

## T 8012 EN

### 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

<b>Valve size</b>	<b>NPS ½ to 12</b>
<b>Pressure rating</b>	<b>Class 125 to 300</b>
<b>Temperatures</b>	<b>-320 to +842 °F (-196 to +450 °C)</b>

#### 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)

Valve body made of

- Cast iron
- Cast steel, cast stainless steel or cast cold-resisting steel
- Forged steel or 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 valve accessories:

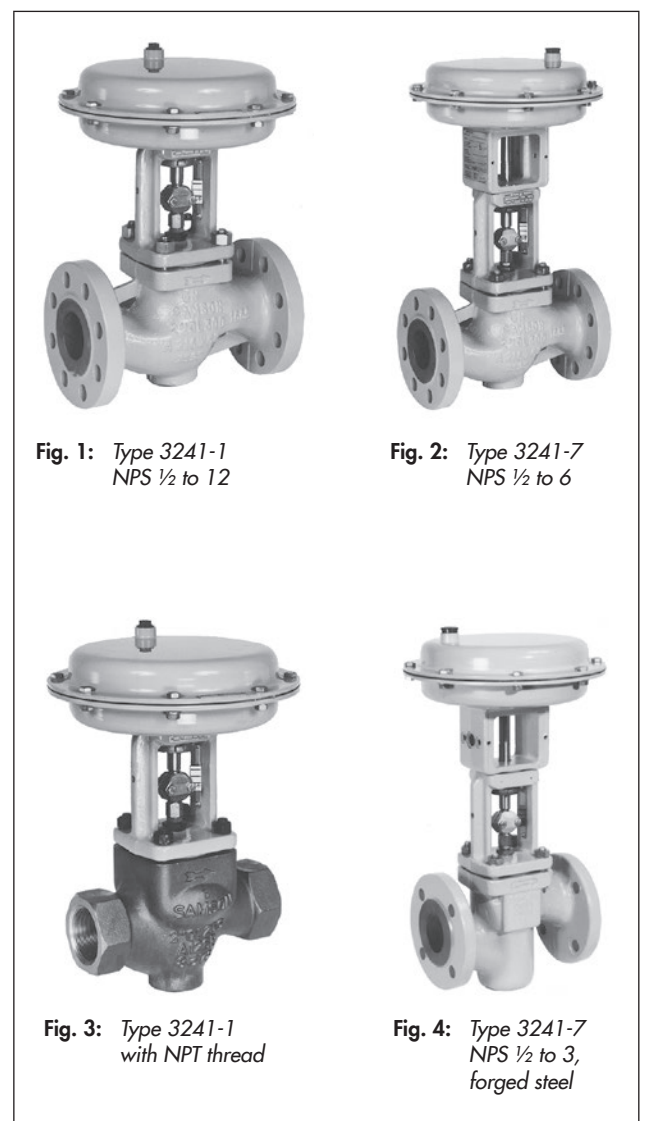
Positioners, limit switches, solenoid valves and other accessories according to IEC 60534-6-1<sup>1)</sup> and NAMUR recommendation. Refer to Information Sheet ▶ T 8350 for more details.

#### Versions

**Standard version** for temperatures ranging from -14 to 428 °F

(-10 to +220 °C)

- **Type 3241-1** (Fig. 1, Fig. 3) · 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** (Fig. 2, Fig. 4) · NPS ½ to 6 · With Type 3277 Pneumatic Actuator for integral positioner attachment (see Data Sheet ▶ T 8310-1)



**Fig. 1:** Type 3241-1  
NPS ½ to 12

**Fig. 2:** Type 3241-7  
NPS ½ to 6

**Fig. 3:** Type 3241-1  
with NPT thread

**Fig. 4:** Type 3241-7  
NPS ½ to 3,  
forged steel

<sup>1)</sup> Accessories required. See associated actuator documentation.

Further versions:

- **NPT threaded connections** (Fig. 3) · NPS ½ to 2, Class 250
- **Adjustable packing** · See Information Sheet ▶ T 8000-1
- **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
- **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 and ▶ T 8310-3
- **Type 3241 PSA** · Version for pressure swing adsorption plants · See Data Sheets ▶ T 8012-1 and ▶ T 8015-1
- **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
- **JIS version** with dimensions according to Japanese Industry Standard (JIS) · See Data Sheet ▶ T 8012-2
- **NACE version 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 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.

