DATA SHEET

T 8097 EN

Type 3347 Hygienic Angle Valve

Application

Control valve for hygienic applications in the food and beverage as well as pharmaceutical industries

Nominal size	**DN 6 to 150**	**NPS ¼ to 6**
Maximum pressure	**63 bar**	**914 psi**
Temperatures	**-10 to 150 °C**	**14 to 300 °F**



Fig. 1: *Type 3347 Valve (cast body) with Type 3277 Pneumatic Actuator and Type 3725 Positioner*

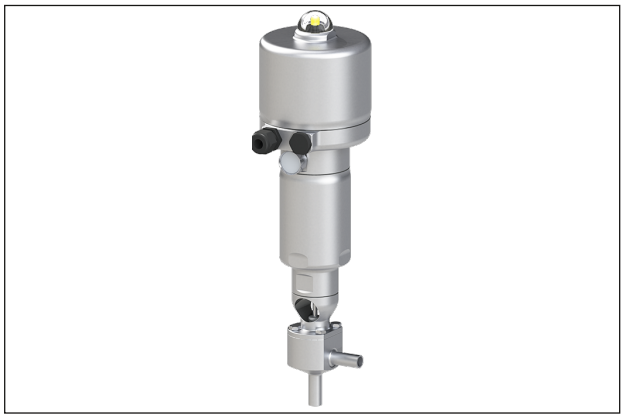


Fig. 2: *Type 3347 Micro-flow Valve with Type 3379 Piston Actuator and Type 3724 Positioner*

Type 3347 Angle Valve with

- Type 3271 Pneumatic Actuator
- Type 3277 Pneumatic Actuator for integral positioner attachment
- Type 3379 Pneumatic Piston Actuator with an optional Type 3724 Positioner
- Type 3372 Pneumatic Actuator (▶ T 8097-1)

Special features

- Valve body free of dead cavities made of stainless steel
- Wetted sealing materials comply with FDA regulations and Regulation (EC) No. 1935/2004
- Metal or soft-seated valve plug
- Easily detachable clamp connection between body and bonnet
- Suitable for cleaning-in-place (CIP) and sterilization-in-place (SIP)
- Internal surface finish (peak-to-valley height) R_a ≤0.8 µm
- Conformity with 3-A regulations with modified Type 3277 Pneumatic Actuator and approved valve accessories (see also Table 4)

The control valves can be equipped with different accessories: positioners for direct attachment or mounted positioners, solenoid valves and limit switches for attachment according to

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DIN EN 60534-6-1[1)] and NAMUR Recommendation (see Information Sheet ▶ T 8350).

The Type 3347/3379 Control Valve used in combination with the Type 3724 Positioner form a compact automated unit.

1) Accessories required. See associated actuator documentation.

Versions

- Angle valves with **welding ends**, **clamp connections**, **threaded couplings** or **flanges**
- **Cast body** or **bar stock body**
- **Three plug stem seal systems: PTFE** (for most standard applications), **PEEK** and **anti-crystallizing seal** (metal centering ring with O-ring and hardened plug stem). See Table 1.

Further versions

- **Polished valve body** (internal and/or external surfaces)
- **V-port plug** instead of a parabolic plug for better plug guidance
- **Steam barrier** for strict sealing requirements (see Fig. 7)
- Other **body materials** on request, e.g. **1.4435**
- **High-pressure version** available
- **Heating jacket** · Details on request
- **Stellite®-faced seat**
- **High-temperature version** · 160 °C (on request)

Principle of operation

See Fig. 3 to Fig. 10

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 is used to seal the plug stem in the body. Fig. 4 shows the PEEK-guided version. The plug stem is additionally guided and sealed by a bushing. Fig. 7 shows the version with steam barrier. The steam barrier 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 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.

Mounting position

SAMSON recommends installing the control valve in the upright position with the actuator on top. Other mounting positions are also possible but do not allow the pipeline to fully drain.

Fail-safe positions

Depending on how the compression springs are arranged in the pneumatic actuator, the valve has two fail-safe positions that become effective when the supply air fails:

- **Actuator stem extends:**
  The valve is closed upon air supply failure.
- **Actuator stem retracts:**
  The valve is opened upon air supply failure.

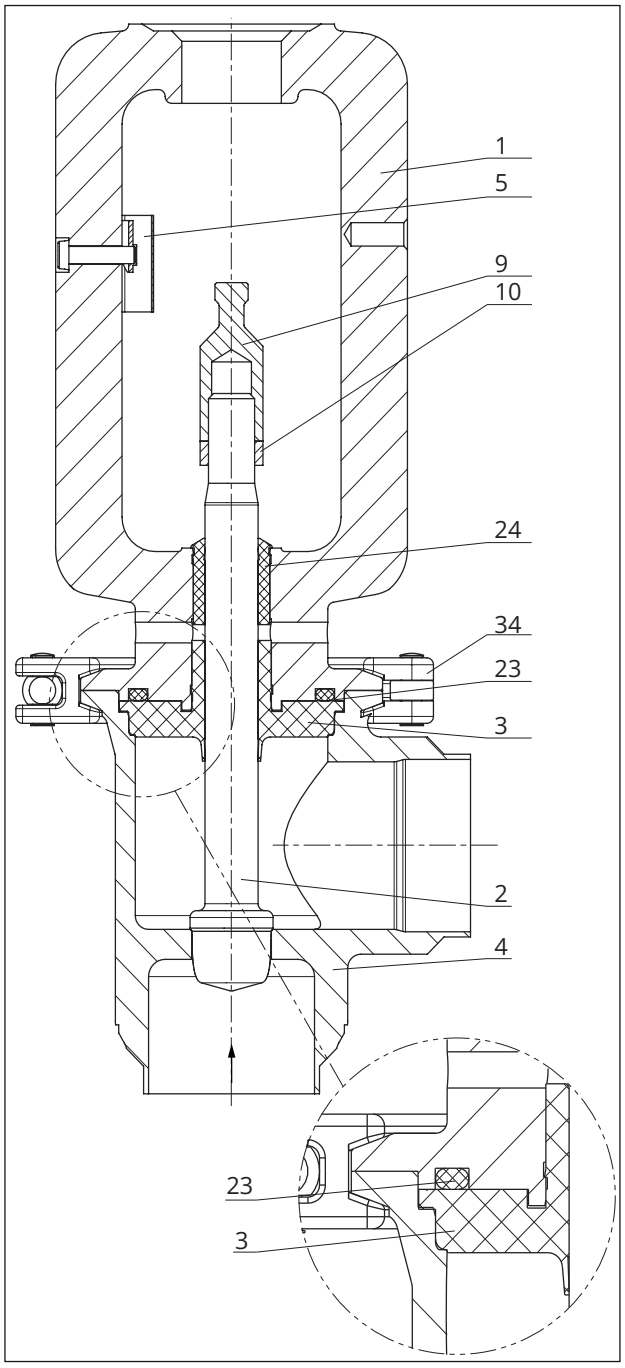


Fig. 3: *Type 3347 Valve, cast body, PTFE-guided version*

1	Yoke	9	Stem connector nut
2	Plug	10	Lock nut
3	Stem seal	23	Seal
4	Body	24	Bearing bushing/ wiper seal
5	Travel indicator scale	34	Clamp

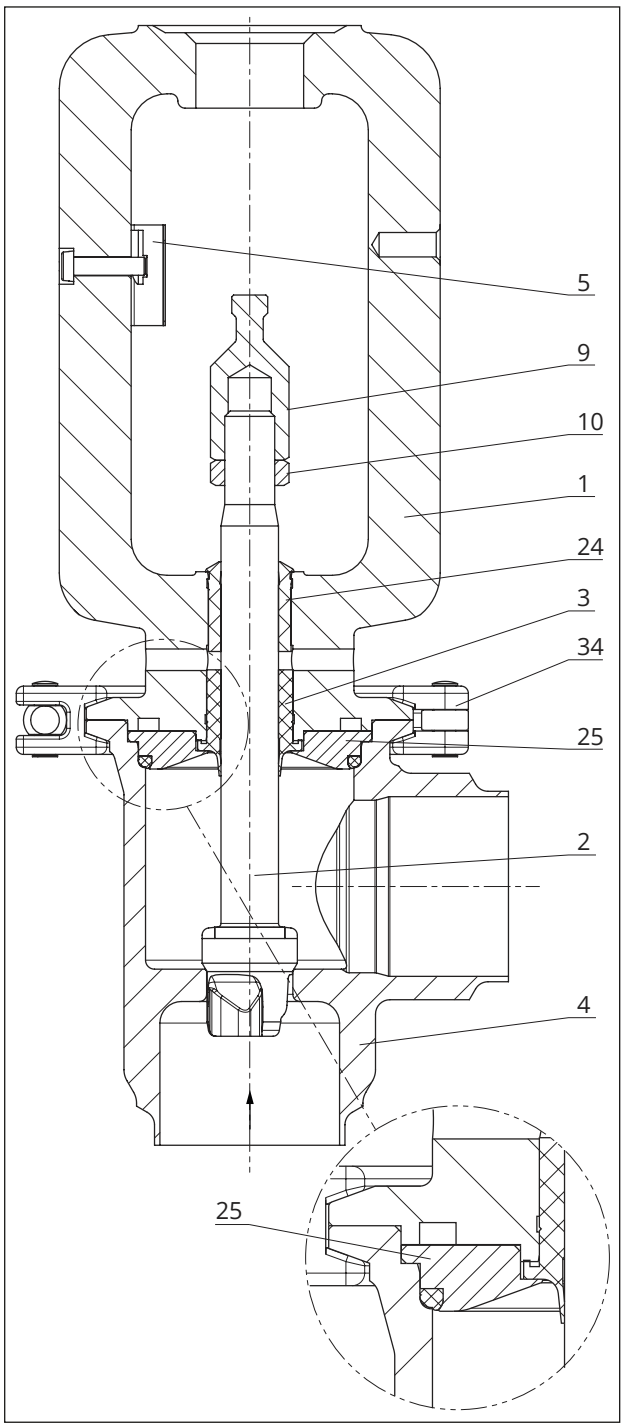


Fig. 4: *Type 3347 Valve, cast body, PEEK-guided version*

1	Yoke	9	Stem connector nut
2	Plug	10	Lock nut
3	Stem seal	24	Bearing bushing/ wiper seal
4	Body	25	Centering ring
5	Travel indicator scale	34	Clamp

