DATA SHEET

T 8051 EN

Series 250 · Type 3251-1/3251-AM-1 and Type 3251-7/3251-AM-7 Pneumatic Control Valves

Type 3251 and Type 3251-AM Globe Valve

DIN version

Application

Control valve for process engineering applications with high industrial requirements

Type	**3251**	**3251-AM**
Nominal size	**DN 15 to 500**	**DN 15 to 80**
Pressure rating	**PN 16 to 400**	**PN 16 to 400**
Temperatures	**-196 to +550 °C**	**-196 to +450 °C**



Fig. 1: *Type 3251-1 Pneumatic Control Valve: (Type 3251 Valve with Type 3271 Pneumatic Actuator)*

Special features

Type 3251 or Type 3251-AM Globe Valve

- Type 3271 Pneumatic Actuator (Type 3251-1 or Type 3251-AM-1 Control Valve)
- Type 3277 Pneumatic Actuator (Type 3251-7 or Type 3251-AM-7 Control Valve) for integral positioner attachment

Valve body material

Type 3251:

- Cast steel
- Cast stainless steel, high-temperature cast steel or cast cold-resisting steel
- Special materials

Type 3251-AM:

- AM stainless steel 1.4401/1.4404
- Other materials on request

Low-noise valve plug

- Metal seal
- Soft seal up to PN 40
- High-performance metal seal
- Balanced to handle high differential pressures

Optional with RFID tags with unique identification according to DIN SPEC 91406.

The control valves with their modular design can be equipped with various accessories, such as positioners, limit switches, solenoid valves and other devices according to DIN EN 60534-6-1[1)] and NAMUR Recommendation (see Information Sheet ▶ T 8350).

1) Accessories required. See associated actuator documentation.

Type 3251 only: A safety manual containing the safety-related data is optionally available for use in safety-instrumented systems (SIL requirements).

Versions

Standard version with PTFE packing for temperatures from -10 to +220 °C or with adjustable high-

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temperature packing for -10 to +350 °C, Type 3251: nominal size DN 15 to 500; Type 3251-AM: nominal size DN 15 to 80, pressure rating PN 16 to 400

- **Type 3251-1** and **Type 3251-AM-1** · Type 3251 or Type 3251-AM Valve with Type 3271 Pneumatic Actuator with 350 to 2800 cm² actuator area (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3)
- **Type 3251-7** and **Type 3251-AM-7** · Type 3251 or Type 3251-AM Valve with Type 3277 Pneumatic Actuator with 350 to 750v2 cm² diaphragm area for integral positioner attachment (see Data Sheet ▶ T 8310-1)

Further versions

- **Welding ends** or **welding-neck ends** according to DIN EN 12627
- **Flow divider** or **AC-1/AC-3 trim** for noise reduction · See Data Sheets ▶ T 8081, ▶ T 8082 and ▶ T 8083
- **Perforated plug** · See Data Sheet ▶ T 8086
- **Valve plug with pressure balancing** · See Technical data
- **Version with insulating section or bellows seal** · See Technical data
- **Heating jacket** (Type 3251 only) · Details on request
- **Additional handwheel** · See Data Sheet ▶ T 8310-1
- **ANSI versions** · See Data Sheet ▶ T 8052
- **Type 3251/3251-AM Valve with Type 3273 Hand-operated Actuator** · For valves with max. 30 mm rated travel and side-mounted handwheel for travel >30 mm (see Data Sheet ▶ T 8312)
- **Type 3251-2/3251-AM-2 Electric Control Valve** · Details on request

Design and principle of operation

The medium flows through the valve in the direction indicated by the arrow. A rise in signal pressure causes the force acting on the diaphragm in the actuator to increase. The springs are compressed. Depending on the selected direction of action, the actuator stem retracts or extends. As a result, the position of the plug in the seat changes and determines the flow rate through the valve and the pressure p_2 with it.

The version with bellows seal is fitted with a test connection to monitor the corrosion-resistant bellows.

Trims with flow dividers can be used to reduce noise emission (▶ T 8081).

Pressure balancing can optionally be used when high pressures or differential pressures act on the plug.

The following diagrams show configuration examples.

