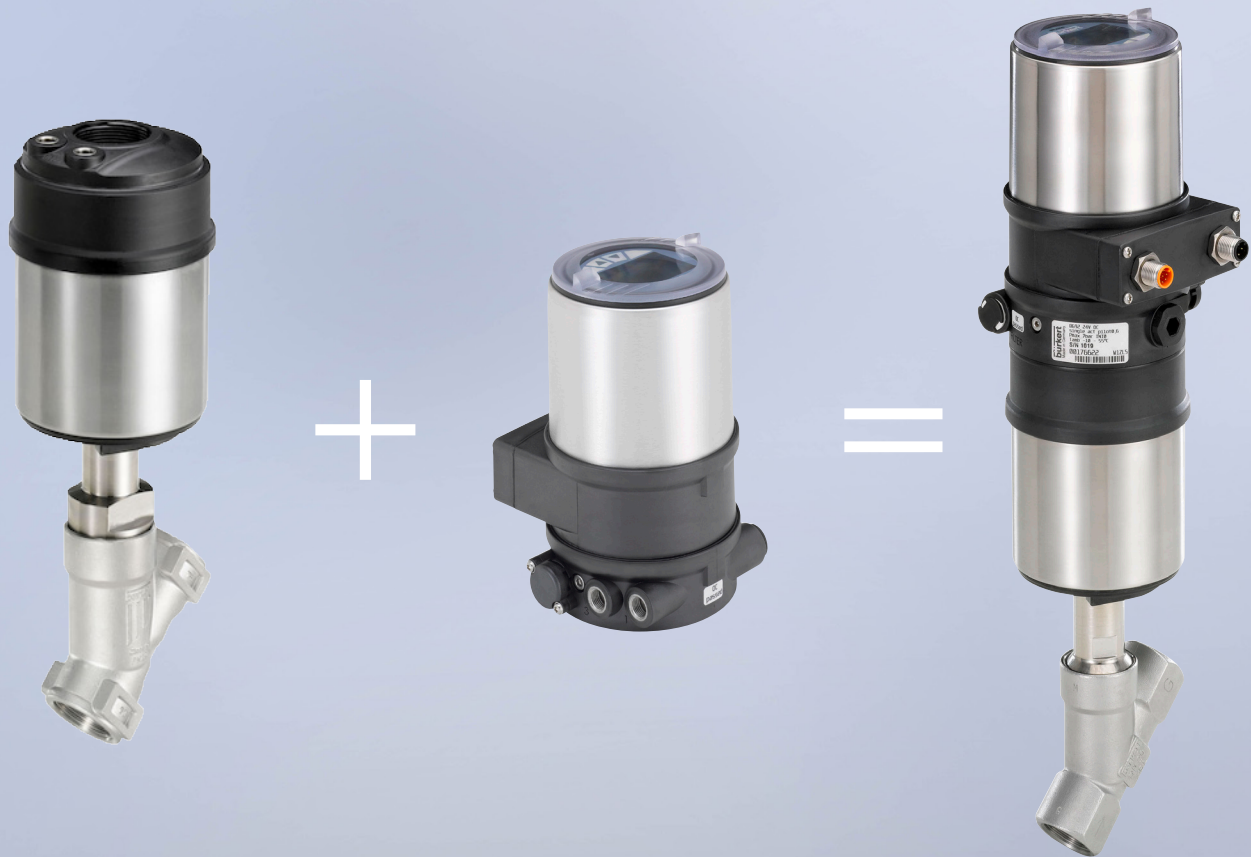


# Angle-seat Valve System for continuous control

Type 8802/2300 electro-pneumatically operated angle-seat valve



TWO YEAR WARRANTY  
on this valve system

# Burkert 8802 continuous control valve



The design of the System Type 8802 control valve enables the easy integration of digital automation units whether they are a simple Blind Positioner, high-capacity Positioner with optional integrated fieldbus interface or even a digital Process Controller with an intuitive, backlit graphical display. The fully integrated system with control valve and automation system has a compact and smooth design, integrated pneumatic lines, IP65/67/NEMA4X protection class and superior chemical resistance.