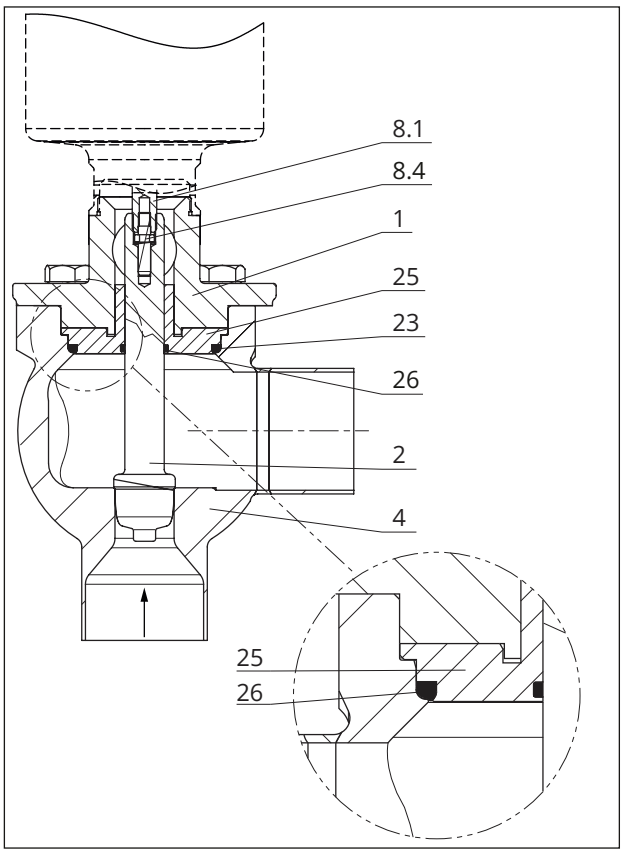


Fig. 5: *Type 3347 Valve, bar stock body, anti-crystallizing seal system*

1	Yoke	8.4	Stem connector
2	Plug	23	Seal
4	Body	25	Centering ring
8	Actuator (not shown)	26	O-ring seal
8.1	Actuator stem		

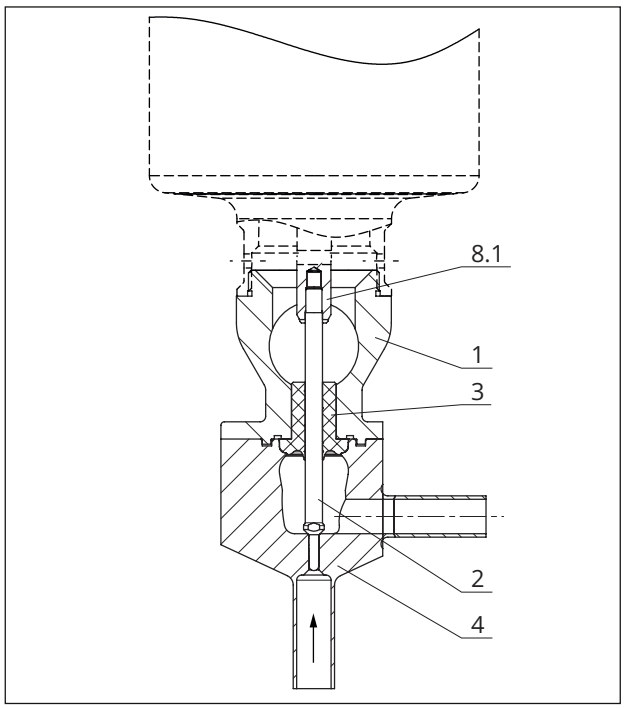


Fig. 6: *Type 3347 Valve, micro-flow valve, PTFE-guided version*

1	Yoke	4	Body
2	Plug	8	Actuator (not shown)
3	Stem seal	8.1	Actuator stem

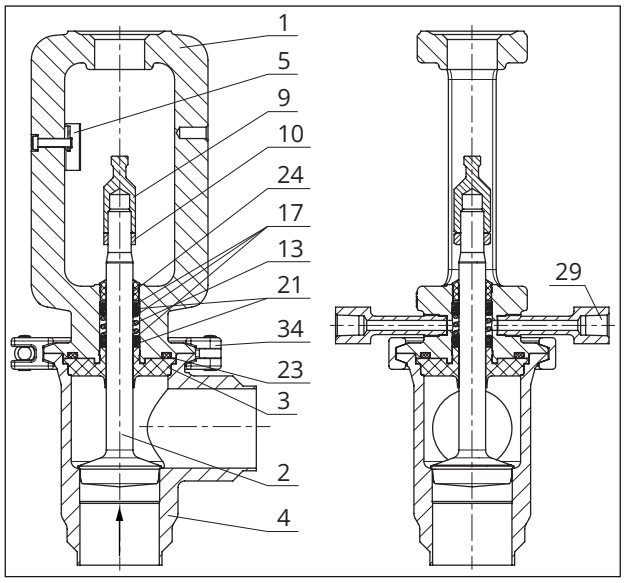


Fig. 7: *Type 3347 Valve for combination with Type 3271 Actuator, cast body with steam barrier*

1	Yoke	13	Spring
2	Plug	17	Washer
3	Stem seal	21	V-ring packing
4	Body	23	Seal
5	Travel indicator scale	24	Bearing bushing/ wiper seal
9	Stem connector nut	29	Nipples
10	Lock nut	34	Clamp

