

T 8012 EN

Series 240 · Type 3241-1 and Type 3241-7 Pneumatic Control Valves

Type 3241 Globe Valve · ANSI version



Application

Control valve for process engineering and industrial applications

Nominal size	NPS ½ to 12
Pressure rating	Class 125 to 300
Temperatures	-320 to +842 °F (-196 to +450 °C)



Special features

Type 3241 Globe Valve operated with

- Type 3271 Pneumatic Actuator (Type 3241-1 Control Valve)
- Type 3277 Pneumatic Actuator (Type 3241-7 Control Valve) for integral positioner attachment

Valve body made of

- Cast iron
- Cast steel
- Cast stainless steel
- Cold-resisting cast steel
- Forged steel
- Forged stainless steel
- Special materials

Undivided valve bonnet up to NPS 6

Valve plug

- Metal seal
- Soft seal
- High-performance metal seal

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 60534-6-1¹⁾ and NAMUR Recommendation (see Information Sheet ► T 8350).

¹⁾ Accessories required. See associated actuator documentation.

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

Versions

Standard version for temperatures from 14 to 428 °F (-10 to +220 °C) or for nominal sizes NPS 8 to 12 also with adjustable high-temperature packing from 14 to 662 °F (-10 to +350 °C)

- **Type 3241-1** · NPS ½ to 12 with Type 3271 Pneumatic Actuator (see Data Sheets ▶ T 8310-1, ▶ T 8310-2 and ▶ T 8310-3)
- **Type 3241-7** · NPS ½ to 6 with Type 3277 Pneumatic Actuator for integral positioner attachment (see Data Sheet ▶ T 8310-1)

Further versions

- **NPT threaded connections** · ½ to 2 NPT, Class 250
- **Adjustable packing** · See Information Sheet ▶ T 8000-6
- **Flow divider or AC-1 trim** for noise reduction · See Data Sheets ▶ T 8081 and ▶ T 8082
- **Valve plug with pressure balancing** · See Technical data
- **Version with insulating section or bellows seal** · See technical data
- **Heating jacket** · On request
- **Stainless steel actuator** · See Data Sheet ▶ T 8310-1
- **Additional handwheel** · See Data Sheets ▶ T 8310-1, ▶ T 8310-2, ▶ T 8310-3
- **Type 3241 PSA** · Version for pressure swing adsorption plants · See Data Sheets ▶ T 8015-1, ▶ T 8012-1
- **DIN/DVGW-tested version for gas according to DIN EN 161:2013-04** · See Data Sheet ▶ T 8020-2
- **DIN version** · See Data Sheet ▶ T 8015
- **Versions with dimensions according to Japanese Industry Standard (JIS)** · See Data Sheet ▶ T 8012-2
- **NACE versions** for sour gas applications · Details on request

Design and principle of operation

The medium flows through the valve in the direction indicated by the arrow. The valve plug position determines the cross-sectional area between the seat and plug.

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.

The following diagrams show configuration examples.