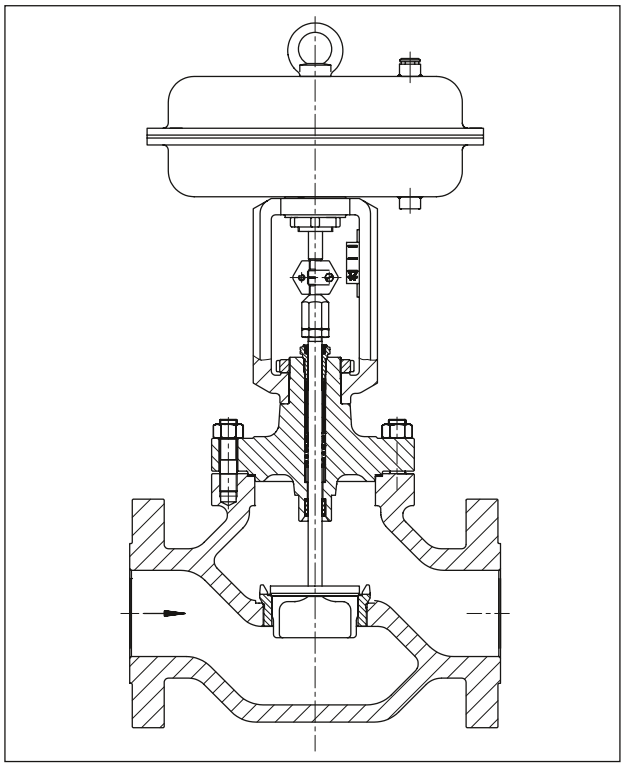


Fig. 2: *Type 3251-1/3251-AM-1 Control Valve with Type 3271 Pneumatic Actuator*

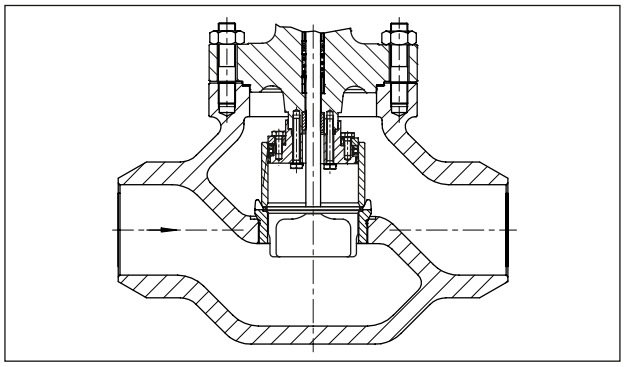


Fig. 3: *Type 3251/3251-AM Valve with welding ends and balanced plug*

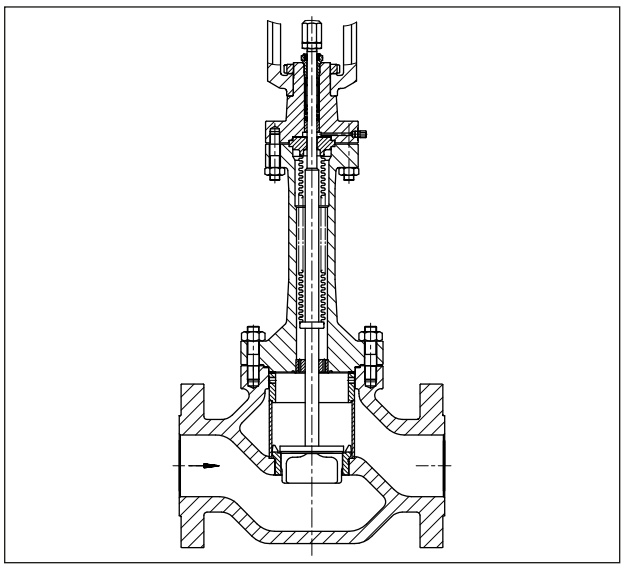


Fig. 4: *Type 3251/3251-AM Valve with flow divider ST 1 and additional bellows seal with test connection*

Differential pressures

See Information Sheet ▶ T 8000-4 for permissible differential pressures.

Fail-safe positions

Depending on how the springs are arranged in the Type 3271 or Type 3277 Pneumatic Actuator (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3), the valve has two different fail-safe positions that become effective when the supply air fails:

- **Actuator stem extends (fail-close):**
  The valve is closed upon air supply failure.
- **Actuator stem retracts (fail-open):**
  The valve is opened upon air supply failure.

