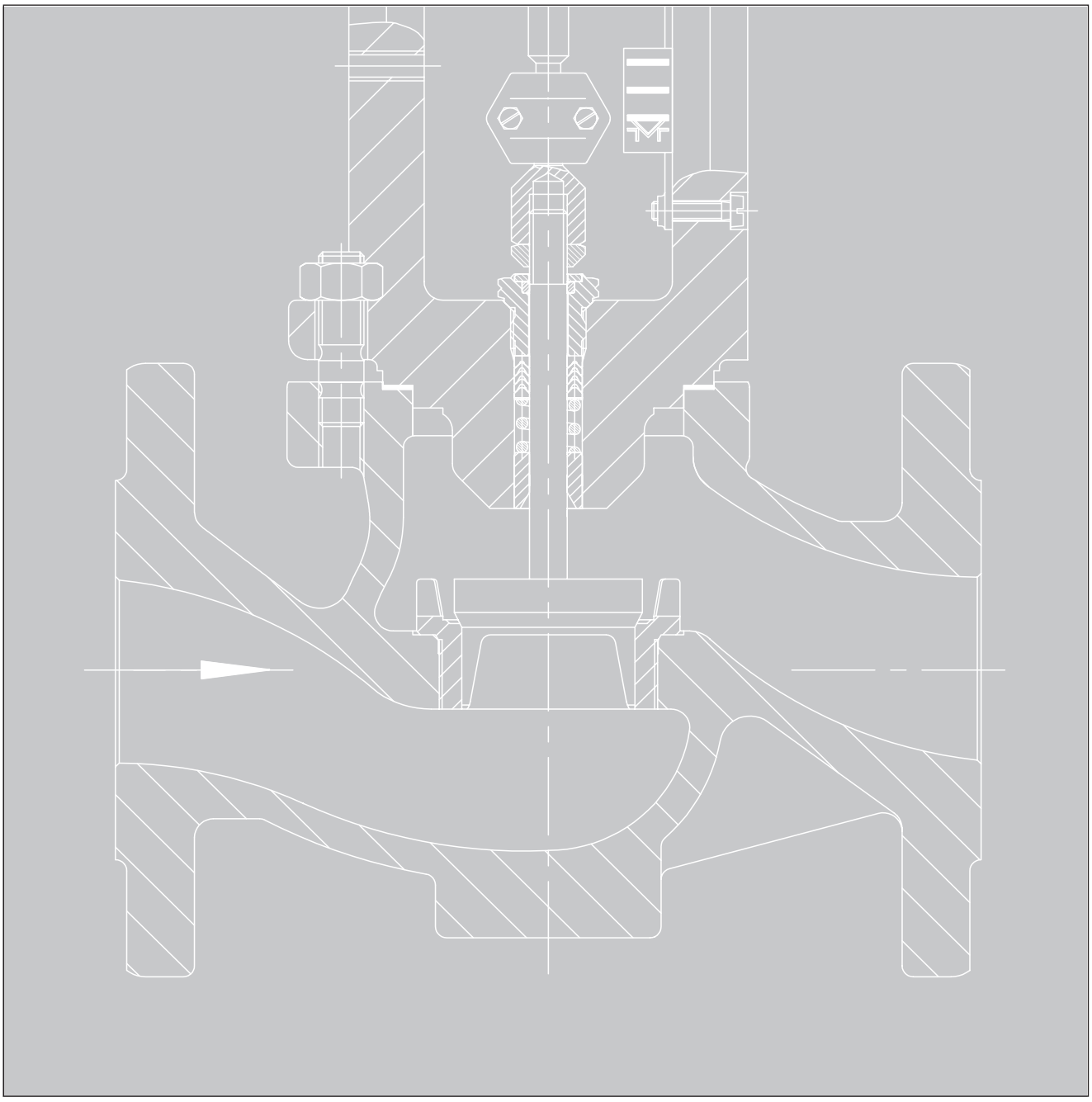
Series 240 · 250 · 280
Pneumatic and Electric Control Valves

Information Sheet Part 4

Permissible Differential Pressures for Valves

Type 3241 · Type 3251 · Type 3254 · Type 3256
Type 3281 · Type 3284 · Type 3286



Information Sheet for Control Valves	T 8000-1 EN	Edition May 2009
Information Sheet for Materials	T 8000-2 EN	
Information Sheet for Flow Coefficients	T 8000-3 EN	

Contents

Valve versions according to DIN EN standards
Leakage rate acc. to IEC 60534-4

Valve versions according to ANSI/ASTM standards
Leakage rate acc. to ANSI/FCI 70-2

Notes concerning selection

1. The specified differential pressures relate to the operating range.
2. The differential pressure specifications apply to adjustable and self-adjusting packings made of PTFE or graphite.
3. The flow-to-open direction always applies.
4. For versions with bellows seal (Tables 2.x, 3.x, 5.x, 6.x) the permissible differential pressure of the closed valve is reduced by the correction value for the bellows seal.

   Example taken from Table 2.1:

   Valve DN 50 to 100,
   K_{VS} 100,
   Actuator 700 cm^2,
   Operating range 2.1 … 3.3 bar;

   Table values: Δp = 24.5 bar,
   Bellows correction value = –0.9 bar

   Corrected permissible differential pressure
   24.5 bar – 0.9 bar = 23.6 bar

Instrumentation

For accessories (e.g. quick exhaust valves) with a minimum supply pressure, make sure that the lower operating range value is higher than the minimum supply pressure for throttling service.

Notes concerning ANSI versions

The operating ranges and bench ranges of the ANSI versions are specified in bar as for the DIN EN versions.
Refer to the table below for the associated psi specifications which have been rounded off:

Bench ranges	
Pressures in **bar**	Pressures in **psi**
0.2 … 0.6	3 … 9
0.2 … 1.0	3 … 15
0.3 … 1.1	4 … 17
0.4 … 0.8	6 … 12
0.4 … 1.2	6 … 18
0.4 … 2.0	6 … 30
0.5 … 2.5	7 … 36
0.6 … 2.2	9 … 32
0.6 … 3.0	9 … 45
0.6 … 3.6	9 … 52
0.8 … 1.2	12 … 18
0.8 … 1.6	12 … 23
0.8 … 2.4	12 … 36
0.9 … 3.3	13 … 48
1.0 … 1.8	15 … 26
1.0 … 2.0	15 … 30
1.0 … 2.1	15 … 30
1.0 … 3.0	15 … 45
1.0 … 3.2	15 … 46
1.1 … 2.3	16 … 34
1.2 … 3.6	18 … 52
1.3 … 3.3	19 … 50
1.4 … 1.8	20 … 26
1.4 … 2.3	20 … 34
1.4 … 2.6	20 … 38
1.4 … 2.7	20 … 39
1.5 … 4.2	22 … 60
1.6 … 2.4	23 … 36

Bench ranges	
Pressures in **bar**	Pressures in **psi**
1.6 … 3.1	23 … 45
1.6 … 3.5	23 … 51
1.6 … 3.8	23 … 55
1.7 … 3.0	25 … 45
1.8 … 2.65	26 … 37
1.8 … 3.5	26 … 51
1.8 … 3.8	26 … 55
1.85 … 2.3	27 … 34
1.9 … 3.4	28 … 50
2.0 … 2.4	30 … 36
2.0 … 3.0	30 … 45
2.1 … 3.1	30 … 46
2.1 … 3.3	30 … 48
2.1 … 4.8	30 … 72
2.2 … 3.9	32 … 58
2.3 … 3.0	34 … 45
2.3 … 3.4	34 … 50
2.4 … 3.6	35 … 52
2.5 … 3.0	36 … 45
2.6 … 3.8	36 … 55
2.6 … 4.3	36 … 63
2.7 … 3.3	37 … 48
2.7 … 3.4	37 … 50
2.8 … 3.8	41 … 55
3.0 … 3.6	45 … 52
3.0 … 3.9	45 … 53
3.2 … 4.4	46 … 66
3.45 … 4.3	50 … 63

Valve versions according to DIN EN standards

Table 1.1 · Permissible differential pressures for Type 3241 Globe Valve up to DN 150 · Metal-seated · Leakage class IV according to IEC 60534-4 · Unbalanced

Note The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10.

DN	K_{VS}	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2…1.0	0.4…2.0	1.4…2.3	2.1…3.3			0.2 … 1.0				
		240	15	0.3…1.1 (0.2…1.0)	0.6…2.2 (0.4…2.0)	0.9…3.3 (0.6…3.0)								
		350	15	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3						
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15	0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6 [3] (0.6…3.0)	1.85...2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3 [3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 [3] (0.6…3.0)	1.4...2.3	2.1…3.3	2.6…4.3 [3]	0.2 … 1.0				
		1000	30	1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar										
15 to 25	0.1 to 0.25	120	15	50	50	50	50			50	50	–	50	3.4
		240	15	50	50	50				50	–	–	50	2.2
15 to 50	0.4 to 1.0	120	15	8.3	50	50	50			50	50	50	50	5.7
		240	15	50	50	50				50	50	–	50	3.3
	1.6 2.5 4.0	120	15	–	18	50	50			18	50	50	50	6
		240	15	37	50	50				50	50	50	50	5.7
		350	15	50	50	50	50	50		50	50	50	50	4.2
		355	15	50	50	50	50			50	50	50	50	4.4
20 to 50	6.3 10	120	15	–	2.8	27	44			2.8	27	50	50	6
		240	15	7.7	22	36.5				12	50	50	50	6
		350	15	21	49.5	50	50	50		21	50	50	50	6
		355	15	50	50	50	50			7.5	50	50	50	6
32 to 50	16	120	15	–	–	15.5	25.5			–	15.5	39	50	6
		240	15	4.0	12.5	21				6.9	35.5	50	50	6
		350	15	12.2	29	45.5	50	50		12	50	50	50	6
		355	15	50	50	50	50			3.9	46.5	50	50	6
40 to 80	25	120	15	–	–	10	16.5			–	10	25	42	6
		240	15	2.3	8.1	13.5				4.2	23.5	50	50	6
		350	15	7.7	19	30	35.5	50		7.7	35.5	50	50	6
		355	15	36	44.5	50	50			2.2	30.5	50	50	6

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
50 to 80	40	240	15	–	4.7	8.3				2.3	14	33.5	50	6
		350		4.5	11.5	18.5	22	34		4.5	22	50	50	6
		355		22	38.5	45.5	50			–	18.5	47	50	6
		700		25.5	50	50	50	50	–	25.5	50	–	50	3.3
65 80	60	240	15	–	2.4	4.5				–	8	19	31.5	6
		350		2.3	6.4	10.5	12.5	19.5		2.3	12.5	28.5	47	6
		355		12.5	22	26	29			–	10.7	27	45.5	6
		700		14.5	30.5	47	36	50	–	14.5	35	–	49.5	3.3
80	80	240	15	–	–	2.6				–	4.8	11.5	19.5	6
		350		–	3.8	6.3	7.6	12		–	7.6	17.5	29	6
		355		7.7	13.5	16	18			–	6.4	16.5	28	6
		700		8.8	19	29	22	32.5	–	8.8	21.5	–	41.5	3.3
	100	700	19		16 [4]					7.6 [5]	20.2 [5]	–	30.5 [5]	3.4 [5]
100 or 150	63	355	30	8.3	15.5	17.5	20.5			–	6.2	22.5	41.4	6
		700		6.1	14	22	26.5	40.5	50	6.1	26.5	50	50	6
		1000		44.5	50		50	50		21	50	–	50	4.1
100 to 150	100	355	30	4.9	9.4	10.5	12.5			–	3.6	13.5	25.5	6
		700		3.6	8.6	13.5	16	25	31	3.6	16	36.5	50	6
		1000		27.5	36.5		45.5	50		13	31	–	50	4.1
	160	355	30	3.0	5.9	6.7	7.9			–	2.2	8.7	16	6
		700		2.1	5.4	8.6	10.2	15.5	20	2.1	10	23	37.5	6
		1000		17	23		29	35.5		8.1	19.5	–	37	4.1
125	200	355	30	2.4	4.8	5.5	6.5			–	–	7.2	13.3	6
		700		–	4.4	7.0	8.4	13	16	–	8.4	19.1	31.2	6
		1000		14	19		23.5	29.5		6.7	16	–	30.5	4.1
150	260	355	30	–	3.3	3.8	4.5			–	–	5	9.4	6
		700		–	3	5	5.9	9.3	11.5	–	5.9	13.5	22	6
		1000		10	13.5		17	21.0		4.7	11.5	–	21.5	4.1

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar, bench range 0.4 to 2 bar
5) Operating range 0.2 to 0.7 bar, bench range 0.2 to 1 bar

Table 1.2 · Permissible differential pressures for Type 3241 Globe Valve up to DN 150 · High-performance metal sealing · Leakage class V according to IEC 60534-4 · Unbalanced

Note Specify the maximum differential pressure on ordering/requesting a quotation to obtain the correct sizing.
The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10.

