.
5	G 1/4	9	38	16.2	17	37	551X4-1/4FF	359045	o. r.
5	G 3/8	9	38	16.2	19	43	551X4-3/8FF	359055	o. r.

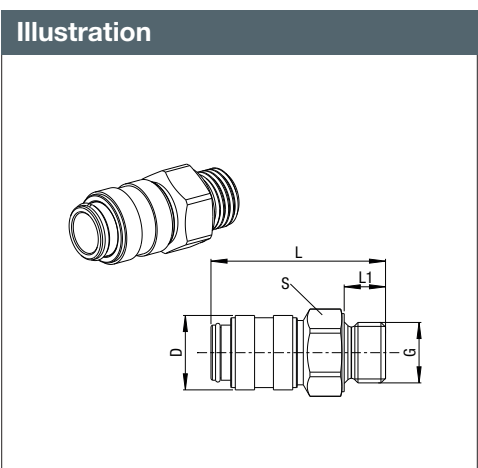
Only to be used in combination with locking plugs!

Illustration


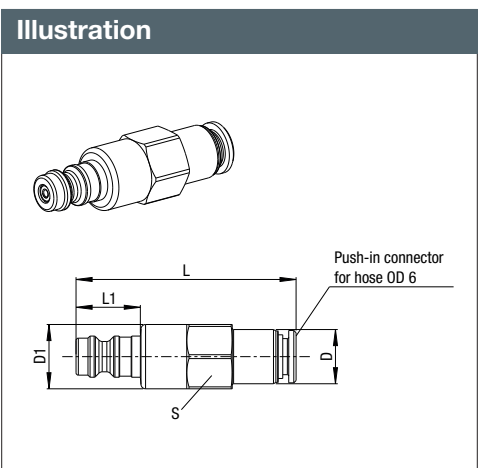
Coupling socket NG5 - low-leakage (L)									
Price group	17 VA	PN 10	T _{min} 0 °C T _{max} +140 °C	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 303		
Nominal size	G	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	36	16.2	14	27	551X5-L1/8FF	359028	o. r.
5	G 1/4	9	38	16.2	17	36	551X5-L1/4FF	359048	o. r.
5	G 3/8	9	38	16.2	19	43	551X5-L3/8FF	359058	o. r.
Only to be used in combination with locking plugs!									



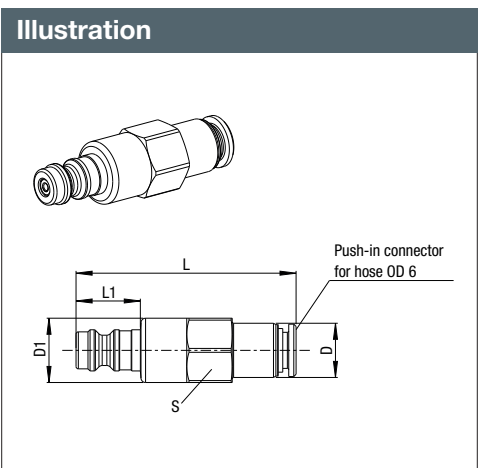
Coupling socket NG5 - low-leakage (L)									
Price group	17 VA	PN 10	T _{min} 0 °C T _{max} +140 °C	Cylindrical thread	Thread sealed by a FKM O-ring in recess		Stainless steel AISI 316L		
Nominal size	G	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	G 1/8	7	37	16.2	14	27	551X4-L1/8FF	359027	o. r.
5	G 1/4	9	38	16.2	17	36	551X4-L1/4FF	359047	o. r.
5	G 3/8	9	38	16.2	19	43	551X4-L3/8FF	359057	o. r.
Only to be used in combination with locking plugs!									



Coupling plug NG5 with ELSA plug connection* - isolating									
Price group	17 VA	PN 20	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 303		
Nominal size	D1	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	14	14	48	11.8	14	27	575X5-S6FF	358713	o. r.
Only available in shut-off version! Applicable for low-leakage version/series! *ELSA connector: with PPSU partial connector									



Coupling plug NG5 with ELSA plug connection* - isolating									
Price group	17 VA	PN 20	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 316L		
Nominal size	D1	L1	L	D	S	Weight in [g]	Type	Order number	Price
5	14	14	48	11.8	14	27	575X44-S6FF	358711	o. r.
Only available in shut-off version! Applicable for low-leakage version/series! *ELSA plug connection: with stainless steel partial plug insert 1.4404									

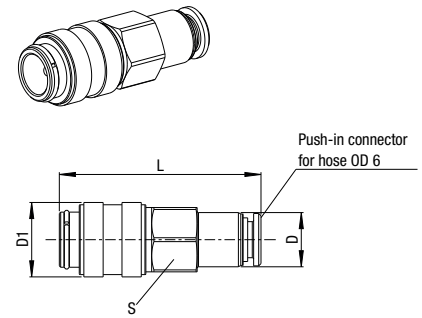


Coupling socket NG5 with ELSA plug connection* - isolating

Price group	17 VA	PN	20	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 303
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Nominal size	D1	L	D	S	Weight in [g]	Type	Order number	Price
5	16.2	44	11.8	14	32	557X5-6FF	359473	o. r.

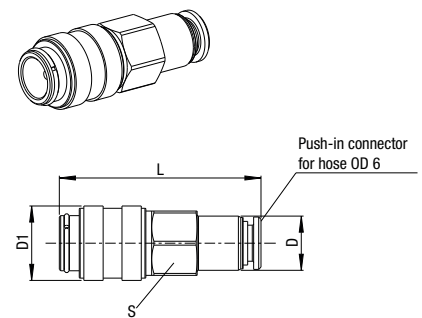
*ELSA connector: with PPSU partial connector

Illustration

Coupling socket NG5 with ELSA plug connection* - isolating

Price group	17 VA	PN	20	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 316L
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Nominal size	D1	L	D	S	Weight in [g]	Type	Order number	Price
5	16.2	44	11.8	14	32	557X44-6FF	359471	o. r.

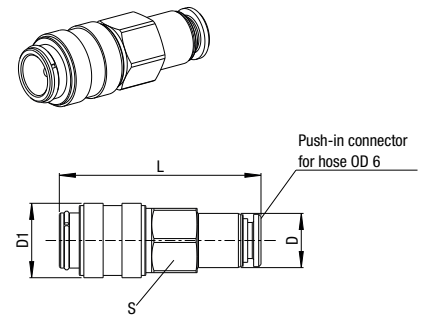
*ELSA plug connection: with stainless steel partial plug insert 1.4404

Illustration

Coupling socket NG5 with ELSA plug connection* - low-leakage (L)

Price group	17 VA	PN	10	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 303
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Nominal size	D1	L	D	S	Weight in [g]	Type	Order number	Price
5	16.2	44	11.8	14	32	557X5-L6FF	359477	o. r.

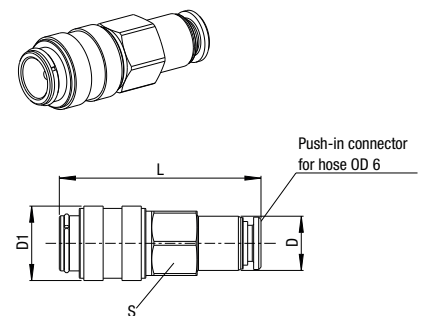
*ELSA connector: with PPSU partial connector

Illustration

Coupling socket NG5 with ELSA plug connection* - low-leakage (L)

Price group	17 VA	PN	10	T _{min} 0 °C T _{max} +140 °C	Sealing ring: FKM FDA compliant	for hose/tube OD 6		Stainless steel AISI 316L
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Nominal size	D1	L	D	S	Weight in [g]	Type	Order number	Price
5	16.2	44	11.8	14	32	557X44-L6FF	359475	o. r.

*ELSA plug connection: with stainless steel partial plug insert 1.4404

Illustration


Pressure Relief Valves with Push-in Connectors



AVS Römer function fittings, i.e., filters, non-return valves, throttles, quick-release couplings... in combination with the Established **ELSA push-in connectors** by AVS Römer.

Application

AVS Römer function fittings are used in a variety of neutral gaseous and liquid media. If the fitting materials are suitable, application with aggressive media is permitted. See also the information on characteristics.

CHARACTERISTICS

BODY MATERIAL / SUITABILITY

Stainless steel AISI 316L	Corresponds to 1.4404 stainless steel . Suitable for many aggressive media, in particular at higher pressures.	
Plastic PPSU	Polyphenylsulfone. Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!	
Other materials	see relevant products	
Approval	NSF/ANSI 169	
TUBE		
Outside diameter [mm]	4 and 6	
Perm. tolerance [mm]	±0.1	
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)	
THREAD		
External thread	"G" cylindrical thread: Whitworth pipe thread DIN ISO 228-1 G 1/8-G 1/4	
OPERATING PRESSURE / TEMPERATURE		
Plastic version	Max. Operating pressure OP at the stated ambient temp. and medium temp. according to table	Means that the permissible operating pressure OP also depends on the average temperature within the permissible ambient temperature according to the table.
Allowable operating pressure and operating temperature of pipe/tube must be observed!		
THREAD SEAL		
Cylindrical threaded nipple	Thread sealed by a FKM O-Ring in recess	applies to all cylindrical threaded nipples

Pressure Relief Valve

 Price group **23**


Constr. design: Pressure relief valve

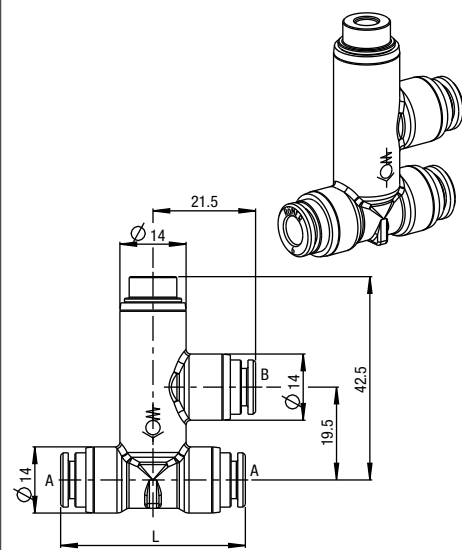
 Max. allow. OP at ambient temp.
 $T_{min} 0\text{ °C}, T_{max} +60\text{ °C}$


Plastic PPSU

Material: Body: PPSU, spring: Stainless steel 1.4310, contact with the medium internals: Stainless steel 1.4404; seal: FKM (FDA-compliant)

This pressure relief valve is not approved as a safety valve!

for tube AD	for tube BD	DN	Max. allow. OP [bar] at medium temp.			L	opening pressure [air]	Weight in [g]	Type	Order number	Price
			20 °C	100 °C	140 °C						
4	6	2.5	6	6	6	37.8	3	27	UDV-982P3-6-4PF-030	499101	o. r.
4	6	2.5	10	10	10	37.8	6	27	UDV-982P3-6-4PF-060	499102	o. r.
4	6	2.5	14	12	10	37.8	10	26.9	UDV-982P3-6-4PF-100	499103	o. r.
6	6	2.5	6	6	6	38.8	3	26.3	UDV-982P3-6PF-030	499104	o. r.
6	6	2.5	10	10	10	38.8	6	28	UDV-982P3-6PF-060	499105	o. r.
6	6	2.5	14	12	10	38.8	10	26.7	UDV-982P3-6PF-100	499106	o. r.

Illustration


Multifunction Valve with Push-in Connectors


„All-in-One“ anti-vacuum membrane valve and over-pressure valve for your hot and cold applications

Special Features:

- Extra connections for e.g. pressure, temperature or flow rate monitoring
- ELSA Push-in cartridges by AVS Römer for a quick and tool-free assembly
- Easy internal cleaning through quick release system
- Compact built

Application Fields:

- Food and Beverage Industry e.g. Full automatic coffee machines
- Medical and Pharma Devices e.g. Autoclave

Characteristics:

- Suitable for fluids and gases
- Valve body made of high-quality plastics
- Minimal heat loss
- Light weight
- Operating temperature up to 284 F (140°C)
- Operating pressure up to 87 psi (6 bar)
- Nominal diameter: 4 mm
- Connection sizes: Outside diameter 6
- FDA compliant materials
- NSF 169 certified

Function:

By an under pressure in the system the anti-vacuum membrane opens and allows air into the system.
By an over pressure in the system the over pressure valve will open and release the ascensive pressure. The opening pressure can be adjusted to your requirements in a certain way.


CHARACTERISTICS
BODY MATERIAL / SUITABILITY

Plastic PPSU	Polyphenylsulfone. Suitable for many aggressive media with temperatures up to 140 °C (hot water, steam). Can be used with FDA-compliant FKM sealing rings or FDA-compliant and KTW-approved EPDM sealing rings in the food and pharmaceutical industries. Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!
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Other materials	see relevant products
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Approval	NSF/ANSI 169
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TUBE

Outside diameter [mm]	6
Perm. tolerance [mm]	±0.1
Permitted grade	Polyamide (PA), polyurethane (PU), fluorine polymer (FEP and PFA)

GENERAL

Constructional design	Pressure relief valve with anti-vacuum function
Applications	Neutral gaseous or fluids
Product name	Multifunktion valve
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +140 °C
Body material	PPSU
Sealing material	EPDM
Release ring	PPSU yellow

PNEUMATIC - HYDRAULIC

Nominal pressure [bar]	PN 6
Pressure range	0 - 6 bar
Medium	Gases or liquids which do not corrode the materials specified

Multifunction Valve

 Price group **23**


Constr. design: Pressure relief valve with anti-vacuum

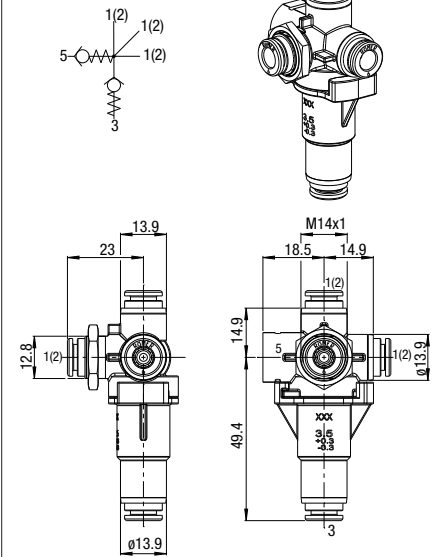
 Max. allow. OP at ambient temp.
Tmin 0 °C, Tmax +60 °C


Plastic PPSU

Material: Body: PPSU, cone PPSU, spring: Stainless steel 1.4310, seal: FKM (FDA-compliant)

This pressure relief valve is not approved as a safety valve!

for tube AD	DN	opening pressure [air]	Weight in [g]	Type	Order number	Price
6	4	3.5	27.0 g	MFV-984-P340-6PF-035	499129	o. r.

Illustration


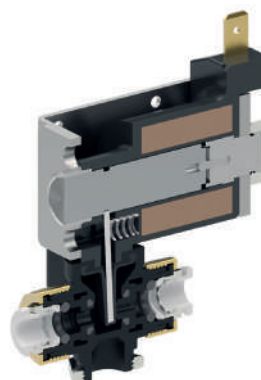
MAGMA Solenoid Valves Type ETV Series 100

MAGMA the special valve principle from AVS Römer

MEDIUM
SEPARATED

 **ELSA**
Push-in Fittings

 **NSF**
COMPONENT



High quality valve series with coaxial flow or 90° flow, in 2/2- and 3/2-way version, especially for use in the food industries and medical technology.

The solenoid operates against spring force a pivot mounted lever to which a membrane is attached. The interior of the valve is spatially and thermally separated from the solenoid system.

A particularly effective ratio of electric power to flow rate and allowable operating pressure is obtained by the optimisation of lever and spring in conjunction with the low friction transmission.

Other features:

- minimal dead space without dirt pockets
- easily disassembled, e.g. for cleaning
- insensitive to contamination
- medium is barely heated by the solenoid
- emergency manual override with position indicator as standard
- materials and constructional design are particularly suited for food applications

Variations / options:

- other tube connector
- other material for seal
- other nominal diameter or other pressure range
- version for vacuum
- other nominal voltage

CHARACTERISTICS

GENERAL

Constructional design	Lever actuated seat valve with separating membrane		
Product name	2/2-way solenoid valve	3/2-way solenoid valve	3/2-way solenoid valve
Actuation	Electric, direct acting or via emergency manual override with position indicator		
Product type	ETV-12x -A .	ETV-117-C .	ETV-139-F .
Function	"A" in 0-position closed	"C" in 0-position "1" closed, "2" to "3" discharged	"F" in 0-position "1" to "2" closed, "1" to "4" open
Nominal diameter	DN 2 to DN 6		
Connection	ELSA push-in connectors for pipe/tube OD 6 OD 8 (others on request)		
Ambient temperature	0 °C to +60 °C (others on request)		
Medium temperature	0 °C to +130 °C (others on request)		
Medium viscosity	up to approx. 35 mm ² /s		
Valve body and insert material	PPA		
O-ring material	FKM, EPDM on request		
Membran material	FKM, EPDM on request		
Union nut material	Brass		
Solenoid housing material	Plastic-molded PBT, "H" (180 °C)		
Mounting method	with lock nut M14x1 or with self-tapping screws ISO 7049-ST3.5x6.5-C		
Mounting position	optional		
Approval	NSF/ANSI 169		

PNEUMATIC - HYDRAULIC

Nominal pressure [bar]	up to PN 16 in accordance with the specification table
Pressure range	0 bar up to allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or liquids which do not corrode the materials specified
Response time	Opening time 10 to 25 ms; Closing time: 15 to 25 ms

ELECTRIC

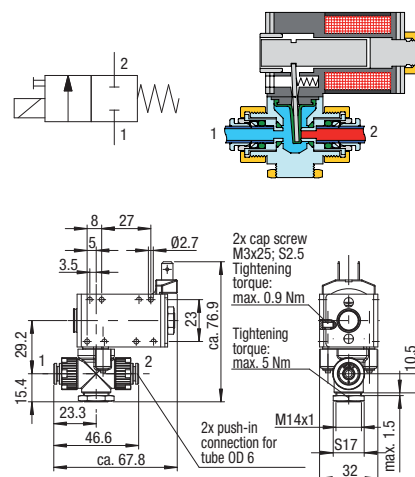
Nominal voltage	24 V DC (other DC upon request)
Voltage tolerance	±10 %
Nominal power P₂₀	8 W
Duty cycle	100 %
Electrical connection	Spade terminals for spade connectors 6.3 x 0.8 mm, DIN 46247
Protection class according to EN 60529	IP 00

2/2-Way Coaxial Solenoid Valve - Type ETV Series 100

 Price group **56** "A" in 0-position closed (closing with the flow)


Plastic PPA

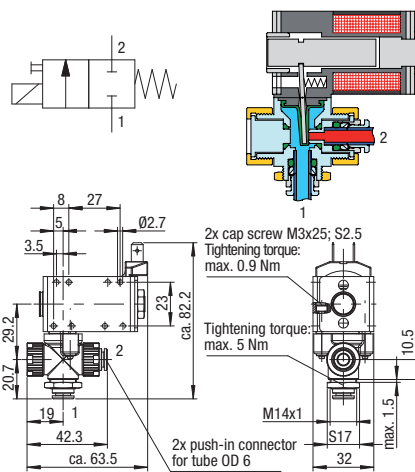
DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
2	1.8	6	16	0 - 16	FKM (FDA-compliant)	24 V DC	ETV-122-A20-6FF-024/=-R0	627003	o. r.
3	3.4	6	16	0 - 16	FKM (FDA-compliant)	24 V DC	ETV-122-A30-6FF-024/=-R0	627008	o. r.
4	5.4	6	8	0 - 8	FKM (FDA-compliant)	24 V DC	ETV-122-A40-6FF-024/=-R0	627010	o. r.
6	11	8	2.5	0 - 2.5	FKM (FDA-compliant)	24 V DC	ETV-122-A60-8FF-024/=-R0	629013	o. r.

Illustration

2/2-Way 90° Solenoid Valve - Type ETV Series 100

 Price group **56** "A" in 0-position closed (closing with the flow)


Plastic PPA

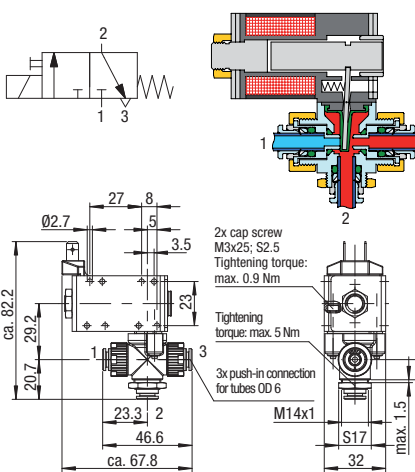
DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
2	1.8	6	16	0 - 16	FKM (FDA-compliant)	24 V DC	ETV-125-A20-6FF-024/=-R0	627033	o. r.
3	3.4	6	16	0 - 16	FKM (FDA-compliant)	24 V DC	ETV-125-A30-6FF-024/=-R0	627038	o. r.
4	5.4	6	8	0 - 8	FKM (FDA-compliant)	24 V DC	ETV-125-A40-6FF-024/=-R0	627040	o. r.
6	9.9	8	2.5	0 - 2.5	FKM (FDA-compliant)	24 V DC	ETV-125-A60-8FF-024/=-R0	629023	o. r.

Illustration

3/2-Way Solenoid Valve - Type ETV Series 100

 Price group **56** "C" in 0-position "1" closed, "2" to "3" discharged


Plastic PPA

DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
2	1.7	6	12.5	0 - 12.5	FKM (FDA-compliant)	24 V DC	ETV-117-C20-6FF-024/=-R0	627103	o. r.
3	3.3	6	6	0 - 6	FKM (FDA-compliant)	24 V DC	ETV-117-C30-6FF-024/=-R0	627108	o. r.
4	5.3	6	3	0 - 3	FKM (FDA-compliant)	24 V DC	ETV-117-C40-6FF-024/=-R0	627113	o. r.
6	8.3	8	1	0 - 1	FKM (FDA-compliant)	24 V DC	ETV-117-C60-8FF-024/=-R0	629033	o. r.

Illustration


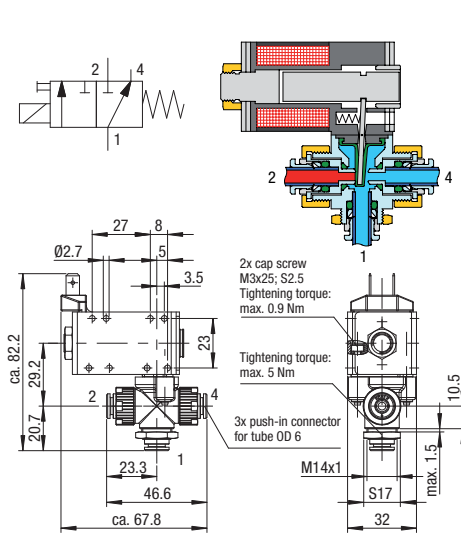
3/2-Way Solenoid Valve - Type ETV Series 100

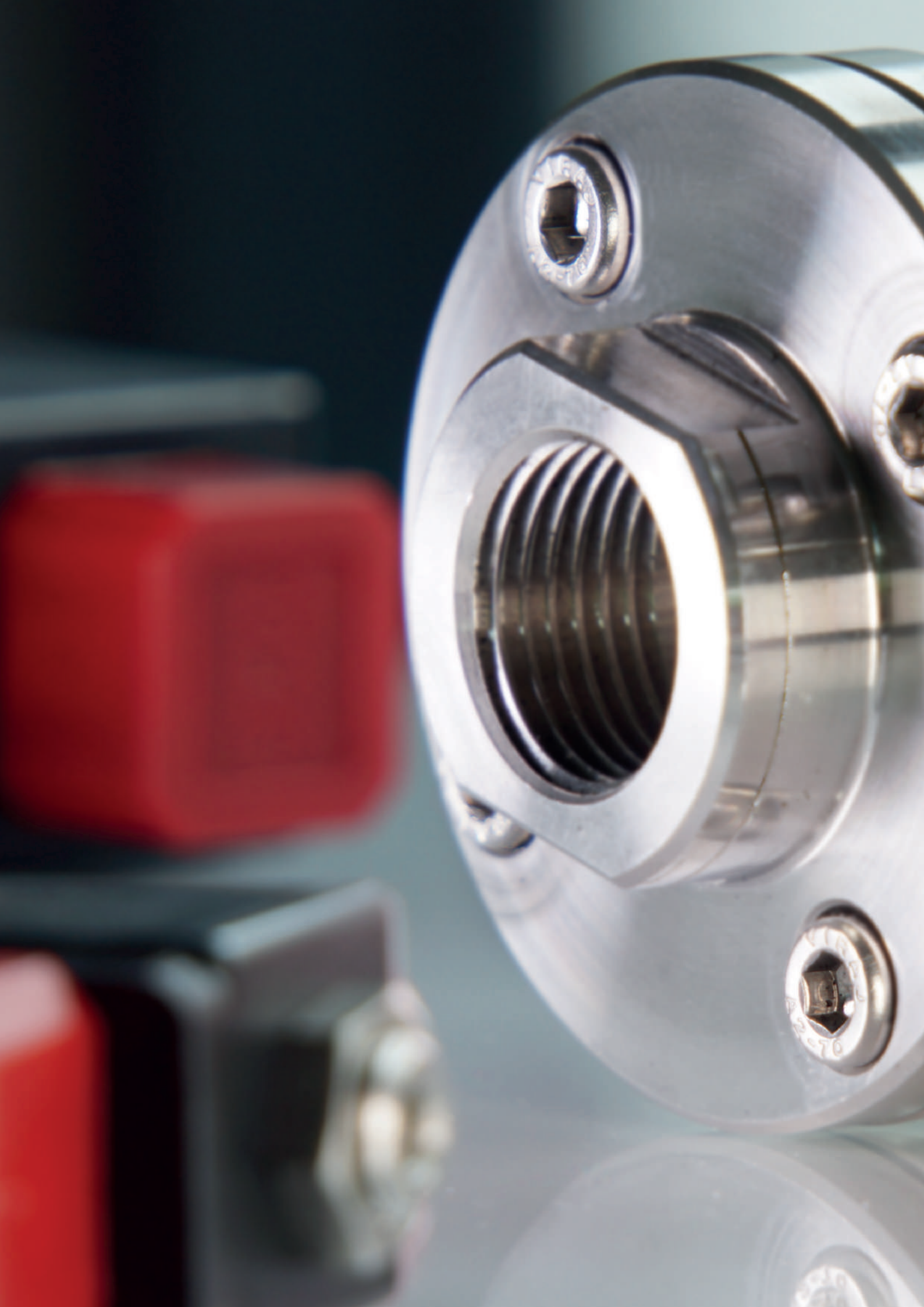
 Price group **56**

 "F" in 0-position "1" to "2" closed,
 "1" to "4" open

 Plastic
 PPA

DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
2	1.8	6	10	0 - 10	FKM (FDA-compliant)	24 V DC	ETV-139-F20-6FF-024/=-R0	627153	o. r.
3	3.3	6	8	0 - 8	FKM (FDA-compliant)	24 V DC	ETV-139-F30-6FF-024/=-R0	627157	o. r.
4	5.3	6	6	0 - 6	FKM (FDA-compliant)	24 V DC	ETV-139-F40-6FF-024/=-R0	627161	o. r.
6	9.9	8	2	0 - 2	FKM (FDA-compliant)	24 V DC	ETV-139-F60-8FF-024/=-R0	629043	o. r.

Illustration




MAGMA Solenoid Valves Type ETV Series 200

 MEDIUM
SEPARATED


 ELSA
Push-in Fittings


 NSF
COMPONENT


High quality valve series with coaxial flow or 90° flow, in 2/2-way and 3/2-way version, especially for use in the food industries and medical technology.

The solenoid operates against spring force a pivot mounted lever to which a membrane is attached. The interior of the valve is spatially and thermally separated from the solenoid system.

A particularly effective ratio of electric power to flow rate and allowable operating pressure is obtained by the optimisation of lever and spring in conjunction with the low friction transmission.

Other features:

- minimal dead space
- easily disassembled, e.g. for cleaning
- insensitive to contamination
- thermal insulation between the electro-magnet and the medium
- emergency manual override with position indicator as standard
- materials and constructional design especially optimised for food applications

Variations / options:

- other tube connector
- other material for seal
- other nominal diameter or other pressure range
- version for vacuum
- other function (e.g. 3/2-way distribution valve)
- other nominal voltage

CHARACTERISTICS
GENERAL

Constructional design	Lever actuated seat valve with separating membrane			
Product name	2/2-way solenoid valve		3/2-way solenoid valve	
Actuation	Electric, direct acting or by emergency manual override with position indicator			
Product type	ETV-222-A .	ETV-211-B .	ETV-217-C .	ETV-219-F .
Function	"A" in 0-position closed	"B" in 0-position open	"C" in 0-position "1" closed, "2" to "3" discharged	"F" in 0-position "1" to "2" closed, "1" to "4" open
Nominal diameter	DN 1.5 to DN 2.5	DN 1.5 to DN 2.5	DN 1.5 to DN 3	DN 1.5 to DN 3
Connection	ELSA push-in connectors for pipe/tube OD 6 or OD 4			
Ambient temperature	0 °C to +60 °C			
Medium temperature	0 °C to +130 °C			
Medium viscosity	up to approx. 35 mm ² /s			
Valve body and insert material	PPA, PPSU			
Membrane and O-ring material	FKM, EPDM (UL94-V0) plastic			
Solenoid housing material	PPS, insulation class "F" (155 °C)			
Mounting method	with 2 thread press-fit inserts M3, self-tapping screws ISO7049-ST3.5x6.5-C or with M14x1 locknut			
Mounting position	optional			
Approval	NSF/ANSI 169			
PNEUMATIC - HYDRAULIC				
Nominal pressure	up to PN 16 in accordance with the specification table			
Pressure range	0 bar up to allowable operating pressure OP in accordance with the specification table depending on duty, OP 50 % duty is valid at max. SD 60 s			
Flow rate	Kv-value in accordance with the specification table			
Medium	Gases or liquids which do not corrode the materials specified			
Response time	Opening time 10 to 25 ms; Closing time: 10 to 25 ms			
ELECTRIC				
Nominal voltage	24 V DC			
Voltage tolerance	±10 %			
Nominal power P₂₀	6 W			
Duty cycle	100 %, depending on the duty cycle the power consumption decreases by up to 30 %			
Electrical connection	Spade terminals for spade connectors 6.3 x 0.8 mm, DIN 46247			
Protection class according to EN 60529	IP 00			

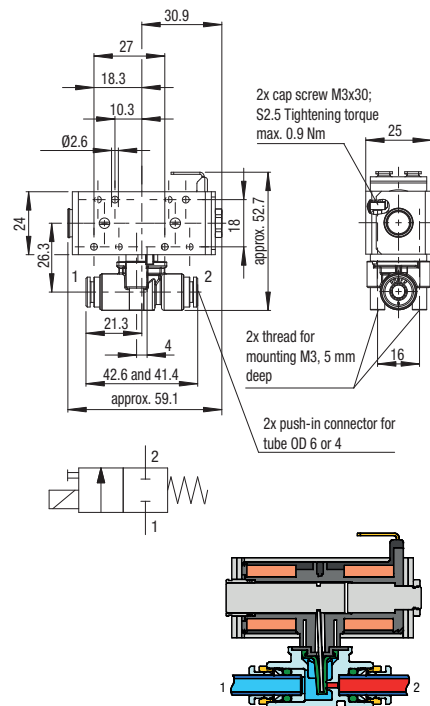
2/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56**

 "A" in 0-position closed
(closing with the flow)

 Plastic
PPA

DN	Kv-value water [l/min]	for tube OD	PN	Al-low. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price
1.5	1.4	4	16	16	12.5	6	EPDM	24 V DC	ETV-222-A15-4PF-024/=U0	627351	o. r.
1.5	1.4	6	16	16	12.5	6	EPDM	24 V DC	ETV-222-A15-6PF-024/=U0	627352	o. r.
2	2.4	4	12.5	12.5	10	5	EPDM	24 V DC	ETV-222-A20-4PF-024/=U0	627363	o. r.
2	2.4	6	12.5	12.5	10	5	EPDM	24 V DC	ETV-222-A20-6PF-024/=U0	627364	o. r.
2.5	2.5	4	8	8	6	3	EPDM	24 V DC	ETV-222-A25-4PF-024/=U0	627353	o. r.
2.5	3.4	6	8	8	6	3	EPDM	24 V DC	ETV-222-A25-6PF-024/=U0	627354	o. r.
1.5	1.4	4	16	16	12.5	6	FKM	24 V DC	ETV-222-A15-4FF-024/=U0	627355	o. r.
1.5	1.4	6	16	16	12.5	6	FKM	24 V DC	ETV-222-A15-6FF-024/=U0	627356	o. r.
2	2.4	4	12.5	12.5	10	5	FKM	24 V DC	ETV-222-A20-4FF-024/=U0	627365	o. r.
2	2.4	6	12.5	12.5	10	5	FKM	24 V DC	ETV-222-A20-6FF-024/=U0	627366	o. r.
2.5	2.5	4	8	8	6	3	FKM	24 V DC	ETV-222-A25-4FF-024/=U0	627357	o. r.
2.5	3.4	6	8	8	6	3	FKM	24 V DC	ETV-222-A25-6FF-024/=U0	627358	o. r.

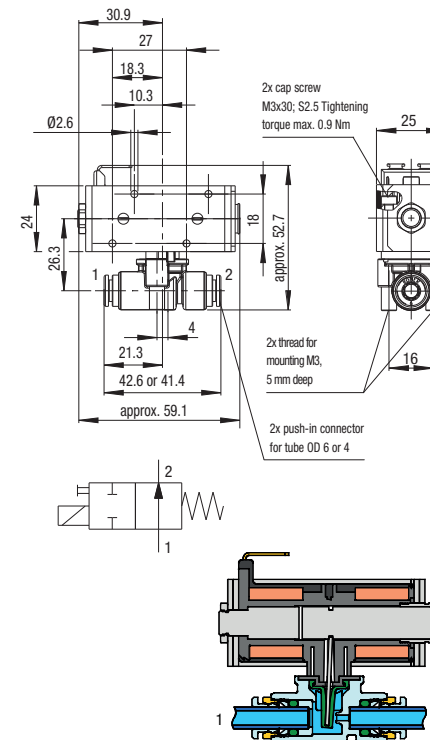
Illustration

2/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56**

 "B" in 0-position open
(closing with the flow)

 Plastic
PPA

DN	Kv-value water [l/min]	for tube OD	PN	Al-low. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price
1.5	1.4	4	12.5	12.5	12.5	12.5	EPDM	24 V DC	ETV-211-B15-4PF-024/=U0	627401	o. r.
1.5	1.4	6	12.5	12.5	12.5	12.5	EPDM	24 V DC	ETV-211-B15-6PF-024/=U0	627402	o. r.
2	2.4	4	8	8	8	8	EPDM	24 V DC	ETV-211-B20-4PF-024/=U0	627409	o. r.
2	2.4	6	8	8	8	8	EPDM	24 V DC	ETV-211-B20-6PF-024/=U0	627410	o. r.
2.5	2.5	4	4	4	4	4	EPDM	24 V DC	ETV-211-B25-4PF-024/=U0	627403	o. r.
2.5	3.4	6	4	4	4	4	EPDM	24 V DC	ETV-211-B25-6PF-024/=U0	627404	o. r.
1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-211-B15-4FF-024/=U0	627405	o. r.
1.5	1.4	6	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-211-B15-6FF-024/=U0	627406	o. r.
2	2.4	4	8	8	8	8	FKM	24 V DC	ETV-211-B20-4FF-024/=U0	627411	o. r.
2	2.4	6	8	8	8	8	FKM	24 V DC	ETV-211-B20-6FF-024/=U0	627412	o. r.
2.5	2.5	4	4	4	4	4	FKM	24 V DC	ETV-211-B25-4FF-024/=U0	627407	o. r.
2.5	3.4	6	4	4	4	4	FKM	24 V DC	ETV-211-B25-6FF-024/=U0	627408	o. r.

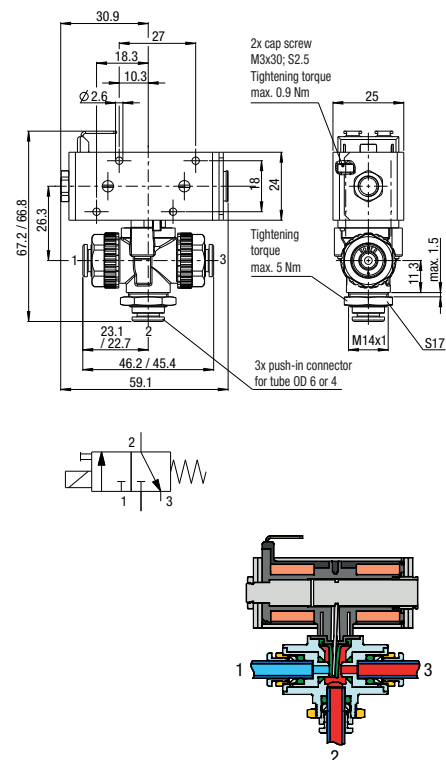
Illustration


3/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56** "C" in 0-position "1" to "2" closed, "2" to "3" discharged


Plastic PPA

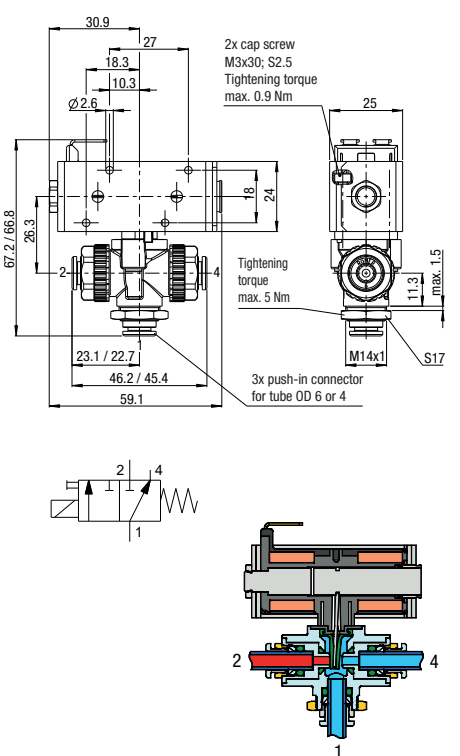
DN	Kv-value water [l/min]	for tube OD	PN	Al-low. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price
1.5	1.4	4	6	6	6	6	EPDM	24 V DC	ETV-217-C15-4PF-024/=U0	627421	o. r.
1.5	1.5	6	6	6	6	6	EPDM	24 V DC	ETV-217-C15-6PF-024/=U0	627424	o. r.
2	1.5	4	5	5	5	5	EPDM	24 V DC	ETV-217-C20-4PF-024/=U0	627427	o. r.
2	1.8	6	5	5	5	5	EPDM	24 V DC	ETV-217-C20-6PF-024/=U0	627430	o. r.
3	1.7	4	2	2	2	2	EPDM	24 V DC	ETV-217-C30-4PF-024/=U0	627433	o. r.
3	2.5	6	2	2	2	2	EPDM	24 V DC	ETV-217-C30-6PF-024/=U0	627436	o. r.
1.5	1.4	4	6	6	6	6	FKM	24 V DC	ETV-217-C15-4FF-024/=U0	627422	o. r.
1.5	1.5	6	6	6	6	6	FKM	24 V DC	ETV-217-C15-6FF-024/=U0	627425	o. r.
2	1.5	4	5	5	5	5	FKM	24 V DC	ETV-217-C20-4FF-024/=U0	627428	o. r.
2	1.8	6	5	5	5	5	FKM	24 V DC	ETV-217-C20-6FF-024/=U0	627431	o. r.
3	1.7	4	2	2	2	2	FKM	24 V DC	ETV-217-C30-4FF-024/=U0	627434	o. r.
3	2.5	6	2	2	2	2	FKM	24 V DC	ETV-217-C30-6FF-024/=U0	627437	o. r.

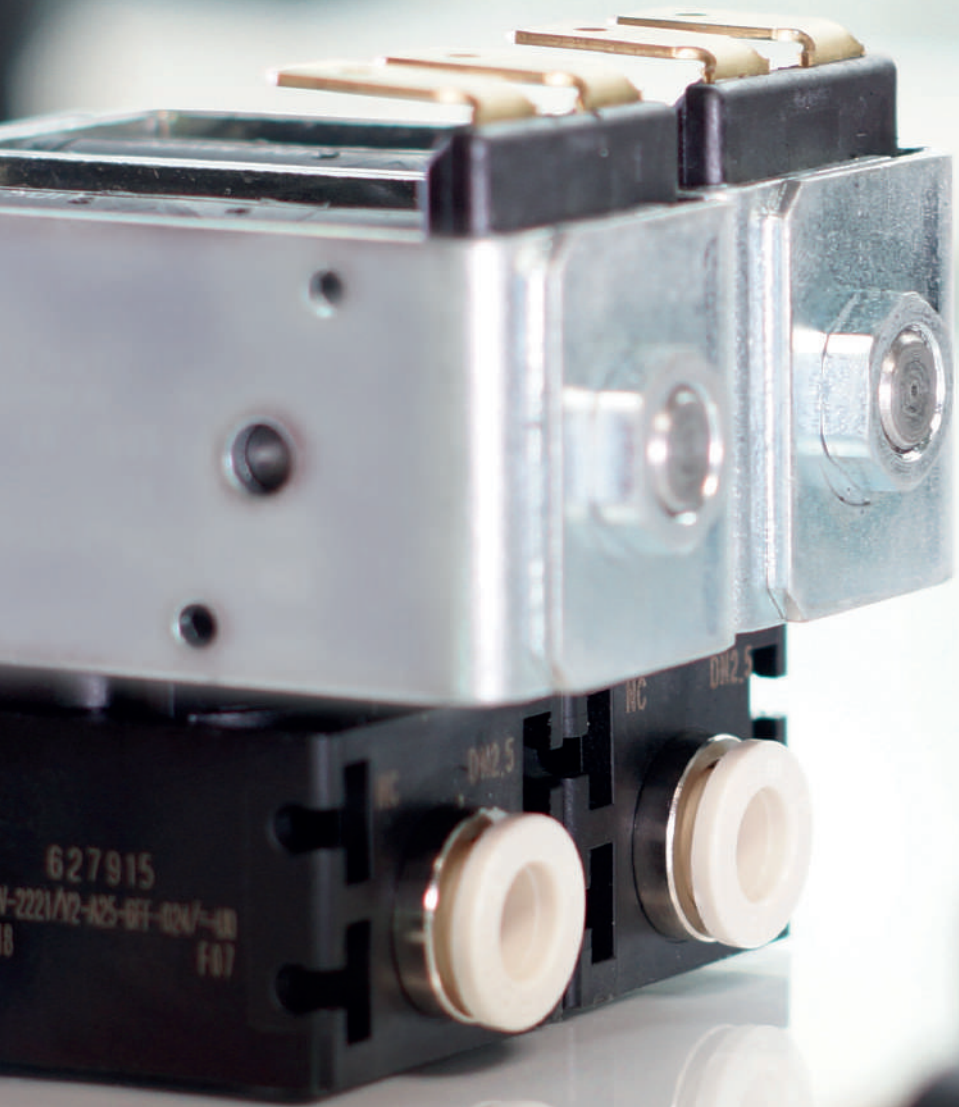
Illustration

3/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56** "F" in 0-position "1" to "2" closed, "1" to "4" open


Plastic PPA

DN	Kv-value water [l/min]	for tube OD	PN	Al-low. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price
1.5	1.4	4	12.5	12.5	12.5	6	EPDM	24 V DC	ETV-219-F15-4PF-024/=U0	627451	o. r.
1.5	1.5	6	12.5	12.5	12.5	6	EPDM	24 V DC	ETV-219-F15-6PF-024/=U0	627454	o. r.
2	1.6	4	10	10	10	6	EPDM	24 V DC	ETV-219-F20-4PF-024/=U0	627457	o. r.
2	1.8	6	10	10	10	6	EPDM	24 V DC	ETV-219-F20-6PF-024/=U0	627460	o. r.
3	1.8	4	4	4	4	3	EPDM	24 V DC	ETV-219-F30-4PF-024/=U0	627463	o. r.
3	2.8	6	4	4	4	3	EPDM	24 V DC	ETV-219-F30-6PF-024/=U0	627466	o. r.
1.5	1.4	4	12.5	12.5	12.5	6	FKM	24 V DC	ETV-219-F15-4FF-024/=U0	627452	o. r.
1.5	1.5	6	12.5	12.5	12.5	6	FKM	24 V DC	ETV-219-F15-6FF-024/=U0	627455	o. r.
2	1.6	4	10	10	10	6	FKM	24 V DC	ETV-219-F20-4FF-024/=U0	627458	o. r.
2	1.8	6	10	10	10	6	FKM	24 V DC	ETV-219-F20-6FF-024/=U0	627461	o. r.
3	1.8	4	4	4	4	3	FKM	24 V DC	ETV-219-F30-4FF-024/=U0	627464	o. r.
3	2.8	6	4	4	4	3	FKM	24 V DC	ETV-219-F30-6FF-024/=U0	627467	o. r.

Illustration


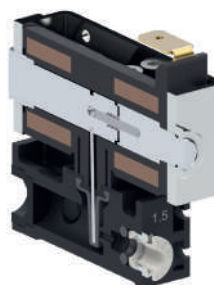


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MAGMA Solenoid Valve Batteries Type ETV Series 200

MAGMA the valve principle from AVS Römer



High quality valve series with coaxial flow, in 2/2-way version, especially for use in the food industries and medical technology.

The solenoid operates against spring force a pivot mounted lever to which a membrane is attached. The interior of the valve is spatially and thermally separated from the solenoid system.

A particularly effective ratio of electric power to flow rate and allowable operating pressure is obtained by the optimisation of lever and spring in conjunction with the low friction transmission.

Other features:

- minimal dead space
- easily disassembled, e.g. for cleaning
- insensitive to contamination
- thermal insulation between the electro-magnet and the medium
- emergency manual override with position indicator as standard
- materials and constructional design especially optimised for food applications

Variations / options:

- distribution connection left, right, both sides
- valves with varying nominal diameters in one battery
- NC and NO valves in one battery
- mixer version

CHARACTERISTICS

GENERAL

Constructional design	Lever actuated seat valve with separating membrane	
Product name	2/2-way solenoid valve, battery	
Actuation	electric, direct acting or by emergency manual override with position indicator	
Product type	ETV-2221/V-A.	ETV-2111/V.- B.
Function	“A” in 0-position closed	“B” in 0-position open
Nominal diameter	DN 1.0 to DN 2.5	DN 1.0 to DN 2.5
Connection	ELSA push-in connectors for pipe/tube OD 6 or OD 4	
Ambient temperature	0 °C to +60 °C	
Medium temperature	0 °C to +130 °C	
Medium viscosity	up to approx. 35 mm ² /s	
Valve body and insert material	PPA and PPSU	
Membrane material	EPDM or FKM	
O-ring material	FKM or EPDM	
Solenoid housing material	PPS (UL94-V0) plastic, insulation class “F” (155 °C)	
Mounting method	with 2 thread press-fit inserts M3 per single valve	
Mounting position	optional	
Approval	NSF/ANSI 169	

PNEUMATIC - HYDRAULIC

Nominal pressure	up to PN 16 in accordance with the specification table
Pressure range	0 bar up to allowable operating pressure OP in accordance with the specification table depending on duty, OP 50 % duty is valid at max. SD 60 s
Flow rate	Kv-value in accordance with the specification table
Medium	gases or liquids which do not corrode the materials specified
Response time	Opening time 10 to 25 ms; Closing time: 10 to 25 ms

ELECTRIC

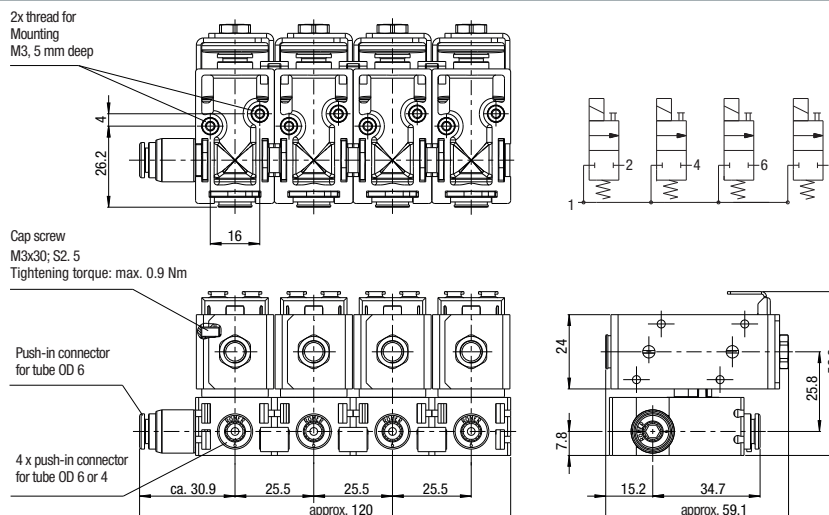
Nominal voltage	24 V DC
Voltage tolerance	±10 %
Nominal power P₂₀	6 W
Duty cycle	100 %, depending on the duty cycle the power consumption decreases by up to 30 %
Electrical connection	Spade terminals for spade connectors 6.3 x 0.8 mm, DIN 46247
Protection class according to EN 60529	IP 00

2/2-Way Solenoid Valve Battery - Type ETV Series 200

 Price group **56** "A" in 0-position closed (closing with the flow)


Plastic PPA

Version	DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price
	1.0	0.8	4	16	16	16	10	FKM	24 V DC	ETV-2221/V2-A10-4FF-024/=U0	627901	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A10-4PF-024/=U0	627902	o. r.
			6					FKM	24 V DC	ETV-2221/V2-A10-6FF-024/=U0	627903	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A10-6PF-024/=U0	627904	o. r.
	1.5	1.4	4	16	16	12.5	6	FKM	24 V DC	ETV-2221/V2-A15-4FF-024/=U0	627905	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A15-4PF-024/=U0	627906	o. r.
			6					FKM	24 V DC	ETV-2221/V2-A15-6FF-024/=U0	627907	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A15-6PF-024/=U0	627908	o. r.
	2.0	2.4	4	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V2-A20-4FF-024/=U0	627909	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A20-4PF-024/=U0	627910	o. r.
			6					FKM	24 V DC	ETV-2221/V2-A20-6FF-024/=U0	627911	o. r.
			6					EPDM	24 V DC	ETV-2221/V2-A20-6PF-024/=U0	627912	o. r.
2.5	3.4	4	8	8	6	3	FKM	24 V DC	ETV-2221/V2-A25-4FF-024/=U0	627913	o. r.	
		6					EPDM	24 V DC	ETV-2221/V2-A25-4PF-024/=U0	627914	o. r.	
		6					FKM	24 V DC	ETV-2221/V2-A25-6FF-024/=U0	627915	o. r.	
		6					EPDM	24 V DC	ETV-2221/V2-A25-6PF-024/=U0	627916	o. r.	
	1.0	0.8	4	16	16	16	10	FKM	24 V DC	ETV-2221/V3-A10-4FF-024/=U0	627917	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A10-4PF-024/=U0	627918	o. r.
			6					FKM	24 V DC	ETV-2221/V3-A10-6FF-024/=U0	627919	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A10-6PF-024/=U0	627920	o. r.
	1.5	1.4	4	16	16	12.5	6	FKM	24 V DC	ETV-2221/V3-A15-4FF-024/=U0	627921	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A15-4PF-024/=U0	627922	o. r.
			6					FKM	24 V DC	ETV-2221/V3-A15-6FF-024/=U0	627923	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A15-6PF-024/=U0	627924	o. r.
	2.0	2.4	4	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V3-A20-4FF-024/=U0	627925	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A20-4PF-024/=U0	627926	o. r.
			6					FKM	24 V DC	ETV-2221/V3-A20-6FF-024/=U0	627927	o. r.
			6					EPDM	24 V DC	ETV-2221/V3-A20-6PF-024/=U0	627928	o. r.
2.5	3.4	4	8	8	6	3	FKM	24 V DC	ETV-2221/V3-A25-4FF-024/=U0	627929	o. r.	
		6					EPDM	24 V DC	ETV-2221/V3-A25-4PF-024/=U0	627930	o. r.	
		6					FKM	24 V DC	ETV-2221/V3-A25-6FF-024/=U0	627931	o. r.	
		6					EPDM	24 V DC	ETV-2221/V3-A25-6PF-024/=U0	627932	o. r.	
	1.0	0.8	4	16	16	16	10	FKM	24 V DC	ETV-2221/V4-A10-4FF-024/=U0	627933	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A10-4PF-024/=U0	627934	o. r.
			6					FKM	24 V DC	ETV-2221/V4-A10-6FF-024/=U0	627935	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A10-6PF-024/=U0	627936	o. r.
	1.5	1.4	4	16	16	12.5	6	FKM	24 V DC	ETV-2221/V4-A15-4FF-024/=U0	627937	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A15-4PF-024/=U0	627938	o. r.
			6					FKM	24 V DC	ETV-2221/V4-A15-6FF-024/=U0	627939	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A15-6PF-024/=U0	627940	o. r.
	2.0	2.4	4	12.5	12.5	10	5	FKM	24 V DC	ETV-2221/V4-A20-4FF-024/=U0	627941	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A20-4PF-024/=U0	627942	o. r.
			6					FKM	24 V DC	ETV-2221/V4-A20-6FF-024/=U0	627943	o. r.
			6					EPDM	24 V DC	ETV-2221/V4-A20-6PF-024/=U0	627944	o. r.
2.5	3.4	4	8	8	6	3	FKM	24 V DC	ETV-2221/V4-A25-4FF-024/=U0	627945	o. r.	
		6					EPDM	24 V DC	ETV-2221/V4-A25-4PF-024/=U0	627946	o. r.	
		6					FKM	24 V DC	ETV-2221/V4-A25-6FF-024/=U0	627947	o. r.	
		6					EPDM	24 V DC	ETV-2221/V4-A25-6PF-024/=U0	627948	o. r.	

Illustration

Valve Design

Description	H1
2-valve battery	69.2
3-valve battery	94.7
4-valve battery	120.2

2/2-Way Solenoid Valve Battery - Type ETV Series 200

 Price group **56**

"B" in 0-position open (closing with the flow)

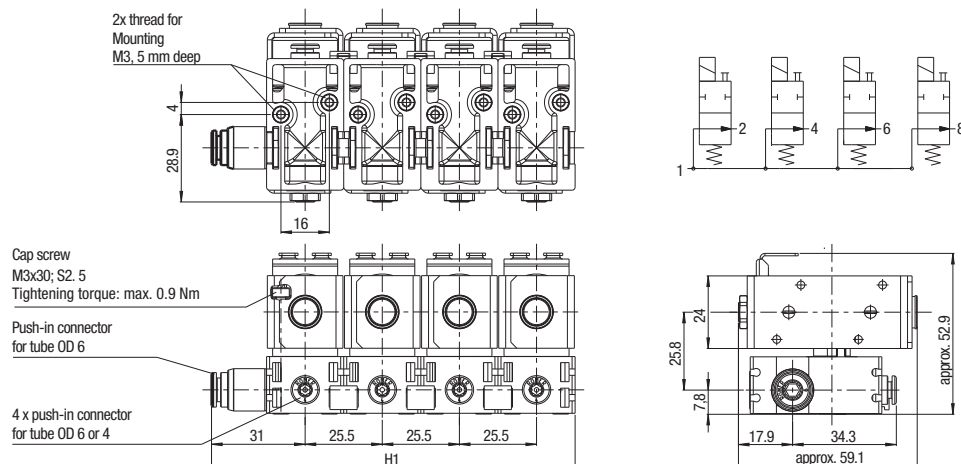


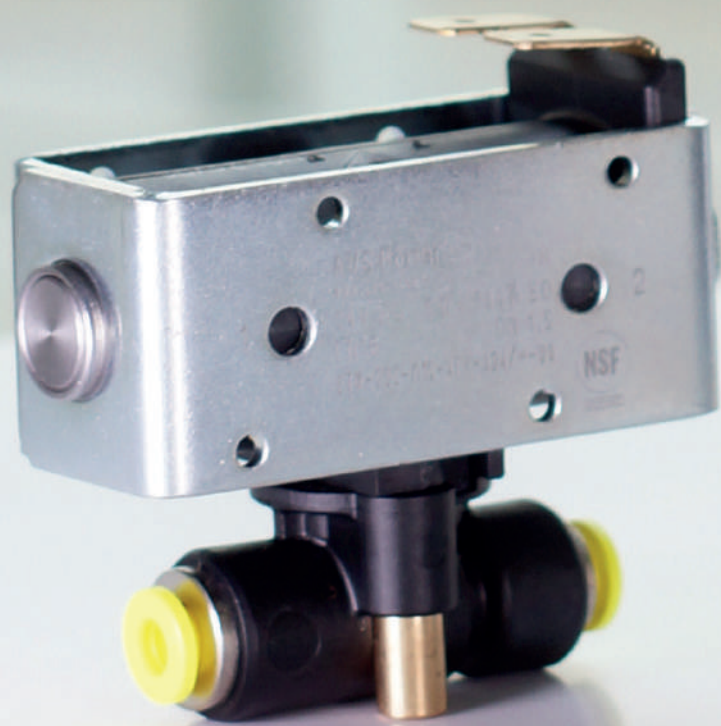
Plastic PPA

DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Allow. OP by 50 % duty [bar]	Allow. OP by 100 % duty [bar]	Seal material	Voltage / current	Type	Order number	Price	Version
1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V2-B10-4FF-024/=-U0	627951	o. r.	
							EPDM	24 V DC	ETV-2111/V2-B10-4PF-024/=-U0	627952	o. r.	
		FKM	24 V DC	ETV-2111/V2-B10-6FF-024/=-U0	627953	o. r.						
		EPDM	24 V DC	ETV-2111/V2-B10-6PF-024/=-U0	627954	o. r.						
1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V2-B15-4FF-024/=-U0	627955	o. r.	
							EPDM	24 V DC	ETV-2111/V2-B15-4PF-024/=-U0	627956	o. r.	
		FKM	24 V DC	ETV-2111/V2-B15-6FF-024/=-U0	627957	o. r.						
		EPDM	24 V DC	ETV-2111/V2-B15-6PF-024/=-U0	627958	o. r.						
2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V2-B20-4FF-024/=-U0	627959	o. r.	
							EPDM	24 V DC	ETV-2111/V2-B20-4PF-024/=-U0	627960	o. r.	
		FKM	24 V DC	ETV-2111/V2-B20-6FF-024/=-U0	627961	o. r.						
		EPDM	24 V DC	ETV-2111/V2-B20-6PF-024/=-U0	627962	o. r.						
2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V2-B25-4FF-024/=-U0	627963	o. r.	
							EPDM	24 V DC	ETV-2111/V2-B25-4PF-024/=-U0	627964	o. r.	
		FKM	24 V DC	ETV-2111/V2-B25-6FF-024/=-U0	627965	o. r.						
		EPDM	24 V DC	ETV-2111/V2-B25-6PF-024/=-U0	627966	o. r.						
1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V3-B10-4FF-024/=-U0	627967	o. r.	
							EPDM	24 V DC	ETV-2111/V3-B10-4PF-024/=-U0	627968	o. r.	
		FKM	24 V DC	ETV-2111/V3-B10-6FF-024/=-U0	627969	o. r.						
		EPDM	24 V DC	ETV-2111/V3-B10-6PF-024/=-U0	627970	o. r.						
1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V3-B15-4FF-024/=-U0	627971	o. r.	
							EPDM	24 V DC	ETV-2111/V3-B15-4PF-024/=-U0	627972	o. r.	
		FKM	24 V DC	ETV-2111/V3-B15-6FF-024/=-U0	627973	o. r.						
		EPDM	24 V DC	ETV-2111/V3-B15-6PF-024/=-U0	627974	o. r.						
2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V3-B20-4FF-024/=-U0	627975	o. r.	
							EPDM	24 V DC	ETV-2111/V3-B20-4PF-024/=-U0	627976	o. r.	
		FKM	24 V DC	ETV-2111/V3-B20-6FF-024/=-U0	627977	o. r.						
		EPDM	24 V DC	ETV-2111/V3-B20-6PF-024/=-U0	627978	o. r.						
2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V3-B25-4FF-024/=-U0	627979	o. r.	
							EPDM	24 V DC	ETV-2111/V3-B25-4PF-024/=-U0	627980	o. r.	
		FKM	24 V DC	ETV-2111/V3-B25-6FF-024/=-U0	627981	o. r.						
		EPDM	24 V DC	ETV-2111/V3-B25-6PF-024/=-U0	627982	o. r.						
1.0	0.8	4	16	16	16	16	FKM	24 V DC	ETV-2111/V4-B10-4FF-024/=-U0	627983	o. r.	
							EPDM	24 V DC	ETV-2111/V4-B10-4PF-024/=-U0	627984	o. r.	
		FKM	24 V DC	ETV-2111/V4-B10-6FF-024/=-U0	627985	o. r.						
		EPDM	24 V DC	ETV-2111/V4-B10-6PF-024/=-U0	627986	o. r.						
1.5	1.4	4	12.5	12.5	12.5	12.5	FKM	24 V DC	ETV-2111/V4-B15-4FF-024/=-U0	627987	o. r.	
							EPDM	24 V DC	ETV-2111/V4-B15-4PF-024/=-U0	627988	o. r.	
		FKM	24 V DC	ETV-2111/V4-B15-6FF-024/=-U0	627989	o. r.						
		EPDM	24 V DC	ETV-2111/V4-B15-6PF-024/=-U0	627990	o. r.						
2.0	2.4	4	8	8	8	8	FKM	24 V DC	ETV-2111/V4-B20-4FF-024/=-U0	627991	o. r.	
							EPDM	24 V DC	ETV-2111/V4-B20-4PF-024/=-U0	627992	o. r.	
		FKM	24 V DC	ETV-2111/V4-B20-6FF-024/=-U0	627993	o. r.						
		EPDM	24 V DC	ETV-2111/V4-B20-6PF-024/=-U0	627994	o. r.						
2.5	3.4	4	4	4	4	4	FKM	24 V DC	ETV-2111/V4-B25-4FF-024/=-U0	627995	o. r.	
							EPDM	24 V DC	ETV-2111/V4-B25-4PF-024/=-U0	627996	o. r.	
		FKM	24 V DC	ETV-2111/V4-B25-6FF-024/=-U0	627997	o. r.						
		EPDM	24 V DC	ETV-2111/V4-B25-6PF-024/=-U0	627998	o. r.						