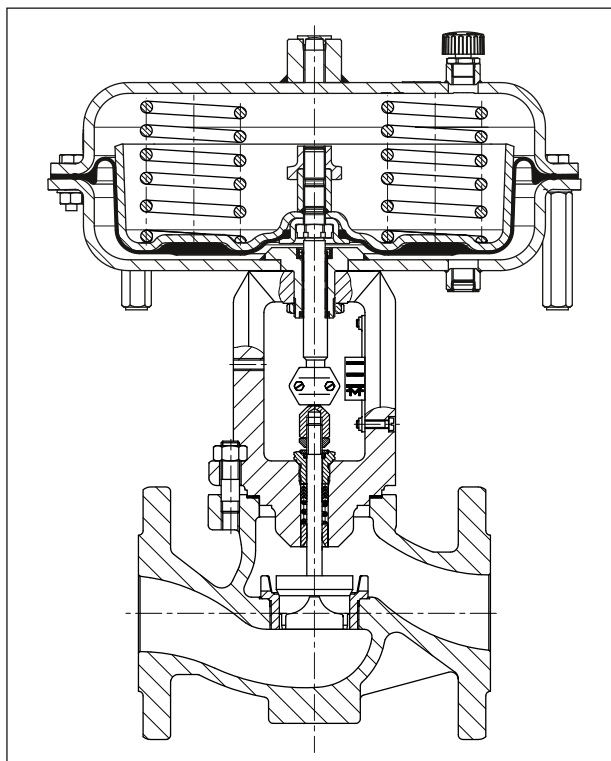


Fig. 1: Type 3241-1 Control Valve · NPS ½ to 6

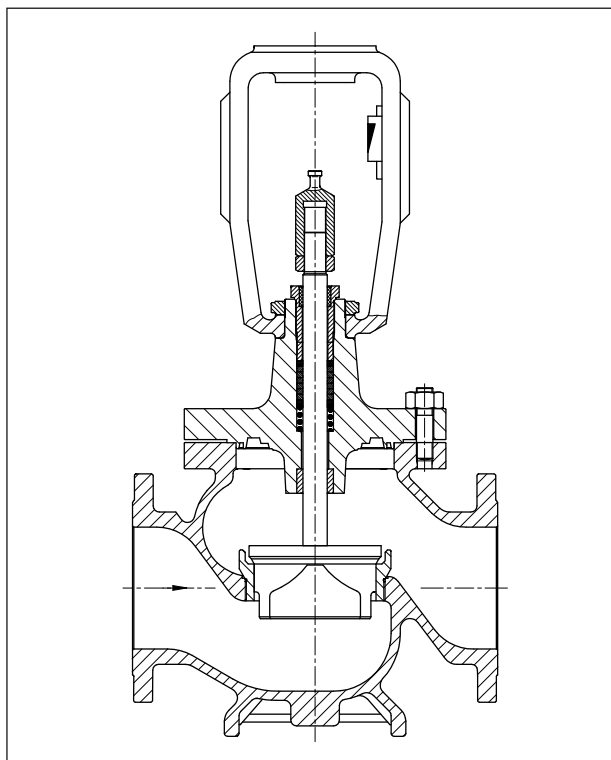


Fig. 2: Type 3241 Valve · NPS 8 to 12

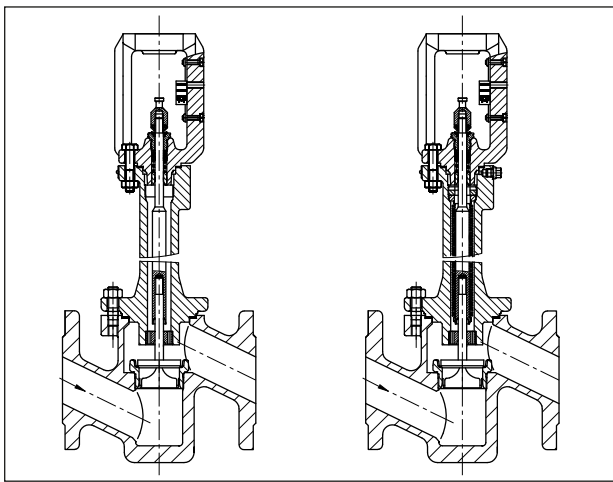


Fig. 3: Type 3241 Valve · NPS ½ to 3 · Forged steel version
with insulating section (left) with bellows seal (right)

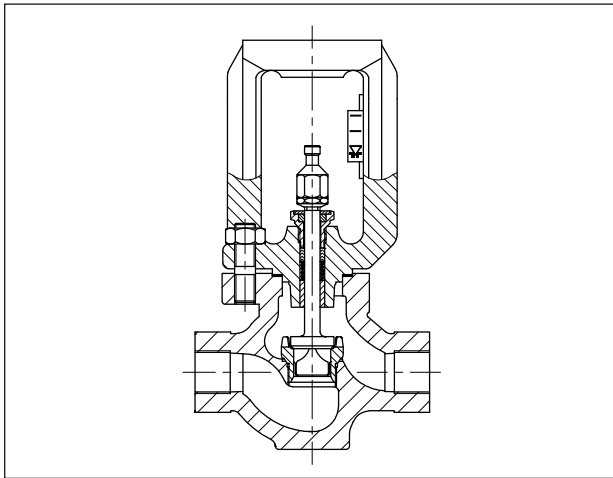


Fig. 4: Type 3241 Valve with NPT thread · ½ to 2 NPT

Table 1: Technical data for Type 3241

Nominal size			NPS	1 to 10	½ to 2	½ to 12				½, 1, 1½, 2, 3 ²⁾	
ASTM material					Cast iron A126B	Cast steel A216 WCC	Cast stain-less steel A351 CF8M	Cast steel A352 LCC	Cast stain-less steel A351 CF8	Forged steel A105	Forged stain-less steel A182 F316
Pressure rating		Class		125	250	150/300				300	
Type of end connections		Flanges		FF	–	RF ¹⁾				RF ¹⁾	
		Welding ends		–	–	ASME B16.25				–	
		Thread		–	NPT	–				–	
Seat-plug seal			Metal seal · Soft seal · High-performance metal seal								
Characteristic			Equal percentage · Linear (according to Information Sheet ► T 8000-3)								
Rangeability			50:1 for NPS ½ to 2 · 30:1 for NPS 2½ to 6 · 50:1 for NPS 8 and larger								
Heating jacket			Class 150								
Conformity											
Optional RFID tag			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 +185 °F (-40 and +85 °C).								
Temperature ranges in °F (°C) · Permissible operating pressures according to pressure-temperature diagram (see Information Sheet ► T 8000-2)											
Body with standard bonnet			All nominal sizes: 14 to 428 (-10 to +220) Nominal sizes NPS 8 to 12 with high-temperature packing: 14 to 662 °F (-10 to +350 °C)								
Body with	Insulating section		-20 to +449 (-29 to +232)	-20 to +797 (-29 to +425)	-58 to +842 ³⁾ (-50 to +450)	-50 to +653 (-46 to +345)	-58 to +842 ³⁾ (-50 to +450)	-20 to +797 (-29 to +425)	-58 to +842 ³⁾ (-50 to +450)		
	With long insulating section		–	–	-320 to +842 (-196 to +450)	–	-320 to +842 (-196 to +450)	–	-320 to +842 (-196 to +450)		
	Bellows seal		-20 to +449 (-29 to +232)	-20 to +797 (-29 to +425)	-58 to +842 ³⁾ (-50 to +450)	-50 to +653 (-46 to +345)	-58 to +842 ³⁾ (-50 to +450)	-20 to +797 (-29 to +425)	-58 to +842 ³⁾ (-50 to +450)		
	With long bellows seal		–	–	-320 to +842 (-196 to +450)	–	-320 to +842 (-196 to +450)	–	-320 to +842 (-196 to +450)		
Valve plug	Standard	Metal seal	-320 to +842 (-196 to +450)								
		Soft seal	-320 to +428 (-196 to +220)								
	Balanced	With PTFE ring	-58 to +428 (-50 to +220) · Lower temperatures on request								
		With graphite ring	50 to 842 (10 to 450)								
Leakage class according to ANSI FCI 70-2											
Valve plug	Standard	Metal seal	Standard: IV · High-performance metal seal: V ⁴⁾								
		Soft seal	VI								
	Balanced	Metal seal	Standard: IV · With PTFE or graphite pressure-balancing ring Special version: V · For high-performance metal seal (only with PTFE balancing ring) on request								