Table 1: *Overview of seal systems in detailed view*

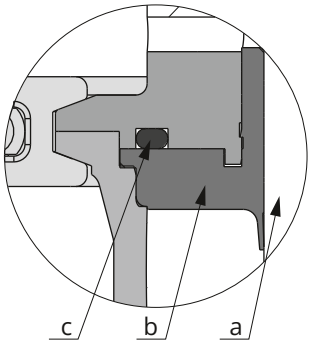


Fig. 8: *PTFE-guided version*

a Plug stem
b PTFE seal
c Seal

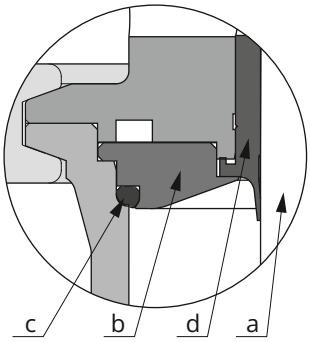


Fig. 9: *PEEK-guided version*

a Plug stem
b Metal centering ring
c Seal
d PEEK seal

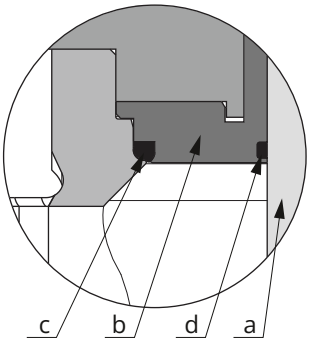


Fig. 10: *Anti-crystallizing seal system*

a Hardened plug stem
b Hardened metal centering ring
c Seal
d EPDM

Table 2: *Technical data for Type 3347 Valve*

Body version[1]		**Micro-flow valve**	**Cast**	**Bar stock**	
Nominal size		**DN 6 to 25 (NPS ¼ to 1)**	**DN 15 to 100 (NPS ½ to 4)**	**DN 15 to 150 (NPS ½ to 6)**	
Body/bonnet connection		**Bolted bonnet**	**Clamp connection**	**Clamp connection**	**Bolted bonnet**
Maximum pressure (see Table 4 for restrictions)		**16 bar (232 psi)**	**16 bar (232 psi)**	**16 bar (232 psi)**	**63 bar (914 psi)**[3]
Seat-plug seal		Metal seal · Soft seal			
Characteristic		Equal percentage or linear			
Rangeability		See Table 8 and Table 9			
Permissible medium temperature (see Table 4 for restrictions)		-10 to 150 °C (14 to 300 °F)			
Leakage class acc. to DIN EN 60534-4 or ANSI FCI 70-2	Metal seal	IV			
	Soft seal	–	VI		
Surface quality	External	Glass bead blasted			
		R_a ≤0.6 µm · Polished			
	Internal	R_a ≤0.8 µm · Fine machine finish			
		R_a ≤0.6 µm · Polished			
		R_a ≤0.4 µm · Satin finish			
		R_a ≤0.4 µm · Mirror finish			
Versions with 3-A certification	Nominal size DN/ NPS	–	25 to 100/1 to 4	15 to 125/½ to 4	
	K_{VS}/C_V		0.4 to 160/0.5 to 190	0.4 to 200/0.5 to 235	
	Connection		See Table 4 All listed end connections comply with 3-A regulations.		
	Body material		1.4409/CF3M	1.4404/316L · 1.4435/316L Generally AISI 300 (except for 301, 302, 303)	
	Internal surface finish		R_a ≤0.8 µm		
	Seat-plug seal		Metal seal · Soft seal		
	Plug stem guide		PTFE, PEEK and anti-crystallizing seal system		
	Other		Actuator and valve accessories mounted to comply with 3-A regulations.		
	Comments		Seals complying with 3-A regulations must be used on site by the end user.		
Version with EHEDG certification (Type EL Class I)		Type 3347 Hygienic Angle Valve; bar stock body; nominal sizes DN 15, 20, 25, 32, 40, 50, 65, 80, 100 and 125; with PTFE stem guide and parabolic or V-port plug made of metal or metal/PEEK			
Other compliance		CFR Title 21 FDA Regulation (EC) No. 1935/2004 Regulation (EU) No. 10/2011 Regulation (EC) No. 2023/2006 USP-VI 121 °C ADI free			
Conformity[2]		CE			

1) Suitable for Group 2 fluids according to Pressure Equipment Directive 2014/68/EU

2) CE compliance only for versions in DN 32 with 40 bar (NPS 1¼ with 580 psi) and higher; Article 3(3) of PED applies to all other versions

3) Maximum pressure depends on the valve end connections. A version for 300 bar is available on request.

Table 3: *Technical data for Type 3379 Pneumatic Actuator*

Piston Ø	**mm**	**63**				**90**				**150**[1]				
Effective area	**cm²**	**31**				**63**				**176**				
Perm. ambient temperature	°C (°F)	-10 to 60 (14 to 140)												
Max. supply pressure	bar (psi)	7 (102)[2]												
Fail-safe action		**Stem extends (FA)**		**Stem retracts (FE)**		**Stem extends (FA)**		**Stem retracts (FE)**		**Stem extends (FA)**			**Stem retracts (FE)**	
Signal pressure	bar (psi)	4 (58)		6 (87)		4.5 (65)	6 (87)	4 (58)	6 (87)	4 (58)	4 (58)	4.5 (65)	4 (58)	6 (87)
Bench range	bar (psi)	2.3 to 3.7 (33.4 to 53.7)		2.3 to 3.7 (33.4 to 53.7)		2.5 to 4.0 (36 to 58)	3.3 to 5.6 (48 to 81)	1.0 to 1.9 (15 to 28)	1.0 to 1.9 (15 to 28)	1.0 to 2.3 (15 to 34)	1.4 to 3.0 (20 to 44)	2.1 to 4.6 (30 to 67)	1.0 to 2.3 (15 to 34)	1.0 to 2.3 (15 to 34)
Rated travel	mm	7.5	15	7.5	15	15	15	15	15	15	15	15	15	15
Thrust	N	710		680		1510	2260	1320	2580	1760	2280	3520	2990	6500

[1] Only with clamp connection

[2] 8 bar without positioner

Type 3271 and Type 3277 Pneumatic Actuators: See Data Sheet ▶ T 8310-1

Information on all the end connections compliant with EHEDG can be found at the following link:
▶ https://www.ehedg.org/guidelines-working-groups/guidelines/guidelines/detail/ehedg-position-paper

Table 4: *End connections, maximum pressures and 3-A/EHEDG conformity*

Connection to the pipeline	Standard		Nominal sizes DN/OD/NPS	P_{max} in bar at 20 °C (68 °F)		3-A/EHEDG conformity
				Versions up to 16 bar (232 psi)[1]	Versions up to 40 bar (580 psi)[2]	
Welding ends	DIN 11866	Series A	DN 6 to 100	16	40	•
			DN 125 to 150	16	25	•
		Series B	OD 10.2 to 139.7	16	40	•
			OD 168.3	16	25	•
		Series C	NPS ¼ to 6	16	40	•
	ISO 1127		OD 10.2 to 139.7	16	40	•
			OD 168.3	16	25	•
	ISO 2037		OD 12 to 101.6	16	40	•
			OD 139.7 to 168.3	16	25	•
	ASME BPE		NPS ¼ to 6	16	40	•
	JIS G 3447		OD 25.4 to 165.2	16	40	•
	JIS G 3459		DN 6A to 125A	16	40	•
			DN 150A	16	25	•
	BS 4825-1		OD 12.7 to 101.6	16	40	•
			OD 139.7 to 168.3	16	25	•
Threaded couplings	DIN 11864-1 Form A	Series A	DN 10 to 40	16	40	•
			DN 50 to 100	16	25	•
		Series B	DN 8 to 25	16	40	•
			DN 32 to 80	16	25	•
		Series C	DN 10 to 40	16	40	•
			DN 50 to 100	16	25	•
	DIN 11851	Series A	DN 10 to 40	16	40	•[3]
			DN 50 to 100	16	25	•[3]
			DN 125 to 150	16	16	•[3]
Flanges	DIN EN 1092-1, B1		DN 10 to 150	16	40	–
	DIN 11864-2 Form A	Series A	DN 10 to 40	16	25	•
			DN 50 to 100	16	16	•
			DN 125 to 150	10	10	•
		Series B	DN 8 to 25	16	25	•
			DN 32 to 80	16	16	•
			DN 100	10	10	•
		Series C	DN 10 to 40	16	25	•
			DN 50 to 100	16	16	•
	ASME B16.5, RF		NPS ½ to 6	16	16	–

Connection to the pipeline	Standard		Nominal sizes DN/OD/NPS	P_{max} in bar at 20 °C (68 °F)		3-A/EHEDG conformity
				Versions up to 16 bar (232 psi)[1]	Versions up to 40 bar (580 psi)[2]	
Clamp connections	DIN 32676	Series A	DN 6 to 40	16	25	•
			DN 50 to 65	16	16	•
			DN 80 to 150	10	10	•
		Series B	OD 10.2 to 42.4	16	25	•
			OD 48.3 to 76.1	16	16	•
			OD 88.9 to 168.3	10	10	•
		Series C	NPS ¼ to 1½	16	25	•
			NPS 2 to 3	16	16	•
			NPS 4 to 6	10	10	•
	BS 4825-3		OD 25.4 to 38.1	16	25	•
			OD 50.8 to 76.2	16	16	•
			OD 101.6 to 168.3	10	10	•
	ASME BPE		NPS ¼ to 4	13.9	13.9	•
			NPS 6	10	10	•
	OSS JIS G 3447		OD 25.4 to 38.1	16	25	–
			OD 50.8 to 63.5	16	16	–
			OD 89.1 to 165.2	10	10	–
	OSS JIS G 3459		DN 25A to 32A	16	25	–
			DN 40A to 65A	16	16	–
			DN 80A to 150A	10	10	–
	DIN 11864-3	Series A	DN 10 to 40	16	40	•
			DN 50 to 65	16	25	•
			DN 80 to 100	16	16	•
		Series B	DN 8 to 25	16	40	•
			DN 32 to 50	16	25	•
			DN 65 to 80	16	16	•
		Series C	DN 10 to 40	16	40	•
			DN 50 to 65	16	25	•
			DN 80 to 100	16	16	•

1) All micro-flow valve versions (DN 6 to 25/NPS ¼ to 1) are restricted to a maximum pressure (P_{max}) of 16 bar (232 psi).

2) Only with bolted bonnet and PEEK stem seal or anti-crystallizing stem seal system

3) Conformity with 3-A regulations provided the groove bottom has a radius R 0.4$^{+0.1}_{0}$ (if necessary) and gaskets that meet 3-A requirements are used on site by the end user.

Table 5: *Standards withdrawn · End connections, maximum pressures and 3-A/EHEDG conformity*

Connection[3] to the pipeline	Standard	Nominal sizes DN/OD/NPS	P_{max} in bar at 20 °C (68 °F)		3-A/EHEDG conformity
			Versions up to 16 bar (232 psi)[1]	Versions up to 40 bar (580 psi)[2]	
Welding ends	SMS 3008	OD 12 to 101.6	16	40	•
		OD 139.7 to 168.3	16	25	•
Threaded couplings	ISO 2853	NPS 25 to 38	16	40	•
		NPS 51 to 76.1	16	25	•
	SMS 1146	DN 25 to 76	6	6	–
Clamp connections	ISO 2852	NPS 25 to 38	16	25	•
		NPS 51 to 76.1	16	16	•
		NPS 101.6 to 168.3	10	10	•

1) All micro-flow valve versions (DN 6 to 25/NPS ¼ to 1) are restricted to a maximum pressure (P_{max}) of 16 bar (232 psi).