## Support documentation for 2300 + 8692



Threaded Datasheet



Clamp Datasheet



Tube End Datasheet



8692 Datasheet



# Type 2300 Angle-Seat Valve

- 2/2-way Angle-Seat Valve with stainless steel design
- For medium up to +185°C (365°F), DN 15-65 (0.5"-2.5")
- High flow rates
- High cycle life
- Flow optimised body in stainless steel
- Deliverable with flow direction below or above seat
- Clean design for optimal use in hygienic environment
- Suitable for steam up to 150 PSI (g)



Technical Data	
<b>Orifice</b>	0.5" (DN15) to 2.5" (DN65)
<b>Port connections</b> Weld acc. to Threaded port and clamp - see separate datasheets	ASME BPE
<b>Body material</b>	Stainless Steel 316L
<b>Nominal pressure</b>	PN25 (Body)
<b>Actuator material</b> Actuator Cover	PPS Stainless steel 1.4561 (316Ti)
<b>Plug sealing</b>	PTFE/St.st. (PTFE/stainless steel) and St.st./St.st. (stainless steel/stainless steel)
<b>Seat leakage IEC 534-4/ EN 1349</b>	Shut-off class III and IV for St.st./St.st. Shut-off class IV for PTFE/St.st.
<b>Medium</b>	Water, alcohol, oils, fuels, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam, optional fuel gas, (EC Gas Appliances Directive 2009/142/EG)
<b>Viscosity</b>	max. 600 mm <sup>2</sup> /s
<b>Spindle packing</b>	PTFE V-rings with spring compensation
<b>Medium temperature</b>	-10°C to +185 °C (max. +130°C for PTFE/ST.st. sealing)
<b>Ambient temperature</b>	0 to +55°C; 32°F to 131°F (with positioner or process controllers) 0 to +80 °C; 32°F to 176°F (remote version)
<b>Control medium</b>	Compressed air
<b>Relevant pilot pressure for circuit function A</b>	Port size DN 15 to 50 Port size 5,5 to 7 bar DN 65 5,6 to 7 bar
<b>Pilot air ports</b>	Push-in connector for external ø 6 mm or 1/4" tube
<b>Installation</b>	As required, preferably with actuator in upright position
<b>Surface Finish</b> on request	standard Ra, internal ≤3.2 µm internal connection area

In line with Burkert's philosophy for modular valves and sensors the construction of the 2300 angle-seat valve fulfils tough criteria for process environments. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with V-seals.

The parabolic trim results in a flow characteristic approximately 35% larger than conventional control valves. It is available in either stainless steel or with a durable PTFE seal for tight shut-off.

The design enables the easy integration of automation modules whether they are digital electropneumatic positioner or process controller.

The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67 protection class and superior chemical resistance.

This system has been engineered for reliable accurate control in applications where high flow rate is an advantage.

# Type 8692 Positioner

- Compact robust stainless steel, NEMA 4X design
- Contact-free position sensor
- Integral control air routing
- Electrically isolated inputs and outputs
- Industry leading diagnostics alarms as standard
- Easy start-up by automatic X-Tune function



