DATA SHEET

T 8079 EN

Type 3595 Globe or Angle Valve

ANSI version

CE

Application

Maintenance-friendly cage-guided valve for throttling and on/off service in the oil and gas industry as well as for high-temperature applications in power plant stations

Valve size [1]	NPS ¾ to 32
Pressure rating	Class 150 to 2500
Temperatures	–325 to +1292 °F (–196 to +700 °C)

Special features

- Cage-guided valve (globe or angle-style body) with a pneumatic actuator
- Suitable for liquids and gases
- Plug guided by a cage over the entire travel range
- Minimum distance between plug and cage minimizes vibrations
- Linear or equal percentage characteristic
- Reduced C_V coefficients for valve sizes
- Optionally with flanged body or body with welding ends or welding-neck ends
- Type 3276 or Type 3271 Pneumatic Actuator in various sizes optimized for each valve size
- Diaphragm actuator with central spring or with several springs (multi-spring version)
- Piston actuator optionally double-acting or with fail-safe action (over central spring)
- Simple attachment of valve accessories, e.g. positioners, limit switches or solenoid valves
- Leakage class V also with balanced valve plug over the entire temperature range (in combination with PILOT/STD™ or PILOT/LDB™ trim)

Selectable valve trims

- USS/STD™ or USS/LDB™ [2]: single-seated valve with unbalanced plug
- BSS/STD™ or BSS/LDB™ [2]: single-seated valve with balanced plug
- CAVLESS™: cage with offset boreholes to prevent cavitation
- PILOT/STD™ or PILOT/LDB™ [2]
- MULTICYL™: multi-stage cage
- MULTISTEP™: seat with groove labyrinth

Fig. 1: *Type 3595 Valve*

[1] Specifications in this data sheet mainly apply to valve sizes up to NPS 16. Specifications for larger valve sizes or other versions are available on request.

[2] Noise-reduced version

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Forged and cast valve body

- Cast steel
- High-temperature cast steel
- Stainless steel
- Special material (e.g. forged steel, duplex steel, super duplex steel or Inconel®)

Further versions

- DIN valve version (on request)
- Actuator with handwheel (on request)

Principle of operation

The medium flows through the valve in the specified direction. The position of the valve piston determines the cross-sectional area of the cage.

Fail-safe action

Depending on how the compression springs are arranged in the pneumatic actuator, the valve has two 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.

Valve trims

- USS/STD™ or USS/LDB™ (Fig. 2)
  – USS™ unbalanced plug
  – STD™ standard cage or low-noise version with LDB™ cage
  – Suitable for control and on/off valves
  – Use in flashing service possible
- BSS/STD™ or BSS/LDB™ (Fig. 3)
  – BSS™ balanced plug
  – STD™ standard cage or low-noise version with LDB™ cage
  – Suitable for low to medium pressure drops
  – Tight shut-off
- CAVLESS™ (Fig. 4)
  – BSS™ balanced plug
  – CAVLESS™ cage to minimize cavitation
  – Suitable for applications with liquids in which considerable cavitation occurs, e.g. feedwater supply or condensate systems
  – Use in flashing service possible
- PILOT/STD™ or PILOT/LDB™ (Fig. 5)
  – PILOT™ plug ensures tight shut-off even with low actuator thrust
  – STD™ standard cage or low-noise version with LDB™ cage
  – Suitable for valve sizes NPS 4 and larger
  – Suitable for high temperatures and pressures
- MULTICYL™ (Fig. 6)
  – BSS™ balanced plug
  – MULTICYL™ cage for pressure letdown over several throttling stages
  – Suitable for gases and liquids