2) Only with bolted bonnet and PEEK stem seal or anti-crystallizing stem seal system

3) SMS 3008, SMS 1146, ISO 2852 and ISO 2853 are withdrawn standards. These end connections are still available on request for service work, replacement and sustaining compatibility in existing plants.

Table 6: *Materials for Type 3347 Valve*

Component	Version	DIN	ANSI	AFNOR
Body version	Cast	1.4409	CF3M	Z2 CND 17-12
	Bar stock	1.4404/1.4435[1]	316L[1]	Z2 CND 17-12
	Micro-flow valve (bar stock)	1.4435	316L	Z2 CND 17-12
Bonnet		1.4404/1.4409	316L	Z2 CND 17-12
Plug		1.4404[1] · Stellite® facing	316L[1] · Stellite® facing	Z2 CND 17-12 · Stellite® facing

1) Other materials on request

Table 7: *Materials for Type 3379 Pneumatic Actuator*

Component	Material
Housing and cover	Stainless steel 1.4409/A351 CF3M
Actuator stem	Stainless steel 1.4404/A182 F316L
Piston	Polyamide, glass fiber reinforced
	Stainless steel 1.4409/A351 CF3M[1]
Dome (visual indicator)	Polycarbonate
Bearings	Polymer
Springs	Spring steel
Seals	NBR

1) For actuator with 176 cm^2 effective area (150 mm piston diameter)

Type 3271 and Type 3277 Pneumatic Actuators: See Data Sheet ▶ T 8310-1

Flow coefficients and associated nominal sizes

Table 8: *K_{VS} and C_V coefficients · 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[1)] 50:1	50:1									
Seat Ø	mm	6	6	6	12	12	12 24[1)]	24	24	31	38	48	63	80	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												•[2)]	•[2)]	•	•	
125	5														•	•	•

[1)] SAMSON recommends using a V-port plug in nominal sizes DN 40 to 65 for pressures higher than 10 bar as well in nominal 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. For version with V-port plug:

Seat bore	Sb 3 to 6	Sb 12 to 31	Sb 38 to 63	Sb 80 to 110
Parabolic plug	Standard			
V-port plug	–	Optional		

[2)] 30 mm travel

Table 9: *K_{VS} and C_V coefficients · Micro-flow valve version*

	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	•	•	•	•	•	•	•	•
20	¾	•	•	•	•	•	•	•	•
25	1	•	•	•	•	•	•	•	•

Possible actuator combinations

Table 10: *Actuator matrix*

	K_{VS}	0.01	0.016	0.025	0.04	0.063	0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4	6.3	10	16	25	40	60	80	100	160	200
Actuator	C_V	0.012	0.02	0.03	0.05	0.075	0.12	0.21	0.3	0.5	0.75	1.2	2	3	5	7.5	12	20	30	47	70	95	120	190	240
Type 3379		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•[1)]	•[1)]	–	–	–
Type 3271/3277		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Type 3372		–	–	–	–	–	–	–	–	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

[1)] Only with clamp connection

Permissible differential pressures for Type 3347 Valve with Type 3379 Pneumatic Actuator · Metal-seated plug (leakage class IV)

The maximum permissible pressure and the permissible differential pressures Δp depend on which end connections are used (see Table 4).

Table 11: *Fail-safe action: Stem extends (FA) · Pressures in bar (psi)*

Operating range in bar (psi) with actuator				**31 cm² actuator area**	**2.3 to 3.7 (34 to 54)**	**–**	**–**	**–**	**–**	**–**
				63 cm² actuator area	**–**	**2.5 to 4.0 (36 to 58)**	**3.3 to 5.6 (48 to 81)**	**–**	**–**	**–**
				176 cm² actuator area[1)]	**–**	**–**	**–**	**1.0 to 2.3 (15 to 34)**	**1.4 to 3.0 (20 to 44)**	**2.1 to 4.6 (30 to 67)**
Required supply pressure in bar (psi) to open the valve					**4 (58)**	**4.5 (65)**	**6 (87)**	**4 (58)**	**4 (58)**	**4.5 (65)**
DN	**NPS**	**K_{VS}**	**Rated travel**	**Actuator area in cm²**	Δp when p2 = 0 bar (psi)					
6 to 25	⅛ to 1	0.01 to 0.25	7.5	31	40 (580)	–	–	–	–	–
15 to 25	½ to 1	0.4 to 1.0	15	31	40 (580)	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	31	30 (435)	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	63	–	40 (580)	–	–	–	–
25 to 50	1 to 2	6.3 to 10	15	63	–	15 (218)	30 (435)	–	–	–
32 to 50	1¼ to 2	16	15	63	–	10 (145)	20 (290)	–	–	–
40 to 50	1½ to 2	25	15	63	–	7 (102)	13 (189)	–	–	–
40 to 80	1½ to 3	25	15	176[1)]	–	–	–	9 (131)	13 (189)	21 (305)
50	2	40	15	63	–	–	8 (116)	–	–	–
50 to 80	2 to 3	40	15	176[1)]	–	–	–	5 (73)	8 (116)	13 (189)
65 to 80	2½ to 3	60	15	176[1)]	–	–	–	3 (44)	4 (58)	7 (102)
80	3	60	15	176[1)]	–	–	–	–	3 (44)	4 (58)

[1)] Only with clamp connection

Table 12: *Fail-safe action: Stem retracts (FE) · Pressures in bar (psi)*

Operating range in bar (psi) with actuator				**31 cm² actuator area**	**2.3 to 3.7 (34 to 54)**	**2.3 to 3.7 (34 to 54)**	**2.3 to 3.7 (34 to 54)**	**–**	**–**	**–**	**–**	**–**	**–**
				63 cm² actuator area	**–**	**–**	**–**	**1.0 to 1.9 (15 to 28)**	**1.0 to 1.9 (15 to 28)**	**1.0 to 1.9 (15 to 28)**	**–**	**–**	**–**
				176 cm² actuator area[1)]	**–**	**–**	**–**	**–**	**–**	**–**	**1.0 to 2.3 (15 to 34)**	**1.0 to 2.3 (15 to 34)**	**1.0 to 2.3 (15 to 34)**
Required supply pressure in bar (psi) to close the valve					**4 (58)**	**5 (73)**	**6 (87)**	**4 (58)**	**5 (73)**	**6 (87)**	**4 (58)**	**5 (73)**	**6 (87)**
DN	**NPS**	**K_{VS}**	**Rated travel**	**Actuator area in cm²**	Δp when p2 = 0 bar (psi)								
6 to 25	⅛ to 1	0.01 to 0.25	7.5	31	17 (247)	40 (580)	–	–	–	–	–	–	–
15 to 25	½ to 1	0.4 to 1.0	15	31	–	11 (160)	23 (334)	–	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	31	–	11 (160)	22.5 (326)	–	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	63	–	–	–	40 (580)	–	–	–	–	–
25 to 50	1 to 2	6.3 to 10	15	63	–	–	–	17.5 (254)	28 (406)	33 (479)	–	–	–
32 to 50	1¼ to 2	16	15	63	–	–	–	10 (145)	16 (232)	22.5 (326)	–	–	–
40 to 50	1½ to 2	25	15	63	–	–	–	6 (87)	10 (145)	15 (218)	–	–	–
40 to 80	1½ to 3	25	15	176[1)]	–	–	–	–	–	–	17.5 (254)	29 (421)	40 (580)
50	2	40	15	63	–	–	–	3 (44)	6 (87)	9 (131)	–	–	–
50 to 80	2 to 3	40	15	176[1)]	–	–	–	–	–	–	11 (160)	18 (261)	25 (363)
65 to 80	2½ to 3	60	15	176[1)]	–	–	–	–	–	–	6 (87)	10 (145)	14 (203)
80	3	60	15	176[1)]	–	–	–	–	–	–	3 (44)	6 (87)	9 (131)

[1)] Only with clamp connection

Permissible differential pressures for Type 3347 Valve with Type 3379 Pneumatic Actuator · PEEK soft-seated plug (leakage class VI)

The maximum permissible pressure and the permissible differential pressures Δp depend on which end connections are used (see Table 4).

