



#### Application

Control valve for hygienic applications in the food and pharmaceutical industries

<b>Valve size</b>	<b>DN 6 to 125</b>	· <b>NPS ¼ to 5</b>
	<b>OD 10.2 to 139.7</b>	
<b>Maximum pressure</b>	<b>40 bar</b>	· <b>580 psi</b>
<b>Medium temperature</b>	<b>0 to 150 °C</b>	· <b>32 to 300 °F</b>



Type 3347 Angle Valve with

- Type 3271 Pneumatic Actuator (Type 3347-1 Control Valve)
- Type 3277 Pneumatic Actuator (Type 3347-7 Control Valve) for integral positioner attachment

#### Special features

- Valve body free of dead space made of stainless steel
- Wetted sealing materials comply with FDA regulations
- Compliance with 3-A regulations with modified Type 3277 Pneumatic Actuator and approved valve accessories (see also Table 1.2)
- Metal or soft-seated valve plug
- Easily detachable clamp connection between body and bonnet
- Suitable for cleaning-in-place (CIP)

PTFE seals are used to seal body and bonnet as well as bonnet and plug stem. An additional steam line connection is available for stricter purity requirements.

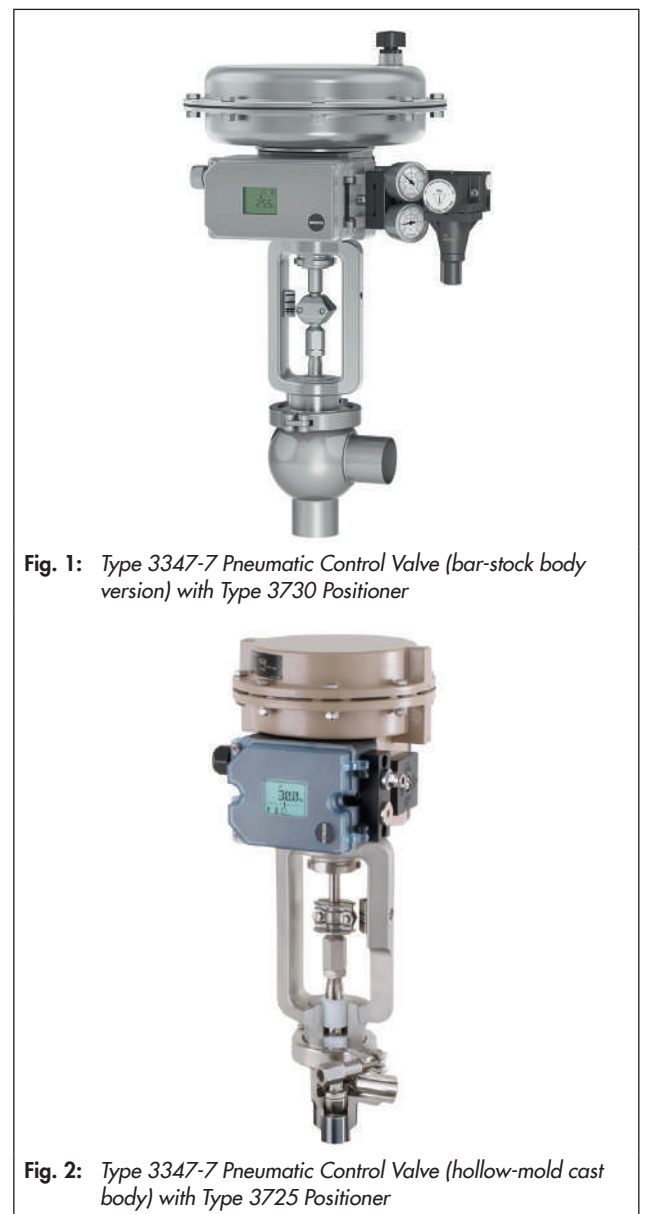
The valves can be equipped with different accessories, directly attached positioners or positioners, solenoid valves and limit switches for attachment according to IEC 60534-6 and NAMUR recommendation (► T 8350).

#### Versions

**Bar-stock body version** (Fig. 1) · DN 15 to 125 (NPS ½ to 5)

- The 3-A approval is only available in combination with specially approved devices:
  - Type 3277 Pneumatic Actuator
  - Type 3730 Positioner
  - Type 3776 Limit Switch
  - Type 4708 Pressure Reducing Valve
  - Type 3963 or Type 3967 Solenoid Valve

**Hollow-mold cast body** (Fig. 2) · DN 25 to 100 (NPS 1 to 4)



**Fig. 1:** Type 3347-7 Pneumatic Control Valve (bar-stock body version) with Type 3730 Positioner

**Fig. 2:** Type 3347-7 Pneumatic Control Valve (hollow-mold cast body) with Type 3725 Positioner

### Further versions

- **Polished valve body** (internal and/or external surfaces)
- **Threaded couplings** according to DIN 11887 (11851), SMS or IDF
- **Clamp connection**, ISO 2852-2, DIN 32676, BS 4825 or JIS G 3447/3459
- Valve plug with **PEEK soft seal** (seat bore 6 and larger)
- **V-port plug** (seat bore 6 and higher)
- **V-port plug with PEEK soft seal** (seat bore 12 and larger)
- **Steam line connection**
- **Body material 1.4435**, delta ferrite content  $\leq 1$  % for body and  $\leq 3$  % for weld seams
  - Standard for micro-flow valves
  - Optional for version with bar-stock body
- High-pressure version with **bolted bonnet** in PN 40  
Higher pressure ratings on request
- **Heating jacket** · Details on request
- Bonnet with **anti-crystallizing seal** (Fig. 6)

### Principle of operation (Fig. 3 to Fig. 6)

The process medium flows through the valve in the direction indicated by the arrow in the flow-to-open direction.

Fig. 3 shows the PTFE-guided version. A body and stem PTFE seal (5.2) is used to seal the plug stem in the body. Fig. 4 shows the PEEK-guided version, in which the plug stem is additionally guided and sealed by a bushing (5.3). The steam line connection (4.1, 4.2, 4.3) in Fig. 5 is used to sterilize the plug stem with steam or a sterile fluid.

