DATA SHEET

T 8066 EN

Series 250 · Type 3256-1 and Type 3256-7 Pneumatic Control Valves
Type 3256 Angle Valve

ANSI version

Application

Control valve for process engineering applications with high industrial requirements

Nominal size	**NPS ½ to 12**
Pressure rating	**Class 150 to 2500**
Temperatures	**–325 to +1022 °F (–196 to +550 °C)**

Special features

Type 3256 Angle Valve with

- Type 3271 Pneumatic Actuator (Type 3256-1 Control Valve)
- Type 3277 Pneumatic Actuator (Type 3256-7 Control Valve) for integral positioner attachment

Valve body made of

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

Low-noise valve plug

- Metal seal
- Soft seal up to Class 300
- 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:
Positioners, limit switches, solenoid valves and other accessories according to IEC 60534-6-1 [1] and NAMUR recommendation. Details in Information Sheet ▶ T 8350.

Versions

Standard version with PTFE packing for temperatures from 14 to 428 °F (–10 to +220 °C) or with adjustable high-temperature packing from 14 to 662 °F (–10 to +350 °C), valve size NPS ½ to 20, pressure rating Class 150 to 2500 (see Table 1)

– **Type 3256-1** (Fig. 1) · Type 3256 Valve and Type 3271 Actuator with 350 to 2800 cm² actuator area (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3)

[1] Accessories required. See associated actuator documentation.

Fig. 1: *Type 3256-1 Control Valve with Type 3271 Pneumatic Actuator, positioner and solenoid valve*

– **Type 3256-7** · Type 3256 Valve and Type 3277 Actuator with 350 to 750v2 cm² actuator area for integral positioner attachment (see Data Sheet ▶ T 8310-1)

Further versions

– **Welding ends or welding-neck ends** according to ANSI B16.25
– **Flow divider** or **AC-1/AC-3 trim** for noise reduction · See Data Sheets ▶ T 8081, ▶ T 8082 and ▶ T 8083
– **Valve plug with pressure balancing** · See Table 3
– **Perforated plug** · See Data Sheet ▶ T 8086

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- **Ceramic or carbide metal internal parts** · See Data Sheet ▶ T 8071
- **Special version for flashing service**
- **Insulating section or bellows seal** · See Technical data
- **Heating jacket** · Details on request
- **Additional handwheel** · See Data Sheet ▶ T 8310-1
- **DIN version** · DN 15 to 500, PN 16 to 400, see Data Sheet ▶ T 8065
- Type 3256 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 3256-2 Electric Control Valve** · Details on request

Principle of operation

The medium flows through the valve in the direction indicated by the arrow. The valve plug determines the cross-sectional area of flow. The version with bellows seal (Fig. 3) is fitted with a test connection to monitor the stainless steel bellows.

The valves can be equipped with a flow divider (▶ T 8081) for noise reduction.

Pressure balancing must be used when high pressures or differential pressures act on the plug (Fig. 4).

Fail-safe position

Depending on how the springs are arranged in the 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 closes when the supply air fails.
- **Actuator stem retracts (fail-open)**
  The valve opens when the supply air fails.

Differential pressures

The permissible differential pressures can be found in the Information Sheet ▶ T 8000-4.

Note: Fig. 2 to Fig. 5 show configuration examples.