DN	K_{VS}	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2...1.0	0.4...2.0	1.4...2.3	2.1...3.3			0.2 ... 1.0				
		240		0.3...1.1 (0.2...1.0)	0.6...2.2 (0.4...2.0)	0.9...3.3 (0.6...3.0)								
		350		0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.4...2.3	2.1...3.3						
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6 (0.8 ... 1.6)				
		700	15	0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.4...3.6 [3] (0.6...3.0)	1.85...2.3 (1.4...2.3)	2.7...3.3 (2.1...3.3)	3.45...4.3[3] (2.6...4.3)	0.2 ... 0.6 (0.2 ... 1.0)				
			30	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 [3] (0.6...3.0)	1.4...2.3	2.1...3.3	2.6...4.3[3]	0.2 ... 1.0				
		1000	30	1.6...2.4	2.1...3.1		2.6...3.8	3.2...4.4		0.2 ... 0.6				
Req. supply pressure in bar				Upper bench range value + 0.2 bar						1.4	2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar										
15 to 25	0.1 to 0.25	120	15	–	50	50	50			50	50	–	50	3.4
		240		50	50	50				50	–	–	50	2.2
15 to 50	0.4 to 1.0	120	15	–	–	50	50			–	50	50	50	5.7
		240		42.5	50	50				50	50	–	50	3.3
	1.6 2.5 4.0	120		–	–	50	50			–	50	50	50	6
		240		–	35	50				–	50	50	50	5.7
		350		32	50	50	50	50		32	50	50	50	4.2
		355		50	50	50	50			–	50	50	50	4.4
20 to 50	6.3 10	120	15	–	–	–	13.5			–	–	35.5	50	6
		240		–	–	6.6				–	30.5	50	50	6
		350		–	19.5	47.5	50	50		–	50	50	50	6
		355		50	50	50	50			–	48.5	50	50	6
32 to 50	16	120	15	–	–	–	2.5			–	–	15.5	41.5	6
		240		–	–	–				–	12.5	50	50	6
		350		–	5.8	22.5	31	50		–	31	50	50	6
		355		32	50	50	50			–	23	50	50	6
40 to 80	25	120	15	–	–	–	–			–	–	6.4	23.5	6
		240		–	–	–				–	4.5	35	50	6
		350		–	–	11	16.5	36.5		–	16.5	50	50	6
		355		17	43	50	50			–	11.5	50	50	6
50 to 80	40	240	15	–	–	–				–	–	18.5	40	6
		350		–	–	3.6	7.1	19		–	7.1	35	50	6
		355		7.4	23.5	30.5	36			–	3.9	32	50	6
		700		10.5	38.5	50	47.5	50	–	10.5	45.5	–	50	3.3

DN	Kvs	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
65 80	60	240	15	–	–	–				–	–	7.8	20	6
		350		–	–	–	–	8.2		–	–	17	35.5	6
		355		–	10.5	14.5	17.5			–	–	15.5	34	6
		700		3.1	19.5	35.5	24.5	41.5	–	3.1	23.5	–	38	3.3
80	80	240	15	–	–	–				–	–	2.7	10.5	6
		350		–	–	–	–	3.0		–	–	8.7	20	6
		355		–	4.5	7.0	9.0			–	–	7.7	19.2	6
		700		–	9.9	20	13.1	23.5	–	–	12.5	–	21.5	3.3
80	100	700	19		7.4 [4]					–	11 [5]	–	21.5[5]	3.4[5]
100 or 150	63	355	30	–	4.1	6.2	9.3			–	–	11	30	6
		700		–	2.8	11	15	29	39.5	–	15	47.5	50	6
		1000		33	47.5		50	50		9.8	39	–	50	4.1
100 to 150	100	355	30	–	–	–	3.6			–	–	4.9	16.5	6
		700		–	–	4.7	7.2	16	22	–	7.2	27.5	50	6
		1000		18	27.5		36.5	47		4	22	–	50	4.1
	160	355	30	–	–	–	–			–	–	–	8.9	6
		700		–	–	–	3.0	8.7	12.5	–	3	16	30.5	6
		1000		10	16		21.5	28.5		–	12.5	–	29.5	4.1
125	200	355	30	–	–	–	–			–	–	–	6.7	6
		700		–	–	–	–	6.5	9.9	–	–	12.5	24.5	6
		1000		7.8	12.5		17	23		–	9.7	–	24	4.1
150	260	355	30	–	–	–	–			–	–	–	3.9	6
		700		–	–	–	–	3.7	6.1	–	–	8	16.5	6
		1000		4.8	8		11.5	15.5		–	6	–	16	4.1

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar, bench range 0.4 to 2 bar
5) Operating range 0.2 to 0.7 bar, bench range 0.2 to 1 bar

Table 1.3 · Permissible differential pressures for Type 3241 Globe Valve up to DN 150 · Soft-seated · Leakage class VI according to IEC 60534-4 · Unbalanced

Note The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10.

DN	K_{VS}	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2...1.0	0.4...2.0	1.4...2.3	2.1...3.3			0.2 ... 1.0				
		240		0.3...1.1 (0.2...1.0)	0.6...2.2 (0.4...2.0)	0.9...3.3 (0.6...3.0)								
		350		0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.4...2.3	2.1...3.3						
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15	0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.4...3.6[3] (0.6...3.0)	1.85...2.3 (1.4...2.3)	2.7...3.3 (2.1...3.3)	3.45...4.3[3] (2.6...4.3)	0.2 ... 0.6 (0.2 ... 1.0)				
			30	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6[3] (0.6...3.0)	1.4...2.3	2.1...3.3	2.6...4.3[3]	0.2 ... 1.0				
		1000	30	1.6...2.4	2.1...3.1		2.6...3.8	3.2...4.4		0.2 ... 0.6				
Req. supply pressure in bar				Upper bench range value + 0.2 bar						1.4	2.4	4.0	1)	2)
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar										
15 to 25	0.1 to 0.25	120	15	50	50	–	–			50	–	–	–	1.5
15 to 50	0.4 to 1.0	120	15	19.5	50	–	–			50	–	–	50	2.1
		240		50	–	–				50	–	–	–	1.5
	1.6 2.5 4.0	120		4.4	23.5	50	50			23.5	50	–	50	3.2
		240		43	50	50				50	–	–	50	2.1
		350		50	–	–	–	–		50	–	–	50	1.7
20 to 50	6.3 10	120	15	–	5.7	29.5	46.5			5.7	29.5	50	50	5.4
		240		10.5	25	39.5				15	50	–	50	3.2
		350		24	50	50	50	–		24	50	–	50	2.5
		355		50	–	–	–			10	50	–	50	2.7
32 to 50	16	120	15	–	3.3	17.5	27.5			3.3	17.5	40.5	50	6
		240		6.2	14.5	23.5				9.1	38	–	50	3.8
		350		14	31	48	50	–		14	50	–	50	2.9
		355		50	–	–	–			6.1	48.5	–	50	3.1
40 to 80	25	120	15	–	2.1	11.5	18.5			2.1	11.5	27	50	6
		240		4.1	9.8	15.5				6	25	50	50	4.5
		350		9.5	20.5	32	37.5	50		9.5	37.5	–	50	3.3
		355		38	50	–	–			4	32.5	–	50	3.5
50 to 80	40	240	15	2.5	6.1	9.7				3.7	15.5	35	49.5	5.4
		350		5.9	13	20	23.5	35.5		5.9	23.5	–	48	4
		355		23.5	39.5	47	50			2.5	20	–	48	4.1
		700		27	–	–	–	–	–	27	–	–	44.5	2.1

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
65 80	60	240	15	–	3.5	5.6				2.1	9.1	20	32.5	6
		350		3.4	7.5	11.5	13.5	20.5		3.4	13.5	29.5	37.5	4.9
		355		13.5	23	27	30			–	11.5	28.3	37.5	5.1
		700		15.5	32	–	37	–	–	15.5	36	–	35.5	2.5
80	80	240	15	–	2.1	3.4				–	5.6	12.5	20	6
		350		2.1	4.6	7.1	8.4	12.5		2.1	8.4	18.5	29.5	6
		355		8.5	14	16.5	18.5			–	7.2	17.5	30	6
		700		9.7	19.5	29.5	23	–	–	9.7	22	–	28.5	3.1
	100	700	19		17[4]					8.4[5]	21[5]	–	28.5[5]	3.2[5]
100 or 150	63	355	30	9.4	16.5	18.5	21.5			–	7.3	23.5	37	5.5
		700		7.2	15.3	23.5	27.5	–	–	7.2	27.5	–	35	2.9
100 to 150	100	355	30	5.8	10	11.5	13.5			–	4.5	14.5	26.5	6
		700		4.4	9.5	14.5	17	25.5	–	4.4	17	–	28.5	3.5
		1000		28	–		–	–		13.5	–	–	27.5	2.3
	160	355	30	3.7	6.5	7.4	8.6			–	2.8	9.4	16.5	6
		700		2.8	6.0	9.3	10.5	16.5	20.5	2.8	10.5	–	23	4.1
		1000		18	23.5		–	–		8.8	20	–	22.5	2.8
125	200	355	30	3.0	5.4	6.1	7.1			–	2.3	7.8	13.5	6
		700		2.3	5.0	7.7	9.0	13.5	17	2.3	9	19.5	21	4.4
		1000		14.5	19.5		–	–		7.3	16.5	–	20.5	3.0
150	260	355	30	2.2	3.9	4.3	5.1			–	–	5.6	9.9	6
		700		–	3.6	5.5	6.4	9.8	12	–	6.4	14	15	5
		1000		10.5	14		17.5	–		5.2	12	–	17.5	3.4

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar, bench range 0.4 to 2 bar
5) Operating range 0.2 to 0.7 bar, bench range 0.2 to 1 bar

Table 1.4 · Permissible differential pressures for Type 3241 Globe Valve up to DN 150 · Metal-seated · Leakage class IV according to IEC 60534-4 · Balanced with PTFE seal ring · Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"		"Actuator stem retracts"			
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 (0.6 … 3.0)	0.4 … 2.0			
		355	15	2.3 … 3.0 (1.4 ... 2.7)	3.0 … 3.9 (1.8 ... 3.5)	1.8 ... 2.65 (1.8 … 3.5)			
			30	1.7 … 3.0 (1.4 ... 2.7)	2.2 … 3.9 (1.8 ... 3.5)	1.4 … 2.7			
		700	30	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6[3] (0.6 … 3.0)	0.4 … 2.0			
Required supply pressure in bar			Upper bench range value + 0.4 bar			2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar					
80	80	350	15	50	50	50	50	50	6
		355		50	50	–	50	50	6
100 or 150	100	355	30	50	50	–	50	50	6
		700		50	50	50	50	50	6
100 to 150	160	355	30	50	50	–	50	50	6
		700		50	50	50	50	50	6
125	200	355	30	50	50	–	50	50	6
		700		50	50	50	50	50	6
150	260	355	30	50	50	–	50	50	50
		700		50	50	50	50	50	6

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

3) Handwheel not possible

Table 1.5 · Permissible differential pressures for Type 3241 Globe Valve up to DN 150 · Metal-seated · Leakage class IV according to IEC 60534-4 · Balanced with graphite seal ring · Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 (0.6 … 3.0)	2.1 … 3.3	1.4 … 2.3	
		700	15	1.6 … 2.4 (0.4 … 2.0)	2.4 … 3.6 [2] (0.6 … 3.0)	2.7 … 3.3 (2.1 ... 3.3)	–	
			30	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 [2] (0.6 … 3.0)	2.1 … 3.3	1.4 … 2.3	
Required supply pressure in bar								[1]
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar / Required supply pressure in bar				
80	80	350	15	–	/	50/4.3	50/3.5	6
		700		50/3	50/4.2	–	–	–
100	63	355	30	50/3.9	50/4.3		50/3	6
		700		50/3	50/4.2		50/3	6
100 to 150	100	700	30	50/3	50/4.2		50/3	6
	160	700	30	50/3.1	50/4.3		50/3	6
125	200	700	30	34/3.2	50/4.4		50/3.1	6
150	260	700	30	–	50/4.5		50/3.2	6

