

Angle-Seat Valve System for on/off control

Type 8801/2100 electro-pneumatically operated angle-seat valve



TWO YEAR WARRANTY
on this valve system

Burkert Type 8801/2100



**Type 2100 angle-Seat
series valve**

+



**Type 8691 on/off
controller**

=



**Type 8801 on/off
control valve**

The design of the System Type 8801 On/Off ELEMENT enables the easy integration of automation units whether they are electrical/ optical position feedback, pneumatic control units or an optional integrated fieldbus interface.

The fully integrated system with 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 2100 + 8691



Threaded Datasheet



Clamp Datasheet



Tube End Datasheet



8691 Datasheet



0903199
Art. - 3x -
570608020-4

91 00

Burkert Type 2100 Angle-Seat Valve

- 2/2-way Angle-Seat Valve with stainless steel design
- For medium up to +185°C (365°F), 1/2" - 2 1/2"
- 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	
Orifice	0.5" (DN15) to 2.5" (DN65)
Port connections Threaded Weld and Clamp	0.5" - 2.5"
Body material	Stainless Steel 316L
Nominal pressure	PN25 (Body)
Actuator material Actuator Cover	PPS (PPS on request) Stainless steel 1.4561 (316Ti)
Sealing material	PTFE
Medium	Water, alcohol, oils, fuels, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam, optional fuel gas, (EC Gas Appliances Directive 2009/142/EG)
Viscosity	max. 600 mm ² /s
Spindle packing	PTFE V-rings with spring compensation
Medium temperature	-10°C to +185°C; 14°F to 365°F
Ambient temperature	0 to +55°C; 32°F to 131°F to (integrated control head)
Control medium	Neutral gases, air
Max. pilot pressure	max. 145 PSI; actuator size 130 mm, 101 PSI
Pilot air ports	Threaded ports G1/8 stainless steel
Installation	As required, preferably with actuator in upright position

1) In the seat area the RA ≤ 0,6 µm surface finish can be higher.)

In line with Burkert's philosophy for modular valves and sensors the construction of the 2100 angle-seat valve fulfills tough criteria for process environments. Unrivaled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with V-seals. The design enables the easy integration of automation modules whether they are electrical/ optical position feedback, pneumatic control units, an integrated fieldbus interface. The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67 protection class and superior chemical resistance.

Burkert Type 8691 Control Head

- Compact stainless steel design
- Integrated analogue valve position registration (teach function)
- Coloured illuminated status display
- Internal control air channel
- Fieldbus interface AS-Interface/DeviceNet (option)



Technical Data	
Material	Body Cover Sealing
	0.5" (DN15) to 2.5" (DN65) PC EPDM
Control medium	neutral gases, air, quality classes acc. to ISO 8573-1
Dust concentration	Class 7 (< 40µm particle size)
Particle density	Class 5 (< 10mg/m³)
Pressure condensation point	Class 3 (< -20°C)
Oil concentration	Class X (< 25mg/m³)
Supply pressure	43.5 - 101.5 PSI
Air input filter	exchangeable
Mesh aperture	~0.1 mm
Pilot air ports	G1/8 thread
Position feedback	Analogue position sensor (contact-free) with teach function; switchport (PNP)
Stroke range valve spindle	2,5 to 45 mm
Ambient temperature with pilot valve	-10°C to 55°C; 14°F to 131°F
Installation	As required, preferably with actuator upright
Protection type	IP65 and IP67 according to EN 60529, Type 4X
Conformity	EMC directive 2014/30/EU
Approvals	cULus Cert. No 238179
Electrical connection	
Multipole	M12, 8-pins
Cable gland	(optional)