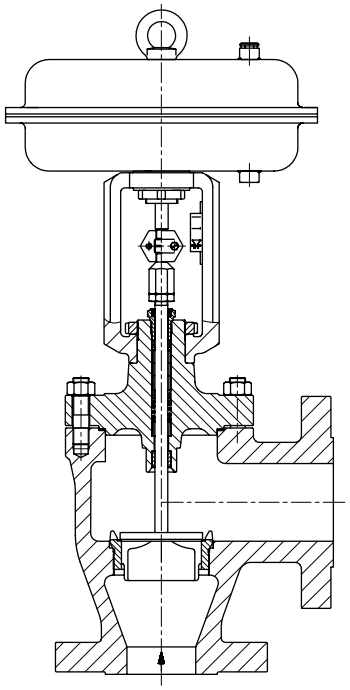


Fig. 2: *Type 3256-1 Control Valve with Type 3271 Actuator*

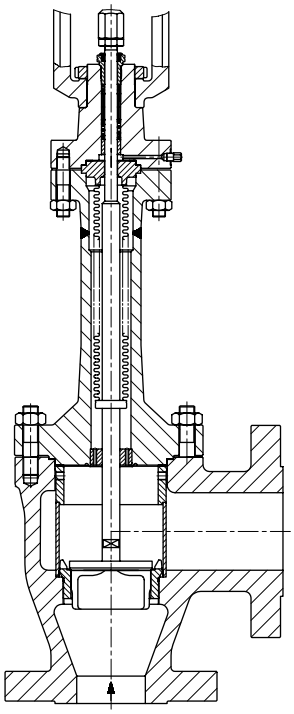


Fig. 3: *Type 3256 Valve with bellows seal and flow divider ST 1*

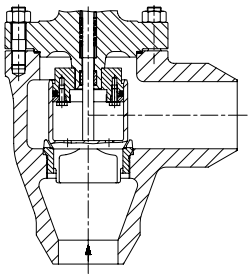


Fig. 4: *Type 3256 Valve with balanced plug*

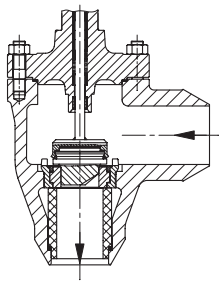


Fig. 5: *Type 3256 Valve with ceramic trim and ceramic anti-wear pipe*

Table 1: *Technical data for Type 3256*

Material			**Cast steel A216 WCC**	**Cast steel A217 WC6**	**Cast stainless steel A351 CF8M**
Nominal size and pressure rating			NPS ½ to 12 in Class 150 to 2500 NPS 16 to 20 on request		
Type of end connections		Flanges	All ANSI versions		
		Welding ends	According to ANSI B16.25		
Seat-plug seal			Metal seal · Soft seal · High-performance metal seal		
Characteristic			Equal percentage · Linear · On/off (▶ T 8000-3)		
Rangeability			50:1		
RFID tag (optional)			Application range according to the technical specifications and the explosion protection certificates. Documents ▶ *www.samsongroup.com* > *Products* > *Electronic nameplate*		
Conformity			CE		
Temperature ranges in °F (°C) · Permissible operating pressures acc. to pressure-temperature diagrams (see Information Sheet ▶ T 8000-2)					
Body without insulating section			14 to 428 °F (–10 to +220 °C) · Up to 662 °F (up to 350 °C) with high-temperature packing		
Body with insulating section or bellows seal			–20 to +800 °F (–29 to +425 °C)	–20 to +932 °F (–29 to +500 °C)	–325 to +1022 °F (–196 to +550 °C)
Valve plug [1]	Standard	Metal seal	–325 to +1022 °F (–196 to +550 °C) [2]		
		Soft seal	–325 to +428 °F (–196 to +220 °C) [2]		
	Balanced with PTFE ring		–58 to +428 °F (–50 to +220 °C) [3]		
	Balanced with graphite ring		428 to 932 °F/220 to 500°C [4]		
RFID tag (optional)			Max. permissible operating temperature: 185 °F (85 °C)		
Leakage class according to ANSI/FCI 70-2					
Valve plug	Standard	Metal seal	Standard: IV · High performance: V		
		Soft seal	VI		
	Balanced, metal seal		With PTFE ring (standard): IV · High-performance metal seal: V		
			With graphite ring: IV		

1) Only in combination with suitable body material
2) Note: The temperature limits are not directly converted temperatures.
3) Lower temperatures on request
4) Higher temperatures on request

Table 2: *Materials*

Standard version Body [1]		**Cast steel A216 WCC**	**Cast steel A217 WC6**	**Cast stainless steel A351 CF8M**
Valve bonnet		A216 WCC/A105	A217 WC6/A182 F12 Cl. 2	A351 CG8M/A182 F316
Seat and plug [2]	Metal seal	410-2/1.4008		316 L/CF3M
Seal ring for	Soft seal	PTFE with 15 % glass fiber		
	Pressure balancing	PTFE with carbon · Graphite		
Guide bushings		1.4112		2.4610
Packing [3]		V-ring packing: PTFE with carbon, spring: 302 or high-temperature packing		
Body gasket		Graphite seal on metal core		
Insulating section		A216 WCC/A105	A217 WC6/A182 F12 Cl. 2	A351 CF8M/A182 F316
Metal bellows seal [5]				
Intermediate piece		A216 WCC/A105	A217 WC6/A182 F12 Cl. 2	A351 CF8M/A182 F316
Metal bellows		1.4571 [4]		
Heating jacket		A240 316L		

