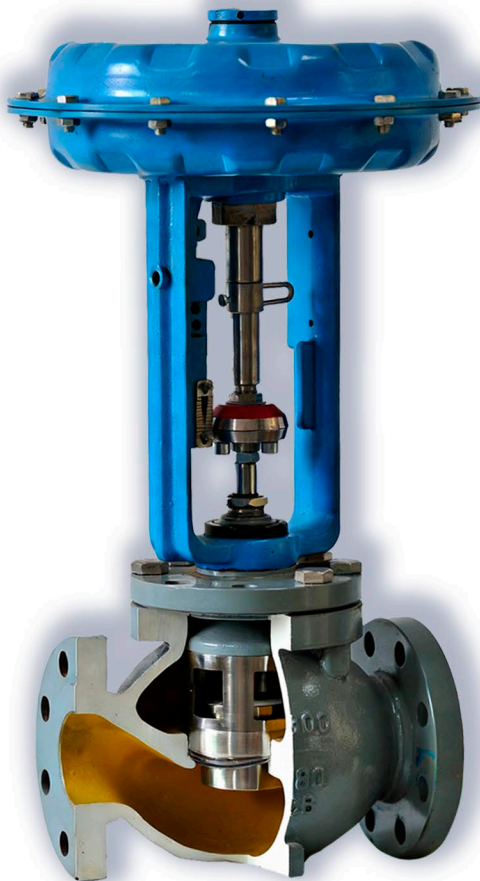
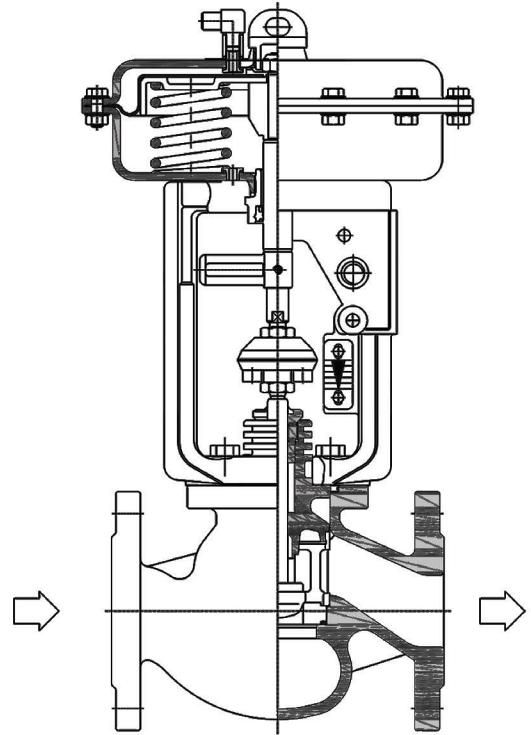


Globe Control Valve



Overview

STP globe control valves adopt metal-seated quick-changeable trim combination PTFE soft sealing also available. Insensitive to impurities with low cavitation design. Fast and easy to maintenance due to its rotational symmetry. STP series can be used in a wide range of applications, especially suitable for the fluid with particle & larger temperature range.



► Valve Body ◀

Type: Cast globe Valve

Nominal Size: DN15~ DN400

Nominal Pressure:

- ANSI 150~300
- DIN PN16~40

End Connection:

- Flange ANSI B16.5
- DIN 2543/2544/2545
- Weld ANSI B16.5

SW (DN≤50), BW (DN>50)

Face to Face Dimension:

- IEC 60534-3-1
- ASME B16.10
- DIN 3202-F1
- ISO 57521 Series

Please refer to table 6.1~6.4

► Valve Body ◀

- **Body Material:** Please refer to table 1 and figure 3
- **Bonnet Type:** STD type.....-46°C ~200°C; 200°C ~300°C
Radiation fin type.....300°C ~530°C
- **Packing Material:** PTFE V-ring compound packing, graphite compound packing, graphite packing Operating Temp.&Pressure range is shown in table 2, figure 2
- **Seal Gasket:** Spiral wound gasket (PTFE+316, Flexible Graphite+316)
Graphite with metal gasket (Graphite+316, Graphite+304)

► Valve Trim ◀

- **Plug Type:** Parabolic column plug
- **Flow Characteristic:** EQ%, Linearity, Quickly opening (figure 4)
- **Trim Material:** Please refer to table 3

► Actuator ◀

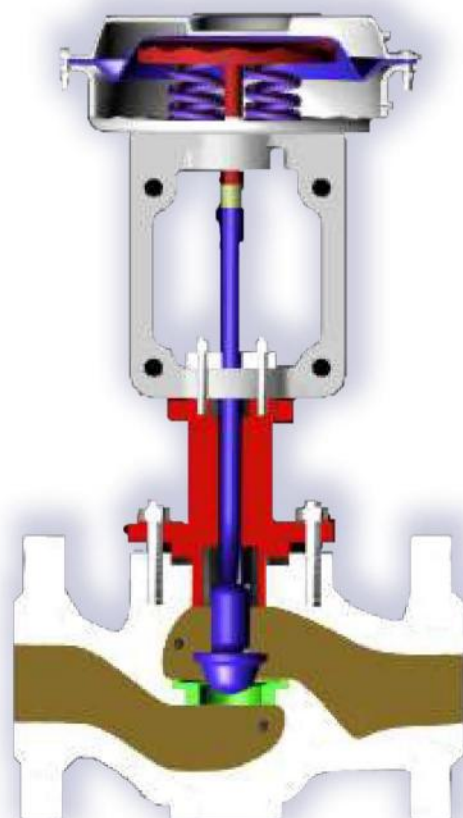
- **Type:** Multi-spring diaphragm
- **Spring Range:** As table 5.1~5.5
- **Air Supply:** Max. 6bar
- **Air Connection:** G1/8; G1/4; G3/4
- **Ambient Temp.:** -20°C~+80°C
- **STD Specification:** As table 5.1~5.5

► Accessory ◀

- Positioner, Filter regulator, Solenoid valve, Limit switch, Valve position transmitter, Booster relay, Lock-valve, Handwheel, etc.