Table 1: *Technical data for Type 3251 and Type 3251-AM · DIN version*

<table>
<tr><td colspan="3">Valve type</td><td colspan="7">3251</td><td>3251-AM</td></tr>
<tr><td colspan="3">Material</td><td colspan="2">Cast steel 1.0619</td><td colspan="2">Cast steel 1.7357</td><td colspan="2">Cast stainless steel 1.4408</td><td>AM stainless steel 1.4401/ 1.4404</td></tr>
<tr><td colspan="2">Nominal size[1]</td><td>DN</td><td>15 to 150</td><td>200 to 300</td><td>15 to 150</td><td>200 to 300</td><td>15 to 150</td><td>200 to 300</td><td>15 to 80</td></tr>
<tr><td colspan="2">Pressure rating[1]</td><td>PN</td><td>16 to 400</td><td>Up to PN 160</td><td>16 to 400</td><td>Up to PN 160</td><td>16 to 400</td><td>Up to PN 160</td><td>16 to 400</td></tr>
<tr><td rowspan="2">Type of end connections</td><td colspan="2">Flanges</td><td colspan="8">All DIN EN versions</td></tr>
<tr><td colspan="2">Welding ends</td><td colspan="8">According to DIN EN 12627</td></tr>
<tr><td colspan="3">Seat-plug seal</td><td colspan="8">Metal seal · Soft seal · High-performance metal seal</td></tr>
<tr><td colspan="3">Characteristic</td><td colspan="8">Equal percentage · Linear · On/off (▶ T 8000-3)</td></tr>
<tr><td colspan="3">Rangeability</td><td colspan="8">50:1</td></tr>
<tr><td colspan="3">Optional RFID tag</td><td colspan="8">Application range according to the technical specifications and the explosion protection certificates. These documents are available on our website:
▶ www.samsongroup.com > Products > Electronic nameplate
The permissible range for temperatures at the RFID tag is between -40 and +85 °C.</td></tr>
<tr><td colspan="3">Conformity</td><td colspan="7">CE EAC</td><td>CE</td></tr>
<tr><td colspan="10">Temperature ranges in °C · Permissible operating pressures according to pressure-temperature diagram (see Information Sheet ▶ T 8000-2)</td></tr>
<tr><td colspan="3">Body with standard bonnet</td><td colspan="8">-10 to +220 · Up to +350 with high-temperature packing</td></tr>
<tr><td colspan="3">Body with insulating section or bellows seal</td><td colspan="3">-10 to +400</td><td colspan="3">-10 to +500</td><td colspan="2">-196 to +550</td><td>-196 to +450</td></tr>
<tr><td rowspan="4">Valve plug[2]</td><td rowspan="2">Standard</td><td>Metal seal</td><td colspan="8">-196 to +550</td><td>-196 to +450</td></tr>
<tr><td>Soft seal</td><td colspan="8">-196 to +220</td><td>-196 to +220</td></tr>
<tr><td colspan="2">Balanced with PTFE ring</td><td colspan="8">-50 to +220[3]</td><td>-50 to +220[3]</td></tr>
<tr><td colspan="2">Balanced with graphite ring</td><td colspan="8">220 to 500[4]</td><td>220 to 450</td></tr>
<tr><td colspan="10">Leakage class according to DIN EN 60534-4</td></tr>
<tr><td rowspan="3">Valve plug</td><td rowspan="2">Standard</td><td>Metal seal</td><td colspan="8">Standard: IV · High-performance metal seal: V</td></tr>
<tr><td>Soft seal</td><td colspan="8">VI</td></tr>
<tr><td colspan="2">Balanced, metal seal</td><td colspan="8">With PTFE ring (standard): IV · High-performance metal seal: V · With graphite ring: IV</td></tr>
</table>