The valve bonnet is fixed to the body by a clamp connection (5.4) to allow the entire bonnet to be easily detached from the body. The valve bonnet can optionally be bolted onto the body using four bolts for versions with pressures above 16 bar as well as with the special sealing system.

### Mounting position

The valve must be installed in the upright position with the actuator on top. A valve installed with the valve outlet facing downwards does not guarantee drainage of the pipe.

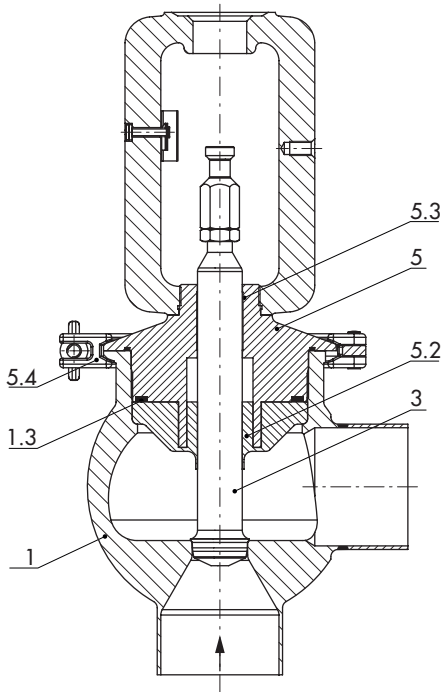
### Valve accessories

Any devices mounted on 3-A-compliant valves must also comply with 3-A regulations.

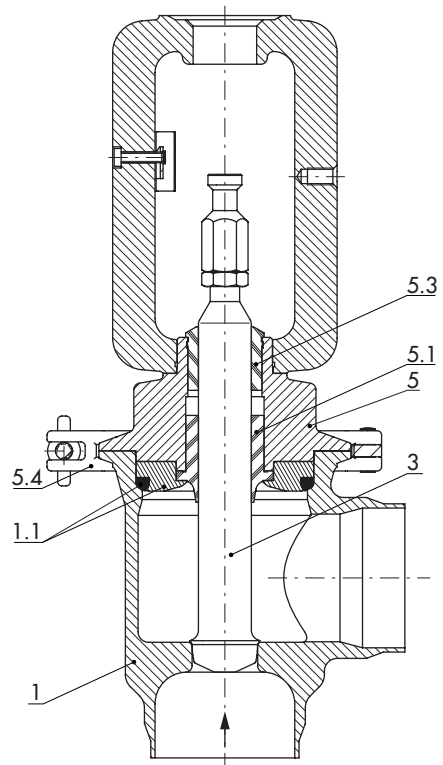
### Fail-safe position

Depending on how the springs are arranged in the pneumatic actuator (► T 8310-1), the valve has two different fail-safe positions that become effective when the supply air fails:

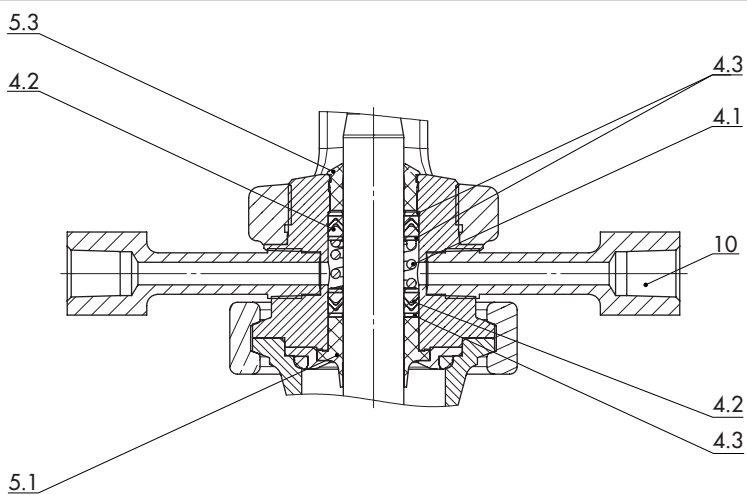
- **Actuator stem extends (fail-close):** The valve closes when the supply air fails.
- **Actuator stem retracts (fail-open):** The valve opens when the supply air fails.



**Fig. 3:** Type 3347 Valve, bar-stock body, PTFE-guided version



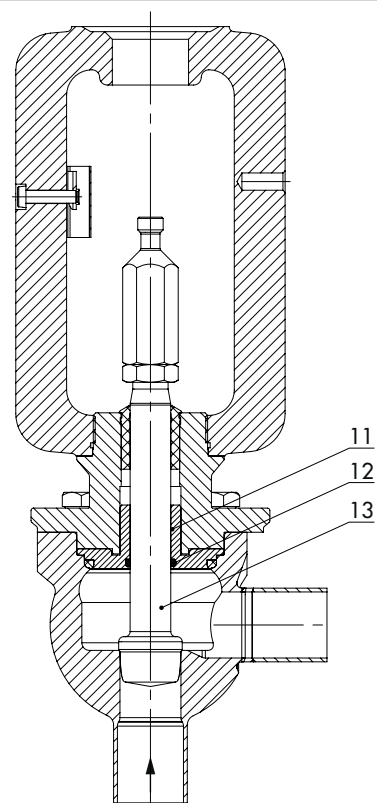
**Fig. 4:** Type 3347 Valve, hollow-mold cast body, PEEK-guided version



**Fig. 5:** Optional steam line connection

**Legend for Fig. 3 to Fig. 6**


- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| 1 Valve body                        | 5.2 Body and stem seal            |
| 1.1 Body gasket with centering ring | 5.3 Plug stem guide/guide bushing |
| 1.3 Compensating ring               | 5.4 Clamp                         |
| 3 Plug                              | 10 Nipple                         |
| 4.1 Spring                          | 11 Metal centering sleeve         |
| 4.2 PTFE V-ring packing             | 12 EPDM O ring                    |
| 4.3 Washer                          | 13 Hard-chrome-plated plug stem   |
| 5 Valve bonnet with yoke            |                                   |
| 5.1 Stem seal                       |                                   |