► Action ◀

- Air to open, Air to close



► Performance ◀

- **Rangeability:** 50:1
- **Seat Leakage:** Metal seal, Class IV, Class V; Soft seal Class VI
- **Hysteresis:** 3% (Without Positioner), 1% (With Positioner)
- **Linearity:** 5% (Without Positioner), 1% (With Positioner)
- **Rated CV:** As table 4
- **Allowable Pressure Differential:** As table 5.1~5.5
- **Figure Size:** As figure 5.1, 5.2, table 6.1~6.4
- **Weight of Product:** As table 6.1~6.4

► Specifications ◀

- Special Inspection
Flow characteristic, material, low temperature, non-damages test.
- Copper-free treatment
- Non-standard painting
- Vacuum service
- Extreme Temperature Treatment
- Oil-free, water-free treatment
- Special air piping and fitting
- Strong corrosion proof
- Stainless steel bolt and nut

► Body Assembly Structure ◀ (As figure 1)

► Notable Characteristics ◀

- Quickly disassemble and installation without special tools
- Good price performance
- Optimize flow of cage
- Various materials are available
- Maintenance-free for packing
- Packing box is wear resistance and corrosion resistance

Figure 1

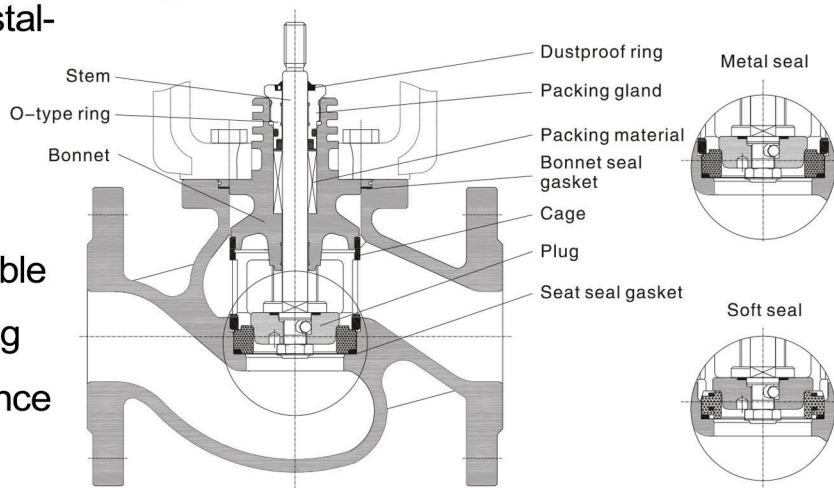


Table 1 Body Material

GB	ANSI	DIN	Temp. Range
ZG230-450 WCB	A216 WCB (ASTM)	1.0619 GP240GH	-10℃ ~ 400℃
ZG0Cr18Ni9	A351 CF8 (ASTM)	1.4308 G-X6CrNi18 9	-200℃ ~ 530℃
ZG0Cr18Ni12Mo2Ti	A351 CF8M (ASTM)	1.4408 G-X6CrNiMo18 10	-200℃ ~ 530℃
ZG0Cr18Ni12Mo2Nb	—	1.4581 G-X5CrNiMoNb18 10	-200℃ ~ 530℃
	A217 WC6 (ASTM)	1.7357 GS-17CrMo5 5	-10℃ ~ 450℃
	A217 WC9 (ASTM)	1.7379 GS-18CrMo9 10	-10℃ ~ 450℃

Table 2 Applicable Temp.& Pressure Range of Packing Material

M	Code	M	M	R	Temp. Range	Bonnet Type	Remarks
Type of Material		Seal material	O-ring material	Dustproof ring			
AS A		AS B	AS C	AS D			
PTFE V type packing	1	EPDM	EPDM	NBR	-25℃~180℃	Standard	(Alternate load) with compress spring
	2	VITON		VITON	-25℃~200℃		
Graphite+ Inchel packing	3	—	—	NBR	-20℃~400℃	Standard/with radiation fin	General occasion
Pure graphite (Density1.2)	4	—	—	VITON	-196℃~530℃	Standard/with radiation fin	High Temp. occasion
Graphite+PTFE	6	—	—	NBR	-196℃~200℃	Standard/ extension type	Low Temp. occasion

Figure 2

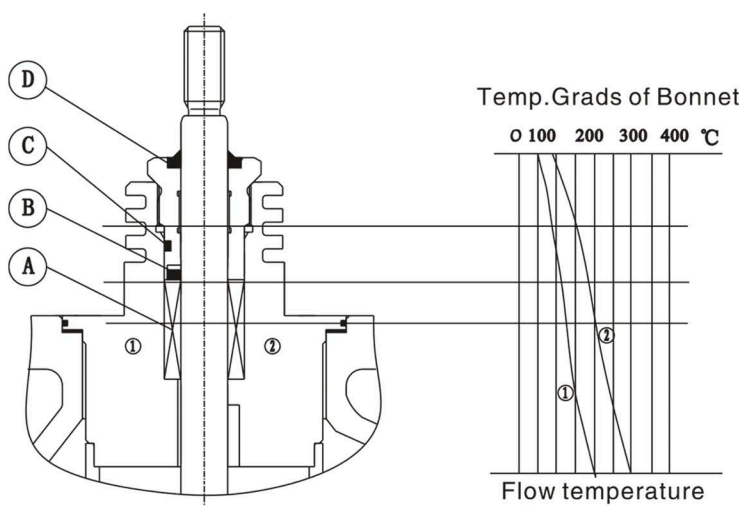
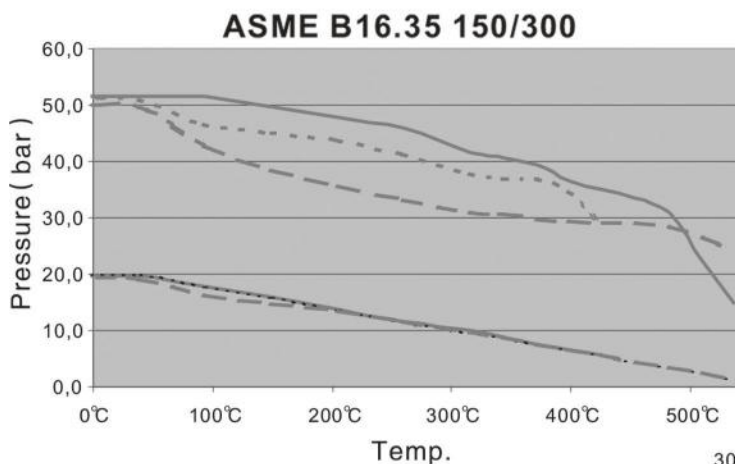
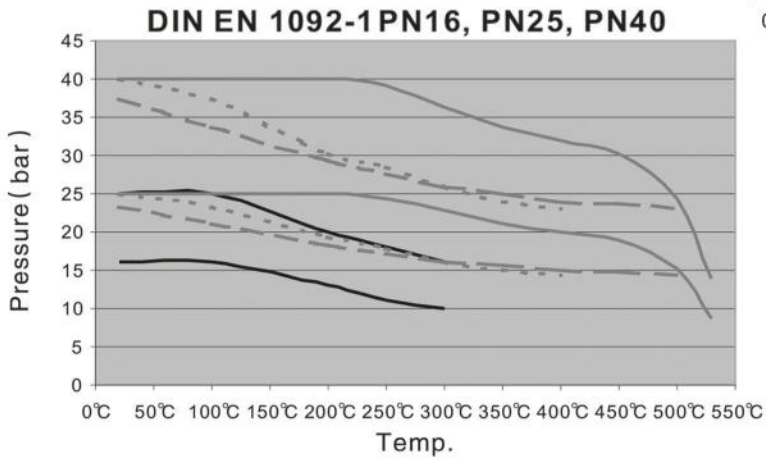
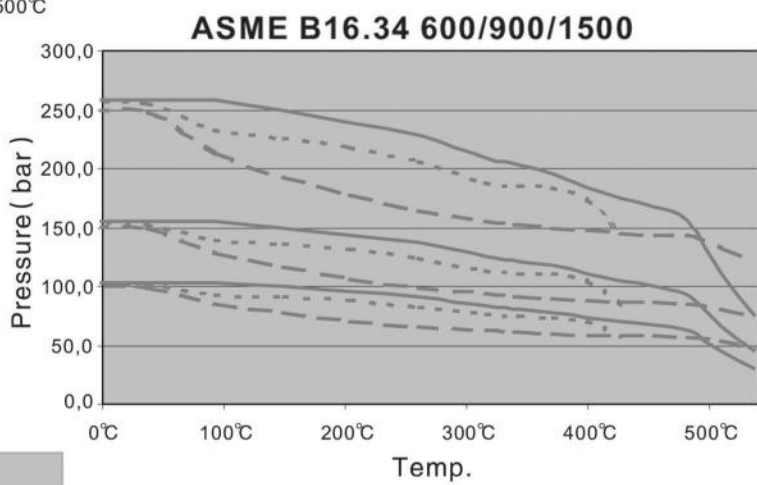