Fig. 5 to Fig. 8 show configuration examples.

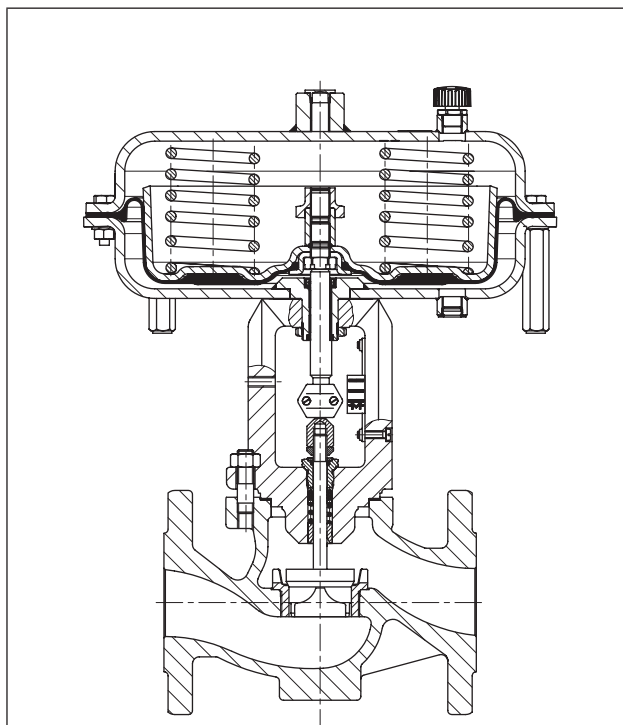


Fig. 5: Type 3241-1 Control Valve, NPS ½ to 6, with Type 3271 Actuator

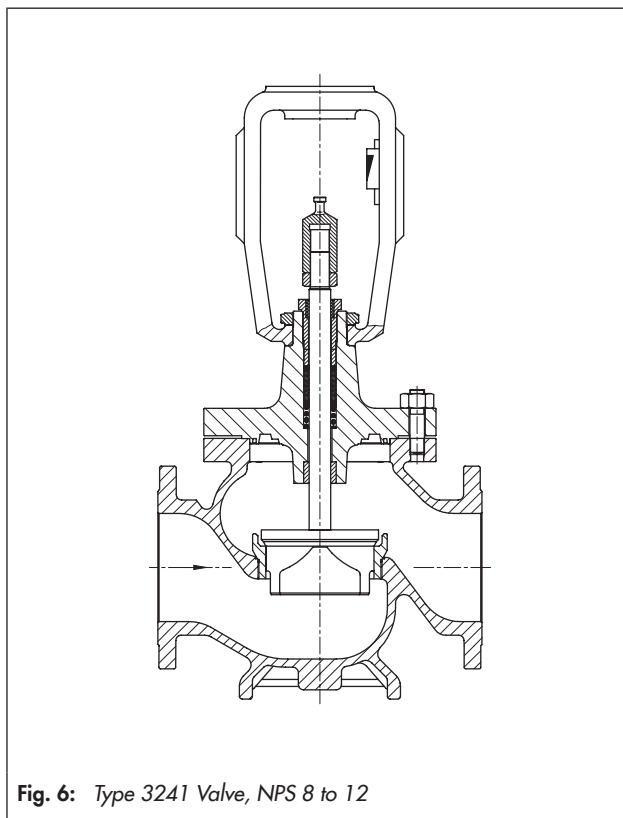
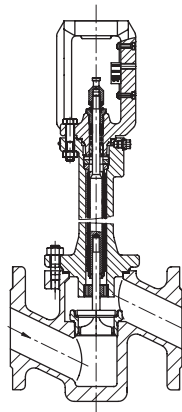
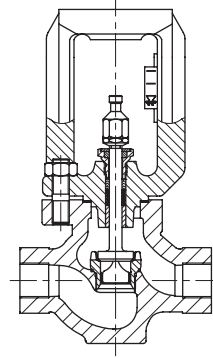