Illustration
Valve Design

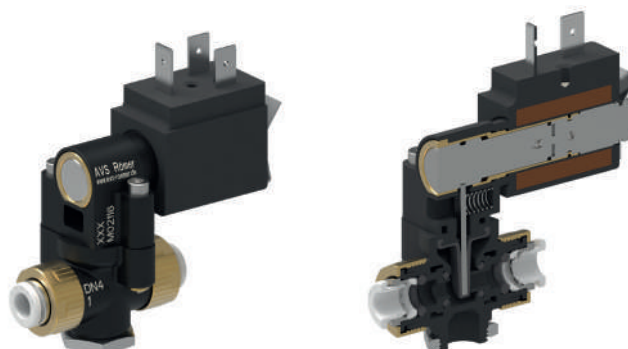
Description	H1
2-valve battery	69.2
3-valve battery	94.7
4-valve battery	120.2





MAGMA Solenoid Valves Type ETV Series 400

MAGMA the valve principle from AVS Römer



High quality valve series with coaxial flow or 90° flow, in 2/2-way and 3/2-way version, especially for use in the food industries and medical technology.

The solenoid operates against spring force a pivot mounted lever to which a membrane is attached. The interior of the valve is spatially and thermally separated from the solenoid system.

A particularly effective ratio of electric power to flow rate and allowable operating pressure is obtained by the optimisation of lever and spring in conjunction with the low friction transmission.

Other features:

- minimal dead space
- easily disassembled, e.g. for cleaning
- insensitive to contamination
- thermal insulation between the electro-magnet and the medium
- emergency manual override with position indicator as standard
- materials and constructional design especially optimised for food applications
- IP class 65 possible

Variations / options:

- other tube connector
- other material for seal
- other nominal diameter or other pressure range
- version for vacuum
- other function (e.g. 3/2-way distribution valve)
- other nominal voltage
- 230 V AC using a bridge rectifier (see under cable sockets)

CHARACTERISTICS
GENERAL

Constructional design	Lever actuated seat valve with separating membrane	
Product name	2/2-way solenoid valve	3/2-way solenoid valve
Actuation	Electric, direct acting or by emergency manual override with position indicator	
Product type	ETV-422-A .	ETV-419-F .
Function	"A" in 0-position closed	"F" in 0-position "1" to "2" closed, "1" to "4" open
Nominal diameter	DN 4 (DN 1,5 - 6 on demand)	
Connection	ELSA push-in connectors for pipe/tube OD 6 (OD 4 OD 8 on request)	
Ambient temperature	0 °C to +60 °C	
Medium temperature	0 °C to +130 °C	
Medium viscosity	up to approx. 35 mm ² /s	
Valve body and insert material	PPA, PPSU	
Membrane and O-ring material	FKM and EPDM	
Solenoid housing material	PPS, EPDM (UL94-V0) plastic, insulation class "F"	
Mounting method	with M14x1 locknut	
Mounting position	optional	
Approval	NSF/ANSI 169	
PNEUMATIC - HYDRAULIC		
Nominal pressure	in accordance with the specification table	
Pressure range	0 bar up to allowable operating pressure OP in accordance with the specification table	
Flow rate	Kv-value in accordance with the specification table	
Medium	Gases or liquids which do not corrode the materials specified	
Response time	Opening time 10 to 25 ms; Closing time: 10 to 25 ms	
ELECTRIC		
Nominal voltage	24 V DC	
Voltage tolerance	±10 %	
Nominal power P₂₀	6 W	
Duty cycle	100 %, depending on the duty cycle the power consumption decreases by up to 20 %	
Electrical connection	11 mm - industry standard form B (DIN EN 175301 - 803)	
Protection class according to EN 60529	IP 00	

2/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56**

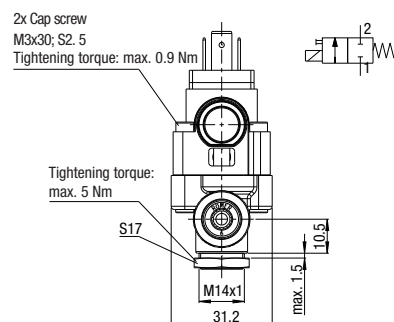
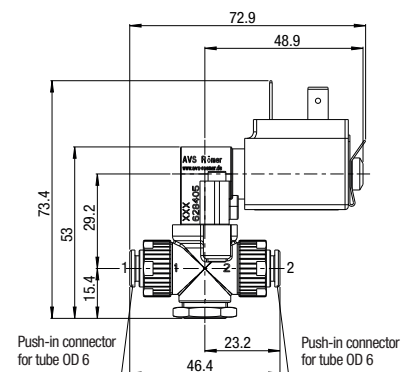
"A" in 0-position closed (closing with the flow)



Plastic PPA

Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded. The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
4	5	6	2	0-2	FKM	24 V DC	ETV-422-A40-6FF-024/=-H0	628407	o. r.
4	5	6	2	0-2	EPDM	24 V DC	ETV-422-A40-6PF-024/=-H0	628417	o. r.

Illustration

3/2-Way Coaxial Solenoid Valve - Type ETV Series 200

 Price group **56**

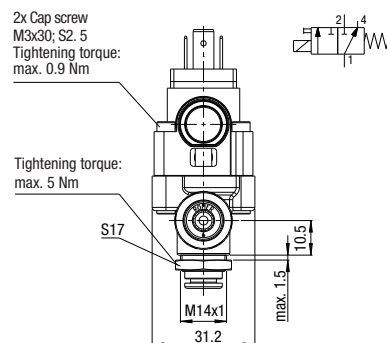
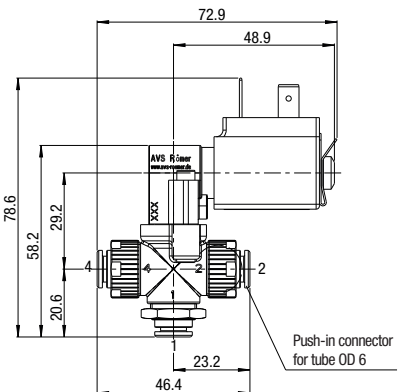
"F" in 0-position "1" to "2" closed, "1" to "4" open

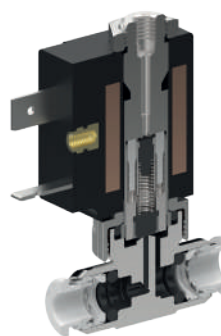


Plastic PPA

Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded. The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

DN	Kv-value water [l/min]	for tube OD	PN	Allow. OP [bar]	Seal material	Voltage / current	Type	Order number	Price
4	5	6	1.5	0-1.5	FKM	24 V DC	ETV-429-F40-6FF-024/=-H0	628537	o. r.
4	5	6	1.5	0-1.5	EPDM	24 V DC	ETV-429-F40-6PF-024/=-H0	628547	o. r.

Illustration


DIGMA Solenoid Valves Type EAV Series 700


Further development based on the EAV series 200.

This stainless steel valve series is suitable for many aggressive medium and thanks to the use of high-quality magnetic steels, offers a reliable solution for applications with the highest demands on corrosion resistance.

Another characteristic of this type of construction is the welded stainless steel plunger guide which ensures increased pressure and leakage assurance.

Solenoid coils with different performance classes enable a favourable adaptation to the diverse requirements with regard to nominal size, operating pressure, power consumption, type of voltage or permissible self-heating.

Features

- Unbeatable price-performance ratio
- Individual product developments
- Inexpensive MIM valve body
- Extremely high material strength
- NSF certified
- Flexibility in design
- Lightweight
- Smallest dimensions
- Highest product quality
- Fail-safe and durable

CHARACTERISTICS
GENERAL

Constructional design	Seat valve, rubber seals			
Product name	2/2-way solenoid valve		3/2-way solenoid valve	
Actuation	electric, direct-acting			
Product type	EAV-7..-A..	EAV-7..-B..	EAV-7..-C..	EAV-7..-D..
Function	"A" normally closed (closing with flow)	"B" normally open (closing against current)	"C" normally closed with "1", "2" to "3" discharged (closing against current)	"D" in 0 position "1" to "2" open, "3" closed (closing against current)
Nominal diameter	DN 1.2 to DN 3	DN 1.2 to DN 1.8	DN 1.2 to DN 3	DN 1.2 to DN 1.8
Connection	ELSA push-in connection for tube/pipe 6			
Ambient temperature	0 °C to +60 °C			
Medium temperature	0 °C to +120 °C (Special designs for higher temperatures on request)			
Medium viscosity	up to approx. 20 mm ² /s			
Valve body material	1.4404 (AISI 316L)			
Other inner component material	Stainless steel			
Seal material	FKM (Flour-Rubber) (others on request)			
Mounting method	2 M4 tapped holes in valve body or using rigid pipework			
Mounting position	optional, preferably upright			
Approval	NSF/ANSI 169			
PNEUMATIC - HYDRAULIC				
Nominal pressure	up to PN 20 According to Type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coils with highest electrical power consumption, the second value to that with lowest power consumption.			
Pressure range	Technical vacuum up to permitted operating pressure OP. For exceptions which refer to minimum permitted operating pressure see table.			
Flow rate	Kv-value and QNn-value according to Type table			
Medium	gaseous or liquid			
Response time	opening time: 7 - 20 ms closing time: 12 - 20 ms			
Electrical	see solenoid coils			

2/2-Way Solenoid Valve - Type EAV Series 700
Illustration

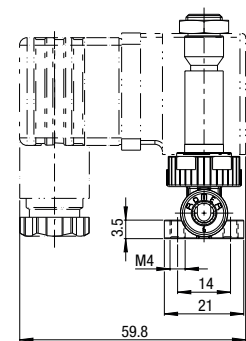
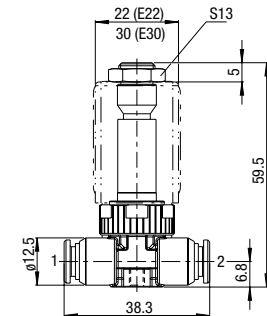
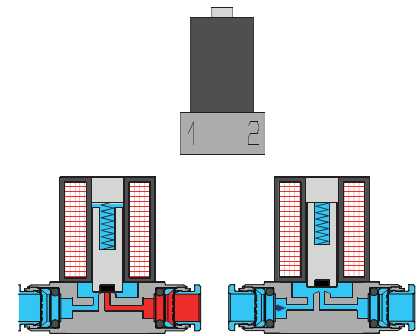
 Price group **51**

"A" normally closed (closing with flow)



Stainless Steel

Version	DN	Kv-value water [m³/h]	Qn-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	0.05	50	6	20/12.5	FKM	EAV-713X4M-A12-6FFK-00	686300	o. r.
	1.5	0.06	68	6	20/6	FKM	EAV-713X4M-A15-6FFK-00	686301	o. r.
	2	0.12	145	6	16/4	FKM	EAV-713X4M-A20-6FFK-00	686302	o. r.
	3	0.21	210	6	10/2	FKM	EAV-713X4M-A30-6FFK-00	686303	o. r.


Switching pressure for 2/2-Way Solenoid Valve - Type EAV Series 700

"A" normally closed (closing with flow)

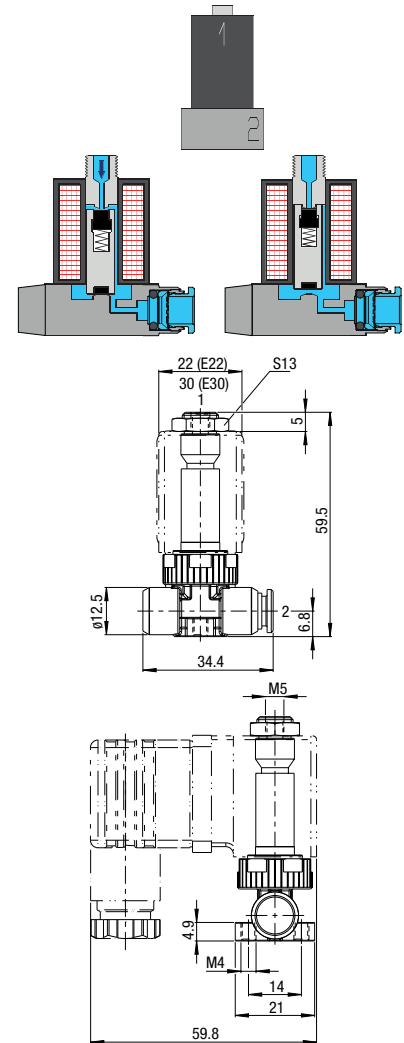
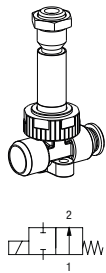
DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																		
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature								
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C						
1.2	EAV-713X4M-A12..	20/12.5	E22...L.	-	-	2.5	-	-	-	-	-	-	15	10	9	8	6	4	9	9	7			
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	20	20	20	20	18	15	20	20	20	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20
1.5	EAV-713X4M-A15..	20/6	E22...L.	-	-	2.5	-	-	-	-	-	-	7	5	4	4	3	2	6	5	4			
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	18	16	14	12	10	8	16	14	13	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	20	20	18	17	13	10	20	18	15	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	20	20	20	20	16	12	20	20	18	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20
2	EAV-713X4M-A20..	16/4	E22...L.	-	-	2.5	-	-	-	-	-	-	4	3	2.5	2.5	1.5	1	3	2.5	2			
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	11	8	7	6	5	4.5	8	7	6	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	14	11	10	8	7	12	10	8	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	17	15	12	13	10	8	15	12	10	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	18	15	13	17	15	14	20	18	16	
3	EAV-713X4M-A30..	10/2	E22...L.	-	-	2.5	-	-	-	-	-	-	2	1.5	1.2	1.2	0.9	0.7	1.8	1.4	0.8			
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	3.5	3	2.8	2.5	2	1.5	3	2.5	2	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	9	7	6	5	4	3	6	5	4	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	10	8	6	6	5	4	7	6	5	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	10	9	7	9	7	6	10	9	8	

2/2-Way Solenoid Valve - Type EAV Series 700
Illustration

 Price group **51** "B" normally open (closing against current) Permitted operating pressure table below


Stainless Steel

Version	DN	Kv-value water [m³/h]	QnN-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	0.05	48	6	16	FKM	EAV-713X4M-B12-6FFK-00	686335	o. r.
	1.5	0.06	65	6	10	FKM	EAV-713X4M-B15-6FFK-00	686336	o. r.
	1.8	0.1	110	6	8	FKM	EAV-713X4M-B18-6FFK-00	686337	o. r.


Switching pressure for 2/2-Way Solenoid Valve - Type EAV Series 700

"B" normally open (closing against current)

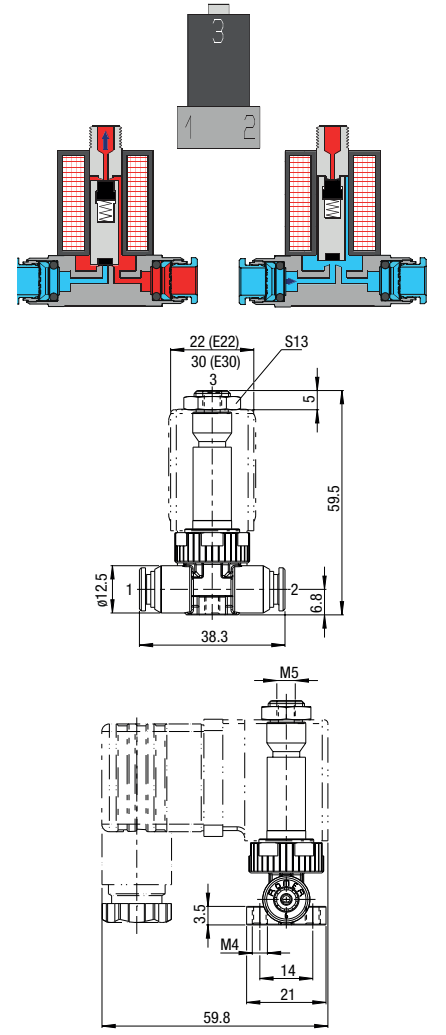
DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																		
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature					
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C			
1.2	EAV-713X4M-B12..	16	E22...M.	-	-	5	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
1.5	EAV-713X4M-B15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	10	9	10	10	10		
			E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	
2	EAV-713X4M-B18..	8	E22...M.	-	-	5	-	-	-	-	-	-	8	8	8	7	7	8	8	8	8	8		
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8

3/2-Way Solenoid Valve - Type EAV Series 700
Illustration

 Price group **51** "C" normally closed with "1", "2" to "3" discharged (closing against current)


Stainless Steel

Version	DN	Kv-value Water [m ³ /h]	Q _N -value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	1 > 2 0,05 2 > 3 0,06	1 > 2 50 2 > 3 65	6	12,5	FKM	EAV-713X4M-C12-6FFK-00	686321	o. r.
	1.5	1 > 2 0,06 2 > 3 0,10	1 > 2 68 2 > 3 115	6	10	FKM	EAV-713X4M-C15-6FFK-00	686322	o. r.
	2	1 > 2 0,09 2 > 3 0,08	1 > 2 124 2 > 3 110	6	6	FKM	EAV-713X4M-C20-6FFK-00	686323	o. r.
	3	1 > 2 0,1 2 > 3 0,08	1 > 2 165 2 > 3 110	6	4	FKM	EAV-713X4M-C30-6FFK-00	686324	o. r.


Switching pressure for 3/2-Way Solenoid Valve - Type EAV Series 700

"C" normally closed with "1", "2" to "3" discharged (closing against current)

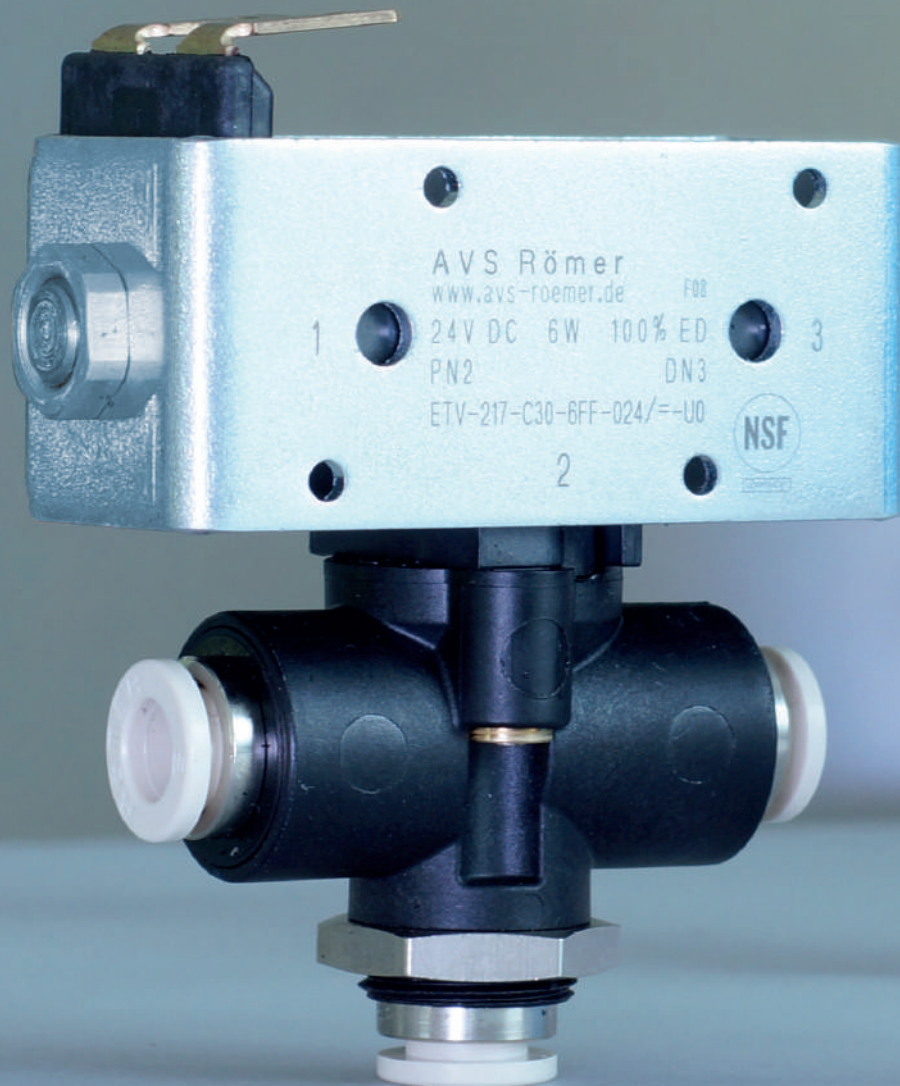
DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																				
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature							
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C					
1.2	EAV-713X4M-C12..	12.5	E22...M.	-	-	5	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5				
			E22...H.	-	-	8	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5			
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5		
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5		
1.5	EAV-713X4M-C15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	
2.0	EAV-713X4M-C20..	6	E22...M.	-	-	5	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	
3.0	EAV-713X4M-C30..	4	E22...M.	-	-	5	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4

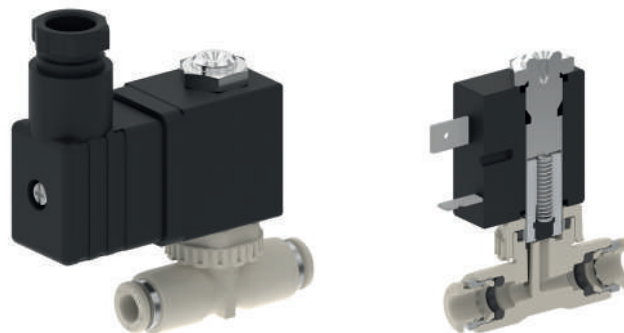
3/2-Way Solenoid Valve Type EAV Series 700										Illustration	
Price group	51	"D" in 0 position "1" to "2" open, "3" closed (closing against current)			Permitted operating pressure Table below					Stainless Steel	
Version	DN	Kv-value water [m³/h]	QNn-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price		
	1.2	1 > 2 0,05 2 > 3 0,06	1 > 2 48 2 > 3 68	6	16	FKM	EAV-713X4M-D12-6FFK-00	686357	o. r.		
	1.5	1 > 2 0,06 2 > 3 0,11	1 > 2 68 2 > 3 125	6	10	FKM	EAV-713X4M-D15-6FFK-00	686358	o. r.		
	1.8	1 > 2 0,10 2 > 3 0,11	1 > 2 115 2 > 3 125	6	8	FKM	EAV-713X4M-D18-6FFK-00	686359	o. r.		

Switching pressure for 3/2-Way Solenoid Valve - Type EAV Series 700

"D" in 0 position "1" to "2" open, "3" closed (closing against current)

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																		
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature					
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C	60 °C	90 °C	120 °C			
1.2	EAV-713X4M-D12..	16	E22...M.	-	-	5	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
1.5	EAV-713X4M-D15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	10	9	10	10	10		
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10		
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	
1.8	EAV-713X4M-D18..	8	E22...M.	-	-	5	-	-	-	-	-	-	8	8	8	7	7	8	8	8	8	8		
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8



DIGMA Solenoid Valves Type EAV Series 800


Further development based on the EAV series 700.

This series of plastic valves is suitable for many aggressive medium and thanks to the use of high-quality magnetic steels, offers among other things a standard solution for controlling hot water and steam.

Another characteristic of this type of construction is the welded stainless steel plunger guide which ensures increased pressure and leakage assurance.

Solenoid coils with different performance classes enable a favourable adaptation to the diverse requirements with regard to nominal size, operating pressure, power consumption, type of voltage or permissible self-heating.

Features

- Unbeatable price-performance ratio
- Individual product developments
- Minimal heat loss
- Extremely high material strength
- NSF certified
- Flexibility in design
- Lightweight
- Compact dimensions
- Highest product quality
- Fail-safe and durable

CHARACTERISTICS
GENERAL

Constructional design	Seat valve, rubber seals			
Product name	2/2-way solenoid valve		3/2-way solenoid valve	
Actuation	electric, direct-acting			
Product type	EAV-8..-A..	EAV-8..-B..	EAV-8..-C..	EAV-8..-D..
Function	"A" normally closed (closing with flow)	"B" normally open (closing against current)	"C" normally closed with "1", "2" to "3" discharged (closing against current)	"D" in 0 position "1" to "2" open, "3" closed (closing against current)
Nominal diameter	DN 1.2 to DN 3	DN 1.2 to DN 1.8	DN 1.2 to DN 3	DN 1.2 to DN 1.8
Connection	ELSA push-in connection for tube/pipe D 4 D 6			
Ambient temperature	0 °C to +60 °C			
Medium temperature	0 °C to +130 °C			
Medium viscosity	up to approx. 20 mm ² /s			
Valve body material	PPSU			
Other inner component material	Stainless steel			
Seal material	FKM EPDM (others on request)			
Mounting method	with bracket (optional) or using rigid pipework			
Mounting position	optional, preferably upright			
Approval	NSF/ANSI 169			
PNEUMATIC - HYDRAULIC				
Nominal pressure	up to PN 16 According to Type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coils with highest electrical power consumption, the second value to that with lowest power consumption.			
Pressure range	Technical vacuum up to permitted operating pressure OP. For exceptions which refer to minimum permitted operating pressure see table.			
Perm. Operating pressure (PB)	20 °C -> 16 bar; 100 °C -> 12 bar; 130 °C -> 6 bar (independent of the switching function)			
Flow rate	Kv-value and QNn-value according to Type table			
Medium	gaseous or liquid			
Response time	opening time: 7 - 20 ms closing time: 12 - 20 ms			
Solenoid coils	see solenoid coils			


2/2-Way Solenoid Valve - Type EAV Series 800

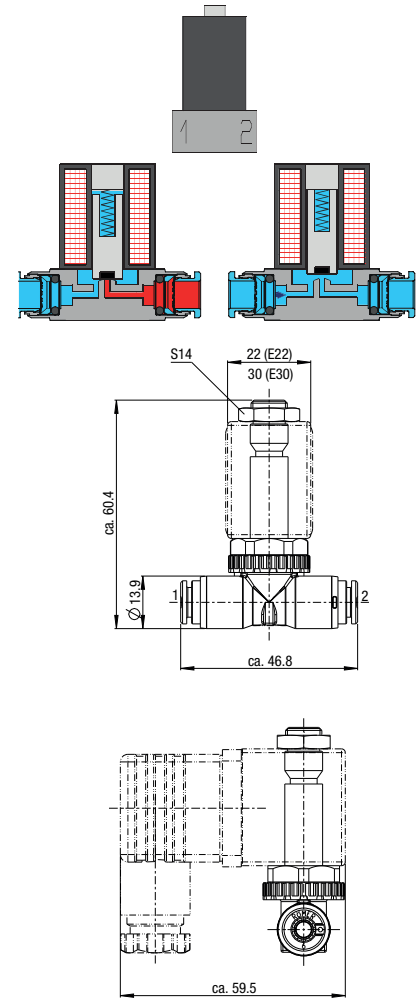
Illustration

Price group **51** "A" normally closed (closing with flow)



Plastic PPSU

Version	DN	Kv-value water [m³/h]	Qn-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	0.04	48	6	16/12.5	FKM	EAV-813P3-A12-6FFK-00	686629	o. r.
	1.5	0.06	74	6	16/6	FKM	EAV-813P3-A15-6FFK-00	686630	o. r.
	2	0.1	115	6	16/4	FKM	EAV-813P3-A20-6FFK-00	686631	o. r.
	3	0.14	159	6	10/2	FKM	EAV-813P3-A30-6FFK-00	686632	o. r.




Switching pressure for 2/2-Way Solenoid Valve - Type EAV Series 800

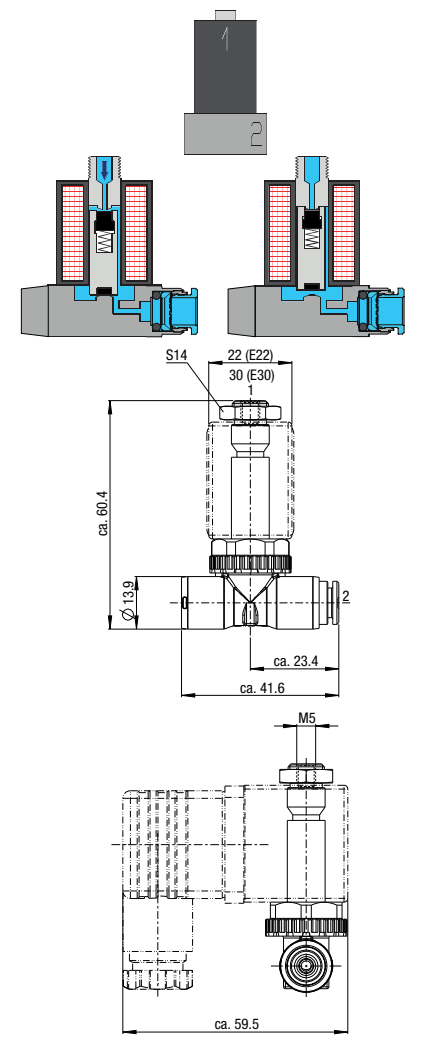
"A" normally closed (closing with flow)

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz 90%U _N Medium temperature			AC 60 Hz 90%U _N Medium temperature			DC 90%U _N Medium temperature			DC 90%U _N Medium temperature			DC 100%U _N Medium temperature			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C 90 °C 130 °C			60 °C 90 °C 130 °C			60 °C 90 °C 130 °C			60 °C 90 °C 130 °C			60 °C 90 °C 130 °C			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
1.2	EAV-813P3-A12..	16/12.5	E22...L.	-	-	2.5	-	-	-	-	-	-	15	10	6	8	6	4	9	9	6	
			E22...M.	-	-	5	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
1.5	EAV-813P3-A15..	16/6	E22...L.	-	-	2.5	-	-	-	-	-	-	7	5	4	4	3	2	6	5	4	
			E22...M.	-	-	5	-	-	-	-	-	-	-	16	12	6	12	10	6	16	12	6
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
2	EAV-813P3-A20..	16/4	E22...L.	-	-	2.5	-	-	-	-	-	-	4	3	2.5	2.5	1.5	1	3	2.5	2	
			E22...M.	-	-	5	-	-	-	-	-	-	-	11	8	6	6	5	4.5	8	7	6
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	12	6	10	8	6	12	10	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	16	12	6	13	10	6	15	12	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
3	EAV-813P3-A30..	10/2	E22...L.	-	-	2.5	-	-	-	-	-	-	2	1.5	1.2	1.2	0.9	0.7	1.8	1.4	0.8	
			E22...M.	-	-	5	-	-	-	-	-	-	-	3.5	3	2.8	2.5	2	1.5	3	2.5	2
			E22...H.	-	-	8	-	-	-	-	-	-	-	9	7	6	5	4	3	6	5	4
			E28...G	-	-	6.3	-	-	-	-	-	-	-	10	8	6	6	5	4	7	6	5
			E30...P.	-	-	8	-	-	-	-	-	-	-	10	9	6	9	7	6	10	9	6



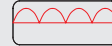
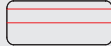
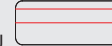
2/2-Way Solenoid Valve - Type EAV Series 800

Illustration

Price group	51	"B" normally open (closing against current)		Permitted operating pressure table below				Plastic PPSU	
Version	DN	Kv-value water [m³/h]	Qn-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	0.04	44	6	16	FKM	EAV-813P3-B12-6FFK-00	686633	o. r.
	1.5	0.04	51	6	10	FKM	EAV-813P3-B15-6FFK-00	686634	o. r.
	1.8	0.06	77	6	8	FKM	EAV-813P3-B18-6FFK-00	686635	o. r.



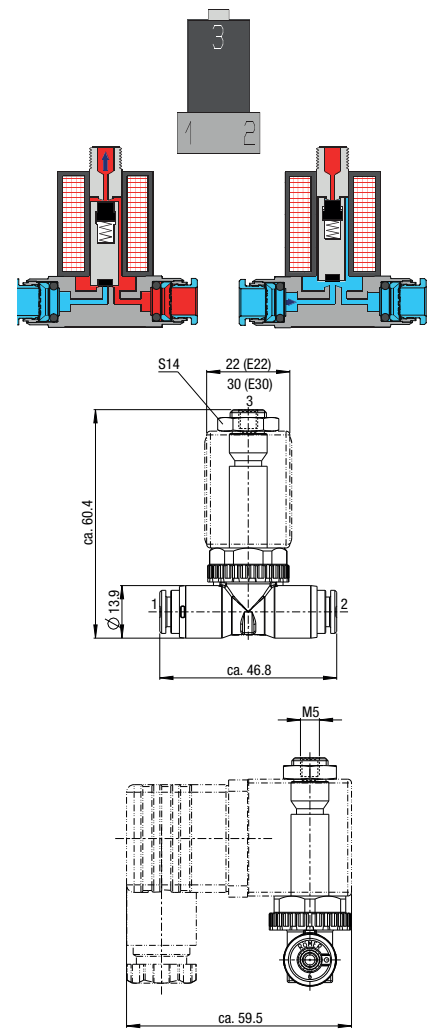
Switching pressure for 2/2-Way Solenoid Valve - Type EAV Series 800

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																		
			Type	Nominal power P ₂₀			AC 50 Hz  90 %U _N Medium temperature			AC 60 Hz  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  100 %U _N Medium temperature					
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C			
1.2	EAV-813P3-B12..	16	E22...M.	-	-	5	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6	
			E28...G	-	-	6,3	-	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6	
1.5	EAV-813P3-B15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	10	10	6
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
			E28...G	-	-	6,3	-	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
1.8	EAV-813P3-B18..	8	E22...M.	-	-	5	-	-	-	-	-	-	8	8	6	7	7	6	8	8	6	8	8	6
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6	
			E28...G	-	-	6,3	-	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6	

3/2-Way Solenoid Valve - Type EAV Series 800

 Price group **51** "C" normally closed with "1", "2" to "3" discharged (closing against current)


Version	DN	Kv-value Water [m ³ /h]	Qn-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price
	1.2	1 > 2 0.04 2 > 3 0.06	1 > 2 44 2 > 3 72	6	12.5	FKM	EAV-813P3-C12-6FFK-00	686636	o. r.
	1.5	1 > 2 0.05 2 > 3 0.08	1 > 2 63 2 > 3 98	6	10	FKM	EAV-813P3-C15-6FFK-00	686637	o. r.
	2	1 > 2 0.08 2 > 3 0.08	1 > 2 101 2 > 3 98	6	6	FKM	EAV-813P3-C20-6FFK-00	686638	o. r.
	3	1 > 2 0.13 2 > 3 0.08	1 > 2 151 2 > 3 98	6	4	FKM	EAV-813P3-C30-6FFK-00	686639	o. r.

Illustration

Switching pressure for 3/2-Way Solenoid Valve - Type EAV Series 800

"C" normally closed with "1", "2" to "3" discharged (closing against current)

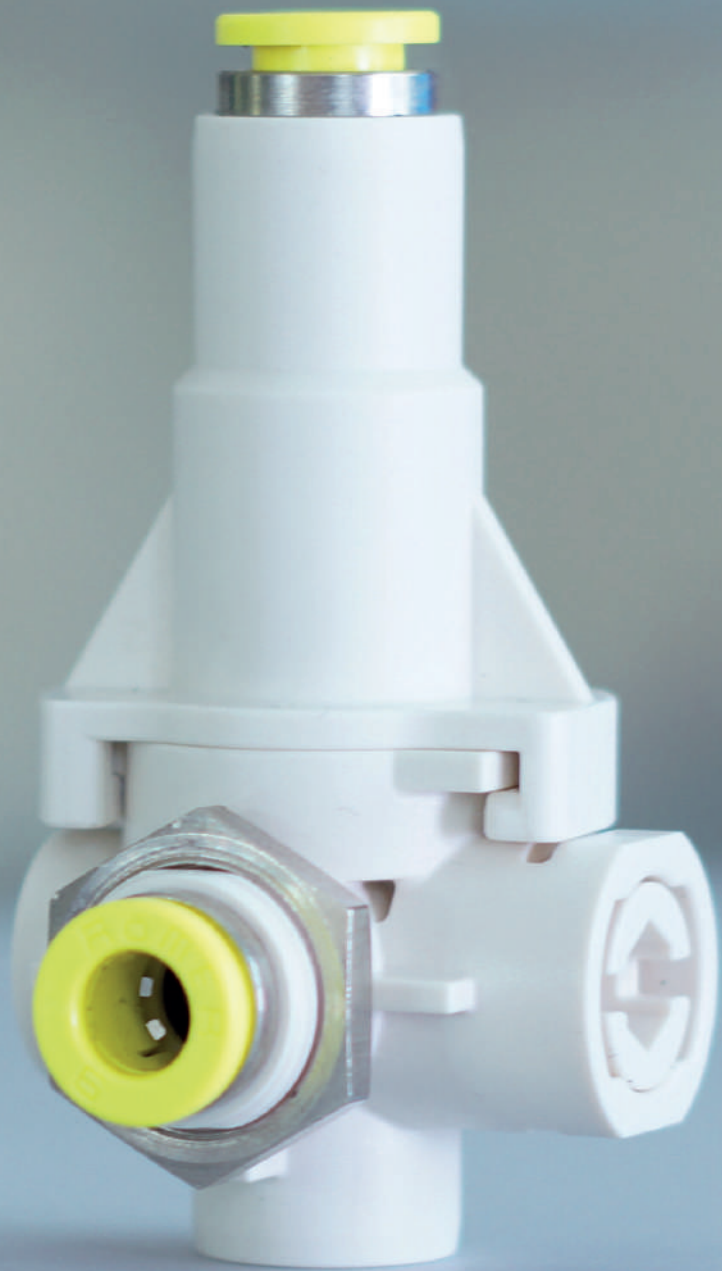
DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz 90%U _N Medium temperature			AC 60 Hz 90%U _N Medium temperature			DC 90%U _N Medium temperature			DC 90%U _N Medium temperature			DC 100%U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
1.2	EAV-813P3-C12..	12.5	E22...M.	-	-	5	-	-	-	-	-	-	12.5	12	6	12.5	12	6	12.5	12	6		
			E22...H.	-	-	8	-	-	-	-	-	-	-	12.5	12	6	12.5	12	6	12.5	12	6	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	12.5	12	6	12.5	12	6	12.5	12	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	12.5	12	6	12.5	12	6	12.5	12	6	
1.5	EAV-813P3-C15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6		
			E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
			E30...P.	-	-	8	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
2.0	EAV-813P3-C20..	6	E22...M.	-	-	5	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6		
			E22...H.	-	-	8	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6
3.0	EAV-813P3-C30..	4	E22...M.	-	-	5	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4		
			E22...H.	-	-	8	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	
			E28...G	-	-	6.3	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4
			E30...P.	-	-	8	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4

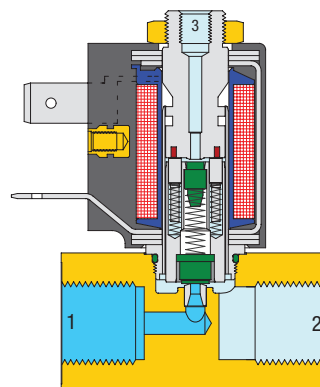
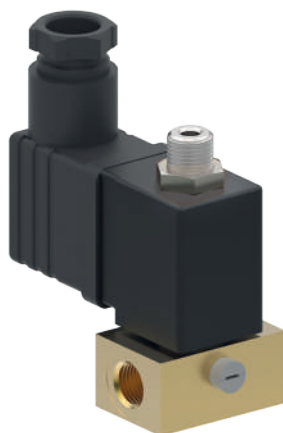
3/2-Way Solenoid Valve Type EAV Series 800									Illustration		
Price group	51	"D" in 0 position "1" to "2" open, "3" closed (closing against current)			Permitted operating pressure Table below			Plastic PPSU			
Version	DN	Kv-value water [m³/h]	QNm-value air [l/min]	For tube D	PN	Sealing material	Type	Order number	Price		
	1.2	1 > 2 0.04 2 > 3 0.04	1 > 2 44 2 > 3 48	6	16	FKM	EAV-813P3-D12-6FFK-00	686640	o. r.		
	1.5	1 > 2 0.04 2 > 3 0.06	1 > 2 51 2 > 3 74	6	10	FKM	EAV-813P3-D15-6FFK-00	686641	o. r.		
	1.8	1 > 2 0.06 2 > 3 0.1	1 > 2 77 2 > 3 115	6	8	FKM	EAV-813P3-D18-6FFK-00	686642	o. r.		

Switching pressure for 3/2-Way Solenoid Valve - Type EAV Series 800

"D" in 0 position "1" to "2" open, "3" closed (closing against current)

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
1.2	EAV-813P3-D12..	16	E22...M.	-	-	5	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6	
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	16	12	6	16	12	6	16	12	6
1.5	EAV-813P3-D15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6	
			E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	10	10	6	10	10	6	10	10	6
1.8	EAV-813P3-D18..	8	E22...M.	-	-	5	-	-	-	-	-	-	8	8	6	7	7	6	8	8	6	
			E22...H.	-	-	8	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6
			E28...G	-	-	6.3	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6
			E30...P.	-	-	8	-	-	-	-	-	-	-	8	8	6	8	8	6	8	8	6



DIGMA Solenoid Valves Type EAV Series 200


Solenoid valve series with familiar constructional design, however with significantly improved magnetic circuit.

On the lower part of the guide tube a magnetic nipple is welded on, which reduces the magnetic resistance of the circuit.

This improvement enables among other things the use of solenoid valves with significantly reduced power consumption and thus lowers the self-heating of the system.

A further feature of this series is the especially strong and corrosion-resistant construction. Solenoid coils with four graduated performance classes enable convenient adjustment to various requirements, with respect to nominal width, diameters, operating pressure, power consumption, Type of current or permitted self-heating.

CHARACTERISTICS
GENERAL

Constructional design	Seat valve, rubber seals			
Product name	2/2-way solenoid valve		3/2-way solenoid valve	
Actuation	electric, direct-acting, resting manual override optional			
Product type	EAV-2..-A..	EAV-2..-B..	EAV-2..-C..	EAV-2..-D..
Function	"A" normally closed (closing with flow)	"B" normally open (closing against current)	"C" normally closed with "1", "2" to "3" discharged (closing against current)	"D" in 0 position "1" to "2" open, "3" closed (closing against current)
Nominal diameter	DN 1.2 to DN 2.2		DN 1.2 to DN 1.8	
Connection	M 5 or pipe thread (ISO 228) G 1/8 to G 1/4			
Ambient temperature	-20 °C to +60 °C (others on request)			
Medium temperature	with NBR: -10 °C to +90 °C for FKM: -10 °C to +130 °C (for exceptions see table)			
Medium viscosity	up to approx. 20 mm ² /s			
Valve body material	Brass			
Manual override	PPE (Polyphenylene ether)			
Seat nozzle material	Stainless steel			
Other inner component material	Stainless steel and non-ferrous metal. DC non-ferrous metal-free version			
Seal material	NBR (Nitrile rubber) or FKM (Fluoride rubber) (others on request)			
Mounting method	2 M3 tapped holes in valve body or using rigid pipework			
Mounting position	optional, preferably upright			
PNEUMATIC - HYDRAULIC				
Nominal pressure	According to Type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coils with highest electrical power consumption, the second value to that with lowest power consumption.			
Pressure range	Technical vacuum up to permitted operating pressure OP. For exceptions which refer to minimum permitted operating pressure see table.			
Flow rate	Kv-value and QNn-value according to Type table			
Medium	gaseous or liquid Sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases Sealing material FKM: e.g. solvents, hot water, hot air			
Response time	opening time: 7 - 20 ms closing time: 12 - 20 ms			
Electrical	see solenoid coils			

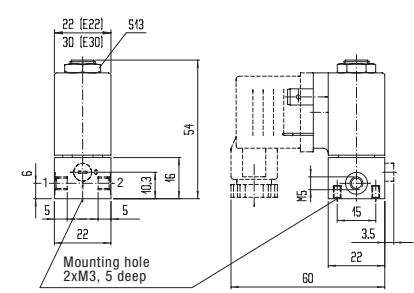
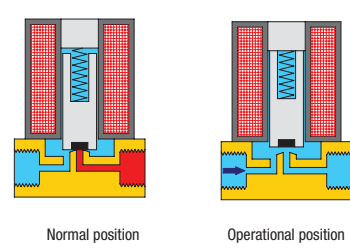
2/2-Way Solenoid Valve - Type EAV Series 200

 Price group **51**

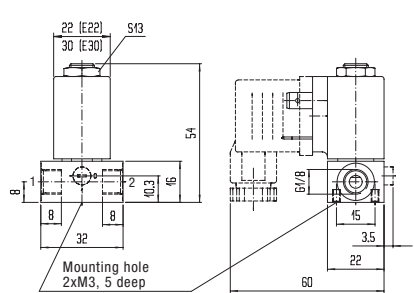
"A" normally closed NC

Brass

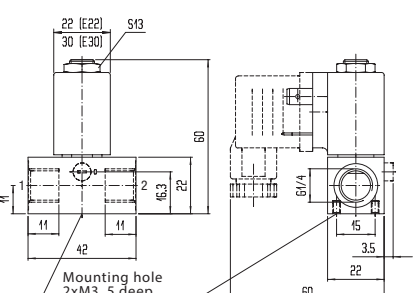
Version	DN	Kv-value water [m³/h]	QnN-value air [l/min]	G	PN	Sealing material	Type	Order number	Price
without manual override for all AC and DC coils	1.2	0.05	50	M5	40/16	NBR	EAV-211-A12-M05BK-00	605001	o. r.
	1.2	0.05	50	M5	40/16	FKM	EAV-211-A12-M05FK-00	605002	o. r.
	1.2	0.05	50	G 1/8	40/16	NBR	EAV-211-A12-1/8BK-00	605003	o. r.
	1.2	0.05	50	G 1/8	40/16	FKM	EAV-211-A12-1/8FK-00	605004	o. r.
	1.5	0.06	68	M5	32/6	NBR	EAV-211-A15-M05BK-00	605007	o. r.
	1.5	0.06	68	M5	32/6	FKM	EAV-211-A15-M05FK-00	605008	o. r.
	1.5	0.06	68	G 1/8	32/6	NBR	EAV-211-A15-1/8BK-00	605009	o. r.
	1.5	0.06	68	G 1/8	32/6	FKM	EAV-211-A15-1/8FK-00	605010	o. r.
	1.8	0.11	125	M5	32/6	NBR	EAV-211-A18-M05BK-00	605013	o. r.
	1.8	0.11	125	M5	32/6	FKM	EAV-211-A18-M05FK-00	605014	o. r.
	1.8	0.11	125	G 1/8	32/6	NBR	EAV-211-A18-1/8BK-00	605015	o. r.
	1.8	0.11	125	G 1/8	32/6	FKM	EAV-211-A18-1/8FK-00	605016	o. r.
	2	0.12	145	M5	25/4	NBR	EAV-211-A20-M05BK-00	605019	o. r.
	2	0.12	145	M5	25/4	FKM	EAV-211-A20-M05FK-00	605020	o. r.
	2	0.12	145	G 1/8	25/4	NBR	EAV-211-A20-1/8BK-00	605021	o. r.
	2	0.12	145	G 1/8	25/4	FKM	EAV-211-A20-1/8FK-00	605022	o. r.
	2	0.12	145	G 1/4	25/4	NBR	EAV-211-A20-1/4BK-00	605023	o. r.
	2	0.12	145	G 1/4	25/4	FKM	EAV-211-A20-1/4FK-00	605024	o. r.
	2.2	0.13	165	M5	16/3	NBR	EAV-211-A22-M05BK-00	605025	o. r.
	2.2	0.13	165	M5	16/3	FKM	EAV-211-A22-M05FK-00	605026	o. r.
	2.2	0.13	165	G 1/8	16/3	NBR	EAV-211-A22-1/8BK-00	605027	o. r.
	2.2	0.13	165	G 1/8	16/3	FKM	EAV-211-A22-1/8FK-00	605028	o. r.
2.2	0.13	165	G 1/4	16/3	NBR	EAV-211-A22-1/4BK-00	605029	o. r.	
2.2	0.13	165	G 1/4	16/3	FKM	EAV-211-A22-1/4FK-00	605030	o. r.	
3	0.21	210	G 1/8	10/2	NBR	EAV-211-A30-1/8BK-00	605031	o. r.	
3	0.21	210	G 1/8	10/2	FKM	EAV-211-A30-1/8FK-00	605032	o. r.	
3	0.21	210	G 1/4	10/2	NBR	EAV-211-A30-1/4BK-00	605033	o. r.	
3	0.21	210	G 1/4	10/2	FKM	EAV-211-A30-1/4FK-00	605034	o. r.	
without manual override for all DC coils	1.2	0.05	50	M5	40/12.5	NBR	EAV-213-A12-M05BK-00	605051	o. r.
	1.2	0.05	50	M5	40/12.5	FKM	EAV-213-A12-M05FK-00	605052	o. r.
	1.2	0.05	50	G 1/8	40/12.5	NBR	EAV-213-A12-1/8BK-00	605053	o. r.
	1.2	0.05	50	G 1/8	40/12.5	FKM	EAV-213-A12-1/8FK-00	605054	o. r.
	1.5	0.06	68	M5	32/6	NBR	EAV-213-A15-M05BK-00	605057	o. r.
	1.5	0.06	68	M5	32/6	FKM	EAV-213-A15-M05FK-00	605058	o. r.
	1.5	0.06	68	G 1/8	32/6	NBR	EAV-213-A15-1/8BK-00	605059	o. r.
	1.5	0.06	68	G 1/8	32/6	FKM	EAV-213-A15-1/8FK-00	605060	o. r.
	1.8	0.11	125	M5	25/5	NBR	EAV-213-A18-M05BK-00	605063	o. r.
	1.8	0.11	125	M5	25/5	FKM	EAV-213-A18-M05FK-00	605064	o. r.
	1.8	0.11	125	G 1/8	25/5	NBR	EAV-213-A18-1/8BK-00	605065	o. r.
	1.8	0.11	125	G 1/8	25/5	FKM	EAV-213-A18-1/8FK-00	605066	o. r.
	2	0.12	145	M5	16/4	NBR	EAV-213-A20-M05BK-00	605069	o. r.
	2	0.12	145	M5	16/4	FKM	EAV-213-A20-M05FK-00	605070	o. r.
	2	0.12	145	G 1/8	16/4	NBR	EAV-213-A20-1/8BK-00	605071	o. r.
	2	0.12	145	G 1/8	16/4	FKM	EAV-213-A20-1/8FK-00	605072	o. r.
	2	0.12	145	G 1/4	16/4	NBR	EAV-213-A20-1/4BK-00	605073	o. r.
	2	0.12	145	G 1/4	16/4	FKM	EAV-213-A20-1/4FK-00	605074	o. r.
	2.2	0.13	165	M5	16/3	NBR	EAV-213-A22-M05BK-00	605075	o. r.
	2.2	0.13	165	M5	16/3	FKM	EAV-213-A22-M05FK-00	605076	o. r.
	2.2	0.13	165	G 1/8	16/3	NBR	EAV-213-A22-1/8BK-00	605077	o. r.
	2.2	0.13	165	G 1/8	16/3	FKM	EAV-213-A22-1/8FK-00	605078	o. r.
2.2	0.13	165	G 1/4	16/3	NBR	EAV-213-A22-1/4BK-00	605079	o. r.	
2.2	0.13	165	G 1/4	16/3	FKM	EAV-213-A22-1/4FK-00	605080	o. r.	
3	0.21	210	G 1/8	10/2	NBR	EAV-213-A30-1/8BK-00	605081	o. r.	
3	0.21	210	G 1/8	10/2	FKM	EAV-213-A30-1/8FK-00	605082	o. r.	
3	0.21	210	G 1/4	10/2	NBR	EAV-213-A30-1/4BK-00	605083	o. r.	
3	0.21	210	G 1/4	10/2	FKM	EAV-213-A30-1/4FK-00	605084	o. r.	
with manual override for all AC and DC coils	1.5	0.06	68	M5	12.5/6	NBR	EAV-221-A15-M05BK-00	605207	o. r.
	1.5	0.06	68	M5	12.5/6	FKM	EAV-221-A15-M05FK-00	605208	o. r.
	1.5	0.06	68	G 1/8	12.5/6	NBR	EAV-221-A15-1/8BK-00	605209	o. r.
	1.5	0.06	68	G 1/8	12.5/6	FKM	EAV-221-A15-1/8FK-00	605210	o. r.
	2	0.12	145	G 1/8	12.5/4	NBR	EAV-221-A20-1/8BK-00	605221	o. r.
	2	0.12	145	G 1/8	12.5/4	FKM	EAV-221-A20-1/8FK-00	605222	o. r.
	2	0.12	145	G 1/4	12.5/4	NBR	EAV-221-A20-1/4BK-00	605223	o. r.
	2	0.12	145	G 1/4	12.5/4	FKM	EAV-221-A20-1/4FK-00	605224	o. r.
	3	0.21	210	G 1/8	10/2	NBR	EAV-221-A30-1/8BK-00	605231	o. r.
	3	0.21	210	G 1/8	10/2	FKM	EAV-221-A30-1/8FK-00	605232	o. r.
3	0.21	210	G 1/4	10/2	NBR	EAV-221-A30-1/4BK-00	605233	o. r.	
3	0.21	210	G 1/4	10/2	FKM	EAV-221-A30-1/4FK-00	605234	o. r.	