**Fig. 6:** Optional anti-crystallizing seal

**Table 1: Technical data**

**Table 1.1: Type 3347**

Body version <sup>1)</sup>	Cast		Bar stock				
Valve size	DN 25 to 100 (NPS 1 to 4)		DN 6 to 125 (NPS ¼ to 5)				
Maximum pressure	16 bar (230 psi) with clamped valve bonnet and with restrictions according to Table 1.2 40 bar (580 psi) with bolted valve bonnet · On request						
Connections	According to Table 1.2						
Seat-plug seal	Metal seal · Soft seal						
Characteristic	Equal percentage or linear						
Rangeability	Refer to Table 3						
Permissible medium temperature (restrictions according to Table 1.2)	0 to 150 °C (32 to 300 °F)						
Leakage class according to IEC 60534-4	Metal seal	IV					
	Soft seal	VI					
Surface finish	R <sub>a</sub> (µm)	0.2	0.4	0.6	0.8	1.6	
	Standard	–	–	–	•	–	
	Internal	Mechanical polishing	• (high-gloss finish)	• (high-gloss finish)	•	–	–
		Mechanical and electrolytic polishing	–	• (satin finish)	• (satin finish)	•	–
	External	Standard	–	–	–	• (bar stock body)	• (hollow-mold cast body)
		Mechanical polishing	–	• (high-gloss finish)	•	–	–
		Mechanical and electrolytic polishing	–	• (satin finish)	• (satin finish)	•	–
	Certificates	CFR Title 21 FDA Regulation (EC) No. 1935/2004 Regulation (EU) No. 10/2011 Regulation (EC) No. 2023/2006 3-A approval, standard 53-06 <sup>3)</sup> EHEDG <sup>3)</sup> USP-VI 121 °C <sup>2)</sup> ADI free					
Compliance							

<sup>1)</sup> Suitable for Group 2 fluids according to European Pressure Equipment Directive 2014/68/EU  
<sup>2)</sup> Only for metal-seated plug with body and stem seal (see Fig. 3)  
<sup>3)</sup> Certification not available for all versions. Contact SAMSON for more information.

**Table 1.2: End connections, maximum pressures and 3-A conformity**

Connection	Standard	Valve sizes DN/NPS	Max. operating pressure in bar or psi at a medium temperature of		3-A conformity	
			0 to 20 °C (32 to 68 °F)	150 °C (300 °F)		
Welding ends	DIN 11866, Series A	DN 15 to 125	16 bar		14 bar	•
	DIN 11866, Series B	OD 10.2 to 139.7	16 bar		14 bar	•
	DIN 11866, Series C; ASME BPE	NPS ¼ to 4	230 psi		175 psi	•
	ISO 2037	DN 10 to 100	16 bar		14 bar	•
	JIS G 3447	NPS 1 to 4	16 bar		14 bar	•
	JIS G 3459	NPS ⅛ to 5	16 bar		14 bar	•
Threaded couplings	DIN 11864-1 Form A Series A and DIN 11887 Series 1	DN 10 to 100	16 bar		14 bar	•
	DIN 11864-1 Form A, Series B	OD 13.5 to 88.9	16 bar		14 bar	•
	DIN 11864-1 Form A, Series C	NPS ½ to 4	230 psi		175 psi	•
	DIN 11887 connection A, Series 1	DN 10 to 125	16 bar		14 bar	•
	ISO 2853 (IDF)	NPS 1 to 4	90 psi		68 psi	•
	SMS 1146	DN 25 to 100	6 bar		5.5 bar	•
Clamp connections	DIN 11864-3 Form A, Series A	DN 10 to 100	16 bar		14 bar	•
	DIN 11864-3 Form A, Series B	OD 13.5 to 88.9	16 bar		14 bar	•
	DIN 11864-3 Form A, Series C	NPS ½ to 4	230 psi		175 psi	•
	DIN 32676, Series A	DN 6 to 125	DN 6 to 50:	16 bar	14 bar	•
			DN 65 to 125:	10 bar	9 bar	
	DIN 32676 Series B	OD 10.2 to 139.7	NPS 10.2 to 60.3:	16 bar	14 bar	•
			NPS 72.1 to 139.7:	10 bar	9 bar	
	DIN 32676 Series C	NPS ¼ to 4	NPS ¼ to 2:	230 psi	175 psi	•
			NPS 2½ to 4:	150 psi	114 psi	
	ISO 2852	DN 10 to 125	DN 10 to 50:	16 bar	14 bar	•
			DN 65 to 125:	10 bar	9 bar	
	ASME BPE	NPS ¼ to 4	NPS ¼ to 2:	230 psi	175 psi	•
NPS 2½ to 4:			150 psi	114 psi		
BS 4825 Part 3	NPS 1 to 4	NPS 1 to 2:	16 bar	14 bar	•	
		NPS 2½ to 4:	14 bar	9 bar		
OSS for pipes acc. to JIS G 3447	NPS 1 to 4	NPS 1 to 2:	230 psi	175 psi	•	
		NPS 2½ to 4:	150 psi	114 psi		
OSS for pipes acc. to JIS G 3459	NPS ⅛ to 5	NPS ⅛ to 2:	230 psi	175 psi	•	
		NPS 2½ to 5:	150 psi	114 psi		
Flanges with smooth raised face, however with R <sub>a</sub> ≤ 0.8	DIN 11864-2 Form A, Series A	DN 10 to 125	16 bar		14 bar	•
	DIN 11864-2 Form A, Series B	OD 13.5 to 114.3	16 bar		14 bar	•
	DIN 11864-2 Form A, Series C	NPS ½ to 4	230 psi		175 psi	•

**Table 2: Materials**

		DIN	ANSI
Body version with lathed seat	Hollow-mold cast	Cast stainless steel 1.4409	CF3M
	Bar stock	1.4404 <sup>1)</sup>	316L <sup>1)</sup>
Upper section		1.4404 <sup>1)</sup>	316L <sup>1)</sup>
Plug		1.4404 <sup>1)</sup>	316L <sup>1)</sup>
Centering ring		1.4404 <sup>1)</sup>	316L <sup>1)</sup>
Clamp		1.4306	304L
Body and stem seal		Pure PTFE/pure PEEK	
Guide bushing		Pure PTFE for DN 50 (NPS 2) and smaller · PTFE-jacketed stainless steel for DN 65 (NPS 2½) and larger	