[1] Maximum permissible supply pressure

[2] Handwheel not possible

Table 2.1 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to DN 150 · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Including correction value for bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in bar	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4…1.8 (0.8…1.6)	2.3…3.0 (1.4…2.7)	2.7…3.4 (1.6…3.1)	3.0…3.9 (1.8…3.5)			0.8 … 1.2 (0.8 … 1.6)				
			30		1.0…1.8 (0.8…1.6)	1.7…3.0 (1.4…2.7)	1.9…3.4 (1.6…3.1)	2.2…3.9 (1.8…3.5)			0.8 … 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6[3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3[3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6[3] (0.6…3.0)	1.4…2.3	2.1…3.3	2.6…4.3[3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6				
			60		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.6…3.8 (1.0…3.2)	2.1…4.8 (1.5…4.2)		0.2 … 1.0				
		1400 -120	30		–	2.0…2.4 (0.8…2.4)	2.5…3.0 (1.0…3.0)	3.0…3.6 (1.2…3.6)			0.8 … 1.2 (0.8 … 2.4)				
			60		0.8…1.2 (0.4…1.2)	1.6…2.4 (0.8…2.4)	2.0…3.0 (1.0…3.0)	2.4…3.6 (1.2…3.6)			0.4 … 0.8 (0.4 … 1.2)				
		2800	60		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.0…3.0 (0.5…2.5)	2.4…3.6 (0.6…3.0)			0.2 … 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar								1.4	2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar										
15 to 40	0.1 to 1.0	350	15	[4]	168	400	400	400	400		168	400	–	400	3.1
		355			400	–	–	–			43	400	–	400	3.3
	1.6 to 2.5	350	15	[4]	72.5	185	297	354	400		72.5	354	400	400	4.2
		355			359	400	400	400			17	302	400	400	4.4
	4.0 to 10	350	15	–10	16.5	44.5	72.5	86.5	136		16.5	86.5	199	326	6
		355			88	152	181	202			2.6	74	188	316	6
		700			100	213	326	248	368	–	100	241	–	415	3.8
	16	350	15	–6.5	9.3	26	43	51.5	81		9.3	51.5	119	194	6
		355			52	90.5	107	120			–	43.5	112	189	6
		700			59.5	127	194	148	220	283	59.5	144	279	313	4.6
	25	350	15	–4.2	5.8	17	28	33.5	53.5		5.8	33.5	78.5	129	6
		355			34	60	71	80			–	28.5	74	125	6
		700			39.5	84	129	98	146	188	39.5	95.5	185.4	207	4.6
50 to 100	4 to 10	350	15	[5]	13.5	41.5	70	84	133		13.5	84	196	323	6
		355			85	149	178	199			–	71	185	313	6
		700			98	210	323	254	355	–	98	238	–	400	3.8
	16	350	15	[5]	7.6	24.5	41	49.5	79		7.6	49.5	117	193	6
		355			50.5	89	106	119			–	42	110	187	6
		700			58	125	193	146	218	281	58	142	277	326	4.7
	25	350	15	–4.2	4.7	15.5	27	32.5	52		4.7	32.5	77.5	128	6
		355			33	58.5	70	78.5			–	27.5	73	124	6
		700			38	83	128	97.3	145	187	38	94.5	184	269	5.7
	40	355	30	–2.5	12	23.5	27	32			–	9	35	64.5	6
		700			8.8	21.5	34.5	41	63.5	107	8.8	41	93	151	6
		1000			70	93		116	144		32.5	79	153	204	5.3
		1400			–	125	158	190			8.8	73.5	177	201	4.5

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 50 to 100	63	355	30	–1.5	7.5	14.5	16.5	19.5			–	5.4	22	40.5	3
		700			5.3	13.5	21.5	25.5	40	67.5	5.3	25.5	58	95	6
		1000			43.5	58		73	90.5		20.5	49.5	96	148	6
		1400			–	78.5	99	119			5.3	46	111	146	5
	100	355	30	–0.9	4.4	8.9	10	12			–	3.1	13	25	6
		700			3.1	8.1	13.0	15.5	24.5	41.5	3.1	15.5	36	59.5	6
		1000			27	26		45	55.5		12.5	30.5	59.5	92	6
		1400			–	48.5	61	74			3.1	28	68.5	90.5	5
	160	355	30	–0.7	2.7	5.5	6.4	7.6			–	–	8.4	15.5	6
		700			–	5.0	8.3	9.9	15.5	26.5	–	9.9	22.5	37.5	6
		1000			17	22.5		28.5	35.5		7.8	19	37.5	58.5	6
		1400			–	31	39	47			–	18	44	73	5
150	63	355	30	–1.5	6.6	13.5	15.9	19			–	4.5	21	39.5	6
		700			4.4	12.5	20.5	24.5	39	49	4.4	24.5	57.5	94	6
		1000			42.5	57.5		72	89.5		19.5	48.5	95	147	6
		1400			–	77.5	98	118			4.4	45	110	161	5.4
	100	355	30	–0.9	3.9	8.4	9.6	11.5			–	2.6	12.5	24	6
		700			2.5	7.6	12.5	15	24	30	2.5	15	35	58	6
		1000			26	35		44.5	55		11.5	30	59	91.5	6
		1400			–	48	60.5	73.0			2.5	27.5	68	114	6
	160	355	30	–0.7	2.3	5.2	6	7.2			–	–	8.1	15.5	6
		700			–	4.7	7.9	9.5	15.2	19	–	9.5	22.5	37	6
		1000			16.5	22.5		28	35		7.5	19	37.5	58	6
		1400			–	30.5	38.5	46.5			–	17.5	43.5	72.8	6
	250	1000	60	–0.2	–	4.6	7.6	10.5	14		–	9.1	21	34	6
		1400			7.0	15.0	19.5	23.5			4.9	15.0	31.5	50.5	6
		2800			15	31.5	40	48.5			15	36	–	50	3.3
	360	1000	60	–0.2	–	3.1	5.2	7.3	9.8		–	6.2	14.5	23.5	6
		1400			4.8	10.5	13	16			3.3	10.5	22	35	6
		2800			10.5	22	27.5	33.5			10.5	25	–	34.5	3.3

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Refer to K_{VS} 4 to 10 for differential pressures
5) Refer to K_{VS} 25 for differential pressures

Table 2.2 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to DN 150 · High-performance metal sealing · Leakage class V acc. to IEC 60534-4 Including correction value for bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in bar	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30		1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6 [3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3 [3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 [3] (0.6…3.0)	1.4...2.3	2.1…3.3	2.6…4.3 [3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6				
			60		0.4…1.2 (0.2…1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		0.2 … 1.0				
		1400 -120	30		–	2.0...2.4 (0.8...2.4)	2.5...3.0 (1.0...3.0)	3.0...3.6 (1.2...3.6)			0.8 … 1.2 (0.8 … 2.4)				
			60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)			0.4 … 0.8 (0.4 … 1.2)				
		2800	60		0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.0...3.0 (0.5...2.5)	2.4...3.6 (0.6...3.0)			0.2 … 0.6				
Req. supply pressure in bar		Upper bench range value + 0.2 bar									1.4	2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar										
15 to 40	0.1 to 1.0	350	15	[4]	78	331	400	400	400		78	400	–	400	3.1
		355			400	–	–	–			–	400	–	400	3.3
	1.6 to 2.5	350	15	[4]	12.5	125	237.5	294	400		12	292	400	400	4.2
		355			299	400	400	400			–	242	400	400	4.4
	4.0 to 10	350	15	–10	–	14.5	42.5	56.6	106		–	56.5	169	296	6
		355			58	122	151	172			–	44	158	286	6
		700			70.5	183	296	218	338	–	70.5	211	–	384	3.8
	16	350	15	–6.5	–	2.9	19.5	28	57.5		–	28	95.5	171	6
		355			29	67.5	84.5	97.5			–	20.5	89	166	6
		700			36.5	104	171	125	196	260	36.5	121	256	289	4.6
	25	350	15	–4.2	–	–	9.3	14.5	34.5		–	14.5	59.5	110	6
		355			15.5	41	52.5	61			–	9.8	55	106	6
		700			20.5	65	110	79.5	127	169	20.5	76.5	166	188	4.6
50 to 100	4 to 10	350	15	[5]	–	11.5	40	54	103		–	54	166	293	6
		355			55.5	119	148	169			–	41	155	283	6
		700			68.0	180	293	215	335	–	68	208	–	382	3.8
	16	350	15	[5]	–	–	18	26.5	56		–	26.5	94	170	6
		355			27	65.5	83	95.5			–	18.5	87	164	6
		700			35	102	170	123	195	258	35	119	254		4.7
	25	350	15	–4.2	–	–	8.2	13.5	33		–	13.5	58.5	109	6
		355			14	40	51	59.5			–	8.7	54	105	6
		700			19	64	109	78	126	168	19.0	75.5	165	250	5.7
	40	355	30	–2.5	–	9.4	12.5	17.5			–	–	20.5	50.5	6
		700			–	7.4	20	26.5	49.5	65.5	–	26.5	78.5	137	6
		1000			55.5	78.5		101	129		18.5	64.5	138	190	5.3
		1400			–	111	143	176			–	59	163	186	4.5

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 50 to 100	63	355	30	–1.5	–	3.3	5.4	8.5			–	–	10.5	29	6
		700			–	2	10	14	28.5	38.5	–	14	47	83.5	6
		1000			32	47		61.5	79		9	38	84.5	137	6
		1400			–	67	87.5	108			–	34.5	100	135	5
	100	700	30	–0.9	–	–	4.2	6.7	15.5	21.5	–	6.7	27	49.5	6
		1000			17.5	27		36	46.5		3.5	21.5	50.5	83	6
		1400			–	39.5	52	65			–	19	59.5	81.5	5
	160	700	30	–0.7	–	–	–	2.7	8.4	12.0	–	2.7	15.5	30.3	6
		1000			9.9	15.5		21.5	28		–	12	30.5	51.5	6
		1400				23.5	31.5	40			–	10.5	36.5	50.5	5
150	63	355	30	–1.5	–	2.4	4.5	7.6			–	–	9.6	28	6
		700			–	–	9.3	13.4	27.5	37.5	–	13	46	82.5	6
		1000			31.5	46		60.5	78		8.1	37	84	136	6
		1400			–	66.5	86.5	107			–	33.5	99	149	5.4
	100	700	30	–0.9	–	–	3.6	6.2	15	21	–	6.2	26	49	6
		1000			17	26		35.5	46		2.9	21	50	82.5	6
		1400			–	39	51.5	64			–	18.5	59	105	6
	160	700	30	–0.7	–	–	–	2.3	8	12	–	2.3	15	26.5	6
		1000			9.5	15		21	28		–	11.5	30	51	6
		1400			–	23	31.5	39.5			–	10.5	36	65.5	6
	250	1000	60	–0.2	–	–	–	4.8	8.5		–	3.3	15	28.5	6
		1400			–	9.7	13.5	17.5			–	9.6	26	44.5	6
		2800			9.6	26	34.5	42.5			9.6	30	–	44	3.3
	360	1000	60	–0.2	–	–	–	2.5	5		–	–	9.7	18.5	6
		1400			–	5.7	8.6	11.5			–	5.7	17	30	6
		2800			5.7	17	23	28.5			5.7	20	–	29.5	3.3

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Refer to K_{VS} 4 to 10 for differential pressures
5) Refer to K_{VS} 25 for differential pressures

Table 2.3 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to DN 150 · Soft-seated · Leakage class VI acc. to IEC 60534-4 · Including correction value for bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in bar	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30		1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6[3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3[3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6[3] (0.6…3.0)	1.4…2.3	2.1…3.3	2.6…4.3[3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6 (0.2 … 1.0)				
			60		0.4…1.2 (0.2…1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		0.2 … 1.0				
		1400 -120	60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)			0.4 … 0.8 (0.4 … 1.2)				
Req. supply pressure in bar			Upper bench range value + 0.2 bar								1.4	2.4	4.0	[1]	[2]
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar										
15 to 40	0.1 to 1.0	350	15	[4]	50	–	–	–	–		50	–	–	–	1.5
	1.6 to 2.5	350	15	[4]	50	–	–	–	–		22.5	–	–	50	1.7
	4.0 to 10	350	15	–10	19	47.5	50	50	–		19	–	–	50	2.5
		355			50	–	–	–			5.4	50	–	50	2.7
	16	350	15	–6.5	11.5	28	45	50	–		11.5	50	–	50	2.9
		355			50	–	–	–			3.2	46		50	3.1
	25	350	15	–4.2	7.6	18.5	30	35.5	50		7.6	35.5	–	50	3.3
		355			36	50	–	–			2.1	30.5	–	50	3.5
50 to 100	4 to 10	350	15	[5]	16.5	44.5	50	50	–		16.5	–	–	50	2.5
		355			50	–	–	–			2.7	50	–	50	2.7
	16	350	15	[5]	9.8	26.5	43.5	50	–		9.8	50	–	50	2.9
		355			50	–	–	–			–	44		50	3.1
		700			50	–	–	–	–	–	50	–	–	–	1.5
	25	350	15	–4.2	6.5	17.5	28.5	34.5	50		6.5	34.5	–	50	3.3
		355			35	50	–	–			–	29	–	50	3.5
		700			40	–	–	–	–	–	40	–	–	50	1.7
	40	355	30	–2.5	13.5	25	28	33			–	10	36.5	44.5	4.7
		700			10	23	36	42.5	–	–	10	–	–	41.5	2.5