Illustration


Version with M5 Ports








Version with G 1/8 Port



Version with G 1/4 Port

Permitted Operating Pressure for 2/2-Way Solenoid Valve - Type EAV Series 200

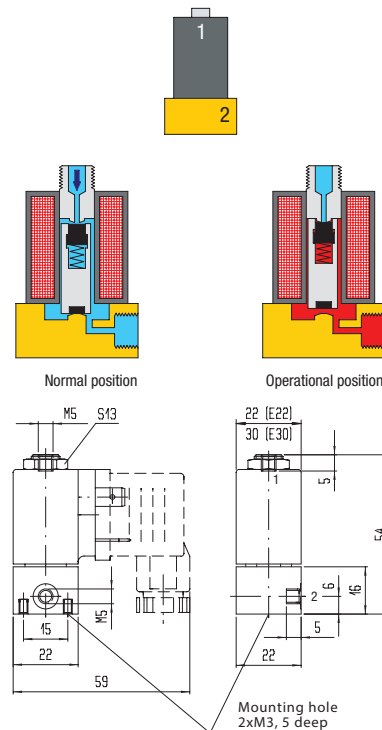
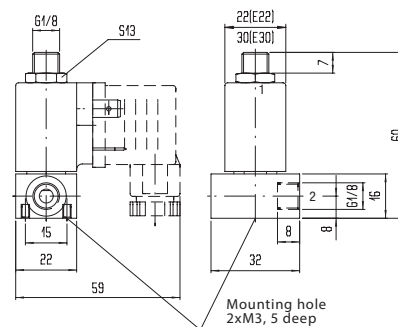
"A" normally closed NC

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz  90 %U _N Medium temperature			AC 60 Hz  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
1.2	EAV-211-A12..	40/16	E22...L.	3.5	on req.	2.5	16	13	12	16	13	12	15	10	9	8	6	4	9	8	7		
			E22...M.	5.5	5	5	40	35	30	40	35	30	30	25	20	20	18	15	23	21	20		
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	40	35	30	30	25	20	38	32	28
	E30...P.	12	10.5	8	40	35	30	40	35	30	40	35	30	40	35	30	40	35	30	40	35	30	
	EAV-213-A12..	40/12.5	E22...L.	-	-	2.5	-	-	-	-	-	-	-	15	10	9	8	6	4	9	9	7	
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	30	25	20	20	18	15	25	22	20
E22...H.			-	-	8	-	-	-	-	-	-	-	-	40	35	30	30	25	20	38	32	28	
E30...P.	-	-	8	-	-	-	-	-	-	-	-	40	35	30	40	35	30	40	35	30			
1.5	EAV-211-A15..	32/6	E22...L.	3.5	on req.	2.5	7	on req.	on req.	7	on req.	on req.	6	5	4	4	3	2	6	5	4		
			E22...M.	5.5	5	5	28	26	24	28	26	24	18	16	14	12	10	8	15	13	12		
			E22...H.	-	-	8	-	-	-	-	-	-	25	20	18	17	13	10	20	18	16		
	E30...P.	12	10.5	8	35	32	28	28	25	20	32	28	22	28	25	21	30	28	26				
	EAV-213-A15..	32/6	E22...L.	-	-	2.5	-	-	-	-	-	-	-	7	5	4	4	3	2	6	5	4	
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	18	16	14	12	10	8	16	14	13
			E22...H.	-	-	8	-	-	-	-	-	-	25	20	18	17	13	10	20	18	15		
	E30...P.	-	-	8	-	-	-	-	-	-	35	30	25	28	25	21	30	28	26				
	EAV-221-A15..	12.5/6	E22...L.	3.5	on req.	2.5	7	*	*	7	*	*	6	*	*	4	*	*	6	*	*		
E22...M.			5.5	5	5	12.5	*	*	12.5	*	*	12.5	*	*	12	*	*	12.5	*	*			
E22...H.			-	-	8	-	*	*	-	*	*	12.5	*	*	12.5	*	*	12.5	*	*			
E30...P.	12	10.5	8	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*					
1.8	EAV-211-A18..	32/6	E22...L.	3.5	on req.	2.5	6	on req.	on req.	6	on req.	on req.	5	4	3	3.5	2	1.5	5	4	3		
			E22...M.	5.5	5	5	20	19	18	20	18	17	12	10	8	8	7	6	12	10	9		
			E22...H.	-	-	8	-	-	-	-	-	-	19	17	14	13	10	8	16	14	10		
	E30...P.	12	10.5	8	30	25	22	20	18	16	24	22	18	23	21	18	25	23	22				
	EAV-213-A18..	25/5	E22...L.	-	-	2.5	-	-	-	-	-	-	-	5	4	3	3.5	2	1.5	5	4	3	
			E22...M.	-	-	5	-	-	-	-	-	-	12	10	8	8	7	6	12	10	9		
E22...H.			-	-	8	-	-	-	-	-	-	19	17	14	13	10	8	15	14	10			
E30...P.	-	-	8	-	-	-	-	-	-	28	25	21	20	18	15	24	22	18					
2	EAV-211-A20..	16/4	E22...L.	3.5	on req.	2.5	4	on req.	on req.	4	on req.	on req.	4	3	2.5	2.5	1.5	1.1	3	2.5	2		
			E22...M.	5.5	5	5	15	14	13	15	14	13	11	8	7	6	5	4.5	8	7	6		
			E22...H.	-	-	8	-	-	-	-	-	-	16	14	11	9	8	7	12	10	8		
	E30...P.	12	10.5	8	25	23	20	17	14	11	17	14	12	17	15	14	20	18	16				
	EAV-213-A20..	16/4	E22...L.	-	-	2.5	-	-	-	-	-	-	-	4	3	2.5	2.5	1.5	1	3	2.5	2	
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	11	8	7	6	5	4.5	8	7	6
			E22...H.	-	-	8	-	-	-	-	-	-	16	14	11	10	8	7	12	10	8		
	E30...P.	-	-	8	-	-	-	-	-	-	18	15	13	17	15	14	20	18	16				
	EAV-221-A20..	12.5/4	E22...L.	3.5	on req.	2.5	4	*	*	4	*	*	4	*	*	2.5	*	*	3	*	*		
E22...M.			5.5	5	5	12.5	*	*	12.5	*	*	11	*	*	6	*	*	8	*	*			
E22...H.			-	-	8	-	*	*	-	*	*	12.5	*	*	9	*	*	12	*	*			
E30...P.	12	10.5	8	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*					
2.2	EAV-211-A22..	16/3	E22...L.	3.5	on req.	2.5	3.5	3	2.5	3.5	on req.	on req.	3	2.5	2	1.5	1	0.8	2.5	2	1		
			E22...M.	5.5	5	5	14	13	12	14	13	12	4	3.5	3	3	2.5	2	3.5	3	2.5		
			E22...H.	-	-	8	-	-	-	-	-	-	13	11	8	7	5	4	9	7.5	6		
	E30...P.	12	10.5	8	16	14	13	16	14	13	16	13	11	13	12	11	16	14	12				
	EAV-213-A22..	16/3	E22...L.	-	-	2.5	-	-	-	-	-	-	-	3	2.5	2	1.5	1	0.8	2	1.5	1	
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	4	3.5	3	3	2.5	2	3.5	3	2.5
E22...H.			-	-	8	-	-	-	-	-	-	13	11	8	7	5.5	4	9	7	6			
E30...P.	-	-	8	-	-	-	-	-	-	16	13	11	13	12	11	16	14	12					
3	EAV-211-A30..	10/2	E22...L.	3.5	on req.	2.5	2	on req.	on req.	2	on req.	on req.	2	1.5	1.2	1.2	0.8	0.6	2.1	1.5	0.8		
			E22...M.	5.5	5	5	8	7	6	8	7	6	3.5	3	2.8	2.5	2	1.5	3	2.5	2		
			E22...H.	-	-	8	-	-	-	-	-	-	9	7	6	5	4	3	6	5	4		
	E30...P.	12	10.5	8	12	9	7	11	8	7	11	9	7	9	7	6	10	9	8				
	EAV-213-A30..	10/2	E22...L.	-	-	2.5	-	-	-	-	-	-	-	2	1.5	1.2	1.2	0.9	0.7	1.8	1.4	0.8	
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	3.5	3	2.8	2.5	2	1.5	3	2.5	2
			E22...H.	-	-	8	-	-	-	-	-	-	9	7	6	5	4	3	6	5	4		
	E30...P.	-	-	8	-	-	-	-	-	-	11	9	7	9	7	6	10	9	8				
	EAV-221-A30..	10/2	E22...L.	3.5	on req.	2.5	2	*	*	2	*	*	2	*	*	1.2	*	*	2	*	*		
E22...M.			5.5	5	5	8	*	*	8	*	*	3.5	*	*	2.5	*	*	2.5	*	*			
E22...H.			-	-	8	-	*	*	-	*	*	9	*	*	5	*	*	6	*	*			
E30...P.	12	10.5	8	12	*	*	11	*	*	11	*	*	9	*	*	10	*	*					



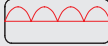
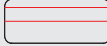
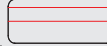
* Solenoid valves with manual override can only be used at medium temperatures up to max. 60 °C.

2/2-Way Solenoid Valve - Type EAV Series 200
Illustration

Version	DN	Kv-value water [m³/h]	Qn-value air [l/min]	G	PN	Sealing material	Type	Order number	Price
without manual override for AC and DC not for L-coils	1.2	0.05	48	M5	16	NBR	EAV-211-B12-M05B-00	605401	o. r.
	1.2	0.05	48	M5	16	FKM	EAV-211-B12-M05F-00	605402	o. r.
	1.2	0.05	48	G 1/8	16	NBR	EAV-211-B12-1/8B-00	605403	o. r.
	1.2	0.05	48	G 1/8	16	FKM	EAV-211-B12-1/8F-00	605404	o. r.
	1.5	0.06	65	M5	10	NBR	EAV-211-B15-M05B-00	605407	o. r.
	1.5	0.06	65	M5	10	FKM	EAV-211-B15-M05F-00	605408	o. r.
	1.5	0.06	65	G 1/8	10	NBR	EAV-211-B15-1/8B-00	605409	o. r.
	1.5	0.06	65	G 1/8	10	FKM	EAV-211-B15-1/8F-00	605410	o. r.
	1.8	0.1	110	M5	8	NBR	EAV-211-B18-M05B-00	605413	o. r.
	1.8	0.1	110	M5	8	FKM	EAV-211-B18-M05F-00	605414	o. r.
	1.8	0.1	110	G 1/8	8	NBR	EAV-211-B18-1/8B-00	605415	o. r.
	1.8	0.1	110	G 1/8	8	FKM	EAV-211-B18-1/8F-00	605416	o. r.
without manual override for DC not for L-coils	1.2	0.05	48	M5	16	NBR	EAV-213-B12-M05B-00	605426	o. r.
	1.2	0.05	48	M5	16	FKM	EAV-213-B12-M05F-00	605427	o. r.
	1.2	0.05	48	G 1/8	16	NBR	EAV-213-B12-1/8B-00	605428	o. r.
	1.2	0.05	48	G 1/8	16	FKM	EAV-213-B12-1/8F-00	605429	o. r.
	1.5	0.06	65	M5	10	NBR	EAV-213-B15-M05B-00	605432	o. r.
	1.5	0.06	65	M5	10	FKM	EAV-213-B15-M05F-00	605433	o. r.
	1.5	0.06	65	G 1/8	10	NBR	EAV-213-B15-1/8B-00	605434	o. r.
	1.5	0.06	65	G 1/8	10	FKM	EAV-213-B15-1/8F-00	605435	o. r.
	1.8	0.1	110	M5	8	NBR	EAV-213-B18-M05B-00	605438	o. r.
	1.8	0.1	110	M5	8	FKM	EAV-213-B18-M05F-00	605439	o. r.
	1.8	0.1	110	G 1/8	8	NBR	EAV-213-B18-1/8B-00	605440	o. r.
	1.8	0.1	110	G 1/8	8	FKM	EAV-213-B18-1/8F-00	605441	o. r.


Version with M 5 Ports

Version with G 1/8 Ports

Permitted Excess Operating Pressure OP for 2/2-Way Solenoid Valve - Type EAV Series 200

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz  90 %U _N Medium temperature			AC 60 Hz  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  100 %U _N Medium temperature			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
1.2	EAV-211-B12..	16	E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	14	13	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	EAV-213-B12..	16	E22...M.	-	-	5	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	-	-	8	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
1.5	EAV-211-B15..	10	E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10	
			E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10
			E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	EAV-213-B15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	9	10	10	10	
			E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10
			E30...P.	-	-	8	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10
1.8	EAV-211-B18..	8	E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	7	7	8	8	8	8	
			E22...H.	-	-	8	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8
			E30...P.	12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	EAV-213-B18..	8	E22...M.	-	-	5	-	-	-	-	-	-	8	8	8	7	7	8	8	8	8	
			E22...H.	-	-	8	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8
			E30...P.	-	-	8	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8

3/2-Way Solenoid Valve - Type EAV Series 200

 Price group **51**

"C" in 0-position "1" closed, "2" after "3" discharged

Brass

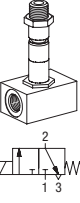
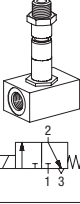
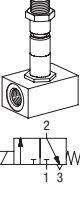
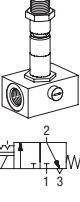
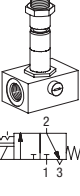
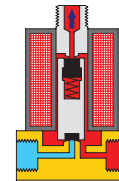
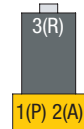
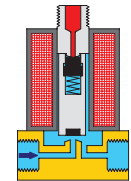
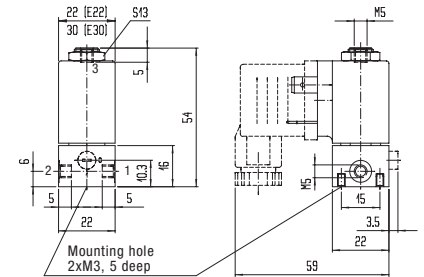
Version	DN	Kv-value Water [m ³ /h]	Qn-value air [l/min]	G	PN	Sealing material	Type	Order number	Price
without manual override for AC and DC not for L-coils 	1.2	1 > 2 0.05	1 > 2 50	M 5	12.5	NBR	EAV-211-C12-M05B-00	606001	o. r.
				M 5	12.5	FKM	EAV-211-C12-M05F-00	606002	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	12.5	NBR	EAV-211-C12-1/8B-00	606003	o. r.
				G 1/8	12.5	FKM	EAV-211-C12-1/8F-00	606004	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M 5	10	NBR	EAV-211-C15-M05B-00	606007	o. r.
				M 5	10	FKM	EAV-211-C15-M05F-00	606008	o. r.
		2 > 3 0.10	2 > 3 115	G 1/8	10	NBR	EAV-211-C15-1/8B-00	606009	o. r.
				G 1/8	10	FKM	EAV-211-C15-1/8F-00	606010	o. r.
1.8	1 > 2 0.11	1 > 2 120	M 5	8	NBR	EAV-211-C18-M05B-00	606013	o. r.	
			M 5	8	FKM	EAV-211-C18-M05F-00	606014	o. r.	
	2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-211-C18-1/8B-00	606015	o. r.	
			G 1/8	8	FKM	EAV-211-C18-1/8F-00	606016	o. r.	
without manual override for all AC and DC coils 	1.2	1 > 2 0.05	1 > 2 50	M 5	10	NBR	EAV-215-C12-M05B-00	606051	o. r.
				M 5	10	FKM	EAV-215-C12-M05F-00	606052	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	10	NBR	EAV-215-C12-1/8B-00	606053	o. r.
				G 1/8	10	FKM	EAV-215-C12-1/8F-00	606054	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M 5	8	NBR	EAV-215-C15-M05B-00	606057	o. r.
				M 5	8	FKM	EAV-215-C15-M05F-00	606058	o. r.
		2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-215-C15-1/8B-00	606059	o. r.
				G 1/8	8	FKM	EAV-215-C15-1/8F-00	606060	o. r.
	1.8	1 > 2 0.06	1 > 2 68	M 5	10	NBR	EAV-213-C12-M05B-00	606026	o. r.
				M 5	12.5	FKM	EAV-213-C12-M05F-00	606027	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	12.5	NBR	EAV-213-C12-1/8B-00	606028	o. r.
				G 1/8	12.5	FKM	EAV-213-C12-1/8F-00	606029	o. r.
1.5	1 > 2 0.06	1 > 2 68	M 5	10	NBR	EAV-213-C15-M05B-00	606032	o. r.	
			M 5	10	FKM	EAV-213-C15-M05F-00	606033	o. r.	
	2 > 3 0.10	2 > 3 115	G 1/8	10	NBR	EAV-213-C15-1/8B-00	606034	o. r.	
			G 1/8	10	FKM	EAV-213-C15-1/8F-00	606035	o. r.	
1.8	1 > 2 0.11	1 > 2 120	M 5	8	NBR	EAV-213-C18-M05B-00	606038	o. r.	
			M 5	8	FKM	EAV-213-C18-M05F-00	606039	o. r.	
	2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-213-C18-1/8B-00	606040	o. r.	
			G 1/8	8	FKM	EAV-213-C18-1/8F-00	606041	o. r.	
without manual override for all DC coils 	1.2	1 > 2 0.05	1 > 2 50	M 5	10	NBR	EAV-217-C12-M05B-00	606076	o. r.
				M 5	10	FKM	EAV-217-C12-M05F-00	606077	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	10	NBR	EAV-217-C12-1/8B-00	606078	o. r.
				G 1/8	10	FKM	EAV-217-C12-1/8F-00	606079	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M 5	10	NBR	EAV-217-C15-M05B-00	606082	o. r.
				M 5	8	FKM	EAV-217-C15-M05F-00	606083	o. r.
		2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-217-C15-1/8B-00	606084	o. r.
				G 1/8	8	FKM	EAV-217-C15-1/8F-00	606085	o. r.
with manual override for AC and DC not for L-coils 	1.2	1 > 2 0.05	1 > 2 50	M 5	12.5	NBR	EAV-221-C12-M05B-00	606151	o. r.
				M 5	12.5	FKM	EAV-221-C12-M05F-00	606152	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	12.5	NBR	EAV-221-C12-1/8B-00	606153	o. r.
				G 1/8	12.5	FKM	EAV-221-C12-1/8F-00	606154	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M 5	10	NBR	EAV-221-C15-M05B-00	606157	o. r.
				M 5	10	FKM	EAV-221-C15-M05F-00	606158	o. r.
		2 > 3 0.10	2 > 3 115	G 1/8	10	NBR	EAV-221-C15-1/8B-00	606159	o. r.
				G 1/8	10	FKM	EAV-221-C15-1/8F-00	606160	o. r.
1.8	1 > 2 0.11	1 > 2 120	M 5	8	NBR	EAV-221-C18-M05B-00	606163	o. r.	
			M 5	8	FKM	EAV-221-C18-M05F-00	606164	o. r.	
	2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-221-C18-1/8B-00	606165	o. r.	
			G 1/8	8	FKM	EAV-221-C18-1/8F-00	606166	o. r.	
with manual override for all AC and DC coils 	1.2	1 > 2 0.05	1 > 2 50	M 5	10	NBR	EAV-225-C12-M05B-00	606201	o. r.
				M 5	10	FKM	EAV-225-C12-M05F-00	606202	o. r.
		2 > 3 0.06	2 > 3 65	G 1/8	10	NBR	EAV-225-C12-1/8B-00	606203	o. r.
				G 1/8	10	FKM	EAV-225-C12-1/8F-00	606204	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M 5	8	NBR	EAV-225-C15-M05B-00	606207	o. r.
				M 5	8	FKM	EAV-225-C15-M05F-00	606208	o. r.
		2 > 3 0.10	2 > 3 115	G 1/8	8	NBR	EAV-225-C15-1/8B-00	606209	o. r.
				G 1/8	8	FKM	EAV-225-C15-1/8F-00	606210	o. r.

Illustration


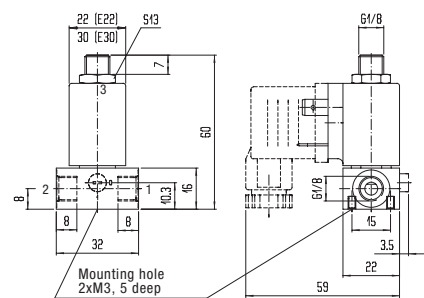
Normal position



Operational position





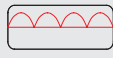
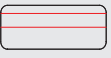
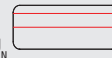
Version with M5 Ports



Version with G 1/8 Ports

Permitted Operating Pressure for 3/2-Way Solenoid Valve - Type EAV Series 200

 "C" in 0-position "1" closed, "2"
after "3" discharged

DN	Type	PN	Combinable solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																			
			Type	Nominal power P ₂₀			AC 50 Hz  90 %U _N Medium temperature			AC 60 Hz  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  100 %U _N Medium temperature						
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C				
1.2	EAV-211-C12..	12.5	E22...M.	5.5	5	5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5			
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
			E30...P.	12	10.5	8	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
	EAV-215-C12..	10	E22...L.	3.5	on req.	2.5	10	-	-	10	-	-	10	10**	10**	10**	10**	10**	10	10**	10**	10	10**	10**	
			E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10
	E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
		EAV-213-C12..	12.5	E22...M.	-	-	5	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
				E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	E30...P.			-	-	8	-	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	EAV-217-C12..	10	E22...L.	-	-	2.5	-	-	-	-	-	-	-	10	10**	10**	10**	10**	10**	10	10**	10**	10	10**	10**
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10
	E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	
		EAV-221-C12..	12.5	E22...M.	5.5	5	5	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*
E22...H.				-	-	8	-	-	-	-	-	-	-	-	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*
E30...P.	12			10.5	8	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*
EAV-225-C12..	10	E22...L.	3.5	on req.	2.5	10	-	-	10	-	-	10	*	*	10**	*	*	10	*	*	10	*	*		
		E22...M.	5.5	5	5	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	*	*	10	*	*	10	*	*	10	*	*
E30...P.	12	10.5	8	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
	1.5	EAV-211-C15..	10	E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
				E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10
E30...P.				12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
EAV-215-C15..	8	E22...L.	3.5	on req.	2.5	8	8	-	-	-	-	-	8	8	8**	8	8**	8**	8	8**	8**	8	8**	8**	
		E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8	
E30...P.	12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
	EAV-213-C15..	10	E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	
E30...P.			-	-	8	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	
EAV-217-C15..	8	E22...L.	-	-	2.5	-	-	-	-	-	-	-	8	8**	8**	8**	8**	8**	8	8**	8**	8	8**	8**	
		E22...M.	-	-	5	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8	
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8	
E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8		
	EAV-221-C15..	10	E22...M.	5.5	5	5	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	10	*	*	10	*	*	10	*	*	10	*
E30...P.			12	10.5	8	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	10	*
EAV-225-C15..	8	E22...L.	3.5	on req.	2.5	8	*	*	-	*	*	8	*	*	8	*	*	8	*	*	8	*	*		
		E22...M.	5.5	5	5	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	*	*	8	*	*	8	*	*	8	*	*
E30...P.	12	10.5	8	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	
	1.8	EAV-211-C18..	8	E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
				E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8
E30...P.				12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
EAV-213-C18..	10	E22...M.	-	-	5	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8		
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8	
		E30...P.	-	-	8	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	8	
EAV-221-C18..	10	E22...M.	5.5	5	5	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*		
		E22...H.	-	-	8	-	-	-	-	-	-	-	-	8	*	*	8	*	*	8	*	*	8	*	
		E30...P.	12	10.5	8	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	8	*

* Solenoid valves with manual override can only be used at medium temperatures up to max. 60 °C. ** Minimum pressure of 2 bar required

3/2-Way Solenoid Valve Type EAV Series 200

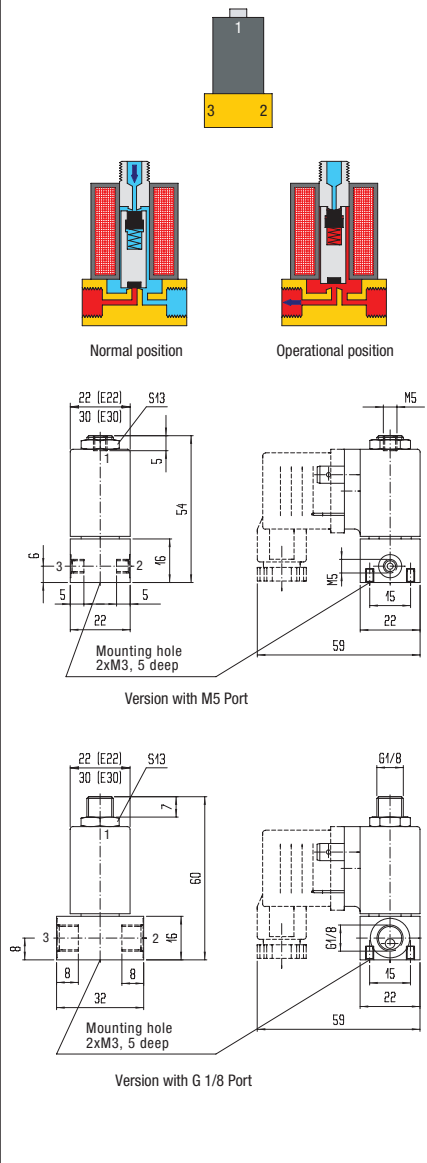
 Price group **51**

Switching mode "D" in 0 position "1" to "2" open, "3" closed

Permitted operating pressure Table below

Brass

Version	DN	Kv-value water [m³/h]	Qn-value air [l/min]	G	PN	Sealing material	Type	Order number	Price
without manual override for AC and DC not for L-coils	1.2	1 > 2 0.05	1 > 2 48	M5	16	NBR	EAV-211-D12-M05B-00	606301	o. r.
				M5	16	FKM	EAV-211-D12-M05F-00	606302	o. r.
		2 > 3 0.06	2 > 3 68	G 1/8	16	NBR	EAV-211-D12-1/8B-00	606303	o. r.
				G 1/8	16	FKM	EAV-211-D12-1/8F-00	606304	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M5	10	NBR	EAV-211-D15-M05B-00	606307	o. r.
				M5	10	FKM	EAV-211-D15-M05F-00	606308	o. r.
		2 > 3 0.11	2 > 3 125	G 1/8	10	NBR	EAV-211-D15-1/8B-00	606309	o. r.
				G 1/8	10	FKM	EAV-211-D15-1/8F-00	606310	o. r.
	1.8	1 > 2 0.10	1 > 2 115	M5	8	NBR	EAV-211-D18-M05B-00	606313	o. r.
				M5	8	FKM	EAV-211-D18-M05F-00	606314	o. r.
		2 > 3 0.11	2 > 3 125	G 1/8	8	NBR	EAV-211-D18-1/8B-00	606315	o. r.
				G 1/8	8	FKM	EAV-211-D18-1/8F-00	606316	o. r.
without manual override for DC not for L-coils	1.2	1 > 2 0.05	1 > 2 48	M5	16	NBR	EAV-213-D12-M05B-00	606326	o. r.
				M5	16	FKM	EAV-213-D12-M05F-00	606327	o. r.
		2 > 3 0.06	2 > 3 68	G 1/8	16	NBR	EAV-213-D12-1/8B-00	606328	o. r.
				G 1/8	16	FKM	EAV-213-D12-1/8F-00	606329	o. r.
	1.5	1 > 2 0.06	1 > 2 68	M5	10	NBR	EAV-213-D15-M05B-00	606332	o. r.
				M5	10	FKM	EAV-213-D15-M05F-00	606333	o. r.
		2 > 3 0.11	2 > 3 125	G 1/8	10	NBR	EAV-213-D15-1/8B-00	606334	o. r.
				G 1/8	10	FKM	EAV-213-D15-1/8F-00	606335	o. r.
	1.8	1 > 2 0.10	1 > 2 115	M5	8	NBR	EAV-213-D18-M05B-00	606338	o. r.
				M5	8	FKM	EAV-213-D18-M05F-00	606339	o. r.
		2 > 3 0.11	2 > 3 125	G 1/8	8	NBR	EAV-213-D18-1/8B-00	606340	o. r.
				G 1/8	8	FKM	EAV-213-D18-1/8F-00	606341	o. r.

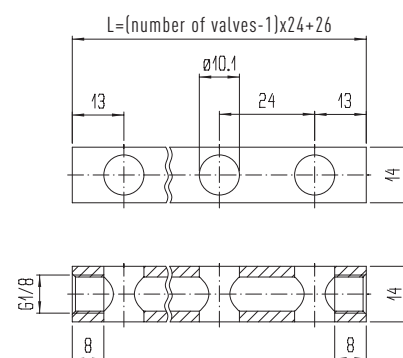
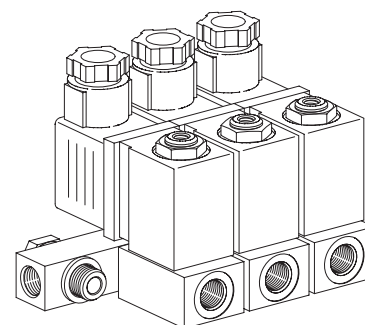
Illustration

Permitted Excess Operating Pressure OP for 3/2-Way Solenoid Valve - Type EAV Series 200

DN	Type	PN	Combinable solenoid coils			Permitted excess operating pressure OP [bar] at ambient temperature +60 °C																								
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature					AC 60 Hz 90 %U _N Medium temperature					DC 90 %U _N Medium temperature					DC 100 %U _N Medium temperature								
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C			90 °C			60 °C			90 °C			60 °C			90 °C			60 °C			90 °C		
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C									
1.2	EAV-211-D12..	16	E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	14	13	16	16	16									
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16								
	EAV-213-D12..	16	E22...M.	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
1.5	EAV-211-D15..	10	E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	9	10	10	10	10									
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
			E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
	EAV-213-D15..	10	E22...M.	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
1.8	EAV-211-D18..	8	E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	7	7	8	8	8										
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
			E30...P.	12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8										
	EAV-213-D18..	8	E22...M.	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-											
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-											
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-											

Power Bar Type ZAV Series 100 to Solenoid Valve EAV Series 200

 Price group **51**
Brass

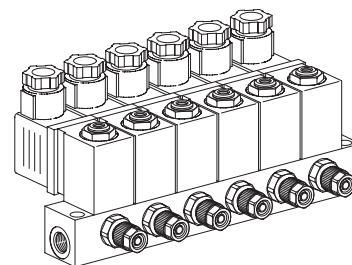
Manifold version	G	Type	order number	Price
2-fold	G 1/8	ZAV-100/02-1/8	500192	o. r.
3-fold	G 1/8	ZAV-100/03-1/8	500193	o. r.
4-fold	G 1/8	ZAV-100/04-1/8	500194	o. r.
5-fold	G 1/8	ZAV-100/05-1/8	500195	o. r.
6-fold	G 1/8	ZAV-100/06-1/8	500196	o. r.
7-fold	G 1/8	ZAV-100/07-1/8	500197	o. r.
8-fold	G 1/8	ZAV-100/08-1/8	500198	o. r.
9-fold	G 1/8	ZAV-100/09-1/8	500199	o. r.
10-fold	G 1/8	ZAV-100/10-1/8	500200	o. r.
11-fold	G 1/8	ZAV-100/11-1/8	500201	o. r.
12-fold	G 1/8	ZAV-100/12-1/8	500202	o. r.
single banjo bolt, short	G 1/8	163M-11-1/8N	304026	o. r.
Plug	G 1/8	261M-1/8	251403	o. r.
Plastic sealing ring		266N-1/8x1.5	252921	o. r.

Illustration

Example


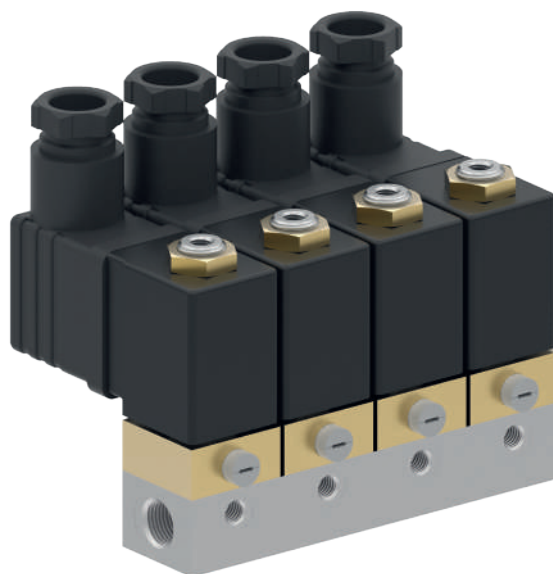
Solenoid valve batterv EAV

Special Solenoid Valves

AVS Römer also manufactures special versions according to customer requirements, e.g. multiple solenoid valves

Illustration




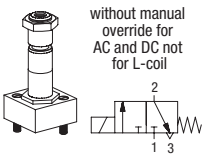
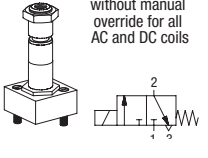
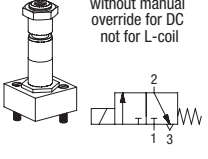
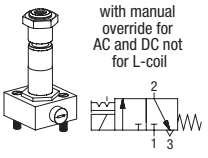
DIGMA Solenoid Valves Type EAV Series 300

FEATURES
GENERAL

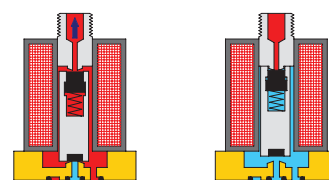
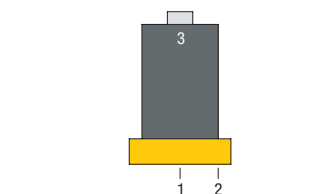
Constructional design	Seat valve, rubber seals
Product name	3/2-way flange solenoid valve
Actuation	electrical, direct-acting
Product type	EAV-3..-C..
Function	"C" in 0 position "1" closed, "2" after "3" discharged (closing against flow)
Nominal diameter	DN 1.2 to DN 1.8
Connections	Flange according to factory standard
Ambient temperature	-20 °C to +60 °C (others on request)
Medium temperature	for NBR: -10 °C to +90 °C for FKM: -10 °C to +130 °C (for restrictions see table)
Medium viscosity	up to approx. 20 mm ² /s
Valve body material	Brass
Manual material	PPE (Polyphenylene ether)
Seat nozzle material	Stainless steel
Other internal components material	Stainless steel and non-ferrous metal. DC version with FKM seal non-ferrous metal-free
Sealing material	NBR (nitrile rubber) or FKM (fluoride rubber) (others on request)
Mounting method	by 2 through bores in the valve body
Mounting position	optional, preferably upright
PNEUMATIC - HYDRAULIC	
Nominal pressure	according to type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure PB in bar at 60 °C ambient temperature and 60 °C medium temperature.
Pressure range	technical vacuum up to permitted operating pressure PB. For exceptions which refer to minimum permitted operating pressure see table.
Flow rate	Kv-value and QNn-value according to type table
Medium	gaseous or liquid media sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases sealing material FKM: e.g. solvents, hot water, hot air
Response time	Opening time: 7 - 20 ms, closing time: 12 - 20 ms
Electric	see under solenoid coils

3/2-Way Solenoid Valve - Type EAV Series 300
Illustration

 Price group **51** "C" in 0-position "1" closed, "2" after "3" discharged

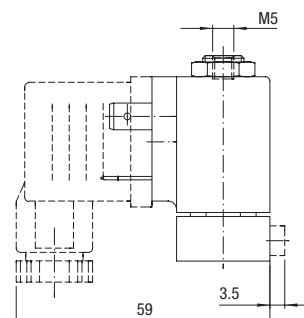
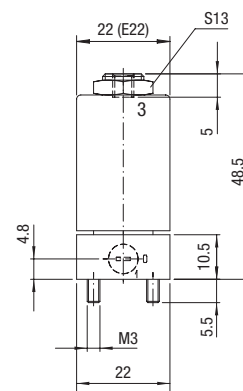
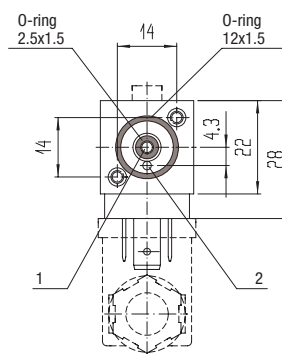
Brass

Version	DN	Kv-value water [m³/h]	QnN-value air [l/min]	PN	Sealing material	Type	Order number	Price
	1.2	1 > 2 0.05	1 > 2 50	12.5	NBR	EAV-311-C12-FL1B-00	609201	o. r.
		2 > 3 0.06	2 > 3 65	12.5	FKM	EAV-311-C12-FL1F-00	609202	o. r.
	1.5	1 > 2 0.06	1 > 2 68	10	NBR	EAV-311-C15-FL1B-00	609203	o. r.
		2 > 3 0.10	2 > 3 115	10	FKM	EAV-311-C15-FL1F-00	609204	o. r.
	1.8	1 > 2 0.11	1 > 2 120	8	NBR	EAV-311-C18-FL1B-00	609205	o. r.
		2 > 3 0.10	2 > 3 115	8	FKM	EAV-311-C18-FL1F-00	609206	o. r.
	1.2	1 > 2 0.05	1 > 2 50	10	NBR	EAV-315-C12-FL1B-00	609217	o. r.
		2 > 3 0.05	2 > 3 50	10	FKM	EAV-315-C12-FL1F-00	609218	o. r.
	1.5	1 > 2 0.06	1 > 2 68	8	NBR	EAV-315-C15-FL1B-00	609219	o. r.
		2 > 3 0.06	2 > 3 68	8	FKM	EAV-315-C15-FL1F-00	609220	o. r.
	1.2	1 > 2 0.05	1 > 2 50	12.5	NBR	EAV-313-C12-FL1B-00	609209	o. r.
		2 > 3 0.06	2 > 3 65	12.5	FKM	EAV-313-C12-FL1F-00	609210	o. r.
1.5	1 > 2 0.06	1 > 2 68	10	NBR	EAV-313-C15-FL1B-00	609211	o. r.	
	2 > 3 0.10	2 > 3 115	10	FKM	EAV-313-C15-FL1F-00	609212	o. r.	
1.8	1 > 2 0.11	1 > 2 120	8	NBR	EAV-313-C18-FL1B-00	609213	o. r.	
	2 > 3 0.10	2 > 3 115	8	FKM	EAV-313-C18-FL1F-00	609214	o. r.	
	1.2	1 > 2 0.05	1 > 2 50	10	NBR	EAV-317-C12-FL1B-00	609225	o. r.
		2 > 3 0.05	2 > 3 50	10	FKM	EAV-317-C12-FL1F-00	609226	o. r.
	1.5	1 > 2 0.06	1 > 2 68	8	NBR	EAV-317-C15-FL1B-00	609227	o. r.
		2 > 3 0.06	2 > 3 68	8	FKM	EAV-317-C15-FL1F-00	609228	o. r.
	1.2	1 > 2 0.05	1 > 2 50	12.5	NBR	EAV-321-C12-FL1B-00	609251	o. r.
		2 > 3 0.06	2 > 3 65	12.5	FKM	EAV-321-C12-FL1F-00	609252	o. r.
1.5	1 > 2 0.06	1 > 2 68	10	NBR	EAV-321-C15-FL1B-00	609253	o. r.	
	2 > 3 0.10	2 > 3 115	10	FKM	EAV-321-C15-FL1F-00	609254	o. r.	
1.8	1 > 2 0.11	1 > 2 120	8	NBR	EAV-321-C18-FL1B-00	609255	o. r.	
	2 > 3 0.10	2 > 3 115	8	FKM	EAV-321-C18-FL1F-00	609256	o. r.	
	1.2	1 > 2 0.05	1 > 2 50	10	NBR	EAV-325-C12-FL1B-00	609267	o. r.
		2 > 3 0.05	2 > 3 50	10	FKM	EAV-325-C12-FL1F-00	609268	o. r.
	1.5	1 > 2 0.06	1 > 2 68	8	NBR	EAV-325-C15-FL1B-00	609269	o. r.
		2 > 3 0.06	2 > 3 68	8	FKM	EAV-325-C15-FL1F-00	609270	o. r.



Normal position

Operational position



Permitted Operating Pressure for 3/2-way Flange Solenoid Valve - Type EAV Series 300

“C” in 0-position “1” closed,
“2” after “3” discharged

DN	Type	PN	Combined solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60°C	90°C	130°C	60°C	90°C	130°C	60°C	90°C	130°C	60°C	90°C	130°C	60°C	90°C	130°C	
1.2	EAV-311-C12..	12.5	E22...M.	5.5	5	5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5
			E30...P.	12	10.5	8	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	EAV-315-C12..	10	E22...L.	3.5	on req.	2.5	10	-	-	10	-	-	10	10**	10**	10**	10**	10**	10	10**	10**	
			E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10
			E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	EAV-313-C12..	12.5	E22...M.	-	-	5	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
			E22...H.	-	-	8	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
			E30...P.	-	-	8	-	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
	EAV-317-C12..	10	E22...L.	-	-	2.5	-	-	-	-	-	-	10	10**	10**	10**	10**	10	10**	10**		
			E22...M.	-	-	5	-	-	-	-	-	-	10	10	10	10	10	10	10	10		
			E22...H.	-	-	8	-	-	-	-	-	-	10	10	10	10	10	10	10	10		
			E30...P.	-	-	8	-	-	-	-	-	-	10	10	10	10	10	10	10	10		
	EAV-321-C12..	12.5	E22...M.	5.5	5	5	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	
			E22...H.	-	-	8	-	-	-	-	-	-	12.5	*	*	12.5	*	*	12.5	*	*	
			E30...P.	12	10.5	8	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	12.5	*	*	
	EAV-325-C12..	10	E22...L.	3.5	on req.	2.5	10	-	-	10	-	-	10	*	*	10**	*	*	10	*	*	
			E22...M.	5.5	5	5	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
			E22...H.	-	-	8	-	-	-	-	-	-	10	*	*	10	*	*	10	*	*	
			E30...P.	12	10.5	8	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
	1.5	EAV-311-C15..	10	E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
				E22...H.	-	-	8	-	-	-	-	-	-	-	10	10	10	10	10	10	10	
				E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
EAV-315-C15..		8	E22...L.	3.5	on req.	2.5	8	8	-	-	-	-	8	8	8**	8	8**	8**	8	8**	8**	
			E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
			E22...H.	-	-	8	-	-	-	-	-	-	8	8	8	8	8	8	8	8		
			E30...P.	12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
EAV-313-C15..		10	E22...M.	-	-	5	-	-	-	-	-	10	10	10	10	10	10	10	10	10		
			E22...H.	-	-	8	-	-	-	-	-	10	10	10	10	10	10	10	10			
			E30...P.	-	-	8	-	-	-	-	-	10	10	10	10	10	10	10	10			
EAV-317-C15..		8	E22...L.	-	-	2.5	-	-	-	-	-	8	8**	8**	8**	8**	8**	8	8**	8**		
			E22...M.	-	-	5	-	-	-	-	-	8	8	8	8	8	8	8	8			
			E22...H.	-	-	8	-	-	-	-	-	8	8	8	8	8	8	8	8			
			E30...P.	-	-	8	-	-	-	-	-	8	8	8	8	8	8	8	8			
EAV-321-C15..		10	E22...M.	5.5	5	5	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
			E22...H.	-	-	8	-	-	-	-	-	10	*	*	10	*	*	10	*	*		
			E30...P.	12	10.5	8	10	*	*	10	*	*	10	*	*	10	*	*	10	*	*	
EAV-325-C15..		8	E22...L.	3.5	on req.	2.5	8	*	*	-	-	-	8	*	*	8	*	*	8	*	*	
			E22...M.	5.5	5	5	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	
			E22...H.	-	-	8	-	-	-	-	-	8	*	*	8	*	*	8	*	*		
			E30...P.	12	10.5	8	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	
1.8		EAV-311-C18..	8	E22...M.	5.5	5	5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
				E22...H.	-	-	8	-	-	-	-	-	-	8	8	8	8	8	8	8	8	
				E30...P.	12	10.5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	EAV-313-C18..	8	E22...M.	-	-	5	-	-	-	-	-	8	8	8	8	8	8	8	8			
			E22...H.	-	-	8	-	-	-	-	-	8	8	8	8	8	8	8	8			
			E30...P.	-	-	8	-	-	-	-	-	8	8	8	8	8	8	8	8			
	EAV-321-C18..	8	E22...M.	5.5	5	5	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	
			E22...H.	-	-	8	-	-	-	-	-	8	*	*	8	*	*	8	*	*		
			E30...P.	12	10.5	8	8	*	*	8	*	*	8	*	*	8	*	*	8	*	*	

* Solenoid valves with manual override can only be used at medium temperatures up to max. 60 °C. ** Minimum pressure of 2 bar required

3/2-Way Solenoid Valve Battery - Type EAV Series 300

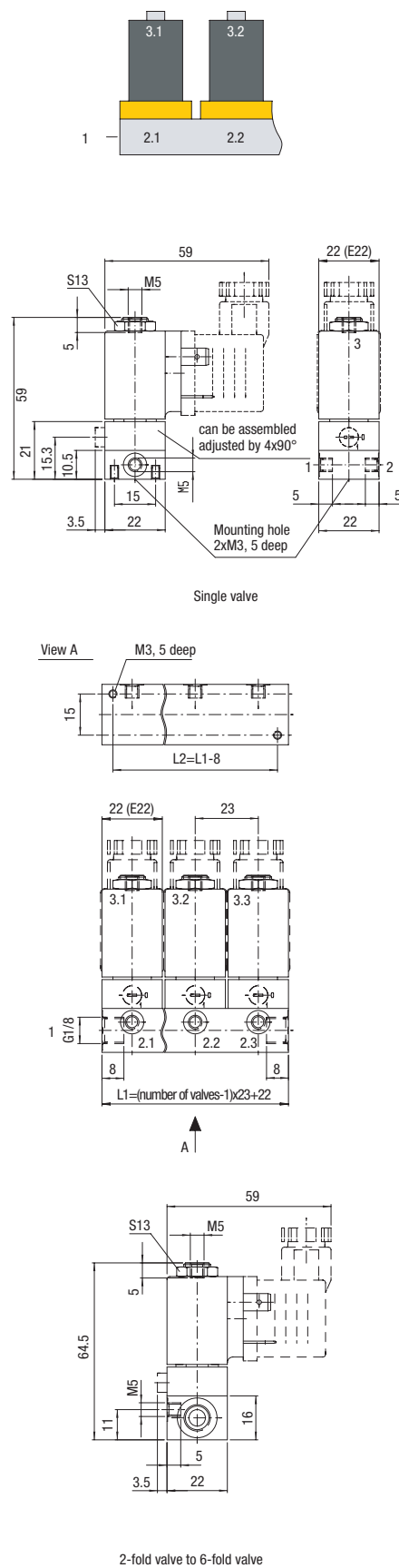
 Price group **51** "C" in 0 position "1" closed, "2" after "3" discharge

Brass

Material single manifold: Ms, multiple manifold: aluminium alloy, sealing material: NBR, solenoid valves: see type EAV series 300

Kv-value water [m³/h], QNn-value air [l/min] see type EAV series 300

Version	PN	Type	Order number	Price	
	without manual override for AC and DC not for L-coil	10	EAV-311/01-C15-M05B	609601	o. r.
	without manual override for all AC and DC coils	8	EAV-315/01-C15-M05B	609625	o. r.
	without manual override for DC not for L-coil	10	EAV-313/01-C15-M05B	609613	o. r.
	without manual override for all DC coils	8	EAV-317/01-C15-M05B	609637	o. r.
	without manual override, for E22, AC and DC not for L-coil	10	EAV-311/02-C15-M05B	609602	o. r.
	without manual override, for all E22, AC and DC coils	8	EAV-315/02-C15-M05B	609626	o. r.
	without manual override, for all E22, DC not for L-coil	10	EAV-313/02-C15-M05B	609614	o. r.
	without manual override, for all E22, DC coils	8	EAV-317/02-C15-M05B	609638	o. r.
	without manual override, for E22, AC and DC not for L-coil	10	EAV-311/03-C15-M05B	609603	o. r.
	without manual override, for all E22, AC and DC coils	8	EAV-315/03-C15-M05B	609627	o. r.
	without manual override, for all E22, DC not for L-coil	10	EAV-313/03-C15-M05B	609615	o. r.
	without manual override, for all E22, DC coils	8	EAV-317/03-C15-M05B	609639	o. r.
	without manual override, for E22, AC and DC not for L-coil	10	EAV-311/04-C15-M05B	609604	o. r.
	without manual override, for all E22, AC and DC coils	8	EAV-315/04-C15-M05B	609628	o. r.
	without manual override, for all E22, DC not for L-coil	10	EAV-313/04-C15-M05B	609616	o. r.
	without manual override, for all E22, DC coils	8	EAV-317/04-C15-M05B	609640	o. r.
	without manual override, for E22, AC and DC not for L-coil	10	EAV-311/05-C15-M05B	609605	o. r.
	without manual override, for all E22, AC and DC coils	8	EAV-315/05-C15-M05B	609629	o. r.
	without manual override, for all E22, DC not for L-coil	10	EAV-313/05-C15-M05B	609617	o. r.
	without manual override, for all E22, DC coils	8	EAV-317/05-C15-M05B	609641	o. r.
	without manual override, for E22, AC and DC not for L-coil	10	EAV-311/06-C15-M05B	609606	o. r.
	without manual override, for all E22, AC and DC coils	8	EAV-315/06-C15-M05B	609630	o. r.
	without manual override, for all E22, DC not for L-coil	10	EAV-313/06-C15-M05B	609618	o. r.
	without manual override, for all E22, DC coils	8	EAV-317/06-C15-M05B	609642	o. r.
	with manual override for AC and DC not for L-coil	10	EAV-321/01-C15-M05B	609651	o. r.
	with manual override for all AC and DC coils	8	EAV-325/01-C15-M05B	609675	o. r.
	with manual override, for E22, AC and DC not for L-coil	10	EAV-321/02-C15-M05B	609652	o. r.
	with manual override, for all E22, AC and DC coils	8	EAV-325/02-C15-M05B	609676	o. r.
	with manual override, for E22, AC and DC not for L-coil	10	EAV-321/03-C15-M05B	609653	o. r.
	with manual override, for all E22, AC and DC coils	8	EAV-325/03-C15-M05B	609677	o. r.
	with manual override, for E22, AC and DC not for L-coil	10	EAV-321/04-C15-M05B	609654	o. r.
	with manual override, for all E22, AC and DC coils	8	EAV-325/04-C15-M05B	609678	o. r.
	with manual override, for E22, AC and DC not for L-coil	10	EAV-321/05-C15-M05B	609655	o. r.
	with manual override, for all E22, AC and DC coils	8	EAV-325/05-C15-M05B	609679	o. r.
	with manual override, for E22, AC and DC not for L-coil	10	EAV-321/06-C15-M05B	609656	o. r.
	with manual override, for all E22, AC and DC coils	8	EAV-325/06-C15-M05B	609680	o. r.

Illustration


Permitted Operating Pressure for 3/2-Way Solenoid Valve Battery - Type EAV Series 300

"C" in 0 position "1" closed,
"2" after "3" discharge

DN	Type	PN	Combined solenoid coils			Permitted operating pressure [bar] at ambient temperature +60 °C										
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature		AC 60 Hz 90 %U _N Medium temperature		DC 90 %U _N Medium temperature		DC 90 %U _N Medium temperature		DC 100 %U _N Medium temperature	
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60°C	90°C	60°C	90°C	60°C	90°C	60°C	90°C	60°C	90°C
1.5	EAV-311/...-C15..	10	E22...M.	5.5	5	5	10	-	10	-	10	-	10	-	10	-
			E22...H.	-	-	8	-	-	-	-	10	-	10	-	10	-
	EAV-315/...-C15..	8	E22...L.	3.5	on req.	2.5	8	-	8	-	8	8**	8	8**	8	8**
			E22...M.	5.5	5	5	8	8	8	8	8	-	8	-	-	-
	EAV-313/...-C15..	10	E22...M.	-	-	5	-	-	-	-	10	-	10	-	10	-
			E22...H.	-	-	8	-	-	-	-	10	-	10	-	10	-
	EAV-317/...-C15..	8	E22...L.	-	-	2.5	-	-	-	-	8	8**	8	8**	8	8**
			E22...M.	-	-	5	-	-	-	-	8	-	8	-	8	-
			E22...H.	-	-	8	-	-	-	-	8	-	8	-	8	-
	EAV-321/...-C15..	10	E22...M.	5.5	5	5	10	-	10	-	10	-	10	-	10	-
			E22...H.	-	-	8	-	-	-	-	10	-	10	-	10	-
	EAV-325/...-C15..	8	E22...L.	3.5	on req.	2.5	8	*	8	*	8	*	8**	*	8**	*
			E22...M.	5.5	5	5	8	-	8	*	8	-	8	-	8	-
			E22...H.	-	-	8	-	-	-	-	8	-	8	-	8	-

* Solenoid valves with manual override can only be used at medium temperatures up to max. 60 °C.

** Minimum pressure of 2 bar required

Collector Manifold for Solenoid Valve - Type EAV Type ZAV Series 300

Price group **51**

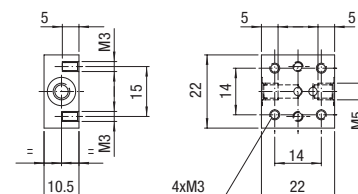
Alu blank

Solenoid valves type EAV series 300 can be assembled on the single and collector manifold. Single manifold made of Ms, multiple manifold made of aluminium alloy.

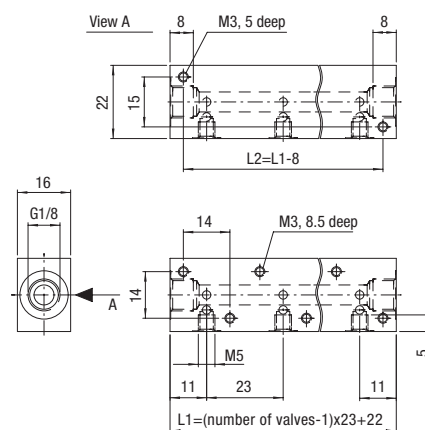
The collector manifold can however only be equipped with solenoid coils type E22. The permitted highest medium temperature is generally limited as follows:

solenoid coils E22-...L. 90 °C
solenoid coils E22-...M. and E22-...H. 60 °C

Manifold	G	Type	Order number	Price
single manifold	M 5	ZAV-310-M05U	500269	a. A.
collector manifold 2-fold	pressure inlet "P": G 1/8 Outlet "A": M5	ZAV-310/02-M05A	500302	a. A.
collector manifold 3-fold	pressure inlet "P": G 1/8 Outlet "A": M5	ZAV-310/03-M05A	500303	a. A.
collector manifold 4-fold	pressure inlet "P": G 1/8 Outlet "A": M5	ZAV-310/04-M05A	500304	a. A.
collector manifold 5-fold	pressure inlet "P": G 1/8 Outlet "A": M5	ZAV-310/05-M05A	500305	a. A.
collector manifold 6-fold	pressure inlet "P": G 1/8 Outlet "A": M5	ZAV-310/06-M05A	500306	a. A.

Illustration


Single plate



Collector plate

AVS Römer

www.avs-roemer.de E12F

Elektronisches Dosierventil

EFC-958-P310-6FF-024-10

DN 1 PNB

Vs=24V Vc=0-10V



AVS Römer

www.avs-roemer.de E20

Leitfähigkeitssensor

ICS-958P3-6FF

1/4"-20x1/2" DN4

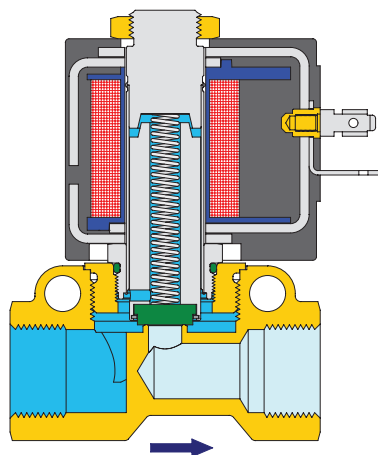
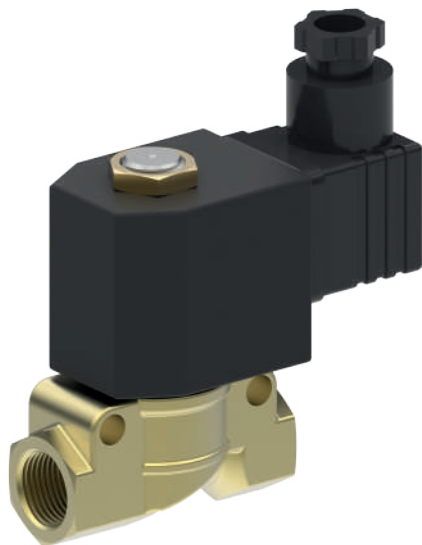
Vs=9-24V Vc=0-5V



1

2

E18F

DIGMA Solenoid Valves Type EBV Series 100


Direct-acting DC solenoid valve with traditional constructional design, however with significantly improved magnetic circuit.

CHARACTERISTICS
GENERAL

Constructional design	Seat valve, elastomer seals	
Product name	2/2-way solenoid valve	
Actuation	electric, direct-acting,	
Product type	EBV-1.3-A..	EBV-153-A..
Function	"A" normally closed (closing with flow)	
Nominal diameter	DN 3, DN 4 or DN 6	
Port size	G 1/4	G 3/8
Ambient temperature	-20 °C to +60 °C (others on request)	
Medium temperature	for NBR: -10 °C to +90 °C for FKM -10 °C to +130 °C (others on request)	
Medium viscosity	up to approx. 20 mm ² /s	
Valve body material	Brass	
Other internal component material	Stainless steel	
Seal material	NBR (Perbunan) or FKM (fluoride rubber)	
Solenoid housing material	plastic-moulded	
Mounting method	2 M3 tapped holes in valve body or using rigid pipework	2 mounting holes in valve body or using rigid pipework
Mounting position	optional, preferably upright	
PNEUMATIC - HYDRAULIC		
Nominal pressure	up to PN 16	
Pressure range	technical vacuum up to excess pressure corresponding to PN	
Flow rate	Kv-value and QNn-value according to type table	
Medium	gaseous or liquid media sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases sealing material FKM: e.g. solvents, hot water, hot air	
Response time	Opening time: approx. 40 ms, closing time: approx. 60 ms	
ELECTRIC		
Nominal voltage	12 or 24 V DC (other DC on request)	
Voltage tolerance	±10 %	
Nominal power P₂₀	16 W	
Duty cycle	100 %	
Protection class	IP 65 (wiring box properly assembled)	

2/2-Way Solenoid Valve - Direct-acting - Type EBV Series 100

Price group	55	Port size	G 1/4	Function "A"	normally closed	Brass
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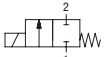
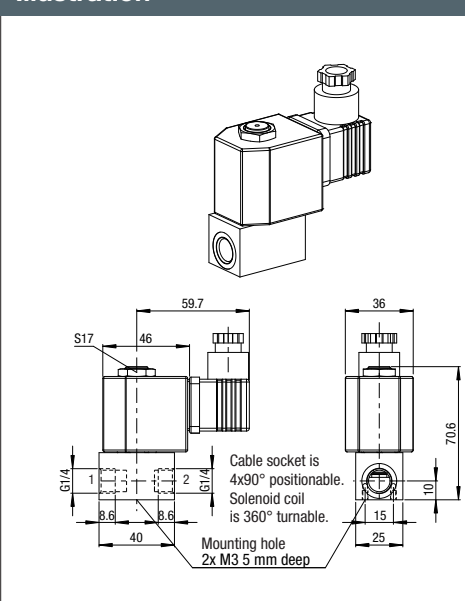
Version	DN	Kv-value water [m³/h]	QNN-value air [l/min]	G	PN	Sealing material	Voltage / current	Type	Order number	Price
Solenoid valve with Solenoid coil E36 including cable socket ESG-182 Pg 9 	3	0.28	285	G 1/4	16	NBR	12 V DC	EBV-113-A30-1/4B-012/--S9	627303	o. r.
	3	0.28	285	G 1/4	16	FKM	12 V DC	EBV-113-A30-1/4F-012/--S9	627304	o. r.
	4	0.5	520	G 1/4	10	NBR	12 V DC	EBV-113-A40-1/4B-012/--S9	627305	o. r.
	4	0.5	520	G 1/4	10	FKM	12 V DC	EBV-113-A40-1/4F-012/--S9	627306	o. r.
	6	0.8	850	G 1/4	5	NBR	12 V DC	EBV-113-A60-1/4B-012/--S9	627307	o. r.
	6	0.8	850	G 1/4	5	FKM	12 V DC	EBV-113-A60-1/4F-012/--S9	627308	o. r.
	3	0.28	285	G 1/4	16	NBR	24 V DC	EBV-113-A30-1/4B-024/--S9	627313	o. r.
	3	0.28	285	G 1/4	16	FKM	24 V DC	EBV-113-A30-1/4F-024/--S9	627314	o. r.
	4	0.5	520	G 1/4	10	NBR	24 V DC	EBV-113-A40-1/4B-024/--S9	627315	o. r.
	4	0.5	520	G 1/4	10	FKM	24 V DC	EBV-113-A40-1/4F-024/--S9	627316	o. r.
	6	0.8	850	G 1/4	5	NBR	24 V DC	EBV-113-A60-1/4B-024/--S9	627317	o. r.
	6	0.8	850	G 1/4	5	FKM	24 V DC	EBV-113-A60-1/4F-024/--S9	627318	o. r.