Fig. 6: Type 3241 Valve, NPS 8 to 12



**Fig. 7:** Type 3241 Valve, forged steel version, NPS ½ to 3, with bellows seal



**Fig. 8:** Type 3241 Valve, NPS ½ to 2 with NPT thread

**Table 1:** Technical data

Valve size	NPS	1 to 10	½ to 2	½ to 12			½, 1, 1½, 2, 3 <sup>2)</sup>	
ASTM material		Cast iron A126 B		Cast steel A216 WCC	Cast st. steel A351 CF8M	Cast steel A352 LCC	Cast st. steel A351 CF8	Forged steel A105 Forged stainless steel A182 F316
Pressure rating	Class	125	250	150/300			300	
Type of connection	Flanges	FF	–	RF <sup>1)</sup>			RF <sup>1)</sup>	
	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						
RFID tag (optional)		Application range according to the technical specifications and the explosion protection certificates. Documents ▶ <a href="http://www.samsongroup.com">www.samsongroup.com</a> > Service & Support > Electronic nameplate						
Conformity		<b>CE · UK · EAC</b>						
<b>Temperature ranges in °C (°F) · Permissible operating pressures according to pressure-temperature diagram (see Information Sheet ▶ T 8000-2)</b>								
Body with standard bonnet		–10 to +220 °C (14 to 428 °F)						
Body with	Insulating section in °C (°F)	–29 to +232 (–20 to +449)	–29 to +425 (–20 to +797)	–50 to +450 <sup>3)</sup> (–58 to +842)	–46 to +345 (–50 to +653)	–50 to +450 <sup>3)</sup> (–58 to +842)	–29 to +425 (–20 to +797)	–50 to +450 <sup>3)</sup> (–58 to +842)
	Long	–	–	–196 to +450 (–320 to +842)	–	–196 to +450 (–320 to +842)	–	–196 to +450 (–320 to +842)
	Bellows seal in °C (°F)	–29 to +232 (–20 to +449)	–29 to +425 (–20 to +797)	–50 to +450 <sup>3)</sup> (–58 to +842)	–46 to +345 (–50 to +653)	–50 to +450 <sup>3)</sup> (–58 to +842)	–29 to +425 (–20 to +797)	–50 to +450 <sup>3)</sup> (–58 to +842)
	Long	–	–	–196 to +450 (–320 to +842)	–	–196 to +450 (–320 to +842)	–	–196 to +450 (–320 to +842)
Valve plug	Standard	Metal seal: –196 to +450 °C (–320 to +842 °F) Soft seal: –196 to +220 °C (–320 to +428 °F)						
	Balanced	PTFE ring: –50 to +220 °C (–58 to +428 °F) · Lower temperatures on request						
		With graphite ring	220 to 450 °C (428 to 842 °F)					
RFID tag (optional)		Max. permissible operating temperature: 85 °C (185 °F)						
<b>Leakage class according to ANSI/FCI 70-2</b>								
Valve plug	Standard	Metal seal: Standard: IV · High-performance metal seal: V <sup>4)</sup> Soft seal: VI						
	Balanced	Metal seal: Standard IV · With PTFE or graphite balancing ring Special version V · For high-performance (only with PTFE balancing ring) on request						

<sup>1)</sup> Other versions on request

<sup>2)</sup> NPS 3 only in A 105

<sup>3)</sup> DN 200 and larger: down to –196 °C (–320 °F)