1) Type 3251:
DN 400: PN 16 to 63 · DN 500: PN 16 to 40

2) Only in combination with suitable body material

3) Lower temperatures on request

4) Higher temperatures on request

Table 2: *Materials*

Valve type		**3251**			**3251-AM**
Standard version Valve body[1]		**Cast steel 1.0619**	**Cast steel 1.7357**	**Cast stainless steel 1.4408**	**AM stainless steel 1.4401/1.4404**
Valve bonnet		1.0460/1.0619	1.7335/1.7357	1.4408/1.4401	1.4408/1.4401
Seat and plug[2]	Metal seal	1.4006/1.4008		1.4404/1.4409	1.4006/1.4008 or 1.4404/1.4409
Seal ring for	Soft seal	PTFE with 15 % glass fiber			
	Pressure balancing	PTFE with carbon · Graphite			
Guide bushings		1.4112		2.4610	2.4610
Packing[3]		V-ring packing: PTFE with carbon; spring: 1.4310 · High-temperature packing			
Body gasket		Graphite seal on metal core			
Insulating section		1.0460/1.0619	1.7335/1.7357	1.4408/1.4401	1.4408/1.4401
Bellows seal[5]					
Intermediate piece		1.0460/1.0619	1.7335/1.7357	1.4408/1.4401	1.4408/1.4401
Metal bellows		1.4571[4]			–
Heating jacket		1.4404			–

1) **Type 3251:** Other materials (e.g. for high-temperatures or low temperatures) as well as special materials for applications with seawater: 1.4538, duplex 1.4470, nickel-based alloy 9.4610 · See pressure-temperature diagrams in Information Sheet ▶ T 8000-2

Type 3251-AM: Other materials on request

2) Seats and metal-seated plug also with Stellite® facing or plug made of solid Stellite® available (up to max. K_{VS} 630)

3) Other packings on request (▶ T 8000-6)

4) Other bellows material on request

5) Bellows with both >DN 200 and >PN 100 on request

K_{VS} coefficients

Terms for control valve sizing according to DIN IEC 60534-2-1 and DIN IEC 60534-2-2: F_L = 0.95, x_T = 0.75

= Versions available for Type 3251-AM (restricted range for Type 3251-AM)

Table 3: *Overview with flow divider ST 1 (K_{VS}-1), ST 2 (K_{VS}-2) or ST 3 (K_{VS}-3)*

K_{VS}	0.1 0.16 0.25 0.4	0.63	1.0	1.6	2.5	4	6.3	10	16	25	40	63	100	160	250	360	630	1000	1500	2000	2500	3600
K_{VS}-1		–		1.45	2.2	3.6	5.7	9	14.5	22	36	57	90	144	225	320	560	900	1350	1800	2250	3200
K_{VS}-2		–				3.2	5.0	8	13	20	32	50	80	125	200	290	500	800	1200	1600	2000	–
K_{VS}-3		–				3	4.8	7.5	12	20	30	47	75	120	190	270	480	750	1100	1500	1900	–
Seat Ø in mm		6		12			24		31	38	50	63	80	100	125	150	200	250	300	350	400	500
Travel in mm		15										30		30		60				120		

Table 4: *Versions without flow divider · PN 16 to 400*

K_{VS}	0.1 0.16 0.25 0.4	0.63	1.0	1.6	2.5	4	6.3	10	16	25	40	63	100	160	250	360	630	1000	1500	2000	2500	3600
DN																						
15	•	•	•	•	•	•																
25	•	•	•	•	•	•	•	•														
40	•	•	•	•	•	•	•	•	•	•												
50						•	•	•	•	•	•											
80						•	•	•	•	•	•	•	•[1]									
100										•	•	•	•[1]	•[1]								
150												•	•	•[1]	•[1]	•[1]						
200													•	•	•[1][2]	•[1]	•[1]					
250													•	•	•[1][2]	•[1]	•[1]	•[1]				
300														•	•[1][2]	•[1]	•[1]	•[1]	•[1]			
400																•[1]	•[1]	•[1]	•[1]	•[1]	•[1]	
500																		•[1]	•[1]	•[1]	•[1]	•[1]

[1] Version also available with balanced plug

[2] Pressure balancing only for ≥ PN 63

Table 5: *Versions with flow divider ST 1 (K_{VS}-1) · PN 16 to 160*[3]

K_{VS}-1	–	1.45	2.2	3.6	5.7	9	14.5	22	36	57	90	144	225	320	560	900	1350	1800	2250	3200
DN																				
15		•	•	•																
25		•	•	•	•	•														
40			•	•	•	•	•	•												
50				•	•	•	•	•	•											
80				•	•	•	•	•	•	•	•[1]									
100									•	•	•	•[1]	•[1]							
150											•	•	•[1]	•[1]	•[1]					
200												•	•	•[1][2]	•[1]	•[1]				
250												•	•	•[1][2]	•[1]	•[1]	•[1]			
300													•	•[1][2]	•[1]	•[1]	•[1]	•[1]		
400															•[1]	•[1]	•[1]	•[1]	•[1]	
500																	•[1]	•[1]	•[1]	•[1]