Illustration

2/2-Way Solenoid Valve - Direct-acting - Type EBV Series 100

Price group	55	Port size	G 3/8	Function "A"	normally closed	Brass
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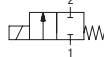
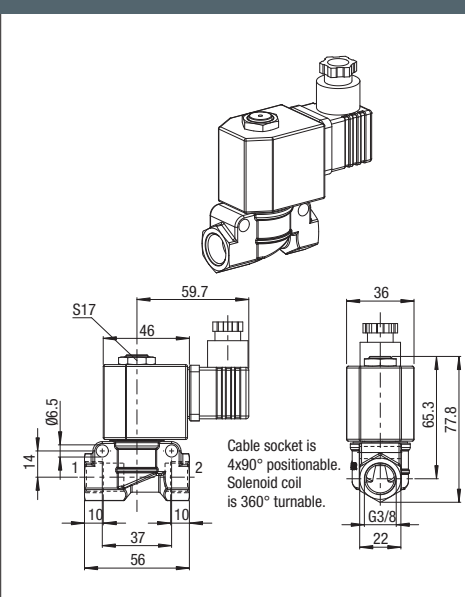
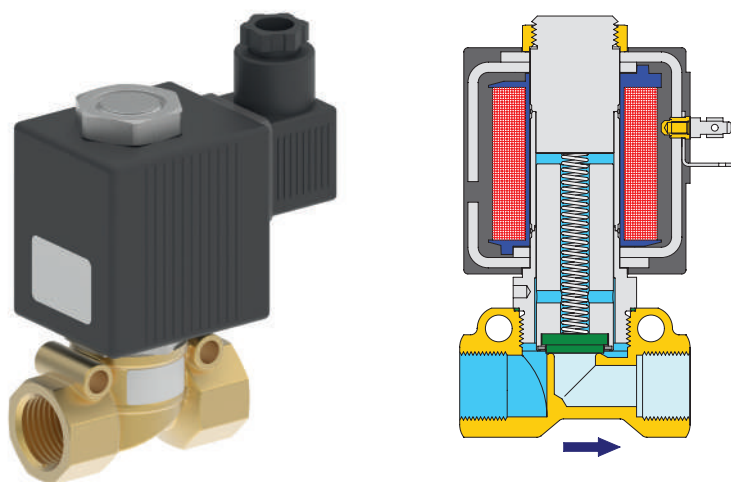
Version	DN	Kv-value water [m³/h]	QNN-value air [l/min]	G	PN	Sealing material	Voltage / current	Type	Order number	Price
Solenoid valve with Solenoid coil E36 including cable socket ESG-182 Pg 9 	3	0.28	285	G 3/8	16	NBR	12 V DC	EBV-153-A30-3/8B-012/--S9	627321	o. r.
	3	0.28	285	G 3/8	16	FKM	12 V DC	EBV-153-A30-3/8F-012/--S9	627322	o. r.
	4	0.5	520	G 3/8	10	NBR	12 V DC	EBV-153-A40-3/8B-012/--S9	627323	o. r.
	4	0.5	520	G 3/8	10	FKM	12 V DC	EBV-153-A40-3/8F-012/--S9	627324	o. r.
	6	0.8	850	G 3/8	5	NBR	12 V DC	EBV-153-A60-3/8B-012/--S9	627325	o. r.
	6	0.8	850	G 3/8	5	FKM	12 V DC	EBV-153-A60-3/8F-012/--S9	627326	o. r.
	3	0.28	285	G 3/8	16	NBR	24 V DC	EBV-153-A30-3/8B-024/--S9	627331	o. r.
	3	0.28	285	G 3/8	16	FKM	24 V DC	EBV-153-A30-3/8F-024/--S9	627332	o. r.
	4	0.5	520	G 3/8	10	NBR	24 V DC	EBV-153-A40-3/8B-024/--S9	627333	o. r.
	4	0.5	520	G 3/8	10	FKM	24 V DC	EBV-153-A40-3/8F-024/--S9	627334	o. r.
	6	0.8	850	G 3/8	5	NBR	24 V DC	EBV-153-A60-3/8B-024/--S9	627335	o. r.
	6	0.8	850	G 3/8	5	FKM	24 V DC	EBV-153-A60-3/8F-024/--S9	627336	o. r.

Illustration


DIGMA Solenoid Valves Type EDV Series 200

CHARACTERISTICS
GENERAL

Constructional design	Seat valve, elastomer or high-performance plastic seals
Product name	2/2-way solenoid valve
Actuation	electric, direct-acting
Product type	EDV-213-A..
Function	"A" normally closed (closing with flow)
Nominal diameter	DN 3 to DN 10
Port sizes	G 3/8 and G 1/2
Ambient temperature	-20 °C to +60 °C (others on request)
Medium temperature	for NBR: -10 °C to +90 °C *, for PTFE: -40 °C to +130 °C, for FKM and EPDM: -10 °C to +130 °C
Medium viscosity	up to ca. 20 mm ² /s
Valve body material	Brass
Other internal component material	Stainless steel
Seat seal material	FKM, EPDM, NBR or PTFE
Material guide tube seal	FKM (also with PTFE seat seal), EPDM or NBR
Material of magnet coil	Thermoplastic
Mounting method	by 2 mounting bores in the valve body or in rigid pipe system
Mounting position	optional, preferably upright

PNEUMATIC - HYDRAULIC

Nominal pressure [bar]	up to PN 30, according to type table
Pressure range	technical vacuum up to excess pressure corresponding to PN
Flow rate	Kv-value and QNn-value according to type table
Medium	Neutrals gaseous or liquid media sealing material Sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases sealing material Sealing material PTFE: e.g. solvents, hot water, water vapour, hot air Sealing material EPDM: e.g. hot water Sealing material FKM: e.g. Solvents, hot water, hot air over 90 °C
Response time electric	Opening time: 120 - 160 ms, closing time: 120 - 140 ms see under Solenoids

* Medium temperatures over 60 °C limit permitted ambient temperature, duty cycle and / or permitted overvoltage.

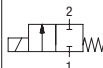
2/2-Way Solenoid Valve - Type EDV Series 200

 Price group **55** "A" normally closed

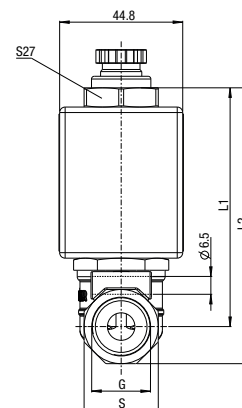
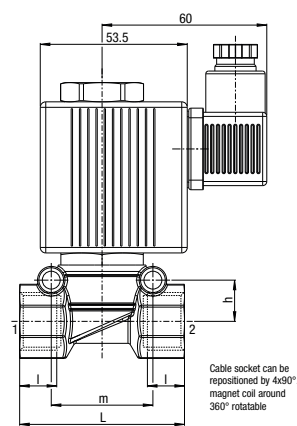
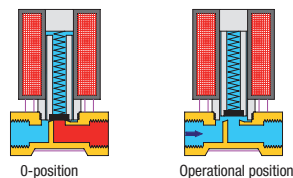
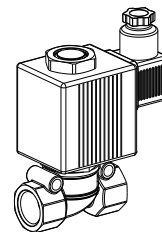
Brass

Version	DN	Kv-value water [m³/h]	QnN-value air [l/min]	G	PN	Sealing material	type	Order number	Price
	3	0.28	285	G 3/8	30	FKM	EDV-213-A30-3/8F-00	684200	o. r.
	3	0.28	285	G 3/8	30	EPDM	EDV-213-A30-3/8P-00	684207	o. r.
	3	0.28	285	G 3/8	30	NBR	EDV-213-A30-3/8B-00	684214	o. r.
	3	0.28	285	G 3/8	30	PTFE	EDV-213-A30-3/8T-00	684221	o. r.
	4	0.5	520	G 3/8	20	FKM	EDV-213-A40-3/8F-00	684201	o. r.
	4	0.5	520	G 3/8	20	EPDM	EDV-213-A40-3/8P-00	684208	o. r.
	4	0.5	520	G 3/8	20	NBR	EDV-213-A40-3/8B-00	684215	o. r.
	4	0.5	520	G 3/8	20	PTFE	EDV-213-A40-3/8T-00	684222	o. r.
	6	0.8	850	G 3/8	10	FKM	EDV-213-A60-3/8F-00	684202	o. r.
	6	0.8	850	G 3/8	10	EPDM	EDV-213-A60-3/8P-00	684209	o. r.
	6	0.8	850	G 3/8	10	NBR	EDV-213-A60-3/8B-00	684216	o. r.
	6	0.8	850	G 3/8	10	PTFE	EDV-213-A60-3/8T-00	684223	o. r.
	6	0.8	850	G 1/2	10	FKM	EDV-213-A60-1/2F-00	684203	o. r.
	6	0.8	850	G 1/2	10	EPDM	EDV-213-A60-1/2P-00	684210	o. r.
	6	0.8	850	G 1/2	10	NBR	EDV-213-A60-1/2B-00	684217	o. r.
	6	0.8	850	G 1/2	10	PTFE	EDV-213-A60-1/2T-00	684224	o. r.
	10	1.7	1670	G 3/8	2.5	FKM	EDV-213-A10-3/8F-00	684204	o. r.
	10	1.7	1670	G 3/8	2.5	EPDM	EDV-213-A10-3/8P-00	684211	o. r.
	10	1.7	1670	G 3/8	2.5	NBR	EDV-213-A10-3/8B-00	684218	o. r.
	10	1.7	1670	G 3/8	2.5	PTFE	EDV-213-A10-3/8T-00	684225	o. r.
	10	1.7	1670	G 1/2	2.5	FKM	EDV-213-A10-1/2F-00	684205	o. r.
	10	1.7	1670	G 1/2	2.5	EPDM	EDV-213-A10-1/2P-00	684212	o. r.
	10	1.7	1670	G 1/2	2.5	NBR	EDV-213-A10-1/2B-00	684219	o. r.
	10	1.7	1670	G 1/2	2.5	PTFE	EDV-213-A10-1/2T-00	684226	o. r.

For all DC magnet coils

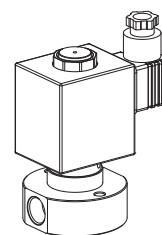


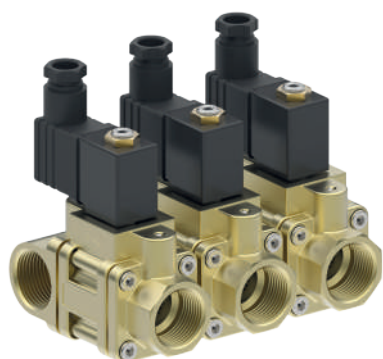
G	L	I	L1	L2	m	h	S
G 3/8	56	10	89.5	102	37	14	22
G 1/2	60	13.5	91	104.5	37	15	27

Illustration

Stainless Steel Variant 2/2-Way Solenoid Valve - Type EDV Series 200
Stainless steel

2/2-way solenoid valve with stainless steel body 1.4305

type EDV-213X5-A...

Variant Illustration


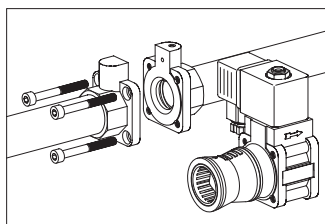
GAMMA Valves Series 100


An especially universal and robust valve series from DN 15 to DN 50 (G1/2 to G2) for the most varied applications in mechanical and apparatus construction.

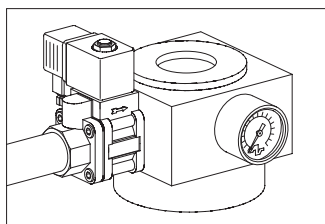
Dirt particles in the medium can lead to malfunction in the valves. It is therefore recommended to install a strainer, e.g. Type SMF-133..

The structural combination of various Types of valve, e.g. solenoid valves and pressure regulators, if required with sensors in multi function blocks, offers significant advantages:

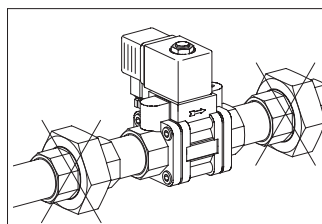
- saving of assembly time (pipework expenditure reduced by up to 85 %)
- saving of fittings
- enormous saving of construction space



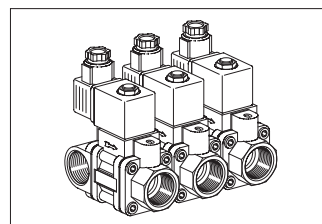
The main valve (intermediate flange valve) can be radially disassembled



Flange mount valves can be screwed onto pressure-bearing elements



Costly assembly of a detachable fitting is not required



Valve batteries up to DN 50 (G 2) with various operation Types and functional applications

CHARACTERISTICS
GENERAL

Constructional design	low noise membrane valve with coaxial flow				
Product name	2/2-way solenoid valve servo-controlled	2/2-way solenoid valve with pressure regulator servo-controlled	2/2-way valve pressure operated by external or own medium	Hand-adjustable pressure regulator valve servo controlled	Valve batteries (all variants)
Product type	EGV	EGR	PGV	RGV	all previously named
Nominal diameter	DN 15 to DN 50				
Port size	G 1/2 to G 2				
Ambient temperature	-20 °C to +60 °C (others on request)				
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)				
Medium viscosity	up to ca. 20 mm ² /s				
Valve body material	Ms				
Membrane support unit material	reinforced synthetic material (others on request)				
Other internal component material	Stainless steel and non-ferrous metal				
Material sealing material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)				
Mounting method	Installation in rigid pipe system or using mounting bracket (see accessories)				
Mounting position	optional, preferably upright				

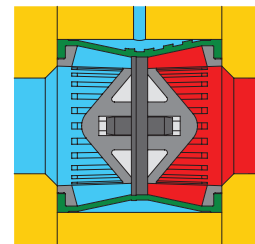
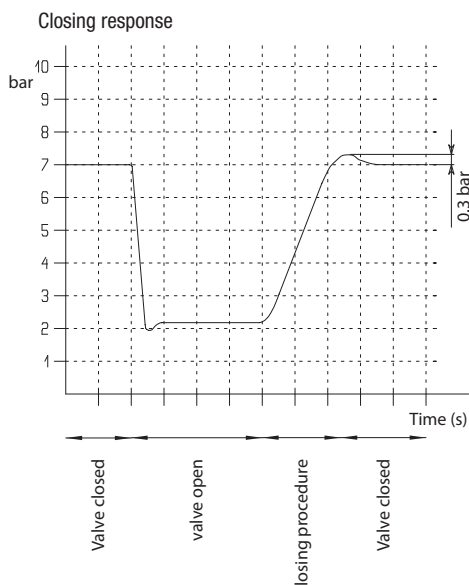
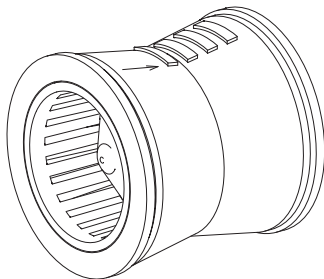
PNEUMATIC - HYDRAULIC

Nominal pressure (bar)	according to Type table. The numerical value of the nominal pressure PN signifies the permitted operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical power consumption, the second value to that with lowest power consumption.				
Pressure range	0.2 bar up to permitted operating pressure OP according to table. 0 to 16 bar version is also Possible for Type EGV function "Z" and Type PGV				
Flow rate	Kv-value according to Type table (full flow with pressure difference of 0.3 bar or higher)				
Medium	gaseous or fluids Sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases Sealing material EPDM: e.g. hot water Sealing material FKM: e.g. solvents, hot water, hot air above 90 °C				
Response time	Opening time: 20 ms to 2 s closing time: 25 ms to 5 s, according to flow medium and DN				
Electric	see solenoid coils				

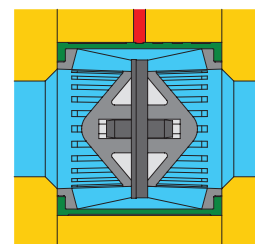
AVS GAMMA valves

Low noise automatic with membraneclosing
GAMMA the perfect valve concept from AVS Römer

closure unit



Closed



Open

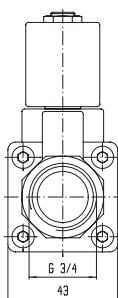
The patented, coaxial constructional design enables advantageous membrane support, in both positions. The optimal heat emission of the open membrane resting on the coil reduces its thermal load. Both sets of circumstances are responsible for the extraordinarily high durability and also with pulsating compressed air. Furthermore the low masses moved enable extremely short response times, if desired.

Further advantages:

- no pressure surges of fluids, minimised flow noises
- also very suitable for compressed air and other gases
- large pressure range (application from 0 bar also Possible)
- large variety of materials (plastic and elastomer components are manufactured in-house)
- the very compact closure unit with rotational symmetry enables very easy structuring of valve coil or special valve batteries

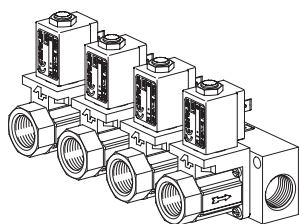
Description

Structural width



The low structural width permits small pipe spacing for single valves and high installation density for valve batteries.

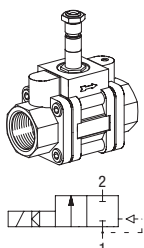
Valve batteries

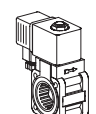

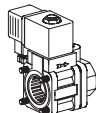

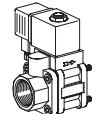

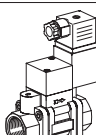
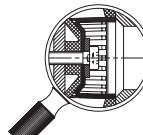


DN 12 to DN 50 (G 1/2 to G 2) single valve to 1normal fold battery.

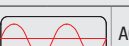
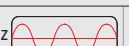
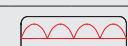
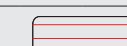

2/2-Way Solenoid Valve - Type EGV Series 100

Price group	53	Function "A" normally closed	low noise and impact-free closing, for neutral, gaseous or fluids	Brass
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Version	DN	Kv-value water [m³/h]	G	PN	Possible Type of power	Sealing material	Type (Partial solenoid valve without solenoid coil)	Order number	Price
Valve without solenoid coil Permitted operating pressure 0.2 bar up to value according to table below. 	15	5.6	G 1/2	16/8	AC/DC	NBR	EGV-111-A78-1/2BN-00	613501	o. r.
	15	5.6	G 1/2	16/8	AC/DC	EPDM	EGV-111-A78-1/2PN-00	613503	o. r.
	15	5.6	G 1/2	16/8	AC/DC	FKM	EGV-111-A78-1/2FN-00	613505	o. r.
	20	7.6	G 3/4	16/8	AC/DC	NBR	EGV-111-A78-3/4BN-00	613521	o. r.
	20	7.6	G 3/4	16/8	AC/DC	EPDM	EGV-111-A78-3/4PN-00	613523	o. r.
	20	7.6	G 3/4	16/8	AC/DC	FKM	EGV-111-A78-3/4FN-00	613525	o. r.
	25	16.8	G 1	16/8	AC/DC	NBR	EGV-111-A78-1BN-00	613551	o. r.
	25	16.8	G 1	16/8	AC/DC	EPDM	EGV-111-A78-1PN-00	613553	o. r.
	25	16.8	G 1	16/8	AC/DC	FKM	EGV-111-A78-1FN-00	613555	o. r.
	32	21	G 1 1/4	16/8	AC/DC	NBR	EGV-111-A78-5/4BN-00	613571	o. r.
	32	21	G 1 1/4	16/8	AC/DC	EPDM	EGV-111-A78-5/4PN-00	613573	o. r.
	32	21	G 1 1/4	16/8	AC/DC	FKM	EGV-111-A78-5/4FN-00	613575	o. r.
	40	29.5	G 1 1/2	16/8	AC/DC	NBR	EGV-111-A78-6/4BN-00	613601	o. r.
	40	29.5	G 1 1/2	16/8	AC/DC	EPDM	EGV-111-A78-6/4PN-00	613603	o. r.
	40	29.5	G 1 1/2	16/8	AC/DC	FKM	EGV-111-A78-6/4FN-00	613605	o. r.
	50	35	G 2	16/8	AC/DC	NBR	EGV-111-A78-2BN-00	613621	o. r.
50	35	G 2	16/8	AC/DC	EPDM	EGV-111-A78-2PN-00	613623	o. r.	
50	35	G 2	16/8	AC/DC	FKM	EGV-111-A78-2FN-00	613625	o. r.	

Variations		Options	
	2/2-way intermediate flange solenoid valve Flange-side 4 through bores: Type EGV-111-AHL-...		Manual override Type EGV-112-... This limits: permitted operating pressure: 12.5 bar permitted Medium temperature: max. 60 °C
	2/2-way flange mount solenoid valve Flange-side pressure inlet Type EGV-111-AH9-...		increases resistance to corrosion and replaces stainless steel valves cost-effectively for many flow media Type EGV-111Q-...
	2/2-way flange mount Solenoid valve Thread-side pressure inlet Type EGV-111-A7L-		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils
	2/2-way solenoid valve Rapid function version with 3/2-way servo-control especially for compressed air Type EGV-161-A96-...BP-00		Non-return valve integrated outlet-side in the gate unit Type EGV-111-A78-./-T-.. This only blocks up to the following pressure difference: DN 15 to DN 32: 10 bar DN 40 to DN 50: 8 bar
		EX protection only up to 10 bar	Type EGV-1004-A.-230/5normal EEX m II T5 or -024/ = -EEX m II T5 respectively with 3m cable A fuse (max. 3 x INenn) must be installed before the solenoid valve!

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz 			AC 60 Hz 			DC 			DC 			DC 				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	90 %U _N Medium temperature			90 %U _N Medium temperature			90 %U _N Medium temperature			90 %U _N Medium temperature			100 %U _N Medium temperature				
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
15 to 32	EGV-111-A..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	on req.	7	on req.	on req.	6	5	4	4	3	2	6	5	4		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	14	12	10	8	15	13	12	
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
40 and 50	EGV-111-A..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	on req.	7	on req.	on req.	5	4	3	3	2	2	5	4	3		
			E22...M.	5.5	5	5	16	16	16	16	16	16	12	10	8	8	7	6	12	10	9		
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	12	10	9	16	14	10		
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	

Function

 Price group **53**

Function "A" normally closed

low noise and impact-free closing, for neutral, gaseous or fluids

Brass

Operating position	Description	Function
	<p>In normal position - magnetic system without power - its resting seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p> <p>In operational position - magnetic system under power - its seat is open, the control chamber discharged and the membrane is held by the flow medium in the "open" position. A minimum pressure difference is required for this operation.</p>	

Illustration

Cable socked adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° turnable.		

Dimensions

DN	G	L	I	M	L1	L2	H	S
15	G 1/2	68.4	13.5	34.2	72	93.5	43	27
20	G 3/4	80.4	15.5	40.2	72	93.5	43	32
25	G 1	94	17	47	80	109.5	59	41
32	G 1 1/4	112	19	56	80	109.5	59	50
40	G 1 1/2	132	21	66	93.5	137	87	55
50	G 2	160	24.5	80	93	136.5	87	70

Mounting Accessories

Illustration	Suitable for valves	Type	Order number	Price
	G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
	G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.

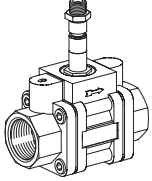
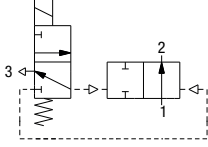
2/2-Way Solenoid Valve - Type EGV Series 100

 Price group **53**

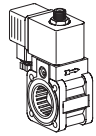


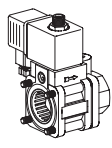
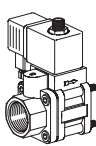
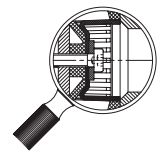
Function "B" normally open

low noise and impact-free closing, for neutral, gaseous or fluids

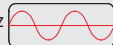
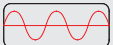
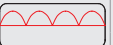
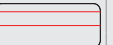
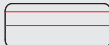
Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible Type of power	Sealing material	Type (Partial solenoid valve without solenoid coil)	Order number	Price
Valve without solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below.  	15	5.6	G 1/2	16	AC/DC	NBR	EGV-111-B96-1/2BP-00	613701	o. r.
	15	5.6	G 1/2	16	AC/DC	EPDM	EGV-111-B96-1/2PP-00	613703	o. r.
	15	5.6	G 1/2	16	AC/DC	FKM	EGV-111-B96-1/2FP-00	613705	o. r.
	20	7.6	G 3/4	16	AC/DC	NBR	EGV-111-B96-3/4BP-00	613721	o. r.
	20	7.6	G 3/4	16	AC/DC	EPDM	EGV-111-B96-3/4PP-00	613723	o. r.
	20	7.6	G 3/4	16	AC/DC	FKM	EGV-111-B96-3/4FP-00	613725	o. r.
	25	16.8	G 1	16	AC/DC	NBR	EGV-111-B96-1BP-00	613751	o. r.
	25	16.8	G 1	16	AC/DC	EPDM	EGV-111-B96-1PP-00	613753	o. r.
	25	16.8	G 1	16	AC/DC	FKM	EGV-111-B96-1FP-00	613755	o. r.
	32	21	G 1 1/4	16	AC/DC	NBR	EGV-111-B96-5/4BP-00	613771	o. r.
	32	21	G 1 1/4	16	AC/DC	EPDM	EGV-111-B96-5/4PP-00	613773	o. r.
	32	21	G 1 1/4	16	AC/DC	FKM	EGV-111-B96-5/4FP-00	613775	o. r.
	40	29.5	G 1 1/2	16	AC/DC	NBR	EGV-111-B96-6/4BP-00	613801	o. r.
	40	29.5	G 1 1/2	16	AC/DC	EPDM	EGV-111-B96-6/4PP-00	613803	o. r.
	40	29.5	G 1 1/2	16	AC/DC	FKM	EGV-111-B96-6/4FP-00	613805	o. r.
	50	35	G 2	16	AC/DC	NBR	EGV-111-B96-2BP-00	613821	o. r.
	50	35	G 2	16	AC/DC	EPDM	EGV-111-B96-2PP-00	613823	o. r.
50	35	G 2	16	AC/DC	FKM	EGV-111-B96-2FP-00	613825	o. r.	

Variations
Options

 <p>2/2-way intermediate flange Solenoid valve Flange-side 4 through bores: Type EGV-111-BLH-...</p>	 <p>Manual override Type EGV-112-... This limits: permitted operating pressure: 12.5 bar permitted Medium temperature: max. 60 °C</p>	 <p>Hessing- Teile chemisch vernickelt</p> <p>increases resistance to corrosion and replaces stainless steel valves cost-effectively for many fluids Type EGV-111Q-...</p>
 <p>2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-111-BL7-...</p>		
 <p>2/2-way flange mount Solenoid valve Thread-side pressure inlet Type EGV-111-B9H-...</p>		
	 <p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>	<p>Non-return valve integrated in the outlet-side of the closure Type EGV-111-B96-../T-... This isolat only up to the following pressure difference: DN 15 to DN 32: 10 bar DN 40 to DN 50: 8 bar</p>

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N 			AC 60 Hz 90 %U _N 			DC 90 %U _N 			DC 90 %U _N 			DC 100 %U _N 			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	Medium temperature			Medium temperature			Medium temperature			Medium temperature			Medium temperature			
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
15 to 50	EGV-111-B..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

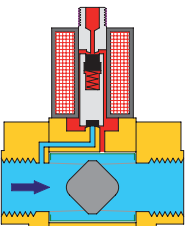
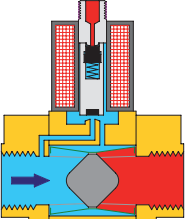
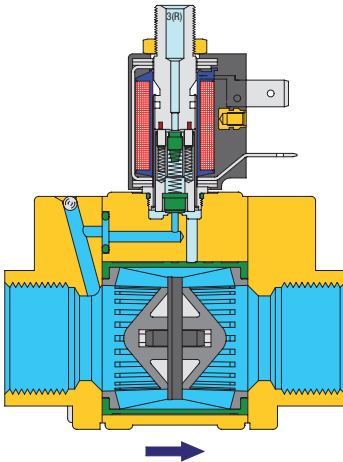
Function

Price group **53**

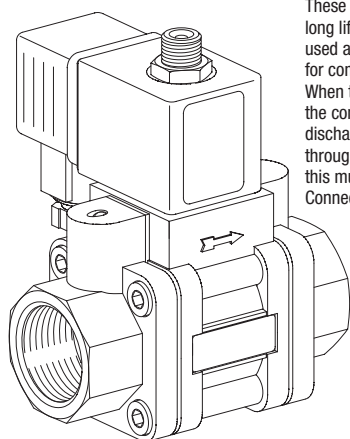
Function "B" normally open

low noise and impact-free closing, for neutral, gaseous or fluids

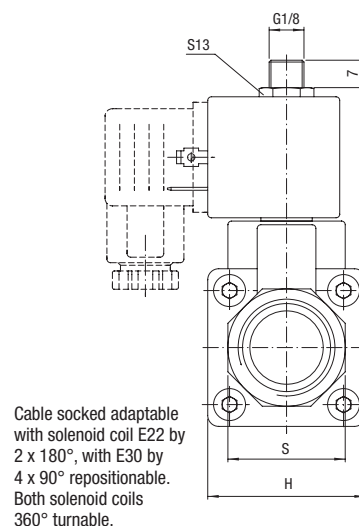
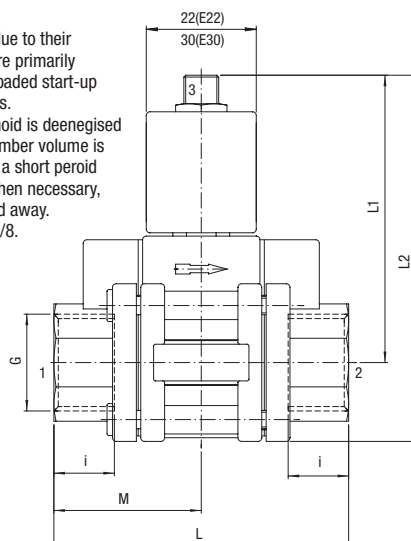
Brass

Operating position	Description	Function
 	<p>In normal position - magnetic system without power - its resting seat is closed and its operational seat open. Thereby the control chamber is discharged over "3" and the membrane held in the "open" position by the flow medium. A minimum pressure difference is required for this operation.</p> <p>In operational position - magnetic system under power - its seat is open and its operational seat closed. Pressure builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p>	

Illustration



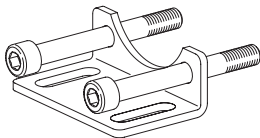
These valves, due to their long lifetime, are primarily used as an unloaded start-up for compressors. When the solenoid is deenergised the control chamber volume is discharged for a short period through "3". When necessary, this must be led away. Connection G 1/8.



Dimensions

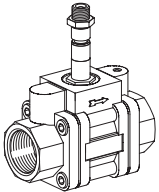
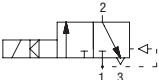
DN	G	L	I	M	L1	L2	H	S
15	G 1/2	68.4	13.5	34.2	78	99.5	43	27
20	G 3/4	80.4	15.5	40.2	78	99.5	43	32
25	G 1	94	19	47	86,5	116	59	41
32	G 1 1/4	112	19	56	86	115.5	59	50
40	G 1 1/2	132	21	66	99.5	143	87	55
50	G 2	160	26	80	99	142.5	87	70

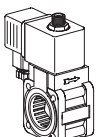

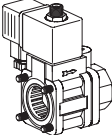

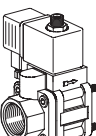

Mounting Accessories

Illustration	Suitable for valves	Type	Order number	Price
	G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
	G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.

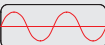
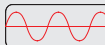
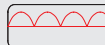
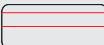

2/2-Way Solenoid Valve - Type EGV Series 100

Price group 53	"C" in 0 position "1" closed, "2" after "3" discharged	low noise and impact-free closing, for neutral, gaseous or fluids	Brass
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Version	DN	Kv-value water [m³/h]	G	PN	Possible Type of power	Sealing material	Type (Partial solenoid valve without solenoid coil)	Order number	Price
Valve discharge seat ND 1.8 without solenoid coil Permitted operating pressure 0.2 bar up to value according to table below.  	15	5.6	G 1/2	12.5	AC/DC	NBR	EGV-121-C78-1/2BN-00	618801	o. r.
	15	5.6	G 1/2	12.5	AC/DC	EPDM	EGV-121-C78-1/2PN-00	618803	o. r.
	15	5.6	G 1/2	12.5	AC/DC	FKM	EGV-121-C78-1/2FN-00	618805	o. r.
	20	7.6	G 3/4	12.5	AC/DC	NBR	EGV-121-C78-3/4BN-00	618821	o. r.
	20	7.6	G 3/4	12.5	AC/DC	EPDM	EGV-121-C78-3/4PN-00	618823	o. r.
	20	7.6	G 3/4	12.5	AC/DC	FKM	EGV-121-C78-3/4FN-00	618825	o. r.
	25	16.8	G 1	12.5	AC/DC	NBR	EGV-121-C78-1BN-00	618851	o. r.
	25	16.8	G 1	12.5	AC/DC	EPDM	EGV-121-C78-1PN-00	618853	o. r.
	25	16.8	G 1	12.5	AC/DC	FKM	EGV-121-C78-1FN-00	618855	o. r.
	32	21	G 1 1/4	10	AC/DC	NBR	EGV-121-C78-5/4BN-00	618871	o. r.
	32	21	G 1 1/4	10	AC/DC	EPDM	EGV-121-C78-5/4PN-00	618873	o. r.
	32	21	G 1 1/4	10	AC/DC	FKM	EGV-121-C78-5/4FN-00	618875	o. r.
	40	29.5	G 1 1/2	10	AC/DC	NBR	EGV-121-C78-6/4BN-00	618901	o. r.
	40	29.5	G 1 1/2	10	AC/DC	EPDM	EGV-121-C78-6/4PN-00	618903	o. r.
	40	29.5	G 1 1/2	10	AC/DC	FKM	EGV-121-C78-6/4FN-00	618905	o. r.
	50	35	G 2	10	AC/DC	NBR	EGV-121-C78-2BN-00	618921	o. r.
	50	35	G 2	10	AC/DC	EPDM	EGV-121-C78-2PN-00	618923	o. r.
50	35	G 2	10	AC/DC	FKM	EGV-121-C78-2FN-00	618925	o. r.	

Variations		Options	
	2/2-way intermediate flange Solenoid valve Flange-side 4 through bores: Type EGV-121-CHL-...		Manual override Type EGV-122-... This limits: permitted operating pressure: 12.5 bar permitted Medium temperature: max. 60 °C
	2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-121-CH9-...		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils
	2/2-way flange mount Solenoid valve Thread-side pressure inlet Type EGV-121-C7L-...		increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many flow media Type EGV-121Q-...

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C																
			Type	Nominal power P ₂₀			AC 50 Hz 			AC 60 Hz 			DC 			DC 			DC 			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	90 %U _N Medium temperature			90 %U _N Medium temperature			90 %U _N Medium temperature			90 %U _N Medium temperature			100 %U _N Medium temperature			
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
15 to 32	EGV-121-C..	12.5	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
			E22...H.	-	-	8	-	-	-	-	-	-	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
			E30...P.	12	10.5	8	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
40 and 50	EGV-121-C..	10	E22...L.	3.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
			E22...M.	5.5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
			E22...H.	-	-	8	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10
			E30...P.	12	10.5	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

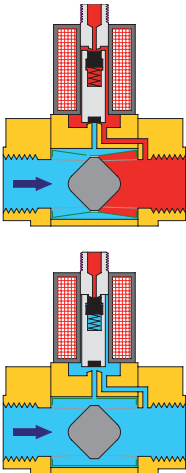
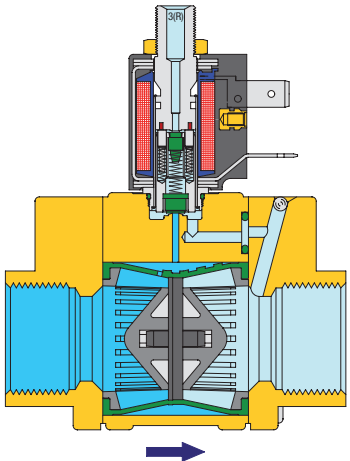
Function

Price group **53**

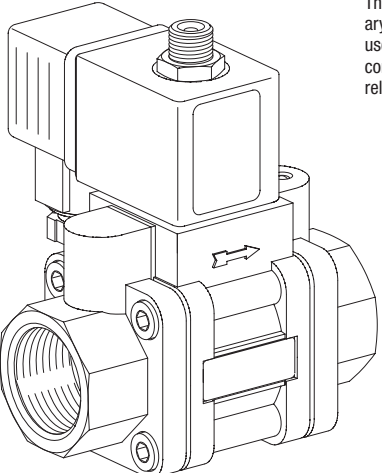
"C" in 0 position "1" closed, "2" after "3" discharged

low noise and impact-free closing, for neutral, gaseous or fluids

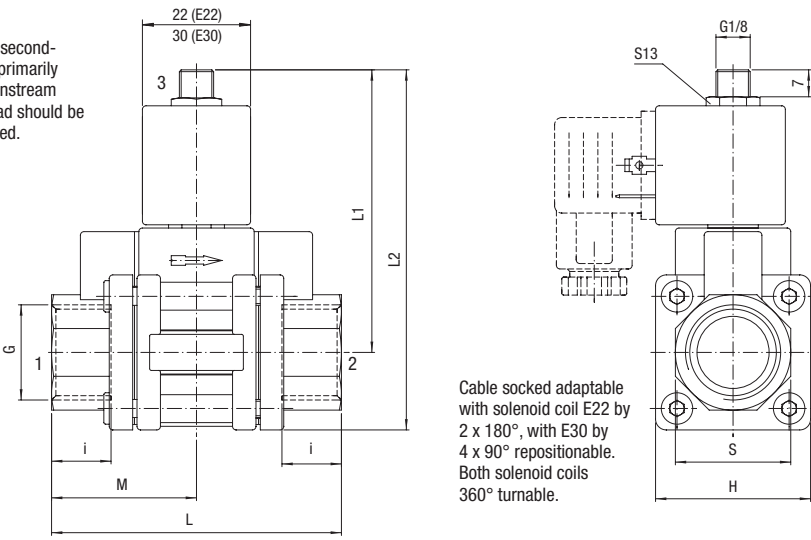
Brass

Operating position	Description	Function
	<p>In normal position - magnetic system without power - its resting seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p> <p>In operational position - magnetic system under power - its seat is open, the control chamber discharged and the membrane is held by the medium in "open" position. A minimum pressure difference is required for this operation.</p>	

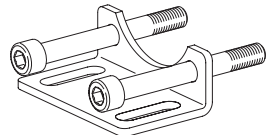
Illustration



These valves with secondary discharge are primarily used where a downstream compressed air load should be relieved deenergised.



Cable socked adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° turnable.

Dimensions									Mounting Accessories				
DN	G	L	I	M	L1	L2	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68.4	13.5	34.2	78	100	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80.4	15.5	40.2	78	99.5	43	32					
25	G 1	94	17	47	86	115.5	59	41		G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.
32	G 1 1/4	112	19	56	86	115.5	59	50					
40	G 1 1/2	132	21	66	99.5	143	87	55					
50	G 2	160	24.5	80	99.5	143	87	70					

2/2-Way Solenoid Valve - Type EGV Series 100

 Price group **53**

Function "Z" normally closed, auxiliary pressure at X, at least 1 bar above OP.

low noise and impact-free closing, for neutral, gaseous or fluids

Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
Valve without solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below, double-sided isolating. Permitted control pressure at "10": ≥ Operating pressure, max. 16 bar 	15	5.6	G 1/2	16	AC/DC	NBR	EGV-111-Z76-1/2BP-00	613901	o. r.
	15	5.6	G 1/2	16	AC/DC	EPDM	EGV-111-Z76-1/2PP-00	613903	o. r.
	15	5.6	G 1/2	16	AC/DC	FKM	EGV-111-Z76-1/2FP-00	613905	o. r.
	20	7.6	G 3/4	16	AC/DC	NBR	EGV-111-Z76-3/4BP-00	613911	o. r.
	20	7.6	G 3/4	16	AC/DC	EPDM	EGV-111-Z76-3/4PP-00	613913	o. r.
	20	7.6	G 3/4	16	AC/DC	FKM	EGV-111-Z76-3/4FP-00	613915	o. r.
	25	16.8	G 1	16	AC/DC	NBR	EGV-111-Z76-1BP-00	613921	o. r.
	25	16.8	G 1	16	AC/DC	EPDM	EGV-111-Z76-1PP-00	613923	o. r.
	25	16.8	G 1	16	AC/DC	FKM	EGV-111-Z76-1FP-00	613925	o. r.
	32	21	G 1 1/4	16	AC/DC	NBR	EGV-111-Z76-5/4BP-00	613931	o. r.
	32	21	G 1 1/4	16	AC/DC	EPDM	EGV-111-Z76-5/4PP-00	613933	o. r.
	32	21	G 1 1/4	16	AC/DC	FKM	EGV-111-Z76-5/4FP-00	613935	o. r.
	40	29.5	G 1 1/2	16	AC/DC	NBR	EGV-111-Z76-6/4BP-00	613941	o. r.
	40	29.5	G 1 1/2	16	AC/DC	EPDM	EGV-111-Z76-6/4PP-00	613943	o. r.
	40	29.5	G 1 1/2	16	AC/DC	FKM	EGV-111-Z76-6/4FP-00	613945	o. r.
	50	35	G 2	16	AC/DC	NBR	EGV-111-Z76-2BP-00	613961	o. r.
50	35	G 2	16	AC/DC	EPDM	EGV-111-Z76-2PP-00	613963	o. r.	
50	35	G 2	16	AC/DC	FKM	EGV-111-Z76-2FP-00	613965	o. r.	

Variations
Options

<p>2/2-way intermediate flange Solenoid valve Flange-side 4 through bores: Type EGV-111-ZHL-...</p>	<p>Manual override Type EGV-112-... This limits: permitted operating pressure: 12.5 bar permitted Medium temperature: max. 60 °C</p>	<p>increases resistance to corrosion and replaces stainless steel valves cost-effectively for medium Type EGV-111Q-...</p>
<p>2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-111-ZH7-...</p>	<p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>	<p>normal pressure membrane requires no differential pressure to open, however to close it requires control pressure 1 bar above operating pressure Type EGV-111-Z76-../.O-..</p>
	<p>Connector G1/8 in outlet-port flange for discharging the control medium Type EGV-111-Z74-..</p>	

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
15 to 50	EGV-111-Z..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

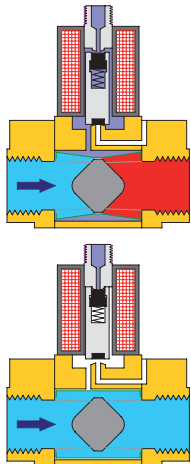
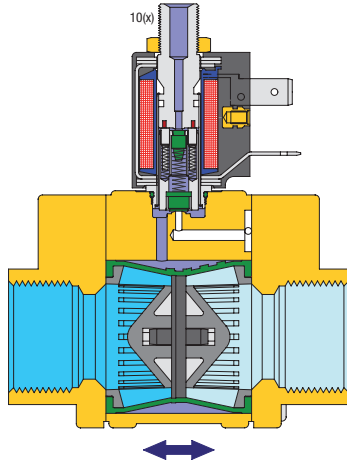
Function

Price group **53**

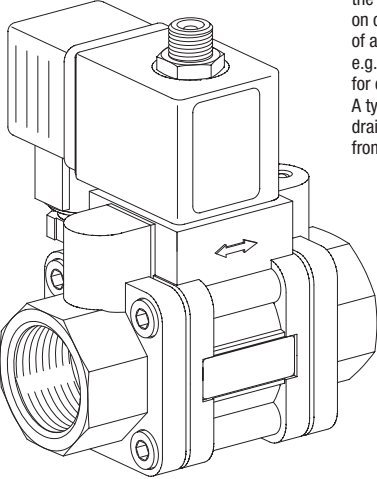
Function "Z" normally closed, auxiliary pressure at X, at least 1 bar above OP.

low noise and impact-free closing, for neutral, gaseous or fluids

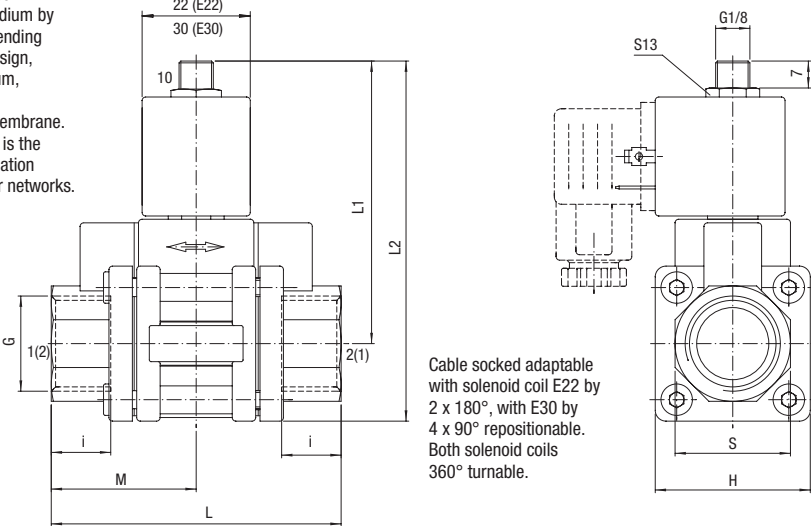
Brass

Operating position	Description	Function
	<p>In normal position - magnetic system without power - its seat is closed. The auxiliary pressure accumulated at "10" builds up in the control chamber and holds the membrane in "closed" position.</p> <p>In operational position - magnetic system under power - its seat is closed. The control chamber is discharged by the open seat and the membrane held in "open" position by the medium. A minimum pressure difference is required for this operation (except normal pressure membrane as listed under Options).</p>	

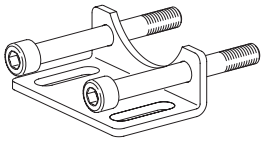
Illustration



These valves can also be used for dirty medium by the application, depending on constructional design, of an external medium, e.g. compressed air, for controlling the membrane. A typical application is the drainage of condensation from compressed air networks.

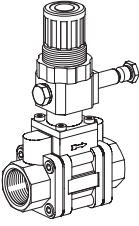


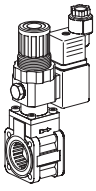


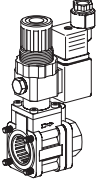
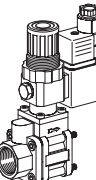
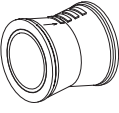
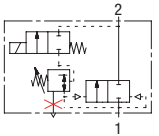
Cable socked adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° turnable.

Dimensions									Mounting Accessories				
DN	G	L	I	M	L1	L2	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68.4	13.5	34.2	78	99.5	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80.4	15.5	40.2	78	99.5	43	32					
25	G 1	94	17	47	86	115.5	59	41		G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.
32	G 1 1/4	112	19	56	86	115.5	59	50					
40	G 1 1/2	132	21	66	99.5	143	87	55					
50	G 2	160	24.5	80	99.5	143	87	70					

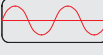
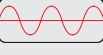
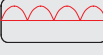


2/2-Way Solenoid Valve - Type EGR Series 100

Price group 53	Function "C" closed in normal position, with secondary discharge	low noise and impact-free closing, for neutral, gaseous media (liquid optional)	Amb. temp. $T_{min} -20\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$ Med.-Temp. $T_{min} -10\text{ }^{\circ}\text{C}$, $T_{max} +90\text{ }^{\circ}\text{C}$	Brass
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Version	Secondary pressure [bar]	DN	Flow air [l/min]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
Valve without solenoid coil without pressure gauge Permitted operating pressure 0.5 bar up to valve according to table below. 	0.5 - 10	15	260 to 2,600	G 1/2	16 / 8	AC/DC	NBR	EGR-151-1C78-1/2BN-00	654201	o. r.
	0.5 - 3	15	260 to 2,600	G 1/2	16 / 8	AC/DC	NBR	EGR-151-3C78-1/2BN-00	654202	o. r.
	0.5 - 6	15	260 to 2,600	G 1/2	16 / 8	AC/DC	NBR	EGR-151-6C78-1/2BN-00	654203	o. r.
	0.5 - 10	20	360 to 3,600	G 3/4	16 / 8	AC/DC	NBR	EGR-151-1C78-3/4BN-00	654301	o. r.
	0.5 - 3	20	360 to 3,600	G 3/4	16 / 8	AC/DC	NBR	EGR-151-3C78-3/4BN-00	654302	o. r.
	0.5 - 6	20	360 to 3,600	G 3/4	16 / 8	AC/DC	NBR	EGR-151-6C78-3/4BN-00	654303	o. r.
	0.5 - 10	25	800 to 8,000	G 1	16 / 8	AC/DC	NBR	EGR-151-1C78-1BN-00	654401	o. r.
	0.5 - 3	25	800 to 8,000	G 1	16 / 8	AC/DC	NBR	EGR-151-3C78-1BN-00	654402	o. r.
	0.5 - 6	25	800 to 8,000	G 1	16 / 8	AC/DC	NBR	EGR-151-6C78-1BN-00	654403	o. r.
	0.5 - 10	32	1,000 to 10,000	G 1 1/4	16 / 8	AC/DC	NBR	EGR-151-1C78-5/4BN-00	654501	o. r.
	0.5 - 3	32	1,000 to 10,000	G 1 1/4	16 / 8	AC/DC	NBR	EGR-151-3C78-5/4BN-00	654502	o. r.
	0.5 - 6	32	1,000 to 10,000	G 1 1/4	16 / 8	AC/DC	NBR	EGR-151-6C78-5/4BN-00	654503	o. r.
	0.5 - 10	40	1,400 to 14,000	G 1 1/2	16 / 8	AC/DC	NBR	EGR-151-1C78-6/4BN-00	654601	o. r.
	0.5 - 3	40	1,400 to 14,000	G 1 1/2	16 / 8	AC/DC	NBR	EGR-151-3C78-6/4BN-00	654602	o. r.
	0.5 - 6	40	1,400 to 14,000	G 1 1/2	16 / 8	AC/DC	NBR	EGR-151-6C78-6/4BN-00	654603	o. r.
	0.5 - 10	50	1,650 to 16,500	G 2	16 / 8	AC/DC	NBR	EGR-151-1C78-2BN-00	654701	o. r.
0.5 - 3	50	1,650 to 16,500	G 2	16 / 8	AC/DC	NBR	EGR-151-3C78-2BN-00	654702	o. r.	
0.5 - 6	50	1,650 to 16,500	G 2	16 / 8	AC/DC	NBR	EGR-151-6C78-2BN-00	654703	o. r.	

Variations		Options			
	2/2-way intermediate flange solenoid valve with pressure regulator Flange-side 4 through bores: Type EGR-151-.CHL-...		Manual override Type EGR-152-... This limits: permitted operating pressure: 12.5 bar permitted medium temperature: max. 60 °C		increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many medium Type EGR-151Q-...
	2/2-way flange mount solenoid valve with pressure regulator Flange-side pressure inlet Type EGR-151-.CH9-...				
	2/2-way flange mount solenoid valve with pressure regulator Thread-side pressure inlet Type EGR-151-.C7L-...		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		without secondary discharge ventilation of the pilot pressure regulator, especially for fluids Type EGR-151-.A78-...

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C											
			Type	Nominal power P_{20}			AC 50 Hz 90 % U_N 		AC 60 Hz 90 % U_N 		DC 90 % U_N 		DC 90 % U_N 		DC 100 % U_N 		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	
15 to 32	EGR-151-C..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	7	on req.	6	5	4	3	6	5	
			E22...M.	5.5	5	5	16	16	16	16	16	16	12	10	15	13	
			E22...H.	-	-	8	-	-	-	-	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16
40 and 50	EGR-151-C..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	7	on req.	5	4	3	2	5	4	
			E22...M.	5.5	5	5	16	16	16	16	12	10	8	7	12	10	
			E22...H.	-	-	8	-	-	-	-	16	16	12	10	16	14	
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16

Function - Speciality

Price group

53

Function "C" closed in normal position, with secondary discharge

low noise and impact-free closing, for neutral, gaseous media (liquid optional)

Brass

Operating position	Description
	<p>With respect to electrical function the valve corresponds to a 2/2-way solenoid valve function "A".</p> <p>In operational position - magnetic system under power - the membrane is only held in "open" position by the medium until the outlet-port pressure reaches the value set on the pressure regulator. This can be set using the lockable adjuster.</p> <p>The pressure should preferably be measured as near to the load as Possible. In case of need a pressure gauge can also be attached to the G 1/8 connection on the pilot pressure regulator, as shown in the dimension illustration. For dynamic loads or neutral fluids, a version without secondary-discharge can be supplied, as listed in the options.</p>

Illustration

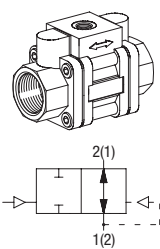
In addition to the function of a 2/2-way solenoid valve the valve regulates the secondary pressure on the set value. This replaces two traditional textures.

Pilot unit can be assembled rotated by 4x90°. For assembly as shown, pressure gauge is limited to NG 40. Cable socked adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° turnable.

Dimensions									Accessories				
DN	G	L	I	L1	L2	L3	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68,4	13,5	123,5	145	98,7	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80	16,5	126	146,5	104	43	32					
25	G 1	95	19	132	161,5	112	59	41		G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.
32	G 1 1/4	112	21,5	132	161,5	120	59	50					
40	G 1 1/2	132	21	144,5	188	130	87	55					
50	G 2	160	26	144,5	188	144	87	70					

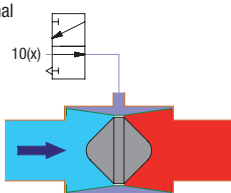
2/2-Way Solenoid Valve Type PGV Series 100 Pressure Operated by External Medium - Double-Sided Isolating

Price group 53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids	Amb. temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$ Med.-Temp. $T_{min} -10\text{ °C}$, $T_{max} +90\text{ °C}$	Brass
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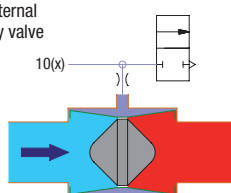
Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type	Order number	Price
2/2-way valve pressure operated, isolating double-sided by external medium Permitted operating pressure 0.2 to 16 bar 	\geq operating pressure max. 16	15	5.6	G 1/2	16	NBR	PGV-131-B76-1/2BP	614201	o. r.
		15	5.6	G 1/2	16	EPDM	PGV-131-B76-1/2PP	614203	o. r.
		15	5.6	G 1/2	16	FKM	PGV-131-B76-1/2FP	614205	o. r.
		20	7.6	G 3/4	16	NBR	PGV-131-B76-3/4BP	614211	o. r.
		20	7.6	G 3/4	16	EPDM	PGV-131-B76-3/4PP	614213	o. r.
		20	7.6	G 3/4	16	FKM	PGV-131-B76-3/4FP	614215	o. r.
		25	16.8	G 1	16	NBR	PGV-131-B76-1BP	614221	o. r.
		25	16.8	G 1	16	EPDM	PGV-131-B76-1PP	614223	o. r.
		25	16.8	G 1	16	FKM	PGV-131-B76-1FP	614225	o. r.
		32	21	G 1 1/4	16	NBR	PGV-131-B76-5/4BP	614231	o. r.
		32	21	G 1 1/4	16	EPDM	PGV-131-B76-5/4PP	614233	o. r.
		32	21	G 1 1/4	16	FKM	PGV-131-B76-5/4FP	614235	o. r.
		40	29.5	G 1 1/2	16	NBR	PGV-131-B76-6/4BP	614241	o. r.
		40	29.5	G 1 1/2	16	EPDM	PGV-131-B76-6/4PP	614243	o. r.
		40	29.5	G 1 1/2	16	FKM	PGV-131-B76-6/4FP	614245	o. r.
		50	35	G 2	16	NBR	PGV-131-B76-2BP	614251	o. r.
		50	35	G 2	16	EPDM	PGV-131-B76-2PP	614253	o. r.
50	35	G 2	16	FKM	PGV-131-B76-2FP	614255	o. r.		