<sup>1)</sup> Other materials available on request

**Table 3:  $K_{VS}$  coefficients and associated nominal sizes****Table 3.1: Standard version**

$K_{VS}$	0.4	0.63	1.0	1.6	2.5	4	6.3	10	16	25	40	60	80	100	160	200
$C_V$	0.5	0.75	1.2	2	3	5	7.5	12	20	30	47	70	95	120	190	240
Rangeability	50:1		25:1 <sup>1)</sup> 50:1	50:1		25:1 <sup>1)</sup> 50:1	50:1									
Seat Ø	mm	6	6	12	12	24	31	38	48	63	80	100	110			
Travel	mm	15											30			
DN	NPS															
15	½	•	•	•	•	•	•									
20	¾	•	•	•	•	•	•									
25	1	•	•	•	•	•	•	•								
32	1¼			•	•	•	•	•	•							
40	1½			•	•	•	•	•	•	•						
50	2				•	•	•	•	•	•	•					
65	2½							•	•	•	•	•				
80	3								•	•	•	•	•			
100	4										•	•	•	•	•	
125	5													•	•	•

<sup>1)</sup> For version with V-port plug

**Table 3.2: Micro-flow valve**

$K_{VS}$	0.01	0.016	0.025	0.04	0.063	0.1	0.16	0.25
$C_V$	0.012	0.02	0.03	0.05	0.075	0.12	0.21	0.3
Rangeability	15:1	20:1	25:1	35:1	45:1	50:1		
Seat Ø	mm	3						
Travel	mm	7.5						
DN	NPS							
6	—	•	•	•	•	•	•	•
8	¼	•	•	•	•	•	•	•
10	⅜	•	•	•	•	•	•	•
15	½	•	•	•	•	•	•	•

**Table 4:** Operating ranges and required supply pressures for metal and soft-seated plugs

**Note:** We recommend using a V-port plug in valve sizes DN 40 to 65 for pressures higher than 10 bar as well in valve sizes DN 80 to 125 for pressures higher than 6 bar. A V-port plug is not required for nominal sizes smaller than DN 40.

**Table 4.1:** Fail-close valve · Valve closed with 0 bar signal pressure

The required supply pressure is 0.2 bar higher than the upper operating range value.

Valve size		K <sub>vs</sub>	Actuator area in cm <sup>2</sup>	Operating range in bar at Δp (valve closed)			
DN	NPS			5 bar	10 bar	16 bar	
15 20 25	½ ¾ 1	0.4/0.63/1.0	120	0.4 to 2.0	0.4 to 2.0	0.4 to 2.0	
			175v2	0.2 to 1.0	0.2 to 1.0	0.2 to 1.0	
			240	0.2 to 1.0	0.2 to 1.0	0.2 to 1.0	
		1	1.6/4	120	0.4 to 2.0	0.4 to 2.0	1.4 to 2.3
				175v2	0.4 to 1.2	0.4 to 1.2	0.4 to 1.2
				240	0.2 to 1.0	0.2 to 1.0	0.3 to 1.1
25	1	6.3/10	120	1.4 to 2.3	1.4 to 2.3	1.4 to 2.3	
			175v2	0.8 to 2.4	0.8 to 2.4	0.8 to 2.4	
			240	0.3 to 1.1	0.4 to 2.0	0.6 to 2.2	
32 40	1¼ 1½	16	120	1.4 to 2.3	1.4 to 2.3	2.1 to 3.3	
			175v2	0.8 to 2.4	0.8 to 2.4	1.3 to 2.9	
			240	0.4 to 2.0	0.6 to 2.2	0.9 to 3.3	
40	1½	25	120	1.4 to 2.3	2.1 to 3.3	–	
			175v2	0.8 to 2.4	1.3 to 2.9	1.7 to 3.3	
			240	0.6 to 2.2	0.9 to 3.3	–	
			350	0.4 to 1.2	0.8 to 2.4	0.8 to 2.4	
50	2	40	175v2	1.3 to 2.9	1.7 to 3.3	–	
			240	0.9 to 3.3	–	–	
			350	0.8 to 2.4	0.8 to 2.4	1.4 to 2.3	
65	2½	60	350	0.8 to 2.4	1.4 to 2.3	2.1 to 3.3	
80	3	80	350	1.4 to 2.3	2.1 to 3.3	1.6 to 2.4 (700 cm <sup>2</sup> )	
			355v2	1.6 to 2.4	2.35 to 2.95	2.95 to 3.65	
100	4	100	700	0.8 to 2.4	1.4 to 2.3	2.1 to 3.3	
		160		1.4 to 2.3	2.1 to 3.3	2.6 to 4.3	
		100	750v2	0.8 to 2.4	1.4 to 2.4	1.4 to 2.4	
		160		0.8 to 2.4	1.4 to 2.4	2.1 to 3.8	
125	5	200	700	1.4 to 2.3	2.1 to 3.3	2.6 to 4.3	
			750v2	1.4 to 2.4	1.65 to 2.65	2.5 to 4.2	

**Table 4.2:** Comparison table: operating ranges and bench ranges for "actuator stem extends" fail-safe position

Actuator area in cm <sup>2</sup>	Travel in mm	Operating range in bar (bench range, if different)				
120	15	0.4 to 2.0	1.4 to 2.3	2.1 to 3.3		
175v2	15	0.4 to 1.2 (0.2 to 1.0)	0.8 to 2.4 (0.4 to 2.0)	1.7 to 3.3 (1.3 to 2.9)		
240	15	0.3 to 1.1 (0.2 to 1.0)	0.6 to 2.2 (0.4 to 2.0)	0.9 to 3.3 (0.6 to 3.0)		
350	15	0.4 to 1.2 (0.2 to 1.0)	0.8 to 2.4 (0.4 to 2.0)	1.4 to 2.3	1.6 to 2.4	2.1 to 3.3
355v2	15		1.6 to 2.4 (0.4 to 2.0)	2.35 to 2.95 (1.4 to 2.6)	2.95 to 3.65 (1.9 to 3.3)	
700	30		0.8 to 2.4 (0.4 to 2.0)	1.4 to 2.3	2.1 to 3.3	2.6 to 4.3
750v2	30		0.8 to 2.4 (0.4 to 2.0)		1.65 to 2.65 (1.4 to 2.4)	2.5 to 4.2 (2.1 to 3.8)