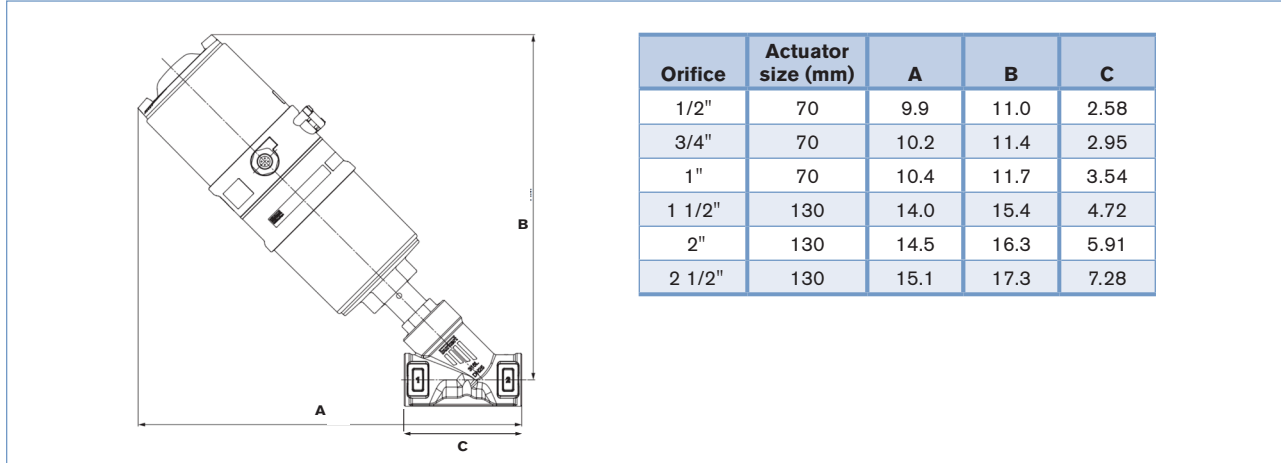
Technical data	
Power Supply	24 VDC ±10% UL: NEC Class 2
Residual ripple with DC	10%
Power consumption	< 2 W

The Control Head Type 8691 is optimized for integrated mounting on the 21XX process valve series. The registration of the valve end position is done through a contact-free analog position sensor, which automatically recognizes and saves the valve end position through the Teach function when starting up. The integrated pilot valve controls single acting actuators and provides two position feedback via two PNP transistors.

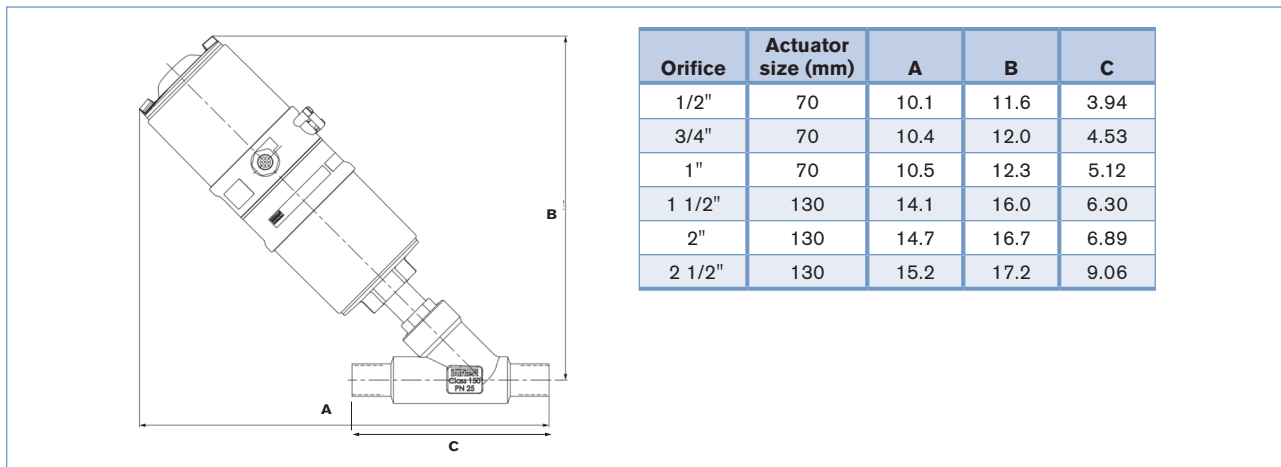
The design of the control unit and the actuator enables an internal control air channel without external tubing. Besides the electrical position feedback signal the status of the device is shown directly on the control head itself through colored powerful LEDs showing a clear visible valve position status, even under dirty or dark environments.

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. Focused on wash down applications the IP rating is supported by a positive pressure inside the control head. Combined with Burkert ELEMENT actuators the unique pilot valve system enables a compressed air recycling that avoids actuator chambers contamination from the environment.