Version and function: 2/2-way solenoid valve Type PGV series 100 pressure operated by external medium, double-sided blocking

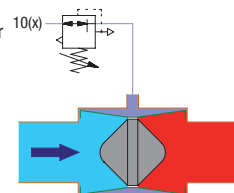
Remotely operated 2/2-way valve regulated by external medium with 3/2-way valve (positive control)



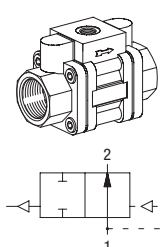
Remotely operated 2/2-way valve regulated by external medium with 2/2-way valve



Remotely operated pressure valve regulated by external medium with pressure regulator

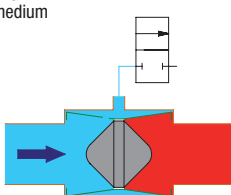

2/2-Way Solenoid Valve - Type PGV Series 100 Pressure Operated by own Medium

Price group 53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids	Brass
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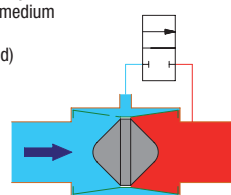
Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type	Order number	Price
2/2-way valve pressure operated, by own medium Permitted operating pressure 0.2 to 16 bar 	\geq operating pressure max. 16	15	5.6	G 1/2	16	NBR	PGV-131-B76-1/2BN	614301	o. r.
		15	5.6	G 1/2	16	EPDM	PGV-131-B76-1/2PN	614303	o. r.
		15	5.6	G 1/2	16	FKM	PGV-131-B76-1/2FN	614305	o. r.
		20	7.6	G 3/4	16	NBR	PGV-131-B76-3/4BN	614311	o. r.
		20	7.6	G 3/4	16	EPDM	PGV-131-B76-3/4PN	614313	o. r.
		20	7.6	G 3/4	16	FKM	PGV-131-B76-3/4FN	614315	o. r.
		25	16.8	G 1	16	NBR	PGV-131-B76-1BN	614321	o. r.
		25	16.8	G 1	16	EPDM	PGV-131-B76-1PN	614323	o. r.
		25	16.8	G 1	16	FKM	PGV-131-B76-1FN	614325	o. r.
		32	21	G 1 1/4	16	NBR	PGV-131-B76-5/4BN	614331	o. r.
		32	21	G 1 1/4	16	EPDM	PGV-131-B76-5/4PN	614333	o. r.
		32	21	G 1 1/4	16	FKM	PGV-131-B76-5/4FN	614335	o. r.
		40	29.5	G 1 1/2	16	NBR	PGV-131-B76-6/4BN	614341	o. r.
		40	29.5	G 1 1/2	16	EPDM	PGV-131-B76-6/4PN	614343	o. r.
		40	29.5	G 1 1/2	16	FKM	PGV-131-B76-6/4FN	614345	o. r.
		50	35	G 2	16	NBR	PGV-131-B76-2BN	614351	o. r.
		50	35	G 2	16	EPDM	PGV-131-B76-2PN	614353	o. r.
50	35	G 2	16	FKM	PGV-131-B76-2FN	614354	o. r.		

Version and function: 2/2-way solenoid valve Type PGV series 100 pressure operated by own medium

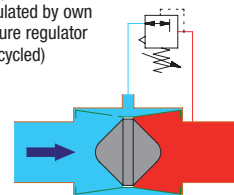
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (negative control)



Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (control medium recycled)



Remotely operated pressure regulator valve regulated by own medium with pressure regulator (control medium recycled)

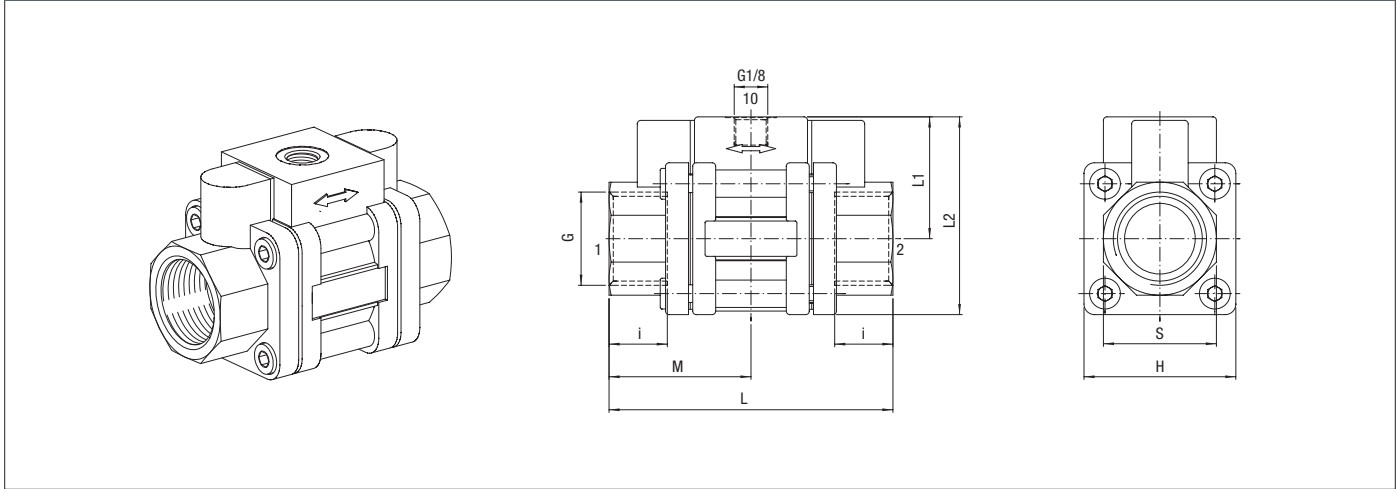


Function

Price group	53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids	Brass
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Operating position	Variations	Options	
			<p>normal pressure membrane, requires no differential pressure to open, however control pressure to close, it 1 bar above operating pressure Type PGV-131-B76-../.0</p>
<p>Type PGV in external medium version shown, control pressure present.</p>	<p>2/2-way intermediate flange valve (both versions) Flange-side 4 through bores: Type PGV-131-BHH-...</p>		<p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>
			<p>increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium Type PGV-131Q-...</p>

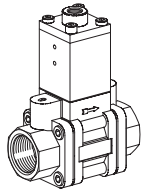
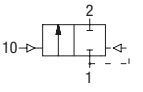
Illustration

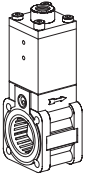
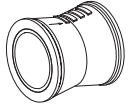

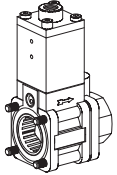
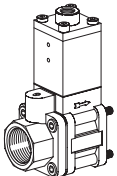
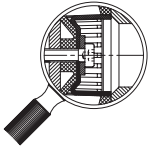


Dimensions									Mounting Accessories				
DN	G	L	I	M	L1	L2	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68.4	13.5	34.2	34.5	56	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80.4	15.5	40.2	34.5	56	43	32					
25	G 1	94	17	47	42.5	72	59	41		G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.
32	G 1 1/4	112	19	56	42	71.5	59	50					
40	G 1 1/2	132	21	66	56	99.5	87	55					
50	G 2	160	24.5	80	56	99.5	87	70					

2/2-Way Valve - Pressure Operated - Type PGV Series 100

Price group	53	Function "A" normally closed	low noise functioning, for gaseous media, especially compressed air	Brass
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Version	Controlpressure [bar]	DN	Q _{Nn} -value air [l/min]	G	PN	Sealing material	Type (Partial solenoid valve without solenoid coil)	Order number	Price
2/2-way valve pressure-operated by maintained compressed air Permitted operating pressure 0.2 to 16 bar  	4 - 7	15	6100	G 1/2	16	NBR	PGV-151-A96-1/2BP	614371	o. r.
	4 - 7	20	8300	G 3/4	16	NBR	PGV-151-A96-3/4BP	614372	o. r.
	4 - 7	25	18400	G 1	16	NBR	PGV-151-A96-1BP	614373	o. r.
	4 - 7	32	23400	G 1 1/4	16	NBR	PGV-151-A96-5/4BP	614374	o. r.
	4 - 7	40	32400	G 1 1/2	16	NBR	PGV-151-A96-6/4BP	614375	o. r.
	4 - 7	50	38400	G 2	16	NBR	PGV-151-A96-2BP	614376	o. r.

Variations		Options			
	2/2-way intermediate flange valve Flange-side 4 through bores: Type PGV-151-ALH-...		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many medium Type PGV-151Q-...
	2/2-way flange mount valve Flange-side pressure inlet Type PGV-151-AL7-...				
	2/2-way flange mount valve Thread-sided pressure inlet Type PGV-151-A9H-...		Non-return valve integrated outlet-side of the closure-unit Type PGV-151-A96-/.T		
			Pressure difference: DN 15 to DN 32, 10 bar DN 40 to DN 50, 8 bar		

Function - Speciality

Price group	53	Function "A" normally closed	low noise functioning, for gaseous media, especially compressed air
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Brass

Operating position	Description	Function
	<p>In normal position - pre-control valve not pressurised - its seat is closed. Pressure builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p> <p>In operational position - pre-control valve pressurised - its operational seat is closed. The control chamber is discharged by the open seat and the membrane held in "open" position by the medium. A minimum pressure difference is required for this operation.</p>	

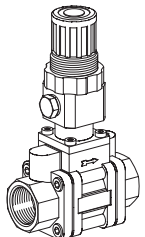
Illustration

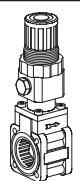
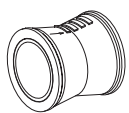

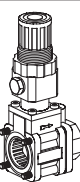
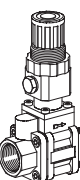
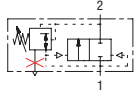
These servo-controlled valves with pneumatic operation are used in the control of compressed air, e.g. for the purposes of explosion protection, where solenoid valves are not desirable.

Dimensions									Mounting Accessories				
DN	G	L	I	M	L1	L2	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68.4	13.5	34.2	86.1	107.6	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80.5	15.5	40	86	107.5	43	32					
25	G 1	94	17	47	94.1	123.6	59	41		G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.
32	G 1 1/4	112	19	56	94	123.5	59	50					
40	G 1 1/2	132	21	66	107.6	151.1	87	55					
50	G 2	160	24.5	80	107.6	151.1	87	70					

Pressure Regulator Valve - Type RGV Series 100 with Secondary Discharge

Price group	53	Low noise and impact-free control, for neutral, gaseous media (optional liquids)	Amb. temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$ Med.-Temp. $T_{min} -10\text{ °C}$, $T_{max} +90\text{ °C}$	Brass
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Version	Secondary pressure [bar]	DN	Flow air [l/min]	G	PN	Sealing material	Type	Order number	Price
Pressure regulator valve without pressure gauge Permitted operating pressure 0.5 to 16 bar 	0.5 - 10	15	260 to 2.600	G 1/2	16	NBR	RGV-151-1C78-1/2BN	653201	o. r.
	0.5 - 3	15	260 to 2.600	G 1/2	16	NBR	RGV-151-3C78-1/2BN	653202	o. r.
	0.5 - 6	15	260 to 2.600	G 1/2	16	NBR	RGV-151-6C78-1/2BN	653203	o. r.
	0.5 - 10	20	360 to 3.600	G 3/4	16	NBR	RGV-151-1C78-3/4BN	653301	o. r.
	0.5 - 3	20	360 to 3.600	G 3/4	16	NBR	RGV-151-3C78-3/4BN	653302	o. r.
	0.5 - 6	20	360 to 3.600	G 3/4	16	NBR	RGV-151-6C78-3/4BN	653303	o. r.
	0.5 - 10	25	800 to 8.000	G 1	16	NBR	RGV-151-1C78-1BN	653401	o. r.
	0.5 - 3	25	800 to 8.000	G 1	16	NBR	RGV-151-3C78-1BN	653402	o. r.
	0.5 - 6	25	800 to 8.000	G 1	16	NBR	RGV-151-6C78-1BN	653403	o. r.
	0.5 - 10	32	1.000 to 10.000	G 1 1/4	16	NBR	RGV-151-1C78-5/4BN	653501	o. r.
	0.5 - 3	32	1.000 to 10.000	G 1 1/4	16	NBR	RGV-151-3C78-5/4BN	653502	o. r.
	0.5 - 6	32	1.000 to 10.000	G 1 1/4	16	NBR	RGV-151-6C78-5/4BN	653503	o. r.
	0.5 - 10	40	1.400 to 14.000	G 1 1/2	16	NBR	RGV-151-1C78-6/4BN	653601	o. r.
	0.5 - 3	40	1.400 to 14.000	G 1 1/2	16	NBR	RGV-151-3C78-6/4BN	653602	o. r.
	0.5 - 6	40	1.400 to 14.000	G 1 1/2	16	NBR	RGV-151-6C78-6/4BN	653603	o. r.
	0.5 - 10	50	1.650 to 16.500	G 2	16	NBR	RGV-151-1C78-2BN	653701	o. r.
0.5 - 3	50	1.650 to 16.500	G 2	16	NBR	RGV-151-3C78-2BN	653702	o. r.	
0.5 - 6	50	1.650 to 16.500	G 2	16	NBR	RGV-151-6C78-2BN	653703	o. r.	

Variations		Options			
	Intermediate flange pressure regulator valve Flange-side 4 through bores: Type RGV-151-.CHL-...		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many medium Type RGV-151Q-...
	Flange mount Pressure regulator valve Flange-side pressure inlet: Type RGV-151-.CH9-...				
	Flange mount Pressure regulator valve Thread-side pressure inlet: Type RGV-151-.C7L-...		without secondary side discharge of the pilot pressure regulator, especially for fluids Type RGV-151-.A78-...		

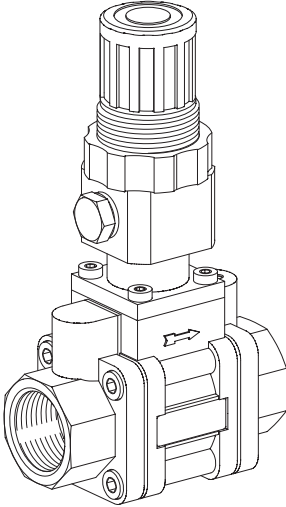
Function

Price group **53** low noise and impact-free control, for neutral, gaseous media (optional liquids)

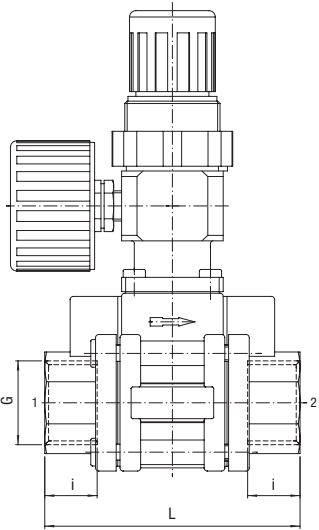
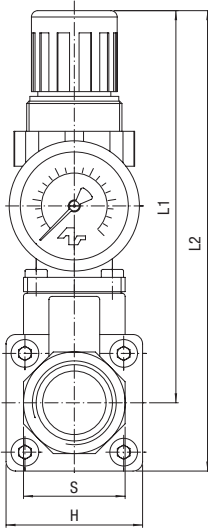
Brass

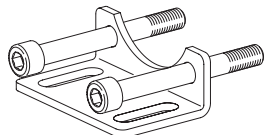
Operating position	Description

Illustration



Pilot unit can be assembled rotated by 4x90°. For assembly as shown, pressure gauge is limited to NG 40 mm Ø.

Dimensions								Mounting Accessories				
DN	G	L	I	L1	L2	H	S	Illustration	Suitable for valves	Type	Order number	Price
15	G 1/2	68.4	13.5	124.5	146	43	27		G 1/2 + G 3/4 DN 15 and DN 20	ZGV-10normal D2normal 52	616252	o. r.
20	G 3/4	80	15.5	124.5	146	43	32					
25	G 1	94	17	132.5	162	59	41					
32	G 1 1/4	112	19	132.5	162	59	50					
40	G 1 1/2	132	21	146	189.5	87	55					
50	G 2	160	24.5	146	189.5	87	70	G 1 + G 1 1/4 DN 25 and DN 32	ZGV-10normal D32-62	616262	o. r.	

2/2-Way Solenoid Valve Battery - Type EGV Series 100

Price group	53	Function "A" normally closed, mixer version	low noise and impact-free closing, for neutral, gaseous or fluids	Brass
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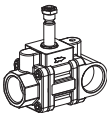
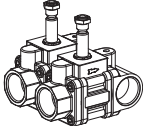
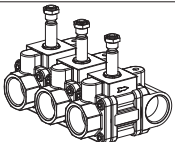
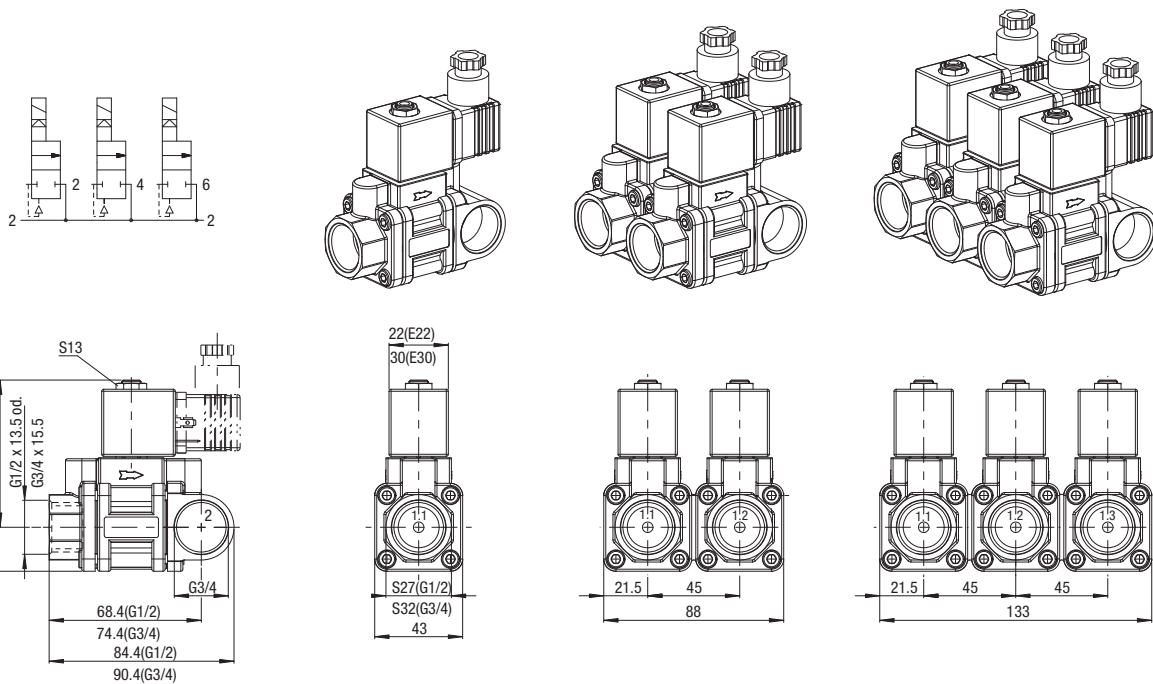
Version	DN	Kv-value water [m³/h]	G	PN	Possible Type of power	Sealing material	Type (Partial solenoid valve without solenoid coil)	Order number	Price
 Valve without solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below.	15	5.6	G 1/2	16/8	AC/DC	NBR	EGV-111/M1-A7L-1/2BN-00	616921	o. r.
	15	5.6	G 1/2	16/8	AC/DC	EPDM	EGV-111/M1-A7L-1/2PN-00	616971	o. r.
	15	5.6	G 1/2	16/8	AC/DC	FKM	EGV-111/M1-A7L-1/2FN-00	617021	o. r.
	20	7.6	G 3/4	16/8	AC/DC	NBR	EGV-111/M1-A7L-3/4BN-00	616931	o. r.
	20	7.6	G 3/4	16/8	AC/DC	EPDM	EGV-111/M1-A7L-3/4PN-00	616981	o. r.
 Valve without solenoid coil, 2-fold battery or solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below.	15	5.6	G 1/2	16/8	AC/DC	NBR	EGV-111/M2-A7L-1/2BN-00	616922	o. r.
	15	5.6	G 1/2	16/8	AC/DC	EPDM	EGV-111/M2-A7L-1/2PN-00	616972	o. r.
	15	5.6	G 1/2	16/8	AC/DC	FKM	EGV-111/M2-A7L-1/2FN-00	617022	o. r.
	20	7.6	G 3/4	16/8	AC/DC	NBR	EGV-111/M2-A7L-3/4BN-00	616932	o. r.
	20	7.6	G 3/4	16/8	AC/DC	EPDM	EGV-111/M2-A7L-3/4PN-00	616982	o. r.
 Valve without solenoid coil, 3-fold battery or solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below.	15	5.6	G 1/2	16/8	AC/DC	NBR	EGV-111/M3-A7L-1/2BN-00	616923	o. r.
	15	5.6	G 1/2	16/8	AC/DC	EPDM	EGV-111/M3-A7L-1/2PN-00	616973	o. r.
	15	5.6	G 1/2	16/8	AC/DC	FKM	EGV-111/M3-A7L-1/2FN-00	617023	o. r.
	20	7.6	G 3/4	16/8	AC/DC	NBR	EGV-111/M3-A7L-3/4BN-00	616933	o. r.
	20	7.6	G 3/4	16/8	AC/DC	EPDM	EGV-111/M3-A7L-3/4PN-00	616983	o. r.
20	7.6	G 3/4	16/8	AC/DC	FKM	EGV-111/M3-A7L-3/4FN-00	617033	o. r.	

Illustration


The pressure value at port "2" may not exceed the values at inlets "1.1", "1.2" or "1.3", otherwise the version with integrated non-return valves should be selected. These isolate up to a pressure difference of 10 bar. Please do not hesitate to ask us if you have any questions.






Valve batteries series 100 can also be constructed combined, with all valve Types, for all listed functions and with various options according to customer requirements.

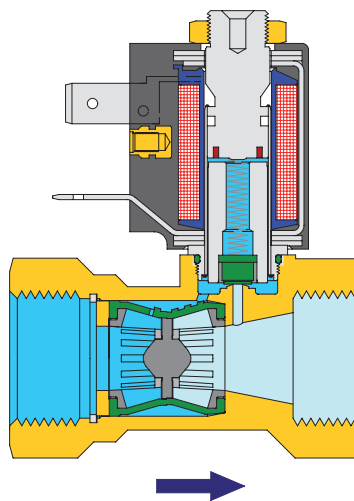
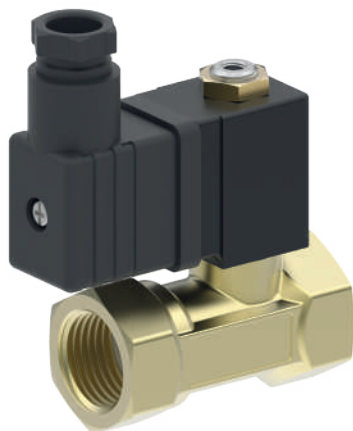
This is also Possible up to DN 50 (G 2) in special version. The number of valves is only limited by the efficiently manufactured overall length of the battery collector plate. Depending on DN this is 600 to 800 mm.

Solenoid valves, with pressure regulator, pressure operated valves or pressure regulator valves, can thus be flange-mounted on a collector plate according to requirement, or also opposite laterally reversed. Likewise the flow direction of the flange valves can be freely selected to a large extent. (Distributor or mixer version)

AVS Römer furthermore manufactures so-called multi-functional blocks, with integrated injectors, pressure sensors and similar.

Permitted operating pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted operating pressure OP [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz 			AC 60 Hz 			DC 			DC 			DC 				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	Medium temperature			Medium temperature			Medium temperature			Medium temperature			Medium temperature				
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
15 to 20	EGV-111M.-A..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	6	5	4	4	3	2	6	5	4		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	14	12	10	8	15	13	12	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

GAMMA Valves Serie 200


Especially economical valve series DN 10 (G 3/8) and DN 12 (G 1/2) for the most varied of applications in mechanical and apparatus construction.

The minimal space requirement of this socket valve series is especially of advantage in small apparatus construction (representations G1/2 in scale 1:1)

Dirt particles in the medium can lead to malfunction in the solenoid valves. The installation of a strainer is thus to be recommended, e.g. type SMF-133..

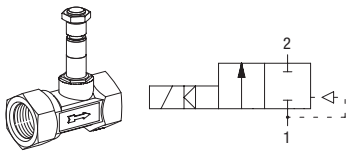
CHARACTERISTICS
GENERAL

Constructional design	Low noise membrane valve with coaxial flow			
Product name	2/2-way Solenoid valve servo controlled	2/2-way Solenoid valve servo controlled	2/2-way Solenoid valve pressure operated	2/2-way valve, pressure operated by external or own medium
Product type	EGV	EGV	EGV	PGV
Function	"A" normally closed	"B" normally open	"Z" normally closed	"B" normally open
Nominal diameter	DN 10 and DN 12			
Port size	Thread (ISO 228) G 3/8 and G 1/2			
Ambient temperature	-20 °C to +60 °C (others on request)			
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)			
Medium viscosity	up to ca. 20 mm ² /s			
Valve body material	Brass			
Membrane support unit material	reinforced synthetic material (others on request)			
Other internal component	Stainless steel and non-ferrous metal			
Material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)			
Mounting method	Installation in rigid pipe system			
Mounting position	optional, preferably upright			
PNEUMATIC - HYDRAULIC				
Nominal pressure (bar)	according to type table. The numerical value of the nominal pressure PN signifies the Permitted Operating Pressure OP in bar at 60°C ambient temperature and 60°C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical current consumption, the second value to that with lowest current consumption.			
Pressure range	0.3 bar up to permitted operating pressure OP according to table.			
Rate	Kv-value according to type table (full passage with pressure difference of 0.5 bar or higher)			
Medium	gaseous or fluids Sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases Sealing material EPDM: e.g. hot water Sealing material FKM: e.g. solvents, hot water, hot air above 90 °C			
Response time	Opening time: 20 ms to 1 s; closing time: 25 ms to 3 s, according to medium			
Electric	see solenoid coils			

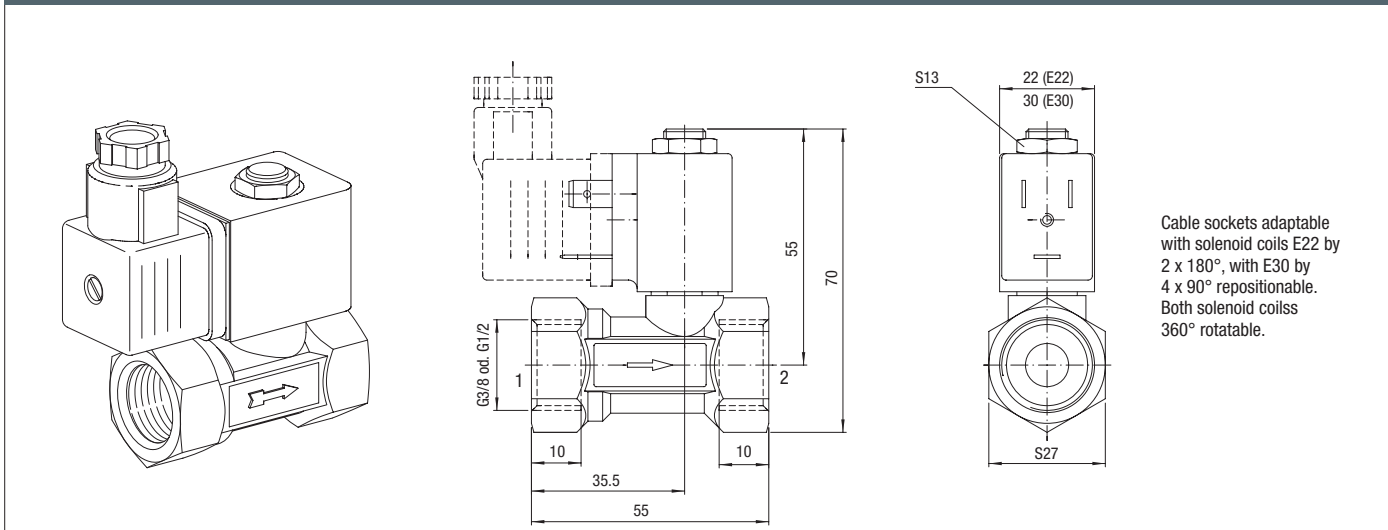
2/2-Way Solenoid Valve - Type EGV Series 200

Price group **53** Function "A" normally closed low noise and impact-free closing, for neutral, gaseous or fluids

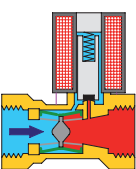
Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type	Order number	Price
 <p>Valve without solenoid coils Permitted operating pressure 0.3 bar up to valve according to table below.</p>	10	2	G 3/8	16/8	AC/DC	NBR	EGV-211-A79-3/8BN-00	613041	o. r.
	10	2	G 3/8	16/8	AC/DC	EPDM	EGV-211-A79-3/8PN-00	613043	o. r.
	10	2	G 3/8	16/8	AC/DC	FKM	EGV-211-A79-3/8FN-00	613045	o. r.
	12	2.2	G 1/2	16/8	AC/DC	NBR	EGV-211-A79-1/2BN-00	613051	o. r.
	12	2.2	G 1/2	16/8	AC/DC	EPDM	EGV-211-A79-1/2PN-00	613053	o. r.
	12	2.2	G 1/2	16/8	AC/DC	FKM	EGV-211-A79-1/2FN-00	613055	o. r.

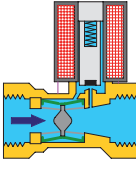
Illustration



Function




In O-position - magnetic system not under current - its seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.



In override position - magnetic system under current - its seat is open, the control chamber discharged and the membrane is held by the medium in "open" position. A minimum pressure difference is required for this.

Options



increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium Type EGV-211Q-...

Permitted Operating Pressure OP

DN	type	PN	Combinable solenoid coils			Permitted Operating Pressure OP [bar] at ambient temperature +60 °C																
			type	Nominal current P ₂₀			AC 50 Hz 90 %U _N			AC 60 Hz 90 %U _N			DC 90 %U _N			DC 90 %U _N			DC 100 %U _N			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	Medium temperature			Medium temperature			Medium temperature			Medium temperature			Medium temperature			
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
10 and 12	EGV-211-A..	16/8	E22...L.	3.5	on req.	2.5	16	13	12	16	13	on req.	15	10	9	8	6	4	9	8	7	
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Solenoid Valve - Type EGV Series 200

Price group	53	Function "Z" normally closed with existing auxiliary pressure at "10"	low noise and impact-free closing, for neutral, gaseous or fluids	Brass
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Version	DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price
<p>Valve without solenoid coils Permitted operating pressure 0.3 bar up to valve according to table below, double-sided blocking.</p>	10	2	G 3/8	16	AC/DC	NBR	EGV-211-Z77-3/8BP-00	613341	o. r.
	10	2	G 3/8	16	AC/DC	EPDM	EGV-211-Z77-3/8PP-00	613343	o. r.
	10	2	G 3/8	16	AC/DC	FKM	EGV-211-Z77-3/8FP-00	613345	o. r.
	12	2.2	G 1/2	16	AC/DC	NBR	EGV-211-Z77-1/2BP-00	613351	o. r.
	12	2.2	G 1/2	16	AC/DC	EPDM	EGV-211-Z77-1/2PP-00	613353	o. r.
	12	2.2	G 1/2	16	AC/DC	FKM	EGV-211-Z77-1/2FP-00	613355	o. r.

Illustration

These valves can also be used for dirty media by the application, depending on constructional design, of an external medium, e.g. compressed air, for controlling the membrane.

Cable sockets adaptable with solenoid coils E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° rotatable.

Function

In 0-position - magnetic system not under current - its seat is closed. The auxiliary pressure accumulated at "10" thus builds up in the control chamber and holds the membrane in "closed" position.

In override position - magnetic system under current - its override seat is closed. The control chamber is discharged by the open seat and the membrane held in "open" position by the medium. A minimum pressure difference is required for this.

Options

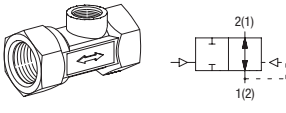
0-pressure membrane requires no differential pressure to open, however to close control pressure 1 bar above operating pressure
TYPE EGV-211-Z77-...-0-00

increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium
Type EGV-211Q-...

Permitted Operating Pressure OP

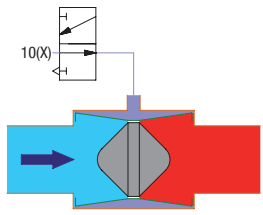
DN	type	PN	Combinable solenoid coils			Permitted Operating Pressure OP [bar] at ambient temperature +60 °C																	
			type	Nominal current P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
10 and 12	EGV-211-Z...	16/8	E22...L.	3.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Valve - Type PGV Series 200 - Pressure Operated (Volume Booster) by External Medium

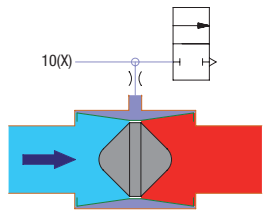
Price group 53	Function "B" normally open	low noise and impact-free closing, for neutral, gaseous and fluids	Brass							
Version	Control-pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price	
 <p>2/2-way valve pressure operated, double-sided blocking by external medium Permitted operating pressure 0.3 to 16 bar Further features Page <AE></p>	≥ excess operating pressure max. 16	10	2	G 3/8	16	NBR	PGV-231 -B77-3/8BP	614041	o. r.	
		10	2	G 3/8	16	EPDM	PGV-231 -B77-3/8PP	614043	o. r.	
		10	2	G 3/8	16	FKM	PGV-231 -B77-3/8FP	614045	o. r.	
		12	2.2	G 1/2	16	NBR	PGV-231 -B77-1/2BP	614051	o. r.	
		12	2.2	G 1/2	16	EPDM	PGV-231 -B77-1/2PP	614053	o. r.	
		12	2.2	G 1/2	16	FKM	PGV-231 -B77-1/2FP	614055	o. r.	

Illustration

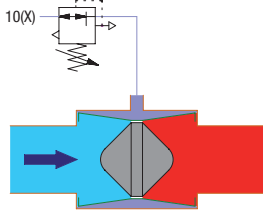
Remotely operated 2/2-way valve regulated by external medium with 3/2-way valve (positive control)



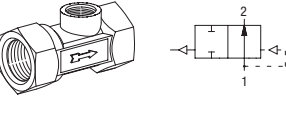
Remotely operated 2/2-way valve regulated by external medium with 2/2-way valve



Remotely operated excess pressure valve regulated by external medium with pressure regulator

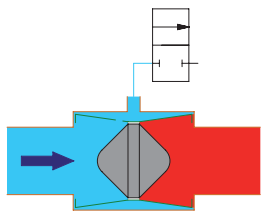


2/2-Way Valve - Type PGV Series 200 - Pressure Operated (Volume Booster) by Own Medium

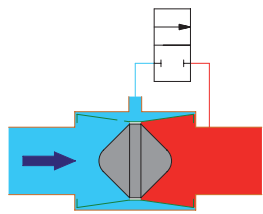
Price group 53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids	Brass							
Version	Control-pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price	
 <p>2/2-way valve pressure operated, by own medium Permitted operating pressure 0.3 to 16 bar</p>	≥ excess operating pressure max. 16	10	2	G 3/8	16	NBR	PGV-231-B77-3/8BN	614095	o. r.	
		10	2	G 3/8	16	EPDM	PGV-231-B77-3/8PN	614073	o. r.	
		10	2	G 3/8	16	FKM	PGV-231-B77-3/8FN	614075	o. r.	
		12	2.2	G 1/2	16	NBR	PGV-231-B77-1/2BN	614081	o. r.	
		12	2.2	G 1/2	16	EPDM	PGV-231-B77-1/2PN	614083	o. r.	
		12	2.2	G 1/2	16	FKM	PGV-231-B77-1/2FN	614085	o. r.	

Illustration

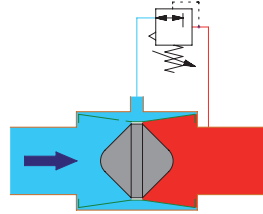
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (negative control)



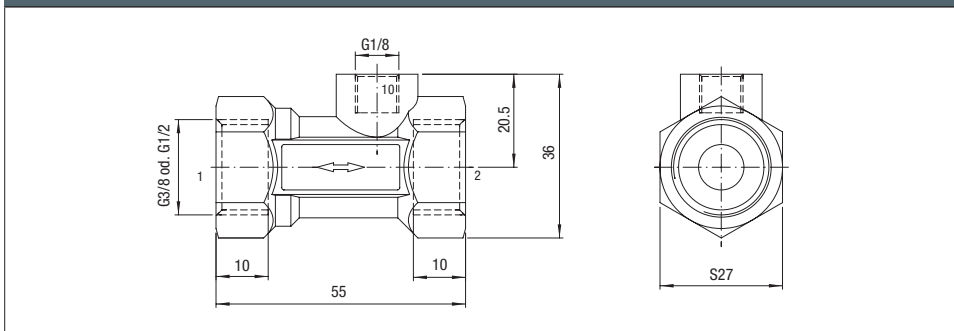
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (control medium recycled)



Remotely operated pressure regulator valve regulated by own medium with pressure regulator (control medium recycled)



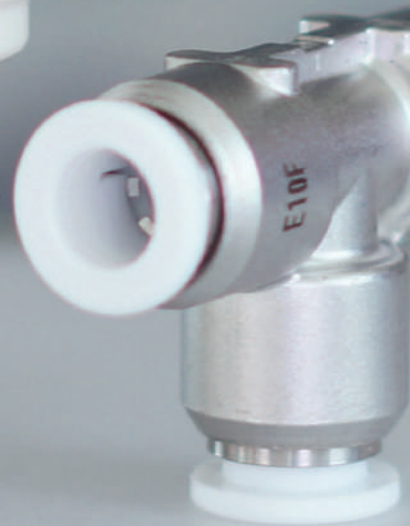
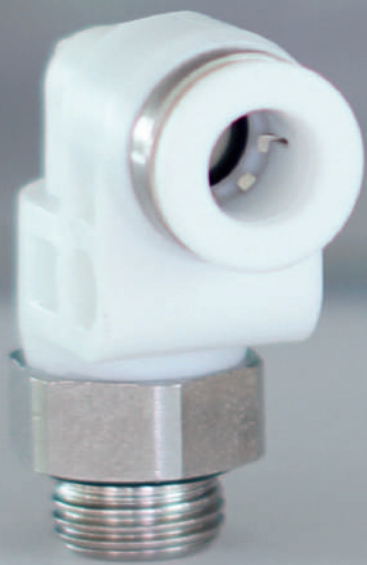
Illustration

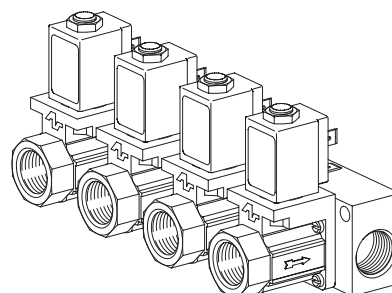


Options

Brass components chemically nickel-plated

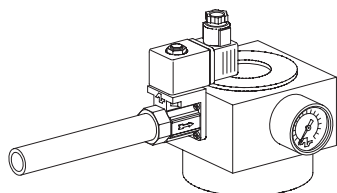
increases resistance to corrosion and replaces stainless steel valves cost-effectively for many flow media
Type PGV-231Q-...



GAMMA Valves Series 300


Especially small-construction valve series DN 13 (G 1/2), 32 mm wide, for the most varied of applications in mechanical and apparatus construction. The narrow constructional design enables extremely high pack density.

Dirt particles in the medium can lead to malfunction in the valves. The installation of a strainer is thus to be recommended, e.g. Type SMF-133...



Valve batteries up to 10-fold with various override and functional applications as standard. The structural combination especially of various Types of valve, sensors and such like in multi-functional blocks creates significant advantages:

- saving of assembly time (pipework expenditure reduced by up to 85 %)
- saving of fittings
- enormous saving of construction space

Intermediante flange and flange-mount valves are directly flange-mounted on pressure-bearing mechanical and apparatus components.

CHARACTERISTICS
GENERAL

Constructional design	low noise membrane valve with coaxial flow				
Product name	2/2-way solenoid valve servo controlled	2/2-way solenoid valve with pressure regulator servo controlled	2/2-way valve pressure operated by external or own medium	Hand-adjustable pressure regulator valve servo controlled	Valve batteries (all variants)
Product type	EGV	EGR	PGV	RGV	all previously named
Nominal diameter	DN 13				
Port size	Thread (ISO 228) G 1/2				
Ambient temperature	-20 °C to +60 °C (others on request)				
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)				
Medium viscosity	up to ca. 20 mm ² /s				
Valve body material	Ms				
Membrane support unit material	reinforced synthetic material (others on request)				
Other internal component material	Stainless steel and non-ferrous metal				
Seal material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)				
Mounting method	Installation in rigid pipe system				
Mounting position	optional, preferably upright				

PNEUMATIC - HYDRAULIC

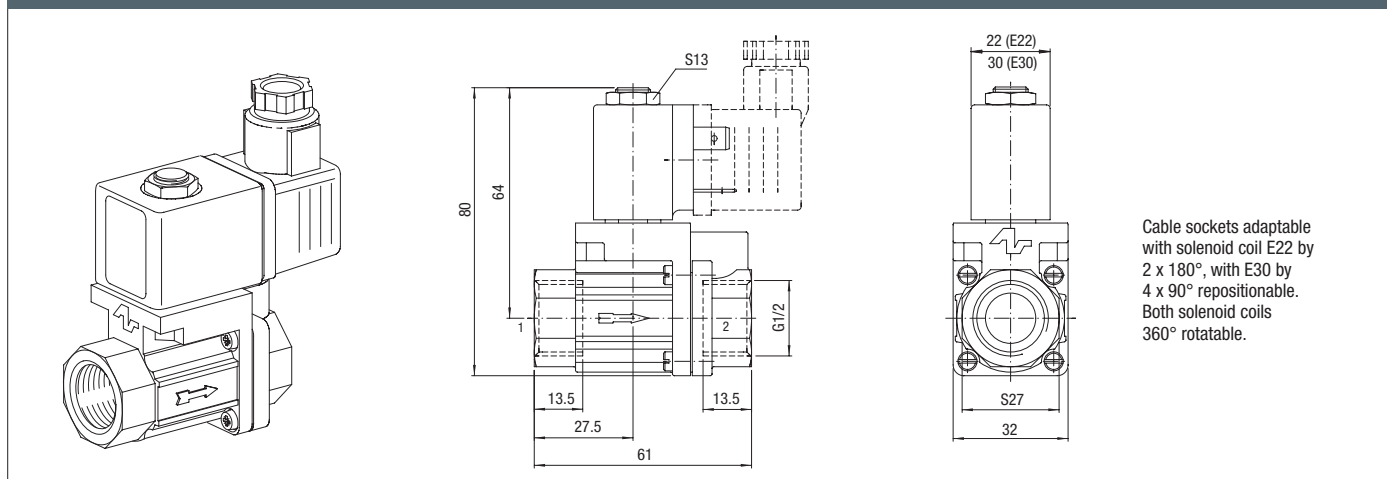
Nominal pressure (bar)	according to Type table. The numerical value of the nominal pressure PN signifies the Permitted Operating Pressure OP in bar at 60°C ambient temperature and 60°C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical power consumption, the second value to that with lowest power consumption.	
Pressure range	0.3 bar up to permitted operating pressure OP according to table. 0 to 16 bar version is also possible for Type EGV function "Z" and Type PGV	
Flow rate	Kv-value according to Type table (full flow with pressure difference of 0.5 bar or higher)	
Medium	gaseous or fluids	
	Sealing material NBR:	e.g. compressed air, water, hydraulic fluids, neutral gases
	Sealing material EPDM:	e.g. hot water
	Sealing material FKM:	e.g. solvents, hot water, hot air above 90°C
Response time	Opening time: 20 ms to 1 s; closing time: 25 ms to 3 s, according to flow medium	
Electric	see solenoid coils	

2/2-Way Solenoid Valve - Type EGV Series 300

Price group	53	Function "A" normally closed	Low noise and impact-free closing, for neutral, gaseous or fluids
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Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
<p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to valve according to table below.</p>	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311-A78-1/2BN-00	613401	o. r.
	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311-A78-1/2PN-00	613403	o. r.
	13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311-A78-1/2FN-00	613405	o. r.

Illustration


Function	Variations	Options
<p>In 0-position - magnetic system not under power - its seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p>	<p>2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-311-AH9-...</p>	<p>Stepwise manual override Type EGV-312-... This limits: permitted excess operating pressure: 12.5 bar permitted Medium temperature: max. 60°C</p>
<p>In overrideal position - magnetic system under power - its seat is open, the control chamber released and the membrane is held by the flow medium in "open" position. A minimum pressure difference is required for this.</p>	<p>2/2-way flange mount Solenoid valve Thread-side pressure inlet Type EGV-311-A7L-...</p>	<p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>
	<p>2/2-way solenoid valve Rapid function version with 3/2-way servo-override especially for compressed air Type EGV-361-A87-... BP-00</p>	<p>increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many flow medium Type EGV-311Q-...</p>
		<p>Non-return valve integrated outlet-side in the gate unit Type EGV-311-A78-../R-.. This only blocks up to a pressure difference of 10 bar</p>

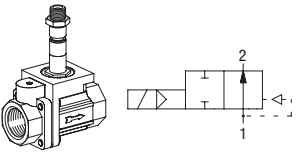
Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted Operating Pressure OP [bar] at ambient temperature +60 °C																	
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
13	EGV-311-A..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	on req.	7	on req.	on req.	6	5	4	4	3	2	6	5	4		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	14	12	10	8	15	13	12	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

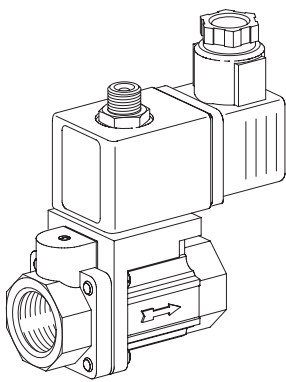
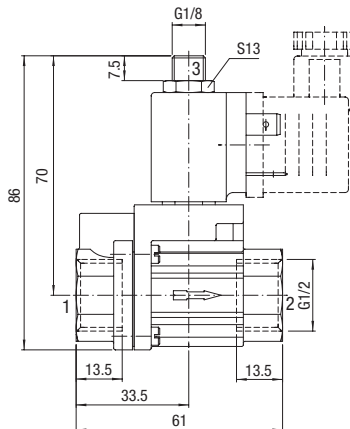
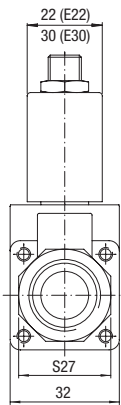
2/2-Way Solenoid Valve - Type EGV Series 300

Price group	53	Function "B" normally open	Low noise and impact-free closing, for neutral, gaseous or fluids
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Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
 <p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to valve according to table below.</p>	13	3.2	G 1/2	16	AC / DC	NBR	EGV-311-B87-1/2BP-00	613411	o. r.
	13	3.2	G 1/2	16	AC / DC	EPDM	EGV-311-B87-1/2PP-00	613413	o. r.
	13	3.2	G 1/2	16	AC / DC	FKM	EGV-311-B87-1/2FP-00	613415	o. r.

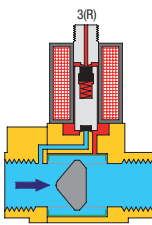
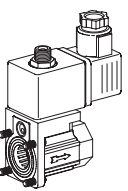

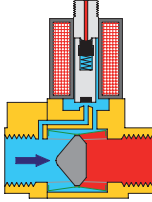
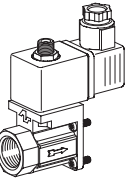
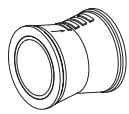

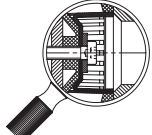
Illustration

These valves, due to their long lifetime, are primarily used as a start-up unloading device for compressors.

If the magnet loses power, control chamber volume leakage of "3" occurs briefly. If necessary this must be caught and discharged at connector G 1/8 (above).

Cable sockets adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° rotatable.

Function	Variations	Options
 <p>In 0-position - magnetic system not under power - its seat is closed and its override seat open. Thereby the control chamber is released by "3" and the membrane held in "open" position by the flow medium. A minimum pressure difference is required for this.</p>	 <p>2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-311-BL7-.....</p>	 <p>Stepwise manual override Type EGV-312-... This limits: permitted excess operating pressure: 12.5 bar permitted Medium temperature: max. 60°C</p>
 <p>In override position - magnetic system under power - its seat is open and its override seat closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in closed position.</p>	 <p>2/2-way flange mount Solenoid valve Thread-side pressure inlet Type EGV-311-B9H-.....</p>	 <p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>
		 <p>increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many flow medium Type EGV-311Q-...</p>
		 <p>Non-return valve integrated outlet-side in the gate unit Type EGV-311-B87-/,T-.. This only blocks up to a pressure difference of 10 bar</p>

Permitted Operating Pressure OP

DN	Type	PN	Permitted Operating Pressure OP [bar] at ambient temperature + 60°C																			
			Combinable solenoid coil			AC 50 Hz			AC 60 Hz			DC 90 %U _N			DC 90 %U _N			DC 100 %U _N				
			Type	AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
13	EGV-311-B..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	16	16	16	16	16	16	16	16	16	16	16	16	16
			E22...M.	5.5	5	5	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Solenoid Valve - Type EGV Series 300

Price group **53**

Function "Z" normally closed with existing auxiliary pressure at port "10"

Low noise and impact-free closing, for neutral, gaseous or fluids

Brass

Version	DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
<p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to valve according to table below, double-sided blocking. Permitted control pressure at "10" ≥ Operating pressure, max. 16 bar</p>	13	3.2	G 1/2	16	AC/DC	NBR	EGV-311-Z76-1/2BP-00	613431	o. r.
	13	3.2	G 1/2	16	AC/DC	EPDM	EGV-311-Z76-1/2PP-00	613433	o. r.
	13	3.2	G 1/2	16	AC/DC	FKM	EGV-311-Z76-1/2FP-00	613435	o. r.

Illustration

Cable sockets adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° rotatable.

Function	Variations	Options
<p>In 0-position - magnetic system not under power - its seat is closed. The auxiliary pressure accumulated at "10" thus builds up in the control chamber and holds the membrane in "closed" position.</p>	<p>2/2-way flange mount Solenoid valve Flange-side pressure inlet Type EGV-311-ZL7-...</p>	<p>Stepwise manual override Type EGV-312-... This limits: permitted excess operating pressure: 12.5 bar permitted Medium temperature: max. 60°C</p>
<p>In override position - magnetic system under power - its override seat is closed. The control chamber is released by the open seat and the membrane held in "open" position by the flow medium. A minimum pressure difference is required for this.</p>		<p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>
		<p>increases resistance to corrosion, and replaces stainless steel valves cost-effectively for many flow medium Type EGV-311Q-...</p>
		<p>0-pressure membrane requires no differential pressure to open, however to close requires control pressure 1 bar above operating pressure Type EGV-311-Z76-1/2..0-...</p>

Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil			Permitted Operating Pressure OP [bar] at ambient temperature +60 °C																		
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature					
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C			
13	EGV-311-Z..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Solenoid Valve with Pressure Regulator - Type EGR Series 300

Price group 53	Function "C" normally closed, with secondary side discharged	low noise and impact-free closing, for neutral, gaseous medium (fluid optional)	Amb. temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$ Med.-Temp. $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$	Brass
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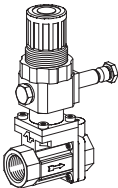
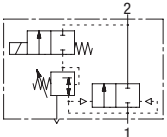
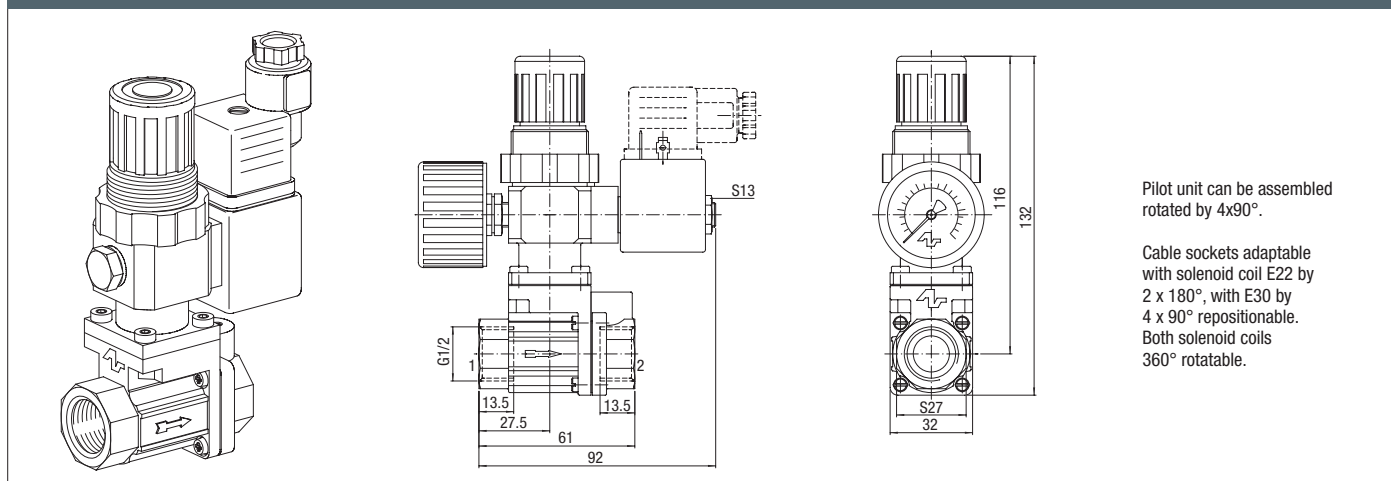
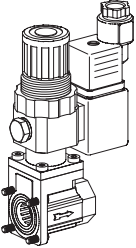
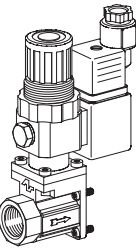
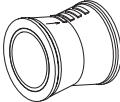

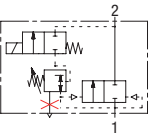





Version		Secondary pressure [bar]	DN	Flow air [l/min]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
 	Valve without solenoid coil without pressure gauge	0.5 - 10	13	150 to 1,500	G 1/2	16/8	AC/DC	NBR	EGR-351-1C78-1/2BN-00	654001	o. r.
	Permitted operating pressure 0.5 bar up to valve according to table below.	0.5 - 3	13	150 to 1,500	G 1/2	16/8	AC/DC	NBR	EGR-351-3C78-1/2BN-00	654002	o. r.
		0.5 - 6	13	150 to 1,500	G 1/2	16/8	AC/DC	NBR	EGR-351-6C78-1/2BN-00	654003	o. r.