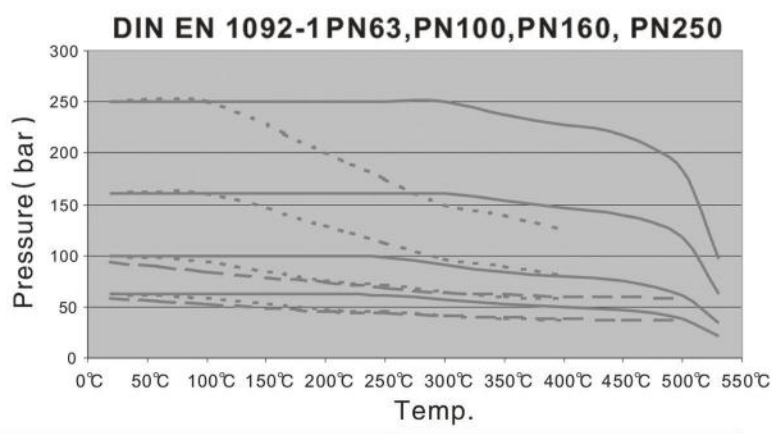
Figure 3 Temp.&Pressure Curve



**ASME
B16.34/B16.35**



**DIN EN
1092-1**



- WC6/1.7357
- - - - - CF8M/1.4581
- WCB/1.0619
- 0.7043

Table 3 STD Material Assembly, Operated Temp.&Pressure Range of Trim

Parabolic Column Plug	Seat	Type of Seat Seal	Temp.
0Cr18Ni12Mo2Ti (1.4571)	0Cr18Ni12Mo2Ti (1.4571)	Metal seal	-46℃~530℃
2Cr13 (1.4021) Harden treatment	2Cr13 (1.4021) Harden treatment		
9Cr18MoV (1.4112) Harden treatment	9Cr18MoV (1.4112) Harden treatment		
3Cr17NiMo (1.4122) Harden treatment	2Cr13 (1.4021) Harden treatment		
0Cr18Ni12Mo2Ti (1.4571)	0Cr18Ni12Mo2Ti (1.4571)	PTFE/EPDM	-46℃~140℃
2Cr13 (1.4021)	2Cr13 (1.4021)		

Table 4 Rated Cv.

Seat Type		Metal Seat							Soft Seat						
Flow Characteristic		Linearity			EQ%			Quick	Linearity			EQ%			Quick
Nominal Size (DN)	Travel	Cv1	Cv2	Cv3	Cv1	Cv2	Cv3	Cv1	Cv1	Cv2	Cv3	Cv1	Cv2	Cv3	Cv1
15	16	4.7	1.9	0.73	4.7	1.9	0.73	4.7	4.7	1.9	0.73	4.7	1.9	0.73	4.7
20		4.7	1.9	0.73	4.7	1.9	0.73	4.7	4.7	1.9	0.73	4.7	1.9	0.73	4.7
25		11.5	4.7	1.9	11.5	4.7	1.9	11.5	11.5	4.7	1.9	11.5	4.7	1.9	11.5
32		11.5	4.7	1.9	11.5	4.7	1.9	11.5	11.5	4.7	1.9	11.5	4.7	1.9	11.5
40		29	19	11.5	29	19	11.5	29	29	19	11.5	29	19	11.5	29
50		46	29	19	46	29	19	46	46	29	19	46	29	19	46
65	30	73	46	29	73	46	29	73	73	46	29	73	46	29	73
80		116	73	46	116	73	46	116	116	73	46	116	73	46	116
100		186	116	73	186	116	73	186	186	116	73	186	116	73	186
150		445	304	176	445	304	176	445	445	304		445	304		445
200	60	761	445	304	761	445	304	761	761			761			761
250		1053	761	445	1053	761	445	1053	1053			1053			1053
300	100	1521	1053	761	1521	1053	761	1521	1521			1521			1521
350		2106	1521	1053	2106	1521	1053	2106	2106			2106			2106
400	120	2925	2106	1521	2925	2106	1521	2925	2925			2925			2925