¹⁾ Other versions on request²⁾ NPS 3: Only in A105³⁾ NPS 8 and larger: Up to -320 °F (-196 °C)⁴⁾ Leakage class V for temperatures <-58 °F (<-50 °C) on request

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

Table 2: Materials

Valve body ¹⁾		Cast iron A126B	Cast steel A216 WCC	Cast stain- less steel A351 CF8M	Cast steel A352 LCC	Cast stain- less steel A351 CF8	Forged steel A105	Forged stain- less steel A182 F316
Valve bonnet		A105/ A126B	A105/ A216 WCC	A182 F316/ A351 CF8M/ A182 F316L	A350 LF2/ A352 LCC	A182 F304/ A351 CF8	A105	A182 F316/ A182 F316L
Seat ²⁾		Cr steel UNS S41000/1.4008		A182 F316L/ A351 CF3M	Cr steel UNS S41000/ 1.4008	A182 F304/ A351 CF8	Cr steel UNS S41000/ 1.4008	A182 F316L/ A351 CF3M
Plug ²⁾		Cr steel UNS S41000 (A182 F316L)/1.4008		A182 F316L/ A351 CF3M	Cr steel UNS S41000 (A182 F316L)/ 1.4008	A182 F304/ A351 CF8	Cr steel UNS S41000 (A182 F316L)/ 1.4008	A182 F316L/ A351 CF3M
Plug seal		Seal ring for soft-seated plug: PTFE with glass fiber						
		Seal ring for balanced plug: PTFE with carbon or graphite ring					–	
Guide bushing		A582 430 F		316L/ A182 F316L	316L/ A182 F316L	A182 F304	A582 430F	316L/ A182 F316L
Packing ³⁾		V-ring packing: PTFE with carbon · Spring A479 302						
Body gasket		Graphite on metal core						
Insulating section		A105		A182 F316/ A182 F316L	A350 LF2	A182 F304	A105	A182 F316/ A182 F316L
Bellows seal	Intermediate piece	A105		A182 F316/ A182 F316L	A350 LF2	A182 F304	A105	A182 F316/ A182 F316L
	Metal bellows	1.4571 ⁴⁾				A182 F321	1.4571	
Heating jacket		–	A182 F316L					

¹⁾ Special materials for applications with seawater: N 08904, duplex A995 4A; nickel-based alloy: A494 LW-21M; other special materials on request

²⁾ All seats and metal-seated plug also with Stellite® facing; for nominal sizes ≤NPS 4, plugs up to SB 38 made of solid Stellite® are available.

³⁾ Other packings on request (see Information Sheet ► T 8000-6)

⁴⁾ Other materials on request

C_v and K_{vs} coefficients

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

Conversion of flow coefficients: C_v (US gallons/min) = $1.17 \cdot K_{vs}$ (m³/h) or $K_{vs}/C_v = 0.865$