**Table 4.3:** Fail-open valve · Valve closed with the required supply pressure

Valve size		K <sub>VS</sub>	Actuator area in cm <sup>2</sup>	Operating range	Required supply pressure in bar at Δp		
DN	NPS				5 bar	10 bar	16 bar
15 20 25	½ ¾ 1	0.4/0.63/1.0	120	0.4 to 2.0	2.4	2.4	2.4
			175v2	0.2 to 1.0	1.2	1.2	1.2
			240	0.2 to 1.0	1.2	–	1.2
		1.6/4	120	0.4 to 2.0	2.4	2.4	3.4
			175v2	0.2 to 1.0	1.4	1.4	1.4
			240	0.2 to 1.0	1.4	1.4	1.4
25	1	6.3/10	120	0.4 to 2.0	3.4	3.4	3.4
			175v2	0.2 to 1.0	1.5	1.6	1.8
			240	0.2 to 1.0	1.4	1.4	1.6
32 40	1¼ 1½	16	120	0.4 to 2.0	3.4	3.4	4.1
			175v2	0.2 to 1.0	1.6	1.8	2.1
			240	0.2 to 1.0	1.4	1.6	1.9
40	1½	25	120	0.4 to 2.0	3.4	4.1	–
			175v2	0.2 to 1.0	1.8	2.1	2.5
			240	0.2 to 1.0	1.6	1.9	–
			350		1.4	1.8	1.8
50	2	40	175v2	0.2 to 1.0	2.0	2.6	3.3
			240	0.2 to 1.0	1.9	–	–
			350		1.8	1.8	2.4
65	2½	60	350	0.2 to 1.0	1.8	2.4	3.1
80	3	80	350	0.2 to 1.0	2.4	3.1	4
			355v2	0.6 to 1.0	2.1	2.9	3.8
100	4	100	355v2	0.2 to 1.0	2.1	2.9	3.8
				0.2 to 1.0	2.6	3.8	5.3
		160	700	0.2 to 1.0	1.7	2.1	2.5
				0.2 to 1.0	2.4	3.1	3.6
		100	750v2	0.2 to 1.0	1.6	1.9	2.4
				0.2 to 1.0	1.8	2.4	3.1
125	5	200	355v2	0.2 to 1.0	2.9	4.4	–
			700	0.2 to 1.0	2.4	3.1	3.6
			750v2	0.2 to 1.0	1.9	2.6	3.5

**Table 5:** Operating ranges and required supply pressures for micro-flow valve (DN 6 to 15/K<sub>VS</sub> 0.01 to 0.25)

**Table 5.1:** Micro-flow valve with "actuator stem extends" fail-safe position

Actuator area in cm <sup>2</sup>	Travel in mm	Operating range in bar at Δp (valve closed)		
		5 bar	10 bar	16 bar
120	7.5	0.4 to 0.8	0.4 to 0.8	0.4 to 0.8

**Table 5.2:** Micro-flow valve with "actuator stem retracts" fail-safe position

Actuator area in cm <sup>2</sup>	Travel in mm	Operating range	Required supply pressure in bar at Δp		
			5 bar	10 bar	16 bar
120	7.5	0.4 to 0.8	1.2	1.2	1.2



**Table 6:** Dimensions of end connections for DIN version · Dimensions in mm**Table 6.1:** Type 3347 Valve with welding ends

Face-to-face dimensions of special versions on request

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
DIN 11866, Series A	L <sup>1)</sup> cast	–	–	–	–	–	50 <sup>2)</sup>	56	67	72	85	98	110	–
	L <sup>1)</sup> bar stock	–	–	–	70	70	70	70	70	85	105	105	130	130
	L bar stock, micro-flow valve	50	50	50	50	–	–	–	–	–	–	–	–	–
	Ød2	8	10	13	19	23	29	35	41	53	70	85	104	129
	t	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2

<sup>1)</sup> Dimensions are not standardized<sup>2)</sup> L according to DIN 11852**Table 6.2:** Type 3347 Valve with clamp connections

Face-to-face dimensions of special versions on request

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
DIN 11864-3 Form A, Series A	L3 cast	–	–	–	–	–	60.3	66	70	88.9	88.9	95.3	114.3	–
	L3 bar stock	–	–	–	60.3	60.3	60.3	60.3	70	88.9	88.9	95.3	114.3	–
	L3 bar stock, micro-flow valve	–	–	50	50	–	–	–	–	–	–	–	–	–
	ØC3	–	–	34	34	50.5	50.5	50.5	64	77.5	91	106	130	–
	Ød1	–	–	10	16	20	26	32	38	50	66	81	100	–
DIN 32676, Series A	L3 cast	–	–	–	–	–	60.3	66	70	88.9	88.9	95.3	114.3	–
	L3 bar stock	–	–	–	60.3	60.3	60.3	60.3	70	88.9	88.9	95.3	114.3	130
	L3 bar stock, micro-flow valve	50	50	50	50	–	–	–	–	–	–	–	–	–
	ØC3	25	25	34	34	34	50.5	50.5	50.5	64	91	106	119	155
	Ød1	6	8	10	16	20	26	32	38	50	66	81	100	125
ISO 2852	L3 cast	–	–	–	–	–	60.3	66	70	88.9	88.9	95.3	114.3	–
	L3 bar stock	–	–	–	60.3	60.3	60.3	60.3	70	88.9	88.9	95.3	114.3	130
	L3 bar stock, micro-flow valve	–	–	50	50	–	–	–	–	–	–	–	–	–
	ØC3	–	–	34	34	34	50.5	50.5	50.5	64	77.5	91	119	155
	Ød1	–	–	10	15.2	19.3	22.6	31.3	35.6	48.6	60.3	72.9	97.6	135.7