1) 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
2) Seats and metal-seated plug also with Stellite® facing or plug made of solid Stellite® available (up to max. C_V 735/K_{VS} 630)
3) Other packings on request (▶ T 8000-6)
4) Other bellows material on request
5) Bellows with both NPS >8 and Class >600 on request

Table 3: *Available C_V/K_{VS} coefficients · Versions highlighted in gray also available with balanced plug*

Terms for control valve sizing according to IEC 60534, Parts 2-1 and 2-2: $F_L = 0.95$, $X_T = 0.75$

Table 3.1: *Overview with flow divider ST 1 (C_V-1, K_{VS}-1), ST 2 (C_V-2, K_{VS}-2) or ST 3 (C_V-3, K_{VS}-3)*

C_V		**0.12 0.2 0.3 0.5**	**0.75**	**1.2**	**2**	**3**	**5**	**7.5**	**12**	**20**	**30**	**47**	**75**	**120**	**190**	**290**	**420**	**735**	**1150**	**1730**
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**
C_V-1		–			1.7	2.6	4.2	7	10.5	17	26	42	67	105	170	265	375	650	1040	1560
K_{VS}-1		–			1.45	2.2	3.6	5.7	9	14.5	22	36	57	90	144	225	320	560	900	1350
C_V-2		–					3.7	6.0	9.5	15	23	37	60	95	145	230	335	580	928	1392
K_{VS}-2		–					3.2	5.0	8	13.0	20	32	50	80	125	200	290	500	800	1200
C_V-3		–					3.5	5.6	9	14	23	35	55	90	140	220	315	560	880	–
K_{VS}-3		–					3.0	4.8	7.5	12	20	30	47	75	120	190	270	480	750	
Seat Ø	in	0.24			0.47		0.94			1.22	1.5	1.97	2.48	3.15	3.94	4.92	5.91	7.87	9.84	11.81
	mm	6			12		24			31	38	50	63	80	100	125	150	200	250	300
Rated travel	in	0.59										1.18				2.36			4.72	
	mm	15										30				60			120	

Table 3.2: *Versions without flow divider · Class 150 to 2500*

C_V		**0.12 0.2 0.3 0.5**	**0.75**	**1.2**	**2**	**3**	**5**	**7.5**	**12**	**20**	**30**	**47**	**75**	**120**	**190**	**290**	**420**	**735**	**1150**	**1730**
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**
NPS	DN																			
½	15	•	•	•	•	•	• [1]													
1	25	•	•	•	•	•	•	•	• [1]											
1½	40	•	•	•	•	•	•	•	•	•	• [1]									
2	50						•	•	•	•	•	• [1]								
3	80						•	•	•	•	•	•	•	• [1]						
4	100										•	•	•	•	• [1]					
6	150												•	•	•	•	• [1]			
8	200													•	•	• [2]	•	• [1]		
10	250													•	•	• [2]	•	•	• [1]	
12	300														•	• [3]	•	•	•	• [1]

[1] Reduced C_V/K_{VS} coefficients with Class 900 to 2500:

C_V	4.2	–	10.5	–	26	42	–	105	170	–	375	650	1040	1560
K_{VS}	3.6	–	9	–	22	36	–	90	144	–	320	560	900	1350

[2] Pressure balancing only for ≥ Class 600

[3] Pressure balancing only for Class 600/900

Table 3.3: *Versions with flow divider ST 1 · Class 150 to 900* [1]