Table 3: Versions 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	70	95	75	120	190	300	290	420	735	1150 ¹⁾	1730		
K _{VS}	0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	16	25	40	60	80	63	100	160	260	250	360	630	1000	1500		
C _v -1	-	-	-	-	-	-	1.7	2.6	4.2	7	10.5	17	26	42	62	85	67	105	170	275	265	375	650	1040	1560		
K _{VS} -1	-	-	-	-	-	-	1.45	2.2	3.6	5.7	9	14.5	22	36	54	72	57	90	144	234	225	320	560	900	1350		
C _v -2	-	-	-	-	-	-	-	-	-	-	9.5	15	23	37	56	-	60	95	145	245	235	335	580	950	1400		
K _{VS} -2	-	-	-	-	-	-	-	-	-	-	8	13	20	32	48	-	50	80	125	210	200	290	500	800	1200		
C _v -3	-	-	-	-	-	-	-	-	-	-	9	14	23	35	-	-	55	90	140	-	220	315	560	880	1280		
K _{VS} -3	-	-	-	-	-	-	-	-	-	-	7.5	12	20	30	-	-	47	75	120	-	190	270	480	750	1100		
Seat Ø	in	0.12			0.24			0.47			0.945			1.22	1.5	1.9	2.48	3.15	2.48	3.15	3.94	5.12	4.92	5.91	7.87	9.84	11.8
	mm	3			6			12			24			31	38	48	63	80	63	80	100	130	125	150	200	250	300
Travel	in	0.59																1.18				2.36				4.72	
	mm	15																30				60				120	

¹⁾ Not available with valve body made of cast iron (A126B)

Table 4: Versions without flow divider

C _v	0.12	0.2	0.3	0.5	0.75	1.2	2	3	5	7.5	12	20	30	47	70	95	75	120	190	300	290	420	735	1150	1730
K _{vs}	0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10	16	25	40	60	80	63	100	160	260	250	360	630	1000	1500
NPS DN																									
½ 15	•	•	•	•	•	•	•	•	•																
¾ 20	•	•	•	•	•	•	•	•	•	•															
1 25	•	•	•	•	•	•	•	•	•	•	•														
1½ 40				•	•	•	•	•	•	•	•	•													
2 50				•	•	•	•	•	•	•	•	•	•												
2½ 65													•	•	•										
3 80													•	•	•	• ³⁾		• ²⁾							
4 100																	•	• ³⁾	• ³⁾						
6 150																	•	• ³⁾	• ³⁾	• ³⁾					
8 200																		•	•		•	• ³⁾	• ³⁾		
10 250																		•	•		•	• ³⁾	• ³⁾	• ¹⁾³⁾	
12 300																			•		•	• ³⁾	• ³⁾	• ³⁾	• ³⁾

¹⁾ Not available with valve body made of cast iron (A126B)

²⁾ With 19 mm overtravel (not for version with bellows seal)

³⁾ Versions also with pressure balancing

Table 5: Versions with flow divider ST 1 (C_V-1 , $K_{VS}-1$)

C_V-1																						
$K_{VS}-1$																						
NPS	DN																					
1/2	15																					
3/4	20																					
1	25																					
1 1/2	40																					
2	50																					
2 1/2	65																					
3	80																					
4	100																					
6	150																					
8	200																					
10	250																					
12	300																					

1) Not available with valve body made of cast iron (A126B)

2) Versions also with pressure balancing

Table 6: Versions with flow divider ST 2 (C_V-2 , $K_{VS}-2$)

C_V-2																						
$K_{VS}-2$																						
NPS	DN																					
1/2	15																					
3/4	20																					
1	25																					
1 1/2	40																					
2	50																					
2 1/2	65																					
3	80																					
4	100																					
6	150																					
8	200																					
10	250																					
12	300																					

1) Not available with valve body made of cast iron (A126B)

2) Versions also with pressure balancing

Table 7: Versions with flow divider ST 3 (C_V-3, K_{VS}-3)

C _V -3		-										9	14	23	35	-	-	55	90	140	-	220	315	560	880	1280
K _{VS} -3		-										7.5	12	20	30	-	-	47	75	120	-	190	270	480	750	1100
NPS	DN																									
½	15																									
¾	20																									
1	25																									
1½	40																									
2	50											• ²⁾														
2½	65												•	•	•											
3	80												•	•	•											
4	100																	•								
6	150																	•	• ³⁾	• ³⁾						
8	200																		•	•		•	• ³⁾			
10	250																	•	•	•		•	• ³⁾	• ¹⁾³⁾		
12	300																			•		•	• ³⁾	• ³⁾	• ³⁾	

¹⁾ Not available with valve body made of cast iron (A126B)

²⁾ Not versions with bellows seal or insulating section

³⁾ Versions also with pressure balancing

Differential pressures: Permissible differential pressures are listed in Information Sheet ► T 8000-4.

Dimensions and weights

The tables below provide an overview of the dimensions and weights of the standard version of Type 3241 Valve.

Dimensions (in mm and inch) and weights (in kg and lbs)

Table 8: Dimensions of Type 3241 Valve, up to NPS 6 (DN 150)