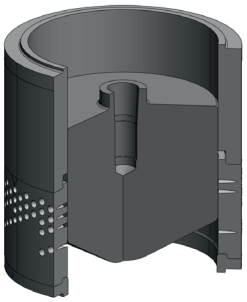


Fig. 2: *USS/STD™ and USS/LDB™ valve trims*

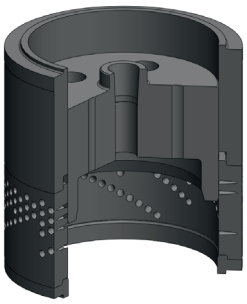


Fig. 3: *BSS/STD™ and BSS/LDB™ valve trims*

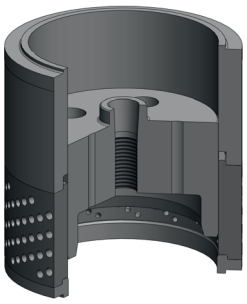


Fig. 4: *CAVLESS™ valve trim*

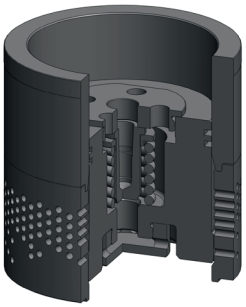


Fig. 5: *PILOT/STD™ and PILOT/LDB™ valve trims*

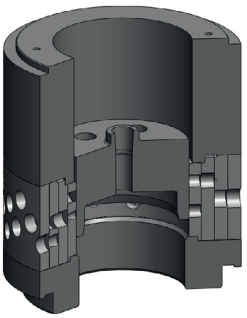


Fig. 6: *MULTICYL™ valve trim*

- MULTISTEP™ (Fig. 7)
  - Seat with groove labyrinth
  - Designed for low or medium flow rates in combination with high pressure drops (cavitation and flashing)
  - Suitable for valve sizes up to NPS 2
  - Combinable with various plug types
  - Optimizes the control performance at the point where the plug is lifted off the seat

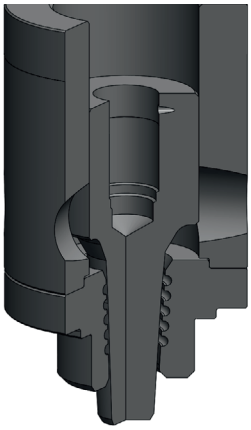


Fig. 7: *MULTISTEP™ valve trim*

Table 1: *Technical data*

Type 3595 Globe Valve		**Cast body**		**Forged body**	
Valve size		**NPS ¾ to 2**	**NPS 3 to 32**	**NPS ¾ to 2**	**NPS 3 to 12**
Pressure rating		Class 150 to 2500			
Type of connection	Flanges	•	•	•	•
	Welding ends	•	•	•	•
	Welding-neck ends	•	•	•	•
Characteristic		Equal percentage · Linear · Others on request			
Permissible temperature range					
Valve trim	USS/STD™ · USS/LDB™	–325 to +1292 °F (–196 to +700 °C)			
	BSS/STD™ · BSS/LDB™	Leakage class IV, V and VI: –325 to +482 °F (–196 to +250 °C)			
	CAVLESS™	Leakage class IV, V and VI: –325 to +482 °F (–196 to +250 °C)			
	PILOT/STD™ · PILOT/LDB™	Leakage class V: –4 to +1292 °F (–20 to +700 °C)			
	MULTICYL™	Leakage class IV, V and VI: –325 to +482 °F (–196 to +250 °C)			

Table 2: *Materials*

Type 3595 Globe Valve			**Cast body**	**Forged body**
Body and valve bonnet	Standard materials	Cast steel or forged steel	A216 WCB	A105
		High-temperature cast steel or forged steel	A217 WC6 A217 WC9	A182 F11 A182 F22
		Stainless steel	A351 CF8M	A182 F316
	Special materials	Duplex steel	A351-CK3MCuN A890 Gr. 4A CD3MN	A182 F44 A182 F51
		Super duplex steel	A890 Gr. 5A CE3MN A890 Gr. 6A CD3MWCuN	A182 F53 A182 F55
		Inconel®	A494 CW6MC	B564 N06625
Valve trim (seat, plug, cage etc.)			AISI 410, AISI 420, AISI 316 and Stellite® or other hard-facing alloy A182 F44, A182 F53, A182 F55, B564 N06625	
Pneumatic actuator with central spring				
Yoke			Cast steel	
Diaphragm case			Sheet steel	
Diaphragm			NBR, EPDM	