Table 13: *Fail-safe action: Stem extends (FA) · Pressures in bar (psi)*

Operating range in bar (psi) with actuator				**31 cm² actuator area**	**2.3 to 3.7 (34 to 54)**	**–**	**–**	**–**	**–**	**–**
				63 cm² actuator area	**–**	**2.5 to 4.0 (36 to 58)**	**3.3 to 5.6 (48 to 81)**	**–**	**–**	**–**
				176 cm² actuator area[1)]	**–**	**–**	**–**	**1.0 to 2.3 (13 to 32)**	**1.4 to 3.0 (22 to 39)**	**2.1 to 4.6 (32 to 58)**
Required supply pressure in bar (psi) to open the valve					**4 (58)**	**4.5 (65)**	**6 (87)**	**4 (58)**	**4 (58)**	**4.5 (65)**
DN	**NPS**	**K_{VS}**	**Rated travel**	**Actuator area in cm²**	Δp when p2 = 0 bar (psi)					
15 to 25	½ to 1	0.4 to 1.0	15	31	40 (580)	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	31	23 (334)	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	63	–	40 (580)	–	–	–	–
25 to 50	1 to 2	6.3 to 10	15	63	–	18 (261)	32 (464)	–	–	–
32 to 50	1¼ to 2	16	15	63	–	10 (145)	18 (261)	–	–	–
40 to 50	1½ to 2	25	15	63	–	6 (87)	12 (174)	–	–	–
40 to 80	1½ to 3	25	15	176[1)]	–	–	–	7.5 (109)	12 (174)	20 (290)
50	2	40	15	63	–	3 (44)	7 (102)	–	–	–
50 to 80	2 to 3	40	15	176[1)]	–	–	–	5 (73)	7 (102)	12 (174)
65 to 80	2½ to 3	60	15	176[1)]	–	–	–	–	3 (44)	7 (102)
80	3	60	15	176[1)]	–	–	–	–		3 (44)

[1)] Only with clamp connection

Table 14: *Fail-safe action: Stem retracts (FE) · Pressures in bar (psi)*

Operating range in bar (psi) with actuator				**31 cm² actuator area**	**2.3 to 3.7 (34 to 54)**	**2.3 to 3.7 (34 to 54)**	**–**	**–**	**–**	**–**	**–**	**–**
				63 cm² actuator area	**–**	**–**	**1.0 to 1.9 (15 to 28)**	**1.0 to 1.9 (15 to 28)**	**1.0 to 1.9 (15 to 28)**	**–**	**–**	**–**
				176 cm² actuator area[1)]	**–**	**–**	**–**	**–**	**–**	**1.0 to 2.3 (13 to 32)**	**1.0 to 2.3 (13 to 32)**	**1.0 to 2.3 (13 to 32)**
Required supply pressure in bar (psi) to close the valve					**5 (73)**	**6 (87)**	**4 (58)**	**5 (73)**	**6 (87)**	**4 (58)**	**5 (73)**	**6 (87)**
DN	**NPS**	**K_{VS}**	**Rated travel**	**Actuator area in cm²**	Δp when p2 = 0 bar (psi)							
15 to 25	½ to 1	0.4 to 1.0	15	31	11 (160)	40 (580)	–	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	31	8 (116)	22.5 (326)	–	–	–	–	–	–
15 to 50	½ to 2	1.6 to 4.0	15	63	–	–	33 (479)	–	–	–	–	–
25 to 50	1 to 2	6.3 to 10	15	63	–	–	15 (218)	26 (377)	40 (580)	–	–	–
32 to 50	1¼ to 2	16	15	63	–	–	8 (116)	14 (203)	21 (305)	–	–	–
40 to 50	1½ to 2	25	15	63	–	–	5 (73)	9 (131)	13 (189)	–	–	–
40 to 80	1½ to 3	25	15	176[1)]	–	–	–	–	–	16 (232)	27.5 (399)	40 (580)
50	2	40	15	63	–	–	–	5 (73)	8 (116)	–	–	–
50 to 80	2 to 3	40	15	176[1)]	–	–	–	–	–	9 (131)	17 (247)	24 (348)
65 to 80	2½ to 3	60	15	176[1)]	–	–	–	–	–	5 (73)	9 (131)	13 (189)
80	3	60	15	176[1)]	–	–	–	–	–	–	5 (73)	8 (116)

1) Only with clamp connection

Operating ranges and required supply pressures for Type 3347 Valve with Type 3271 or Type 3277 Pneumatic Actuator · Metal-seated plug (leakage class IV) and PEEK soft-seated plug (leakage class VI)

Table 15: *Fail-safe action: Stem extends (FA) · Standard version · Valve closed at 0 bar signal pressure · The required supply pressure is 0.2 bar higher than the upper operating range value · Pressures in bar*

Nominal size			Actua-tor area in cm²	Operating range in bar at Δp (valve CLOSED)		
DN	NPS	K_{VS}		5 bar[1)]	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
		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
25	1	6.3 10	120	1.4 to 2.3	1.4 to 2.3	1.4 to 2.3
			175v2	1.4 to 2.3	0.8 to 2.4	0.8 to 2.4
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
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
			350v2	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	–
			350v2	0.8 to 2.4	0.8 to 2.4	1.4 to 2.3
65	2½	60	350v2	0.8 to 2.4	1.4 to 2.3	2.1 to 3.3
80	3	80	350v2	1.4 to 2.3	2.1 to 3.3	–
			355v2	1.6 to 2.4	2.35 to 2.95	2.95 to 3.65
100	4	100	750v2	0.8 to 2.4	1.4 to 2.4	1.4 to 2.4
		160	750v2	0.8 to 2.4	1.4 to 2.4	2.1 to 3.8
125	5	200	750v2	1.4 to 2.4	1.65 to 2.65	2.5 to 4.2

1) Select a smaller actuator for low signal pressures.

Table 16: *Fail-safe action: Stem extends (FA) · Micro-flow valve · Pressures in bar*

Actuator area in cm²	Travel in mm	Operating range in bar at Δp (valve CLOSED)		
		5 bar	10 bar	16 bar
120	7.5	0.8 to 1.6	0.8 to 1.6	0.8 to 1.6

Table 17: *Fail-safe action: Stem retracts (FE) · Standard version · Valve closed at required supply pressure · Pressures in bar*

Nominal size			Actuator area in cm²	Travel in mm	Operating range	Required supply pressure in bar at Δp		
DN	NPS	K_{VS}				5 bar[1)]	10 bar	16 bar
6 8 10 15	⅛ ¼ ⅜ ½	0.01 to 0.25	120	7.5	0.8 to 1.6	1.2	1.2	1.2
15 20 25	½ ¾ 1	0.4 0.63 1.0	120	15	0.4 to 2.0	2.4	2.4	2.4
			175v2		0.2 to 1.0	1.2	1.2	1.2
		1.6 4	120	15	0.4 to 2.0	2.4	2.4	2.4
			175v2		0.2 to 1.0	1.4	1.4	1.4
25	1	6.3 10	120	15	0.4 to 2.0	3.4	3.4	3.4
			175v2		0.2 to 1.0	1.5	1.6	1.8
32 40	1¼ 1½	16	120	15	0.4 to 2.0	3.4	3.4	4.1
			175v2		0.2 to 1.0	1.6	1.8	2.1
40	1½	25	120	15	0.4 to 2.0	3.4	4.1	–
			175v2		0.2 to 1.0	1.8	2.1	2.5
			350v2		0.2 to 1.0	1.4	1.8	1.8
50	2	40	175v2	15	0.2 to 1.0	2.0	2.6	3.3
			350v2		0.2 to 1.0	1.8	1.8	2.4
65	2½	60	350v2	15	0.2 to 1.0	1.8	2.4	3.1
80	3	80	350v2	15	0.2 to 1.0	2.4	3.1	4.0
			355v2		0.6 to 1.0	2.1	2.9	3.8
100	4	100	355v2	15	0.2 to 1.0	2.1	2.9	3.8
		160	355v2		0.2 to 1.0	2.6	3.8	5.3
		100	750v2	30	0.2 to 1.0	1.6	1.9	2.4
		160	750v2		0.2 to 1.0	1.8	2.4	3.1
125	5	200	355v2	15	0.2 to 1.0	2.9	4.4	–
			750v2	30	0.2 to 1.0	1.9	2.6	3.5

1) Select a smaller actuator for low signal pressures.

Table 18: *Fail-safe action: Stem retracts (FE) · Micro-flow valve · Valve closed at required supply pressure · Pressures in bar*

Actuator area in cm²	Travel in mm	Operating range	Required supply pressure in bar at Δp		
			5 bar	10 bar	16 bar
120	7.5	0.8 to 1.6	1.2	1.2	1.2

Table 19: *Comparison table: Operating ranges and bench ranges for "stem extends" (FA) fail-safe action*

Type ... Actuator	Actuator area in cm²	Travel in mm	Operating range in bar (bench range, if different)				
3271/3277	120	7.5	0.8 to 1.6	–	–	–	–
	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)	–	–
	350v2	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)	–
	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)
3379	31	7.5	–	–	2.3 to 3.7 (34 to 54)	–	–
	31	15	–	–	2.3 to 3.7 (34 to 54)	–	–
	63	15	–	–	–	2.5 to 4.0 (36 to 58)	3.3 to 5.6 (48 to 81)
	176[1)]	15	1.0 to 2.3 (15 to 34)	1.4 to 3.0 (20 to 44)	2.1 to 4.6 (30 to 67)	–	–