Valve		NPS	½	¾	1	1½	2	2½	3	4	6
		DN	15	20	25	40	50	65	80	100	150
		NPT	½	¾	1	1½	2	–	–	–	–
Length L ¹⁾	Class 125 and 150	in	7.25	7.25	7.25	8.75	10.00	10.88	11.75	13.88	17.75
		mm	184	184	184	222	254	276	298	352	451
	Class 300	in	7.50	7.62	7.75	9.25	10.50	11.50	12.50	14.50	18.62
		mm	190	194	197	235	267	292	318	368	473
Length L ₁	Class 250	in	6	6	6	8	9.25	–	–	–	–
		mm	152.4	152.4	152.4	203.2	235	–	–	–	–
H ₁ (actuator with ... cm ²)	≤750	in	8.74	8.74	8.74	8.78	8.78	10.31	10.31	13.94	15.35
		mm	222	222	222	223	223	262	262	354	390
	1000 1400-60	in	–							16.26	17.72
		mm	–							413	450
	1400-120 2800	in	–								
		mm	–								
H ₂ ²⁾ for	Cast steel	in	1.73 ³⁾	1.73 ³⁾	1.73 ³⁾	2.83 ³⁾	2.83 ³⁾	3.86	3.86 ³⁾	4.65	6.89
		mm	44 ³⁾	44 ³⁾	44 ³⁾	72 ³⁾	72 ³⁾	98	98 ³⁾	118	175
	Forged steel	in	2.1	–	2.76	3.7	3.93	–	5.2	–	
		mm	53		70	94	100		132		

¹⁾ Face-to-face dimensions according to ANSI/ISA 75.08.01

²⁾ The H₂ dimension is the distance from the middle of the flow channel to the bottom of the valve body.

³⁾ The H₂ dimension in this valve is not the lowest point of the valve. This valve's lowest point is the bottom of the connecting flanges. The flange dimensions comply with the corresponding flange standard.

Table 9: Dimensions of Type 3241 Valve, NPS 8 (DN 200) and larger

Valve		NPS	8	10 (cast iron body)	10	10	12
		DN	200	250 (cast iron body up to 200 mm SB)	250 up to 200 mm SB	250 for 250 mm SB and larger	300
Length L ¹⁾	Class 125 and 150	in	21.38	26.50	26.50	26.50	29.00
		mm	543	673	673	673	737
	Class 300	in	22.38	27.88	27.88	27.88	30.50
		mm	568	708	708	708	775
H4		in	15.35	17.76	17.76	17.76	25.67
		mm	390	451	451	451	652
H8 ²⁾ (actuator with ... cm ²)	1000 1400-60	in	16.46	16.46	16.46	-	19.80
		mm	418	418	418		503
	1400-120 2800	in	19.80	19.80	19.80	25.59	25.59
		mm	503	503	503	650	650

Valve	NPS	8	10 (cast iron body)	10	10	12
	DN	200	250 (cast iron body up to 200 mm SB)	250 up to 200 mm SB	250 for 250 mm SB and larger	300
H2	in	9.06	10.24	11.61	11.61	13.98
	mm	230	260	295	295	355

¹⁾ Face-to-face dimensions according to ANSI/ISA 75.08.01

²⁾ For valves with C_v 290, 420 or 735 (K_{vS} 250, 360 or 630) and 60 mm rated travel operated with overtravel, H8 increases by 6.69" (170 mm).

Table 10: Dimensions for Type 3241 Valve with insulating section or bellows seal, up to NPS 6 (DN 150)

Nominal size			NPS	½	¾	1	1½	2	2½	3	4	6	
			DN	15	20	25	40	50	65	80	100	150	
		Insulating section or bellows seal											
H4 (actu-ator with ... cm²)	≤750 cm²	Short	in	16.10			16.14		17.76		25.04	26.46	
			mm	409			410		451		636	672	
		Long	in	28.07			28.11		29.72		34.53	35.94	
			mm	713			714		755		877	913	
	1000 1400-60	Short	in	-							27.36	28.82	
			mm	-							695	732	
		Long	in	-							36.85	38.31	
			mm	-							936	973	
	1400-120 2800	Short	in	-									
			mm	-									
		Long	in	-									
			mm	-									

Table 11: Dimensions for Type 3241 Valve with insulating section or bellows seal, NPS 8 (DN 200) and larger

Version with		Insulating section					Bellows seal			
Nominal valve size		NPS	8	10 up to 200 mm SB	10 for 250 mm SB	12	8	10 up to 200 mm SB	10 for 250 mm SB	12
		DN	200	250 Up to 200 mm SB	250 250 mm SB	300	200	250 Up to 200 mm SB	250 250 mm SB	300
Height H4 (actuator with ... cm²)	1000 1400-60	in	32.7	41.9	-	45.3	40.8	58.7	-	59.8
		mm	830	1065		1150	1036	1492		1520
	1400-120 2800	in	32.7	41.9	41.9	45.3	40.8	58.7	58.7	59.8
		mm	830	1065	1065	1150	1036	1492	1492	1520
H8 (actuator with ... cm²)	1000 1400-60	in	16.5	16.5	-	19.8	16.5	16.5	-	19.8
		mm	418	418		503	418	418		503
	1400-120 2800	in	19.8	19.8	25.6	25.6	19.8	19.8	25.6	25.6
		mm	503	503	650	650	503	503	650	650

Table 12: Further dimensions¹⁾ in combination with Type 3271 Pneumatic Actuator or Type 3277 Pneumatic Actuator