Table 3: *Flow coefficients for USS/STD™, BSS/STD™ and PILOT/STD™*

Valve size	Linear characteristic	Equal-percentage characteristic	Seat Ø		Travel for USS/ STD™		Travel for BSS/ STD™		Travel for PILOT/ STD™	
NPS	C_V coefficient	C_V coefficient	in	mm	in	mm	in	mm	in	mm
2	54	40	1.92	48.88	0.79	20	0.79	20	–	–
	38	28								
3	122	90	2.92	74.28	1.26	32	1.26	32	–	–
	85	63								
4	216	160	3.92	99.68	1.77	45	1.77	45	2.01	51
	150	112								
6	490	360	5.84	148.4	2.52	64	2.52	64	2.83	72
	343	252								
8	864	640	7.94	201.6	3.35	85	3.35	85	3.74	95
	605	450								
10	1350	1000	9.88	251	4.21	107	4.21	107	4.61	117
	945	700								
12	1950	1440	11.88	301.8	5.00	127	5.00	127	5.47	139
	1365	1010								
14	2650	1960	13.84	351.6	5.98	152	5.98	152	6.46	164
	1855	1370								
16	3460	2560	15.84	402.4	6.97	177	6.97	177	7.52	191
	2420	1790								
18	4383	3240	17.84	453.2	7.99	203	7.99	203	8.54	217
	3065	2269								
20	5411	4000	19.84	504	8.86	225	8.86	225	9.49	241
	3784	2801								
22	6547	4840	21.84	554.8	9.88	251	9.88	251	10.51	267
	4579	3389								
24	7792	5760	23.84	605.6	10.79	274	10.79	274	11.50	292
	5449	4034								
26	9144	6760	25.84	656.4	11.69	297	11.69	297	12.40	315
	6395	4734								
28	10605	7840	27.84	707.2	12.60	320	12.60	320	13.39	340
	7417	5490								
30	12174	9000	29.84	758	13.50	343	13.50	343	14.37	365
	8515	6303								
32	13852	10240	31.84	808.8	14.41	366	14.41	366	15.35	390
	9688	7171								

Table 4: *Flow coefficients for USS/LDB™, BSS/LDB™ and PILOT/LDB™*

Valve size	Linear characteristic	Equal-percentage characteristic	Seat Ø		Travel for USS/ LDB™		Travel for BSS/ LDB™		Travel for PILOT/ LDB™	
NPS	C_V coefficient	C_V coefficient	in	mm	in	mm	in	mm	in	mm
2	49	36	1.92	48.88	0.79	20	0.79	20	–	–
	34	25								
3	110	81	2.92	74.28	1.26	32	1.26	32	–	–
	77	57								
4	195	144	3.92	99.68	1.77	45	1.77	45	2.01	51
	137	100								
6	440	325	5.84	148.4	2.52	64	2.52	64	2.83	72
	310	230								
8	780	580	7.94	201.6	3.35	85	3.35	85	3.74	95
	540	405								
10	1215	900	9.88	251	4.21	107	4.21	107	4.61	117
	850	630								

Valve size	Linear characteristic	Equal-percentage characteristic	Seat Ø		Travel for USS/ LDB™		Travel for BSS/ LDB™		Travel for PILOT/ LDB™	
NPS	C_V coefficient	C_V coefficient	in	mm	in	mm	in	mm	in	mm
12	1750	1300	11.88	301.8	5.00	127	5.00	127	5.47	139
	1225	910								
14	2380	1760	13.84	351.6	5.98	152	5.98	152	6.46	164
	1670	1230								
16	3110	2300	15.84	402.4	6.97	177	6.97	177	7.52	191
	2175	1610								
18	3948	2919	17.84	453.2	7.99	203	7.99	203	8.54	217
	2761	2042								
20	4874	3604	19.84	504	8.86	225	8.86	225	9.49	241
	3408	2522								
22	5897	4360	21.84	554.8	9.88	251	9.88	251	10.51	267
	4124	3051								
24	7018	5189	23.84	605.6	10.79	274	10.79	274	11.50	292
	4908	3631								
26	8237	6090	25.84	656.4	11.69	297	11.69	297	12.40	315
	5760	4261								
28	9553	7063	27.84	707.2	12.60	320	12.60	320	13.39	340
	6681	4942								
30	10966	8108	29.84	758	13.50	343	13.50	343	14.37	365
	7669	5673								
32	12477	9225	31.84	808.8	14.41	366	14.41	366	15.35	390
	8726	6455								