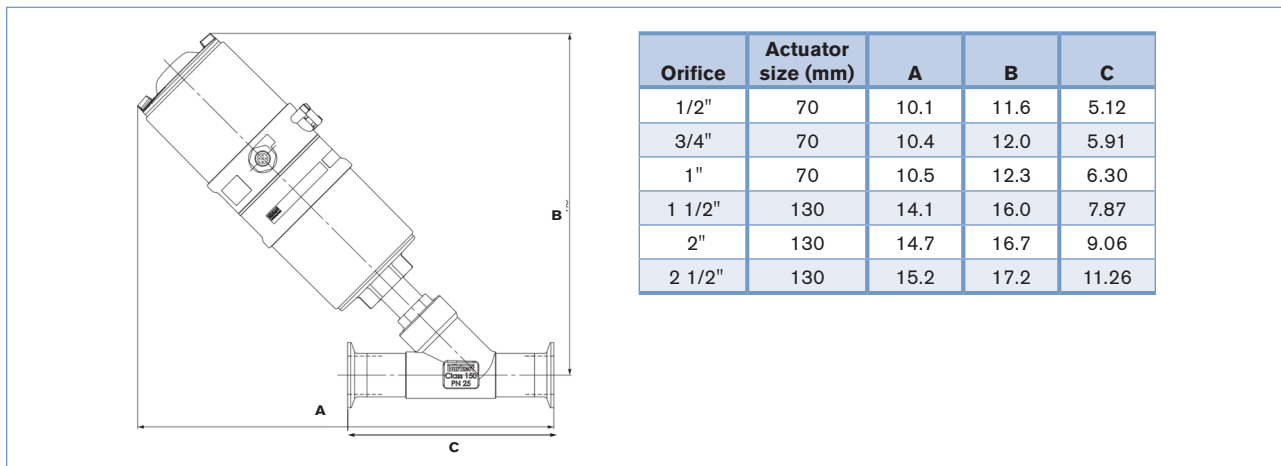
Dimensions NPT end



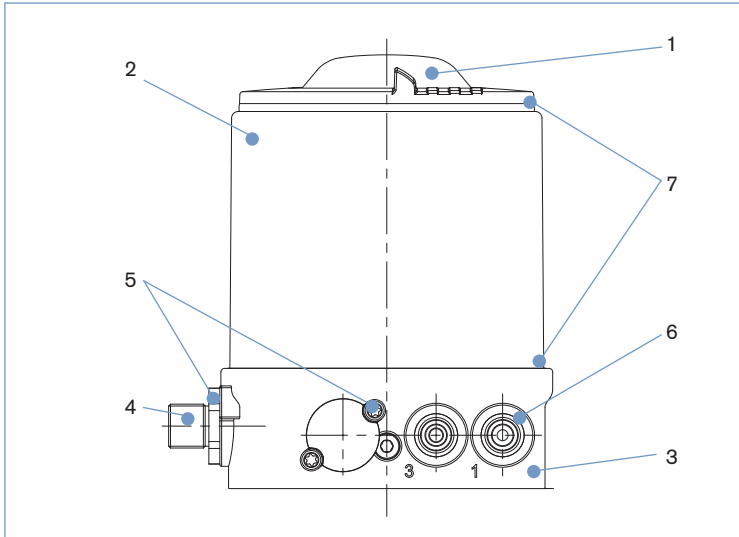
Dimensions weld end ASME BPE



Dimensions clamp end ASME BPE

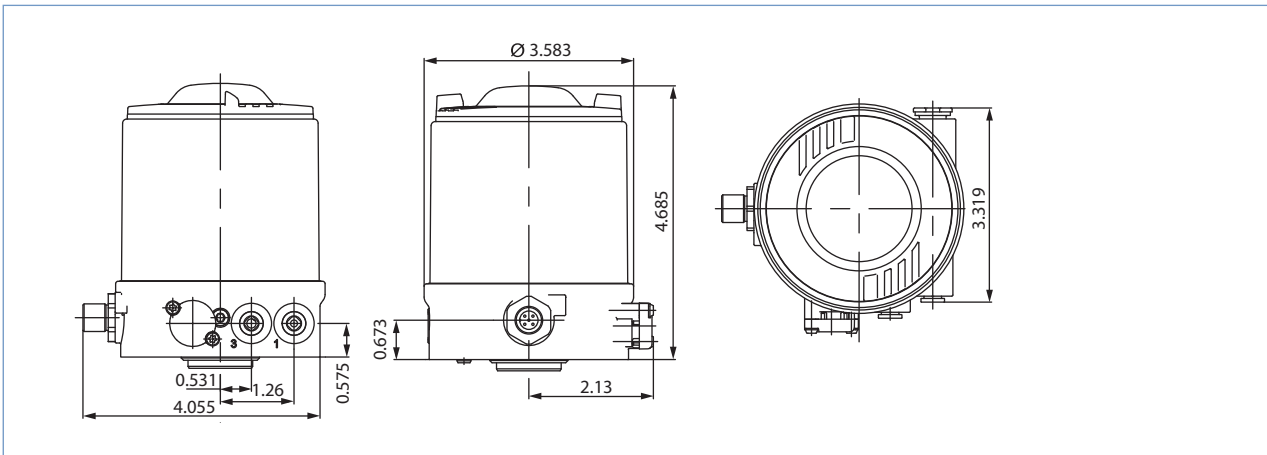


8691 Dimensions



1	Cover	PC
2	Housing	Stainless steel
3	BASIC body	PPS
4	Plug M12	Stainless steel
5	Screws	Stainless steel
6	Push-in connector	POM/Stainless steel
	Threaded ports G 1/8	Stainless steel
7	Sealing	EPDM