Actuator area		cm ²	120	175v2	350	350v2	355v2	750v2	1000	1400-60	1400-120	2800
Diaphragm ØD		in	6.61	8.46	11.02	11.02	11.02	15.51	18.19	20.87	21.02	30.32
Diaphragm ØD		mm	168	215	280	280	280	394	462	530	534	770
H ²⁾	Type 3271	in	2.71	3.07	3.23	3.62	5.16	9.29	15.87	13.27	23.54	28.07
H ²⁾	Type 3271	mm	69	78	82	92	131	236	403	337	598	713
H ²⁾	Type 3277	in	2.71	3.07	3.23	3.23	4.76	9.29	–	–	–	–
H ²⁾	Type 3277	mm	69	78	82	82	121	236	–	–	–	–
H3 ³⁾		in	4.33	4.33	4.33	4.33	4.33	7.48	24.02	24.02	25.59	25.59
H3 ³⁾		mm	110	110	110	110	110	190	610	610	650	650
H5	Type 3277	in	3.46	3.98	3.98	3.98	3.98	3.98	–	–	–	–
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	M60x1.5	M60x1.5	M100x2	M100x2
Thread	Type 3277		M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	–	–	–	–
a	Type 3271		G ½ (½ NPT)	G ¼ (¼ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G ¾ (¾ NPT)	G 1 (1 NPT)	G 1 (1 NPT)
a2	Type 3277		–	G ¾ ⁴⁾	G ¾ ⁴⁾	G ¾ ⁴⁾	G ¾ ⁴⁾	G ¾ 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 ¾ to ¾ NPT is available for the a2 connection. It can be ordered separately using the following article number: 100160362

Table 13: Dimensions for Type 3241 Valve with heating jacket¹⁾

Nominal size	NPS	1	½ · 2	2½ · 3	4	6	8 to 12
Nominal size	DN	25	32 to 50	65 to 80	100	150	200 to 300
a	in	4.3	5.5	7.1	7.9	10.4	On request
a	mm	110	140	180	200	265	On request
b	in	0.6	0.8	1.4	2	3.2	On request
b	mm	15	20	35	50	80	On request
c	in	5.5	6.7	8.5	10	5.1	On request
c	mm	140	170	215	255	130	On request
d	in	7.5	7.5	9.1	12.6	14	On request
d	mm	190	190	230	320	355	On request

- ¹⁾ Not for valves with body material A126 B

Dimensional drawings

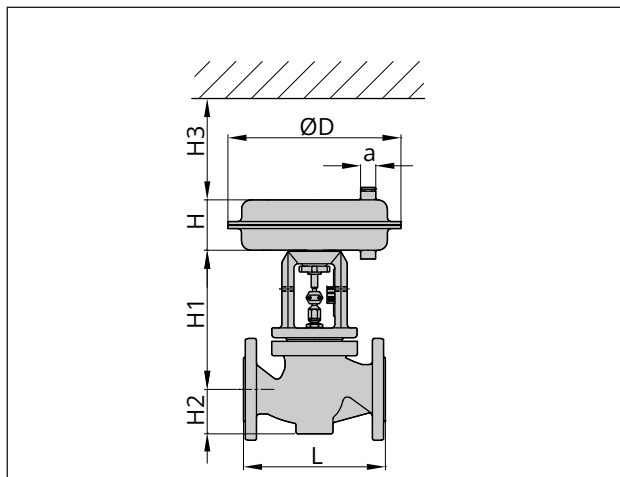


Fig. 5: Type 3241-1 (Type 3271 Pneumatic Actuator) up to nominal size DN 150/NPS 6/DN 150A

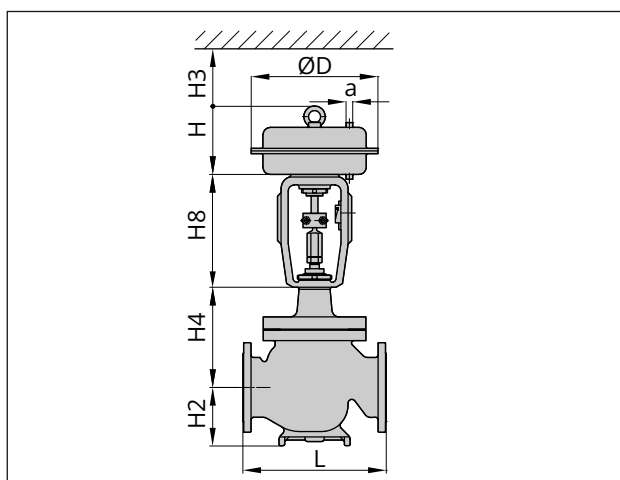


Fig. 6: Type 3241-1 (Type 3271 Pneumatic Actuator) in nominal size DN 200/NPS 8 and larger