Table 5: *Flow coefficients for CAVLESS™*

Valve size	Linear characteristic	Equal-percentage characteristic	Seat Ø		Travel	
NPS	C_V coefficient	C_V coefficient	in	mm	in	mm
2	35	25	1.92	48.88	1.02	26
	25	18				
3	78	56	2.92	74.28	1.50	38
	53	38				
4	110	78	3.92	99.68	1.77	45
	74	53				
6	245	175	5.84	148.4	2.52	64
	162	116				
8	490	350	7.94	201.6	2.99	76
	318	227				
10	717	512	9.88	251	4.21	107
	457	326				
12	1265	903	11.88	301.8	5.00	127
	776	554				
14	1754	1253	13.84	351.6	5.98	152
	1084	774				
16	2372	1694	15.84	402.4	6.97	177
	1458	1041				

Table 6: *Flow coefficients for MULTICYL™*

Valve size	Travel		Characteristic [1]	Multi Cyl. 2-stage			Multi Cyl. 3-stage			Multi Cyl. 4-stage			Multi Cyl. 5-stage		
				C_V coefficient	Seat Ø		C_V coefficient	Seat Ø		C_V coefficient	Seat Ø		C_V coefficient	Seat Ø	
NPS	in	mm			in	mm		in	mm		in	mm		in	mm
2	1.02	26	lin	43	1.61	41	29	1.73	44	19	1.26	32	–	–	–
			eq. %	22			15			9					
			mod. eq. %	26			17			11					
			mod. lin	35			23			15					
			par.	30			20			13					
3	1.02	26	lin	43	1.61	41	29	1.73	44	19	1.26	32	–	–	–
			eq. %	22			15			9					
			mod. eq. %	26			17			11					
			mod. lin	35			23			15					
			par.	30			20			13					
	1.50	38	lin	87	2.52	64	60	2.01	51	38	1.61	41	24	1.26	32
			eq. %	44			30			19			12		
			mod. eq. %	52			36			23			14		
			mod. lin	70			49			31			19		
			par.	61			42			27			17		
4	1.50	38	lin	87	2.52	64	60	2.01	51	38	1.61	41	24	1.26	32
			eq. %	44			30			19			12		
			mod. eq. %	52			36			23			14		
			mod. lin	70			49			31			19		
			par.	61			42			27			17		
	2.09	53	lin	147	3.50	89	104	2.99	76	66	2.64	67	43	2.24	57
			eq. %	74			52			33			22		
			mod. eq. %	88			62			40			26		
			mod. lin	119			84			53			35		
			par.	103			73			46			30		
6	2.48	63	lin	147	3.50	89	104	2.99	76	66	2.64	67	43	2.24	57
			eq. %	74			52			33			22		
			mod. eq. %	88			62			40			26		
			mod. lin	119			84			53			35		
			par.	103			73			46			30		
	2.95	75	lin	283	4.49	114	201	4.02	102	127	3.50	89	83	2.99	76
			eq. %	142			101			64			42		
			mod. eq. %	170			121			76			50		
			mod. lin	229			163			103			67		
			par.	198			141			89			58		
8	2.95	75	lin	283	4.49	114	201	4.02	102	127	3.50	89	83	2.99	76
			eq. %	142			101			64			42		
			mod. eq. %	170			121			76			50		
			mod. lin	229			163			103			67		
			par.	198			141			89			58		
	3.62	92	lin	465	5.98	152	330	5.00	127	210	4.49	114	135	4.02	102
			eq. %	233			165			105			68		
			mod. eq. %	279			198			126			81		
			mod. lin	377			267			170			109		
			par.	326			231			147			95		
10	3.62	92	lin	465	5.98	152	330	5.00	127	210	4.49	114	135	4.02	102
			eq. %	233			165			105			68		
			mod. eq. %	279			198			126			81		
			mod. lin	377			267			170			109		
			par.	326			231			147			95		
	5.00	127	lin	788	7.99	203	559	7.01	178	354	5.98	152	229	5.00	127
			eq. %	394			280			177			115		
			mod. eq. %	473			335			212			137		
			mod. lin	638			453			287			185		
			par.	552			391			248			160		