C_V-1		**–**			**1.7**	**2.6**	**4.2**	**7**	**10.5**	**17**	**26**	**42**	**67**	**105**	**170**	**265**	**375**	**650**	**1040**	**1560**
K_{VS}-1					**1.45**	**2.2**	**3.6**	**5.7**	**9**	**14.5**	**22**	**36**	**57**	**90**	**144**	**225**	**320**	**560**	**900**	**1350**
NPS	DN																			
½	15				•	•	•													
1	25				•	•	•	•	•											
1½	40					•	•	•	•	•	•									
2	50						•	•	•	•	•	•								
3	80						•	•	•	•	•	•	•	•						
4	100										•	•	•	•	•					
6	150												•	•	•	•	•			
8	200													•	•	• [2]	•	•		
10	250													•	•	• [2]	•	•	•	
12	300														•	• [3]	•	•	•	•

[1] Class 1500 to 2500 with flow divider ST 1 and pressure balancing on request

[2] Pressure balancing only for ≥ Class 600

[3] Pressure balancing only for Class 600/900

Table 3.1: *Overview with flow divider ST 1 (C_V-1/K_{VS}-1), ST 2 (C_V-2/K_{VS}-2) or ST 3 (C_V-3/K_{VS}-3)*

C_V		**0.12 0.2 0.3 0.5**	**0.75**	**1.2**	**2**	**3**	**5**	**7.5**	**12**	**20**	**30**	**47**	**75**	**120**	**190**	**290**	**420**	**735**	**1150**	**1730**
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**
C_V-1		–			1.7	2.6	4.2	7	10.5	17	26	42	67	105	170	265	375	650	1040	1560
K_{VS}-1		–			1.45	2.2	3.6	5.7	9	14.5	22	36	57	90	144	225	320	560	900	1350
C_V-2		–					3.7	6.0	9.5	15	23	37	60	95	145	230	335	580	928	1392
K_{VS}-2		–					3.2	5.0	8	13.0	20	32	50	80	125	200	290	500	800	1200
C_V-3		–					3.5	5.6	9	14	23	35	55	90	140	220	315	560	880	–
K_{VS}-3		–					3.0	4.8	7.5	12	20	30	47	75	120	190	270	480	750	
Seat Ø	in	0.24			0.47		0.94			1.22	1.5	1.97	2.48	3.15	3.94	4.92	5.91	7.87	9.84	11.81
	mm	6			12		24			31	38	50	63	80	100	125	150	200	250	300
Rated travel	in	0.59										1.18				2.36			4.72	
	mm	15										30				60			120	

Table 3.4: *Versions with flow divider ST 2 · Class 150 to 900* [1)]

C_V-2		**–**	**3.7**	**6.0**	**9.5**	**15**	**23**	**37**	**60**	**95**	**145**	**230**	**335**	**580**	**928**	**1392**
K_{VS}-2			**3.2**	**5.0**	**8**	**13**	**20**	**32**	**50**	**80**	**125**	**200**	**290**	**500**	**800**	**1200**
NPS	DN															
2	50		•	•	•	•	•	•								
3	80		•	•	•	•	•	•	•	•						
4	100						•	•	•	•	•					
6	150								•	•	•	•	•			
8	200									•	•	• [2)]	•	•		
10	250									•	•	• [2)]	•	•	•	
12	300										•	• [3)]	•	•	•	•

1) Class 1500 to 2500 with flow divider ST 2 and pressure balancing on request
2) Pressure balancing only for ≥ Class 600
3) Pressure balancing only for Class 600/900

Table 3.5: *Versions with flow divider ST 3 · Class 150 to 900* [1)]

C_V-3		**–**	**3.5**	**5.6**	**9**	**14**	**23**	**35**	**55**	**90**	**140**	**220**	**315**	**560**	**880**	**–**
K_{VS}-3			**3.0**	**4.8**	**7.5**	**12**	**20**	**30**	**47**	**75**	**120**	**190**	**270**	**480**	**750**	
NPS	DN															
2 [1)]	50 [1)]		• [4)]	• [4)]	• [4)]											
3	80		• [4)]	• [4)]	• [4)]	• [4)]	• [4)]	•								
4	100						• [4)]	•	•							
6	150								•	•	•	•				
8	200									•	•	• [2)]	•			
10	250										•	• [2)]	•	•		
12	300										•	• [3)]	•	•	•	–

1) Class 1500 to 2500 with flow divider ST 3 and pressure balancing on request
2) Pressure balancing only for ≥ Class 600
3) Pressure balancing only for Class 600/900
4) Version not possible with bellows seal

Table 4: *Dimensions in inches and mm for standard versions of Type 3256-1 and Type 3256-7 Pneumatic Control Valves*