1) Only with clamp connection

Dimensions

Table 20: *Welding ends · Dimensions in mm*

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
DIN 11866, Series A (DIN 11850, Series 2)	DN	L[1] (cast)	–	–	–	50	50	50[2]	56	67	72	85	98	110	–	*)
		L[1] (bar stock)	–	–	–	70	70	70	70	70	85	105	105	130	130	
		L (bar stock) micro	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	2	2	2	2	
DIN 11866 Series B	OD	L[1] (cast)	–	–	–	55	55	55	66	70	82	105	110	110	–	*)
		L[1] (bar stock)	–	–	–	70	70	70	70	70	85	105	105	130	130	
		L (bar stock) micro	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	
DIN 11866, Series C (ASME BPE)	NPS	L[1] (cast)	–	–	–	55	55	55	–	70	82	105	110	150	–	*)
		L[1] (bar stock)	–	–	–	70	70	70	–	70	85	105	105	130	130	
		L (bar stock) micro	40	–	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	16.5	–	1.65	–	1.65	1.65	1.65	1.65	2.11	–	
ISO 2037	OD	L[1] (cast)	–	–	–	55	55	55	66	70	82	105	110	150	–	*)
		L[1] (bar stock)	–	–	–	–	–	70	70	70	85	105	105	130	130	
		L (bar stock) micro	–	–	50	50	–	–	–	–	–	–	–	–	–	
		Ød2	–	12	12.7	17.2	21.3	25	33.7	38	51	63.5	76.1	101.6	139.7	
		t	–	1	1	1	1	1.2	1.2	1.2	1.2	1.6	1.6	2	2	
JIS G 3447	OD	L[1] (cast)	–	–	–	–	–	55	66	70	82	105	110	150	–	*)
		L[1] (bar stock)	–	–	–	–	–	70	70	70	85	105	105	130	–	
		L (bar stock) micro	–	–	–	–	–	–	–	–	–	–	–	–	–	
		Ød2	–	–	–	–	–	25.4	31.8	38.1	50.8	63.5	89.1	101.6	–	
		t	–	–	–	–	–	1.2	1.2	1.2	1.5	2	2	2	–	
JIS G 3459	DN	L[1] (cast)	–	–	–	55	55	55	66	70	82	105	110	150	–	*)
		L[1] (bar stock)	–	–	–	70	70	70	70	70	85	105	105	130	130	
		L (bar stock) micro	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	

*) On request

1) Dimensions are not standardized

2) L acc. to DIN 11852

Table 21: *Clamp end connections · Dimensions in mm · Face-to-face dimensions of special versions on request*

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
DIN 11864-3, Form A Series A	DN	L3 (cast)	–	–	–	60.3	60.3	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	–	–	50	50	–	–	–	–	–	–	–	–	–	
		ØC3	–	–	34	34	50.5	50.5	50.5	64	77.5	91	106	130	–	
		Ød1	–	–	10.05	16.05	20.05	260.5	32.05	38.05	50.05	66.05	81.05	100.05	–	

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
DIN 11864-3, Form A Series B	OD	L3 (cast)	–	–	–	60.3	60.3	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	–	–	50	50	–	–	–	–	–	–	–	–	–	
		ØC3	–	34	34	34	50.5	50.5	64	64	91	106	119	–	–	
		Ød1	–	10.35	14.05	18.15	23.75	29.75	38.45	44.35	56.35	72.15	84.35	–	–	
DIN 11864-3, Form A Series C	DN	L3 (cast)	–	–	–	60.3	60.3	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	–	–	–	50	–	–	–	–	–	–	–	–	–	
		ØC3	–	–	34	34	–	50.5	–	64	77.5	91	106	130	–	
		Ød1	–	–	9.45	15.80	–	22.15	–	34.85	47.55	60.25	72.95	97.43	–	
DIN 32676, Series A	DN	L3 (cast)	–	–	–	60.3	60.3	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	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	
DIN 32676 Series B	OD	L3 (cast)	–	–	–	60.3	60.3	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	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	
DIN 32676, Series C	NPS	L3 (cast)	–	–	–	60.3	60.3	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	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	NPS	L3 (cast)	–	–	–	60.3	60.3	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	35	–	50	50	–	–	–	–	–	–	–	–	–	
		ØC3	25	25	25	25	–	50.39	–	50.39	63.91	77.39	90.91	118.92	–	
		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	OD	L3 (cast)	–	–	–	60.3	60.3	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	OD	L3 (cast)	–	–	–	60.3	60.3	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 (OD)	–	–	–	–	–	50.5	50.5	50.5	64	77.5	106	119	–	
		Ød1 (NPS)	–	–	–	–	–	23	29.4	35.7	47.8	59.5	85.10	97.6	–	
OSS for pipes acc. to JIS G 3459	DN	L3 (cast)	–	–	–	60.3	60.3	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	64	77.5	91	106	119	–	
		Ød1	–	–	–	–	–	30.7	39.4	45.3	57.2	72.1	84.9	97.4	–	

*) On request

Table 22: *Threaded couplings · Dimensions in mm · Face-to-face dimensions of special versions on request*

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
DIN 11864-1, Form A Series A and DIN 11887, Series 1	DN	L1 (cast)	–	–	–	64	64	64	70	80	85	100	115	130	–	*)
		L1 (bar stock)	–	–	–	64	64	64	70	80	85	100	115	130	–	
		L1 (bar stock) micro	–	–	50	50	–	–	–	–	–	–	–	–	–	
		ØC1	–	–	RD 28x1⅛"	RD 34x1⅛"	RD 44x 1/6"	RD 52x 1/6"	RD 58x 1/6"	RD 65x 1/6"	RD 78x 1/6"	RD 95x 1/6"	RD 110x¼	RD 130x¼	–	
		Ød1	–	–	10.05	16.05	20.05	26.05	32.05	38.05	50.05	66.05	81.05	100.05	–	
DIN 11864-1, Form A Series B	DN	L1 (cast)	–	–	–	64	64	64	70	80	85	100	115	130	–	*)
		L1 (bar stock)	–	–	–	64	64	64	70	80	85	100	115	130	–	
		L1 (bar stock) micro	–	–	–	50	–	–	–	–	–	–	–	–	–	
		ØC2	–	RD 28x1⅛"	RD 34x1⅛"	RD 44x 1/6"	RD 52x 1/6"	RD 58x 1/6"	RD 65x 1/6"	RD 78x 1/6"	RD 95x 1/6"	RD 110x¼	RD 130x¼	–	–	
		Ød1	–	10.35	14.05	18.15	23.75	29.75	38.45	44.35	56.35	72.15	84.35	–	–	
DIN 11864-1, Form A Series C	DN	L1 (cast)	–	–	–	64	64	64	–	80	85	100	115	130	–	*)
		L1 (bar stock)	–	–	–	–	–	64	–	80	85	100	115	130	–	
		ØC3	–	RD 28x1⅛"	RD 34x1⅛"	RD 44x 1/6"	RD 52x 1/6"	RD 58x 1/6"	RD 65x 1/6"	RD 78x 1/6"	RD 95x 1/6"	RD 110x¼	RD 130x¼	–	–	
		Ød1	–	9.45	15.80	–	–	22.15	–	34.85	47.55	60.25	72.95	97.43	–	

*) On request

Table 23: *Flanges · Dimensions in mm · Face-to-face dimensions of special versions on request*

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
DIN 11864-2, Form A Series A	DN	L4 (cast)	–	–	–	90	95	100	105	115	125	145	155	175	–	*)
		L4 (bar stock)	–	–	–	90	95	100	105	115	125	145	155	175	200	
		L4 (bar stock) micro	–	–	90	90	–	–	–	–	–	–	–	–	–	
		Ød1	–	–	10.05	16.05	20.05	26.05	32.05	38.05	50.05	66.05	81.05	100.05	125.05	
DIN 11864-2, Form A Series B	DN	L4 (cast)	–	–	–	90	95	100	105	115	125	145	155	175	–	*)
		L4 (bar stock)	–	–	–	90	95	100	115	115	125	145	155	175	–	
		L4 (bar stock) micro	–	90	90	90	–	–	–	–	–	–	–	–	–	
		Ød1	–	10.35	14.05	18.15	23.75	29.75	38.45	44.35	56.35	72.15	84.35	109.75	–	
DIN 11864-2, Form A Series C	DN	L4 (cast)	–	–	–	90	95	100	–	115	125	145	155	175	–	*)
		L4 (bar stock)	–	–	–	90	95	100	–	115	125	145	155	175	–	
		L4 (bar stock) micro	–	–	–	90	–	–	–	–	–	–	–	–	–	
		Ød1	–	–	–	9.4	15.75	22.1	–	34.8	47.5	–	–	–	–	
DIN EN 1092-1	DN	L4 (cast)	–	–	–	90	95	100	105	115	125	145	155	175	–	*)
		L4 (bar stock)	–	–	–	90	95	100	115	115	125	145	155	175	200	
		L4 (bar stock) micro	–	–	90	90	–	–	–	–	–	–	–	–	–	
		Ød1	–	–	10	16	20	26	32	38	50	66	81	100	125	

Valve	DN		6	8	10	15	20	25	32	40	50	65	80	100	125	150
	NPS		¼	⅜	½	¾	–	1	1¼	1½	2	2½	3	4	–	6
ASME B16.5	NPS	L4 (cast)	–	–	–	90	95	100	–	115	125	145	155	175	–	*)
		L4 (bar stock)	–	–	–	90	–	100	–	115	125	145	155	175	–	
		L4 (bar stock) micro	–	–	90	90	–	–	–	–	–	–	–	–	–	
		Ød2	–	–	9.4	15.75	–	22.1	–	34.8	47.5	60.2	72.9	97.38	–	