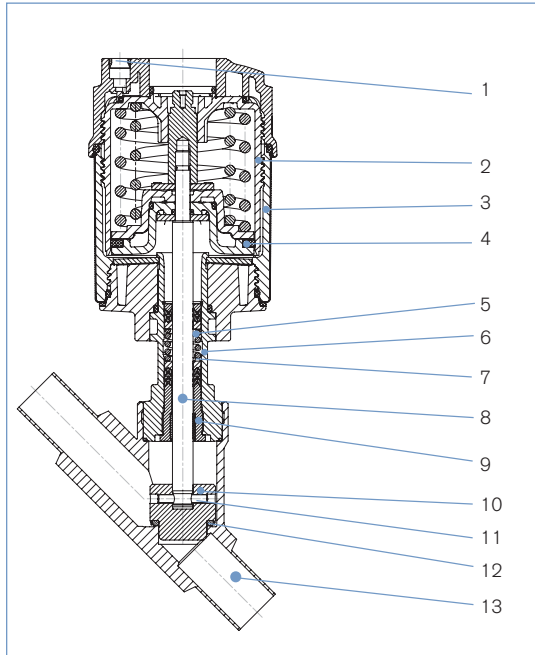
The compact Positioner Type 8692 is optimized for integrated mounting on the pneumatic actuators in the process valve series Type 23xx/2103 and is specially designed for the requirements of a hygienic process environment. The control air channel is integrated in the actuator without external tubings. The easy handling and the selection of additional software functions are done either on a big graphic display with backlight and keypad or over a PC interface.

The Positioner registers the valve position without deterioration through a contact-free, analog position sensor. The control of single or double-acting actuators is done without internal air consumption. With integrated diagnostic functions operation conditions of the control valve can be monitored. Through status signals, valve diagnostic messages are transmitted according to NAMUR NE107 and recorded as history entries.

The housing is easy to clean and features proven IP protection and chemically resistant materials for use in hygienic processing, in food, beverage and pharmaceutical industries. Combined with Burkert ELEMENT actuators the unique pilot valve system enables a compressed air recycling that avoids actuator chambers contamination from the environment.

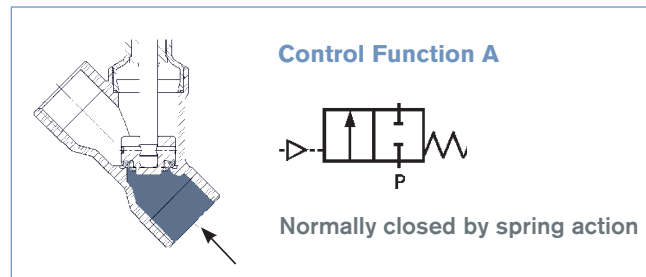
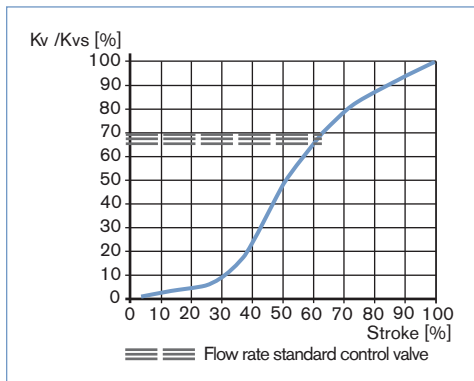
Technical Data	
<b>Material</b>	Body Cover Sealing
	PPS, stainless steel PC EPDM
<b>Power Supply</b>	24 VDC +/- 10% UL; NEC Class 2
<b>Residual ripple</b>	max. 10%
<b>Setpoint setting</b>	0/4 to 20mA and 0 to 5/10 V
<b>Output resistance</b>	0/4 to 20mA: 180 Ω 0 to 5/10 V: 19 k Ω
<b>Control medium</b>	neutral gases, air, quality classes acc. to ISO 8573-1
Dust concentration	Class 7 (<40µm particle size)
Particle density	Class 5 (<10mg/m <sup>3</sup> )
Pressure condensation point	Class 3 (<-20°C)
Oil concentration	Class X (<25mg/m <sup>3</sup> )
<b>Ambient temperature</b>	-10 to +55°C
<b>Pilot air ports</b>	Threaded ports G1/8 stainless steel
<b>Supply pressure</b>	Low air flow rate 0 to 7 bar <sup>1)</sup> High air flow rate 3 to 7 bar
<b>Air input filter</b>	Exchangeable (mesh aperture-0.1mm)
<b>Actuator system</b>	Low air flow rate: Ø Actuator 70 / 90 mm High air flow rate: Ø Actuator 130 mm
<b>Position detection module</b>	Contact-free, wear-free
<b>Installation</b>	As required, preferably with actuator upright position
<b>Protection type</b>	IP65 and IP67 according to EN 60529, Type 4X
<b>Power consumption</b>	< 5 W
<b>Electrical connection</b>	Multipole connection Cable gland
	M12, 8-pins and M12 4-pins (optional)
<b>Approvals</b>	UL listed for USA and Canada cULus
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Conformity</b>	EMC directive 2014/30/EU