[1] Version also available with balanced plug

[2] Pressure balancing only for ≥ PN 63

[3] PN 250 to 400 with flow divider ST 1 and pressure balancing on request

Table 6: *Versions with flow divider ST 2 (K_{VS}-2) · PN 16 to 160*[3)]

K_{VS}-2	–					3.2	5.0	8	13	20	32	50	80	125	200	290	500	800	1200	1600	2000	–
DN																						
50						•	•	•	•	•	•											
80						•	•	•	•	•	•	•	•[1)]									
100										•	•	•	•[1)]	•[1)]								
150												•	•	•[1)]	•[1)]	•[1)]						
200													•	•	•[1)2)]	•[1)]	•[1)]					
250													•	•	•[1)2)]	•[1)]	•[1)]					
300														•	•[1)2)]	•[1)]	•[1)]	•[1)]				
400																•[1)]	•[1)]	•[1)]	•[1)]	•[1)]	•[1)]	
500																		•[1)]	•[1)]	•[1)]	•[1)]	

1) Version also available with balanced plug

2) Pressure balancing only for ≥ PN 63

3) PN 250 to 400 with flow divider ST 2 and pressure balancing on request

Table 7: *Versions with flow divider ST 3 (K_{VS}-3) · PN 16 to 160*[4)]

K_{VS}-3	–					3	4.8	7.5	12	20	30	47	75	120	190	270	480	750	1100	1500	1900	–
DN																						
50						•[3)]	•[3)]	•[3)]														
80						•[3)]	•[3)]	•[3)]	•[3)]	•[3)]	•											
100										•[3)]	•	•										
150												•	•	•[1)]	•[1)]							
200													•	•	•[1)2)]	•[1)]						
250													•	•	•[1)2)]	•[1)]	•[1)]					
300														•	•[1)2)]	•[1)]	•[1)]	•[1)]				
400																•[1)]	•[1)]	•[1)]	•[1)]	•[1)]		
500																		•[1)]	•[1)]	•[1)]	•[1)]	

1) Version also available with balanced plug

2) Pressure balancing only for ≥ PN 63

3) Version not possible with bellows seal

4) PN 250 to 400 with flow divider ST 3 and pressure balancing on request

Dimensions

Specifications in mm

= Versions available for Type 3251-AM (restricted range for Type 3251-AM)

Table 8: *Type 3251/3251-AM Valve · Face-to-face dimensions according to DIN EN 558*

Valve	DN	15	25	40	50	80	100	150	200	250	300	400	500
Length L (flanges and welding ends)	PN 10 to 40	130	160	200	230	310	350	480	600	730	850	1100	1250
	PN 63 to 160	210	230	260	300	380	430	550	650	775	900	1150	–
	PN 250	230	260	300	350	450	520	700	–	–	–	–	–
	PN 320	230	260	300	350	450	520	700	–	–	–	–	–
	PN 400	264[2)]	308[2)]	378[2)]	444[2)]	570[2)]	666[2)]	908[2)]	–	–	–	–	–
H8 for actuator	350 cm²	240	240	240	240	240	240	–	–	–	–	–	–
	350v2 cm²	240	240	240	240	240	240	–	–	–	–	–	–
	355v2 cm²	240	240	240	240	240	240	418	–	–	–	–	–
	750v2 cm²	240	240	240	240	240	240	418	418	418	–	–	–
	1000 cm²	–	–	–	295	295	295	418	418	*)	*)	*)	*)
	1400-60 cm²	–	–	–	295	295	295	418	418	*)	*)	*)	*)
	1400-120 cm²	–	–	–	–	–	480	503	503	503[3)]	650	650	650
	2800 cm²	–	–	–	–	–	480	503	503	503[3)]	650	650	650
	2 x 2800 cm²	–	–	–	–	–	480	503	503	503[3)]	650	650	650
H2[1)] (approx.) (DN 100 and larger with foot)	PN 10 to 40	50	60	80	90	100	160	220	230	310	370	415	*)
	PN 63 to 160	60	70	90	100	100	180	235	270	300	390	*)[4)]	–
	PN 250	70	80	100	110	140	220	285	–	–	–	–	–
	PN 320	70	80	100	110	140	220	*)	–	–	–	–	–
	PN 400	75	90	110	120	160	237	320	–	–	–	–	–
With standard bonnet													
H4	PN 10 to 40	152	152	164	217	222	242	314	387	442	655	640	760
	PN 63 to 160	152	152	164	217	222	242	314	387	519	655	640[4)]	–
	PN 250 to 400	186	186	195	251	288	348	443	–	–	–	–	–
With insulating section													
H4	PN 10 to 160	353	353	365	487	492	512	665	947	1067	1151	1109[5)]	*)[6)]
	PN 250 to 400	382	382	391	516	546	598	790	–	–	–	–	–
With bellows seal													
	Travel												
H4	15 to 120	PN 10 to 40	362	362	374	608	613	613	730	1024	1479	1514	1516	1590
	120	PN 63 to 160	–	–	–	–	–	–	–	–	*)	*)	*)[4)]	–
	15 to 60	PN 63 to 160	362	362	374	608	613	613	862	*)	*)	*)	*)[4)]	–
		PN 250 to 320	633	633	635	853	853	800	*)	–	–	–	–	–
		PN 400	633	633	635	*)	*)	*)	*)	–	–	–	–	–