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 50 to 100	63	355	30	–1.5	8.6	15.5	17.5	21			–	6.5	23	36.5	5.5
		700			6.4	14.5	22.5	26.5	–	–	6.4	26.5	–	34.5	2.9
	100	355	30	–0.9	5.3	9.8	11	13			–	4	14	25.5	6
		700			3.9	9	14	16.5	25	–	3.9	16.5	–	28	3.5
		1000			27.5	–	–	–			13	–	–	27	2.3
	160	355	30	–0.7	3.4	6.2	7.1	8.3			–	2.5	9.1	16.5	6
		700			2.5	5.7	9	10.5	16	26.5	2.5	10.5	–	23	4.1
		1000			17.5	23.5	–	–			8.5	20	–	22	2.8
150	63	355	30	–1.5	7.6	14.5	17	20			–	5.6	22	35.5	5.5
		700			5.5	13.5	21.5	25.5	–	–	5.5	25.5	–	33.5	2.9
	100	355	30	–0.9	4.7	9.2	10.5	12.4			–	3.4	13.5	25	6
		700			3.4	8.4	13.5	16	24.5	–	3.4	16	–	27.5	3.5
		1000			27	–	–	–			12.5	–	–	26.5	2.3
	160	355	30	–0.7	3	5.9	6.7	7.9			–	2.2	8.7	16.1	6
		700			2.1	5.4	8.6	10	15.5	20	2.1	10	–	22.5	4.1
		1000			17	–	–	–			8.1	19.5	–	22	2.8
	250	1000	60	–0.2	2.2	5.2	8.2	11	14.5		2.2	9.6	–	18	3.7
		1400			7.6	15.9	–	–			5.5	15.5	–	17.5	2.7
	360	1000	60	–0.2	–	3.6	5.7	7.7	10.0		–	6.7	14.5	15	4.3
		1400			5.2	11	13.5	–			3.8	11	–	15	3.1

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar
2) Maximum permissible supply pressure
3) Handwheel not possible
4) Refer to K_{VS} 4 to 10 for differential pressures
5) Refer to K_{VS} 25 for differential pressures

Table 2.4 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to DN 150 · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Balanced with PTFE seal ring Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"			
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		355	30	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)		0.8...1.6			
		700	30	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	2.1...3.3	0.4...2.0			
		1000	30	2.1...3.1	2.6...3.8		0.4...1.2			
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	0.4...2.0			
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)	0.8...1.6 (0.8...2.4)			
Required supply pressure in bar							2.4	4	1)	2)
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar/ Required supply pressure in bar			Permissible differential pressures Δp in bar			
80 to 100	100	355	30	185/3.4	217/3.8		40	297	400	6
		700		165/2.8	292/4.0	400/7.7	39	400	400	6
	160	355	30	169/3.5	201/3.9		25	282	400	6
		700		150/2.4	276/4.0	400/3.7	23	400	400	6
150	100	355	30	70/3.5	83/3.9		11	116	234	6
		700		62/2.8	114/4.0	230/3.7	10	217	400	6
		1000		347/3.5	400/4.2		180	400	400	6
	160	355	30	64/3.5	77/3.9		–	109	228	6
		700		55/2.8	107/4.0	224/3.7	–	211	400	6
		1000		341/3.5	400/4.2		174	400	400	6
	250	1000	60	92/2.8	240/4.2	325/5.1	18	314	400	6
		1400		359/2.8	400/3.4	400/4.0	151	400	400	6
	360	1000	60	84/2.8	232/4.2	325/5.1	10	306	400	6
		1400		351/2.8	400/3.4	400/4.0	143	400	400	6

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

Table 2.5 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to DN 150 · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Balanced with graphite seal ring Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		355	30	1.7...3.0	1.9...3.4		Use the SAMSON valve sizing software to determine the permissible differential pressures.	
		700	30	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	2.1...3.3		
		1000	30	2.1...3.1	2.6...3.8			
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		
Required supply pressure in bar								
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar/ Required supply pressure in bar			Permissible differential pressure Δp in bar	
80 to 100	100	355	30	97/3.9	130/4.3	–		
		700		78/2.9	204/4.1	400/3.8		
	160	355	30	60/4.1	92/4.5	–		
		700		40/3.0	167/4.1	400/3.9		
150	100	355	30	34/4.0	47/4.4			
		700		26/2.9	78/4.1	194/3.8		
		1000		311/3.5	400/4.2			
	160	355	30	19/4.2	32/4.6			
		700		10/3.0	62/4.2	179/3.9		
		1000		296/3.5	388/4.2			
	250	1000	60	36/2.9	184/3.5	277/5.3		
		1400		303/2.8	400/3.4	400/4.0		
	360	1000	60	17/3.0	165/3.6	257/5.4		
		1400		283/2.8	387/3.4	400/4.0		

Table 3.1 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes DN 200 or larger · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Including correction value for bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in bar	1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4	0.4 … 1.2				
			60		–	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0...2.4 (0.8...2.4)	2.5...3.0 (1.0...3.0)	3.0...3.6 (1.2...3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8...2.4	1.0...3.0	1.2...3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.0...3.0 (0.5...2.5)	2.4...3.6 (0.6...3.0)	2.8...3.8 (1.3...3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8...2.4 (0.4...2.0)	1.0...3.0 (0.5...2.5)	1.2...3.6 (0.6...3.0)	1.4...2.6 (1.1...2.3)	1.8...3.8 (1.3...3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar									
Up to 250	100	1000	30	–1	25.5	34.5		43.5	54	–	18	47	79.5	6
		1400			–	47	59.5	72.5		–	26.5	67	113	6
Up to 300	160	1000	30	–0.6	16	21.5		27.5	34.5	–	11.5	30	50.5	6
		1400			–	30	38	46		–	17	43	72	6
	250	1000	60	–0.4	–	4.3	7.2	10	13.5	–	–	13	26.5	6
		1400			6.6	14.5	19	23		4.6	14.5	31.5	50	6
		2800			14.5	31.5	39.5	48	56	14.5	35.5	68.5	81.5	4.8
Up to 400	360	1000	60	–0.3	–	2.9	4.9	7	9.6	–	–	9	18	6
		1400			4.5	10	13	16		3.1	10	21.5	34.5	6
		2800			10	21.5	27.5	33	39	10	24.5	47.5	68.5	5.6
		2x2800			21.5	44.5	56	67.5	–	21.5	50.5	–	65.5	3.1
	630	1000	60	–0.2	–	–	2.7	3.8	5.3	–	–	5	10	6
		1400			2.4	5.7	7.3	8.9		–	5.7	12	19.5	6
		2800			5.7	12	15	18.5	21.5	5.7	13.5	26.5	41	6
		2x2800			12	25	31.5	38	44.5	12	28	–	42	3.9
	1000	1400	120	–0.1	–	–	2	2.5		–	2.5	6.7	11	6
		2800			3.6	4.6	5.6	6.7	8.8	1.5	6.7	15	24.3	6
		2x2800			7.7	9.8	11.5	14	18	3.6	14	30.5	41	5.2
	1500	1400	120	–	–	–	–	–		–	–	4.6	7.8	6
		2800			2.4	3.2	3.9	4.6	6	1.0	4.6	10.4	16.8	6
		2x2800			5.3	6.8	8.2	9.6	12.5	2.4	9.6	21	34	6
Up to 500	2000	2800	120	–	1.8	2.3	2.8	3.3	4.4	–	3.3	7.6	12.3	6
		2x2800			3.9	4.9	6	7.1	9.2	1.8	7.1	15.5	25.1	6
	2500	2800	120	–	1.3	1.7	2.1	2.5	3.3	–	2.5	5.8	9.4	6
		2x2800			2.9	3.8	4.6	5.4	7	1.3	5.4	11.5	19	6
	4000	2800	120	–	–	1.1	1.3	1.6	2.1	–	1.6	3.7	6	6
		2x2800			1.9	2.4	2.9	3.4	4.4	–	3.4	7.6	12.2	6

* For actuators 2800 cm^2 and 2x2800 cm^2 with fail-safe action "Stem retracts", the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

Table 3.2 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes DN 200 or larger · High-performance metal sealing · Leakage class V acc. to IEC 60534-4 · Including correction value for bellows seal

DN	K_{VS}	Actuator cm²	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in bar	1.6…2.4	2.1…3.1		2.8…3.8	3.2…4.4	0.4 … 1.2				
			60		–	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.6…3.8 (1.0…3.2)	2.1…4.8 (1.5…4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0…2.4 (0.8…2.4)	2.5…3.0 (1.0…3.0)	3.0…3.6 (1.2…3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8…1.2 (0.4…1.2)	1.6…2.4 (0.8…2.4)	2.0…3.0 (1.0…3.0)	2.4…3.6 (1.2…3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8…2.4	1.0…3.0	1.2…3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.0…3.0 (0.5…2.5)	2.4…3.6 (0.6…3.0)	2.8…3.8 (1.3…3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8…2.4 (0.4…2.0)	1.0…3.0 (0.5…2.5)	1.2…3.6 (0.6…3.0)	1.4…2.6 (1.1…2.3)	1.8…3.8 (1.3…3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar									
Up to 250	100	1000	30	–1	16	25.5		34.5	45	–	9.2	38	70.5	6
		1400			–	38	50.5	63.5		–	17.5	58	104	6
Up to 300	160	1000	30	–0.6	8.9	14.5		20.5	27.5	–	4.3	22.5	43.5	6
		1400			–	22.5	30.5	39		–	9.9	35.5	65	6
	250	1000	60	–0.4	–	–	–	4.4	8.1	–	–	7.4	20.5	6
		1400			–	9.2	13	17.5		–	9.2	25.5	44.5	6
		2800			9.2	25.5	34	42	50.5	9.2	29.5	63	75.5	4.8
Up to 400	360	1000	60	–0.3	–	–	–	2.2	4.8	–	–	4.2	13.5	6
		1400			–	5.5	8.4	11		–	5.5	17	30	6
		2800			5.5	17	22.5	28.5	34	5.5	19.5	43	63.5	5.6
		2x2800			17	40	51.5	63	–	17	45.5	–	61	3.1
	630	1000	60	–0.2	–	–	–	–	1.7	–	–	1.4	6.6	6
		1400			–	2.1	3.7	5.3		–	2.1	8.6	15.9	6
		2800			2.1	8.6	11.5	15	18	2.1	10.0	23	37.5	6
		2x2800			8.6	21.5	28	34.5	41	8.6	24.5	–	46.5	3.9
	1000	2800	120	–0.1	–	1.7	2.8	3.8	5.9	–	3.8	12	21	6
		2x2800			4.8	6.9	9	11	15	–	11	27.5	38	5.2
	1500	2800	120	–	–	–	1.5	2.2	3.6	–	2.2	8	14	6
		2x2800			2.9	4.4	5.8	7.2	10	–	7.2	18.5	31.5	6
Up to 500	2000	2800	120	–	–	–	–	1.4	2.3	–	1.3	5.5	10	6
		2x2800			1.8	2.9	3.9	5	7.1	–	5	13.5	23	6
	2500	2800	120	–	–	–	–	–	1.5	–	–	4	7.6	6
		2x2800			1.1	2.0	2.8	3.6	5.2	–	3.6	10	17	6
	4000	2x2800	120	–	–	–	1.4	2	3	–	2.0	6.1	10.5	6

* For actuators 2800 cm² and 2x2800 cm² with fail-safe action "Stem retracts". the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

Table 3.3 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes DN 200 or larger · Soft-seated · Leakage class VI acc. to IEC 60534-4 · Including correction value for bellows seal