Table 4.1: *Type 3256 Valve*

Valve		NPS	½	1	1½	2	3	4	6	8	10	12
		DN	15	25	40	50	80	100	150	200	250	300
Length L	Class 150	in	3.62	3.62	4.37	5.00	5.88	6.94	8.88	10.69	On request	
		mm	92	92	111	127	149	176	225	272		
	Class 300	in	3.75	3.88	4.62	5.25	6.25	7.25	9.31	11.19		
		mm	95	99	117	133	159	184	236	284		
	Class 600	in	3.98	4.12	4.94	5.62	6.62	7.75	10.00	12.00		
		mm	101	105	125	143	168	197	254	305		
	Class 900	in	4.25	5.00	6.00	7.25	7.50	9.00	12.00	14.50		
		mm	108	127	152	184	190	229	305	368		
	Class 1500	in	4.25	5.00	6.00	7.25	9.25	10.75	13.88	16.38		
		mm	108	127	152	184	235	273	353	416		
	Class 2500	in	5.19	6.06	7.56	8.88	11.38	13.25	18.00	20.12		
		mm	132	154	192	226	289	337	457	511		
Height H4	Class 150 to 600	in	5.28	5.08	5.08	6.89	6.30	6.69	9.13	On request		
		mm	134	129	129	175	160	170	210			
	Class 900	in	6.89	6.69	6.69	8.70	6.30	6.69	9.13			
		mm	175	170	170	221	160	170	210			
	Class 1500 to 2500	in	6.89	6.69	6.69	8.70	9.53	11.65	14.61	21.54	On request	
		mm	175	170	170	221	242	296	371	547		
H8 for actuator	350 cm²	in	9.45	9.45	9.45	9.45	9.45	9.45	–			
		mm	240	240	240	240	240	240				
	355v2 cm²	in	9.45	9.45	9.45	9.45	9.45	9.45	16.46	–		
		mm	240	240	240	240	240	240	418			
	700 cm²	in	9.45	9.45	9.45	9.45	9.45	9.45	16.46	16.46	16.46	–
		mm	240	240	240	240	240	240	418	418	418	
	750v2 cm²	in	9.45	9.45	9.45	9.45	9.45	9.45	16.46	16.46	16.46	–
		mm	240	240	240	240	240	240	418	418	418	
	1000 cm²	in	–			11.61	11.61	11.61	16.46	16.46	On req.	
		mm				295	295	295	418	418		
	1400-60 cm²	in				11.61	11.61	11.61	16.46	16.46	On req.	
		mm				295	295	295	418	418		
	1400-120 cm²	in				18.90	18.90	18.90	19.80	19.80	19.80	25.60
		mm				480	480	480	503	503	503 [1)]	650
	2800 cm²	in				18.90	18.90	18.90	19.80	19.80	19.80	25.60
		mm				480	480	480	503	503	503 [1)]	650
	2x2800 cm²	in				18.90	18.90	18.90	19.80	19.80	19.80	25.60
		mm				480	480	480	503	503	503 [1)]	650

[1)] H8 = 650 mm with 250 mm seat bore

Table 4.2: *Type 3271 and Type 3277 Pneumatic Actuators*

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.

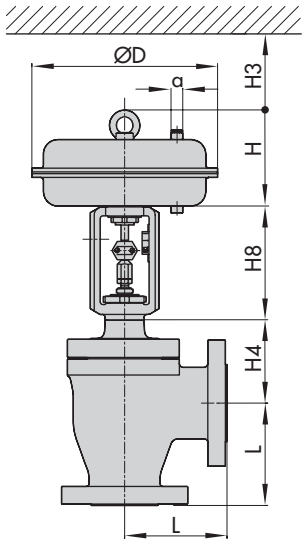
Actuator area		cm²	350	350v2	355v2	750v2	1000	1400-60	1400-120	2800	2 x 2800
Diaphragm ØD		in	11.02	11.02	11.02	15.51	18.19	20.87	21.02	30.32	30.32
		mm	280	280	280	394	462	530	534	770	770
H [1]	Type 3271	in	3.23	3.62	5.16	9.29	15.87	13.27	23.54	28.07	47.76
		mm	82	92	131	236	403	337	598	713	1213
	Type 3277	in	3.23	3.23	4.76	9.29	–	–	–	–	–
		mm	82	82	121	236	–	–	–	–	–
H3 [2]		in	4.33	4.33	4.33	7.48	24.02	24.02	25.59	25.59	25.59
		mm	110	110	110	190	610	610	650	650	650
H5	Type 3277	in	3.98	3.98	3.98	3.98	–	–	–	–	–
		mm	101	101	101	101	–	–	–	–	–
Thread	Type 3271		M30x1.5				M60x1.5		M100x2		
	Type 3277		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	G ⅜	G ⅜	G ⅜	–	–	–	–	–