## Materials Type 2300



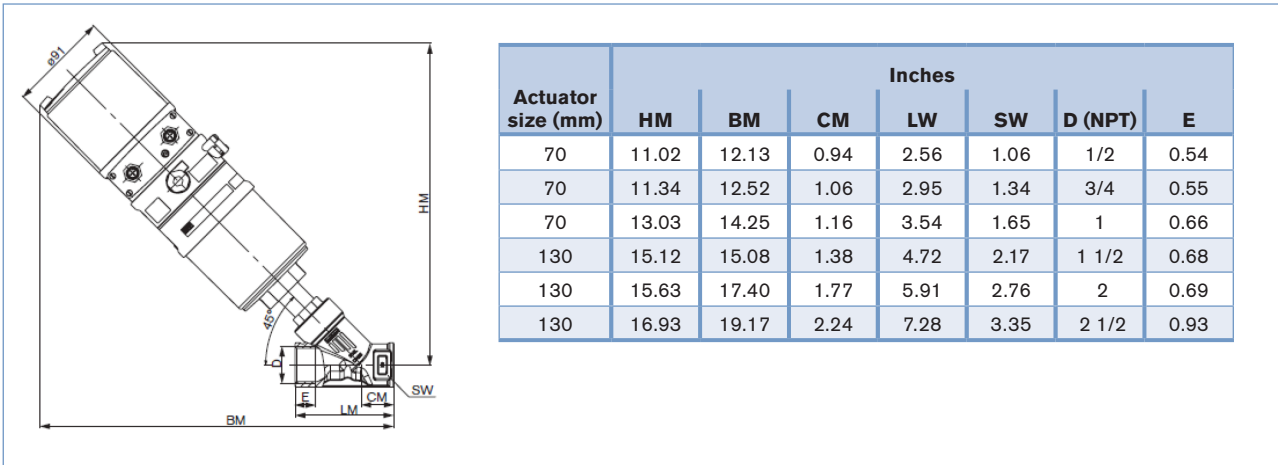
- |                               |  |
|-------------------------------|--|
| <b>1 Pilot air ports</b>      | Push-in connector PP (standard)                          |
| <b>2 Actuator</b>             | PPS  |
| <b>3 Cover</b>                | Stainless steel 1.4561 (316Ti)                           |
| <b>4 Piston seal</b>          | FKM  |
| <b>5 Spring</b>               | Stainless steel 1.4310                                   |
| <b>6 Tube</b>                 | Stainless steel 1.4401 (316) / 1.4404 (316L)             |
| <b>7 Spindle packing</b>      | PTFE   |
| <b>8 Spindle</b>              | Stainless steel 1.4401 (316) / 1.4404 (316L)             |
| <b>9 Spindle guidance</b>     | Edelstahl 1.4404 (316L)                                  |
| <b>10 Plug</b>                | Stainless steel 1.4571                                   |
| <b>11 Spring straight pin</b> | Stainless steel 1.4310                                   |
| <b>12 Plug seal</b>           | Stainless steel 1.4571 / PTFE disc for soft seat sealing |
| <b>13 Valve body</b>          | Stainless steel 316L                                     |