<sup>4)</sup> Leakage class V for temperatures <–50 °C (<–58 °F) on request

**Table 2: Materials**

Valve body <sup>1)</sup>	Cast iron A126B	Cast steel A216 WCC	Cast stainless steel A351 CF8M	Cast steel A352 LCC	Cast stainless 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 <sup>2)</sup>	Cr steel UNS S41000/1.4008		A182 F316/ A351 CF3M	Cr steel UNS S41000/ 1.4008	A182 F304/ A351 CF8	Cr steel UNS S41000/ 1.4008	A182 F316/ A351 CF3M
Plug <sup>2)</sup>	Cr steel UNS S 41000 (A182 F316L)/1.4008		A182 F316/ A351 CF3M	Cr steel UNS S41000 (A182 F316L)/ 1.4008	A182 F304/ A351 CF8	Cr steel UNS S41000 (A182 F316L)/ 1.4008	A182 F316/ 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 <sup>3)</sup>	V-ring packing: PTFE with carbon · Spring: A479 302						
Body gasket	Graphite on metal core						
Insulating section	A105	A105	A182 F316/ A182 F316L	A350 LF2	A182 F304	A105	A182 F316/ A182 F316L
<b>Bellows seal</b>							
Intermediate piece	A105	A105	A182 F316/ A182 F316L	A350 LF2	A182 F304	A105	A182 F316/ A182 F316L
Bellows seal	1.4571 <sup>4)</sup>				A182 F321	1.4571	
Heating jacket	-	A182 F316L					

<sup>1)</sup> Special materials for applications with seawater: N 08904, duplex A 995 4 A; nickel-based alloy: A494 LW-21M; other special materials on request

<sup>2)</sup> Seats and metal-seated plug also with Stellite® facing; for ≤NPS 4 plug up to seat bore 38 made of solid Stellite® available.

<sup>3)</sup> Other packings on request (► T 8000-1)

<sup>4)</sup> Other materials on request

**Table 3:**  $C_V$  and  $K_{VS}$  coefficientsTerms for control valve sizing according to IEC 60534, Parts 2-1 and 2-2:  $F_L = 0.95$ ,  $X_T = 0.75$ Conversion of flow coefficients:  $C_V$  (US gallons/min.) =  $1.17 \times K_{VS}$  (m<sup>3</sup>/h) or  $K_{VS}/C_V = 0.865$ **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	70	95	75	120	190	300	290	420	735	1150 <sup>1)</sup>	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 (ØD)	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			

<sup>1)</sup> Not available with valve body made of cast iron (A126B).**Table 3.2:** Versions without flow divider ( $C_V/K_{VS}$ ) · Areas highlighted in gray indicate versions also with pressure balancing

$C_V$	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												•	•	•	•	•	• <sup>2)</sup>							
4	100																•	•	•	•					
6	150																•	•	•	•	•				
8	200																	•	•		•	•	•		
10	250																	•	•		•	•	•	• <sup>1)</sup>	
12	300																	•		•	•	•	•	•	•

<sup>1)</sup> Not available with valve body made of cast iron (A126B).<sup>2)</sup> With 19 mm overtravel (not with bellows seal)**Table 3.3:** Versions with flow divider ST 1 ( $C_V$ -1,  $K_{VS}$ -1) · Areas highlighted in gray indicate versions also with pressure balancing

$C_V$ -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	
NPS	DN																					
½	15						•	•	•													
¾	20						•	•	•													
1	25						•	•	•													
1½	40							•	•	•	•											
2	50							•	•	•	•	•										
2½	65											•	•	•								
3	80											•	•	•	•							
4	100												•	•	•	•						
6	150												•	•	•	•	•					
8	200													•	•		•	•	•			
10	250													•	•		•	•	•	•	• <sup>1)</sup>	
12	300													•		•	•	•	•	•	•	•

<sup>1)</sup> Not available with valve body made of cast iron (A126B).

**Table 3.1: Overview with flow divider ST 1 (C<sub>V</sub>-1, K<sub>VS</sub>-1), ST 2 (C<sub>V</sub>-2, K<sub>VS</sub>-2) or ST 3 (C<sub>V</sub>-3, K<sub>VS</sub>-3)**

C <sub>V</sub>	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 <sup>1)</sup>	1730
K <sub>VS</sub>	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 <sub>V</sub> -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 <sub>VS</sub> -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 <sub>V</sub> -2	-	-	-	-	-	-	-	-	-	-	9.5	15	23	37	56	-	60	95	145	245	235	335	580	950	1400
K <sub>VS</sub> -2	-	-	-	-	-	-	-	-	-	-	8	13	20	32	48	-	50	80	125	210	200	290	500	800	1200
C <sub>V</sub> -3	-	-	-	-	-	-	-	-	-	-	9	14	23	35	-	-	55	90	140	-	220	315	560	880	1280
K <sub>VS</sub> -3	-	-	-	-	-	-	-	-	-	-	7.5	12	20	30	-	-	47	75	120	-	190	270	480	750	1100
Seat (ØD)	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					

<sup>1)</sup> Not available with valve body made of cast iron (A126B).