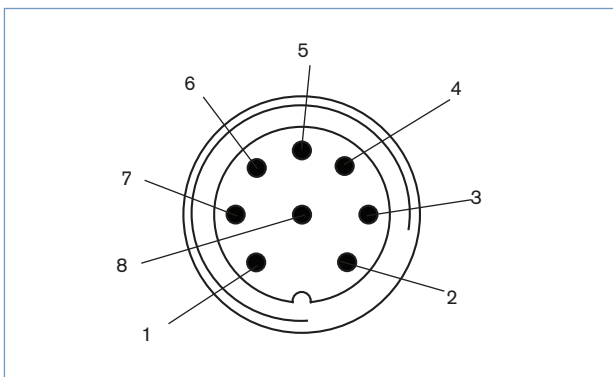
Dimensions for valve system On/Off ELEMENT Type 8801-GC [inch]...cont.



Connection options

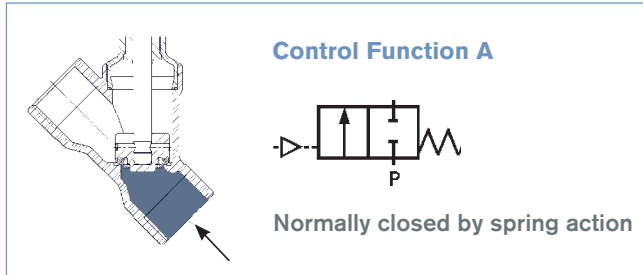
24 V DC

Multipole connection M12, 8-pins



Pin	Description	Configuration
1	Limit switch 1	IN 1 / TOP
2	Limit switch 2	IN 2 / BOTTOM
3	Power supply	GND
4	Operating voltage +	24 V DC
5	Valve control +	Valve +
6	Valve control -	Valve -
7	n.a.	not assigned
8	n.a.	not assigned

Flow from below the seat (liquids)



Size	Actuator (mm)	Max psi	Min pilot PSI	Cv
1/2"	70	363	73	5.8
3/4"	70	363	73	12.7
1"	70	232	73	20.8
1 1/2"	90	232	73	46.2
2"	130	232	73	71.7
2 1/2"	130	218	81	109.8



NPT SIZE	8801 Item #
1/2"	303637
3/4"	302452
1"	464795
1 1/2"	307516
2"	302455
2 1/2"	302456