DN	K_{VS}	Actuator cm²	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in bar	1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4	0.4 … 1.2				
			60		–	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.6…3.8 (1.0…3.2)	2.1…4.8 (1.5…4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0…2.4 (0.8…2.4)	2.5…3.0 (1.0…3.0)	3.0…3.6 (1.2…3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8…1.2 (0.4…1.2)	1.6…2.4 (0.8…2.4)	2.0…3.0 (1.0…3.0)	2.4…3.6 (1.2…3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8…2.4	1.0…3.0	1.2…3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.0…3.0 (0.5…2.5)	2.4…3.6 (0.6…3.0)	2.8…3.8 (1.3…3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8…2.4 (0.4…2.0)	1.0…3.0 (0.5…2.5)	1.2…3.6 (0.6…3.0)	1.4…2.6 (1.1…2.3)	1.8…3.8 (1.3…3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
DN	K_{VS}	Actuator	Travel	Bellows	Permissible differential pressures Δp in bar									
Up to 250	100	1000	30	–1	26	–	–	–	–	–	19	–	25.5	2.9
Up to 300	160	1000	30	–0.6	16.5	22.5	–	–	–	–	12	–	21	3.4
	250	1000	60	–0.4	–	4.8	7.8	10.5	14	–	1.8	13.5	17.5	4.7
		1400			7.2	15.5	–	–		5.1	15.5	–	17	2.7
Up to 400	360	1000	60	–0.3	–	3.3	5.4	7.4	10	–	1.3	9.5	15	5.3
		1400			5	10.5	13.5	–		3.5	10.5	–	14.5	3.1
	630	1000	60	–0.2	–	–	3	4.2	5.6	–	–	5.3	10.5	6
		1400			2.8	6	7.6	9.3		2	6	–	11.5	3.9
	1000	1400	120	–0.1	–	1.8	2.3	2.8		–	2.8	7	9.4	5.1
		2800			3.8	4.9	5.9	7	9	1.8	7	–	8.8	2.9
	1500	1400	120	–	–	1.2	1.6	1.9		–	1.9	4.8	7.9	5.9
		2800			2.7	3.4	4.1	4.8	6.3	1.2	4.8	–	7.6	3.3
Up to 500	2000	2800	120	–	2	2.5	3	3.5	4.6	–	3.5	–	6.6	3.7
	2500	2800	120	–	1.5	1.9	2.3	2.7	3.5	–	2.7	–	5.8	4.1
	4000	2800	120	–	–	1.2	1.5	1.7	2.2	–	1.7	3.8	4.7	4.9

* For actuators 2800 cm² and 2x2800 cm² with fail-safe action "Stem retracts". the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

Table 3.4 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes DN 200 or larger · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Balanced with PTFE seal ring · Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts" *			
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	2.1...3.1	2.6...3.8		1.0 ... 2.1 (1.0 ... 3.2)			
			60	0.8…2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	1.0 … 3.2			
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)	1.0 ... 2.0 (1.0 … 3.0)			
			120	0.8...2.4	1.0...3.0	1.2...3.6	0.8 ... 2.4			
		2800	120	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.8...3.8 (1.3...3.3)	1.1 … 2.3			
Required supply pressure in bar							3	4	1)	2)
DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar/ Required supply pressure in bar			Permissible differential pressures Δp in bar			
200 to 500	160	1000	30	129/3.5	165/4.2		42.5	115	245	6
	250	1000	60	32/2.8	90/4.2	126/5.2	–	32	162	6
		1400		136/2.8	177/3.4	217/4.0	75	177	359	6
	360	1000	60	29/2.8	87/4.2	123/5.2	–	29	159	6
		1400		133/2.8	173/3.4	214/4.0	72	173	356	6
	630	1000	60	22/2.8	80/4.2	117/5.2	–	22.5	153	6
		1400		127/2.8	167/3.4	208/4.0	66	167	350	6
	1000	1400	120	39/2.8	60/3.4	80/4.0	19	120	303	6
		2800		120/2.8	201/4.0	323/4.2	100	303	400	6
	1500	1400	120	33/2.8	53/3.4	74/4.0	13	114	297	6
		2800		114/2.8	195/4.0	317/4.2	94	297	400	6
	2000	1400	120	27/2.8	47/3.4	67/4.0	–	108	290	6
		2800		108/2.8	189/4.0	311/4.2	88	290	400	6
	2500	1400	120	21/2.8	41/3.4	61/4.0	–	102	284	6
		2800		102/2.8	183/4.0	304/4.2	81	284	400	6
	4000	1400	120	–	28/3.5	49/4.1	–	89	272	6
		2800		89/2.8	170/4.0	292/4.2	69	272	400	6

* For actuators 2800 cm^2 and 2x2800 cm^2 with fail-safe action "Stem retracts". the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar

2) Maximum permissible supply pressure

Table 3.5 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes DN 200 or larger · Metal-seated · Leakage class IV acc. to IEC 60534-4 · Balanced with graphite seal ring · Without bellows seal

DN	K_{VS}	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	2.1...3.1	2.6...3.8		Permissible differential pressures available on request.	
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		
			120	0.8...2.4	1.0...3.0	1.2...3.6		
		2800	120	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.8...3.8 (1.3...3.3)		
Required supply pressure in bar								

DN	K_{VS}	Actuator	Travel	Permissible differential pressures Δp in bar/ Required supply pressure in bar			Permissible differential pressures Δp in bar	
200 to 500	160	1000	30	112/3.6	148/4.3			
	250	1000	60	10/3.0	68/3.6	104/5.4		
		1400		114/2.8	155/3.4	195/4.0		
	360	1000	60	–	60/3.6	97/5.4		
		1400		107/2.9	147/3.5	188/4.1		
	630	1000	60	–	45/3.8	82/5.6		
		1400		92/3.0	132/3.6	173/4.2		
	1000	1400	120	–	16/3.7	36/4.3		
		2800		77/2.8	158/4.0	279/4.2		
	1500	1400	120	–	–	21/4.4		
		2800		62/2.8	143/4.0	264/4.2		
	2000	2800	120	47/2.9	128/4.1	249/4.3		
	2500	2800	120	32/2.9	113/4.1	234/4.3		
	4000	2800	120	–	83/4.3	204/4.5		

Valve versions according to ANSI/ASTM standards

Table 4.1 · Permissible differential pressures for Type 3241 Globe Valve up to NPS 6 · Metal-seated · Leakage class IV according to ANSI/FCI 70-2 · Unbalanced

Note The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 (C_V 5) or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10 (C_V = 7.5 to 12).

NPS	C_V	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2...1.0	0.4...2.0	1.4...2.3	2.1...3.3			0.2 ... 1.0				
		240	15	0.3...1.1 (0.2...1.0)	0.6...2.2 (0.4...2.0)	0.9...3.3 (0.6...3.0)				0.2 ... 1.0				
		350	15	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.4...2.3	2.1...3.3		0.2 ... 1.0				
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15	0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.4...3.6 [3] (0.6...3.0)	1.85...2.3 (1.4...2.3)	2.7...3.3 (2.1...3.3)	3.45...4.3[3] (2.6...4.3)	0.2 ... 0.6 (0.2 ... 1.0)				
			30	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 [3] (0.6...3.0)	1.4...2.3	2.1...3.3	2.6...4.3[3]	0.2 ... 1.0				
		1000	30	1.6...2.4	2.1...3.1		2.6...3.8	3.2...4.4		0.2 ... 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi										
½ to 1	0.12 to 0.3	120	15	725	725	725	725			725	725	–	725	49
		240	15	725	725	725				725	–	–	725	32
½ to 2	0.5 to 1.2	120	15	120	725	725	725			725	725	725	725	126
		240	15	725	725	725				725	725	–	725	48
	2 3 5	120	15	–	261	725	725			261	725	725	725	87
		240	15	536	725	725				725	725	725	725	82
		350	15	725	725	725	725	725		725	725	725	725	61
		355	15	725	725	725	725			725	725	725	725	64
¾ to 2	7.5 12	120	15	–	40.5	392	638			40.5	391	725	725	87
		240	15	111	319	529				174	725	725	725	87
		350	15	304	718	725	725	725		3.4	725	725	725	87
		355	15	725	725	725	725			109	725	725	725	87
1¼ to 2	20	120	15	–	–	225	370			–	225	566	725	87
		240	15	58	181	304				100	515	725	725	87
		350	15	177	420	660	725	725		174	725	725	725	87
		355	15	725	725	725	725			56	674	725	725	87
1½ to 3	30	120	15	–	–	145	239			–	145	362	609	87
		240	15	33	117	196				61	341	725	725	87
		350	15	111	275	435	515	725		111	515	725	725	87
		355	15	522	645	725	725			32	442	725	725	87

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
2 to 3	47	240	15	–	68	120				33	203	486	725	87
		350		65	167	268	319	493		65	319	725	725	87
		355		319	558	660	725			–	268	681	725	87
		700		370	725	725	725	725	–	370	725	–	725	48
2½ 3	70	240	15	–	35	65				–	116	275	457	87
		350		33	93	152	181	283		33	181	413	681	87
		355		181	319	377	420			–	155	391	660	87
		700		210	442	681	522	725	–	210	607	–	718	48
3	95	240	15	–	–	37				–	69	167	283	87
		350		–	55	91	110	174		–	110	254	420	87
		355		112	196	232	261			–	93	239	406	87
		700		128	276	421	319	471	–	128	312	–	602	48
	120	700	19		232 [4]					110 [5]	293 [5]	–	442 [5]	49 [5]
4 to 6	75	355	30	120	225	254	297			–	90	326	600	87
		700		88	203	319	384	587	725	88	384	725	725	87
		1000		645	725		725	725		308	725	–	725	59
	120	355	30	71	136	152	181			–	52	196	370	87
		700		52	125	196	232	363	450	52	232	529	725	87
		1000		399	529		711	725		189	450	–	725	59
	190	355	30	44	86	97	115			–	32	126	232	87
		700		30	78	125	148	225	290	130	145	334	544	87
		1000		247	334		450	537		117	283	–	537	59
6	300	355	30	–	48	55	65			–	–	73	136	87
		700		–	44	73	86	135	167	–	86	196	319	87
		1000		145	196		261	312		68	167	–	312	59

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar (20 to 35 psi), bench range 0.4 to 2 bar (6 to 30 psi)
5) Operating range 0.2 to 0.7 bar (3 to 10 psi), bench range 0.2 to 1 bar (3 to 15 psi)

Table 4.2 · Permissible differential pressures for Type 3241 Globe Valve up to NPS 6 · High-performance metal sealing Leakage class V according to ANSI/FCI 70-2 · Unbalanced

Note Specify the maximum differential pressure on ordering/requesting a quotation to obtain the correct sizing.
The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 (C_V 5) or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10 (C_V = 7.5 to 12).

NPS	C_V	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2...1.0	0.4...2.0	1.4...2.3	2.1...3.3			0.2 ... 1.0				
		240		0.3...1.1 (0.2...1.0)	0.6...2.2 (0.4...2.0)	0.9...3.3 (0.6...3.0)								
		350		0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.4...2.3	2.1...3.3						
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6 (0.8 ... 1.6)				
		700	15	0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.4...3.6 [3] (0.6...3.0)	1.85...2.3 (1.4...2.3)	2.7...3.3 (2.1...3.3)	3.45...4.3[3] (2.6...4.3)	0.2 ... 0.6 (0.2 ... 1.0)				
			30	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 [3] (0.6...3.0)	1.4...2.3	2.1...3.3	2.6...4.3[3]	0.2 ... 1.0				
		1000	30	1.6...2.4	2.1...3.1		2.6...3.8	3.2...4.4		0.2 ... 0.6				
Req. supply pressure in bar				Upper bench range value + 0.2 bar						1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi										
½ to 1	0.12 to 0.3	120	15	–	725	725	725			725	725	–	725	49
		240		725	725	725				725	–	–	725	32
½ to 2	0.5 to 1.2	120	15	–	–	725	725			–	725	725	725	83
		240		616	725	725				725	725	–	725	48
	2 3 5	120		–	–	725	725			–	725	725	725	87
		240		–	508	725				–	725	725	725	83
		350		464	725	725	725	725		464	725	725	725	61
		355		725	725	725	725			–	725	725	725	64
¾ to 2	7.5 12	120	15	–	–	–	196			–	–	515	725	87
		240		–	–	96				–	442	725	725	87
		350		–	283	689	725	725		–	725	725	725	87
		355		725	725	725	725			–	703	725	725	87
1¼ to 2	20	120	15	–	–	–	36			–	–	225	602	87
		240		–	–	–				–	181	725	725	87
		350		–	84	326	450	725		–	450	725	725	87
		355		464	725	725	725			–	334	725	725	87
1½ to 3	30	120	15	–	–	–	–			–	–	93	341	87
		240		–	–	–				–	65	508	725	87
		350		–	–	160	239	529		–	239	725	725	87
		355		247	624	725	725			–	167	725	725	87