Valve size	Travel		Characteristic [1]	Multi Cyl. 2-stage			Multi Cyl. 3-stage			Multi Cyl. 4-stage			Multi Cyl. 5-stage		
				C_V coefficient	Seat Ø		C_V coefficient	Seat Ø		C_V coefficient	Seat Ø		C_V coefficient	Seat Ø	
NPS	in	mm			in	mm		in	mm		in	mm		in	mm
12	5.00	127	lin	788	7.99	203	559	7.01	178	354	5.98	152	229	5.00	127
			eq. %	394			280			177			115		
			mod. eq. %	473			335			212			137		
			mod. lin	638			453			287			185		
			par.	552			391			248			160		
	5.47	139	lin	1050	9.02	229	745	7.99	203	470	7.01	178	305	5.98	152
			eq. %	525			373			235			153		
			mod. eq. %	630			447			282			183		
			mod. lin	851			603			381			247		
			par.	735			522			329			214		
14	5.47	139	lin	1050	9.02	229	745	7.99	203	470	7.01	178	305	5.98	152
			eq. %	525			373			235			153		
			mod. eq. %	630			447			282			183		
			mod. lin	851			603			381			247		
			par.	735			522			329			214		
	6.85	174	lin	1540	10.00	254	1105	9.02	229	692	7.99	203	450	7.01	178
			eq. %	770			503			346			225		
			mod. eq. %	924			603			415			270		
			mod. lin	1247			814			561			365		
			par.	1078			704			484			315		
16	6.85	174	lin	1540	10.00	254	1105	9.02	229	692	7.99	203	450	7.01	178
			eq. %	770			503			346			225		
			mod. eq. %	924			603			415			270		
			mod. lin	1247			814			561			365		
			par.	1078			704			484			315		
	7.28	185	lin	1805	12.01	305	1325	10.00	254	834	9.02	229	543	7.99	203
			eq. %	903			663			417			272		
			mod. eq. %	1083			795			500			326		
			mod. lin	1462			1073			676			440		
			par.	1264			928			584			380		

[1] Characteristics:

lin	Linear
eq. %	Equal percentage
mod. eq. %	Modified equal percentage
mod. lin	Modified linear
par.	Parabolic

Table 7: *Dimensions for Type 3595 Valve*

Table 7.1: *Body with welding ends or welding-neck ends · NPS ¾ to 4*

Dimension	Pressure rating		Valve size NPS ¾	1	1½	2	3	4
Length L	Class 150 to 600	in	7.36	7.36	8.74	10.00	12.52	14.49
		mm	187	187	222	254	318	368
	Class 900 and 1500	in	7.64	7.76	9.25	11.50	12.52	14.49
		mm	194	197	235	292	318	368
	Class 2500	in	8.50	8.50	10.24	12.52	15.00	15.98
		mm	216	216	260	318	381	406
Height H2	Class 150 to 600	in	On request	1.69	3.15	2.52	3.15	5.71
		mm	On request	43	80	64	80	145
	Class 900 and 1500	in	On request	2.68	3.35	3.58	4.84	5.94
		mm	On request	68	85	91	123	151
	Class 2500	in	On request	2.8	On request	3.86	On request	6.26
		mm	On request	71	On request	98	On request	159
Height H4	Class 150 to 600	in	8.54	8.54	8.54	8.54	11.10	12.60
		mm	217	217	217	217	282	320
	Class 900 to 2500	in	8.54	8.54	8.54	9.53	11.10	12.60
		mm	217	217	217	242	282	320
Height H3 with Type 3276 Actuator [1]	Class 150 to 2500	in	3.94	3.94	3.94	3.94	4.92	5.91
		mm	100	100	100	100	125	150
Height H8 [2]	Class 150 to 2500	in	On request	On request	On request	On request	On request	On request
		mm	On request	On request	On request	On request	On request	On request