**Table 6.3:** Type 3347 Valve with threaded couplings

Face-to-face dimensions of special versions on request

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
DIN 11864-1 Form A, Series A and DIN 11887 Series 1	L1 cast	–	–	–	–	–	64	70	80	85	100	115	130	–
	L1 bar stock	–	–	–	64	64	64	70	80	85	100	115	130	–
	L1 bar stock, mi- cro-flow valve	–	–	50	50	–	–	–	–	–	–	–	–	–
	ØC1	–	–	RD 28 x 1/8	RD 34 x 1/8	RD 44 x 1/8	RD 52 x 1/8	RD 58 x 1/8	RD 65 x 1/8	RD 78 x 1/8	RD 95 x 1/8	RD 110 x 1/4	RD 130 x 1/4	–
	Ød1	–	–	10	16	20	26	32	38	50	66	81	100	–
ISO 2853 (IDF)	L1 cast	–	–	–	–	–	55	66	70	82	105	110	150	–
	L1 bar stock	–	–	–	–	–	64	70	80	85	100	115	130	–
	ØC1	–	–	–	–	–	37.1 x 1/8	45.9 x 1/8	50.6 x 1/8	64.1 x 1/8	77.6 x 1/8	91.1 x 1/8	–	–
SMS 1146	Ød1	–	–	–	–	–	22.6	31.3	35.6	48.6	60.3	72.9	–	–
	L1 cast	–	–	–	–	–	55	66	70	82	105	110	150	–
	L1 bar stock	–	–	–	–	–	55	66	70	82	105	110	150	–
	ØC1	–	–	–	–	–	RD 40 x 1/8	RD 48 x 1/8	RD 60 x 1/8	RD 70 x 1/8	RD 85 x 1/8	RD 98 x 1/8	RD 125 x 1/4	–
Ød1	–	–	–	–	–	22.6	29.6	35.6	48.6	60.3	72.9	100	–	

**Table 6.4: Type 3347 Valve with flanges**

Face-to-face dimensions of special versions on request

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
DIN 11864-2 Form A, Series A	L <sup>1)</sup> cast	-	-	-	-	-	100	105	115	125	145	155	175	-
	L <sup>1)</sup> bar stock	-	-	-	90	95	100	105	115	125	145	155	175	200
	L <sup>1)</sup> bar stock, micro-flow valve	-	-	90	90	-	-	-	-	-	-	-	-	-
	Ød1	-	-	10	16	20	26	32	38	50	66	81	100	125

**Table 7: Dimensions of end connections for OD version · Dimensions in mm****Table 7.1: Type 3347 Valve with welding ends**

Face-to-face dimensions of special versions on request

Valve	OD	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7
DIN 11866 Series B	L <sup>1)</sup> cast	-	-	-	-	-	55	66	70	82	105	110	150	-
	L <sup>1)</sup> bar stock	-	-	-	70	70	70	70	70	85	105	105	130	130
	L bar stock, micro-flow valve	50	50	50	50	-	-	-	-	-	-	-	-	-
	Ød2	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7
	t	1.6	1.6	1.6	1.6	1.6	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.6
ISO 2037	L <sup>1)</sup> cast	-	-	-	-	-	55	66	70	82	105	110	150	-
	L <sup>1)</sup> bar stock	-	-	-	-	-	70	70	70	85	105	105	130	130
	L bar stock, micro-flow valve	-	-	50	50	-	-	-	-	-	-	-	-	-
	Ød2	-	-	12	17.2	21.3	25	33.7	38	51	63.5	76.1	101.6	139.7
	t	-	-	1	1	1	1.2	1.2	1.2	1.2	1.6	1.6	2	2

<sup>1)</sup> Dimensions are not standardized**Table 7.2: Type 3347 Valve with clamp connections**

Face-to-face dimensions of special versions on request

Valve	OD	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7
DIN 11864-3 Form A, Series B	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	-	-
	L3 bar stock	-	-	-	60.3	60.3	60.3	60.3	70	88.9	88.9	95.3	-	-
	L3 bar stock, micro-flow valve	-	-	50	50	-	-	-	-	-	-	-	-	-
	ØC3	-	-	34	34	50.5	50.5	64	64	91	106	119	-	-
	Ød1	-	-	10.3	18.1	23.7	29.7	38.4	44.3	56.3	72.1	84.3	-	-
DIN 32676 Series B	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	114.3	-
	L3 bar stock	-	-	60.3	60.3	60.3	60.3	60.3	70	88.9	88.9	95.3	114.3	130
	L3 bar stock, micro-flow valve	50	50	50	50	-	-	-	-	-	-	-	-	-
	ØC3	25	25	25	50.5	50.5	50.5	64	64	77.5	91	106	130	155
	Ød1	7.0	10.3	14.0	18.1	23.7	29.7	38.4	44.3	56.3	72.1	84.3	109.7	134.5
OSS for pipes acc. to JIS G 3459	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	-	-
	L3 bar stock	-	-	-	-	-	60.3	60.3	70	88.9	88.9	95.3	-	-
	ØC3	-	-	-	-	-	50.5	50.5	50.5	64	77.5	91	119	-
	Ød1	-	-	-	-	-	30.7	39.4	45.3	57.2	72.1	84.9	110.1	-

**Table 7.3: Type 3347 Valve with threaded couplings**

Face-to-face dimensions of special versions on request

Valve	OD	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7
DIN 11864-1 Form A, Series B	L1 cast	–	–	–	–	–	64	70	80	85	100	115	130	–
	L1 bar stock	–	–	–	64	64	64	70	80	85	100	115	130	–
	L1 bar stock, micro-flow valve	–	–	–	50	–	–	–	–	–	–	–	–	–
	ØC1	–	–	–	RD 44 x 1/6	RD 52 x 1/6	RD 58 x 1/6	RD 65 x 1/6	RD 78 x 1/6	RD 95 x 1/6	RD 110 x 1/4	RD 130 x 1/4	–	–
	Ød1	–	–	–	18.1	23.7	29.7	38.4	44.3	56.3	72.1	84.3	–	–