Figure 4 Flow Characteristic Curve

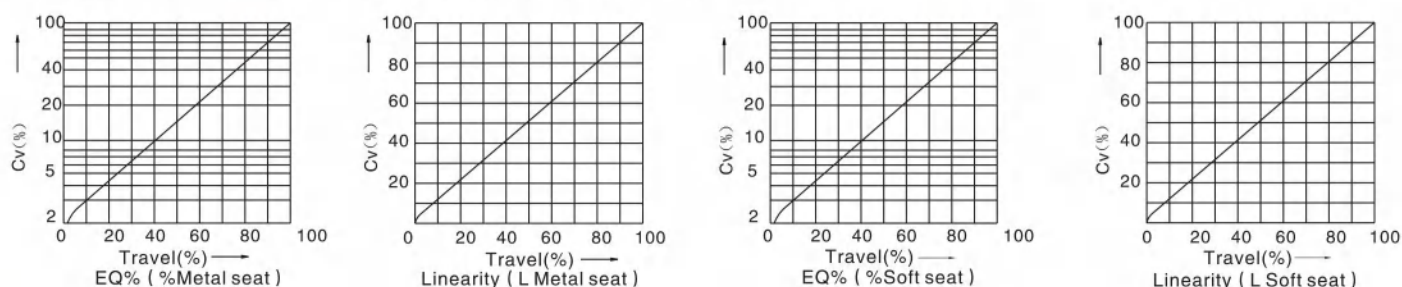


Table 5.1 Allowable Pressure Differential (Leakage Class IV PTFE Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. $\varnothing$ (mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply (bar)				
									3	4.5	6.0	4.5	6.0
15 1/2"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
20 3/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
25 1"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	32.8	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			4.7	15	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
32 1-1/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	32.8	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			4.7	15	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	-	-	50.0	50.0	50.0	50.0	50.0
40 1-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	29	36	14.1	37.7	-	-	37.7	50.0	50.0	37.7	50.0
			19	30	21.6	50.0	-	-	50.0	50.0	50.0	50.0	50.0
			11.5	25	32.8	50.0	-	-	50.0	50.0	50.0	50.0	50.0
50 2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	46	46	7.1	22.1	-	-	22.1	50.0	50.0	22.1	50.0
			29	36	14.1	37.7	-	-	37.7	50.0	50.0	37.7	50.0
			19	30	21.6	50.0	-	-	50.0	50.0	50.0	50.0	50.0
65 2-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	73	50	6.2	18.4	-	-	18.4	42.9	50.0	18.4	42.9
			46	46	7.7	22.1	-	-	22.1	50.0	50.0	22.1	50.0
			29	36	14.1	37.7	-	-	37.7	50.0	50.0	37.7	50.0
80 3"	30	SA1R-5XX 320cm ² (50in ²)	116	80	1.3	6.1	-	-	6.1	15.6	25.2	6.1	15.6
			73	50	5.7	17.9	-	-	17.9	42.4	50.0	17.9	42.4
			46	46	7.1	21.5	-	-	21.5	50.0	50.0	21.5	50.0
		SA2DR-1XX 720cm ² (111in ²)	116	80	6.5	16.4	22.4	28.4	18.0	39.5	50.0	18.0	39.5
			73	50	18.9	44.4	50	50.0	48.5	50.0	50.0	48.5	50.0
			46	46	22.7	50.0	50	50.0	50.0	50.0	50.0	50.0	50.0
100 4"	30	SA1DR-5XX 320cm ² (50in ²)	186	100	0.4	3.5	-	-	3.5	9.6	15.7	3.5	9.6
			116	80	1.3	6.1	-	-	6.1	15.6	25.2	6.1	15.4
			73	50	5.7	17.9	-	-	17.9	42.4	50.0	17.9	42.4
		SA2DR-1XX 720cm ² (111in ²)	186	100	3.7	10.1	13.9		11.1	24.9	38.6	11.1	24.9
			116	80	6.5	16.4	22.4		18.0	39.5	50.0	18.0	39.5
			73	50	18.9	44.4	50		48.5	50.0	50.0	48.5	50.0
150 6"	60	SA2DR-1XX 720cm ² (111in ²)	445	143	1.7	5.2	7.3	9.0	5.7	13.3	20.8	5.7	13.3
			304	113	2.6	7.4	10.3	13.2	8.2	18.6	29.0	8.2	18.6
			176	90	4.9	12.7	17.4	22.2	14.0	31.0	47.9	14.0	31.0
200 8"	60	SA2DR-1XX 720cm ² (111in ²)	761	172	0.7	2.6	3.8	5.0	2.9	7.2	11.4	2.9	7.2
			445	143	1.7	5.2	7.3	9.4	5.7	13.3	20.8	5.7	13.3
			304	113	2.6	7.4	10.3	13.2	8.2	18.6	29.0	8.2	18.6

Table 5.1 Allowable Pressure Differential (Leakage Class IV PTFE Packing)

Actuator SA3 Series					Spring Nos.			Spring Nos.				
Nominal Size DN(mm)	Max.Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	4	6	8	2	2	2	4	4
					bar	bar	bar	Air Supply(bar)				
								3.0	4.5	6.0	4.5	6.0
150 6"	60	SA3DR-1XX 1600cm ² (248in ²)	445	143	12.1	19.1	26.1	27.2	46.7	50.0	37.0	50.0
			304	113	17.0	26.7	36.3	37.8	50.0	50.0	50.0	50.0
			176	90	28.4	44.2	50.0	50.0	50.0	50.0	50.0	50.0
200 8"	60	SA3DR-1XX 1600cm ² (248in ²)	761	172	6.6	10.5	14.4	15.0	26.7	36.8	20.5	31.3
			445	143	12.1	19.1	26.1	27.2	46.7	50.0	37.0	50.0
			304	113	17.0	26.7	36.3	37.8	50.0	50.0	50.0	50.0
250 10"	100	SA3DR-2XX 1600cm ² (248in ²)	1053	220	3.9	6.4	8.7	7.4	13.9	20.4	9.4	16.0
			761	172	6.0	9.7	13.3	11.3	20.9	30.8	14.3	24.1
			445	143	11.2	17.8	24.1	20.6	37.7	50.0	25.8	43.3
300 12"	100	SA3DR-2XX 1600cm ² (248in ²)	1521	282	2.5	4.3	5.9	5.0	9.4	14.0	6.3	10.9
			1053	220	3.9	6.4	8.7	7.4	13.9	20.4	9.4	16.0
			761	172	6.0	9.7	13.3	11.3	20.9	30.8	14.3	24.1
350 14"	100	SA3DR-2XX 1600cm ² (248in ²)	2106	313	1.8	17.8	4.2	3.5	6.8	10.1	4.5	7.9
			1521	282	2.5	4.3	5.9	5.0	9.4	14.0	6.3	10.9
			1053	220	3.9	6.4	8.7	7.4	13.9	20.4	9.4	16.0
400 16"	120	SA3DR-2XX 1600cm ² (248in ²)	2925	400	0.4	0.9	1.3	1.6	3.5	5.4	2.0	3.8
			2106	313	0.9	1.7	2.4	2.9	6.0	9.1	3.5	6.6
			1521	282	1.3	2.5	3.3	4.1	8.3	12.6	4.9	9.1