**Table 3.4: Versions with flow divider ST 2 (C<sub>V</sub>-2, K<sub>VS</sub>-2) · Areas highlighted in gray indicate versions also with pressure balancing**

C <sub>V</sub> -2	-										9.5	15	23	37	56	-	60	95	145	245	235	335	580	950	1400		
K <sub>VS</sub> -2	-										8	13	20	32	48	-	50	80	125	210	200	290	500	800	1200		
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																										

<sup>1)</sup> Not available with valve body made of cast iron (A126B).

**Table 3.5: Versions with flow divider ST 3 (C<sub>V</sub>-3, K<sub>VS</sub>-3) · Areas highlighted in gray indicate versions also with pressure balancing**

C <sub>V</sub> -3	-										9	14	23	35	-	-	55	90	140	-	220	315	560	880	1280		
K <sub>VS</sub> -3	-										7.5	12	20	30	-	-	47	75	120	-	190	270	480	750	1100		
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																										

<sup>1)</sup> Not available with valve body made of cast iron (A126B).

<sup>2)</sup> Not with bellows seal or insulating section

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

**Table 4:** Dimensions and weights for standard version of Type 3241-1 and Type 3241-7 Valves with flanges or welding ends

**Table 4.1:** Dimensions for Type 3241 Valve, up to NPS 6 · Without actuator · Dimensions in inch and mm

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 <sup>1)</sup>	Class 125 and 150	in	7.25	7.25	7.25	8.75	10.0	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 L1	Class 250	in	6	6	6	8	9.25	–	–	–	–
		mm	152.4	152.4	152.4	203.2	235	–	–	–	–
H1 for actuator	≤750v2 cm <sup>2</sup>	in	8.74			8.78		10.31		13.94	15.35
		mm	222			223		262		354	390
	1000 cm <sup>2</sup> 1400-60 cm <sup>2</sup>	in	–							16.26	17.72
		mm	–							413	450
	1400-120 cm <sup>2</sup> 2800 cm <sup>2</sup>	in	–								
		mm	–								
H2 <sup>2)</sup> for version	Cast steel	in	1.73 <sup>3)</sup>			2.83 <sup>3)</sup>		3.86	3.86 <sup>3)</sup>	4.65	6.89
		mm	44 <sup>3)</sup>			72 <sup>3)</sup>		98	98 <sup>3)</sup>	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 path 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 4.2:** Dimensions for Type 3241 Valve, NPS 8 and larger · Without actuator · Dimensions in inch and mm

Valve	NPS	8	10 (cast iron body)	10	10	12	
	DN	200	250 cast iron body up to SB 200 mm	Up to 200 mm seat bore	250 seat bore 250 mm and larger	300	
Length L <sup>1)</sup>	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 <sup>2)</sup> for actuator	1000 cm <sup>2</sup> 1400-60 cm <sup>2</sup>	in	16.46	16.46	16.46	–	19.80
		mm	418	418	418	–	503
	1400-120 cm <sup>2</sup> 2800 cm <sup>2</sup>	in	19.80	19.80	19.80	25.59	25.59
		mm	503	503	503	650	650
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) H8 increases by 170 mm for valves with K<sub>v5</sub> 250, 360 or 630 and 60 mm rated travel operating with overtravel.