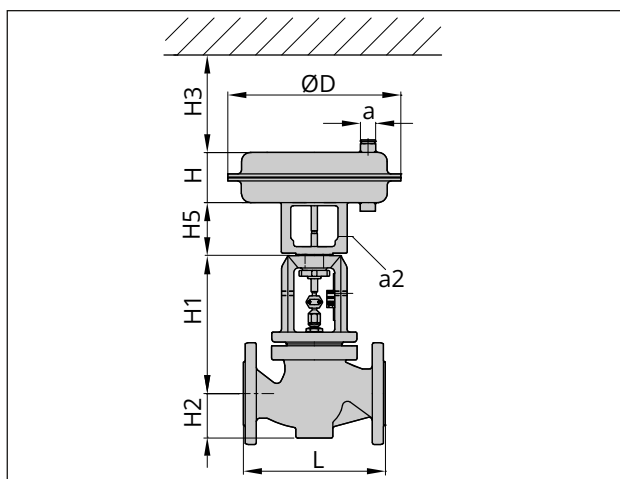


Fig. 7: Type 3241-7 (Type 3277 Pneumatic Actuator) up to nominal size DN 150/NPS 6/DN 150A

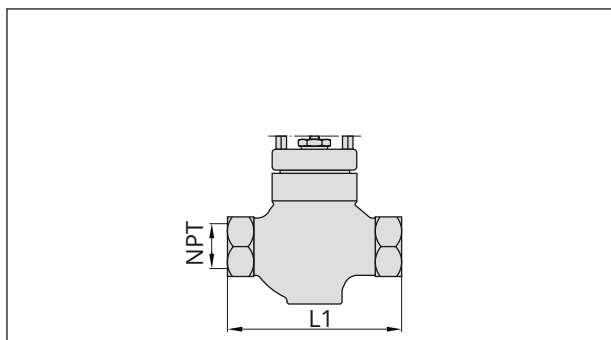


Fig. 8: Type 3241 with 1/2 to 2 NPT threaded connections

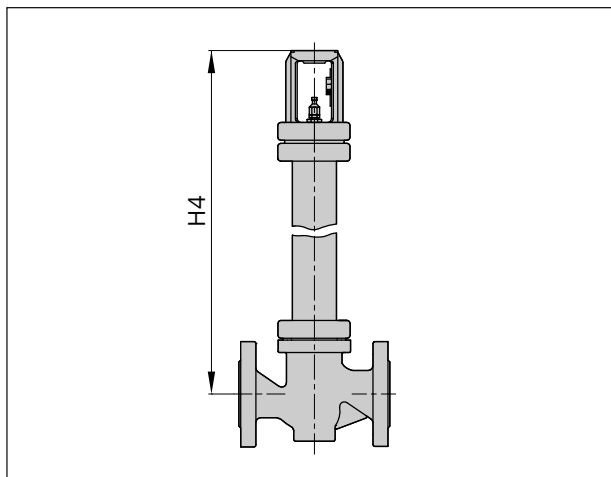


Fig. 9: Type 3241 with insulating section or bellows seal, up to nominal size DN 150/NPS 6/DN 150A

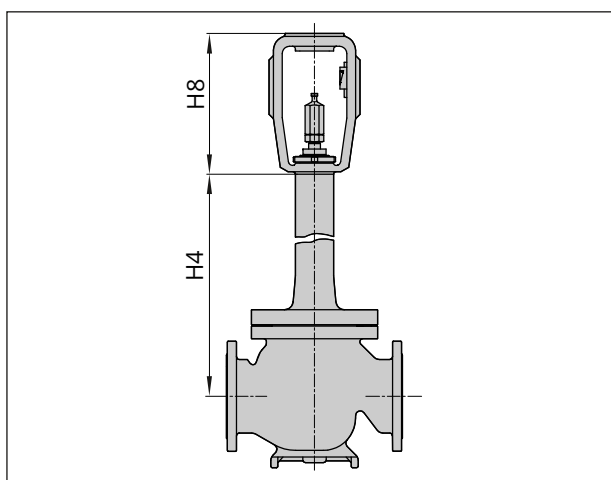


Fig. 10: Type 3241 with insulating section or bellows seal, DN 200/NPS 8 and larger

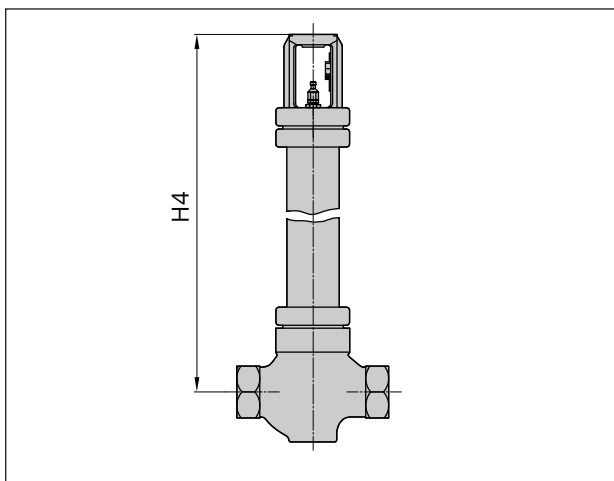


Fig. 11: Type 3241 with insulating section or bellows seal and ½ to 2 NPT threaded connections