NPS	Cv	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
2 to 3	47	240	15	–	–	–				–	–	268	40	87
		350		–	–	52	103	276		–	103	508	725	87
		355		107	341	442	522			–	57	464	725	87
		700		152	558	725	689	725	–	152	660	–	725	48
2½ and 3	70	240	15	–	–	–				–	–	113	290	87
		350		–	–	–	–	119		–	–	247	515	87
		355		–	152	210	254			–	–	225	493	87
		700		45	283	515	355	602	–	45	341	–	551	48
3	95	240	15	–	–	–				–	–	39	152	87
		350		–	–	–	–	44		–	–	126	290	87
		355		–	65	102	131			–	–	112	278	87
		700		–	144	290	190	341	–	–	181	–	312	48
	120	700	19		107 [4]					–	160 [5]	–	312 [5]	49 [5]
4 to 6	75	355	30	–	59	90	135			–	–	160	435	87
		700		–	41	160	218	421	573	–	218	689	725	87
		1000		479	689		725	725		142	566	–	725	59
	120	355	30	–	–	–	52			–	–	71	239	87
		700		–	–	68	104	232	319	–	104	399	725	87
		1000		261	399		580	711		58	319	–	725	59
	190	355	30	–	–	–	–			–	–	–	129	87
		700		–	–	–	44	126	181	–	44	232	442	87
		1000		145	232		348	428		–	181	–	428	59
6	300	355	30	–	–	–	–			–	–	–	57	87
		700		–	–	–	–	54	88	–	–	116	239	87
		1000		70	116		181	232		–	87	–	232	59

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar (20 to 35 psi), bench range 0.4 to 2 bar (6 to 30 psi)
5) Operating range 0.2 to 0.7 bar (3 to 10 psi), bench range 0.2 to 1 bar (3 to 15 psi)

Table 4.3 · Permissible differential pressures for Type 3241 Globe Valve up to NPS 6 · Soft-seated · Leakage class VI according to ANSI/FCI 70-2 · Unbalanced

Note The bellows correction value is 0 when a bellows seal is used.
For valves with K_{VS} 4 (C_V 5) or smaller, use the permissible differential pressures from the rows for K_{VS} = 6.3 to 10 (C_V = 7.5 to 12).

NPS	C_V	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		120	15	0.2...1.0	0.4...2.0	1.4...2.3	2.1...3.3			0.2 ... 1.0				
		240		0.3...1.1 (0.2...1.0)	0.6...2.2 (0.4...2.0)	0.9...3.3 (0.6...3.0)								
		350		0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.4...2.3	2.1...3.3						
		355	15	1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30	1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15	0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.4...3.6[3] (0.6...3.0)	1.85...2.3 (1.4...2.3)	2.7...3.3 (2.1...3.3)	3.45...4.3[3] (2.6...4.3)	0.2 ... 0.6 (0.2 ... 1.0)				
			30	0.4...1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6[3] (0.6...3.0)	1.4...2.3	2.1...3.3	2.6...4.3[3]	0.2 ... 1.0				
		1000	30	1.6...2.4	2.1...3.1		2.6...3.8	3.2...4.4		0.2 ... 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi										
½ to 1	0.12 to 0.3	120	15	725	725	–	–			725	–	–	–	22
½ to 2	0.5 to 1.2	120	15	283	725	–	–			725	–	–	725	30
		240		725	–	–				725	–	–	–	22
	2 3 5	120		64	471	725	725			341	725	–	725	46
		240		624	725	725				725	–	–	725	30
		350		725	–	–	–	–		725	–	–	725	25
¾ to 2	7.5 12	120	15	–	83	428	674			83	428	725	725	78
		240		152	363	573				218	725	–	725	46
		350		348	725	725	725	–		348	725	–	725	36
		355		725	–	–	–			145	725	–	725	39
1¼ to 2	20	120	15	–	48	254	399			48	254	587	725	87
		240		90	210	341				132	551	–	725	55
		350		203	450	696	725	–		203	725	–	725	42
		355		725	–	–	–			88	703	–	725	45
1½ to 3	30	120	15	–	30	167	268			30	167	392	725	87
		240		59	142	225				87	363	725	725	65
		350		138	297	464	544	725		138	544	–	725	48
		355		551	725	–	–			58	471	–	725	51
2 to 3	47	240	15	36	88	141				54	225	508	718	78
		350		86	189	290	341	515		86	341	–	696	58
		355		341	573	682	725			36	290	–	696	59
		700		392	–	–	–	–	–	392	–	–	645	30

NPS	Cv	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
2½ 3	70	240	15	–	51	81				30	132	290	471	87
		350		49	109	167	196	297		49	196	428	544	71
		355		196	334	392	435			–	167	410	544	74
		700		225	464	–	537	–	–	225	522	–	515	36
3	95	240	15	–	30	49				–	81	181	290	87
		350		30	67	103	122	181		30	122	268	428	87
		355		123	203	239	268			–	104	254	435	87
		700		141	283	428	334	–	–	141	319	–	413	45
3	120	700	19		247 [4]					122 [5]	305 [5]	–	413 [5]	46 [5]
4 to 6	75	355	30	136	239	268	312			–	106	341	537	80
		700		104	222	341	399	–	–	104	399	–	508	42
4 to 6	120	355	30	84	145	167	196			–	65	210	384	87
		700		64	138	210	247	370	–	64	247	–	413	51
		1000		406	–		–	–		196	–	–	399	33
4 to 6	190	355	30	54	94	107	125			–	41	136	239	87
		700		41	87	135	152	239	297	41	152	–	334	59
		1000		261	341		–	–		128	290	–	326	41
6	300	355	30	32	57	62	74			–	–	81	144	87
		700		–	52	80	93	142	174	–	93	203	218	73
		1000		152	203		254	–		75	174	–	254	49

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) Operating range 1.4 to 2.4 bar (20 to 35 psi), bench range 0.4 to 2 bar (6 to 30 psi)
5) Operating range 0.2 to 0.7 bar (3 to 10 psi), bench range 0.2 to 1 bar (3 to 15 psi)

Table 4.4 · Permissible differential pressures for Type 3241 Globe Valve up to NPS 6 · Metal-seated · Leakage class IV according to ANSI/FCI 70-2 · Balanced with PTFE ring · Without bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"		"Actuator stem retracts"			
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 (0.6 … 3.0)	0.4 … 2.0			
		355	15	2.3 … 3.0 (1.4 ... 2.7)	3.0 … 3.9 (1.8 ... 3.5)	1.8 ... 2.65 (1.8 … 3.5)			
			30	1.7 … 3.0 (1.4 ... 2.7)	2.2 … 3.9 (1.8 ... 3.5)	1.4 … 2.7			
		700	30	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6[3] (0.6 … 3.0)	0.4 … 2.0			
Required supply pressure in bar			Upper bench range value + 0.4 bar			2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi					
3	95	350	15	725	725	725	725	725	87
		355		725	725	–	725	725	87
4 to 6	120	355	30	725	725	–	725	725	87
		700		725	725	725	725	725	87
	190	355	30	725	725	–	725	725	87
		700		725	725	725	725	725	87
6	300	355	30	725	725	–	725	725	87
		700		725	725	725	725	725	87

[1] Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)

[2] Maximum permissible supply pressure in psi

[3] Handwheel not possible

Table 4.5 · Permissible differential pressures for Type 3241 Globe Valve up to NPS 6 · Metal-seated · Leakage class IV according to ANSI/FCI 70-2 · Balanced with graphite seal ring · Without bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 (0.6 … 3.0)	2.1 … 3.3	1.4 … 2.3	
		355	30	1.7 … 3.0 (1.4 … 2.7)	1.9 … 3.4 (1.6 … 3.1)		0.8 … 1.6	
		700	15	1.6 … 2.4 (0.4 … 2.0)	2.4 … 3.6 [2] (0.6 … 3.0)	2.7 … 3.3 (2.1 … 3.3)	–	
			30	0.8 … 2.4 (0.4 … 2.0)	1.2 … 3.6 [2] (0.6 … 3.0)	2.1 … 3.3	1.4 … 2.3	
Required supply pressure in bar								[1]
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi /Required supply pressure in psi				
3	95	350	15	–	/	725 / 62	725 / 51	87
		700		725 / 44	725 / 61	–	–	–
4 to 6	120	700	30	725 / 44	725 / 61		725 / 44	87
	190	700	30	725 / 45	725 / 62		725 / 44	87
6	300	700	30	–	725 / 65		725 / 46	87

[1] Maximum permissible supply pressure in psi

[2] Handwheel not possible

Table 5.1 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to NPS 6 · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Including correction value for bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in psi	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30		1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6[3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3[3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6[3] (0.6…3.0)	1.4…2.3	2.1…3.3	2.6…4.3[3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6				
			60		0.4…1.2 (0.2…1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		0.2 … 1.0				
		1400 -120	30		–	2.0...2.4 (0.8...2.4)	2.5...3.0 (1.0...3.0)	3.0...3.6 (1.2...3.6)			0.8 … 1.2 (0.8 … 2.4)				
			60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)			0.4 … 0.8 (0.4 … 1.2)				
		2800	60		0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.0...3.0 (0.5...2.5)	2.4...3.6 (0.6...3.0)			0.2 … 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar								1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi										
½ to 1½	0.12 to 1.2	350	15	[4]	2437	5802	5802	5802	5802		2437	5802	–	5802	45
		355			5802	–	–	–			624	5802	–	5802	48
	2 to 3	350	15	[4]	1052	2683	4308	5134	5802		1052	5134	5802	5802	61
		355			5207	5802	5802	5802			247	4380	5802	5802	64
	5 to 12	350	15	–145	239	645	1052	1255	1973		239	1255	2886	4728	87
		355			1276	2205	2625	2930			38	1073	2727	4583	87
		700			1450	3089	4728	3597	5337		1450	3495	–	6019	55
	20	350	15	–94	135	377	624	747	1175		135	747	1726	2814	87
		355			754	1313	1552	1740			–	631	1624	2741	87
		700			863	1842	2814	2147	3191	4105	863	2089	4047	4540	67
	30	350	15	–61	84	247	406	486	776		84	486	1139	1871	87
		355			493	870	1030	1160			–	413	1073	1813	87
		700			573	1218	1871	1421	2118	2727	573	1385	2689	3002	67
2 to 4	5 to 12	350	15	[5]	196	602	1015	1218	1929		196	1218	2843	4685	87
		355			1233	2161	2582	2886			–	1030	2683	4540	87
		700			1421	3046	4685	3684	5149	–	1421	3452	–	5802	55
	20	350	15	[5]	110	355	595	718	1146		110	718	1697	2799	87
		355			732	1291	1537	1726			–	609	1595	2712	87
		700			841	1813	2799	2118	3162	4076	841	2060	4018	4728	68
	30	350	15	–61	68	225	392	471	754		68	471	1124	1856	87
		355			479	848	1015	1139			–	399	1059	1798	87
		700			551	1204	1856	1411	2103	2712	551	1371	2669	3902	83
	47	355	30	–36	174	341	392	464			–	131	508	935	87
		700			128	312	500	595	921	1552	128	595	1349	2190	87
		1000			1015	1349		1682	2089		471	1146	2219	2959	77
		1400			–	1813	2292	2756			128	1066	2567	2915	65

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 2 to 4	75	355	30	–22	109	210	239	283			–	78	319	587	44
		700			77	196	312	370	580	979	77	370	841	1378	87
		1000			631	841		1059	1313		297	718	1392	2147	87
		1400			–	1139	1436	1726			77	667	1610	2118	73
	120	355	30	–13	64	129	145	174			–	45	189	363	87
		700			45	117	189	225	355	602	45	225	522	863	87
		1000			392	377		653	805		181	442	863	1334	87
		1400			–	703	885	1073			45	406	994	1313	73
	190	355	30	–10	39	80	93	110			–	–	122	225	87
		700			–	73	120	144	225	384	–	144	326	544	87
		1000			247	326		413	515		113	276	544	848	87
		1400			–	450	566	682			–	261	638	1059	73
6	75	355	30	–22	96	196	231	276			–	64	305	573	87
		700			64	181	297	355	566	711	64	355	834	1363	87
		1000			616	834		1044	1298		283	703	1378	2132	87
		1400			–	1124	1421	1711			64	653	1595	2335	78
	120	355	30	–13	57	122	139	167			–	38	181	348	87
		700			36	110	181	218	348	435	36	218	508	841	87
		1000			377	508		645	798		167	435	856	1327	87
		1400			–	696	877	1059			36	399	986	1653	87
	190	355	30	–10	33	75	87	104			–	–	117	225	87
		700			–	68	115	138	220	276	–	138	326	537	87
		1000			239	326		406	508		109	276	544	841	87
		1400			–	442	558	674			–	254	631	1056	87
	290	1000	60	–3	–	67	110	152	302		–	132	305	493	87
		1400			102	218	283	341			71	218	457	732	87
		2800			218	457	580	703			218	522	–	725	48
	420	1000	60	–3	–	45	75	106	142		–	90	210	341	87
		1400			70	152	189	232			48	152	319	508	87
		2800			152	319	399	486			152	363	–	500	48