**Table 4.3:** Dimensions for Type 3271 and Type 3277 Pneumatic Actuators · Dimensions in inch and mm

Actuator area	cm <sup>2</sup>	120	175v2	240	350	355v2	700	750v2	1000	1400-60	1400-120	2800
Diaphragm ØD	in	6.61	8.46	9.45	11.02	11.02	15.35	15.51	18.19	20.87	21.02	30.32
	mm	168	215	240	280	280	390	394	462	530	534	770
H <sup>1)</sup>	in	2.71	3.07	2.44	3.23	4.76	7.83	9.29	15.87	13.27	23.54	28.07
	mm	69	78	62	82	121	199	236	403	337	598	713
H3 <sup>2)</sup>	in	4.33	4.33	4.33	4.33	4.33	7.48	7.48	24.02	24.02	25.59	25.59
	mm	110	110	110	110	110	190	190	610	610	650	650
H5	Type 3277 in	3.46	3.98	3.98	3.98	3.98	3.98	3.98	–	–	–	–
	Type 3277 mm	88	101	101	101	101	101	101	–	–	–	–
Thread	Type 3271	M30x1.5							M60x1.5		M100x2	
	Type 3277	M30x1.5							–	–	–	–
α	Type 3271	G 1/8 (1/8 NPT)	G 1/4 (1/4 NPT)	G 1/4 (1/4 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/8 (3/8 NPT)	G 3/4 (3/4 NPT)	G 3/4 (3/4 NPT)	G 1 (1 NPT)	G 1 (1 NPT)
	Type 3277	–	G 3/8	G 3/8	G 3/8	G v	G 3/8	G 3/8	–	–	–	–

<sup>1)</sup> Height including lifting eyelet or female thread and eyebolt according to DIN 580. Height of the swivel hoist may differ. Actuators up to 355v2 cm<sup>2</sup> without lifting eyelet or female thread

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

**Table 4.4:** Weights for Type 3241-1 and Type 3241-7 · Weights in lbs and kg

Valve	NPS	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
	DN	15	20	25	40	50	65	80	100	150	200	250	300
Weight 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

Actuator	cm <sup>2</sup>	120	175v2	240	350	355v2	700	750v2	1000	1400-60	1400-120	2800		
Type 3271	Without handwheel	lbs	6	13	11	18	33	49	79	176	154	386	992	
		kg	2.5	6	5	8	15	22	36	80	70	175	450	
	With handwheel	Travel ≤80 mm	lbs	9	22	20	29	51	60	90	397	386	661	1268
			kg	4	10	9	13	23	27	41	180	175	300	575
		Travel ≤160 mm	lbs	–	–	–	–	–	–	–	–	–	937	1543
			kg	–	–	–	–	–	–	–	–	–	425	700
Type 3277	Without handwheel	lbs	7	22	20	26	42	57	88	–	–	–	–	
		kg	3.2	10	9	12	19	26	40	–	–	–	–	
	With handwheel	lbs	10	31	29	37	53	68	99	–	–	–	–	
		kg	4.5	14	13	17	24	31	45	–	–	–	–	



**Table 5:** Dimensions and weights for Type 3241 Valve with insulating section or bellows seal

**Table 5.1:** Dimensions in mm and weights Type 3241 Valve, NPS ½ to 6 and ½ to 2 NPT thread · Without actuator · Dimensions in inch and mm · Weights in lbs and kg

Valve size		NPS	½	¾	1	1½	2	2½	3	4	6	
		DN	15	20	25	40	50	65	80	100	150	
H4 for actuator	≤750v2 cm <sup>2</sup>	Insulating section or bellows seal	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 cm <sup>2</sup> / 1400-60 cm <sup>2</sup>	Insulating section or bellows seal	in								27.36	28.82
			mm								695	732
		Long	in								36.85	38.31
			mm								936	973
	1400-120 cm <sup>2</sup> / 2800 cm <sup>2</sup>	Insulating section or bellows seal	in									
			mm									
		Long	in									
			mm									
Weight without actuator (approx.)	Insulating section or bellows seal	lbs	22	24	26	49	57	88	99	176	353	
		kg	10	11	12	22	26	40	45	80	160	
	Long	lbs	31	33	35	57	66	97	108	194	370	
		kg	14	15	16	26	30	44	49	88	168	