*) On request

1) The H2 dimension is the distance from the middle of the flow channel to the bottom of the valve body (DN 100 and larger: up to the bottom of the foot). The dimension up to the bottom of the flange may differ. It may be lower or higher. The dimension up to the bottom of the flange is determined based on the corresponding flange standard.

2) Face-to-face dimensions acc. to SAMSON standard

3) H8 = 650 mm with 250 mm seat bore

4) PN 63

5) Up to PN 63

6) Up to PN 40

Table 9: *Further dimensions[1] in combination with Type 3271 Pneumatic Actuator or Type 3277 Pneumatic Actuator*

Actuator area		**cm²**	**350**	**350v2**	**355v2**	**750v2**	**1000**	**1400-60**	**1400-120**	**2800**	**2x 2800**
Diaphragm ØD		mm	280	280	280	394	462	530	534	770	770
H[2]	Type 3271	mm	82	92	131	236	403	337	598	713	1213
H[2]	Type 3277	mm	82	82	121	236	–	–	–	–	–
H3[3]		mm	110	110	110	190	610	610	650	650	650
H5	Type 3277	mm	101	101	101	101	–	–	–	–	–
Thread	Type 3271		M30x1.5	M30x1.5	M30x1.5	M30x1.5	M60x1.5	M60x1.5	M100x2	M100x2	M100x2
Thread	Type 3277		M30x1.5	M30x1.5	M30x1.5	M30x1.5	–	–	–	–	–
a	Type 3271		G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ⅜ (⅜ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G 1 (1 NPT)	G 1 (1 NPT)	G 1 (1 NPT)
a2	Type 3277		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

Dimensional drawings

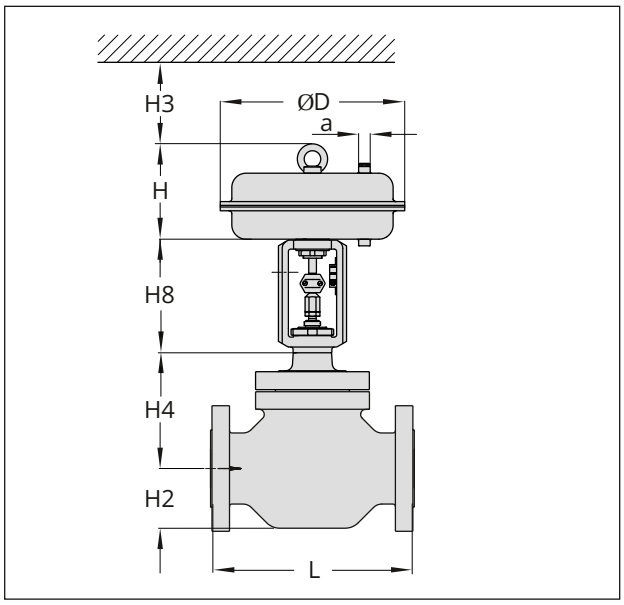


Fig. 5: *Type 3251-1/3251-AM-1 up to DN 80/NPS 3 without foot (Type 3251/3251-AM Valve with Type 3271 Pneumatic Actuator)*