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) See K_{VS} 4 to 10 (C_V 5 to 12) for differential pressures
5) See K_{VS} 25 (C_V 30) for differential pressures

Table 5.2 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to NPS 6 · High-performance metal sealing · Leakage class V acc. to ANSI/FCI 70-2 Including correction value for bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in psi	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30		1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6 [3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3 [3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 [3] (0.6…3.0)	1.4…2.3	2.1…3.3	2.6…4.3 [3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6				
			60		0.4…1.2 (0.2...1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		0.2 … 1.0				
		1400 -120	30		–	2.0...2.4 (0.8...2.4)	2.5...3.0 (1.0...3.0)	3.0...3.6 (1.2...3.6)			0.8 … 1.2 (0.8 … 2.4)				
			60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)			0.4 … 0.8 (0.4 … 1.2)				
		2800	60		0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.0...3.0 (0.5...2.5)	2.4...3.6 (0.6...3.0)			0.2 … 0.6				
Req. supply pressure in bar			Upper bench range value + 0.2 bar								1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi										
½ to 1½	0.12 to 1.2	350	15	[4]	1131	4801	5802	5802	5802		1131	5802	–	5802	45
		355			5802	–	–	–			–	5802	–	5802	48
	2 to 3	350	15	[4]	181	1813	3445	4264	5802		174	4235	5802	5802	61
		355			4337	5802	5802	5802			–	3510	5802	5802	64
	5 to 12	350	15	–145	–	210	616	821	1537		–	819	2451	4293	87
		355			841	1769	2190	2495			–	638	2292	4148	87
		700			1023	2654	4293	3162	4902	–	1023	3060	–	5569	55
	20	350	15	–94	–	42	283	406	834		–	406	1385	2480	87
		355			421	979	1226	1414			–	297	1291	2408	87
		700			529	1508	2480	1813	2843	3771	529	1755	3713	4192	67
	30	350	15	–61	–	–	135	210	500		–	210	863	1595	87
		355			225	595	761	885			–	142	798	1537	87
		700			297	943	1595	1153	1842	2451	297	1110	2408	2727	67
2 to 4	5 to 12	350	15	[5]	–	167	580	783	1494		–	783	2408	4250	87
		355			805	1726	2147	2451			–	595	2248	4105	87
		700			986	2611	4250	3118	4859	–	986	3017	–	5540	55
	20	350	15	[5]	–	–	261	384	812		–	384	1363	2466	87
		355			392	950	1204	1385			–	268	1262	2379	87
		700			508	1479	2466	1784	2828	3742	508	1726	3684		68
	30	350	15	–61	–	–	119	196	479		–	196	848	1581	87
		355			203	580	740	863			–	126	783	1523	87
		700			276	928	1581	1131	1827	2437	276	1095	2393	3626	83
	47	355	30	–36	–	136	181	254			–	–	297	732	87
		700			–	107	290	384	718	950	–	384	1139	1987	87
		1000			805	1139		1465	1871		268	935	2002	2756	77
		1400			–	1610	2074	2553			–	856	2364	2698	65

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 2 to 4	75	355	30	–22	–	48	78	123			–	–	152	421	87
		700			–	29	145	203	413	558	–	203	682	1211	87
		1000			464	682		892	1146		131	551	1226	1987	87
		1400			–	972	1269	1566			–	500	1450	1958	73
	120	700	30	–13	–	–	61	97	225	312	–	97	392	718	87
		1000			254	392		522	674		51	312	732	1204	87
		1400			–	573	754	943			–	276	863	1182	73
	190	700	30	–10	–	–	–	39	122	174	–	39	225	439	87
		1000			144	225		312	406		–	174	442	747	87
		1400				341	457	580			–	152	529	732	73
6	75	355	30	–22	–	35	65	110			–	–	139	406	87
		700			–	–	135	194	399	544	–	189	667	1197	87
		1000			457	667		877	1131		117	537	1218	1973	87
		1400			–	965	1255	1552			–	486	1436	2161	78
	120	700	30	–13	–	–	52	90	218	305	–	90	377	711	87
		1000			247	377		515	667		42	305	725	1197	87
		1400			–	566	747	928			–	268	856	1523	87
	190	700	30	–10	–	–	–	33	116	174	–	3	218	384	87
		1000			138	218		305	406		–	167	435	740	87
		1400			–	334	457	573			–	152	522	950	87
	290	1000	60	–3	–	–	–	70	123		–	48	218	413	87
		1400			–	141	196	254			–	139	377	645	87
		2800			139	377	500	616			139	435	–	638	48
	420	1000	60	–3	–	–	–	36	73		–	–	141	268	87
		1400			–	83	125	167			–	83	247	435	87
		2800			83	247	334	413			83	290	–	428	48

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) See K_{VS} 4 to 10 (C_V 5 to 12) for differential pressures
5) See K_{VS} 25 (C_V 30) for differential pressures

Table 5.3 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to NPS 6 · Soft-seated · Leakage class VI acc. to ANSI/FCI 70-2 · Including correction value for bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		350	15	Correction value in psi	0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.4…2.3	2.1…3.3		0.2 … 1.0				
		355	15		1.4...1.8 (0.8...1.6)	2.3...3.0 (1.4...2.7)	2.7...3.4 (1.6...3.1)	3.0...3.9 (1.8...3.5)			0.8 ... 1.2 (0.8 ... 1.6)				
			30		1.0...1.8 (0.8...1.6)	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)	2.2...3.9 (1.8...3.5)			0.8 ... 1.6				
		700	15		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.4…3.6[3] (0.6…3.0)	1.85…2.3 (1.4…2.3)	2.7…3.3 (2.1…3.3)	3.45…4.3[3] (2.6…4.3)	0.2 … 0.6 (0.2 … 1.0)				
			30		0.4…1.2 (0.2…1.0)	0.8…2.4 (0.4…2.0)	1.2…3.6[3] (0.6…3.0)	1.4…2.3	2.1…3.3	2.6…4.3[3]	0.2 … 1.0				
		1000	30		1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4		0.2 … 0.6 (0.2 … 1.0)				
			60		0.4…1.2 (0.2…1.0)	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		0.2 … 1.0				
		1400 -120	60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)			0.4 … 0.8 (0.4 … 1.2)				
Req. supply pressure in bar			Upper bench range value + 0.2 bar								1.4	2.4	4.0	[1]	[2]
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi										
½ to 1½	0.12 to 1.2	350	15	[4]	725	–	–	–	–		725	–	–	–	22
	2 to 3	350	15	[4]	725	–	–	–	–		326	–	–	725	25
	5 to 12	350	15	–145	276	689	725	725	–		276	–	–	725	36
		355			725	–	–	–			78	725	–	725	39
	20	350	15	–94	167	406	653	725	–		167	725	–	725	42
		355			725	–	–	–			46	667		725	45
	30	350	15	–61	110	268	435	515	725		110	515	–	725	48
		355			522	725	–	–			30	442	–	725	51
2 to 4	5 to 12	350	15	[5]	239	645	725	725	–		239	–	–	725	36
		355			725	–	–	–			39	725	–	725	39
	20	350	15	[5]	142	384	631	725	–		142	725	–	725	42
		355			725	–	–	–			–	638		725	45
		700			725	–	–	–	–	–	725	–	–	–	22
	30	350	15	–61	94	254	413	500	725		94	500	–	725	48
		355			508	725	–	–			–	421	–	725	51
		700			580	–	–	–	–	–	580	–	–	725	25
	47	355	30	–36	196	363	406	479			–	145	529	645	68
		700			145	334	522	616	–	–	145	–	–	602	36

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"						"Actuator stem retracts"				
Cont'd: 2 to 4	75	355	30	–22	125	225	254	305			–	94	334	529	80
		700			93	210	326	384	–	–	93	384	–	500	42
	120	355	30	–13	77	142	160	189			–	58	203	370	87
		700			57	131	203	239	363	–	57	239	–	406	51
		1000			399	–	–	–			189	–	–	392	33
	190	355	30	–10	49	90	103	120			–	36	132	239	87
		700			36	83	131	152	232	384	36	152	–	334	59
		1000			254	341	–	–			123	290	–	319	41
6	75	355	30	–22	110	210	247	290			–	81	319	515	80
		700			80	196	312	370	–	–	80	370	–	486	42
	120	355	30	–13	68	133	152	180			–	49	196	363	87
		700			49	122	196	232	355	–	49	232	–	399	51
		1000			392	–	–	–			181	–	–	384	33
	190	355	30	–10	44	86	97	115			–	32	126	234	87
		700			30	78	125	145	225	290	30	145	–	326	59
		1000			247	–	–	–			117	283	–	319	41
	290	1000	60	–3	32	75	119	160	210		32	139	–	261	54
		1400			110	231	–	–			80	225	–	254	39
	420	1000	60	–3	–	52	83	112	145		–	97	210	218	62
		1400			75	160	196	–			55	160	–	218	45

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)
2) Maximum permissible supply pressure in psi
3) Handwheel not possible
4) See K_{VS} 4 to 10 (C_V 5 to 12) for differential pressures
5) See K_{VS} 25 (C_V 30) for differential pressures

Table 5.4 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to NPS 6 · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Balanced with PTFE ring Without bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"			
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		355	30	1.7...3.0 (1.4...2.7)	1.9...3.4 (1.6...3.1)		0.8...1.6			
		700	30	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	2.1...3.3	0.4...2.0			
		1000	30	2.1...3.1	2.6...3.8		0.4...1.2			
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	0.4...2.0			
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)	0.8...1.6 (0.8...2.4)			
Required supply pressure in bar							2.4	4	1)	2)
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi/ Required supply pressure in psi			Permissible differential pressures Δp in psi			
3 to 4	120	355	30	2683/49	3147/55		580	4308	5802	87
		700		2393/41	4235/58	5802/7.7	566	5802	5802	87
	190	355	30	2451/51	2915/57		363	4090	5802	87
		700		2176/35	4003/58	5802/54	334	5802	5802	87
6	120	355	30	1015/51	1204/57		160	1682	3394	87
		700		899/41	1653/58	3336/54	145	3147	5802	87
		1000		5033/51	5802/61		2611	5802	5802	87
	190	355	30	928/51	1117/57		–	1581	3307	87
		700		798/41	1552/58	3249/3.7	–	3060	5802	87
		1000		4946/51	5802/61		2524	5802	5802	87
	290	1000	60	1334/41	3481/61	4714/74	261	4554	5802	87
		1400		5207/41	5802/49	5802/58	2190	5802	5802	87
	420	1000	60	1218/41	3365/61	4714/74	145	4438	5802	87
		1400		5091/41	5802/49	5802/58	2074	5802	5802	87

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)

2) Maximum permissible supply pressure in psi

Table 5.5 · Permissible differential pressures for Types 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves up to NPS 6 · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Balanced with graphite ring Without bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		355	30	1.7...3.0	1.9...3.4		Use the SAMSON valve sizing software to determine the permissible differential pressures.	
		700	30	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	2.1...3.3		
		1000	30	2.1...3.1	2.6...3.8			
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		
Required supply pressure in bar								
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi/ Required supply pressure in psi			Permissible differential pressures Δp in psi	
3 to 4	120	355	30	1407/57	1885/62	–		
		700		1131/42	2959/59	5802/55		
	190	355	30	870/59	1334/65	–		
		700		580/44	2422/59	5802/57		
6	120	355	30	493/58	682/64			
		700		377/42	1131/59	2814/55		
		1000		4511/51	5802/61			
	190	355	30	276/61	464/67			
		700		145/44	899/61	2596/57		
		1000		4293/51	5627/61			
	290	1000	60	522/42	2669/51	4018/77		
		1400		4395/41	5802/49	5802/58		
	420	1000	60	247/44	2393/52	3727/78		
		1400		4105/41	5613/49	5802/58		

Table 6.1 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes NPS 8 and larger · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Including correction value for bellows seal