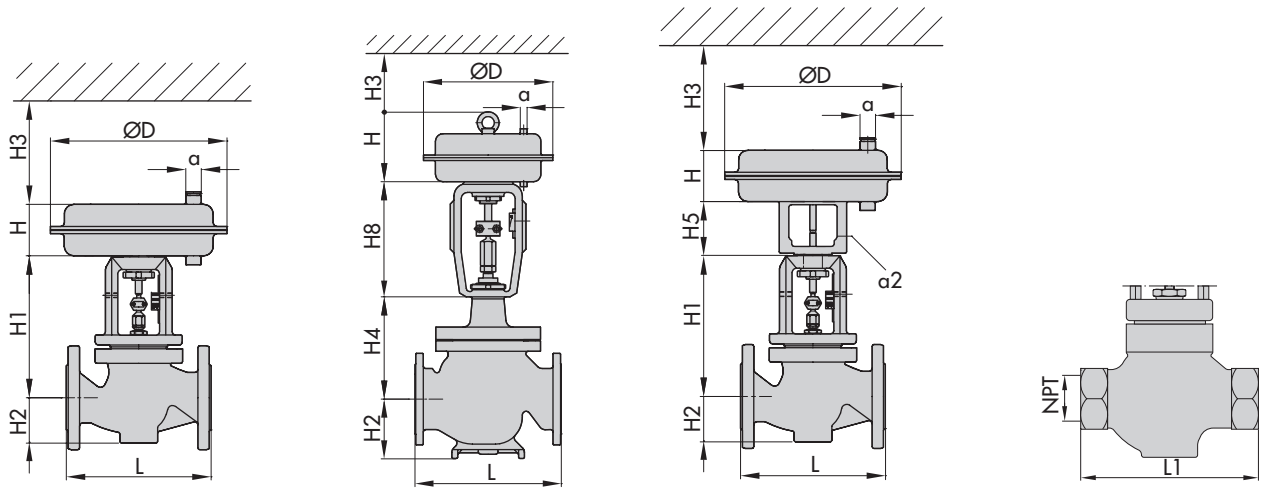
**Table 5.2:** Dimensions in mm and weights Type 3241 Valve, NPS 8 to 12 · Without actuator · Dimensions in inch and mm · Weights in lbs and kg

Version with		Insulating section				Bellows seal				
Valve size	NPS	8	10 Up to 200 mm seat bore	10 Seat bore 250	12	8	10 Up to 200 mm seat bore	10 Seat bore 250	12	
	DN	200	250 Up to 200 mm seat bore	250 Seat bore 250	300	200	250 Up to 200 mm seat bore	250 Seat bore 250	300	
H4 for actuator	1000 cm <sup>2</sup> / 1400-60 cm <sup>2</sup>	in	32.7	41.9	-	45.3	40.8	58.7	-	59.8
		mm	830	1065		1150	1036	1492		1520
	1400-120 cm <sup>2</sup> / 2800 cm <sup>2</sup>	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 for actuator	1000 cm <sup>2</sup> / 1400-60 cm <sup>2</sup>	in	16.5	16.5	-	19.8	16.5	16.5	-	19.8
		mm	418	418		503	418	418		503
	1400-120 cm <sup>2</sup> / 2800 cm <sup>2</sup>	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
Weight without actuator (approx.)	lbs	1191	2220	2220	2690	1312	2407	2407	2793	
	kg	540	1007	1007	1220	595	1092	1092	1267	

**Table 6:** Dimensions for Type 3241 Valve with heating jacket · Not for valves with body material A 126 B · Dimensions in inch and mm

Valve size	NPS	1	1½ · 2	2½ · 3	4	6	8 to 12
	DN	25	40 · 50	65 · 80	100	150	200 to 300
a	in	4.3	5.5	7.1	7.9	10.4	On request
	mm	110	140	180	200	265	
b	in	0.6	0.8	1.4	2	3.2	
	mm	15	20	35	50	80	
c	in	5.5	6.7	8.5	10	5.1	
	mm	140	170	215	255	130	
d	in	7.5	7.5	9.1	12.6	14	
	mm	190	190	230	320	355	