Illustration


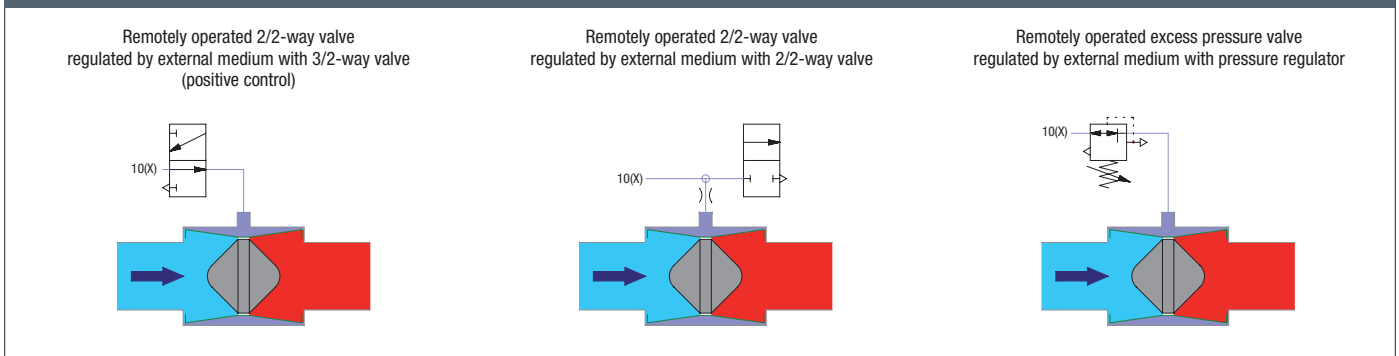
Function	Variations	Options
<p>With respect to electrical function the valve corresponds to a 2/2-way solenoid valve function "A".</p> <p>In override position - magnetic system under power - the membrane is only held in "open" position by the flow medium until the outlet-side pressure reaches the value set on the pressure regulator. This can be set using the lockable adjustment button. The pressure should preferably be measured as near to the load as possible. In case of need a pressure gauge can also be attached to the pilot pressure regulator.</p> <p>For dynamic loads or neutral fluids, a version without secondary-side ventilation can be supplied.</p>	 <p>2/2-way flange mount Solenoid valve with Pressure regulator Flange-side pressure inlet Type EGR-351-.CH9-.</p>  <p>2/2-way flange mount Solenoid valve with Pressure regulator Thread-side pressure inlet Type EGR-351-.C7L-.....</p>	 <p>Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils</p>  <p>increases resistance to corrosion and replaces stainless steel valves cost-effectively for many flow medium Type EGV-321Q-...</p>  <p>without secondary side ventilation of the pilot pressure regulator, especially for fluids Type EGR-351-.A78-...</p>

Permitted Operating Pressure OP

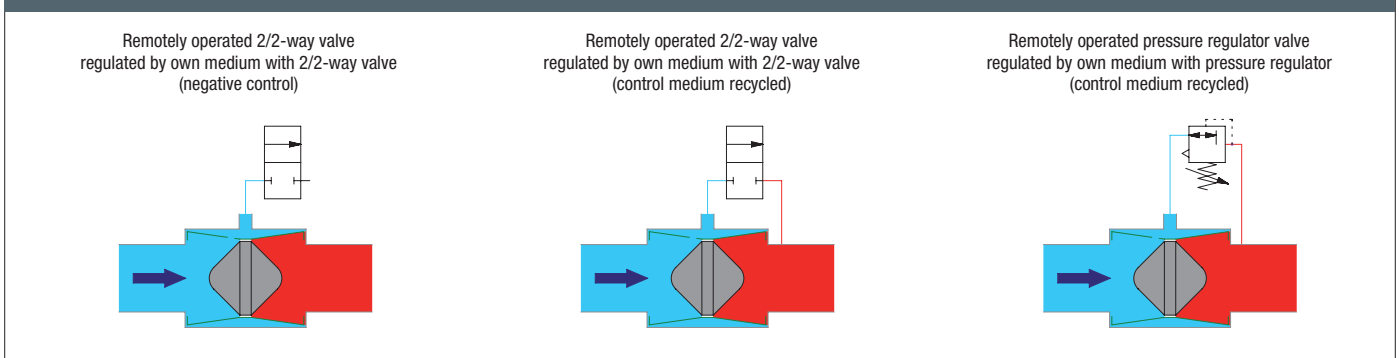
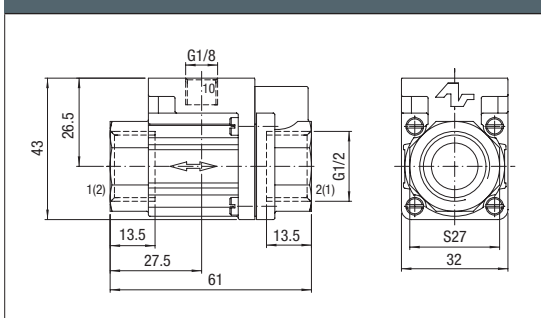
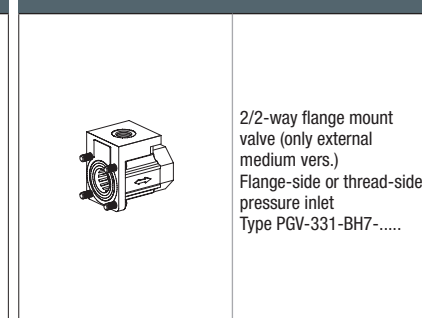
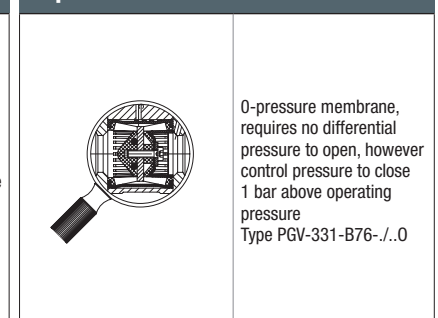
DN	Type	PN	Combinable solenoid coil		Permitted Operating Pressure OP [bar] at ambient temperature +60 °C												
			Type	Nominal power P_{20}			AC 50 Hz 		AC 60 Hz 		DC 90 %U _N 		DC 90 %U _N 		DC 100 %U _N 		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	90 %U _N Medium temperature		90 %U _N Medium temperature		90 %U _N Medium temperature		90 %U _N Medium temperature		100 %U _N Medium temperature		
				60 °C	90 °C	130 °C	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	60 °C	90 °C	
13	EGV-351-C..	16/8	E22...L.	3.5	on req.	2.5	8	on req.	-	7	on req.	6	5	4	3	6	5
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	12	10	15	13
			E22...H.	-	-	8	-	-	-	-	-	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Valve - Type PGV Series 300 - Pressure Operated (Volume Booster) by External Medium

Price group	53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids								Brass
Version	Control pressure [bar]	DN	Kv-value water [m ³ /h]	G	PN	Sealing material	Type	Order number	Price		
	≥ excess operating pressure max. 16 bar Permitted operating pressure 0.3 to 16 bar	13	3.2	G 1/2	16	NBR	PGV-331-B76-1/2BP	614101	o. r.		
		13	3.2	G 1/2	16	EPDM	PGV-331-B76-1/2PP	614103	o. r.		
		13	3.2	G 1/2	16	FKM	PGV-331-B76-1/2FP	614105	o. r.		

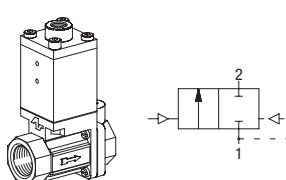
Illustration

2/2-Way Valve - Type PGV Series 300 - Pressure Operated (Volume Booster) by own Medium

Price group	53	Function "B" normally open (without control pressure)	low noise and impact-free closing, for neutral, gaseous and fluids								Brass
Version	Control pressure [bar]	DN	Kv-value water [m ³ /h]	G	PN	Sealing material	Type	Order number	Price		
	≥ excess operating pressure max. 16 bar Permitted operating pressure 0.3 to 16 bar	13	3.2	G 1/2	16	NBR	PGV-331-B76-1/2BN	614151	o. r.		
		13	3.2	G 1/2	16	EPDM	PGV-331-B76-1/2PN	614153	o. r.		
		13	3.2	G 1/2	16	FKM	PGV-331-B76-1/2FN	614155	o. r.		

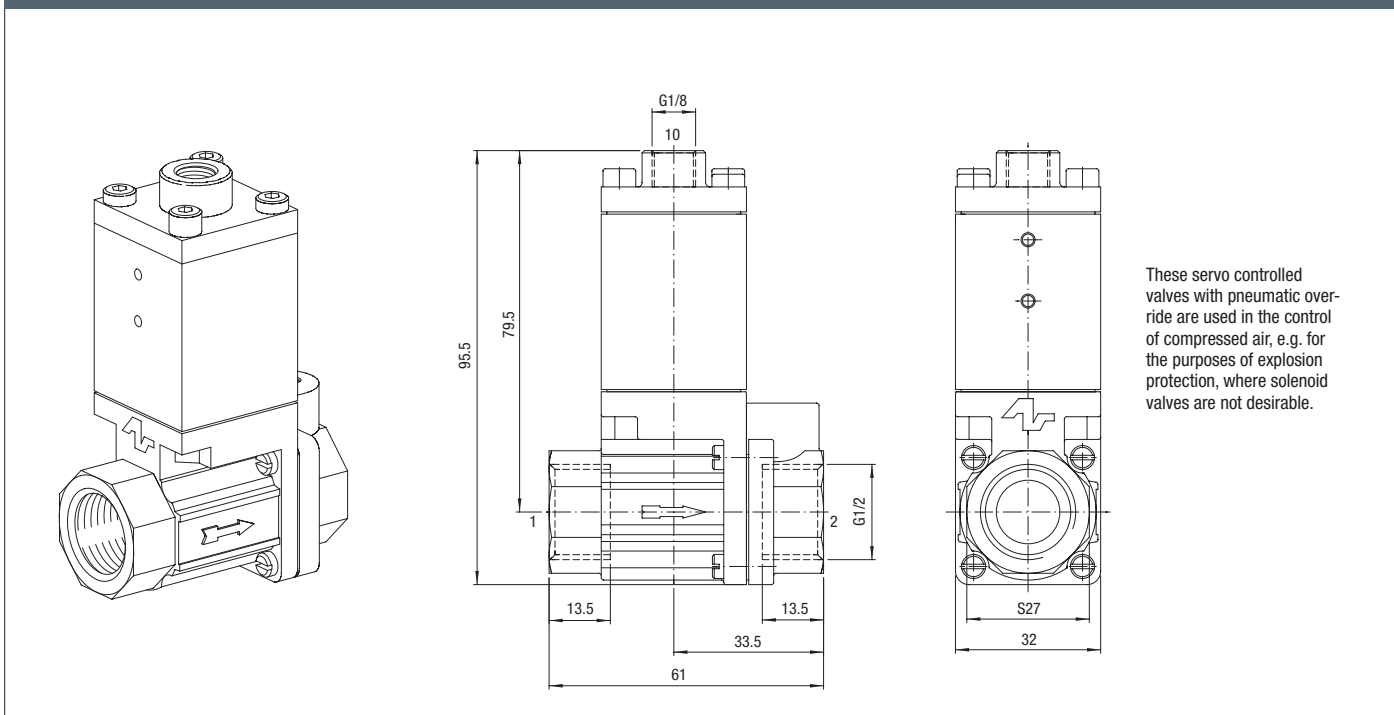
Illustration

Illustration

Variations

Options


2/2-Way Valve - Type PGV Series 300 - Pressure Operated

Price group 53	Function "A" normally closed	low noise functioning, for gaseous medium, especially compressed air	Brass
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Version	Control pressure [bar]	DN	Flow air [Nm³/h]	G	PN	Sealing material	Type	Order number	Price
 <p>2/2-way valve pressure-operated by maintained compressed air Permitted operating pressure 0.3 to 16 bar</p>	4-7	13	3.2	G 1/2	16	NBR	PGV-351-A96-1/2BP	614181	o. r.

Illustration



Function

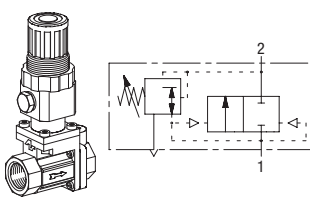
	<p>In 0-position - pre-control valve not pressurised - its seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p>
	<p>In override position - pre-control valve pressurised - its override seat is closed. The control chamber is released by the open seat, and the membrane is held in "open" position by the flow medium. A minimum pressure difference is required for this.</p>

Variations

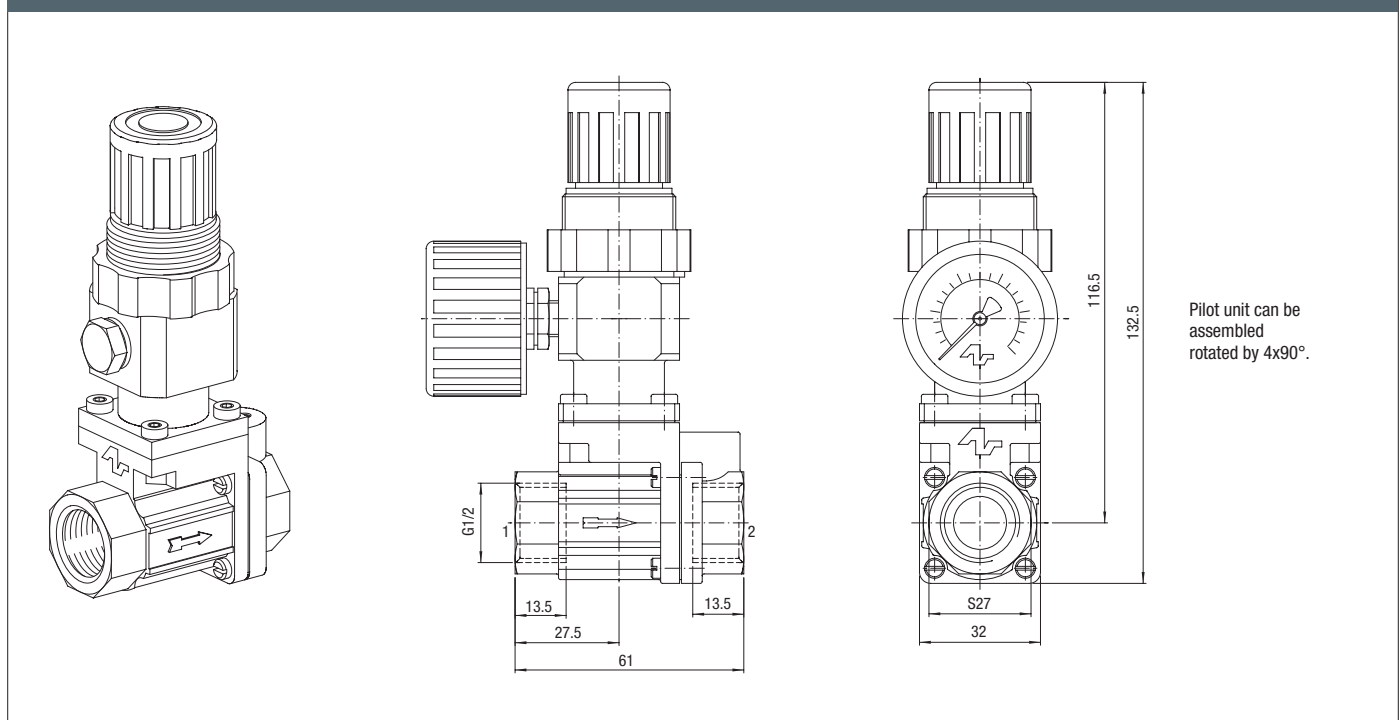
	<p>2/2-way flange mount valve Flange-side pressure inlet Type PGV-351-.AL7-1/2BP</p>
	<p>2/2-way flange mount valve Thread-side pressure inlet Type PGV-351-.A9H-1/2BP</p>

Pressure Regulator Valve - Type RGV Series 300

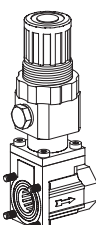
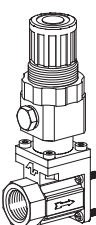
Price group 53	with secondary side ventilation	low noise and impact-free control, for neutral, gaseous medium (optional fluids)	Amb. temp. $T_{min} -20\text{ °C}$, $T_{max} +60\text{ °C}$ Med.-Temp. $T_{min} 0\text{ °C}$, $T_{max} +60\text{ °C}$	Brass
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Version	Secondary pressure [bar]	DN	Flow air [l/min]	G	PN	Sealing material	Type	Order number	Price
 <p>Pressure regulator valve without pressure gauge Permitted operating pressure 0.5 bar up to 16 bar</p>	0.5 - 10	13	150 to 1,500	G 1/2	16	NBR	RGV-351-1C78-1/2BN	653001	o. r.
	0.5 - 3	13	150 to 1,500	G 1/2	16	NBR	RGV-351-3C78-1/2BN	653002	o. r.
	0.5 - 6	13	150 to 1,500	G 1/2	16	NBR	RGV-351-6C78-1/2BN	653003	o. r.


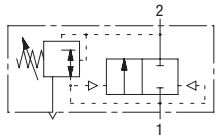
Illustration



Variations

	<p>Flange mount Pressure regulator valve Flange-side pressure inlet Type RGV-351-.CH9-....</p>
	<p>Flange mount Pressure regulator valve Thread-side pressure inlet Type RGV-351-.C7L-....</p>

Options

	<p>increases resistance to corrosion, and replaces stainless steel valves cost-effectively stainless steel pressure regulator Type RGV-351Q-...</p>
	<p>without secondary side ventilation of the pilot pressure regulator, especially for fluids Type RGV-351-.A78-...</p>

2/2-Way Solenoid Valve Battery - Type EGV Series 300

 Price group **53**

Function "A" normally closed, distributor version

low noise and impact-free closing, for neutral, gaseous or fluids

Brass


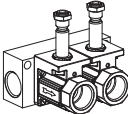
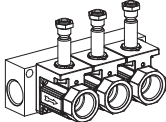
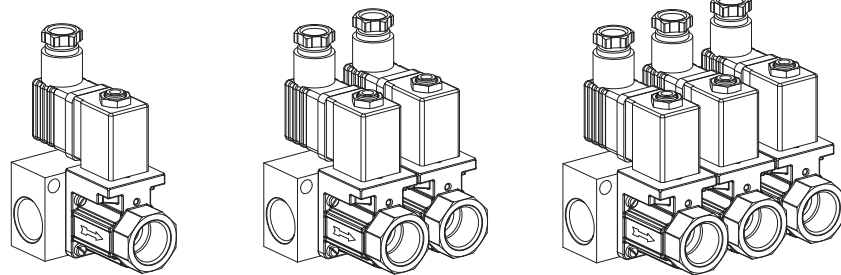
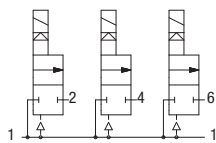
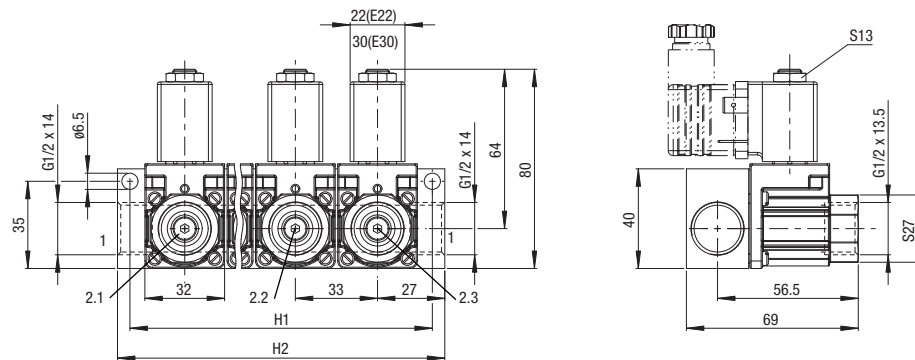
Version		DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
	Valve without solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/V1-AH9-1/2BN-00	616801	o. r.
		13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/V1-AH9-1/2PN-00	616831	o. r.
		13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/V1-AH9-1/2FN-00	616861	o. r.
	Valve, 2-fold Battery or solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/V2-AH9-1/2BN-00	616802	o. r.
		13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/V2-AH9-1/2PN-00	616832	o. r.
		13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/V2-AH9-1/2FN-00	616862	o. r.
	Valve, 3-fold Battery or solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/V3-AH9-1/2BN-00	616803	o. r.
		13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/V3-AH9-1/2PN-00	616833	o. r.
		13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/V3-AH9-1/2FN-00	616863	o. r.

Illustration

Valve Version

Description	H1	H2
Single valve	44	54
2-fold battery	77	87
3-fold battery	110	120
4-fold battery	143	153
5-fold battery	176	186
6-fold battery	209	219
7-fold battery	242	252
8-fold battery	275	285
9-fold battery	308	318
10-fold battery	341	351



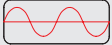

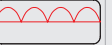
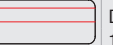

Valve batteries series 300 can also be delivered at short notice in 4- to 10-fold version

Valve batteries series 100 can also be constructed combined, with all valve Types, for all listed functions and with various options according to customer requirements.

Solenoid valves, with pressure regulator, pressure operated valves or pressure regulator valves, can thus be flange-mounted on a collector plate according to requirement, or also opposite laterally reversed. Likewise the flow direction of the flange valves can be freely selected to a large extent. (Distributor or mixer version)

AVS Römer furthermore manufactures so-called multi-functional blocks, with integrated injectors, pressure sensors and such like.

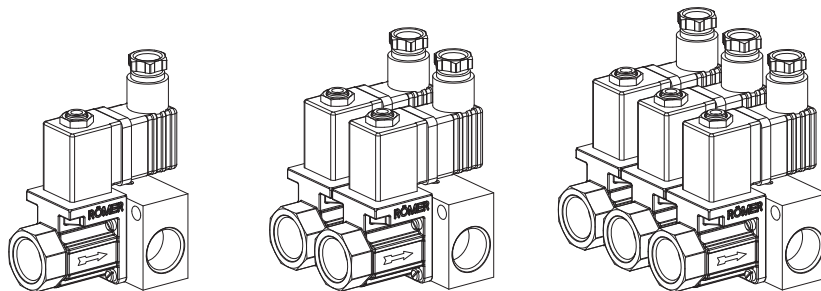
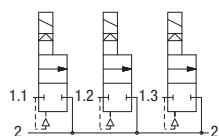
Permitted Operating Pressure OP

DN	Type	PN	Combinable solenoid coil		Permitted Operating Pressure OP [bar] at ambient temperature + 60 °C																			
			Type	Nominal power P ₂₀			AC 50 Hz 			AC 60 Hz 			DC 90 %U _N 			DC 90 %U _N 			DC 100 %U _N 					
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	Medium temperature			Medium temperature			Medium temperature			Medium temperature			Medium temperature					
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C			
13	EGV-311/V-A.	16/8	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	6	5	4	4	3	2	6	5	4
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	14	12	10	8	15	13	12
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

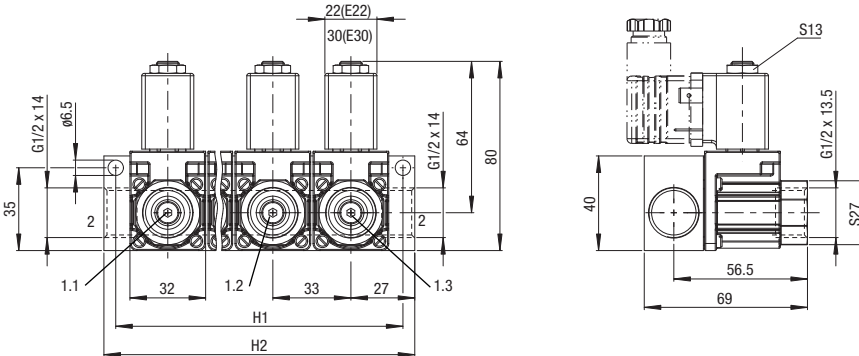
2/2-Way Solenoid Valve Battery - Type EGV Series 300

Price group	53	Function "A" normally closed, mixer version	low noise and impact-free closing, for neutral, gaseous or fluids	Brass
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Version	Non-return valve	DN	Kv-value water [m³/h]	G	PN	Possible type of power	Sealing material	Type	Order number	Price
<p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.</p>	without	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M1-A7L-1/2BN-00	616811	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M1-A7L-1/2BR-00	616821	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M1-A7L-1/2PN-00	616841	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M1-A7L-1/2PR-00	616851	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/M1-A7L-1/2FN-00	616871	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/M1-A7L-1/2FR-00	616881	o. r.
<p>Valve, 2-fold Battery or solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.</p>	without	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M2-A7L-1/2BN-00	616812	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M2-A7L-1/2BR-00	616822	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M2-A7L-1/2PN-00	616842	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M2-A7L-1/2PR-00	616852	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/M2-A7L-1/2FN-00	616872	o. r.
	with	13	3.2	G 1/2	16/10	AC/DC	FKM	EGV-311/M2-A7L-1/2FR-00	616882	o. r.
<p>Valve, 3-fold Battery or solenoid coil Permitted operating pressure 0.3 bar up to value according to table below.</p>	without	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M3-A7L-1/2BN-00	616813	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	NBR	EGV-311/M3-A7L-1/2BR-00	616823	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M3-A7L-1/2PN-00	616843	o. r.
	with	13	3.2	G 1/2	16/8	AC/DC	EPDM	EGV-311/M3-A7L-1/2PR-00	616853	o. r.
	without	13	3.2	G 1/2	16/8	AC/DC	FKM	EGV-311/M3-A7L-1/2FN-00	616873	o. r.
	with	13	3.2	G 1/2	16/10	AC/DC	FKM	EGV-311/M3-A7L-1/2FR-00	616883	o. r.

Illustration

Valve Version

Description	H1	H2
Single valve	44	54
2-fold battery	77	87
3-fold battery	110	120
4-fold battery	143	153
5-fold battery	176	186
6-fold battery	209	219
7-fold battery	242	252
8-fold battery	275	285
9-fold battery	308	318
10-fold battery	341	351



The pressure value at outlet "2" may not exceed the values at inlets 1.1, 1.2 or 1.3, otherwise the version with integrated non-return valves should be selected. These block up to a pressure difference of 10 bar.

Valve batteries series 300 can also be delivered at short notice in 4- to 10-fold version.

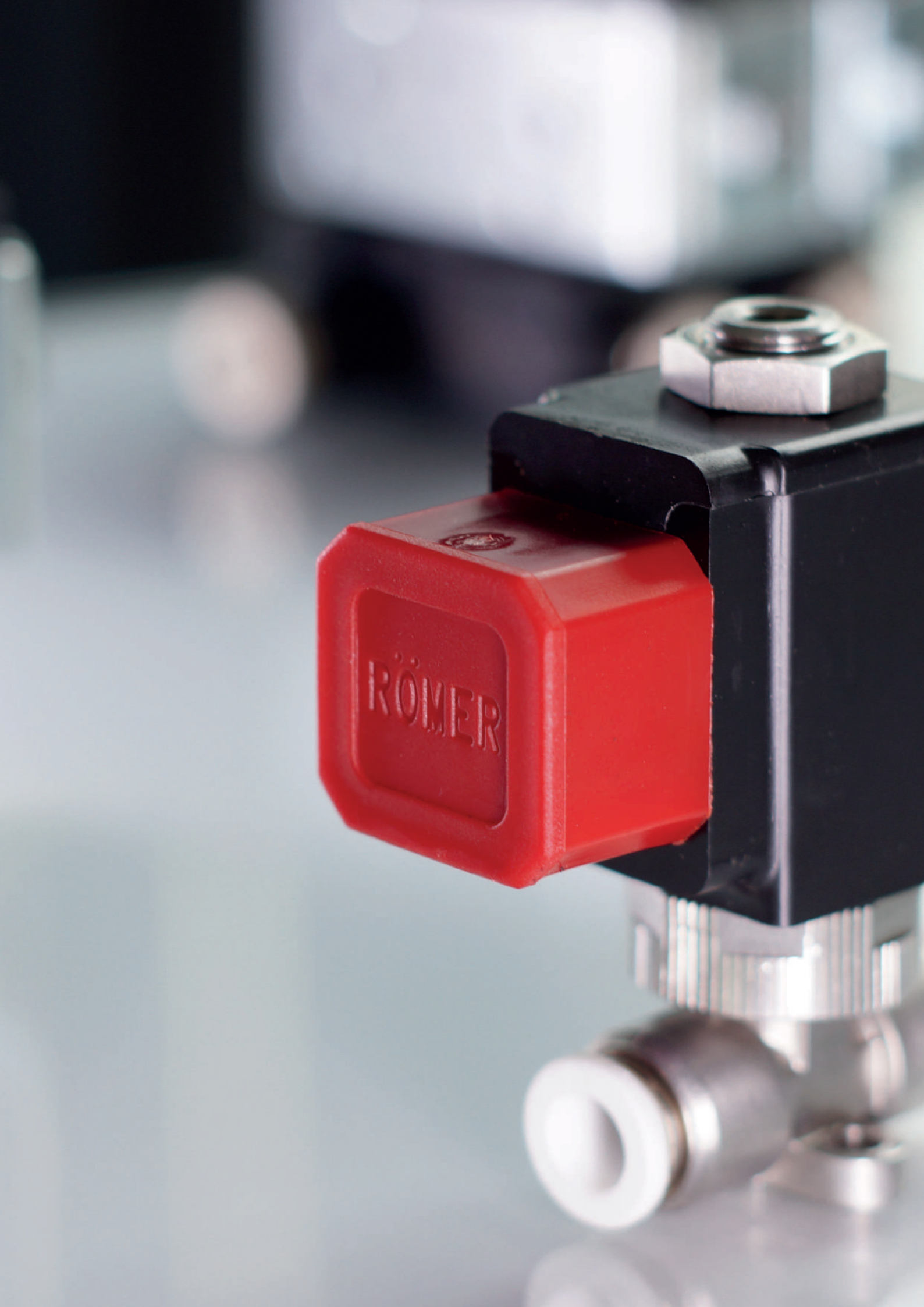
Valve batteries series 100 can also be constructed combined, with all valve Types, for all listed functions and with various options according to customer requirements.

Solenoid valves, with pressure regulator, pressure operated valves or pressure regulator valves, can thus be flange-mounted on a collector plate according to requirement, or also opposite laterally reversed. Likewise the flow direction

of the flange valves can be freely selected to a large extent. (Distributor or mixer version) AVS Römer furthermore manufactures so-called multi-functional blocks, with integrated injectors, pressure sensors and such like.

Permitted Operating Pressure OP

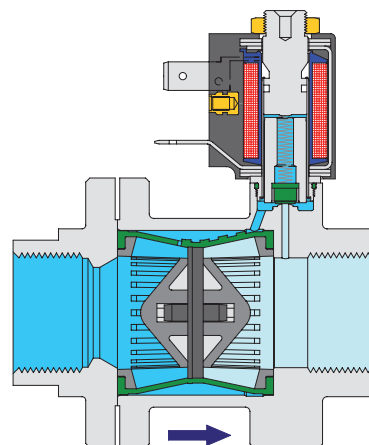
DN	Type	PN	Combinable solenoid coil			Permitted Operating Pressure OP [bar] at ambient temperature +60 °C																					
			Type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature								
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C						
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.					
13	EGV-311/M.-A.	16/8	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	6	5	4	4	3	2	6	5	4		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16



RÖMER

GAMMA Valves Series 700 Stainless Steel AISI 303 (1.4305)

Robust valve series DN 15 (G 1/2) to DN 50 (G 2) for various aggressive flow media



Rapid technological development in mechanical and apparatus construction requires ever more stainless steel valves made from the most varied of materials and connectors. The coaxial gate unit, the centrepiece of AVS Römer GAMMA valves, also permits cost reduction here. In material and form various valve bodies and connector

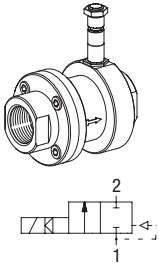
components can be manufactured very economically using rods with relatively low material expenditure. Dirt particles in the flow medium can lead to malfunction in the solenoid valves. The installation of a strainer with mesh width 0.25 mm is thus to be recommended.

CHARACTERISTICS
GENERAL

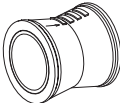
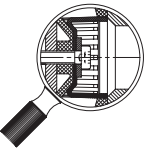
Constructional design	low noise membrane valve with coaxial flow		
Product name	2/2-way solenoid valve servo controlled	2/2-way solenoid valve pressure operated	2/2-way valve pressure operated by external or own medium
Product type	EGV	EGV	PGV
Function	"A" normally closed	"Z" normally closed	"B" normally open
Nominal diameter	DN 15 to DN 50		
Connection	Thread (ISO 228) G 1/2 to G 2 (other connectors on request)		
Ambient temperature	-20 °C to +60 °C (others on request)		
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)		
Medium viscosity	up to ca. 20 mm ² /s		
Valve body material	Stainless steel 1,4305 (others on request)		
Membrane support unit material	reinforced plastic		
Other internal component material	Stainless steel		
Seal material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)		
Mounting method	Installation in rigid pipe system		
Mounting position	optional, preferably upright		
PNEUMATIC - HYDRAULIC			
Nominal pressure (bar)	according to type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure OP in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical power consumption, the second value to that with lowest power consumption.		
Pressure range	0.2 bar up to permitted operating pressure OP according to table. 0 to 16 bar version is also possible for type EGV function "Z" and type PGV		
Flow rate	Kv-value according to type table (full flow with pressure difference of 0.5 bar or higher)		
Medium	gaseous or fluids which do not corrode the materials specified		
Response time	Opening time: 20 ms to 1 s; closing time: 25 ms to 3 s, according to flow medium		
Electric	see under solenoid coils		

2/2-Way Solenoid Valve - Type EGV Series 700






Price group 53	Function "A" normally closed	Low noise and impact-free closing, for gaseous or fluids	Stainless steel 1.4305
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Version	DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Valve without solenoid coil)	Order number	Price
Valve without solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below. 	15	5.6	G 1/2	16/8	DC	NBR	EGV-713-A79-1/2BN-00	623502	o. r.
	15	5.6	G 1/2	16/8	DC	EPDM	EGV-713-A79-1/2PN-00	623504	o. r.
	15	5.6	G 1/2	16/8	DC	FKM	EGV-713-A79-1/2FN-00	623506	o. r.
	20	7.6	G 3/4	16/8	DC	NBR	EGV-713-A79-3/4BN-00	623552	o. r.
	20	7.6	G 3/4	16/8	DC	EPDM	EGV-713-A79-3/4PN-00	623554	o. r.
	20	7.6	G 3/4	16/8	DC	FKM	EGV-713-A79-3/4FN-00	623556	o. r.
	25	16.8	G 1	16/8	DC	NBR	EGV-713-A79-1BN-00	623602	o. r.
	25	16.8	G 1	16/8	DC	EPDM	EGV-713-A79-1PN-00	623604	o. r.
	25	16.8	G 1	16/8	DC	FKM	EGV-713-A79-1FN-00	623606	o. r.
	32	21	G 1 1/4	16/8	DC	NBR	EGV-713-A79-5/4BN-00	623652	o. r.
	32	21	G 1 1/4	16/8	DC	EPDM	EGV-713-A79-5/4PN-00	623654	o. r.
	32	21	G 1 1/4	16/8	DC	FKM	EGV-713-A79-5/4FN-00	623656	o. r.
	40	29.5	G 1 1/2	16/8	DC	NBR	EGV-713-A79-6/4BN-00	623702	o. r.
	40	29.5	G 1 1/2	16/8	DC	EPDM	EGV-713-A79-6/4PN-00	623704	o. r.
	40	29.5	G 1 1/2	16/8	DC	FKM	EGV-713-A79-6/4FN-00	623706	o. r.
	50	35	G 2	16/8	DC	NBR	EGV-713-A79-2BN-00	623752	o. r.
	50	35	G 2	16/8	DC	EPDM	EGV-713-A79-2PN-00	623754	o. r.
50	35	G 2	16/8	DC	FKM	EGV-713-A79-2FN-00	623756	o. r.	

Options

	Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		Non-return valve integrated outlet-side in the gate unit Type EGV-713-A79-../R-.. This blocks only up to the following pressure difference: DN 15 to DN 32: 10 bar DN 40 to DN 50: 8 bar	EX protection only up to 10 bar	Type EGV-7004-A..-230/50-EEX m II T5 or -024/ = -EEX m II T5 respectively with 3m cable A fuse (max. 3 x INenn) must be pre-installed with the solenoid valve!
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Permitted Operating Pressure OP

DN	type	PN	Combinable solenoid coil			Permitted excess operating pressure OP [bar] at ambient temperature +60 °C																	
			type	Nominal power P ₂₀			AC 50 Hz  90 %U _N Medium temperature			AC 60 Hz  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  90 %U _N Medium temperature			DC  100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				15 to 32	EGV-713-A..	16/8	E22...L.	-	-	2,5	-	-	-	-	-	-	-	-	-	-	4	3	2
E22...M.	-	-	5				-	-	-	-	-	-	-	-	-	-	-	12	10	8	15	13	12
E22...H.	-	-	8				-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16
E30...P.	-	-	8				-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16
40 and 50	EGV-713-A..	16/8	E22...L.	3,5	on.req.	2,5	8	on.req.	on.req.	7	on.req.	on.req.	5	4	3	3	2	2	5	4	3		
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	-	-	8	7	6	12	10	9	
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	-	12	10	9	16	14	10	
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	

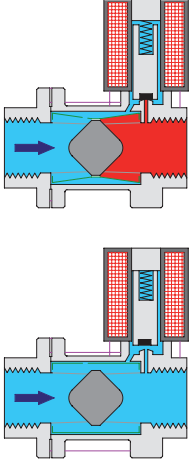
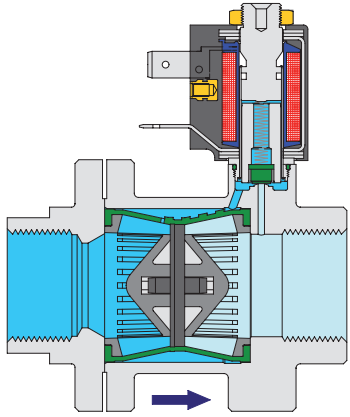
Function

Price group **53**

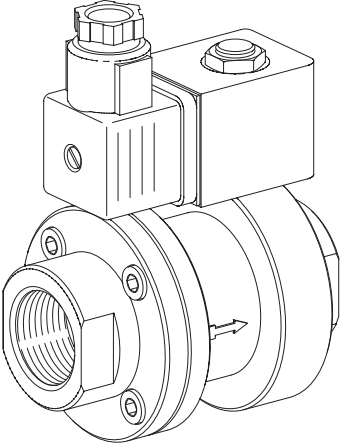
Function "A" normally closed

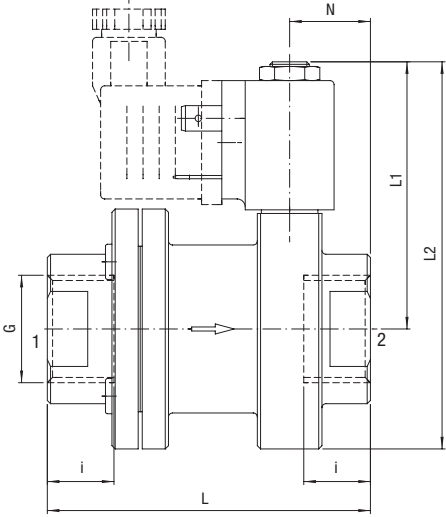
low noise and impact-free closing, for neutral, gaseous or fluids

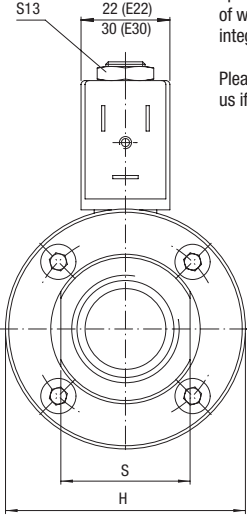
Stainless steel 1.4305

Operating position	Description	Function
	<p>In 0-position - magnetic system not under current - its resting seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.</p> <p>In operational position - magnetic system under current - its resting seat is open, the control chamber released and the membrane is held by the flow medium in "open" position. A minimum pressure difference is required for this.</p>	

Illustration







Alternating current (AC) operation is possible with use of wiring box type ESG with integrated bridge rectifier.

Please do not hesitate to ask us if you have any questions.

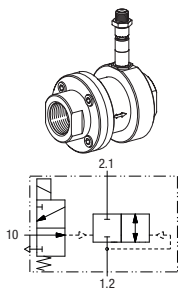
Dimensions

DN	G	L	I	N	L1	L2	H	S
15	G 1/2	68	13	14	66.5	96.5	60	27
20	G 3/4	80	15	20	66.5	96.5	60	32
25	G 1	94	17	41.5	82.5	126.5	88	41
32	G 1 1/4	112	19	50.5	82.5	126.5	88	50
40	G 1 1/2	132	21	48	96	153	114	55
50	G 2	160	24.5	62	96	153	114	70

2/2-Way Solenoid Valve - Type EGV Series 700

Price group 53	Function "Z" normally closed with existing auxiliary pressure at "10"	Low noise and impact-free closing, for gaseous or fluids	Stainless steel 1.4305
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Version	DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Valve without solenoid coil)	Order number	Price
Valve without solenoid coil Permitted operating pressure 0.2 bar up to valve according to table below, double-sided blocking. Permitted control pressure at "10": ≥ Operating pressure, max. 16 bar	15	5.6	G 1/2	16	AC/DC	NBR	EGV-711-Z77-1/2BP-00	624501	o. r.
	15	5.6	G 1/2	16	AC/DC	EPDM	EGV-711-Z77-1/2PP-00	624503	o. r.
	15	5.6	G 1/2	16	AC/DC	FKM	EGV-711-Z77-1/2FP-00	624505	o. r.
	20	7.6	G 3/4	16	AC/DC	NBR	EGV-711-Z77-3/4BP-00	624511	o. r.
	20	7.6	G 3/4	16	AC/DC	EPDM	EGV-711-Z77-3/4PP-00	624513	o. r.
	20	7.6	G 3/4	16	AC/DC	FKM	EGV-711-Z77-3/4FP-00	624515	o. r.
	25	16.8	G 1	16	AC/DC	NBR	EGV-711-Z77-1BP-00	624521	o. r.
	25	16.8	G 1	16	AC/DC	EPDM	EGV-711-Z77-1PP-00	624523	o. r.
	25	16.8	G 1	16	AC/DC	FKM	EGV-711-Z77-1FP-00	624525	o. r.
	32	21	G 1 1/4	16	AC/DC	NBR	EGV-711-Z77-5/4BP-00	624531	o. r.
	32	21	G 1 1/4	16	AC/DC	EPDM	EGV-711-Z77-5/4PP-00	624533	o. r.
	32	21	G 1 1/4	16	AC/DC	FKM	EGV-711-Z77-5/4FP-00	624535	o. r.
	40	29.5	G 1 1/2	16	AC/DC	NBR	EGV-711-Z77-6/4BP-00	624541	o. r.
	40	29.5	G 1 1/2	16	AC/DC	EPDM	EGV-711-Z77-6/4PP-00	624543	o. r.
	40	29.5	G 1 1/2	16	AC/DC	FKM	EGV-711-Z77-6/4FP-00	624545	o. r.
	50	35	G 2	16	AC/DC	NBR	EGV-711-Z77-2BP-00	624551	o. r.
	50	35	G 2	16	AC/DC	EPDM	EGV-711-Z77-2PP-00	624553	o. r.
	50	35	G 2	16	AC/DC	FKM	EGV-711-Z77-2FP-00	624555	o. r.


Options

	Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		0-pressure membrane requires no differential pressure to open, however to close requires control pressure 1 bar above operating pressure Type EGV-711-Z77-/.0-..
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Permitted Operating Pressure OP

DN	type	PN	Combinable solenoid coil			Permitted excess operating pressure OP [bar] at ambient temperature +60 °C																
			type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature			
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	
15 to 50	EGV-711-Z..	16	E22...L.	3.5	on req.	2.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

Function

Price group	53	Function "Z" normally closed with existing auxiliary pressure at "10"	Low noise and impact-free closing, for gaseous or fluids	Stainless steel 1.4305
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Operating position	Description	Function
	<p>In 0-position - magnetic system not under current - its resting seat is closed. The auxiliary pressure accumulated at "10" thus builds up in the control chamber and holds the membrane in "closed" position.</p> <p>In operational position - magnetic system under current - its operational seat is closed. The control chamber is released by the open resting seat and the membrane held in "open" position by the flow medium. A minimum pressure difference is required for this (except 0-pressure membrane as listed under Options)</p>	

Illustration

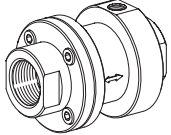
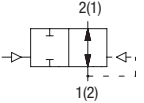
			<p>These valves can also be used for dirty media by the application, depending on constructional design, of an external medium, e.g. compressed air, for controlling the membrane. A typical application is the drainage of condensation from compressed air networks.</p>
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Dimensions

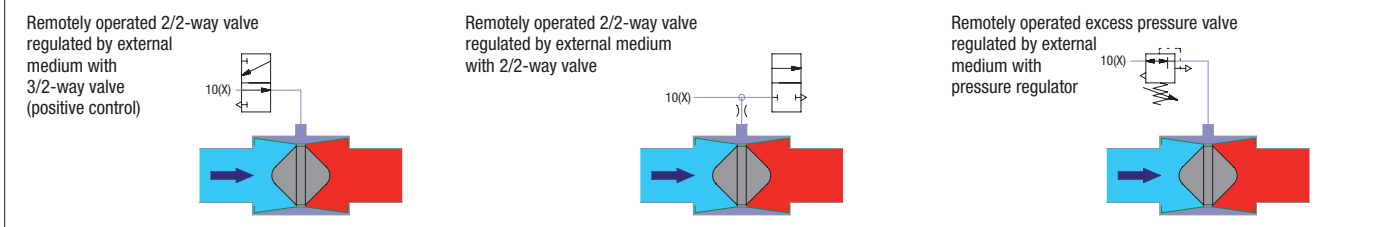
DN	G	L	I	N	L1	L2	H	S
15	G 1/2	68	13	14	72.5	102.5	60	27
20	G 3/4	80	15	20	72.5	102.5	60	32
25	G 1	94	17	41.5	88.5	132.5	88	41
32	G 1 1/4	112	19	50.5	88.5	132.5	88	50
40	G 1 1/2	132	21	48	102	159	114	55
50	G 2	160	24.5	62	102	159	114	70

2/2-Way Solenoid Valve - Type PGV Series 700 Pressure Operated by External Medium - Double-Sided Blocking

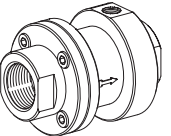
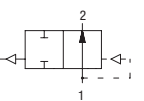
Price group 53	Function "B" - open in 0-position without control pressure	low noise and impact-free closing, for neutral, gaseous and fluids	Stainless steel 1.4305
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Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Valve without solenoid coil)	Order number	Price
2/2-way valve pressure operated, blocking double-sided by external medium Permitted operating pressure 0.2 to 16 bar  	≥ Excess operating pressure max. 16	15	5.6	G 1/2	16	NBR	PGV-731-B77-1/2BP	624801	o. r.
		15	5.6	G 1/2	16	EPDM	PGV-731-B77-1/2PP	624802	o. r.
		15	5.6	G 1/2	16	FKM	PGV-731-B77-1/2FP	624803	o. r.
		20	7.6	G 3/4	16	NBR	PGV-731-B77-3/4BP	624811	o. r.
		20	7.6	G 3/4	16	EPDM	PGV-731-B77-3/4PP	624812	o. r.
		20	7.6	G 3/4	16	FKM	PGV-731-B77-3/4FP	624813	o. r.
		25	16.8	G 1	16	NBR	PGV-731-B77-1BP	624821	o. r.
		25	16.8	G 1	16	EPDM	PGV-731-B77-1PP	624822	o. r.
		25	16.8	G 1	16	FKM	PGV-731-B77-1FP	624823	o. r.
		32	21	G 1 1/4	16	NBR	PGV-731-B77-5/4BP	624831	o. r.
		32	21	G 1 1/4	16	EPDM	PGV-731-B77-5/4PP	624832	o. r.
		32	21	G 1 1/4	16	FKM	PGV-731-B77-5/4FP	624833	o. r.
		40	29.5	G 1 1/2	16	NBR	PGV-731-B77-6/4BP	624841	o. r.
		40	29.5	G 1 1/2	16	EPDM	PGV-731-B77-6/4PP	624842	o. r.
		40	29.5	G 1 1/2	16	FKM	PGV-731-B77-6/4FP	624843	o. r.
		50	35	G 2	16	NBR	PGV-731-B77-2BP	624851	o. r.
		50	35	G 2	16	EPDM	PGV-731-B77-2PP	624852	o. r.
50	35	G 2	16	FKM	PGV-731-B77-2FP	624853	o. r.		

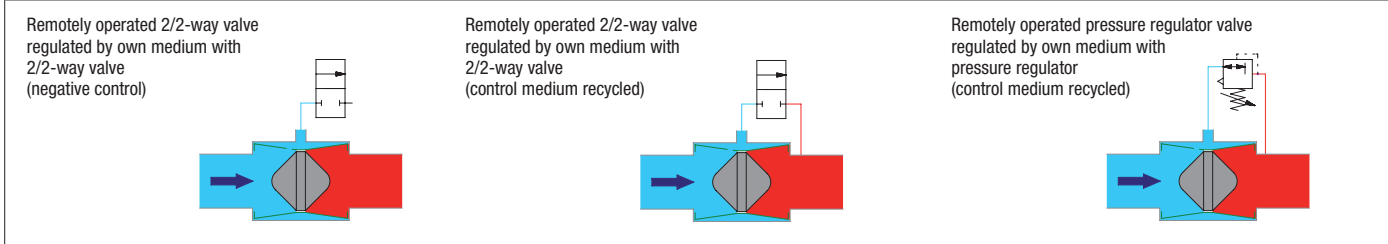
Version and function: 2/2-way solenoid valve type PGV series 700 pressure operated by external medium, double-sided blocking


2/2-Way Solenoid Valve - Type PGV Series 700 Pressure Operated by own Medium

Price group 53	Function "B" - open in 0-position without control pressure	low noise and impact-free closing, for neutral, gaseous and fluids	Stainless steel 1.4305
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Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Valve without solenoid coil)	Order number	Price
2/2-way valve pressure operated by own medium Permitted operating pressure 0.2 to 16 bar  	≥ Excess operating pressure max. 16	15	5.6	G 1/2	16	NBR	PGV-731-B77-1/2BN	624901	o. r.
		15	5.6	G 1/2	16	EPDM	PGV-731-B77-1/2PN	624902	o. r.
		15	5.6	G 1/2	16	FKM	PGV-731-B77-1/2FN	624903	o. r.
		20	7.6	G 3/4	16	NBR	PGV-731-B77-3/4BN	624911	o. r.
		20	7.6	G 3/4	16	EPDM	PGV-731-B77-3/4PN	624912	o. r.
		20	7.6	G 3/4	16	FKM	PGV-731-B77-3/4FN	624913	o. r.
		25	16.8	G 1	16	NBR	PGV-731-B77-1BN	624921	o. r.
		25	16.8	G 1	16	EPDM	PGV-731-B77-1PN	624922	o. r.
		25	16.8	G 1	16	FKM	PGV-731-B77-1FN	624923	o. r.
		32	21	G 1 1/4	16	NBR	PGV-731-B77-5/4BN	624931	o. r.
		32	21	G 1 1/4	16	EPDM	PGV-731-B77-5/4PN	624932	o. r.
		32	21	G 1 1/4	16	FKM	PGV-731-B77-5/4FN	624933	o. r.
		40	29.5	G 1 1/2	16	NBR	PGV-731-B77-6/4BN	624941	o. r.
		40	29.5	G 1 1/2	16	EPDM	PGV-731-B77-6/4PN	624942	o. r.
		40	29.5	G 1 1/2	16	FKM	PGV-731-B77-6/4FN	624943	o. r.
		50	35	G 2	16	NBR	PGV-731-B77-2BN	624951	o. r.
		50	35	G 2	16	EPDM	PGV-731-B77-2PN	624952	o. r.
50	35	G 2	16	FKM	PGV-731-B77-2FN	624953	o. r.		

Version and function: 2/2-way solenoid valve type PGV series 700 pressure operated by own medium



Function - Illustrations Versions

Price group 53	Function "B" - open in 0-position without control pressure	low noise and impact-free closing, for neutral, gaseous and fluids	Stainless steel 1.4305
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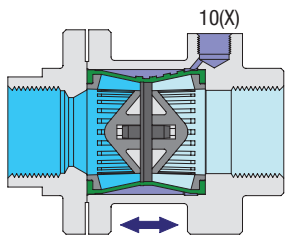
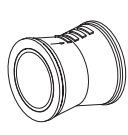
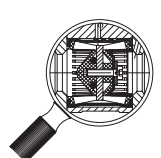
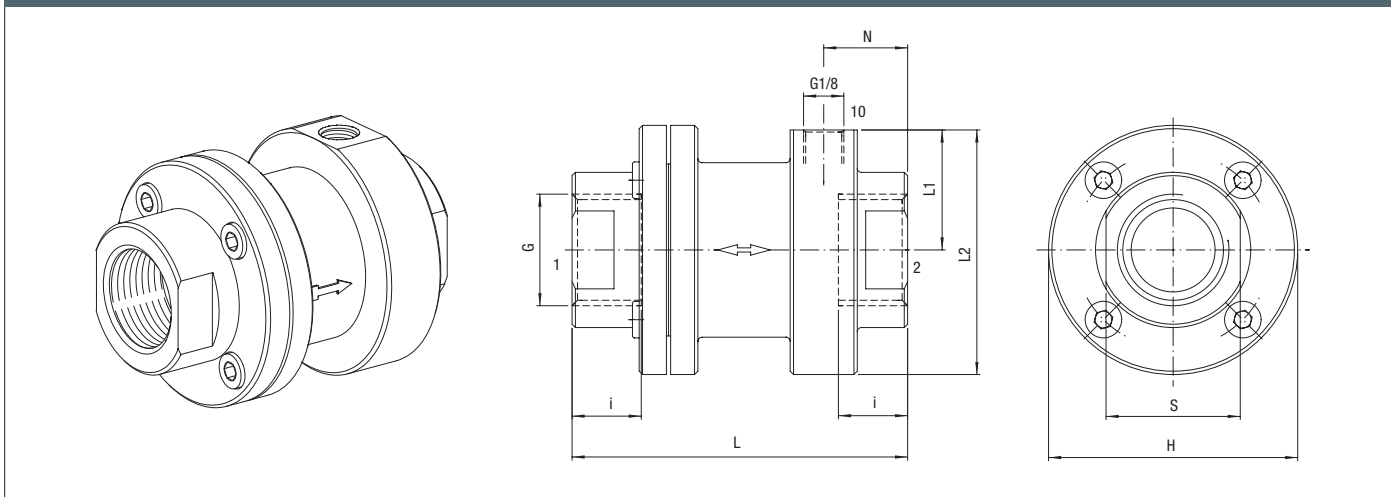
Function	Options			
 <p>Shown: Type PGV in external medium version shown, control pressure present.</p>		Membrane made of other material: CR (chloroprene) optimal for compressed air HNBR (NBR with higher nitrile content) specially for certain synthetic oils		0-pressure membrane requires no differential pressure to open, however to close requires control pressure 1 bar above operating pressure Type EGV-731-B77-./..0-..

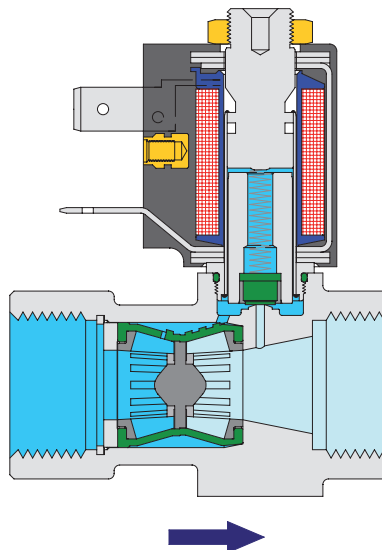
Illustration

Dimensions

DN	G	L	I	N	L1	L2	H	S
15	G 1/2	68	13	14	28.5	58.5	60	27
20	G 3/4	80	15	20	28.5	58.5	60	32
25	G 1	94	17	47	41.5	85.5	88	41
32	G 1 1/4	112	19	56	41.5	85.5	88	50
40	G 1 1/2	132	21	53.5	55	112	114	55
50	G 2	160	24.5	67.5	55	112	114	70



GAMMA Valves Series 800 Stainless Steel AISI 303 (1.4305)

Especially economical valve series DN 12 (G 1/2) with reduced flow for aggressive flow media



The minimal space requirement of this socket valve series is especially of advantage in small apparatus construction (representation in scale 1:1!)
Valve body manufactured as turned component made of bar material.

Dirt particles in the flow medium can lead to malfunction in the solenoid valves. The installation of a strainer with mesh width 0.25 mm is thus to be recommended.

CHARACTERISTICS
GENERAL

Constructional design	low noise membrane valve with coaxial flow		
Product name	2/2-way solenoid valve servo-operated	2/2-way solenoid valve pressure operated	2/2-way valve pressure operated by external or own medium
Product type	EGV	EGV	PGV
Function	"A" normally closed	"Z" normally closed	"B" normally open
Nominal diameter	DN 12	DN 12	DN 12
Port size	Pipe thread (ISO 228) G 1/2 (other connectors on request)		
Ambient temperature	-20 °C to +60 °C (others on request)		
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)		
Medium viscosity	up to ca. 20 mm ² /s		
Valve body material	Stainless steel AISI 303 (1.4305) (others on request)		
Membrane support unit material	reinforced plastic		
Other internal component	stainless steel		
Seal material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)		
Mounting method	Installation in rigid pipe system		
Mounting position	optional, preferably upright		
PNEUMATIC - HYDRAULIC			
Nominal pressure (bar)	according to type table. The numerical value of the nominal pressure PN signifies the permitted excess operating pressure PB in bar at 60 °C ambient temperature and 60 °C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical power consumption, the second value to that with lowest power consumption.		
Pressure range	0.3 bar up to permitted operating pressure PB according to table. 0 to 16 bar version is also Possible for type EGV function "Z" and type PGV		
Flow rate	Kv-value according to type table (full flow with pressure difference of 0.5 bar or higher)		
Medium	gaseous or liquid media which do not corrode the materials specified		
Response time	Opening time: 20 ms to 1 s; closing time: 25 ms to 3 s, according to flow medium		
Electric	see under solenoid coils		

2/2-Way Solenoid Valve - Type EGV Series 800

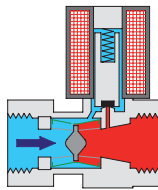
 Price group **53**

Function "A" normally closed

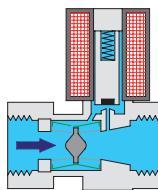
Low noise and impact-free closing, for neutral, gaseous or medium

Stainless steel 1.4305

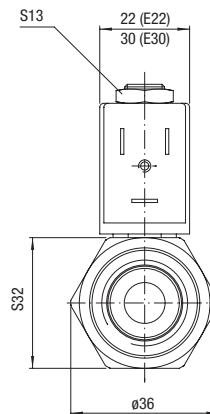
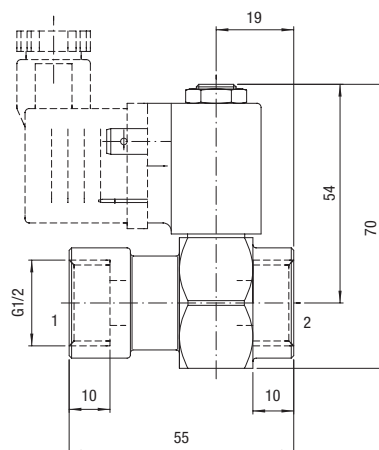
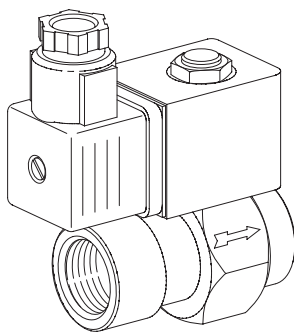
Version	DN	Kv-value water [m ³ /h]	G	PN	Possible type of current	Sealing material	Type (Valve without solenoid coil)	Order number	Price
<p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to valve according to table below.</p>	12	2.2	G 1/2	16/8	DC	NBR	EGV-813-A79-1/2BN-00	623052	o. r.
	12	2.2	G 1/2	16/8	DC	EPDM	EGV-813-A79-1/2PN-00	623054	o. r.
	12	2.2	G 1/2	16/8	DC	FKM	EGV-813-A79-1/2FN-00	623056	o. r.

Function


In 0-position - magnetic system not under current - its resting seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.



In operational position - magnetic system under current - its resting seat is open, the control chamber released and the membrane is held by the flow medium in "open" position. A minimum pressure difference is required for this.

Illustration


Alternating current (AC) operation is possible with use of cable socket type ESG with integrated bridge rectifier.

Cable socket adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° rotatable.