[1] 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

[2] Minimum clearance required to remove the actuator

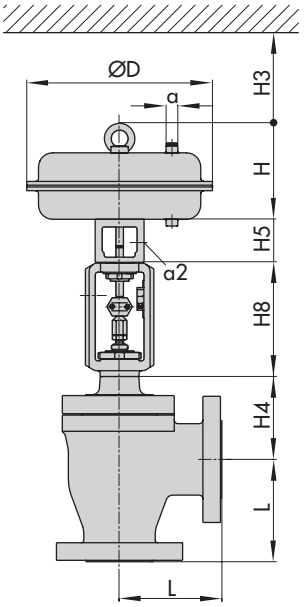
Dimensional drawings

Type 3271 Pneumatic Actuator

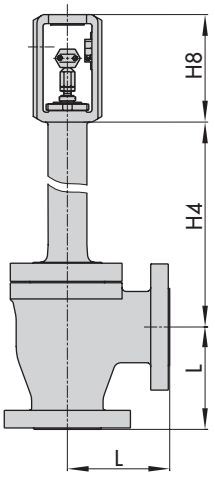


Type 3256-1

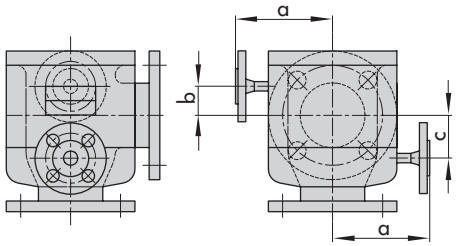
Type 3277 Pneumatic Actuator



Type 3256-7



Type 3256 with bellows seal or insulating section



Type 3256 with heating jacket
Dimensions on request

Table 5: *Weights in lbs and kg for standard versions of Type 3256-1 and Type 3256-7 Pneumatic Control Valves*

Table 5.1: *Type 3256 Valve*

Valve		**NPS**	**½**	**1**	**1½**	**2**	**3**	**4**	**6**	**8**	**10**	**12**
		DN	**15**	**25**	**40**	**50**	**80**	**100**	**150**	**200**	**250**	**300**
Valve [1] without actuator (approx.)	Class 150	lbs	26	33	49	77	128	165	419	On request		
		kg	12	15	22	35	58	75	190			
	Class 300	lbs	On request									
		kg										
	Class 600	lbs	On request			128	203	On request				
		kg				58	92					
	Class 900	lbs	On req.	84	126	201	243					
		kg		38	57	91	110					
	Class 1500 to 2500	lbs	On request									
		kg										

[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.).

Table 5.2: *Type 3271 and Type 3277 Pneumatic Actuators*

Actuator area			cm²	350	350v2	355v2	750v2	1000	1400-60	1400-120	2800	2 x 2800
Weight [1]	Type 3271	Without handwheel	lbs (approx.)	18	26	33	79	176	154	386	992	2095
			kg (approx.)	8	11.5	15	36	80	70	175	450	950
		With handwheel	lbs (approx.)	29	37	44	90	397	386	661 [2]/ 937 [3]	1268 [2]/ 1544 [3]	On req.
			kg (approx.)	13	16.5	20	41	180	175	300 [2]/ 425 [3]	575 [2]/ 700 [3]	On req.
	Type 3277	Without handwheel	lbs (approx.)	27	33	42	89	–	–	–	–	–
			kg (approx.)	12	15	19	40	–	–	–	–	–
		With handwheel	lbs (approx.)	38	44	53	100	–	–	–	–	–
			kg (approx.)	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.).
[2] Side-mounted handwheel up to 80 mm travel
[3] Side-mounted handwheel with travel higher than 80 mm travel