### Flow characteristic

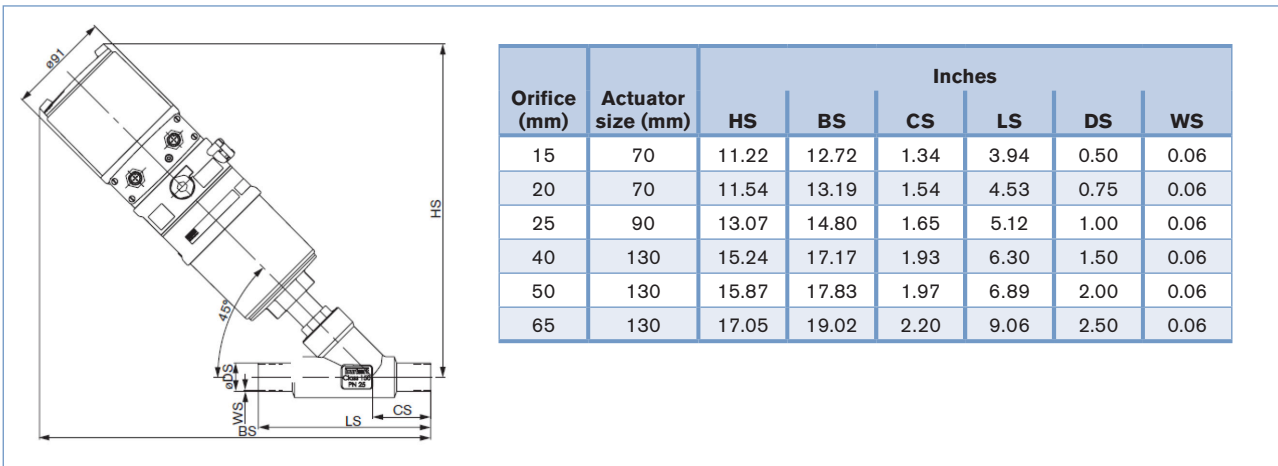


Orifice (mm)	Actuator size (mm)	Cv (gpm) values at stroke (%)										
		5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
15	70	0.18	0.2	0.3	0.5	1.4	3.1	4.0	4.6	5.2	5.5	5.8
20	70	0.30	0.3	0.5	1.3	4.6	6.8	8.3	9.6	10.5	11.1	11.6
25	90	0.39	0.4	0.7	1.7	6.0	10.3	13.3	15.0	16.4	17.8	18.5
40	130	0.55	0.8	1.6	5.9	16.2	23.1	28.1	32.7	36.7	39.9	41.6
50	130	1.01	1.4	2.1	4.6	17.6	30.1	40.5	46.6	52.0	55.5	61.3
65	130	1.97	2.3	7.5	23	40.5	55.5	67.1	77.5	86.7	96.0	104.1