NPS	C_V	Actuator cm²	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in psi	1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4	0.4 … 1.2				
			60		–	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.6…3.8 (1.0…3.2)	2.1…4.8 (1.5…4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0…2.4 (0.8…2.4)	2.5…3.0 (1.0…3.0)	3.0…3.6 (1.2…3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8…1.2 (0.4…1.2)	1.6…2.4 (0.8…2.4)	2.0…3.0 (1.0…3.0)	2.4…3.6 (1.2…3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8…2.4	1.0…3.0	1.2…3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.0…3.0 (0.5…2.5)	2.4…3.6 (0.6…3.0)	2.8…3.8 (1.3…3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8…2.4 (0.4…2.0)	1.0…3.0 (0.5…2.5)	1.2…3.6 (0.6…3.0)	1.4…2.6 (1.1…2.3)	1.8…3.8 (1.3…3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi									
Up to 10	120	1000	30	–15	370	500		631	783	–	261	682	1153	87
		1400			–	682	863	1052		–	384	972	1639	87
Up to 12	190	1000	30	–9	232	312		399	500	–	167	435	732	87
		1400			–	435	551	667		–	247	624	1044	87
	250	1000	60	–6	–	62	104	145	196	–	–	189	384	87
		1400			96	210	276	334		67	210	457	725	87
		2800			210	457	573	696	812	210	515	994	1182	70
Up to 16	420	1000	60	–4	–	42	71	102	139	–	–	131	261	87
		1400			65	145	189	232		45	145	312	500	87
		2800			145	312	399	479	566	145	355	689	994	81
		2x2800			312	645	812	979	–	312	732	–	950	45
	735	1000	60	–3	–	–	39	55	77	–	–	73	145	87
		1400			35	83	106	129		–	83	174	283	87
		2800			83	174	218	268	312	83	196	384	595	87
		2x2800			174	363	457	551	645	174	406	–	609	57
	1150	1400	120	–1	–	–	29	36		–	36	97	160	87
		2800			52	67	81	97	218	22	97	218	352	87
		2x2800			112	142	167	203	261	52	203	442	595	75
	1750	1400	120	–	–	–	–	–		–	–	67	113	87
		2800			35	46	57	67	87	15	67	151	244	87
		2x2800			77	99	119	139	181	35	139	305	493	87
Up to 20	2300	2800	120	–	26	33	41	48	64	–	48	110	178	87
		2x2800			57	71	87	103	133	26	103	225	364	87
	2900	2800	120	–	19	25	30	36	48	–	36	84	136	87
		2x2800			42	55	67	78	102	18	78	167	276	87
	4600	2800	120	–	–	16	19	23	30	–	23	54	87	87
		2x2800			28	35	42	49	64	–	49	110	177	87

* For actuators 2800 cm² and 2x2800 cm² with fail-safe action "Stem retracts", the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)

2) Maximum permissible supply pressure in psi

Table 6.2 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes NPS 8 and larger · High-performance metal sealing · Leakage class V acc. to ANSI/FCI 70-2 · Including correction value for bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in psi	1.6…2.4	2.1…3.1		2.8…3.8	3.2…4.4	0.4 … 1.2)				
			60		–	0.8…2.4 (0.4…2.0)	1.2…3.6 (0.6…3.0)	1.6…3.8 (1.0…3.2)	2.1…4.8 (1.5…4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0…2.4 (0.8…2.4)	2.5…3.0 (1.0…3.0)	3.0…3.6 (1.2…3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8…1.2 (0.4…1.2)	1.6…2.4 (0.8…2.4)	2.0…3.0 (1.0…3.0)	2.4…3.6 (1.2…3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8…2.4	1.0…3.0	1.2…3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8…1.2 (0.2…1.0)	1.6…2.4 (0.4…2.0)	2.0…3.0 (0.5…2.5)	2.4…3.6 (0.6…3.0)	2.8…3.8 (1.3…3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8…2.4 (0.4…2.0)	1.0…3.0 (0.5…2.5)	1.2…3.6 (0.6…3.0)	1.4…2.6 (1.1…2.3)	1.8…3.8 (1.3…3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi									
Up to 10	120	1000	30	–15	232	370		500	653	–	133	551	1023	87
		1400			–	551	732	921		–	254	841	1508	87
Up to 12	190	1000	30	–9	129	210		297	399	–	62	326	631	87
		1400			–	326	442	566		–	144	515	943	87
	290	1000	60	–6	–	–	–	64	117	–	–	107	297	87
		1400			–	133	189	254		–	133	370	645	87
		2800			133	370	493	609	732	133	428	914	1095	70
Up to 16	420	1000	60	–4	–	–	–	32	70	–	–	61	196	87
		1400			–	80	122	160		–	80	247	435	87
		2800			80	247	326	413	493	80	283	624	921	81
		2x2800			247	580	747	914	–	247	660	–	885	45
	735	1000	60	–3	–	–	–	–	25	–	–	20	96	87
		1400			–	30	54	77		–	30	125	231	87
		2800			30	125	167	218	261	30	145	334	544	87
		2x2800			125	312	406	500	595	125	355	–	674	57
	1150	2800	120	–1	–	25	41	55	86	–	55	174	305	87
		2x2800			70	100	131	160	218	–	160	399	551	75
	1730	2800	120	–	–	–	22	32	52	–	32	116	203	87
		2x2800			42	64	84	104	145	–	104	268	457	87
Up to 20	2300	2800	120	–	–	–	–	20	33	–	19	80	145	87
		2x2800			26	42	57	73	103	–	73	196	334	87
	2900	2800	120	–	–	–	–	–	22	–	–	58	110	87
		2x2800			16	29	41	52	75	–	52	145	247	87
	4600	2x2800	120	–	–	–	20	29	44	–	29	88	152	87

* For actuators 2800 cm^2 and 2x2800 cm^2 with fail-safe action "Stem retracts", the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)

2) Maximum permissible supply pressure in psi

Table 6.3 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes NPS 8 and larger · Soft-seated · Leakage class VI acc. to ANSI/FCI 70-2 · Including correction value for bellows seal

NPS	C_V	Actuator cm²	Travel mm	Bellows	Fail-safe action "Actuator stem extends"					"Actuator stem retracts" *				
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	Correction value in psi	1.6…2.4	2.1…3.1		2.6…3.8	3.2…4.4	0.4 … 1.2				
			60		–	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	0.4 … 2.0				
		1400 -120	30		–	2.0...2.4 (0.8...2.4)	2.5...3.0 (1.0...3.0)	3.0...3.6 (1.2...3.6)		0.8 … 1.2 (0.8 … 2.4)				
			60		0.8...1.2 (0.4...1.2)	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		0.4 … 0.8 (0.4 … 1.2)				
			120		–	0.8...2.4	1.0...3.0	1.2...3.6		0.4 … 1.2				
		2800/ 2x2800	60		0.8...1.2 (0.2...1.0)	1.6...2.4 (0.4...2.0)	2.0...3.0 (0.5...2.5)	2.4...3.6 (0.6...3.0)	2.8...3.8 (1.3...3.3)	0.2 … 0.6 (0.2 … 1.0)				
			120		0.8...2.4 (0.4...2.0)	1.0...3.0 (0.5...2.5)	1.2...3.6 (0.6...3.0)	1.4...2.6 (1.1...2.3)	1.8...3.8 (1.3...3.3)	0.2 … 1.0				
Req. supply pressure in bar			Upper bench range value + 0.2 bar							1.4	2.4	4.0	1)	2)
NPS	C_V	Actuator	Travel	Bellows	Permissible differential pressures Δp in psi									
Up to 10	120	1000	30	–15	377	–	–	–	–	–	276	–	370	42
Up to 12	190	1000	30	–9	239	370	–	–	–	–	174	–	305	49
	290	1000	60	–6	–	70	113	152	203	–	26	196	254	68
		1400			104	225	–	–		74	225	–	247	39
Up to 16	420	1000	60	–4	–	48	78	107	145	–	19	138	218	77
		1400			73	152	196	–		51	152	–	210	45
	735	1000	60	–3	–	–	44	61	81	–	–	77	152	87
		1400			41	87	110	135		29	87	–	167	57
	1150	1400	120	–1	–	26	33	41		–	41	102	136	74
		2800			55	71	86	102	131	26	102	–	128	42
	1730	1400	120	–	–	17	23	28		–	28	70	115	86
		2800			39	49	59	70	91	17	70	–	110	48
Up to 20	2300	2800	120	–	29	36	44	51	67	–	51	–	96	54
	2900	2800	120	–	22	28	33	39	51	–	39	–	84	59
	4600	2800	120	–	–	17	22	25	32	–	25	55	68	71

* For actuators 2800 cm² and 2x2800 cm² with fail-safe action "Stem retracts", the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar (–3 psi)

2) Maximum permissible supply pressure in psi

Table 6.4 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes NPS 8 and larger · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Balanced with PTFE ring · Without bellows seal

NPS	C_V	Actuator cm²	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts" *			
Operating ranges in bar with actuator size in cm² and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	2.1...3.1	2.6...3.8		1.0...2.1 (1.0...3.2)			
			60	0.8…2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)	1.0 … 3.2			
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)	1.0...2.0 (1.0...3.0)			
			120	0.8...2.4	1.0...3.0	1.2...3.6	0.8...2.4			
		2800	120	0.8...2.4 (0.4...2.0)	1.2...3.6 (0.6...3.0)	1.8...3.8 (1.3...3.3)	1.1...2.3			
Required supply pressure in bar							3	4	1)	2)
NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi/ Required supply pressure in psi			Permissible differential pressures Δp in psi			
8 to 20	190	1000	30	1871/51	2393/61		616	1668	3553	87
	290	1000	60	464/41	1305/61	1827/75	–	464	2350	87
		1400		1973/41	2567/49	3147/58	1088	2567	5207	87
	420	1000	60	421/41	1262/61	1784/75	–	421	2306	87
		1400		1929/41	2509/49	3104/58	1044	2509	5163	87
	735	1000	60	319/41	1160/61	1697/75	–	326	2219	87
		1400		1842/41	2422/49	3017/58	957	2422	5076	87
	1150	1400	120	566/41	870/49	1160/58	276	1740	4395	87
		2800		1740/41	2915/58	4685/61	1450	4395	5802	87
	1730	1400	120	479/41	769/49	1073/58	189	1653	4308	87
		2800		1653/41	2828/58	4598/61	1363	4308	5802	87
	2300	1400	120	392/41	682/49	972/58	–	1566	4206	87
		2800		1566/41	2741/58	4511/61	1276	4206	5802	87
	2900	1400	120	305/41	595/49	885/58	–	1479	4119	87
		2800		1479/41	2654/58	4409/61	1175	4119	5802	87
	4600	1400	120	–	406/51	711/59	–	1291	3945	87
		2800		1291/41	2466/58	4235/61	1001	3945	5802	87

* For actuators 2800 cm² and 2x2800 cm² with fail-safe action "Stem retracts", the plug stem made of 1.4548 must be used.

1) Permissible differential pressure in relation to the maximum permissible supply pressure –0.2 bar(–3 psi)

2) Maximum permissible supply pressure in psi

Table 6.5 · Permissible differential pressures for Types 3241, 325x and 328x Globe Valves as well as Types 3256 and 3286 Angle Valves in sizes NPS 8 and larger · Metal-seated · Leakage class IV acc. to ANSI/FCI 70-2 · Balanced with graphite ring · Without bellows seal

NPS	C_V	Actuator cm^2	Travel mm	Fail-safe action "Actuator stem extends"			"Actuator stem retracts"	
Operating ranges in bar with actuator size in cm^2 and travel in mm. Specifications in parentheses indicate the bench range of the actuator in bar when it is different.		1000	30	2.1...3.1	2.6...3.8		Permissible differential pressures available on request	
			60	0.8...2.4 (0.4...2.0)	1.6...3.8 (1.0...3.2)	2.1...4.8 (1.5...4.2)		
		1400 -120	60	1.6...2.4 (0.8...2.4)	2.0...3.0 (1.0...3.0)	2.4...3.6 (1.2...3.6)		
			120	0.8...2.4	1.0...3.0	1.2...3.6		
		2800	120	0.8...2.4 0.4...2.0	1.2...3.6 0.6...3.0	1.8...3.8 1.3...3.3		
Required supply pressure in bar								

NPS	C_V	Actuator	Travel	Permissible differential pressures Δp in psi/ Required supply pressure in psi			Permissible differential pressures Δp in psi	
8 to 20	190	1000	30	1624/52	2147/62			
	290	1000	60	145/44	986/52	1508/78		
		1400		1653/41	2248/49	2828/58		
	420	1000	60	–	870/52	1407/78		
		1400		1552/42	2132/51	2727/59		
	735	1000	60	–	653/55	1189/81		
		1400		1334/44	1915/52	2509/61		
	1150	1400	120	–	232/54	522/62		
		2800		1117/41	2292/58	4047/61		
	1730	1400	120	–	–	305/64		
		2800		899/41	2074/58	3829/61		
	2300	2800	120	682/42	1856/59	3611/62		
	2900	2800	120	464/42	1639/59	3394/62		
	4600	2800	120	–	1204/62	2959/65		

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