Table 5.2 Allowable Pressure Differential (Leakage Class IV Graphite Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply(bar)				
									3.0	4.5	6.0	4.5	6.0
15 1/2"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
20 3/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
25 1"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	20.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			4.7	15	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
32 1-1/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	20.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			4.7	15	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
40 1-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	29	36	8.2	31.8	—	—	31.8	50.0	50.0	31.8	50.0
			19	30	13.1	47.1	—	—	47.1	50.0	50.0	47.1	50.0
			11.5	25	20.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
50 2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	46	46	4.1	18.5	—	—	18.5	47.4	50.0	18.5	47.4
			29	36	8.2	31.8	—	—	31.8	50.0	50.0	31.8	50.0
			19	30	13.1	47.1	—	—	47.1	50.0	50.0	47.1	50.0
65 2-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	73	50	3.1	15.4	—	—	15.4	39.8	50.0	15.4	39.8
			46	46	4.1	18.5	—	—	18.5	47.4	50.0	18.5	47.4
			29	36	8.2	31.8	—	—	31.8	50.0	50.0	31.8	50.0

Table 5.2 Allowable Pressure Differential (Leakage Class IV Graphite Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Cose Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply(bar)				
									3.0	4.5	6.0	4.5	6.0
80 3"	30	SA1DR-5xx 320cm²(50in²)	116	80	—	4.7	—	—	4.7	14.2	23.8	4.7	14.2
			73	50	2.1	14.3	—	—	14.3	38.8	50.0	14.3	38.8
			46	46	2.9	17.3	—	—	17.3	46.2	50.0	17.3	46.2
		SA2DR-1XX 720cm²(111in²)	116	80	5.1	15.0	21.0	27.0	16.6	38.1	50.0	16.6	38.1
			73	50	15.4	40.8	50.0	50.0	44.9	50.0	50.0	44.9	50.0
			46	46	18.5	18.6	50.0	50.0	50.0	50.0	50.0	50.0	50.0
100 4"	30	SA1DR-5XX 320cm²(50in²)	186	100	—	2.6	—	—	2.6	8.7	14.8	2.6	8.7
			116	80	—	4.7	—	—	4.7	14.2	23.8	4.7	14.2
			73	50	2.1	14.3	—	—	14.3	38.8	50.0	14.3	38.8
		SA2DR-1×X 720cm²(111in²)	186	100	2.8	9.2	13.0	16.9	10.2	24.0	37.7	10.2	24.0
			116	80	5.1	15.0	21.0	27.0	16.6	38.1	50.0	16.6	38.1
			73	50	15.4	40.8	50.0	50.0	44.9	50.0	50.0	44.9	50.0
150 6"	60	SA2DR-2XX 720cm²(111in²)	445	143	1.2	4.7	6.8	8.9	5.2	12.8	20.3	5.2	12.8
			304	113	1.9	6.7	9.6	12.5	7.5	17.9	28.3	7.5	17.9
			176	90	3.8	11.6	16.3	21.1	12.9	29.9	46.8	12.9	29.9
200 8"	60	SA2DR-2XX 720cm²(111in²)	761	172	0.4	2.3	3.5	4.7	2.7	6.9	11.2	2.7	6.9
			445	143	1.2	4.7	6.8	8.9	5.2	12.8	20.3	2.2	12.8
			304	113	1.9	6.7	9.6	12.5	7.5	17.9	28.3	7.5	17.9

Table 5.2 Allowable Pressure Differential (Leakage Class IV Graphite Packing)

Actuator SA3 Series					Spring Nos.			Spring Nos.				
Nominal Size DN(mm)	Max.Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	4	6	8	2	2	2	4	4
					bar	bar	bar	Air Supply(bar)				
								3.0	4.5	6.0	4.5	6.0
150 6"	60	SA3DR-1XX 1600cm ² (248in ²)	445	143	11.7	18.6	25.6	26.7	46.3	50.0	36.5	50.0
			304	113	16.4	26.0	35.6	37.1	50.0	50.0	50.0	50.0
			176	90	27.3	43.1	50.0	50.0	50.0	50.0	50.0	50.0
200 8"	60	SA3DR-1XX 1600cm ² (248in ²)	761	172	6.3	10.2	14.1	14.7	25.7	36.6	20.2	31.1
			445	143	11.7	18.6	25.6	26.7	46.3	50.0	36.5	50.0
			304	113	16.4	26.0	35.6	37.1	50.0	50.0	50.0	50.0
250 10"	100	SA3DR-2xX 1600cm ² (248in ²)	1053	220	3.6	6.1	8.4	7.1	13.6	20.1	9.1	15.7
			761	172	5.6	9.3	12.8	10.9	20.5	30.3	13.8	23.7
			445	143	10.4	17.0	23.3	19.8	37.0	50.0	25.1	42.6
300 12"	100	SA3DR-2XX 1600cm ² (248in ²)	1521	282	2.3	4.1	5.7	4.8	9.2	13.8	6.1	10.7
			1053	220	3.6	6.1	8.4	7.1	13.6	20.1	9.1	15.7
			761	172	5.6	9.3	12.8	10.9	20.5	30.3	13.8	23.7
350 14"	100	SA3DR-2xX 1600cm ² (248in ²)	2106	313	1.6	2.9	4.1	3.4	6.6	10.0	4.4	7.7
			1521	282	2.3	4.1	5.7	4.8	9.2	13.8	6.1	10.7
			1053	220	3.6	6.1	8.4	7.1	13.6	20.1	9.1	15.7
400 16"	120	SA3DR-2xx 1600cm ² (248in ²)	2925	400	0.3	0.8	1.2	1.5	3.4	5.3	1.9	3.8
			2106	313	0.7	1.6	2.2	2.7	5.9	9.0	3.3	6.4
			1521	282	1.1	2.3	3.1	3.9	8.1	12.4	4.7	9.0