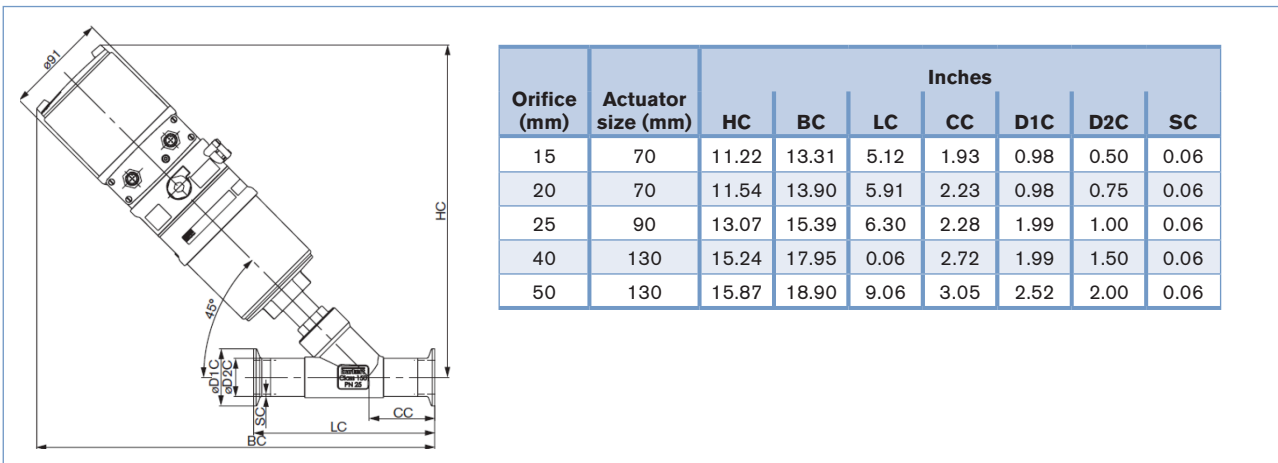
### Dimensions NPT end



### Dimensions weld end ASME BPE

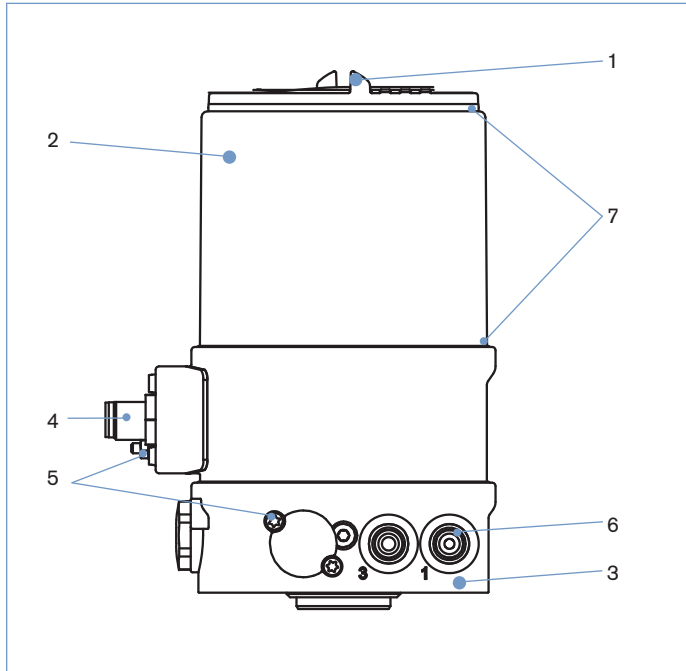


### Dimensions clamp end ASME BPE



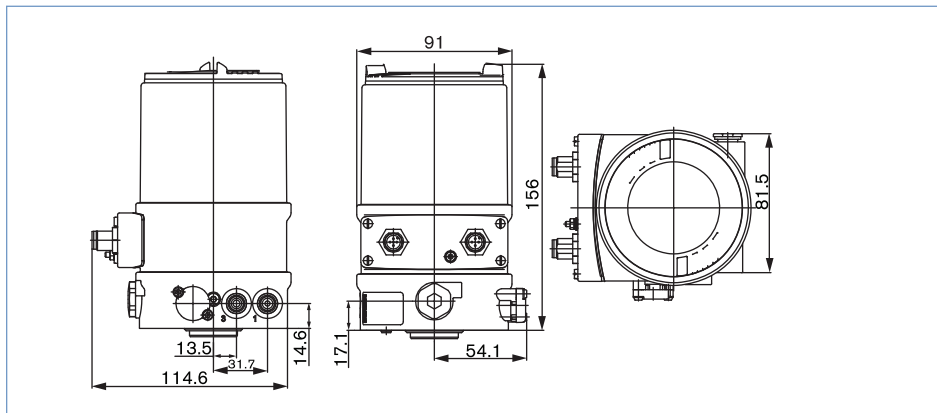
# 8692 Positioner

## Materials



<b>1 Cover</b>	PC
<b>2 Body casing</b>	Stainless steel
<b>3 BASIC body</b>	PPS
<b>4 Plug M12</b>	Stainless steel
<b>5 Screws</b>	Stainless steel
<b>6 Threaded ports G 1/8</b>	Stainless steel
<b>7 Sealing</b>	EPDM