*) On request

Dimensional drawings of end connections

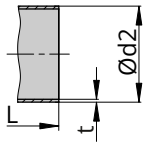


Fig. 11: *Welding end*

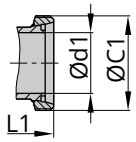


Fig. 12: *Threaded coupling acc. to DIN 11887 (DIN 11851) or IDF*

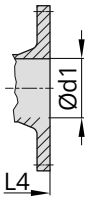


Fig. 13: *Flange connection acc. to DIN EN 1092-1*

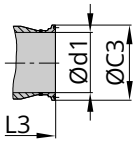


Fig. 14: *Clamp connection*

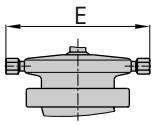


Fig. 15: *Steam barrier, G ¼ connections*

Dimensions and weights for valves with Type 3271 and Type 3277 Pneumatic Actuators

Table 24: *Common dimensions for Type 3347 Control Valve · Dimensions in mm*

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
	NPS	–	¼	⅜	½	¾	1	1¼	1½	2	2½	3	4	5
A	Cast	–	–	–	70	70	70	80	80	90	100	110	130	–
	Bar stock	–	–	–	80	80	80	80	80	90	110	110	130	130
H1		–	–	–	234	231	227	229	234	240	266	274	306	314
E (steam barrier)	Cast	–	–	–	162	162	162	164	164	164	192	203	178	–
	Bar stock	–	–	–	164	164	164	164	164	164	187	187	212	212

Table 25: *Type 3347 Valve · Weights in kg*

Valve	DN	6	8	10	15	20	25	32	40	50	65	80	100	125
	NPS	–	¼	⅜	½	¾	1	1¼	1½	2	2½	3	4	5
With welding ends, threaded couplings, clamp connections for	Cast	–	–	–	3.7	3.7	3.7	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	–	–	–	4.1	4.1	4.4	9	10	12	17	21	29	–
	Bar stock	–	–	–	8.5	9	9.5	11	12	15	25	27	37	46

Table 26: *Further dimensions[1] in combination with Type 3271 Pneumatic Actuator or Type 3277 Pneumatic Actuator*

Actuator area		cm²	120	175v2	350	350v2	355v2	750v2
Diaphragm ØD		mm	168	215	280	280	280	394
H[2]	Type 3271	mm	69	78	82	92	131	236
H[2]	Type 3277	mm	69	78	82	82	121	236
H3[3]		mm	110	110	110	110	110	190
H5	Type 3277	mm	88	101	101	101	101	101
Thread	Type 3271		M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5
Thread	Type 3277		M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5

Actuator area		cm²	120	175v2	350	350v2	355v2	750v2
a	Type 3271		G ⅛ (⅛ NPT)	G ¼ (¼ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)
a2	Type 3277		–	G ⅜[4)]	G ⅜[4)]	G ⅜[4)]	G ⅜[4)]	G ⅜[4)]

1) The specified dimensions are theoretical maximum design values for a specific standard device configuration. They do not reflect every possible case of use. The actual values for individual devices may differ depending on the device configuration and the specific application.

2) Height including lifting eyelet or female thread and eyebolt according to DIN 580. Height of the swivel hoist may differ. Actuators up to 355v2 cm² without lifting eyelet or female thread.

3) Minimum clearance required to remove the actuator

4) An adapter G ⅜ to ⅜ NPT is available for the a2 connection. It can be ordered separately using the following article number: 100160362

Table 27: *Weights[1)] for Type 3271 and Type 3277 Pneumatic Actuators*

Type ... Actuator	Actuator area in cm²		120	175v2	350	350v2	355v2	750v2
3271	Without handwheel	kg	2.5	6	8	11.5	15	36
3271	With handwheel	kg	4	10	13	16.5	20	41
3277	Without handwheel	kg	3.2	10	12	15	19	40
3277	With handwheel	kg	4.5	14	17	20	24	45

1) The weights specified apply to a specific standard device configuration. Weights of other actuator configurations may differ depending on the version (material, number of actuator springs etc.).

Dimensional drawings of Type 3347 Valve with Type 3271 and Type 3277 Pneumatic Actuators

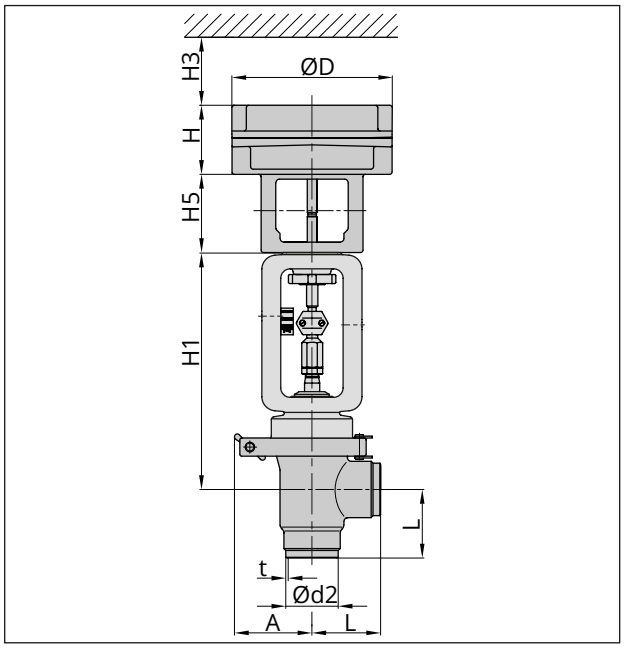


Fig. 16: *Type 3347-7 Control Valve with welding ends*

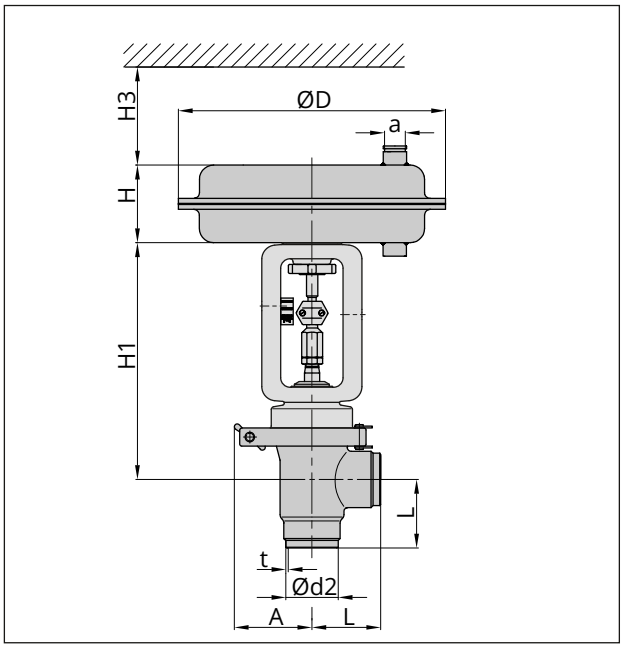


Fig. 17: *Type 3347-1 Control Valve with welding ends*

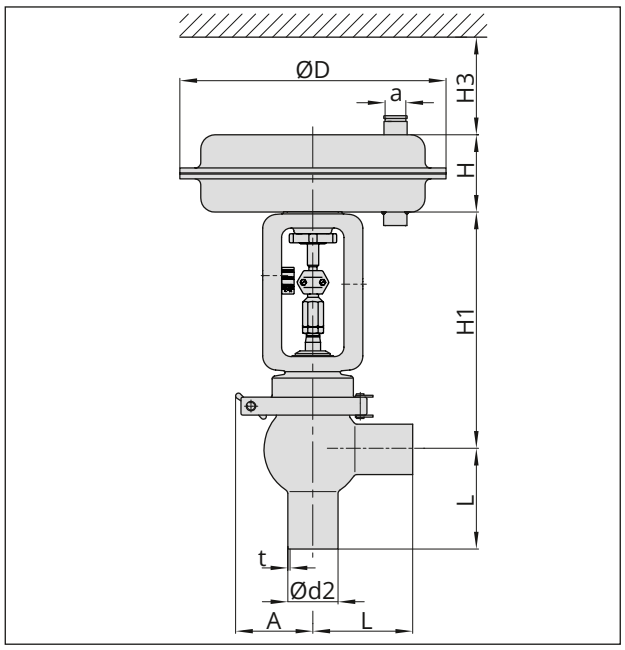


Fig. 18: *Type 3347-1 Control Valve with welding ends*

Dimensions and weights of valves with Type 3379 Pneumatic Piston Actuator (including Type 3724 Positioner)

Table 28: *Common dimensions for Type 3347 Control Valve · Dimensions in mm*

Valve		DN	6	8	10	15	20	25	32	40	50	65	80
		NPS	–	¼	⅜	½	¾	1	1¼	1½	2	2½	3
A	Cast	Clamped	70	70	70	70	70	70	80	80	90	100	110
	Bar stock	Clamped	–	–	–	80	80	80	80	80	90	110	110
	Bar stock	Bolted	–	–	–	47	47	47	47	47	54	–	–
	Bar stock Micro-flow valve	Bolted	27	27	27	27	–	–	–	–	–	–	–
H1	Cast	Clamped	–	–	–	–	–	72	69	79	87	124	132
	Bar stock	Clamped	–	–	–	81	78	73	75	80	87	124	132
		Bolted	–	–	–	81	78	73	75	80	88	–	–
	Bar stock Micro-flow valve	Bolted	66	66	64	61	–	–	–	–	–	–	–
E (steam barrier)	Cast		–	–	–	–	–	162	164	164	164	–	–
	Bar stock		–	–	–	164	164	164	164	164	164	–	–