[1] H3 with Type 3271 Actuator, see Table 9
[2] Only with Type 3271 Actuator

Table 7.2: *Body with welding ends or welding-neck ends · NPS 6 to 16*

Dimension	Pressure rating		Valve size NPS 6	8	10	12	14	16
Length L	Class 150 to 600	in	17.76	21.38	29.61	32.24	40.51	43.62
		mm	451	543	752	819	1029	1108
	Class 900 and 1500	in	20.00	24.02	30.00	35.98	49.49	55.98
		mm	508	610	762	914	1257	1422
	Class 2500	in	24.02	30.00	40.00	44.02	70.98	75.98
		mm	610	762	1016	1118	1803	1930
Height H2	Class to 300	in	5.63	6.61	12.4	13.78	16.42	18.5
		mm	143	168	315	350	417	470
	Class 600	in	5.55	6.89	12.8	14.37	16.69	15.75
		mm	141	175	325	365	424	400
	Class 900	in	8.15	10.24	13.5	15.55	17.13	On request
		mm	207	260	343	395	435	On request
	Class 1500	in	8.94	11.26	13.62	15.31	18.11	21.34
		mm	227	286	346	389	460	542
	Class 2500	in	9.45	On request	On request	On request	On request	On request
		mm	240	On request	On request	On request	On request	On request
Height H4	Class 150 to 600	in	15.43	17.44	21.06	24.80	25.20	29.88
		mm	392	443	535	630	640	759
	Class 900 to 2500	in	15.43	17.99	22.52	24.80	27.13	29.88
		mm	392	457	572	630	689	759
Height H3 with Type 3276 Actuator [1]	Class 150 to 2500	in	7.87	9.84	13.78	15.75	17.72	19.69
		mm	200	250	350	400	450	500
Height H8 [2]	Class 150 to 2500	in	On request	On request	On request	On request	On request	On request
		mm	On request	On request	On request	On request	On request	On request

[1] H3 with Type 3271 Actuator, see Table 9
[2] Only with Type 3271 Actuator

Table 7.3: *Flanged body version · NPS ¾ to 4*

Dimension	Pressure rating		Valve size NPS ¾	1	1½	2	3	4
Length L	Class 150	in	7.24	7.24	8.74	10.00	11.73	13.86
		mm	184	184	222	254	298	352
	Class 300	in	7.64	7.76	9.25	10.51	12.52	14.49
		mm	194	197	235	267	318	368
	Class 600	in	8.11	8.27	9.88	11.26	13.27	15.51
		mm	206	210	251	286	337	394
	Class 900	in	10.75	10.75	12.24	13.39	15.24	18.27
		mm	273	273	311	340	387	464
	Class 1500	in	10.75	10.75	12.24	13.39	18.11	19.02
		mm	273	273	311	340	460	483
	Class 2500	in	12.13	12.52	14.13	15.75	19.61	22.64
		mm	308	318	359	400	498	575
Height H2	Class 150 to 600	in	On request	1.69	3.15	2.52	3.15	5.71
		mm	On request	43	80	64	80	145
	Class 900 and 1500	in	On request	2.68	3.35	3.58	4.84	5.94
		mm	On request	68	85	91	123	151
	Class 2500	in	On request	2.8	On request	3.86	On request	6.26
		mm	On request	71	On request	98	On request	159
Height H4	Class 150 to 600	in	8.54	8.54	8.54	8.54	11.10	12.60
		mm	217	217	217	217	282	320
	Class 900 to 2500	in	8.54	8.54	8.54	9.53	11.10	12.60
		mm	217	217	217	242	282	320
Height H3 with Type 3276 Actuator [1]	Class 150 to 2500	in	3.94	3.94	3.94	3.94	4.92	5.91
		mm	100	100	100	100	125	150
Height H8 [2]	Class 150 to 2500	in	On request	On request	On request	On request	On request	On request
		mm	On request	On request	On request	On request	On request	On request