Table 5.3 Allowable Pressure Differential (Leakage Class V PTFE Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply(bar)				
									3.0	4.5	6.0	4.5	6.0
15 1/2"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	46.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	2	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
20 3/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	46.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
25 1"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	0.8	49.7	—	—	49.7	50.0	50.0	49.7	50.0
			4.7	15	46.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
32 1 1/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	0.8	49.7	—	—	49.7	50.0	50.0	49.7	50.0
			4.7	15	46.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
40 1 1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	29	36	—	15.5	—	—	15.5	50.0	50.0	15.5	50.0
			19	30	—	28.9	—	—	28.9	50.0	50.0	28.9	50.0
			11.5	25	0.8	49.7	—	—	49.7	50.0	50.0	49.7	50.0
50 2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	46	46	—	4.7	—	—	4.7	33.6	50.0	4.7	33.6
			29	36	—	15.5	—	—	15.5	50.0	50.0	15.5	50.0
			19	30	—	28.9	—	—	28.9	50.0	50.0	28.9	50.0
65 2 1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	73	50	—	2.4	—	—	2.4	26.9	50.0	2.4	26.9
			46	46	—	4.7	—	—	4.7	33.6	50.0	4.7	33.6
			29	36	—	15.5	—	—	15.5	50.0	50.0	15.5	50.0
80 3"	30	SA1DR-5XX 320cm ² (50in ²)	116	80	—	—	—	—	—	5.6	15.2	—	5.6
			73	50	—	1.9	—	—	1.9	26.4	50.0	1.9	26.4
			46	46	—	4.1	—	—	4.1	33.0	50.0	4.1	33.0
		SA2DR-1XX 720cm ² (111in ²)	116	80	—	6.4	12.4	18.4	8.0	29.5	50.0	8.0	29.5
			73	50	2.9	28.4	43.7	50.0	32.5	50.0	50.0	32.5	50.0
			46	46	5.4	35.5	50.0	50.0	40.3	50.0	50.0	40.3	50.0
100 4"	30	SA1DR-5XX 320cm ² (50in ²)	186	100	—	—	—	—	—	1.6	7.7	—	1.6
			116	80	—	—	—	—	—	5.6	15.2	—	5.6
			73	50	—	1.9	—	—	1.9	26.4	50.0	1.9	26.4
		SA2DR-1XX 720cm ² (111in ²)	186	100	—	2.1	5.9	9.7	3.1	16.9	30.6	3.1	16.9
			116	80	—	6.4	12.4	18.4	8.0	29.5	50.0	8.0	29.5
			73	50	2.9	28.4	43.7	50.0	32.5	50.0	50.0	32.8	50.0
150 6"	60	SA2DR-2XX 720cm ² (111in ²)	445	143	—	—	1.3	3.4	—	7.3	14.9	—	7.3
			304	113	—	0.5	3.3	6.2	1.2	11.6	22.0	1.2	11.6
			176	90	—	3.8	8.5	13.3	5.1	22.1	39.1	5.1	22.1
200 8"	60	SA2DR-2XX 720cm ² (111in ²)	761	172	—	—	—	0.5	—	2.7	7.0	—	2.7
			445	143	—	—	1.3	3.4	—	7.3	14.9	—	7.3
			304	113	—	0.5	3.3	6.2	1.2	11.6	22.0	1.2	11.6

Table 5.3 Allowable Pressure Differential (Leakage Class V PTFE Packing)

Actuator SA3 Series					Spring Nos.			Spring Nos.				
Nominal Size DN(mm)	MaX.Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	4	6	8	2	2	2	4	4
					bar	bar	bar	Air Supply(bar)				
								3.0	4.5	6.0	4.5	6.0
150 6"	60	SA3DR-1XX 1600cm ² (248in ²)	445	143	6.2	13.2	20.2	21.3	40.8	50.0	31.0	50.0
			304	113	10.1	19.7	29.4	30.8	50.0	50.0	44.3	50.0
			176	90	19.6	35.3	50.0	50.0	50.0	50.0	50.0	50.0
200 8"	60	SA3DR-1XX 1600cm ² (248in ²)	761	172	2.1	6.0	10.0	10.6	21.6	32.4	16.1	26.9
			445	143	6.2	13.2	20.2	21.3	40.8	50.0	31.0	50.0
			304	113	10.1	19.7	29.4	30.8	50.0	50.0	44.3	50.0
250 10"	100	SA3DR-2XX 1600cm ² (248in ²)	1053	220	0.2	2.7	5.1	3.8	10.2	16.8	5.7	12.3
			761	172	1.6	5.3	8.8	6.9	16.5	26.3	9.8	19.6
			445	143	5.2	11.9	18.2	14.7	31.8	49.3	19.9	37.4
300 12"	100	SA3DR-2XX 1600cm ² (248in ²)	1521	282	—	—	—	—	—	—	—	—
			1053	220	—	—	—	—	—	—	—	—
			761	172	—	—	—	—	—	—	—	—
350 14"	100	SA3DR-2XX 1600cm ² (248in ²)	2106	313	—	—	—	—	—	—	—	—
			1521	282	—	—	—	—	—	—	—	—
			1053	220	—	—	—	—	—	—	—	—
400 16"	120	SA3DR-2XX 1600cm ² (248in ²)	2925	400	—	—	—	—	—	—	—	—
			2106	313	—	—	—	—	—	—	—	—
			1521	282	—	—	—	—	—	—	—	—

Table 5.4 Allowable Pressure Differential (Leakage Class V Graphite Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply(bar)				
									3.0	4.5	6.0	4.5	6.0
15 1/2"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	12.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
20 3/4"	16	SA18-1*(6)XX 320cm ² (50in ²)	4.7	15	12.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
25 1"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	—	37.5	—	—	37.5	50.0	50.0	37.5	50.0
			4.7	15	12.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
32 1-1/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	—	37.5	—	—	37.5	50.0	50.0	37.5	50.0
			4.7	15	12.6	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
40 1-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	29	36	—	9.6	—	—	9.6	50.0	50.0	9.6	50.0
			19	30	—	20.5	—	—	20.5	50.0	50.0	20.5	50.0
			11.5	25	—	37.5	—	—	37.5	50.0	50.0	37.5	50.0
50 2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	46	46	—	1.1	—	—	1.1	30.0	50.0	1.1	50.0
			29	36	—	9.6	—	—	9.6	50.0	50.0	9.6	50.0
			19	30	—	20.5	—	—	20.5	50.0	50.0	20.5	50.0
65 2-1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	73	50	—	—	—	—	—	23.8	48.3	—	23.8
			46	46	—	1.1	—	—	1.1	30.0	50.0	1.1	30.0
			29	36	—	9.6	—	—	9.6	50.0	50.0	9.6	50.0