**Table 7.4: Type 3347 Valve with flanges**

Face-to-face dimensions of special versions on request

Valve	OD	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7
DIN 11864-2 Form A, Series B	L4 cast	–	–	–	–	–	100	105	115	125	145	155	175	–
	L4 bar stock	–	–	–	90	95	100	105	115	125	145	155	175	–
	L4 bar stock, micro-flow valve	–	90	90	90	–	–	–	–	–	–	–	–	–
	Ød1	–	10.3	14.0	18.1	23.7	29.7	38.4	44.3	56.3	72.1	84.3	109.7	–

**Table 8: Dimensions of end connections for ANSI version · Dimensions in mm****Table 8.1: Type 3347 Valve with welding ends**

Face-to-face dimensions of special versions on request

Valve	NPS	1/4	–	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5
DIN 11866 Series C ASME BPE	L <sup>1)</sup> cast	–	–	–	–	–	55	–	70	82	105	110	150	–
	L <sup>1)</sup> bar stock	–	–	–	70	70	70	–	70	85	105	105	130	130
	L bar stock, micro-flow valve	35	–	50	50	–	–	–	–	–	–	–	–	–
	Ød2	6.35	–	9.53	12.7	19.05	25.4	–	38.1	50.8	63.5	76.2	101.6	–
	t	0.89	–	0.89	1.65	1.65	1.65	–	1.65	1.65	1.65	1.65	2.11	–
JIS G 3447	L <sup>1)</sup> cast	–	–	–	–	–	55	66	70	82	105	110	150	–
	L <sup>1)</sup> bar stock	–	–	–	–	–	70	70	70	85	105	105	130	–
	L bar stock, micro-flow valve	–	–	–	–	–	–	–	–	–	–	–	–	–
	Ød2	–	–	–	–	–	25.4	31.8	38.1	50.8	63.5	76.3	101.6	–
	t	–	–	–	–	–	1.2	1.2	1.2	1.5	2	2	2	–
JIS G 3459	L <sup>1)</sup> cast	–	–	–	–	–	55	66	70	82	105	110	150	–
	L <sup>1)</sup> bar stock	–	–	–	70	70	70	70	70	85	105	105	130	130
	L bar stock, micro-flow valve	50	50	50	50	–	–	–	–	–	–	–	–	–
	Ød2	10.5	13.8	17.3	21.7	27.2	34	42.7	48.6	60.5	76.3	89.1	114.3	139.8
	t	1	1.2	1.2	1.65	1.65	1.65	1.65	1.65	1.65	2.1	2.1	2.1	2.8

<sup>1)</sup> Dimensions are not standardized

**Table 8.2: Type 3347 Valve with clamp connections**

Face-to-face dimensions of special versions on request

Valve	NPS	1/4	-	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5
DIN 11864-3 Form A, Series C	L3 cast	-	-	-	-	-	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock	-	-	-	60.3	60.3	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock, micro-flow valve	-	-	-	50	-	-	-	-	-	-	-	-	-
	ØC3	-	-	-	34	34	50.5	-	64	77.5	91	106	130	-
	Ød1	-	-	-	9.4	15.75	22.1	-	34.8	47.5	60.2	72.9	97.38	-
DIN 32676 Series C	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	114.3	-
	L3 bar stock	-	-	-	60.3	60.3	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock, micro-flow valve	35	-	50	50	-	-	-	-	-	-	-	-	-
	ØC3	25	-	25	25	25	50.5	-	50.5	64	77.5	91	119	-
	Ød1	4.57	-	7.75	9.4	15.75	22.1	-	34.8	47.5	60.2	72.9	97.38	-
ASME BPE	L3 cast	-	-	-	-	-	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock	-	-	-	60.3	60.3	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock, micro-flow valve	35	-	50	50	-	-	-	-	-	-	-	-	-
	ØC3	25	-	25	25	25	50.5	-	50.5	64	77.5	91	119	-
	Ød1	4.57	-	7.75	9.4	15.75	22.1	-	34.8	47.5	60.2	72.9	97.38	-
BS 4825 Part 3	L3 cast	-	-	-	-	-	60.3	-	70	88.9	88.9	95.3	114.3	-
	L3 bar stock	-	-	-	-	-	60.3	-	70	88.9	88.9	95.3	114.3	130
	ØC3	-	-	-	-	-	50.5	-	50.5	64	77.5	91	119	155
	Ød1	-	-	-	-	-	22.2	-	34.9	47.6	60.3	73	97.6	135.7
OSS for pipes acc. to JIS G 3447	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	-	-
	L3 bar stock	-	-	-	-	-	60.3	60.3	70	88.9	88.9	95.3	-	-
	ØC3	-	-	-	-	-	50.5	50.5	50.5	64	77.5	91	119	-
	Ød1	-	-	-	-	-	23	29.4	35.7	47.8	59.5	72.3	97.6	-
OSS for pipes acc. to JIS G 3459	L3 cast	-	-	-	-	-	60.3	66	70	88.9	88.9	95.3	-	-
	L3 bar stock	-	-	-	-	-	60.3	60.3	70	88.9	88.9	95.3	-	-
	ØC3	-	-	-	-	-	50.5	50.5	50.5	64	77.5	91	119	-
	Ød1	-	-	-	-	-	30.7	39.4	45.3	57.2	72.1	84.9	110.1	-

**Table 8.3: Type 3347 Valve with threaded couplings**

Face-to-face dimensions of special versions on request

Valve	NPS	1/4	-	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5
DIN 11864-1 Form A, Series C	L1 cast	-	-	-	-	-	64	-	80	85	100	115	130	-
	L1 bar stock	-	-	-	-	-	64	-	80	85	100	115	130	-
	ØC1	-	-	-	-	-	RD 52 x 1/6	-	RD 65 x 1/6	RD 78 x 1/6	RD 95 x 1/6	RD 110 x 1/4	RD 130 x 1/4	-
	Ød1	-	-	-	-	-	22.1	-	34.8	47.5	60.2	72.9	97.38	-

**Table 8.4: Type 3347 Valve with flanges**

Face-to-face dimensions of special versions on request

Valve	NPS	1/4	-	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5
DIN 11864-2 Form A, Series C	L4 cast	-	-	-	-	-	100	-	115	125	145	155	175	-
	L4 bar stock	-	-	-	90	95	100	-	115	125	145	155	175	-
	L4 bar stock, micro-flow valve	-	-	-	90	-	-	-	-	-	-	-	-	-
	Ød1	-	-	-	9.4	15.75	22.1	-	34.8	47.5	-	-	-	-