1) H3 with Type 3271 Actuator, see Table 9
2) Only with Type 3271 Actuator

Table 7.4: *Flanged body version · NPS 6 to 16*

Dimension	Pressure rating		Valve size NPS 6	8	10	12	14	16
Length L	Class 150	in	17.76	21.38	26.50	29.02	35.00	40.00
		mm	451	543	673	737	889	1016
	Class 300	in	18.62	22.36	27.87	30.51	36.50	41.61
		mm	473	568	708	775	927	1057
	Class 600	in	20.00	24.02	29.61	32.24	38.27	43.62
		mm	508	610	752	819	972	1108
	Class 900	in	23.62	30.75	34.02	40.00	49.49	55.98
		mm	600	781	864	1016	1257	1422
	Class 1500	in	27.24	32.99	39.02	44.49	49.49	55.98
		mm	692	838	991	1130	1257	1422
	Class 2500	in	32.24	40.24	50.00	52.01	57.91	63.82
		mm	819	1022	1270	1321	1471	1621

Dimension	Pressure rating		Valve size NPS 6	8	10	12	14	16
Height H2	Class to 300	in	5.63	6.61	12.4	13.78	16.42	18.5
		mm	143	168	315	350	417	470
	Class 600	in	5.55	6.89	12.8	14.37	16.69	15.75
		mm	141	175	325	365	424	400
	Class 900	in	8.15	10.24	13.5	15.55	17.13	On request
		mm	207	260	343	395	435	On request
	Class 1500	in	8.94	11.26	13.62	15.31	18.11	21.34
		mm	227	286	346	389	460	542
	Class 2500	in	9.45	On request	On request	On request	On request	On request
		mm	240	On request	On request	On request	On request	On request
Height H4	Class 150 to 600	in	15.43	17.44	21.06	24.80	25.20	29.88
		mm	392	443	535	630	640	759
	Class 900 to 2500	in	15.43	17.99	22.52	24.80	27.13	29.88
		mm	392	457	572	630	689	759
Height H3 with Type 3276 Actuator [1]	Class 150 to 2500	in	7.87	9.84	13.78	15.75	17.72	19.69
		mm	200	250	350	400	450	500
Height H8 [2]	Class 150 to 2500	in	On request	On request	On request	On request	On request	On request
		mm	On request	On request	On request	On request	On request	On request

1) H3 with Type 3271 Actuator, see Table 9
2) Only with Type 3271 Actuator

Table 8: *Dimensions for Type 3276 Pneumatic Actuator*

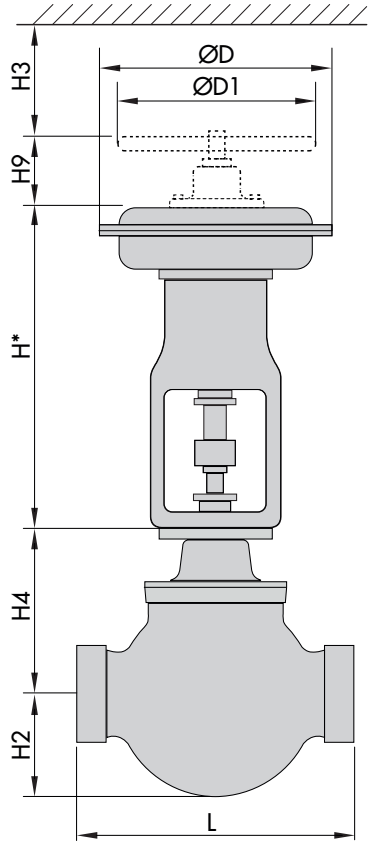
Dimension			Version (effective diaphragm area) 330 (387 cm²)	350 (645 cm²)	380 (1032 cm²)	390 (1032 cm²)
Height H*	Version with direction of action "actuator stem extends" (FA)	in	17.09	26.65	27.56	34.80
		mm	434	677	700	884
	Version with fail-safe action "actuator stem retracts" (FE)	in	17.64	27.24	30.67	35.43
		mm	448	692	779	900
ØD		in	11.50	15.12	17.99	17.99
		mm	292	384	457	457
ØD1		in	9.84	17.72	17.72	17.72
		mm	250	450	450	450
Height H9	Version with direction of action "actuator stem extends" (FA)	in	5.12	8.27	8.27	9.65
		mm	130	210	210	245
	Version with fail-safe action "actuator stem retracts" (FE)	in	7.20	12.40	12.60	12.99
		mm	183	315	320	330
Max. travel		in	1.02	2.01	2.99	5.00
		mm	26	51	76	127