**Dimensional drawings**



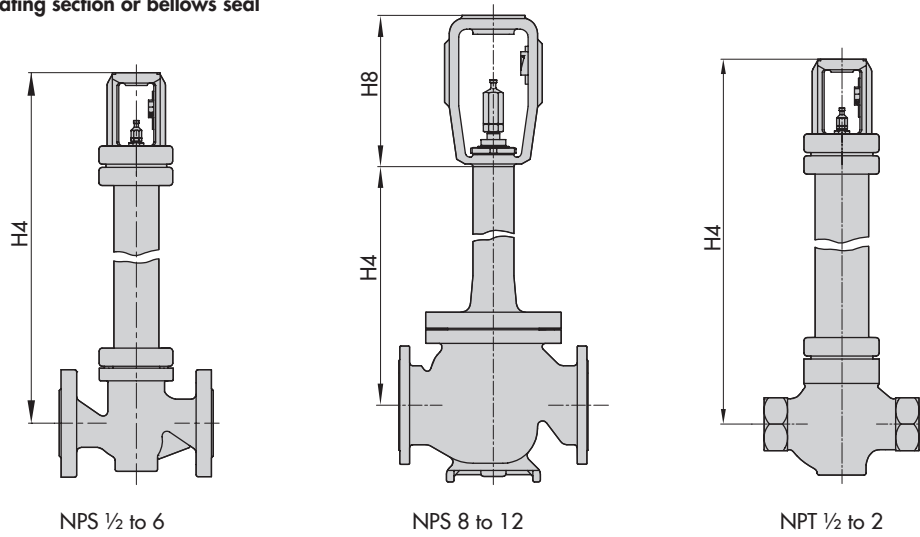
Type 3241-1 · NPS ½ to 6

Type 3241-1 · NPS 8 to 12

Type 3241-7 · NPS ½ to 6

Type 3241 · NPT ½ to 2

**Versions with insulating section or bellows seal**

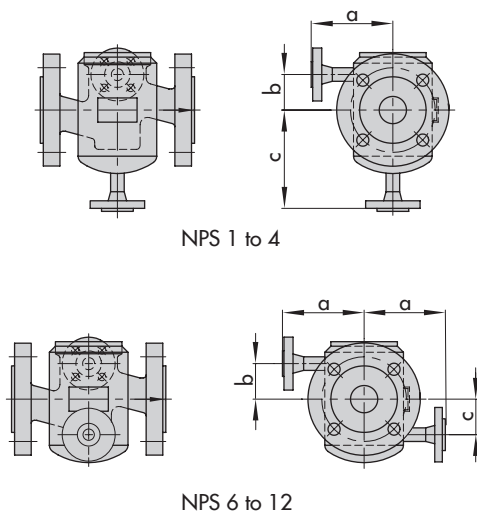


NPS ½ to 6

NPS 8 to 12

NPT ½ to 2

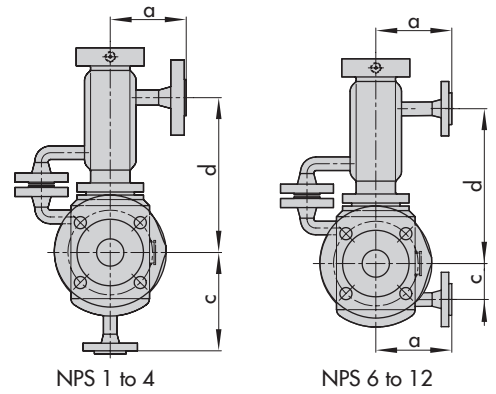
**Versions with heating jacket**



NPS 1 to 4

NPS 6 to 12

**Versions with bellows seal or insulating section**



NPS 1 to 4

NPS 6 to 12

## Ordering text

Globe valve	Type 3241
Valve size	NPS ...
Pressure rating	Class ...
Body material	Refer to Table 2
Type of connection	Flanges (RF or FF), welding ends or NPT thread
Seat-plug seal	Soft seal, metal seal or high-performance metal seal
Characteristic	Equal percentage or linear
Pneumatic actuator	Type 3271 or Type 3277
Fail-safe position	Fail-close or fail-open
Process medium	Density and temperature
Max. flow rate	in kg/h or m <sup>3</sup> /h
Pressure	p <sub>1</sub> and p <sub>2</sub> in bar or psi (absolute pressure)
RFID tag	Yes/No
Valve accessories	Positioner and/or limit switch

<b>Associated Information Sheet</b>	▶ T 8000-X
<b>Associated Data Sheets for Pneumatic actuators</b>	▶ T 8310-1 to -3
<b>Associated Mounting and Operating Instructions</b>	▶ EB 8012
<b>Associated Safety Manual</b>	▶ SH 8015

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