Table 5.4 Allowable Pressure Differential (Leakage Class V Graphite Packing)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply (bar)				
									3.0	4.5	6.0	4.5	6.0
80 3"	30	SA1DR-5XX 320cm ² (50in ²)	116	80	—	—	—	—	—	4.2	13.8	—	4.2
			73	50	—	—	—	—	—	22.8	47.3	—	22.8
			46	46	—	—	—	—	—	28.8	50.0	—	28.8
		SA2DR-1XX 720cm ² (111in ²)	116	80	—	5.0	11.0	17.0	6.6	28.1	49.6	6.6	28.1
			73	50	—	24.8	40.1	50.0	28.9	50.0	50.0	28.9	50.0
			46	46	1.1	31.2	49.3	50.0	36.1	50.0	50.0	36.1	50.0
100 4"	30	SA1DR-5XX 320cm ² (50in ²)	186	100	—	—	—	—	—	0.7	6.8	—	0.7
			116	80	—	—	—	—	—	4.2	13.8	—	4.2
			73	50	—	—	—	—	—	22.8	47.3	—	22.8
		SA2DR-1XX 720cm ² (111in ²)	186	100	—	1.2	5.0	8.9	2.2	16.0	29.7	2.2	16.0
			116	80	—	5.0	11.0	17.0	6.6	28.1	49.6	6.6	28.1
			73	50	—	24.8	40.1	50.0	28.9	50.0	50.0	28.9	50.0
150 6"	60	SA2DR-2XX 720cm ² (111in ²)	445	143	—	—	0.8	2.9	—	6.9	14.4	—	6.9
			304	113	—	—	2.7	5.6	0.6	11.0	21.4	0.6	11.0
			176	90	—	2.7	7.4	12.2	4.0	21.0	38.0	4.0	21.0
200 8"	60	SA2DR-2XX 720cm ² (111in ²)	761	172	—	—	—	0.3	—	2.5	6.7	—	2.5
			445	143	—	—	0.8	2.9	—	6.9	14.4	—	6.9
			304	113	—	—	2.7	5.6	0.6	11.0	21.4	0.6	11.0

Table 5.4 Allowable Pressure Differential (Leakage Class V Graphite Packing)

Actuator SA3 Series					Spring Nos.			Spring Nos.				
Nominal Size DN(mm)	MaX.Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	4	6	8	2	2	2	4	4
					bar	bar	bar	Air Supply (bar)				
								3.0	4.5	6.0	4.5	6.0
150 6"	60	SA3DR-1XX 1600cm ² (248in ²)	445	143	5.7	12.7	19.7	20.8	40.3	50.0	30.5	49.8
			304	113	9.4	19.0	28.7	30.1	50.0	50.0	43.6	50.0
			176	90	18.5	34.2	49.9	50.0	50.0	50.0	50.0	50.0
200 8"	60	SA3DR-1XX 1600cm ² (248in ²)	761	172	1.8	5.8	9.7	10.3	21.3	32.1	15.8	26.6
			445	143	5.7	12.7	19.7	20.8	40.3	50.0	30.5	49.8
			304	113	9.4	19.0	28.7	30.1	50.0	50.0	43.6	50.0
250 10"	100	SA3DR-2XX 1600cm ² (248in ²)	1053	220	—	2.4	4.8	3.5	9.9	16.5	5.5	12.0
			761	172	1.1	4.9	8.4	6.4	16.1	25.9	9.4	19.2
			445	143	4.5	11.1	17.4	13.9	31.0	48.5	19.2	36.6
300 12"	100	SA3DR-2XX 1600cm ² (248in ²)	1521	282	—	—	—	—	—	—	—	—
			1053	220	—	—	—	—	—	—	—	—
			761	172	—	—	—	—	—	—	—	—
350 14"	100	SA3DR-2XX 1600cm ² (248in ²)	2106	313	—	—	—	—	—	—	—	—
			1521	282	—	—	—	—	—	—	—	—
			1053	220	—	—	—	—	—	—	—	—
400 16"	120	SA3DR-2XX 1600cm ² (248in ²)	2925	400	—	—	—	—	—	—	—	—
			2106	313	—	—	—	—	—	—	—	—
			1521	282	—	—	—	—	—	—	—	—

Table 5.5 Allowable Pressure Differential (Leakage Class VI Soft Seat)

Actuator SA1, 2 Series					Air to Open Spring Nos.				Air to Close Spring Nos.				
Nominal Size DN(mm)	Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	3	6	9	12	3	3	3	6	6
					bar	bar	bar	bar	Air Supply (bar)				
									3.0	4.5	6.0	4.5	6.0
15 1/2"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	34.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
20 3/4"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	4.7	15	34.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			0.73	5	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
25 1"	16	SA1DR-1*(6)XX 320cm ² (50in ²)	11.5	25	12.4	42.2	—	—	42.2	50.0	50.0	42.2	50.0
			4.7	15	34.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
32 1 1/4"	16	SA1DR-1*(6)xx 320cm ² (50in ²)	11.5	25	12.4	42.2	—	—	42.2	50.0	50.0	42.2	50.0
			4.7	15	34.5	50.0	—	—	50.0	50.0	50.0	50.0	50.0
			1.9	10	50.0	50.0	—	—	50.0	50.0	50.0	50.0	50.0
40 1 1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	29	36	4.3	20.4	—	—	20.4	50.0	50.0	20.4	50.0
			19	30	7.5	29.2	—	—	29.2	50.0	50.0	29.2	50.0
			11.5	25	12.4	42.2	—	—	42.2	50.0	50.0	42.2	50.0
50 2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	46	46	0.7	10.0	—	—	10.0	28.5	47.0	10.0	28.5
			29	36	4.3	20.4	—	—	20.4	50.0	50.0	20.4	50.0
			19	30	7.5	29.2	—	—	29.2	50.0	50.0	29.2	50.0
65 2 1/2"	16	SA1DR-2*(3)XX 320cm ² (50in ²)	73	50	0.7	10.0	—	—	10.0	28.5	47.0	10.0	28.5
			46	46	0.7	10.0	—	—	10.0	28.5	47.0	10.0	28.5
			29	36	4.3	20.4	—	—	20.4	50.0	50.0	20.4	50.0
80 3"	30	SA1DR-5XX 320cm ² (50in ²)	116	80	—	2.4	—	—	2.4	10.0	17.6	2.4	10.0
			73	50	0.4	9.6	—	—	9.6	28.1	46.6	9.6	28.1
			46	46	0.4	9.6	—	—	9.6	28.1	46.6	9.6	28.1
		SA2DR-1XX 720cm ² (111in ²)	116	80	2.7	10.6	15.4	20.2	11.9	29.1	46.3	11.9	29.1
			73	50	10.4	29.6	41.2	50.0	32.7	50.0	50.0	32.7	50.0
			46	46	10.4	29.6	41.2	50.0	32.7	50.0	50.0	32.7	50.0
100 4"	30	SA1DR-5XX 320cm ² (50in ²)	186	100	—	0.9	—	—	0.9	6.0	11.1	0.9	6.0
			116	80	—	2.4	—	—	2.4	10.0	17.6	2.4	10.0
			73	50	0.4	9.6	—	—	9.6	28.1	46.6	9.6	28.1
		SA2DR-2xx 720cm ² (111in ²)	186	100	1.1	6.4	9.6	12.8	7.3	18.8	30.2	7.3	18.8
			116	80	2.7	10.6	15.4	20.2	11.9	29.1	46.3	11.9	29.1
			73	50	10.4	29.6	41.2	50.0	32.7	50.0	50.0	32.7	50.0
150 6"	60	SA2DR-2Xx 720cm ² (111in ²)	445	143	—	2.6	4.2	5.9	3.0	8.9	14.9	3.0	8.9
			304	113	0.6	4.8	7.3	9.9	5.5	14.6	23.8	5.5	14.6
			176	90	1.8	8.2	12.1	15.9	9.2	23.1	37.0	9.2	23.1
200 8"	60	SA2DR-2Xx 720cm ² (111in ²)	761	172	—	1.2	2.3	3.3	1.5	5.2	9.0	1.5	5.2
			445	143	—	2.6	4.2	5.9	3.0	8.9	14.9	3.0	8.9
			304	113	0.6	4.8	7.3	9.9	5.5	14.6	23.8	5.5	14.6