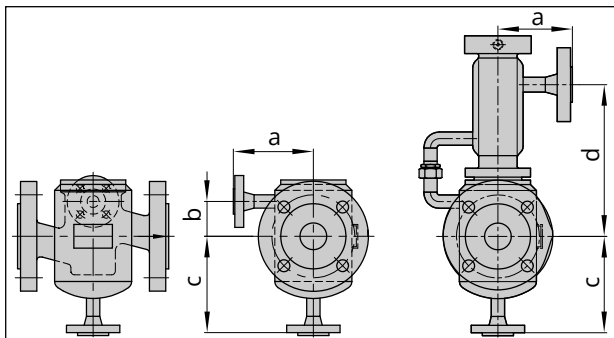


Fig. 12: Type 3241 with heating jacket, up to nominal size DN 100/NPS 4 · With insulating section or bellows seal (right)

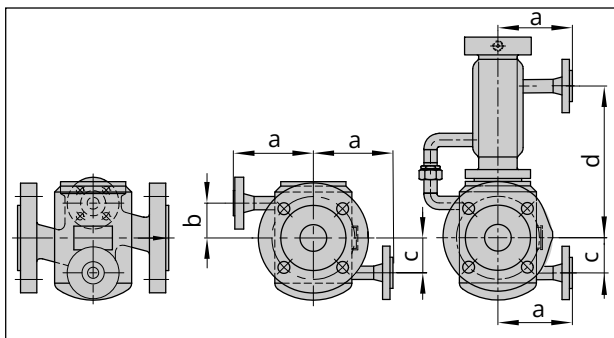


Fig. 13: Type 3241 with heating jacket, nominal size DN 150/NPS 6 and larger · With insulating section or bellows seal (right)

Table 14: Weights for Type 3241 Valve

Valve	NPS	½	¾	1	1½	2	2½	3	4	6	8	10	12
	DN	15	20	25	40	50	65	80	100	150	200	250	300
Version with standard bonnet													
Weight ¹⁾ without actuator	lbs	15	18	20	35	44	71	82	137	287	1096	1892	2535
	kg	7	8	9	16	20	32	37	62	130	497	858	1150

Valve		NPS	½	¾	1	1½	2	2½	3	4	6	8	10	12
		DN	15	20	25	40	50	65	80	100	150	200	250	300
Version with insulating section														
Weight ¹⁾ without actuator	Insulat- ing sec- tion													
		Short	lbs	22	24	26	49	57	88	99	176	353	1191	2220
	kg		10	11	12	22	26	40	45	80	160	540	1007	1220
	Long	lbs	31	33	35	57	66	97	108	194	370	-		
		kg	14	15	16	26	30	44	49	88	168			
Version with bellows seal														
Weight ¹⁾ without actuator	Bellows seal													
		Short	lbs	22	24	26	49	57	88	99	176	353	1312	2407
	kg		10	11	12	22	26	40	45	80	160	595	1092	1267
	Long	lbs	31	33	35	57	66	97	108	194	370	-		
		kg	14	15	16	26	30	44	49	88	168			

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 15: *Weights¹⁾ for Type 3271 and Type 3277 Pneumatic Actuators*

Type ... Actua- tor	Actuator area in cm ²		120	175v2	350	350v2	355v2	750v2	1000	1400-60	1400-120	2800
3271	Without hand- wheel	lbs	6	13	18	26	33	79	176	154	386	992
3271	Without hand- wheel	kg	2.5	6	8	11.5	15	36	80	70	175	450
3271	With handwheel	lbs	9	22	29	37	44	90	397	386	661 ^{2)/} 937 ³⁾	1268 ^{2)/} 1544 ³⁾
3271	With handwheel	kg	4	10	13	16.5	20	41	180	175	300 ^{2)/} 425 ³⁾	575 ^{2)/} 700 ³⁾
3277	Without hand- wheel	lbs	7	22	27	33	42	89	-	-	-	-
3277	Without hand- wheel	kg	3.2	10	12	15	19	40	-	-	-	-
3277	With handwheel	lbs	10	31	38	44	53	100	-	-	-	-
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.).

²⁾ Side-mounted handwheel up to 80 mm travel

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

Ordering text

Globe valve	Type 3241
Nominal size	NPS ...
Pressure rating	Class ...
Body material	See Table 2
Type of end connections	Flanges (RF or FF), welding ends or NPT thread
Seat-plug seal	Soft seal, metal seal or high-performance metal seal
Characteristic Pneumatic actuator	Equal percentage or linear Type 3271 or Type 3277
Fail-safe action	Fail-close or fail-open
Process medium	Density in lb/cu.ft or kg/m ³ and temperature in °F or °C
Flow rate	lbs/h or kg/h or cu.ft/min or m ³ /h in standard or operating state
Pressure	p ₁ and p ₂ in bar or psi (absolute pressure p _{abs}), with minimum, normal and maximum flow rate
RFID tag	Yes/No
Valve accessories	Positioner/limit switch

Associated Information Sheets ▶ T 8000-X
Associated Data Sheets for ▶ T 8310-1 to
Types 3271/3277 Pneumatic Actuators ▶ T 8310-3
Associated Mounting and Operating Instructions ▶ EB 8012