Permitted Excess Operating Pressure PB

DN	type	PN	Combinable solenoid coil			Permitted excess operating pressure PB [bar] at ambient temperature +60 °C															
			type	Nominal power P ₂₀			AC 50 Hz 90 %U _N			AC 60 Hz 90 %U _N			DC 90 %U _N			DC 90 %U _N			DC 100 %U _N		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	Medium temperature			Medium temperature			Medium temperature			Medium temperature			Medium temperature		
				60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C
12	EGV-813-A..	16/8	E22...L.	-	-	2.5	-	-	-	-	-	-	-	-	-	8	6	4	9	8	7
			E22...M.	-	-	5	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16
			E30...P.	-	-	8	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16

2/2-Way Solenoid Valve - Type EGV Series 800

Price group 53	Function "Z" closed in 0-position with existing auxiliary pressure at "10"	Low noise and impact-free closing, for neutral, gaseous or medium	Stainless steel 1.4305
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Version	DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Valve without solenoid coil)	Order number	Price
<p>Valve without solenoid coil Permitted operating pressure 0.3 bar up to valve according to table below, double-sided blocking. Permitted control pressure at "X": ≥ Operating pressure, max. 16 bar</p>	12	2.2	G 1/2	16	AC/DC	NBR	EGV-811-Z77-1/2BP-00	623351	o. r.
	12	2.2	G 1/2	16	AC/DC	EPDM	EGV-811-Z77-1/2PP-00	623353	o. r.
	12	2.2	G 1/2	16	AC/DC	FKM	EGV-811-Z77-1/2FP-00	623355	o. r.

Function

	In 0-position - magnetic system not under current - its resting seat is closed. The auxiliary pressure accumulated at "10" thus builds up in the control chamber and holds the membrane in "closed" position.
	In operational position - magnetic system under current - its operational seat is closed. The control chamber is released by the open resting seat and the membrane held in "open" position by the flow medium. A minimum pressure difference is required for this (except 0-pressure membrane as listed under Options)

Illustration

These valves can also be used for dirty media by the application, depending on constructional design, of an external medium, e.g. compressed air, for controlling the membrane. A typical application is the drainage of condensation from compressed air networks.

Cable socket adaptable with solenoid coil E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coils 360° rotatable.

Permitted Excess Operating Pressure PB

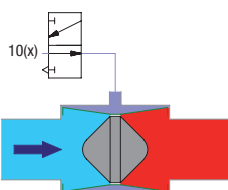
DN	type	PN	Combinable solenoid coil			Permitted excess operating pressure PB [bar] at ambient temperature +60 °C																	
			type	Nominal power P ₂₀			AC 50 Hz 90 %U _N Medium temperature			AC 60 Hz 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 90 %U _N Medium temperature			DC 100 %U _N Medium temperature				
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C		
				on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	
12	EGV-811-Z..	16	E22...L.	3.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.		
			E22...M.	5.5	5	5	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	
			E22...H.	-	-	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

2/2-Way Valve - Type PGV Series 800 - Pressure Operated by External Medium

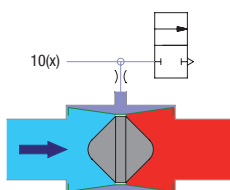
Price group	53	Function "B" open in 0-position (without control pressure)	low noise and impact-free closing, for neutral, gaseous and liquid media								Stainless steel 1.4305
Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Valve without solenoid coil)	Order number	Price		
	\geq excess operating pressure max. 16	12	2.2	G 1/2	16	NBR	PGV-831-B77-1/2BP	624451	o. r.		
		12	2.2	G 1/2	16	EPDM	PGV-831-B77-1/2PP	624452	o. r.		
		12	2.2	G 1/2	16	FKM	PGV-831-B77-1/2FP	624453	o. r.		

Illustration

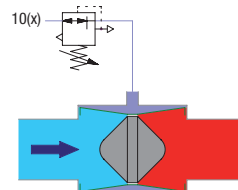
Remotely operated 2/2-way valve regulated by external medium with 3/2-way valve (positive control)



Remotely operated 2/2-way valve regulated by external medium with 2/2-way valve



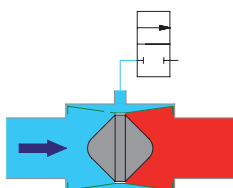
Remotely operated excess pressure valve regulated by external medium with pressure regulator


2/2-Way Valve - Type PGV Series 800 - Pressure Operated by own Medium

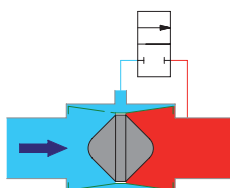
Price group	53	Function "B" open in 0-position (without control pressure)	low noise and impact-free closing, for neutral, gaseous and liquid media								Stainless steel 1.4305
Version	Control pressure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Valve without solenoid coil)	Order number	Price		
	\geq excess operating pressure max. 16	12	2.2	G 1/2	16	NBR	PGV-831-B77-1/2BN	624471	o. r.		
		12	2.2	G 1/2	16	EPDM	PGV-831-B77-1/2PN	624472	o. r.		
		12	2.2	G 1/2	16	FKM	PGV-831-B77-1/2FN	624473	o. r.		

Illustration

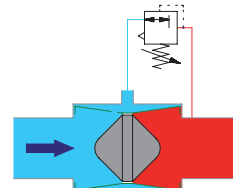
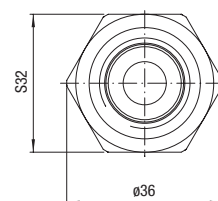
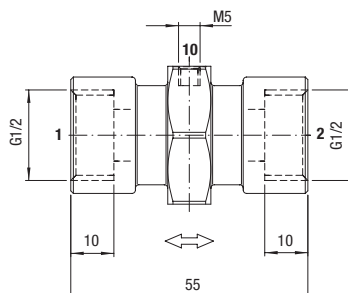
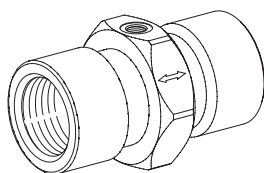
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (negative control)



Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (control medium recycled)



Remotely operated pressure regulator valve regulated by own medium with pressure regulator (control medium recycled)

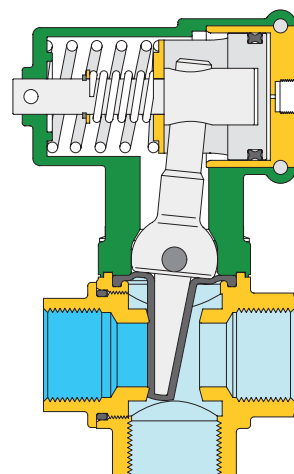

Illustration


SIGMA Valves

SIGMA the valve concept from AVS Römer



shown
3/2-way version



Especially economical valve series with coaxial flow or corner flow, in 2/2- and 3/2-way version with pneumatically operated piston.

The pivoting lever with the membrane placed on it, results in very low-friction force transfer with high sealing capacity. This constructional design also permits a small-dimensioned pneumo-drive due to the "lever effect" and thus very low space requirement

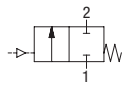
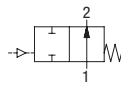
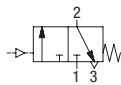
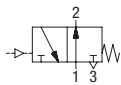
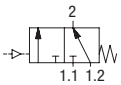
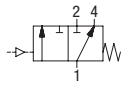
for the valve. An additional spring limits the force with which the membrane is pressed against the working seat.

Other features:

- Series encompasses all possible functions of 2/2- and 3/2-way valves
- large variety of membrane materials (in-house production!)

- variety of versions avoiding liquid pressure surges
- suitable for dirty media
- easily dismantled, e.g. for cleaning
- high flow performance
- Medium only comes into contact with body material (brass) and membrane material
- optical position display as standard

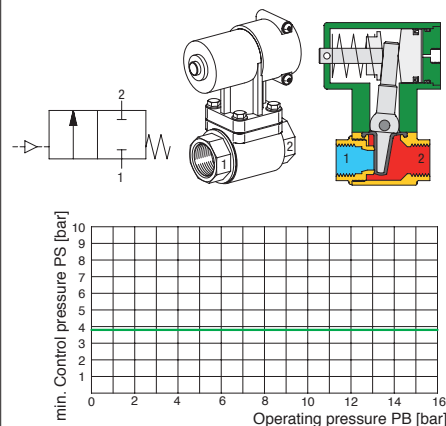
CHARACTERISTICS
GENERAL

Constructional design	Piston actuated valve with membrane seal					
Product name	2/2-way Piston actuated valve			3/2-way Piston actuated valve		
Product Type	PKV-13.-A..	PKV-13.-B..	PKV-137-C..	PKV-137-D..	PKV-137-E..	PKV-137-F..
Function	A 	B 	C 	D 	E 	F 
Nominal diameter DN	DN 15 and DN 20					
Port size	Thread (ISO 228) G 1/2 and G 3/4					
Ambient temperature	-10 °C to +60 °C (others on request)					
Medium temperature	NBR: 0 °C to +70 °C, HNBR: +10 °C to +90 °C, EPDM: -10 °C to +120 °C, FKM: +10 °C to +120 °C					
Medium viscosity	up to approx. 400 mm ² /s					
Valve body material	Brass					
Membrane material	NBR (nitrile rubber) HNBR (hydrogenated nitrile rubber) EPDM (ethylene propylene diene rubber) FKM (fluoride rubber)					
Drive material	shape-retaining plastic (PA)					
Mounting method	Installation in rigid pipe system					
Mounting position	optional, preferably drive above					
PNEUMATIC - HYDRAULIC						
Nominal pressure (bar)	up to PN 16 [bar] (observe permitted operating pressure OP!)					
Pressure range	0 up to permitted operating pressure OP in bar according to table (vacuum on request)					
Flow rate	Kv-value according to table					
Medium (examples)	gaseous or fluids Sealing material NBR: Compressed air, neutral gases, water, oils and grease without additives Sealing material HNBR: Compressed air, neutral gases, alloyed oils Sealing material EPDM: Hot water, alkaline detergent solutions, oil- and grease-free media, steam Sealing material FKM: Solvents, hot water, hot air above 90 °C					
Control medium	Compressed air and neutral gases					
Control medium temperature	-10 °C to +60 °C					
Control pressure	min. Control pressure according to table up to max. 10 bar					
Response time	Open and closing time: 50 ms to 900 ms respectively, according to media and control pressure					

2/2-Way Coaxial Piston Actuated Valve - Type PKV Series 100

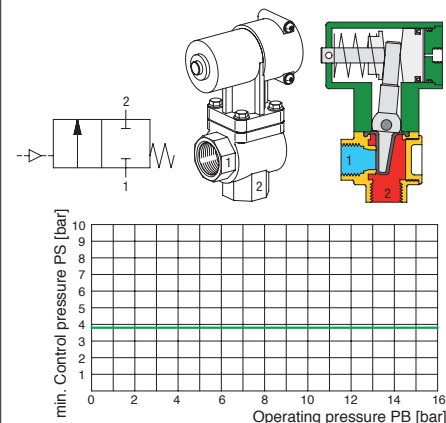
Price group	59	"A" in 0-position closed (closing against the flow)	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	4.8	G 1/2	0 - 16	3.8 - 10	NBR	PKV-131-A11-1/2B	626201	o. r.
15	4.8	G 1/2	0 - 16	3.8 - 10	HNBR	PKV-131-A11-1/2H	626202	o. r.
15	4.8	G 1/2	0 - 16	3.8 - 10	EPDM	PKV-131-A11-1/2P	626203	o. r.
15	4.8	G 1/2	0 - 16	3.8 - 10	FKM	PKV-131-A11-1/2F	626205	o. r.
20	8	G 3/4	0 - 10	3.8 - 10	NBR	PKV-131-A11-3/4B	626206	o. r.
20	8	G 3/4	0 - 10	3.8 - 10	HNBR	PKV-131-A11-3/4H	626207	o. r.
20	8	G 3/4	0 - 10	3.8 - 10	EPDM	PKV-131-A11-3/4P	626208	o. r.
20	8	G 3/4	0 - 10	3.8 - 10	FKM	PKV-131-A11-3/4F	626210	o. r.

Illustration

2/2-Way 90° Piston Actuated Valve - Type PKV Series 100

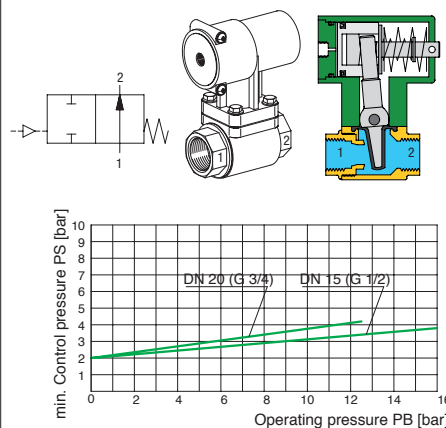
Price group	59	"A" in 0-position closed (closing against the flow)	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	5.8	G 1/2	0 - 16	3.8 - 10	NBR	PKV-134-A12-1/2B	626301	o. r.
15	5.8	G 1/2	0 - 16	3.8 - 10	HNBR	PKV-134-A12-1/2H	626302	o. r.
15	5.8	G 1/2	0 - 16	3.8 - 10	EPDM	PKV-134-A12-1/2P	626303	o. r.
15	5.8	G 1/2	0 - 16	3.8 - 10	FKM	PKV-134-A12-1/2F	626305	o. r.
20	11.7	G 3/4	0 - 10	3.8 - 10	NBR	PKV-134-A12-3/4B	626306	o. r.
20	11.7	G 3/4	0 - 10	3.8 - 10	HNBR	PKV-134-A12-3/4H	626307	o. r.
20	11.7	G 3/4	0 - 10	3.8 - 10	EPDM	PKV-134-A12-3/4P	626308	o. r.
20	11.7	G 3/4	0 - 10	3.8 - 10	FKM	PKV-134-A12-3/4F	626310	o. r.

Illustration

2/2-Way Coaxial Piston Actuated Valve - Type PKV Series 100

Price group	59	"B" in 0-position open (closing against the flow)	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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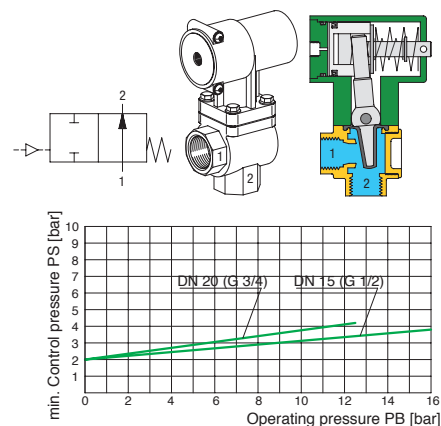
DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	4.8	G 1/2	0 - 16	2-10	NBR	PKV-131-B82-1/2B	626401	o. r.
15	4.8	G 1/2	0 - 16	2-10	HNBR	PKV-131-B82-1/2H	626402	o. r.
15	4.8	G 1/2	0 - 16	2-10	EPDM	PKV-131-B82-1/2P	626403	o. r.
15	4.8	G 1/2	0 - 16	2-10	FKM	PKV-131-B82-1/2F	626405	o. r.
20	8	G 3/4	0 - 12.5	2-10	NBR	PKV-131-B82-3/4B	626406	o. r.
20	8	G 3/4	0 - 12.5	2-10	HNBR	PKV-131-B82-3/4H	626407	o. r.
20	8	G 3/4	0 - 12.5	2-10	EPDM	PKV-131-B82-3/4P	626408	o. r.
20	8	G 3/4	0 - 12.5	2-10	FKM	PKV-131-B82-3/4F	626410	o. r.

Illustration


2/2-Way 90° Piston Actuated Valve Type PKV Series 100

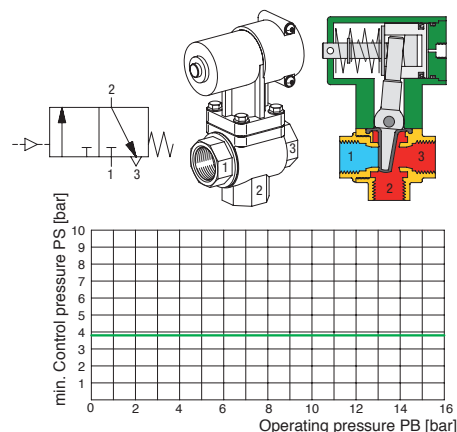
Price group	59	"B" in 0-position open (closing against the flow)	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	5.8	G 1/2	0 - 16	2 - 10	NBR	PKV-134-B81-1/2 B	626501	o. r.
15	5.8	G 1/2	0 - 16	2 - 10	HNBR	PKV-134-B81-1/2 H	626502	o. r.
15	5.8	G 1/2	0 - 16	2 - 10	EPDM	PKV-134-B81-1/2 P	626503	o. r.
15	5.8	G 1/2	0 - 16	2 - 10	FKM	PKV-134-B81-1/2 F	626505	o. r.
20	11.7	G 3/4	0 - 12.5	2 - 10	NBR	PKV-134-B81-3/4 B	626506	o. r.
20	11.7	G 3/4	0 - 12.5	2 - 10	HNBR	PKV-134-B81-3/4 H	626507	o. r.
20	11.7	G 3/4	0 - 12.5	2 - 10	EPDM	PKV-134-B81-3/4 P	626508	o. r.
20	11.7	G 3/4	0 - 12.5	2 - 10	FKM	PKV-134-B81-3/4 F	626510	o. r.

Illustration

3/2-Way Piston Actuated Valve - Type PKV Series 100

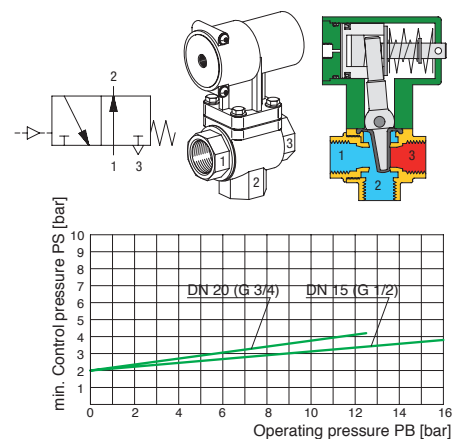
Price group	59	"C" in 0-position "1" closed, "2" to "3" discharged	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	5	G 1/2	0 - 16	3.8 - 10	NBR	PKV-137-C61-1/2B	626601	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	HNBR	PKV-137-C61-1/2H	626602	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	EPDM	PKV-137-C61-1/2P	626603	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	FKM	PKV-137-C61-1/2F	626605	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	NBR	PKV-137-C61-3/4B	626606	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	HNBR	PKV-137-C61-3/4H	626607	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	EPDM	PKV-137-C61-3/4P	626608	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	FKM	PKV-137-C61-3/4F	626610	o. r.

Illustration

3/2-Way Piston Actuated Valve - Type PKV Series 100

Price group	59	"D" in 0-position "1" to "2" open, "3" closed	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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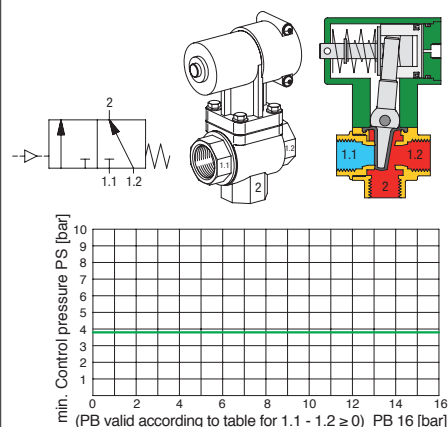
DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	5	G 1/2	0 - 16	2 - 10	NBR	PKV-137-D82-1/2B	626651	o. r.
15	5	G 1/2	0 - 16	2 - 10	HNBR	PKV-137-D82-1/2H	626652	o. r.
15	5	G 1/2	0 - 16	2 - 10	EPDM	PKV-137-D82-1/2P	626653	o. r.
15	5	G 1/2	0 - 16	2 - 10	FKM	PKV-137-D82-1/2F	626655	o. r.
20	8.9	G 3/4	0 - 12.5	2 - 10	NBR	PKV-137-D82-3/4B	626656	o. r.
20	8.9	G 3/4	0 - 12.5	2 - 10	HNBR	PKV-137-D82-3/4H	626657	o. r.
20	8.9	G 3/4	0 - 12.5	2 - 10	EPDM	PKV-137-D82-3/4P	626658	o. r.
20	8.9	G 3/4	0 - 12.5	2 - 10	FKM	PKV-137-D82-3/4F	626660	o. r.

Illustration


3/2-Way Piston Actuated Valve - Type PKV Series 100

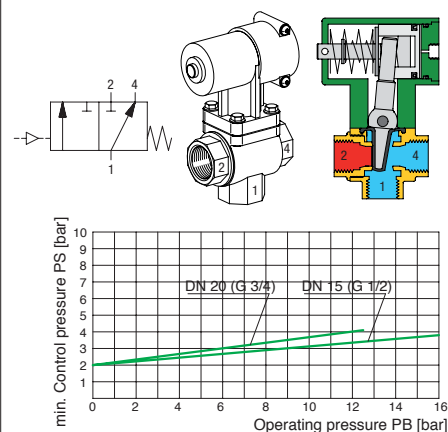
Price group	59	"E" in 0-position "1.1" to "2" closed, "1.2" to "2" open	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	5	G 1/2	0 - 16	3.8 - 10	NBR	PKV-137-E61-1/2B	626701	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	HNBR	PKV-137-E61-1/2H	626702	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	EPDM	PKV-137-E61-1/2P	626703	o. r.
15	5	G 1/2	0 - 16	3.8 - 10	FKM	PKV-137-E61-1/2F	626705	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	NBR	PKV-137-E61-3/4B	626706	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	HNBR	PKV-137-E61-3/4H	626707	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	EPDM	PKV-137-E61-3/4P	626708	o. r.
20	8.9	G 3/4	0 - 10	3.8 - 10	FKM	PKV-137-E61-3/4F	626710	o. r.

Illustration

3/2-Way Piston Actuated Valve - Type PKV Series 100

Price group	59	"F" in 0-position "1" to "2" closed, "1" to "4" open	For neutral, gaseous or fluids	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	Kv-value water [m³/h]	G	OP	PS	Sealing material	Type	Order number	Price
15	4.5	G 1/2	0 - 16	3 - 10	NBR	PKV-137-F71-1/2B	626751	o. r.
15	4.5	G 1/2	0 - 16	3 - 10	HNBR	PKV-137-F71-1/2H	626752	o. r.
15	4.5	G 1/2	0 - 16	3 - 10	EPDM	PKV-137-F71-1/2P	626753	o. r.
15	4.5	G 1/2	0 - 16	3 - 10	FKM	PKV-137-F71-1/2F	626755	o. r.
20	8	G 3/4	0 - 10	3 - 10	NBR	PKV-137-F71-3/4B	626756	o. r.
20	8	G 3/4	0 - 10	3 - 10	HNBR	PKV-137-F71-3/4H	626757	o. r.
20	8	G 3/4	0 - 10	3 - 10	EPDM	PKV-137-F71-3/4P	626758	o. r.
20	8	G 3/4	0 - 10	3 - 10	FKM	PKV-137-F71-3/4F	626760	o. r.

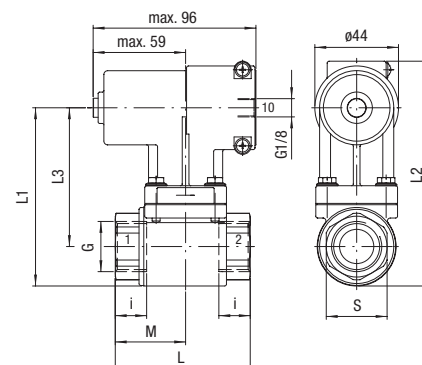
Illustration


Dimension tables and drawings for SIGMA valves

2/2-Way Coaxial Piston Actuated Valve - Type PKV Series 100

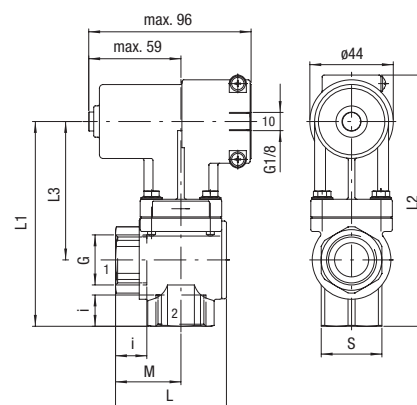
Price group	59	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	G	L	i	L1	L2	L3	M	S
15	G 1/2	61	13.5	85	109.5	69	32	27
20	G 3/4	71	15.5	94	118.5	73	37	32

Illustration

2/2-Way 90° Piston Actuated Valve - Type PKV Series 100

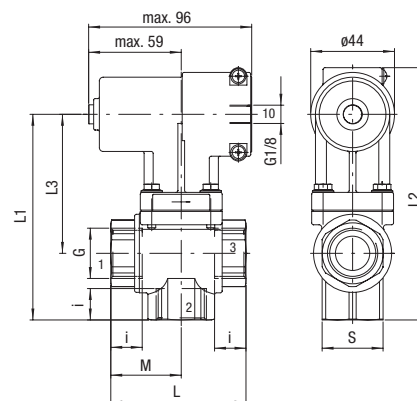
Price group	59	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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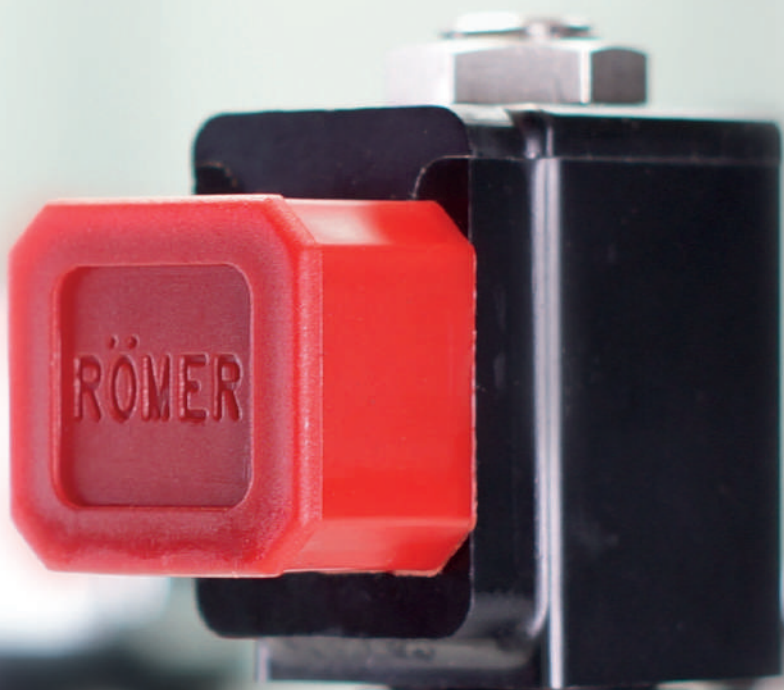
DN	G	L	i	L1	L2	L3	M	S
15	G 1/2	53.5	13.5	99	123.5	69	29	27
20	G 3/4	58.5	15.5	108	132.5	73	34	32

Illustration

3/2-Way Piston actuated valve - Type PKV Series 100

Price group	59	DN 15 (G 1/2) and DN 20 (G 3/4)	Brass
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DN	G	L	i	L1	L2	L3	M	S
15	G 1/2	61	13.5	99	123.5	69	32	27
20	G 3/4	71	15.5	108	132.5	73	37	32

Illustration




RÖMER

Solenoid Coils

Price group **53**

Special voltage: 12 V to 230 V, AC 50 to 60 Hz or DC

Duty cycle: 100 %, when installed on solenoid valve

Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded. The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

Thermal class H

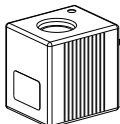
Version	Cable socket	Pro-tection class	Nominal power P ₂₀		Nominal voltage [V]	Operational voltage [V]			Type	Order number	Price
			AC [VA]	DC [W]		AC 50 Hz	AC 60 Hz	DC			
<p>Solenoid housing E22 (22 mm wide)</p>	without	IP 00	-	approx. 5	12 =	-	-	10.8 - 13.2	E22-012 / = -M0	720015	o. r.
	without	IP 00	-	approx. 8	12 =	-	-	10.8 - 13.2	E22-012 / = -H0	720005	o. r.
	without	IP 00	-	approx. 2.5	12 =	-	-	10.8 - 13.2	E22-012 / = -L0	720065	o. r.
	without	IP 00	-	approx. 5	24 =	-	-	21.6 - 26.4	E22-024 / = -M0	720016	o. r.
	without	IP 00	-	approx. 8	24 =	-	-	21.6 - 26.4	E22-024 / = -H0	720006	o. r.
	without	IP 00	-	approx. 2.5	24 =	-	-	21.6 - 26.4	E22-024 / = -L0	720066	o. r.
	without	IP 00	approx. 5.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-M0	720012	o. r.
	without	IP 00	approx. 3.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-L0	720062	o. r.
	without	IP 00	approx. 5.5	-	42/50	37.6 - 46.4	on req.	-	E22-042/50-M0	720013	o. r.
	without	IP 00	approx. 5.5	-	110/50	99 - 121	on req.	-	E22-110/50-M0	720014	o. r.
	without	IP 00	approx. 5.5	-	230/50	198 - 244	on req.	-	E22-230/50-M0	720011	o. r.
	without	IP 00	approx. 3.5	-	230/50	198 - 244	on req.	-	E22-230/50-L0	720061	o. r.
<p>Solenoid housing E22 (22 mm wide)</p>	PG 7	IP 65	-	approx. 5	12 =	-	-	10.8 - 13.2	E22-012 / = -M7	720115	o. r.
	PG 7	IP 65	-	approx. 8	12 =	-	-	10.8 - 13.2	E22-012 / = -H7	720105	o. r.
	PG 7	IP 65	-	approx. 2.5	12 =	-	-	10.8 - 13.2	E22-012 / = -L7	720165	o. r.
	PG 7	IP 65	-	approx. 5	24 =	-	-	21.6 - 26.4	E22-024 / = -M7	720116	o. r.
	PG 7	IP 65	-	approx. 8	24 =	-	-	21.6 - 26.4	E22-024 / = -H7	720106	o. r.
	PG 7	IP 65	-	approx. 2.5	24 =	-	-	21.6 - 26.4	E22-024 / = -L7	720166	o. r.
	PG 7	IP 65	approx. 5.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-M7	720112	o. r.
	PG 7	IP 65	approx. 3.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-L7	720162	o. r.
	PG 7	IP 65	approx. 5.5	-	42/50	37.6 - 46.4	on req.	-	E22-042/50-M7	720113	o. r.
	PG 7	IP 65	approx. 5.5	-	110/50	99 - 121	on req.	-	E22-110/50-M7	720114	o. r.
	PG 7	IP 65	approx. 5.5	-	230/50	198 - 244	on req.	-	E22-230/50-M7	720111	o. r.
	PG 7	IP 65	approx. 3.5	-	230/50	198 - 244	on req.	-	E22-230/50-L7	720161	o. r.
	PG 9	IP 65	-	approx. 5	12 =	-	-	10.8 - 13.2	E22-012 / = -M9	720215	o. r.
	PG 9	IP 65	-	approx. 8	12 =	-	-	10.8 - 13.2	E22-012 / = -H9	720205	o. r.
	PG 9	IP 65	-	approx. 2.5	12 =	-	-	10.8 - 13.2	E22-012 / = -L9	720265	o. r.
	PG 9	IP 65	-	approx. 5	24 =	-	-	21.6 - 26.4	E22-024 / = -M9	720216	o. r.
	PG 9	IP 65	-	approx. 8	24 =	-	-	21.6 - 26.4	E22-024 / = -H9	720206	o. r.
	PG 9	IP 65	-	approx. 2.5	24 =	-	-	21.6 - 26.4	E22-024 / = -L9	720266	o. r.
PG 9	IP 65	approx. 5.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-M9	720212	o. r.	
PG 9	IP 65	approx. 3.5	-	24/50	21.6 - 26.4	on req.	-	E22-024/50-L9	720262	o. r.	
PG 9	IP 65	approx. 5.5	-	42/50	37.6 - 46.4	on req.	-	E22-042/50-M9	720213	o. r.	
PG 9	IP 65	approx. 5.5	-	110/50	99 - 121	on req.	-	E22-110/50-M9	720214	o. r.	
PG 9	IP 65	approx. 5.5	-	230/50	198 - 244	on req.	-	E22-230/50-M9	720211	o. r.	
PG 9	IP 65	approx. 3.5	-	230/50	198 - 244	on req.	-	E22-230/50-L9	720261	o. r.	
<p>Solenoid housing E28 (28 mm wide)</p>	without	IP 00	-	approx. 6,3	24 =	-	-	21,6 - 26,4	E28-024/=-G20	720007	o. r.
<p>Solenoid housing E30 (30 mm wide)</p>	without	IP 00	-	approx. 8	12 =	-	-	10.8 - 13.2	E30-012/ = -P0	730005	o. r.
	without	IP 00	-	approx. 8	24 =	-	-	21.6 - 26.4	E30-024/ = -P0	730006	o. r.
	without	IP 00	approx. 12	-	24/50	21.6 - 26.4	on req.	-	E30-024/50-P0	730002	o. r.
	without	IP 00	approx. 12	-	42/50	37.6 - 46.4	on req.	-	E30-042/50-P0	730003	o. r.
	without	IP 00	approx. 12	-	110/50	99 - 121	on req.	-	E30-110/50-P0	730004	o. r.
	without	IP 00	approx. 12	-	230/50	198 - 244	on req.	-	E30-230/50-P0	730001	o. r.
<p>Solenoid housing E30 (30 mm wide)</p>	PG 9	IP 65	-	approx. 8	12 =	198 - 244	-	10.8 - 13.2	E30-012 / = -P9	730105	o. r.
	PG 9	IP 65	-	approx. 8	24 =	198 - 244	-	21.6 - 26.4	E30-024 / = -P9	730106	o. r.
	PG 9	IP 65	approx. 12	-	24/50	21.6 - 26.4	on req.	-	E30-024/50-P9	730102	o. r.
	PG 9	IP 65	approx. 12	-	42/50	37.6 - 46.4	on req.	-	E30-042/50-P9	730103	o. r.
	PG 9	IP 65	approx. 12	-	110/50	99 - 121	on req.	-	E30-110/50-P9	730104	o. r.
	PG 9	IP 65	approx. 12	-	230/50	198 - 244	on req.	-	E30-230/50-P9	730101	o. r.
	PG 11	IP 65	-	approx. 8	12 =	-	-	10.8 - 13.2	E30-012 / = -P1	730205	o. r.
	PG 11	IP 65	-	approx. 8	24 =	-	-	21.6 - 26.4	E30-024 / = -P1	730206	o. r.
	PG 11	IP 65	approx. 12	-	24/50	21.6 - 26.4	on req.	-	E30-024/50-P1	730202	o. r.
	PG 11	IP 65	approx. 12	-	42/50	37.6 - 46.4	on req.	-	E30-042/50-P1	730203	o. r.
	PG 11	IP 65	approx. 12	-	110/50	99 - 121	on req.	-	E30-110/50-P1	730204	o. r.
	PG 11	IP 65	approx. 12	-	230/50	198 - 244	on req.	-	E30-230/50-P1	730201	o. r.

Solenoid Coils

Price group	53	Special voltage: 12 V to 230 V, AC 50 to 60 Hz or DC	Duty cycle: 100 %, when installed on solenoid valve
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Irrespective of the information in the solenoid valve tables a housing temperature of +155 °C may not be exceeded. The value is limited to +120 °C with use of a cable socket. In case of doubt we are pleased to advise you.

Thermal class H

Version	Cable socket	Pro-tection class	Nominal power P ₂₀		Nominal voltage [V]	Operational voltage [V]			Type	Order number	Price
			AC [VA]	DC [W]		AC 50 Hz	AC 60 Hz	DC			
 Solenoid housing E45 (45 mm wide)	without	IP 00	-	ca. 16	24 =	-	-	21.6 - 26.4	E45-024/= -DZ0	745000	o. r.
	without	IP 00	-	ca. 16	197 =	-	-	177.3 - 216.7	E45-197/= -DZ0	745002	o. r.

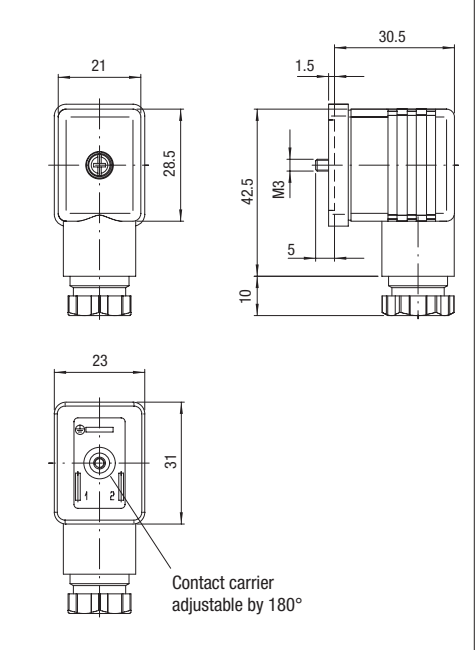
Cable Socket - Type ESG-122

Price group **71** 2-pole + PE contact (preferred type bold print)

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 7	4 - 6	black	10	7	100	ESG-122-07-N-G13	702521	o. r.
Pg 9	6 - 8	black	10	7	100	ESG-122-09-N-G13	702523	o. r.

CHARACTERISTICS	
Constructional design	11 mm - industry standard suitable for AVS Römer solenoid housing type E22
Nominal voltage	250 V AC, 300 V DC
Nominal current 1 mm ² and 1.5 mm ²	16 A
Nominal current 0.75 mm ²	13 A
Temp. range with profile seal G13	-40 °C to +90 °C
Temp. range with flat seal G12S	-40 °C to +125 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide)
Profile seal G13 material	NBR (nitrile rubber)
Scope of delivery:	Cable socket, profile seal G 13, installation screw M3

Illustration



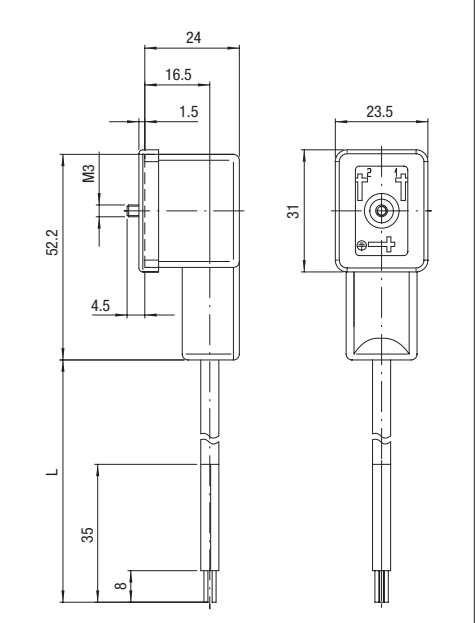
Cable Socket - Type ESG-162

Price group **71** 2-pole + PE contact (preferred type bold print)

Cable length [cm]	Cable	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
50	PVC 3 x 0.75 H05VVF	black	5	3	100	ESG-162-N-050-06h-G13	702851	o. r.
150	PVC 3 x 0.75 H05VVF	black	5	3	100	ESG-162-N-150-06h-G13	702853	o. r.

CHARACTERISTICS	
Constructional design	11 mm - industry standard suitable for AVS Römer solenoid Housing Type E22
Nominal voltage	250 V AC, 300 V DC
Nominal current	10 A
Temp. range	-15 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Housing material	PA (polyamide)
Profile seal G13 material	NBR (nitrile rubber)
Scope of delivery:	Cable socket, profile seal G 13, installation screw M3

Illustration



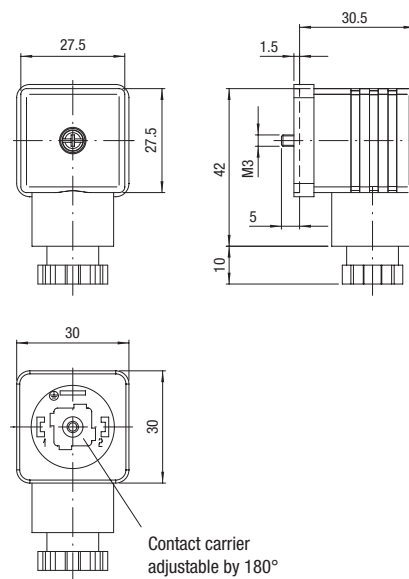
Cable Socket - Type ESG-182

Price group **71** 2-pole + PE contact (preferred types bold print)

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	black	10	7	100	ESG-182-09-N-G11	701021	o. r.
Pg 11	8 - 10	black	10	7	100	ESG-182-11-N-G11	701023	o. r.

CHARACTERISTICS	
Constructional design	DIN 43650 construction A suitable for AVS Römer solenoid housings type E30 and E44
Nominal voltage	250 V AC, 300 V DC
Nominal current 1 mm ² and 1.5 mm ² :	16 A
Nominal current 0.75 mm ²	13 A
Temp. range with profile seal G13	-40 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide)
Profile seal G11 material	NBR (nitrile rubber)
Scope of delivery:	Cable socket, profile seal G 11, installation screw M3

Illustration



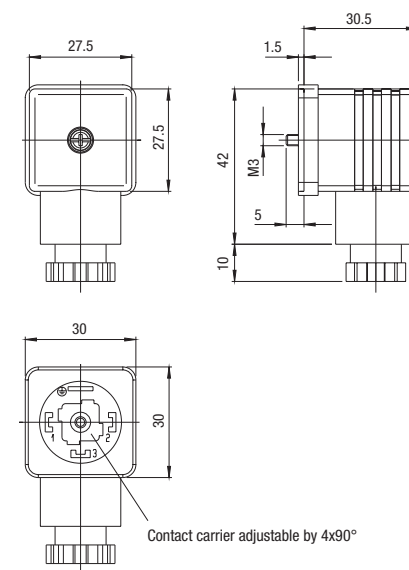
Cable Socket - Type ESG-183

Price group **71** 3-pole + PE contact (preferred type bold print)

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	black	10	7	100	ESG-183-09-N-G11	701071	o. r.
Pg 11	8 - 10	black	10	7	100	ESG-183-11-N-G11	701073	o. r.

CHARACTERISTICS	
Constructional design	DIN 43650 construction A suitable for AVS Römer electro-ball valve type EKH
Nominal voltage	250 V AC, 300 V DC
Nominal current 1 mm ² and 1.5 mm ² :	16 A
Nominal current 0.75 mm ²	13 A
Temp. range with profile seal G13	-40 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide)
Profile seal G11 material	NBR (nitrile rubber)
Scope of delivery:	Cable socket, profile seal G 11, installation screw M3

Illustration



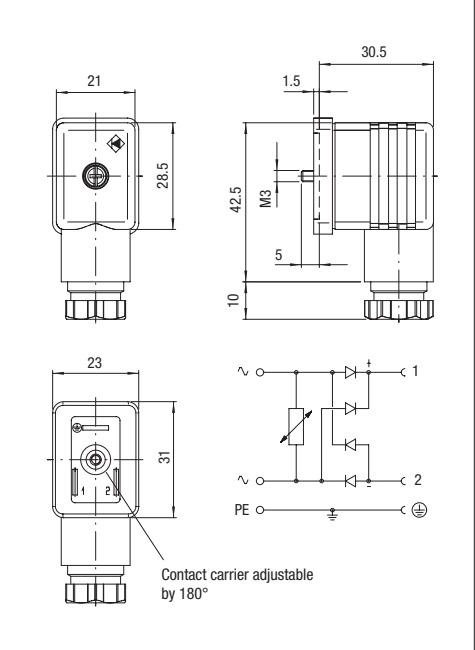
Cable Socket - Type ESG-572

Price group **71** with bridge rectifier, 2-pole + PE contact

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	black	0.8	0.6	100	ESG-572-09-N-220VAC-G13	702755	o. r.

CHARACTERISTICS	
Constructional design	11 mm - industry standard suitable for AVS Römer solenoid housing type E22
Connection voltage	220 V AC
Outlet voltage	198 V DC (others on request)
Temp. range	-15 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide)
Profile seal G13 material	NBR (nitrile rubber)
Scope of delivery	Cable socket, profile seal G13, installation screw M3

Illustration



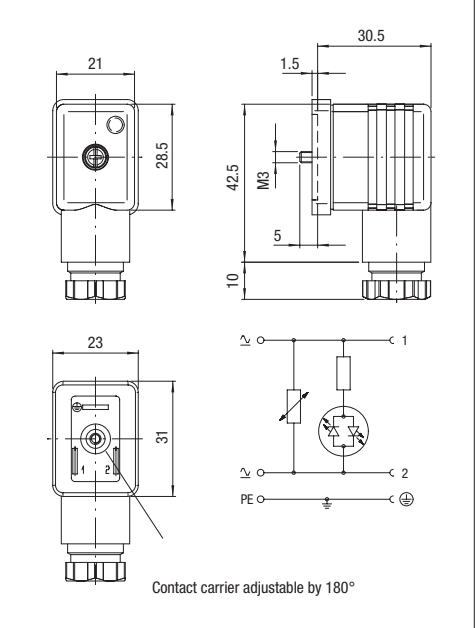
Cable Socket - Type ESG-542

Price group **71** with suppressor circuit, 2-pole + PE contact

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	transp.	2.5	2	100	ESG-542-09-T-C4-024VDC-G13	702806	o. r.

CHARACTERISTICS	
Constructional design	11 mm - industry standard suitable for AVS Römer solenoid housing type E22
Connection voltage	24 V DC suppressor circuit polarity reversal protected red LED in transparent Housing
Temp. range	-15 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide, transparent)
Profile seal G13 material	NBR (nitrile rubber)
Scope of delivery	Cable socket, profile seal G13, installation screw M3

Illustration



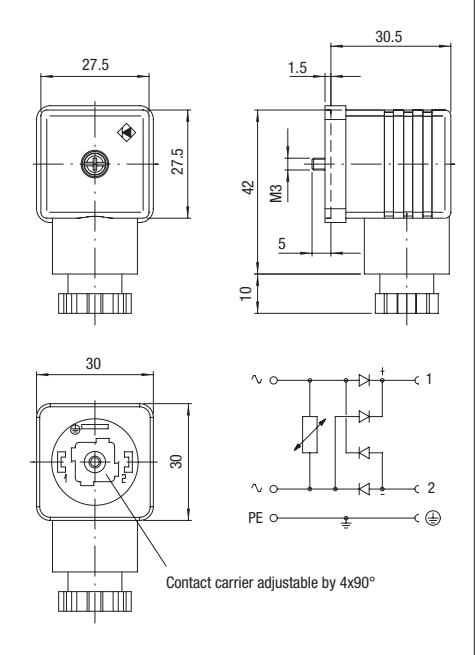
Cable Socket - Type ESG-132

Price group **71** with bridge rectifier, 2-pole + PE contact

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	black	1.5	1.4	100	ESG-132-09-N-220VAC-G11	701505	o. r.

CHARACTERISTICS	
Constructional design	DIN 43650 construction A suitable for AVS Römer solenoid housings type E30/E44
Connection voltage	220 V AC
Outlet voltage	198 V DC (others on request)
Temp. range	-15 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide)
Profile seal G11 material	NBR (nitrile rubber)
Scope of delivery	Cable socket, profile seal G11, installation screw M3

Illustration



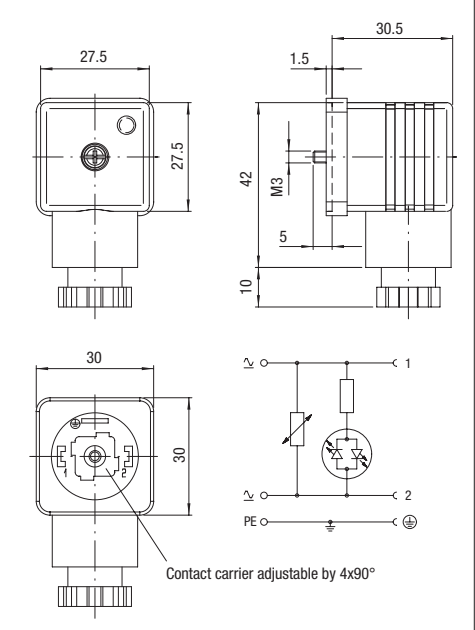
Cable Socket - Type ESG-532

Price group **71** with suppressor circuit, 2-pole + PE contact

Cable gland	for cable ø	Housing colour	Operating current [A] at ambient temperature up to		Pack unit	Type	Order number	Price
			75 °C	90 °C				
Pg 9	6 - 8	transp.	2.5	2	100	ESG-532-09-T-C4-024VDC-G11	701705	o. r.

CHARACTERISTICS	
Constructional design	DIN 43650 construction A suitable for AVS Römer solenoid housings type E30/E44
Connection voltage	24 V DC suppressor circuit polarity reversal protected red LED in transparent Housing
Temp. range	-15 °C to +90 °C
Protection class	IP 65 EN 60529
Isolation	Group C according to VDE 0110
Connection	max. 1.5 mm ²
Housing material	PA (polyamide, transparent)
Profile seal G11 material	NBR (nitrile rubber)
Scope of delivery	Cable socket, profile seal G11, installation screw M3

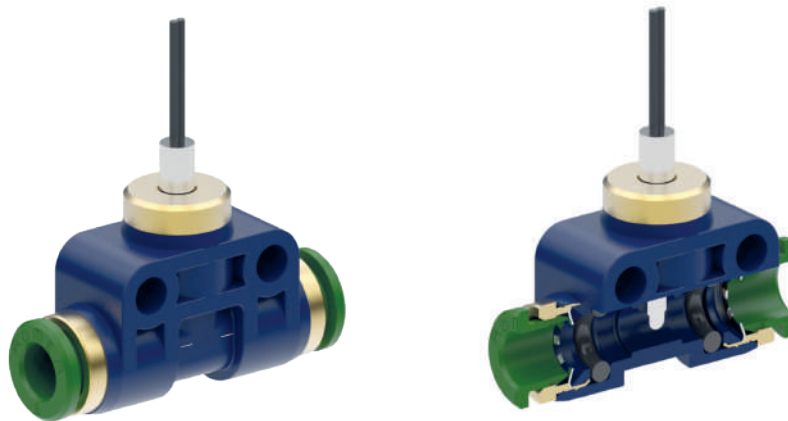
Illustration



Temperature Sensors Type ITS POM

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The temperature sensor made of stainless steel combined with the proven ELSA push-in connections made of POM.

Other features:

- fast response time
- minimal dead space

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

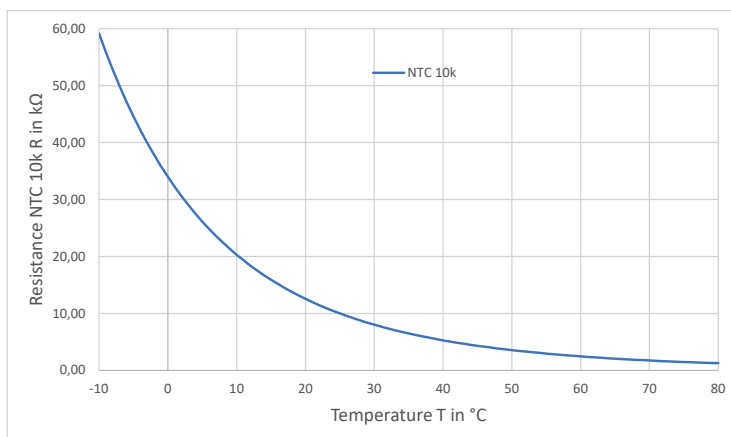
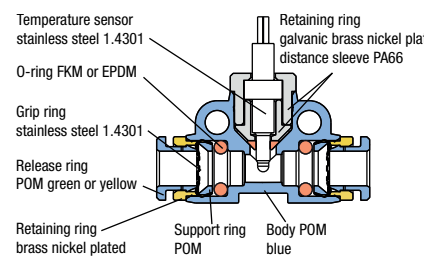
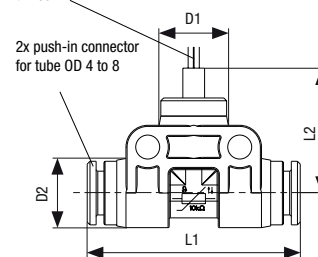
Constructional design	Temperature measuring cell in stainless steel design
Product name	Temperature sensor
Product type	ITS-958P-...
Nominal diameter	2.5 DN or DN 4
Connection	ELSA push-in connectors for pipe/tube OD 4 or OD 6
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +80 °C
Thermal time constant	t63 <= 2.0s (still water, higher flow velocities favor the response time)
Body material	POM
Sensor housing material	1.4301
O-ring material	FKM / EPDM
PNEUMATIC - HYDRAULIC	
Nominal pressure	PN 16
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluids which do not corrode the materials specified
ELECTRIC	
Electrical Connection	2-pin PVC ribbon cable AWG 30, 0.20 m, 300 V, 105 °C, strand ends pre-tinned

Temperature Sensor - Type ITS POM

 Price group **721** PN 16 Max. Allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C

**Plastic
POM**

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1/D2	Sensor-type	Nominal resistance NTC at 25 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	60 °C	80 °C												
4	2.5	16	16	12	2.4	37.2	22.4	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958P-4F-X01-NTC10	390538
4	2.5	16	16	12	2.4	37.2	22.4	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958P-4P-X01-NTC10	390540
6	4	16	12	10	8.1	38.2	22.4	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958P-6F-X01-NTC10	390539
6	4	16	12	10	8.1	38.2	22.4	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958P-6P-X01-NTC10	390541
8	6	16	12	10	19	44.2	22.7	14.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958P-8F-X01-NTC10	390535
8	6	16	12	10	19	44.2	22.7	14.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958P-8P-X01-NTC10	390537

Characteristic Curve -10 °C to +100 °C 0-60 kΩ

Illustration

 Cable length approx. 0.2m
 strand ends stripped,
 tinned


Temperature Sensors Type ITS PVDF

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The temperature sensor made of stainless steel combined with the proven ELSA push-in connections made of PVDF.

Other features:

- fast response time
- minimal dead space

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

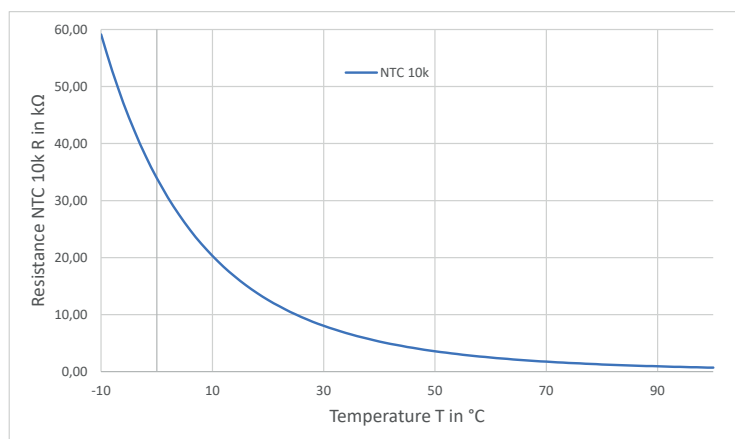
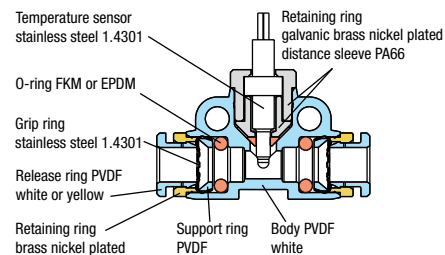
Constructional design	Temperature measuring cell
Product name	Temperature sensor in PVDF version
Product type	ITS-958V-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +100 °C
Thermal time constant	t63 <= 2.0 s (still water, higher flow velocities favor the response time)
Body material	PVDF (FDA-complaint, KTW-approved)
Sensor housing material	1.4301
O-ring material	FKM or EPDM
Approval	NSF/ANSI 169
PNEUMATIC - HYDRAULIC	
Nominal pressure	PN 16
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified
ELECTRIC	
Electrical Connection	2-pin PVC-FBL AWG 30, 0.20 m, 300 V, 105 °C, strand ends pre-tinned

Temperature Sensor - Type ITS PVDF

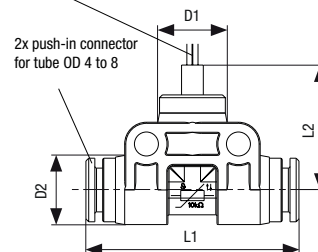
 Price group **721** PN 16 Max. Allow. OP at ambient temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PVDF

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1	D2	Sensor-type	Nominal resistance NTC at 25 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	60 °C	100 °C													
4	2.5	16	12	10	2.4	37.2	22.3	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958V-4FF-X01-NTC10	390542	
4	2.5	16	12	10	2.4	37.2	22.3	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958V-4PF-X01-NTC10	390544	
6	4	16	12	10	8.1	38.2	22.3	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958V-6FF-X01-NTC10	390543	
6	4	16	12	10	8.1	38.2	22.3	12.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958V-6PF-X01-NTC10	390545	
8	6	16	12	8	18	44.2	22.7	14.4	NTC	10 kOhm	±3%	3984 K	±0.5%	FKM	ITS-958V-8FF-X01-NTC10	390482	
8	6	16	12	8	18	44.2	22.7	14.4	NTC	10 kOhm	±3%	3984 K	±0.5%	EPDM	ITS-958V-8PF-X01-NTC10	390547	

Characteristic Curve -10 °C to +100 °C 0-60 kΩ

Illustration


Cable length approx. 0.2m strand ends stripped, tinned



Temperature Sensors Type ITS PPSU Ceramic Measuring Cell

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The ceramic temperature sensor combined with the proven ELSA push-in connector made from PPSU is mainly used in the food industries.