Table 6: *Dimensions in inch and mm and weights in lbs and kg for Type 3256 Valve with insulating section · Without actuator*

Nominal size		NPS	½	1	1½	2	3	4	6	8	10	12
		DN	15	25	40	50	80	100	150	200	250	300
Height H4	Class 150 to 600	in	13.19	12.99	13.03	17.52	16.93	17.32	22.05	On req.		
		mm	335	330	331	445	430	440	560			
	Class 900	in	14.57	14.41	14.41	19.13	16.93	17.32	22.05			
		mm	370	366	366	486	430	440	560			
	Class 1500 to 2500	in	14.57	14.41	14.41	19.13	19.69	21.5	28.23			
		mm	370	366	366	486	500	546	717			
Weight [1] without actuator	Class 150/300	lbs	66	79	97	159	243	344	794	1411	On req.	
		kg	30	36	44	72	110	156	360	640		
	Class 600	lbs	On request									
		kg										
	Class 900	lbs	95	108	150	231	287	397	882	1609		
		kg	43	49	68	105	130	180	400	730		
	Class 1500 to 2500	lbs	On request									
		kg										

[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.).

Table 7: *Dimensions in inch and mm and weights in lbs and kg for Type 3256 with bellows seal · Without actuator*

Nominal size			NPS	½	1	1½	2	3	4	6	8	10	12
			DN	15	25	40	50	80	100	150	200	250	300
			Travel										
Height H4	Class 150	in	0.59 to 2.36" 15 to 60 mm	13.5	13.31	13.35	22.28	22.09	21.3	23.86	–		
		mm		343	338	339	566	561	541	606			
	Class 300 to 900	in		13.5	13.31	13.35	22.28	22.09	21.3	On req.			
		mm		343	338	339	566	561	541				
	Class 1500	in	0.59	24.45	24.29	24.02	20.63	19.69	On req.				
		mm	15	621	617	610	524	500					
		in	1.18	–			20.63	19.69	On req.				
		mm	30				524	500					
		in	2.36	–						On req.			
		mm	60										
	Class 2500	in	0.59	24.45	24.29	24.02	On request						
		mm	15	621	617	610							
		in	1.18	–									
		mm	30										
		in	2.36	–						On req.			
		mm	60										
	Class 150 to 300	in	1.18 to 4.72	–							On req.		
		mm	30 to 120										
	Class 600 to 900	in	1.18 to 2.36										
		mm	30 to 60										
	Class 600	in	4.72										
		mm	120										

Nominal size		NPS	½	1	1½	2	3	4	6	8	10	12
		DN	15	25	40	50	80	100	150	200	250	300
Weight [1] without actuator	Class 150/300	lbs	On req.						794	On req.	On req.	
		kg							360			
	Class 600	lbs	66	79	97	159	243	344	794	1411		
		kg	30	36	44	72	110	156	360	640		
	Class 900	lbs	95	108	150	231	287	397	882	1609		
		kg	43	49	68	105	130	180	400	730		
	Class 1500 to 2500	lbs	On req.									
		kg										

[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.).

Selection and sizing of the control valve

1. Calculate the C_V/K_V coefficient according to IEC 60534.
2. Select nominal size and C_V/K_{VS} coefficient from Table 3.
3. Select the actuator and determine the permissible differential pressure from the 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 data

Nominal size	NPS
Pressure rating	Class
Body material	See Table 2
Bonnet	Standard bonnet, insulating section or bellows seal
Type of end connections	Flanges/welding ends
Plug	Standard or balanced Soft seal, metal seal or high-performance metal seal
Characteristic	Equal percentage, linear or on/off
Actuator	Type 3271 or Type 3277 (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3)
Fail-safe position	Fail-close or fail-open
Process medium	Density in lb/cu.ft or kg/m³ and temperature in °F or °C
Flow coefficients	lbs/h or kg/h or cu.ft/min 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 Sheet	▶ T 8000-X
Associated Data Sheets for pneumatic actuators	▶ T 8310-1 to -3
Associated Mounting and Operating Instructions	▶ EB 8066

Note: The temperature limits for DIN and ANSI versions are not directly converted temperatures.