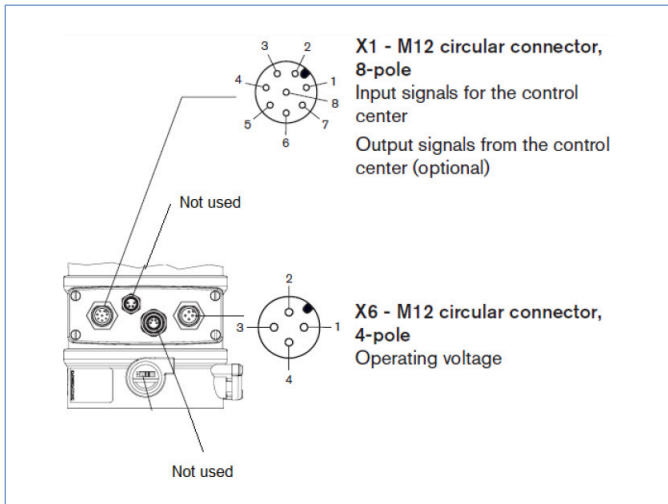
## Dimensions [mm] Version connection Multipole





## Electrical installation

Designation of the circular plug-in connectors:



### X1-M12 circular connector, 8-pole

Pin	Wire color*	Assignment
<b>Input signals of the control centre (e.g. PLC)</b>		
8	red	Set-point value + (0/4 ... 20 mA / 0 ... 5/10 V)
7	blue	Set-point value GND
1	white	Binary input +
<b>Output signals to the control centre (e.g. PLC) (required for analogue output and/or binary output option only)</b>		
6	pink	Analog position feedback +
5	gray	Analog position feedback GND
4	yellow	Binary output 1
3	green	Binary output 2
2	brown	Binary outputs GND
* The indicated colors refer to the connection cable available as an accessory (919061).		

Tab. 3: X1 - M12 circular connector, 8-pole

### X6-M12 circular connector, 4-pole

Pin	Wire color*	Assignment
1	brown	Operating voltage + 24 V DC
3	blue	Operating voltage GND
* The indicated colors refer to the connection cable available as an accessory (918038).		

Tab. 4: X6 - M12 circular connector, 4-pole (operating voltage)



# Type 2300 Angle-Seat Valve



TEFLON SEATS	
NPT	
SIZE	8802 Item #
0.50	302530
0.75	302533
1.00	302535
1.50	302542
2.00	302543
2.50	302544

TUBE	ASME BPE
SIZE	8802#
0.50	302545
0.75	302546
1.00	302548
1.50	302549
2.00	302551
2.50	302552

CLAMP	
SIZE	8802#
0.50	303015
0.75	303017
1.00	303019
1.50	303020
2.00	303021
2.50	303022

STAINLESS SEATS	
NPT	
SIZE	8802 Item #
0.50	303353
0.75	303358
1.00	303359
1.50	303360
2.00	300426
2.50	303361

TUBE	ASME BPE
SIZE	8802#
0.50	304026
0.75	304027
1.00	304028
1.50	304029
2.00	290898
2.50	304030

CLAMP	
SIZE	8802#
0.50	294204
0.75	304839
1.00	304840
1.50	304841
2.00	304842
2.50	304843

## Ordering chart accessories

Description	Item no.
M12 socket, 8-pins, 5m assembled cable	919 267
M12 socket, 4-pins, 5m assembled cable	918038
Silencer G1/8 (spare part)	788934
Sensor puck (spare part)	682 240
G1/8 X 1/4" push tube connector (spare part)	98132544

*All valve systems come pre-assembled and tested. 1/4" push tube connections and air mufflers are also included.*

**One M12 socket, 8-pin cable and one M12 socket, 4-pin is required. See accessories chart for ID#.**

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