**Table 9: Types 3271 and 3277 Pneumatic Actuators**

Actuator area		cm <sup>2</sup>	120	175v2	240	350	355v2	700	750v2
Diaphragm ØD		mm	168	215	240	280	280	390	394
H <sup>1)</sup>		mm	69	78	62	82	121	199	236
H3 <sup>2)</sup>		mm	110	110	110	110	110	190	190
H5	Type 3277	mm	88	101	101	101	101	101	101
Thread	Type 3271	M30 x 1.5							
	Type 3277	M30 x 1.5							
α	Type 3271	G 1/8 (1/8 NPT)	G 1/4 (1/4 NPT)	G 1/4 (1/4 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)
α2	Type 3277	-	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8

<sup>1)</sup> Height with welded-on lifting eyelet or height of eyebolt according to DIN 580. Height of the swivel lifting hook may differ. Actuators up to 355v2 cm<sup>2</sup> without lifting eyelet

<sup>2)</sup> Minimum clearance required to remove the actuator

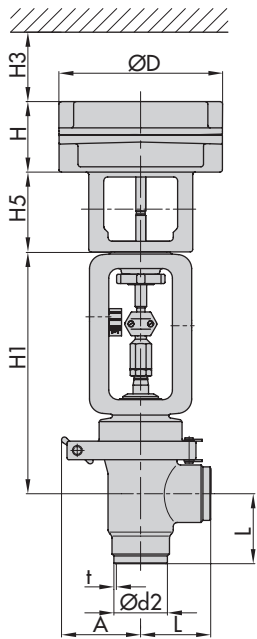
**Table 10: General dimensions and weights**

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
	NPS	-	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5
<b>Common dimensions</b>														
A	Cast	-	-	-	-	-	70	80	80	90	100	110	130	-
	Bar stock	-	-	-	80	80	80	80	80	90	110	110	130	130
Height H1		-	-	-	234	231	227	229	234	240	266	274	306	314
E (steam line connection)	Cast	-	-	-	-	-	162	164	164	164	192	203	178	-
	Bar stock	-	-	-	164	164	164	164	164	164	187	187	212	212
<b>Valve weight in kg (approx.)</b>														
With welding ends, threaded couplings, clamp connections for	Cast	-	-	-	-	-	5	5.5	6	7	11	14	19	-
	Bar stock	-	-	-	7	7	7	7.5	8	10	19	19	27	33
With flanges for body version	Cast	-	-	-	-	-	7.5	9	10	12	17	21	29	-
	Bar stock	-	-	-	8.5	9	9.5	11	12	15	25	27	37	46

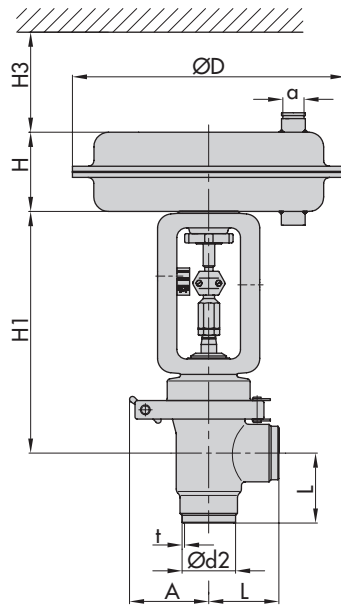
**Table 11: Weights of Type 3271 and Type 3277 Pneumatic Actuators · With and without handwheel**

Actuator		cm <sup>2</sup>	120	175v2	240	350	355v2	700	750v2
Type 3271	Without handwheel	kg	2.5	6	5	8	15	22	36
	With handwheel	kg	-	10	9	13	20	27	41
Type 3277	Without handwheel	kg	3.2	10	9	12	19	26	40
	With handwheel	kg	-	14	13	17	24	31	45

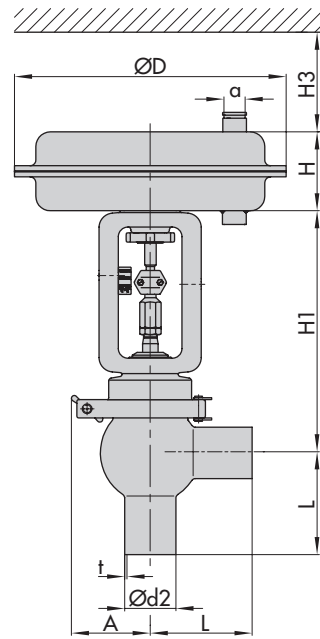
**Dimensional drawings**



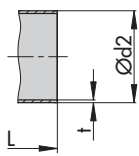
Type 3347-7 Control Valve with welding ends



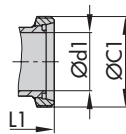
Type 3347-1 Control Valve with welding ends



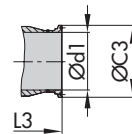
Type 3347-1 Control Valve with welding ends



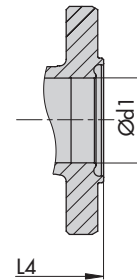
Welding end



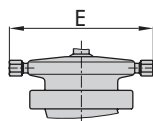
Threaded coupling



Clamp connection



Flange



Steam line connection, G 1/4 connections

## Ordering text

Pneumatic control valve	DN .../NPS .../OD ...
Materials according to	DIN/ANSI
Connections according to Table 1.2	Welding ends Threaded couplings Clamp connections Flanges
Flow coefficient	$K_{VS}$ .../ $C_V$ ...
Characteristic	Equal percentage/linear
Seat-plug seal	Metal or soft seal
Steam line connection	With/without
Body surface finish	Polished outside and/or inside $R_a$ according to Table 1.1 ff.
Actuator	Type 3271 or Type 3277 (see ► T 8310-1)
Actuator area	... cm <sup>2</sup>
Signal pressure range	... bar
Fail-safe position	Fail-close or fail-open
Additional equipment	Positioner and/or limit switch (see ► T 8350)