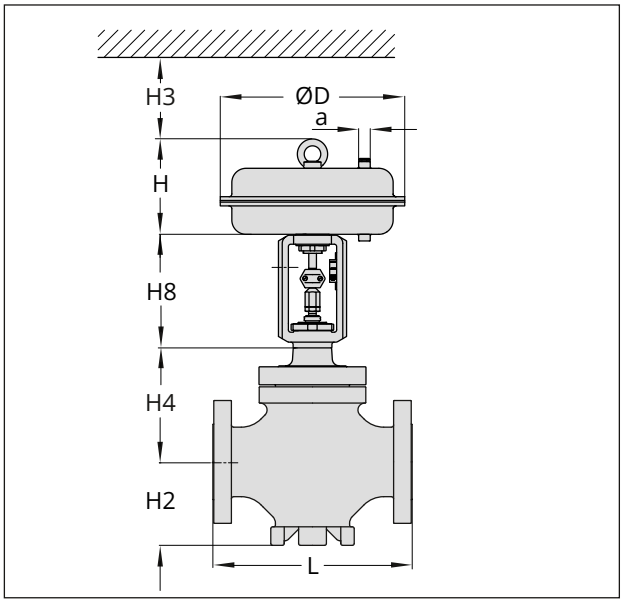


Fig. 6: *Type 3251-1 in DN 100/NPS 4 and larger (Type 3251 Valve with Type 3271 Pneumatic Actuator)*

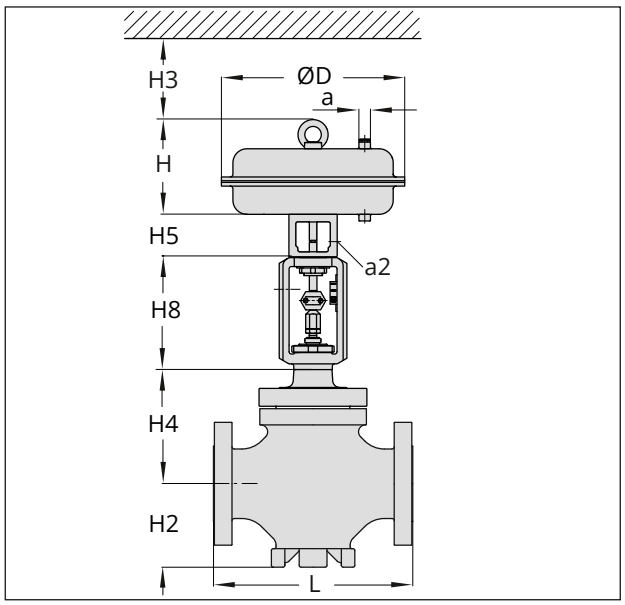


Fig. 7: *Type 3251-7/3251-AM-7 (Type 3251/3251-AM Valve with Type 3277 Pneumatic Actuator)*