Table 29: *Type 3347 Valve · Weights in kg*

Valve		DN	6	8	10	15	20	25	32	40	50	65	80
		NPS	–	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Valve weight · Body with welding ends	Cast	Clamped	–	–	–	1.7 to 1.8		1.8	2	2.5	4	7.5	10.5
	Bar stock	Clamped or bolted	–	–	–	3	3	3	3	3	4	13	13
	Bar stock Micro-flow valve	Bolted	0.9	0.9	0.9	0.9	–	–	–	–	–	–	–

Table 30: *Type 3379 Pneumatic Actuator*

Piston diameter	mm	63	90	150
Actuator area	**cm²**	**31**	**63**	**31**
Height H	mm	285	285	310
Height H3[1)]	mm	150	150	150
Length A1	mm	30	30	30
Diameter ØD	mm	108	108	108
Diameter Ød	mm	69	94	160
Weight, approx.	kg	3.7	4.9	10.7

1) Minimum clearance required to remove the actuator

Dimensional drawings of Type 3347 Valve with Type 3379 Pneumatic Piston Actuator (including Type 3724 Positioner)

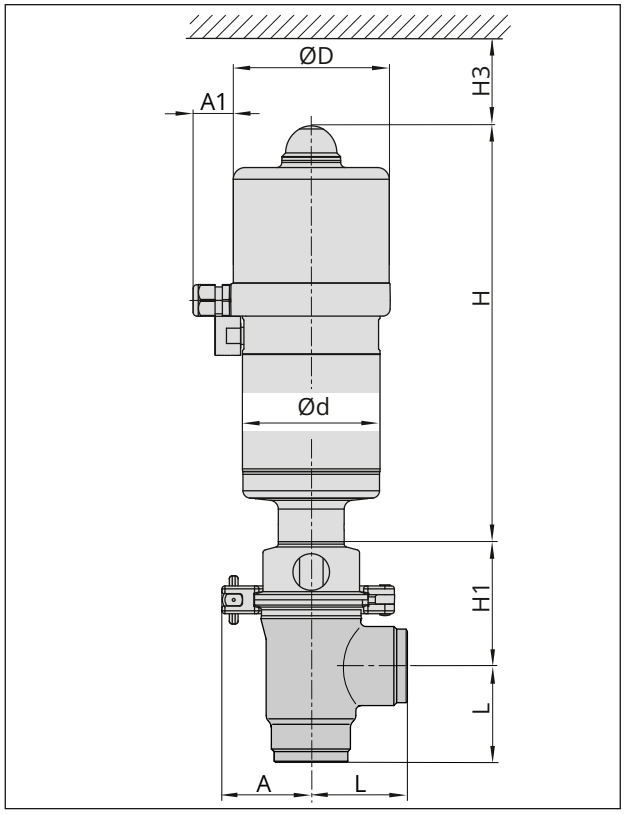


Fig. 19: *Type 3347/3379/3724 Control Valve with welding ends and clamped bonnet · Version with cast body*

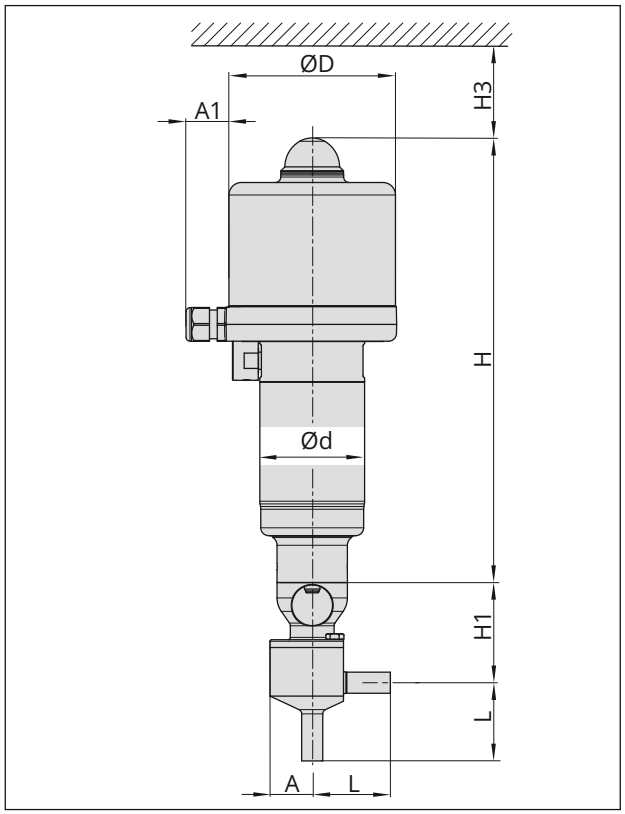


Fig. 20: *Type 3347/3379/3724 Control Valve with welding ends · Micro-flow valve version*

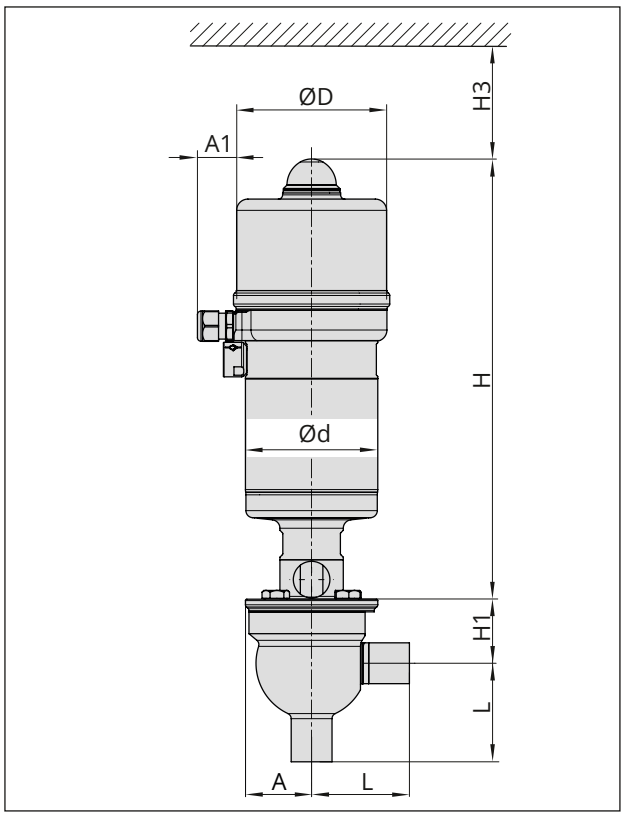


Fig. 21: *Type 3347/3379/3724 Control Valve with welding ends and bolted bonnet · Bar stock version*

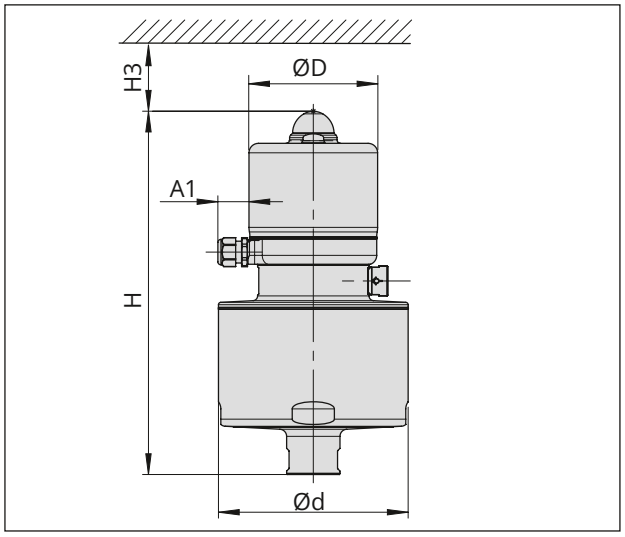


Fig. 22: *Type 3379 Actuator with Type 3724 Positioner*

Ordering text

The following specifications are required on ordering:

Body version	Standard version or micro-flow valve version
Nominal size	DN .../NPS .../OD ...
Materials according to	DIN/ANSI/AFNOR
End connections acc. to Table 4	Welding ends Threaded couplings Clamp connections Flanges
Flow coefficients	K_{VS} .../C_V ...
Plug seal	Metal or soft seal
Characteristic	Equal percentage or linear
Steam barrier	With/without
Body surface finish	Polished outsides and/or insides R_a according to Table 2
Actuator	Type 3271/Type 3277 (▶ T 8310-1), Type 3372 (▶ T 8313) or Type 3379
Actuator area	... cm^2
Bench range	... bar
Fail-safe position	Fail-close or fail-open
Additional equipment	Type 3724 Positioner (▶ T 8395) Positioner and/or limit switch (▶ T 8350)