Table 9: *Dimensions for Type 3271 Pneumatic Actuator*

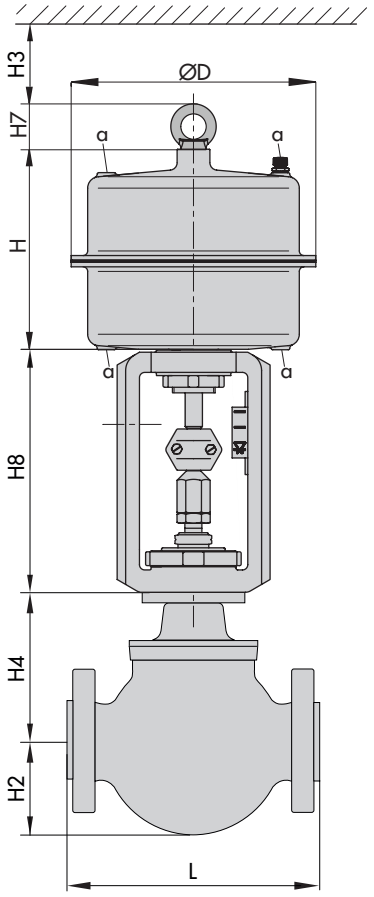
Actuator area	cm²	1000	1400-60	1400-120	1400-250	2800	2 x 2800
Diaphragm ØD	in	18.19	20.87	21.02	21.02	30.32	30.32
	mm	462	530	534	534	770	770
Height H	in	12.32	9.72	18.5	31.5	23.03	42.72
	mm	313	247	470	800	585	1085
Height H3 [1]	in	24.02	24.02	25.59	On request	25.59	25.59
	mm	610	610	650	On request	650	650
Height H7 [2]	in	3.54	3.54	5.04	4.33	5.04	5.04
	mm	90	90	128	110	128	128
Thread		M60x1.5		M100x2			
a		G ¾ (¾ NPT)	G ¾ (¾ NPT)	G 1 (1 NPT)	G 1 (1 NPT)	G 1 (1 NPT)	G 1 (1 NPT)

1) Height of eyebolt according to DIN 580. Height of the swivel hoist may differ.
2) Minimum clearance required to remove the actuator

Dimensional drawings



Type 3595 Globe Valve with Type 3276 Pneumatic Actuator
Body with welding ends or welding-neck ends



Type 3595 Globe Valve with Type 3271 Pneumatic Actuator
Version with flanged valve body

Ordering text

Type ... Valve	3595
Valve size	NPS …
Pressure rating	Class …
Body material	Refer to Table 2
Type of connection	Flanges/welding ends/welding-neck ends
Characteristic	Linear or equal percentage
Process medium	Density and temperature (other medium data, if required)
Flow rate	Under normal or operating condition for various cases
Pressure	Upstream pressure p_1 and downstream pressure p_2 or differential pressure Δp each with minimum, normal and maximum flow rate
Valve trim	USS/STD™, USS/LDB™, BSS/STD™, BSS/LDB™, CAVLESS™, PILOT/STD™, PILOT/LDB™, MULTICYL™ with/without balanced plug
Actuator	Type 3276 or Type 3271 Pneumatic Actuator
Valve accessories	Positioner, limit switches, solenoid valve or others (see Information Sheet ▶ T 8350)