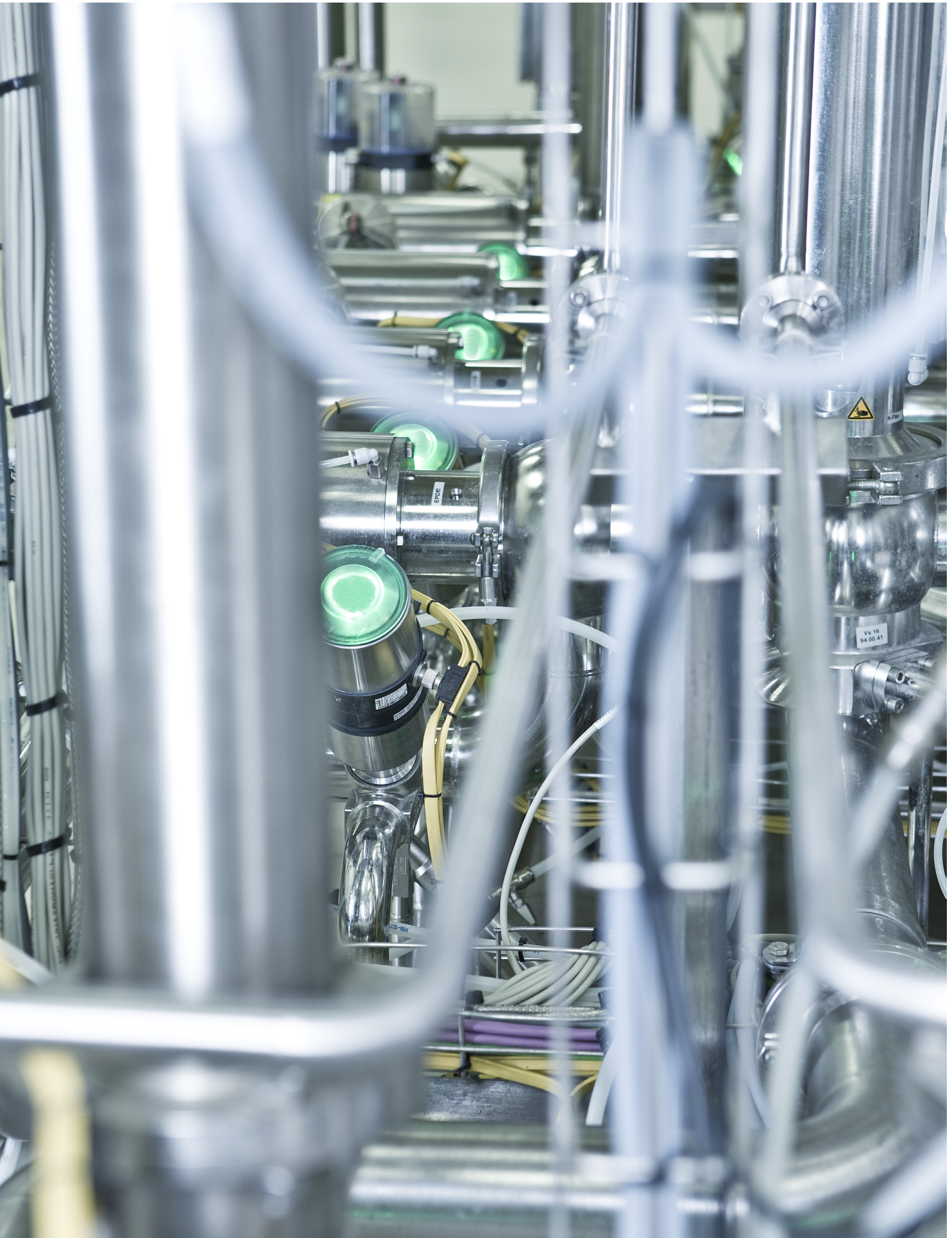
TUBE SIZE	ASME BPE 8801#
1/2"	286261
3/4"	274542
1"	253137
1 1/2"	302457
2"	302521
2 1/2"	302522

CLAMP SIZE	ASME BPE 8801#
1/2"	290366
3/4"	302523
1"	295044
1 1/2"	302526
2"	302527
2 1/2"	306677

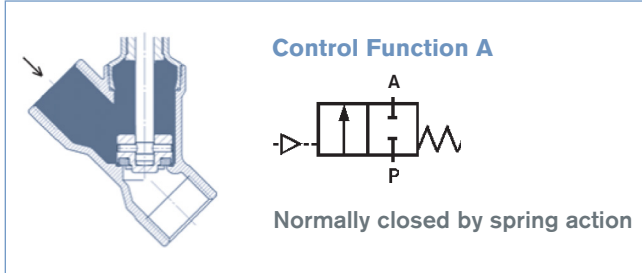
All valve systems come pre-assembled and tested. 1/4" push tube connections and air mufflers are also included. One M12 socket, 8-pin cable is required. See accessories chart for ID#.



IP65/67 ACHTUNG: In Ex-Bereichen darf die Oberfläche
T135°C CE nur mit einem feuchten Tuch gereinigt werden
CAUTION: In Hazardous Areas the surface
may only be cleaned with a wet towel



Flow from above the seat (steam and other gases)



Size	Actuator (mm)	Max psi	Cv
1/2"	70	232	5.90
3/4"	70	232	13.87
1"	70	232	21.96
1 1/2"	90	232	46.34
2"	90	232	63.58
2 1/2"	130	116	98.26



NPT SIZE	8801 Item #
1/2"	295043
3/4"	306647
1"	294405
1 1/2"	306672
2"	295174
2 1/2"	306673

TUBE SIZE	ASME BPE 8801#
1/2"	306674
3/4"	268818
1"	306675
1 1/2"	306676
2 "	306677

When closing against compressible fluids such as steam, nitrogen or air, the 2/2-way angle seat valve type 2100 should be installed with the inlet flow above the valve seat. As the fluid flows into the valve, it aids the closing of the valve ensuring an ANSI class VI, bubble-tight seal. Upon opening, as the medium expands under the swivel plate, the process pressure contributes to the opening of the valve. This allows for a more compact valve with a smaller actuator to be used for all gases. Attention! Valves with flow above the seat are only conditionally usable for liquid medium. There is a danger of waterhammer!

Ordering chart accessories

Description	Item no.
M12 socket, 8-pins, 5m assembled cable	919 267
Silencer G1/8 (spare part)	780779
Sensor puck (spare part)	682 240
G1/8 X 1/4" push tube connector (spare part)	98124810



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