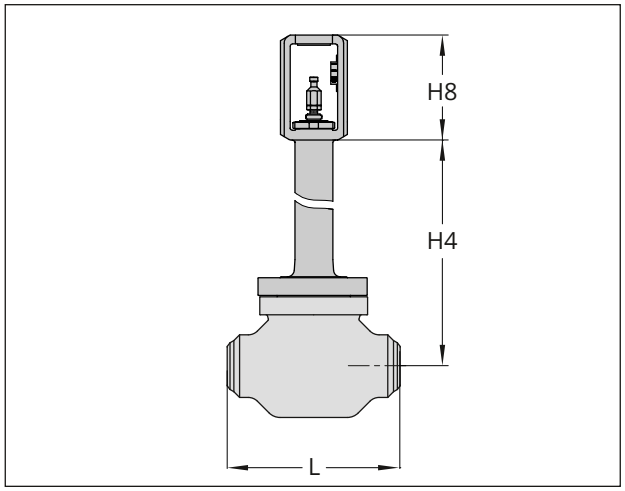


Fig. 8: *Type 3251/3251-AM with bellows seal or insulating section*

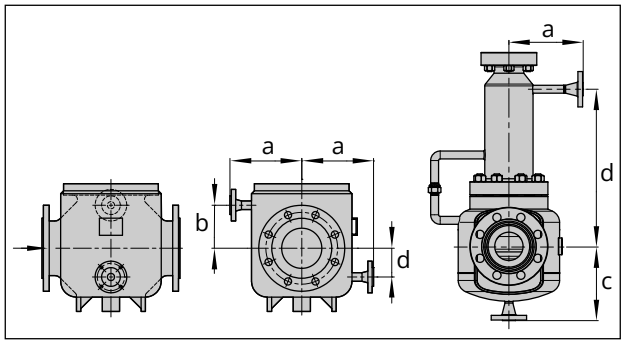


Fig. 9: *Type 3251 with heating jacket · Dimensions on request*

Weights

Specifications in kg

= Versions available for Type 3251-AM (restricted range for Type 3251-AM)

Table 10: *Type 3251/3251-AM Valve*

Valve	DN		15	25	40	50	80	100	150	200	250	300	400	500
With standard bonnet														
Weight[1] without actuator	PN 16 to 40	Approx.	15.5	17.5	21.5	38	59	78	201	427	858	920	1450	*)
	PN 63 to 160	Approx.	20	25	30.5	54	89	116	334	642	1090	1480	2600[2]	–
	PN 250	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
	PN 320	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
	PN 400	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
With insulating section														
Weight[1] without actuator	PN 16 to 40	Approx.	19.5	21.5	24	44	65	84	237	492	928	1030	1497	*)
	PN 63 to 160	Approx.	24	29	33	60	95	122	370	707	1160	1250	*)[2]	–
	PN 250	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
	PN 320	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
	PN 400	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
With bellows seal														
Weight[1] without actuator	PN 10 to 40	Approx.	20	22	24	45	66	85	242	532	975	1010	*)	*)
	PN 63 to 160	Approx.	25	30	34	61	96	123	375	768	1240	1240	*)[2]	–
	PN 250 to 320	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–
	PN 400	Approx.	*)	*)	*)	*)	*)	*)	*)	–	–	–	–	–

*) On request

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

2) PN 63

Table 11: *Weights[1] for Type 3271 and Type 3277 Pneumatic Actuators*

Type ... Actuator	Actuator area in cm²		350	350v2	355v2	750v2	1000	1400-60	1400-120	2800	2x 2800
3271	Without handwheel	kg	8	11.5	15	36	80	70	175	450	950
3271	With handwheel	kg	13	16.5	20	41	180	175	300[2]/ 425[3]	575[2]/ 700[3]	*)
3277	Without handwheel	kg	12	15	19	40	–	–	–	–	–
3277	With handwheel	kg	17	20	24	45	–	–	–	–	–

*) On request

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.).

2) Side-mounted handwheel up to 80 mm travel

3) Side-mounted handwheel with travel higher than 80 mm travel

Selection and sizing of the valve

1. Calculate K_{VS} coefficient according to DIN EN 60534-1.
2. Select nominal size DN and K_{VS} coefficient from Table 3 and from Table 4 to Table 7.
3. Determine the permissible differential pressure Δp from the pressure-temperature diagrams in Information Sheet ▶ T 8000-4.
4. Select the valve body material from Table 1 and Table 2 as well as from the pressure-temperature diagrams (see Information Sheet ▶ T 8000-2).
5. Select accessories from Table 1 and Table 2.

Ordering text

The following specifications are required on ordering:

Type	3251 or 3251-AM
Nominal size	DN ...
Pressure rating	PN ...
Body material	See Table 2
Bonnet	Standard bonnet, insulating section or bellows seal
Type of end connections	Flanges or welding ends
Plug	Standard or balanced Soft seal, metal seal or high-performance metal seal
Actuator	Type 3271 or Type 3277 (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3)
Fail-safe action	Actuator stem extends/retracts
Process medium	Density in kg/m³ and temperature in °C
Flow rate	in kg/h or m³/h in standard or operating state
Pressure	p_1 and p_2 in bar (absolute pressure p_{abs}), with minimum, normal and maximum flow rate
RFID tag	Yes/No
Valve accessories	Positioner and/or limit switch

Associated Information Sheets	▶ T 8000-X
Associated Data Sheets for Types 3271/3277 Pneumatic Actuators	▶ T 8310-1 to ▶ T 8310-3
Associated Mounting and Operating Instructions	▶ EB 8051

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