Other features:

- fast response time
- minimal dead space
- materials and constructional design especially optimised for food applications

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Ceramic temperature measuring cell
Product name	Temperature sensor
Product type	ITS-958P3-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +135 °C
Thermal time constant	t63 <= 2.0 s (still water, higher flow velocities favor the response time)
Body material	PPSU (KTW-approved, NSF-certified)
Sensor housing material	Al203
O-ring material	FKM or EPDM
Approval	NSF/ANSI 169
PNEUMATIC - HYDRAULIC	
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified
ELECTRIC	
Electrical Connection	2-pin PVC ribbon cable AWG 24, 0.75 m, UL AWM style 2651, 300 V, 105 °C, strand ends pre-tinned

Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Temperature Sensor, Type ITS

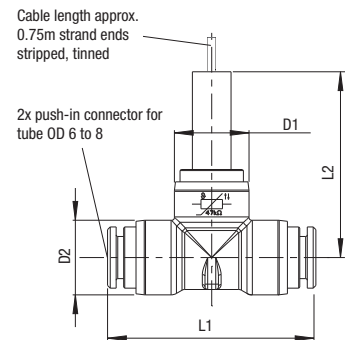
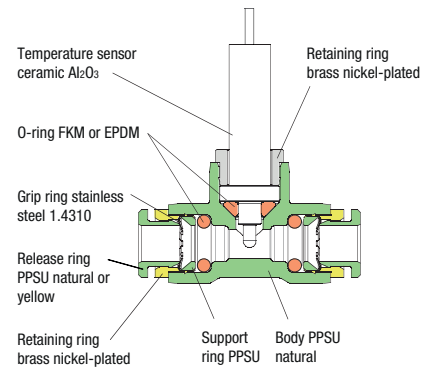
Price group **720** Max. Allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C



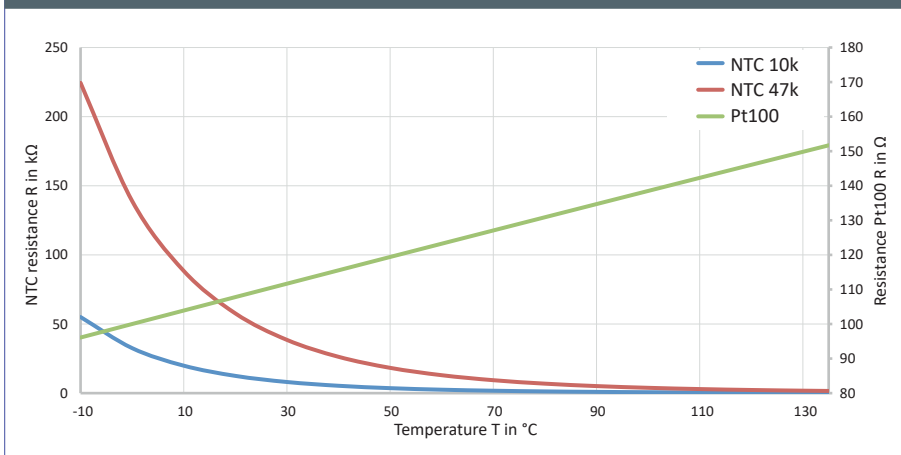
Plastic PPSU

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	L6	Sensor-type	Nominal resistance NTC at 25 °C Pt100 at 0 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	100 °C	135 °C												
4	2.5	20	16	10	2.4	37.8	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	FKM	ITS-958P3-4FF-NTC10	390517
4	2.5	20	16	10	2.4	37.8	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	EPDM	ITS-958P3-4PF-NTC10	390521
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	FKM	ITS-958P3-6FF-NTC10	390518
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	10 kOhm	±1 %	3977 K	±1 %	EPDM	ITS-958P3-6PF-NTC10	390522
8	6	16	12	6	25	44.8	35	17.2	NTC	10 kOhm	±1 %	3977 K	±1 %	FKM	ITS-958P3-8FF-NTC10	390435
8	6	16	12	6	25	44.8	35	17.2	NTC	10 kOhm	±1 %	3977 K	±1 %	EPDM	ITS-958P3-8PF-NTC10	390436
4	2.5	20	16	10	2.4	37.8	34.6	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-4FF-NTC47	390508
4	2.5	20	16	10	2.4	37.8	34.6	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM	ITS-958P3-4PF-NTC47	390509
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-6FF-NTC47	390510
6	4	20	16	10	8.1	38.6	34.6	13.9	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM	ITS-958P3-6PF-NTC47	390511
8	6	16	12	6	25	44.8	35	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	FKM	ITS-958P3-8FF-NTC47	390437
8	6	16	12	6	25	44.8	35	17.2	NTC	47 kOhm	±1 %	3690 K	±1 %	EPDM	ITS-958P3-8PF-NTC47	390438
4	2.5	20	16	10	2.4	37.8	34.6	13.9	Pt100	100 Ohm	KL.B.	-	±1 %	FKM	ITS-958P3-4FF-PT100	390519
4	2.5	20	16	10	2.4	37.8	34.6	13.9	Pt100	100 Ohm	KL.B.	-	±1 %	EPDM	ITS-958P3-4PF-PT100	390523
6	4	20	16	10	8.1	38.6	34.6	13.9	Pt100	100 Ohm	KL.B.	-	±1 %	FKM	ITS-958P3-6FF-PT100	390520
6	4	20	16	10	8.1	38.6	34.6	13.9	Pt100	100 Ohm	KL.B.	-	±1 %	EPDM	ITS-958P3-6PF-PT100	390524
8	6	16	12	6	25	44.8	35	17.2	Pt100	100 Ohm	KL.B.	-	±1 %	FKM	ITS-958P3-8FF-PT100	390439
8	6	16	12	6	25	44.8	35	17.2	Pt100	100 Ohm	KL.B.	-	±1 %	EPDM	ITS-958P3-8PF-PT100	390440

Illustration



Characteristic Curve -10 °C to +135 °C 0 kΩ to 250 kΩ



Temperature Sensors Type ITS PPSU Stainless Steel Measuring Cell

Inline Temperature Sensor

ITS the new inline temperature sensor from AVS Römer



Inline temperature sensor for measuring temperature of fluids and gaseous medium.

The stainless steel temperature sensor combined with the proven ELSA push-in connector made from PPSU.

Other features:

- fast response time
- minimal dead space
- materials and constructional design especially optimised for food applications

Variations / options:

- other hose connections
- other materials for seal

CHARACTERISTICS

GENERAL

Constructional design	Temperature sensor in stainless steel design
Product name	Temperature sensor
Product type	ITS-958P3-...
Nominal diameter	2.5 DN to DN 6
Connection	ELSA push-in connectors for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +120 °C
Thermal time constant	t63 <= 2.0 s (still water, higher flow velocities favor the response time)
Body material	PPSU (KTW-approved, NSF-certified)
Sensor housing material	1.4404
O-ring material	FKM or EPDM
Approval	NSF/ANSI 169
PNEUMATIC - HYDRAULIC	
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or fluidss which do not corrode the materials specified
ELECTRIC	
Electrical Connection	Depending on the NTC or PT resistance, a different cable is used: NTC 47k: silicone cable, Ø3.1 ± 0.1 mm, black, 2x AWG 24/7, red / white PT 100: PVC cable (HT), Ø3.1 ± 0.2mm, gray, 2x14mm², brown / white

Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Temperature Sensor, Type ITS Stainless Steel Measuring Cell

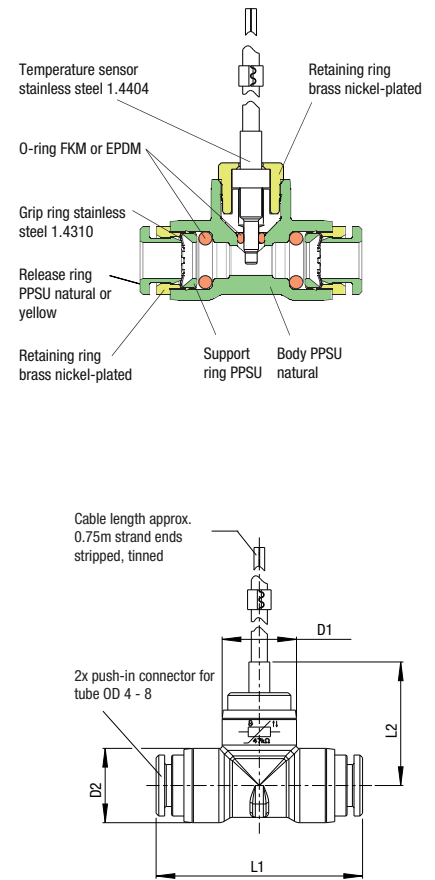
Price group **720** Max. Allow. OP at ambient temp.
 T_{min} 0 °C, T_{max} +60 °C



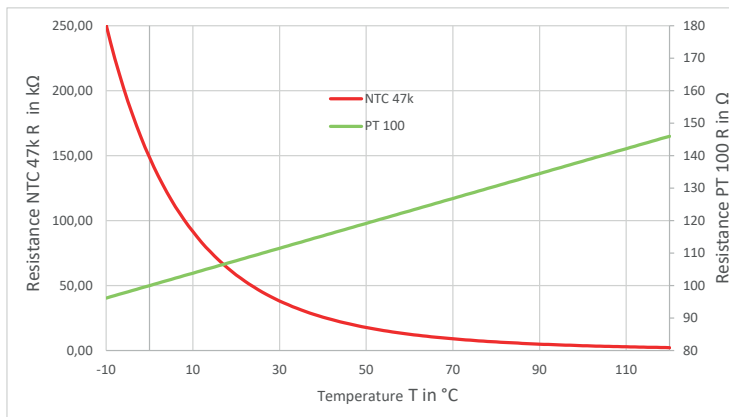
Plastic PPSU

for tube OD	DN	Allow. OP [bar] at medium temp.			Kv-value water [l/min]	L1	L2	D1/D2	Sensor-type	Nominal resistance NTC at 25 °C Pt100 at 0 °C	R Tolerance	B value R25/85	B Tolerance	Sealant material	Type	Order number
		20 °C	100 °C	120 °C												
4	2.5	20	16	10	2.4	37.8	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-4FF-X04-NTC47	390443
4	2.5	20	16	10	2.4	37.8	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM	ITS-958P3-4PF-X04-NTC47	390445
6	4	20	16	10	8.1	38.6	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-6FF-X04-NTC47	390444
6	4	20	16	10	8.1	38.6	23.1	13.9	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM	ITS-958P3-6PF-X04-NTC47	390446
8	6	16	12	6	25	44.8	23.5	17.2	NTC	47 kOhm	± 1 %	3720 K	± 1 %	FKM	ITS-958P3-8FF-X04-NTC47	390441
8	6	16	12	6	25	44.8	23.5	17.2	NTC	47 kOhm	± 1 %	3720 K	± 1 %	EPDM	ITS-958P3-8PF-X04-NTC47	390442
4	2.5	20	16	10	2.4	37.8	23.1	13.9	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-4FF-X04-PT100	390457
4	2.5	20	16	10	2.4	37.8	23.1	13.9	PT	100 Ohm	Kl. B	-	-	EPDM	ITS-958P3-4PF-X04-PT100	390460
6	4	20	16	10	8.1	38.6	23.1	13.9	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-6FF-X04-PT100	390456
6	4	20	16	10	8.1	38.6	23.1	13.9	PT	100 Ohm	Kl. B	-	-	EPDM	ITS-958P3-6PF-X04-PT100	390458
8	6	16	12	6	25	44.8	23.5	17.2	PT	100 Ohm	Kl. B	-	-	FKM	ITS-958P3-8FF-X04-PT100	390461
8	6	16	12	6	25	44.8	23.5	17.2	PT	100 Ohm	Kl. B	-	-	EPDM	ITS-958P3-8PF-X04-PT100	390462

Illustration



Characteristic Curve -10 °C to +120 °C 0 kΩ to 250 kΩ



Pressure Sensors Type IPS PPSU

Inline Pressure Sensor

IPS the new inline pressure sensor from AVS Römer



Inline pressure sensor for measuring pressure of liquid and gaseous media.

The ceramic pressure measuring cell combined with the proven ELSA push-in connector made from PPSU is mainly used in the food industries.

Other features:

- minimal dead space
- temperature-compensated elevation electronics
- materials and constructional design especially optimised for food applications

Variations / options:

- other tube connections
- other material for seal
- other pressure range

CHARACTERISTICS

GENERAL

Constructional design	Ceramic pressure measuring cell
Product name	Inline pressure sensor
Product type	IPS-V36 -...
Nominal diameter	DN 2.5 up to DN 6
Connection	ELSA plug fittings for pipe/tube OD 4 to OD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +140 °C
Body material	PPSU (KTW approved, NSF certified)
Measuring cell material	Al ₂ O ₃
O-ring material	FKM / EPDM
Mounting method	by spring clip, internal width Ø18-22 mm (not included in scope of supply)
Mounting position	Preferably upright
Approval	NSF/ANSI 169

PNEUMATIC - HYDRAULIC

Nominal pressure	up to PN 16 in accordance with the specification table
Pressure range	0 bar (Vacuum: -0,8 bar) up to allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or liquids which do not corrode the materials specified

ELECTRIC

Supply voltage	5 V bis 36 V DC
Voltage tolerance	±10 %
Output voltage	0,5 V bis 4,5 V DC (ratiometric) (0 V to 5 V DC, 0 V to 10 V DC DC on request)
Electrical connection	0.75 m 3-pole screened cable (LiYCY 3 x AWG 26), strand ends pre-tinned.
Protection class	IP65

ACCURACY

Total error	±1.5 % FS
Temperature error zero point	<±0.02 % FS/K
Temperature margin of error	-0.012 % FS/K
Response time	< 2 ms

Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

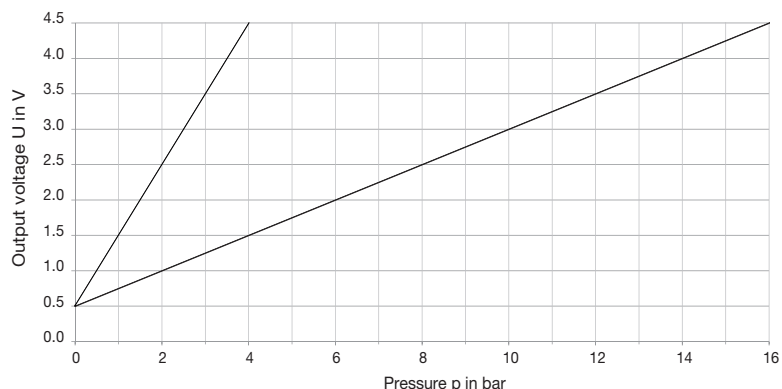
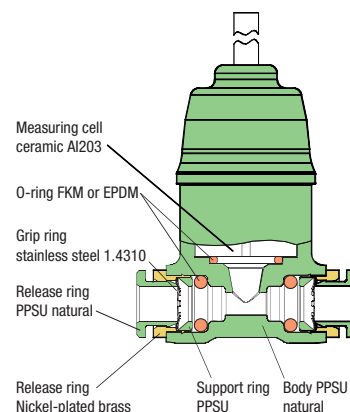
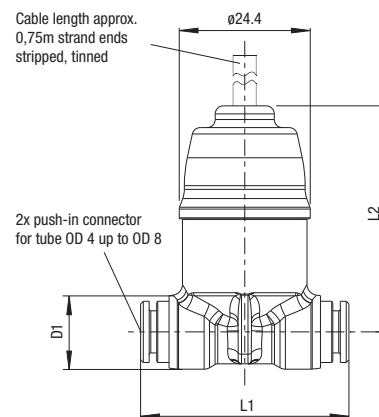
Pressure Sensor - Type IPS

 Price group **730** Max. Allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

 Plastic
 PPSU

LiYCY 3xAWG26		Cable screen
		Supply
		Output signal
		Earth

for tube OD	DN	Kv-value water [l/min]	PN	Allow. OP [bar] at medium temp.			L1	L2	D1	Seal material	Type	Order number
				20 °C	100 °C	140 °C						
4	2.5	3.2	4	4	4	4	37.8	42.1	13.9	FKM	IPS-V36-958P3-4FF-004-51	390900
4	2.5	3.2	16	16	12	6	37.8	42.1	13.9	FKM	IPS-V36-958P3-4FF-016-51	390901
6	4	12.8	4	4	4	4	38.6	42.1	13.9	FKM	IPS-V36-958P3-6FF-004-51	390580
6	4	12.8	16	16	12	6	38.6	42.1	13.9	FKM	IPS-V36-958P3-6FF-016-51	390581
8	6	26.5	4	4	4	4	44.8	42.8	17.2	FKM	IPS-V36-958P3-8FF-004-51	390906
8	6	26.5	16	16	12	3	44.8	42.8	17.2	FKM	IPS-V36-958P3-8FF-016-51	390584

Characteristic Curve 0-4 bar or 0-16 bar 0.5-4.5 V (ratiometric)

Illustration

 Cable length approx.
 0,75m strand ends
 stripped, tinned


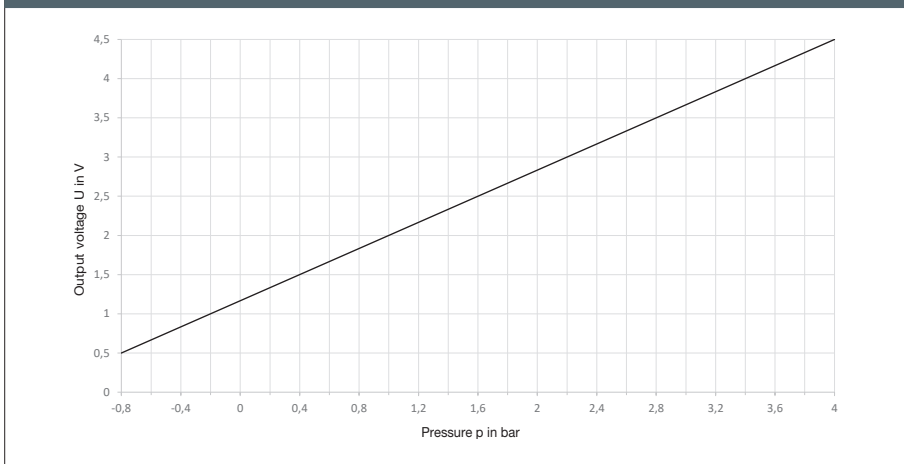
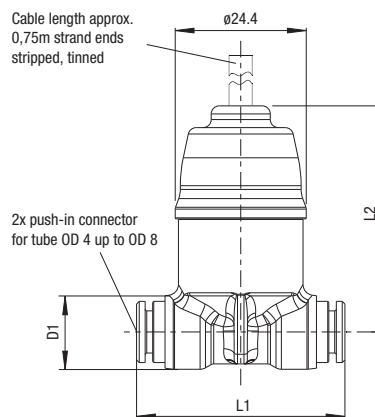
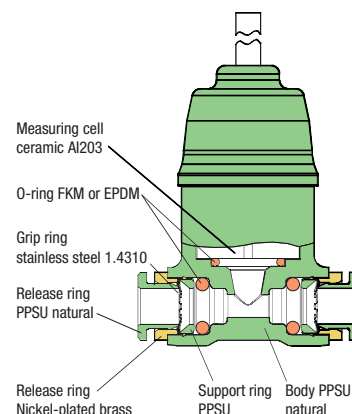
Pressure Sensor - Type IPS vacuum

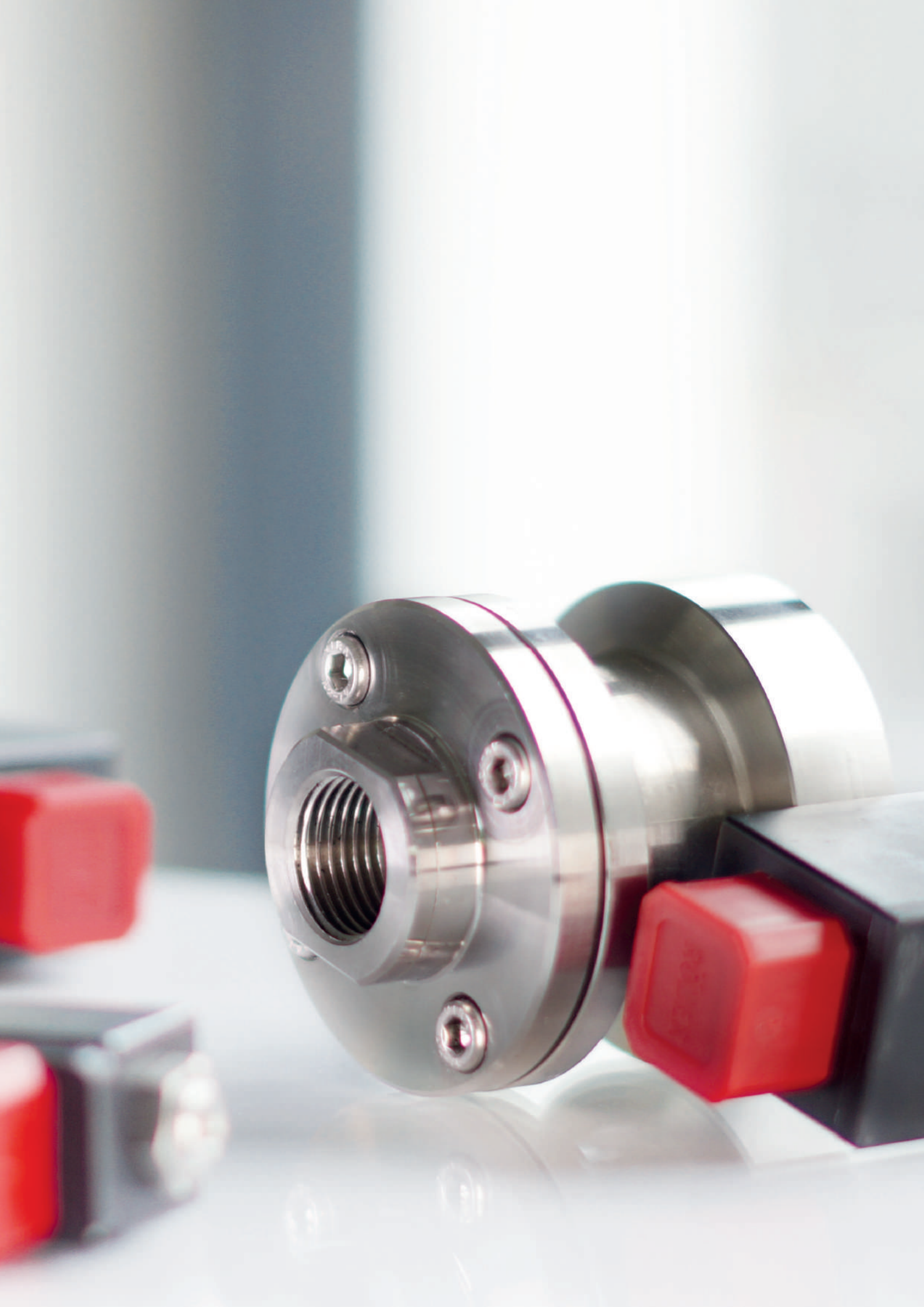
 Price group **730** Max. Allow. OP at ambient temp.
 $T_{min} 0\text{ }^{\circ}\text{C}$, $T_{max} +60\text{ }^{\circ}\text{C}$

Plastic PPSU

LiYCY 3xAWG26		Cable screen
		Supply
		Output signal
		Earth

for tube OD	DN	Kv-value water [l/min]	PN	Allow. OP [bar] at medium temp.			L1	L2	D1	Seal material	Type	Order number
				20 °C	100 °C	140 °C						
4	2.5	3.2	4	4	4	4	37.8	42.1	13.9	FKM	IPS-V36-958P3-4FF-V04-51	390902
4	2.5	3.2	16	16	12	6	37.8	42.1	13.9	FKM	IPS-V36-958P3-4FF-V16-51	390903
6	4	12.8	4	4	4	4	38.6	42.1	13.9	FKM	IPS-V36-958P3-6FF-V04-51	390904
6	4	12.8	16	16	12	6	38.6	42.1	13.9	FKM	IPS-V36-958P3-6FF-V16-51	390905
8	6	26.5	4	4	4	4	44.8	42.8	17.2	FKM	IPS-V36-958P3-8FF-V04-51	390907
8	6	26.5	16	16	12	3	44.8	42.8	17.2	FKM	IPS-V36-958P3-8FF-V16-51	390908

Characteristic Curve -0.8 bar bis 4 bar 0.5 V bis 4.5 V (ratiometric)

Illustration




Conductivity Sensors Type ICS PPSU

Inline Conductivity Sensor

ICS the new inline conductivity sensor from AVS Römer



Inline conductivity sensor for conductivity measurement of liquid media.

The ceramic conductivity measuring cell in conjunction with the established ELSA push-in connectors made of PPSU finds its use primarily in the food industry.

Other features:

- minimal dead space
- optionally with temperature-compensated evaluation electronics
- materials and constructional design especially optimised for food applications

Variations / options:

- other material for seal
- available with Modbus on request
- available without electronics on request

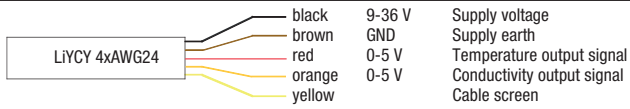
CHARACTERISTICS

GENERAL	
Constructional design	Ceramic conductivity measuring cell
Product name	Conductivity Sensor
Product type	ICS-2-958P3 / ICS-3-958P3
Nominal diameter	DN 2,5 to DN 4
Connection	ELSA push-in connectors for pipe/tube OD 4-6
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +140 °C, conductivity can only be measured up to +95 °C.
Body material	PPSU (KTW approved, NSF certified)
Measuring cell material	Al ₂ O ₃ , Pt, glass
O-ring material	FKM or EPDM
Mounting method	using spring clip, internal width Ø 30-32 (not included in scope of supply)
Mounting position	Air bubbles in the medium falsify the measurement result. Vertical flow is used to avoid air bubbles recommended from bottom to top
Approval	NSF/ANSI 169
PNEUMATIC - HYDRAULIC	
Nominal pressure	PN 16
Pressure range	Technical vacuum up to maximum allowable operating pressure OP in accordance with the specification table
Flow rate	Kv-value in accordance with the specification table
Medium	Gases or liquids which do not corrode the materials specified
ELECTRIC	
Supply voltage	9V to 36V DC
Conductivity output signal	0 V to 5 V DC (linear over the entire measurement range)
Temperature output signal	0 V to 5 V DC (linear over the entire measurement range)
Electrical connection	4-pole screened cable 0.75 m (LiYCY 4xAWG24)
Protection class	IP65
MEASURING CELL	
Measuring range	Conductivity Temperature
	0,2 bis 20 mS/cm at 0 to 95 °C 0 to 140 °C
without temperature compensation	Accuracy: ± 2 % F.S.; 0.2–5 mS/cm: ± 2.5 % R.E.; 5–15 mS/cm: ± 1.5 % R.E.; 15–20 mS/cm: ± 2 % R.E. ± 1 °C
with temperature compensation	Accuracy: ± 3 % F.S.; 0.2–5 mS/cm: ± 4 % R.E.; 5–20 mS/cm: ± 3 % R.E. ± 1 °C
Response time	<3 s, 90% of the signal swing is available at the output < 1 s

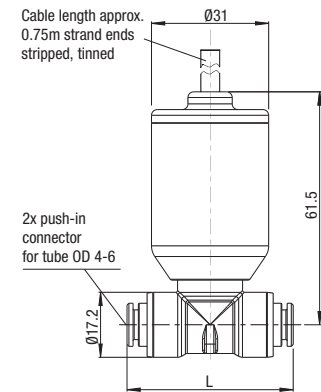
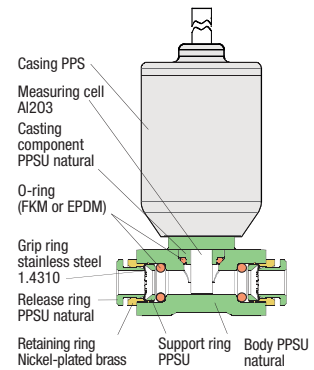
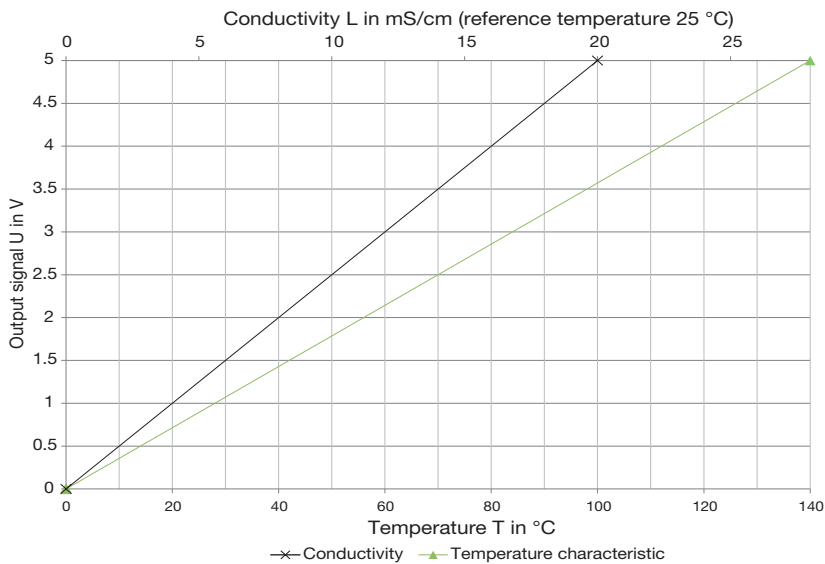
Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Conductivity Sensor - Type ICS PPSU

 Price group **710** PN 16 Max. Allow. OP at ambient temp.
 $T_{\min} 0\text{ °C}, T_{\max} +60\text{ °C}$

Plastic PPSU


for tube OD	DN	Kv-value water [l/min]	Allow. OP [bar] at medium temp.			Temperature-compensation	L	Seal material	Type	Order number
			20 °C	100 °C	140 °C					
4	2.5	2.73	16	12	6	-	50.4	FKM	ICS-2-958P3-4FF-200-020-U05-51	390660
6	4	8.3	16	12	6	-	43.8	FKM	ICS-2-958P3-6FF-200-020-U05-51	390662
4	2.5	2.73	16	12	6	water	50.4	FKM	ICS-3-958P3-4FF-200-020-U05-51	390666
6	4	8.3	16	12	6	water	43.8	FKM	ICS-3-958P3-6FF-200-020-U05-51	390668

Illustration

Characteristic Curve 0-20 mS/cm or 0-140 °C 0-5 V


Dispensing Valves Type EFC 11 PPSU



Electronic Flow Control Valve

EFC the new electronic dispensing valve from AVS Römer

Motorised dispensing valve for regulating the flow volume of liquids and gases.

The position of the precision throttle, which is connected directly to a linear motor, determines the flow rate.

In conjunction with the proven ELSA push-in connectors made from PPSU, this valve is also used in the food industries.

The control electronics integrated in the valve housing allow the setting of the motor via an analog voltage signal, whereby the flow rate can be adjusted almost continuously.

A set position can also be maintained unpowered due to the stepper motor technology.

Other features:

- less dead space
- materials and constructional design especially optimised for food applications
- low hysteresis
- simple control
- easy connection using ELSA plug-in connector

Variations / options:

- other seal materials
- other nominal diameters
- other voltage ranges
- other characteristics of the valve by variation of the stem tip or A/D converter characteristics



CHARACTERISTICS

GENERAL

Constructional design	Motorised precision tapered throttle
Product name	Electronic flow control valve
Product type	EFC-11-958P3...-U10-51, EFC-11-955P3...-U10-51
Nominal diameter	DN 0,5 / DN 1 / DN 1,5 / DN 2 / DN 3 / DN 4 / DN 5
Connection	ELSA push-in connectors for pipe/tube OD 4 ,OD 6 or AD 8
Ambient temperature	0 °C to +60 °C
Medium temperature	0 °C to +80 °C
Body material	PPSU (KTW approved, NSF certified)
Spindle material	1.4404
O-ring material	FKM, or EPDM
Housing material	PPS GF40 (UL94-V0)
Mounting method	via M3 DIN 931 hexagonal bolts in the groove or spring clips with inside diameter 18-22 mm (not included)
Mounting position	Preferably upright
Approval	NSF/ANSI 169

PNEUMATIC - HYDRAULIC

Nominal pressure	PN8 EFC-20-958-..., PN6 EFC-20-955-...
Pressure range	0 bar bis 8 bar EFC-20-958-..., 0 bar bis 6 bar EFC-20-955-...
Flow rate	KV value, Q ₉₀ value according to the table
Medium	Gases or liquids which do not corrode the materials specified.
Contamination	The upstream connection of a filter with a mesh size of 0.1 mm is recommended (e.g. SMF-958-P3-...-100)
Cycle duration	700 ms (completely open to completely closed or vice versa)
Response time	< 15 ms (shorter response time on request)
Time delay	After adjustment the valve does not respond until after a 70 ms time delay (shorter on request)

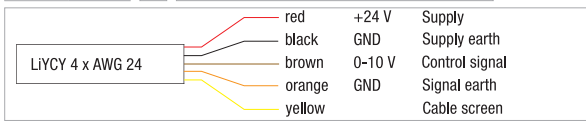
ELECTRIC

Nominal voltage	+24 V DC ±10 %
Control signal	Voltage: 0 V to 10 V sampling rate: 100 ms
Power consumption P _{max}	Approx. 15 W during adjustment, <1 W during standing time
Duty cycle	30 % (corresponds to the proportion of active adjustment time in the overall process time)
Electrical connection	0.75 m, 4-pin screened cable (LiYCY 4 x AWG 24), strand ends pre-tinned.
Protection class	IP65

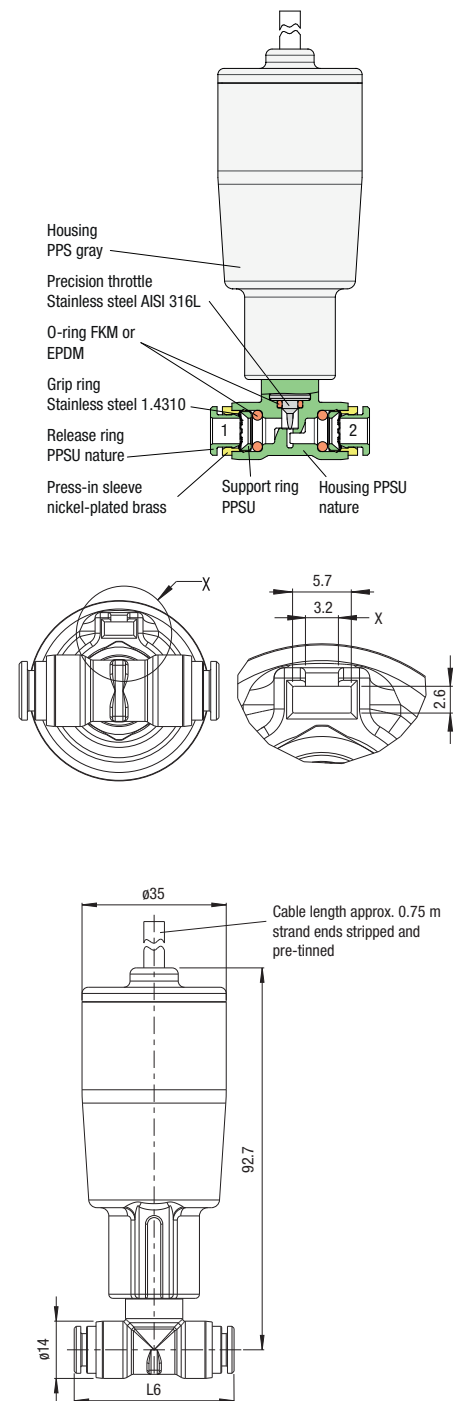
Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Dispensing Valve - Type EFC 11-958

 Price group **630** PN 8
 Amb. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +60\text{ }^{\circ}\text{C}$
 Med. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +80\text{ }^{\circ}\text{C}$

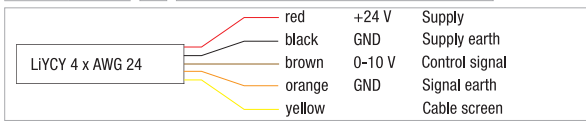
Plastic PPSU


for tube OD	DN	Kv-value water [l/min]	Qnn value O-x [l/min]	L6	Sealant material	Type	Order number
4	0.5	0 - 0.25	0 - 15	37.8	FKM	EFC-11-958P305-4FF-U10-51	690531
4	0.5	0 - 0.25	0 - 15	37.8	EPDM	EFC-11-958P305-4PF-U10-51	690529
6	0.5	0 - 0.25	0 - 15	38.6	FKM	EFC-11-958P305-6FF-U10-51	690527
6	0.5	0 - 0.25	0 - 15	38.6	EPDM	EFC-11-958P305-6PF-U10-51	690525
4	1	0 - 0.75	0 - 50	37.8	FKM	EFC-11-958P310-4FF-U10-51	690532
4	1	0 - 0.75	0 - 50	37.8	EPDM	EFC-11-958P310-4PF-U10-51	690530
6	1	0 - 0.75	0 - 50	38.6	FKM	EFC-11-958P310-6FF-U10-51	690528
6	1	0 - 0.75	0 - 50	38.6	EPDM	EFC-11-958P310-6PF-U10-51	690526
4	1.5	0 - 1.35	0 - 85	37.8	FKM	EFC-11-958P315-4FF-U10-51	690510
4	1.5	0 - 1.35	0 - 85	37.8	EPDM	EFC-11-958P315-4PF-U10-51	690507
6	1.5	0 - 1.35	0 - 85	38.6	FKM	EFC-11-958P315-6FF-U10-51	690504
6	1.5	0 - 1.35	0 - 85	38.6	EPDM	EFC-11-958P315-6PF-U10-51	690501
4	2	0 - 1.8	0 - 120	37.8	FKM	EFC-11-958P320-4FF-U10-51	690511
4	2	0 - 1.8	0 - 120	37.8	EPDM	EFC-11-958P320-4PF-U10-51	690508
6	2	0 - 1.8	0 - 120	38.6	FKM	EFC-11-958P320-6FF-U10-51	690505
6	2	0 - 1.8	0 - 120	38.6	EPDM	EFC-11-958P320-6PF-U10-51	690502
6	3	0 - 2.4	0 - 190	38.6	FKM	EFC-11-958P330-6FF-U10-51	690506
6	3	0 - 2.4	0 - 190	38.6	EPDM	EFC-11-958P330-6PF-U10-51	690503

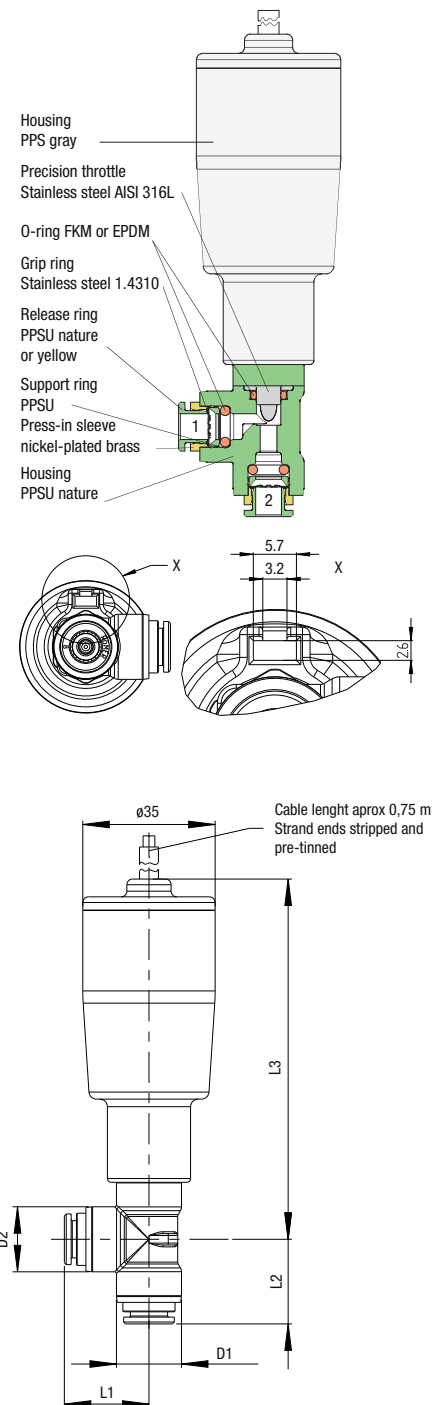
Illustration


Dispensing Valve - Type EFC 11-955

 Price group **630** PN 6
 Amb. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +60\text{ }^{\circ}\text{C}$
 Med. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +80\text{ }^{\circ}\text{C}$

 Plastic
 PPSU


for tube OD	DN	Kv-value water [l/min]	Qnn value 0-x [l/min]	L1	L2	L3	D1	D2	Sealant material	Type	Order number
6	3	0 - 3.7	0 - 220	19.3	19.3	92.7	13.9	13.9	FKM	EFC-11-955P330-6FF-U10-51	690543
6	3	0 - 3.7	0 - 220	19.3	19.3	92.7	13.9	13.9	EPDM	EFC-11-955P330-6PF-U10-51	690544
8	3	0 - 4.2	0 - 245	22.4	22.4	95.3	17.2	17.2	FKM	EFC-11-955P330-8FF-U10-51	690541
8	3	0 - 4.2	0 - 245	22.4	22.4	95.3	17.2	17.2	EPDM	EFC-11-955P330-8PF-U10-51	690542
6	4	0 - 5	0 - 320	21.9	21.9	95.3	17.2	17.2	FKM	EFC-11-955P340-6FF-U10-51	690548
6	4	0 - 5	0 - 320	21.9	21.9	95.3	17.2	17.2	EPDM	EFC-11-955P340-6PF-U10-51	690545
8	4	0 - 7	0 - 400	22.4	22.4	95.3	17.2	17.2	FKM	EFC-11-955P340-8FF-U10-51	690549
8	4	0 - 7	0 - 400	22.4	22.4	95.3	17.2	17.2	EPDM	EFC-11-955P340-8PF-U10-51	690546
8	5	0 - 9.3	0 - 480	22.4	22.4	95.3	17.2	17.2	FKM	EFC-11-955P350-8FF-U10-51	690547
8	5	0 - 9.3	0 - 480	22.4	22.4	95.3	17.2	17.2	EPDM	EFC-11-955P350-8PF-U10-51	690550

Illustration


AVS Römer

www.avs-roemer.de E20F

Leitfähigkeitssensor

ICS-958P3-6FF

L=0,2-20mS DN4

Vin=9-36V Vout=0-5V



Dispensing Valves Type EFC 20 PPSU

Electronic Flow Control Valve

EFC the new electronic dispensing valve from AVS Römer

Motorised dispensing valve for regulating the flow volume of liquids and gases.

The separately available cable electronics of the type XFC allow the position of the Motor via an analog voltage signal.

The position of the precision throttle, which is connected directly to a linear motor, determines the flow rate.

In conjunction with the proven ELSA push-in connectors made from PPSU, this valve is also used in the food industries.

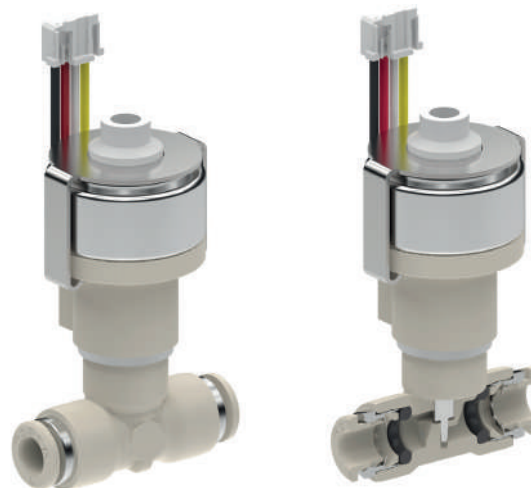
A set position can also be maintained unpowered due to the stepper motor technology.

Other features:

- less dead space
- materials and constructional design especially optimised for food applications
- low hysteresis
- simple control
- easy connection using ELSA plug-in connector

Variations / options:

- other seal materials
- other nominal diameters
- other voltage ranges
- other characteristics of the valve by variation of the stem tip or A/D converter characteristics



CHARACTERISTICS

GENERAL

Constructional design	Motorised precision tapered throttle
Product name	Electronic flow control valve
Product type	EFC-20-958P3..., EFC-20-955P3...
Nominal diameter	DN 0,5 / DN 1 / DN 1,5 / DN 2 / DN 3 / DN 4 / DN 5
Connection	ELSA push-in connectors for pipe/tube OD 4 ,OD 6 or AD 8
Ambient temperature	0° C to +60 °C
Medium temperature	0 °C to +80 °C
Body material	PPSU (KTW approved, NSF certified)
Spindle material	1.4404
O-ring material	FKM
Housing material	PPSU GF40 (UL94-V0)
Mounting method	via M3 DIN 931 hexagonal bolts in the groove or spring clips with inside diameter 18-22 mm (not included)
Mounting position	Preferably upright
Approval	NSF/ANSI 169

PNEUMATIC - HYDRAULIC

Nominal pressure	PN8 EFC-20-958-..., PN6 EFC-20-955-...
Pressure range	0 bar bis 8 bar EFC-20-958-..., 0 bar bis 6 bar EFC-20-955-...
Flow rate	KV value, Q ₉₀ value according to the table
Medium	Gases or liquids which do not corrode the materials specified.
Contamination	The upstream connection of a filter with a mesh size of 0.1 mm is recommended (e.g. SMF-958-P3-...-100)
Cycle duration	700 ms (completely open to completely closed or vice versa)
Response time	< 15 ms (shorter response time on request)
Time delay	After adjustment the valve does not respond until after a 70 ms time delay (shorter on request)

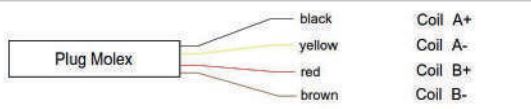
ENGINE SPECIFICATION

Operating voltage	5 V DC
Resistance per phase	12.7 Ohm ± 7 %
Inductance	6 mH ± 20 %
Current max.	0.39 A
Stroke per step	0.0127 mm
Electrical connection	4 strands AWG28 100 mm, connector Molex 35507-0400
Protection class	IP30

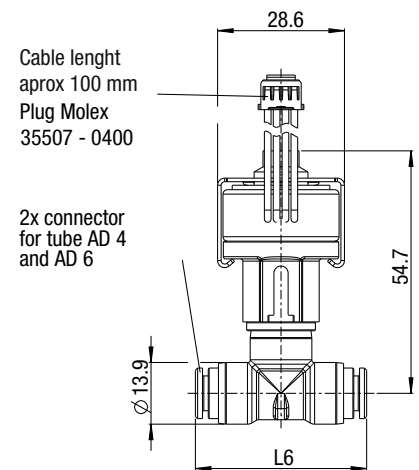
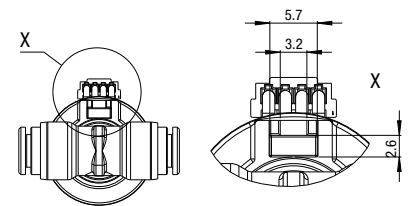
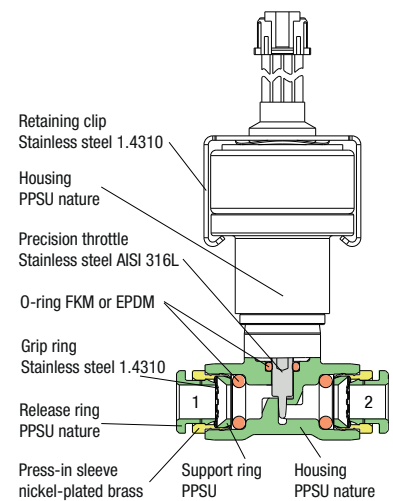
Caution! PPSU should not be used in contact with aromatic hydrocarbons, oxidising acids, acetone, chlorinated hydrocarbons, ethers or ketones! Also, PPSU should not be placed directly in contact with anaerobic adhesives!

Dispensing Valve - Type EFC 20-958

 Price group **630** PN 8
 Amb. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +60\text{ }^{\circ}\text{C}$
 Med. temp. $T_{\min} 0\text{ }^{\circ}\text{C}, T_{\max} +80\text{ }^{\circ}\text{C}$

Plastic PPSU


for tube OD	DN	Kv-value water [l/min]	Qnn value 0-x [l/min]	L6	Sealant material	Type	Order number
4	0.5	0 - 0.25	0 - 15	37.8	FKM	EFC-20-958P305-4FF	691800
6	0.5	0 - 0.25	0 - 15	38.6	FKM	EFC-20-958P305-6FF	691801
4	1	0 - 0.75	0 - 50	37.8	FKM	EFC-20-958P310-4FF	691802
6	1	0 - 0.75	0 - 50	38.6	FKM	EFC-20-958P310-6FF	691803
4	1.5	0 - 1.35	0 - 85	37.8	FKM	EFC-20-958P315-4FF	691804
6	1.5	0 - 1.35	0 - 85	38.6	FKM	EFC-20-958P315-6FF	691805
4	2	0 - 1.8	0 - 120	37.8	FKM	EFC-20-958P320-4FF	691806
6	2	0 - 1.8	0 - 120	38.6	FKM	EFC-20-958P320-6FF	691807
6	3	0 - 2.4	0 - 190	38.6	FKM	EFC-20-958P330-6FF	691809

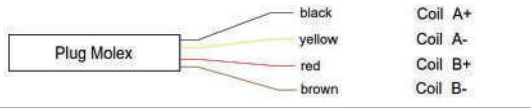
Illustration


Dispensing Valve - Type EFC 20-955

Price group **630** PN 6
 Amb. temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +60\text{ }^{\circ}\text{C}$
 Med. temp. $T_{min} 0\text{ }^{\circ}\text{C}, T_{max} +80\text{ }^{\circ}\text{C}$

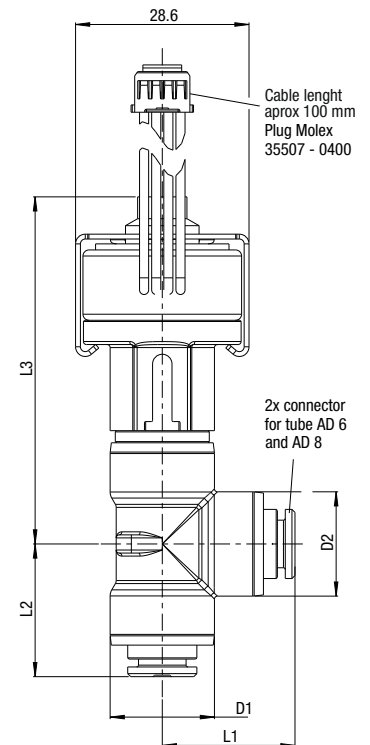
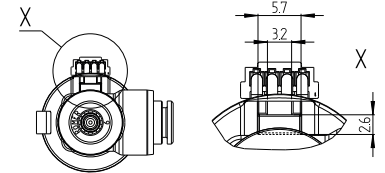
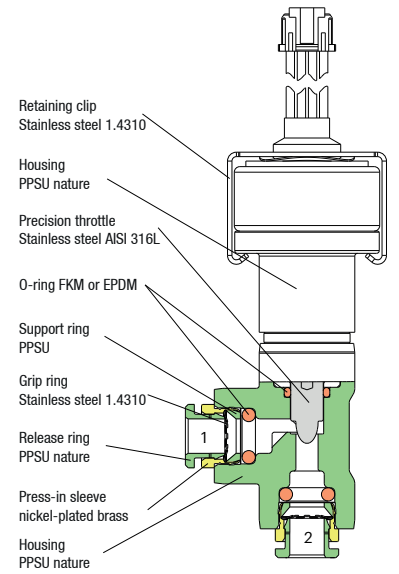


Plastic PPSU



for tube OD	DN	Kv-value water [l/min]	Qnn value 0-x [l/min]	L1	L2	L3	D1	D2	Sealant material	Type	Order number
6	3	0 - 3.7	0 - 220	19.3	19.3	54.7	13.9	13.9	FKM	EFC-20-955P330-6FF	690655
8	3	0 - 4.2	0 - 245	22.4	22.4	57.2	17.2	17.2	FKM	EFC-20-955P330-8FF	690656
6	4	0 - 5	0 - 320	21.9	21.9	57.2	17.2	17.2	FKM	EFC-20-955P340-6FF	690652
8	4	0 - 7	0 - 400	22.4	22.4	57.2	17.2	17.2	FKM	EFC-20-955P340-8FF	690653
8	5	0 - 9.3	0 - 480	22.4	22.4	57.2	17.2	17.2	FKM	EFC-20-955P350-8FF	690654

Illustration



Cable electronics XFC for EFC-20 series

Cable with control electronics for Electronic Flow Control Valve

XFC the new cable electronics for controlling electronic dosing valves of the EFC-20 series

The electronics enable analog or digital control of the EFC-20 series by voltage, current, I²C, RS485 or pulse width modulation.

The control electronics allow the position of the motor to be determined using an analog voltage signal. The status query via two integrated LEDs in the Housings also offer visual control at all times.

Other features:

- Little space required for valve housing
- Easy replacement if the mechanics or electronics are damaged
- Simple firmware upgrade when developing special versions

Variations / options:

- Voltage control (0 V to + 5 V DC, 0 V to + 10 V DC)
- Current control (+ 4 mA to + 20 mA)
- Digital interfaces I²C, Modbus RS 485 (on request)
- PWM control
- Various connector plugs



CHARACTERISTICS

GENERAL

Product name	Cable electronics EFC-20 series
Product type	XFC-21-...
Nominal diameter	DN 0,5 / DN 1 / DN 1,5 / DN 2 / DN 3 / DN 4 / DN 5
Ambient temperature	0 °C to +60 °C

PNEUMATIC - HYDRAULIC

Response time	< 15 ms
Time delay	after adjustment, the valve only reacts after a dead time of 70 ms

ENGINE SPECIFICATION

Nominal voltage	24 V DC ±10 %
Control signal	Voltage: 0 V to +5 V DC; 0 V to +10 V DC or current: +4 mA to +20 mA; Sampling rate 10 ms; I ² C, RS485, PWM
Duty cycle	30% ED (corresponds to the proportion of the active adjustment time in the total process time)
Electrical connection	6-pole cable 0.75 m, pre-tinned wire ends (LiYCY 6x AWG 24)
Protection class	IP30

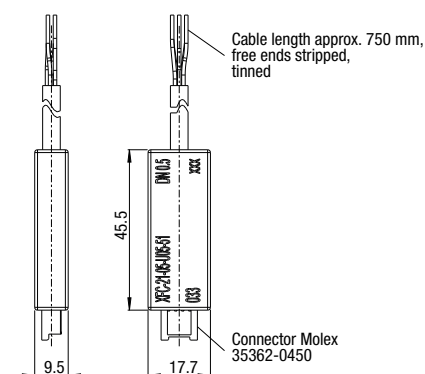
Cable electronics for EFC-20 series

Price group	630	PN	8	Temperature range	0 °C to +60 °C
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For nominal size	Control signal	Typ	Order-number
0,5	0 V bis +5 V DC	XFC-21-05-U05-51	691300
0,5	0 V bis +10 V DC	XFC-21-05-U10-51	691303
0,5	+4 mA bis +20 mA	XFC-21-05-I20-51	691306
1,0	0 V bis +5 V DC	XFC-21-10-U05-51	691301
1,0	0 V bis +10 V DC	XFC-21-10-U10-51	691304
1,0	+4 mA bis +20 mA	XFC-21-10-I20-51	691307
1,5 - 5,0	0 V bis +5 V DC	XFC-21-15-U05-51	691302
1,5 - 5,0	0 V bis +10 V DC	XFC-21-15-U10-51	691305
1,5 - 5,0	+4 mA bis +20 mA	XFC-21-15-I20-51	691308

Illustration



The new generation of stainless steel

Compact design and complex geometries for demanding applications

The new stainless steel generation in metal injection molding technology is perfectly suited for use with aggressive media. Equipped with food-grade sealing materials (FKM, EPDM) as standard, the stainless steel products are ideal for challenging tasks in Food & Beverage, Industrial and Life Science segments.



Your advantages

- Complex geometries, sizes and threads
- Smaller and lighter design
- Certified products
- Fail-safe and durable due to extremely high material strength
- Unbeatable price-performance ratio

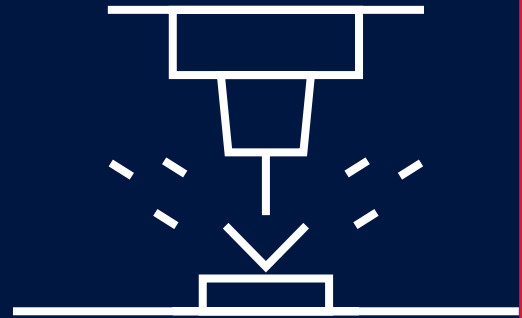
Metal Injection Molding (MIM)

The starting material is a feedstock of stainless steel powder (1.4404) and thermoplastic carrier material. Components are formed from the feedstock by injection molding. The solid stainless steel product is created by completely dissolving out the carrier material via a chemo-thermal process and the subsequent sintering process.

Our in-house mold construction with state-of-the-art machinery enables the fast and flexible realization of complex shapes and sizes

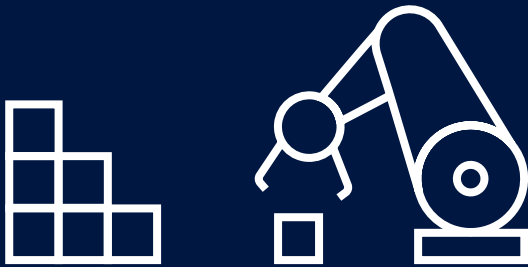
10,500

products and variants through **modular design**,
different configurations and **custom solutions**



○ Since 1970

Successful family business for over **50 years**

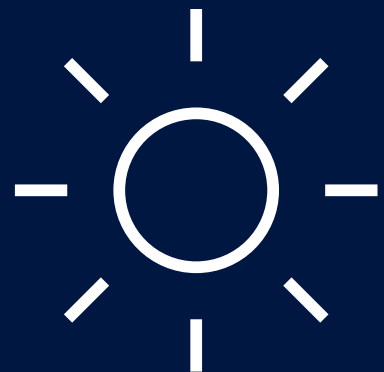


From 1 to 1,000,000

Flexibility in the number of pieces

○ 14 %

of the electricity demand is
generated with **our own PV system**





Worldwide

International customers from the market segments
Food & Beverage, Industrial, Life Science

J. C. Römer Foundation since **2012**
to promote young technical talent



3 core values

The Römer family

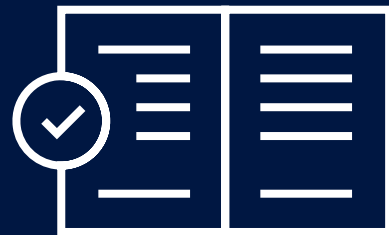
We live cohesion and trust

Customer orientation

We are committed to quality and service

Down-to-earth self-confidence

We stand by our word



3,500

Catalog products with variants

3 locations

Grafenau, Langenberg and Switzerland



48

Shipping to
different countries



Certifications and approvals

AVS Römer Quality and Environmental Management

Our ISO certifications confirm the sustainable environmental policy and the high quality at AVS Römer. The implemented management systems according to ISO 9001:2015 and ISO 14001:2015 ensure an improvement process, which continuously expands the high standard at our company.



Product approvals

For numerous applications, compliance with certain safety standards is necessary. Among other things, this requires a high degree of cleanliness as well as special design guidelines and materials. A large number of our products meet these stringent requirements.



Product and material conformity

AVS Römer products are particularly well-suited for use in various areas due to their compliance with certain guidelines and standards. Further conformities, approvals and certifications on request.



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GERMANY**

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