Table 5.5 Allowable Pressure Differential (Leakage Class VI Soft Seat)

Actuator SA3 Series					Spring Nos.			Spring Nos.				
Nominal Size DN(mm)	Max.Travel (mm)	Actuator Size Parameter	Cv	Seat Dia. ø(mm)	4	6	8	2	2	2	4	4
					bar	bar	bar	Air Supply (bar)				
								3.0	4.5	6.0	4.5	6.0
150 6"	60	SA3DR-1XX 1600cm ² (248in ²)	445	143	8.1	13.5	19.0	19.8	35.2	50.0	27.5	42.6
			304	113	13.3	21.8	30.3	31.5	50.0	50.0	43.4	50.0
			176	90	21.1	33.9	46.8	48.7	50.0	50.0	50.0	50.0
200 8"	60	SA3DR-1XX 1600cm ² (248in ²)	761	172	4.7	8.2	11.6	12.2	21.9	31.4	17.0	26.6
			445	143	8.1	13.5	19.0	19.8	35.2	50.0	27.5	42.6
			304	113	13.3	21.8	30.3	31.5	50.0	50.0	43.4	50.0
250 10"	100	SA3DR-2xX 1600cm ² (248in ²)	1053	220	2.6	4.9	7.0	5.8	11.7	17.6	7.6	13.6
			761	172	4.2	7.5	10.6	8.9	17.4	26.1	11.5	20.2
			445	143	7.3	12.5	17.4	14.7	28.1	41.8	18.8	32.5
300 12"	100	SA3DR-2xx 1600cm ² (248in ²)	1521	282	1.6	3.1	4.6	3.8	7.9	12.0	5.0	9.2
			1053	220	2.6	4.9	7.0	5.8	11.7	17.6	7.6	13.6
			761	172	4.2	7.5	10.6	8.9	17.4	26.1	11.5	20.2
350 14"	100	SA3DR-2XX 1600cm ² (248in ²)	2106	313	1.0	2.1	3.3	2.6	5.7	8.7	3.6	6.6
			1521	282	1.6	3.1	4.6	3.8	7.9	12.0	5.0	9.2
			1053	220	2.6	4.9	7.0	5.8	11.7	17.6	7.6	13.6
400 16"	120	SA3DR-2XX 1600cm ² (248in ²)	2925	400	—	0.3	0.7	1.0	2.6	4.3	1.3	3.0
			2106	313	0.2	0.9	1.5	2.0	4.9	7.8	2.6	5.5
			1521	282	0.5	1.5	2.3	3.0	6.9	10.8	3.7	7.6

Figure 5.1 DN15~DN100 (1/2" ~4")

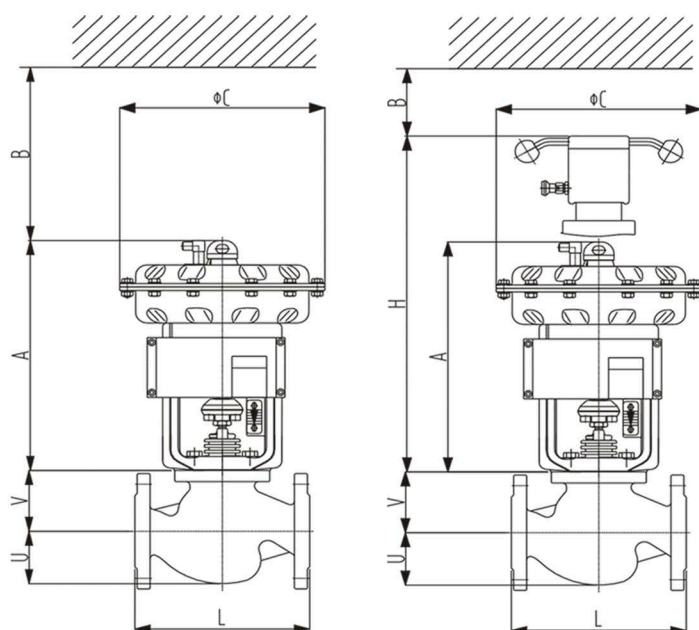


Figure 5.2 DN150~DN400 (6" ~16")

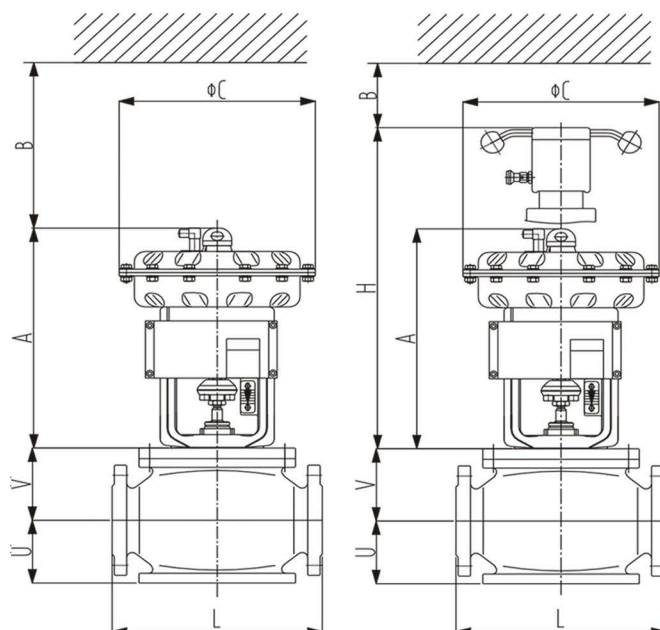


Table 6.1 Figure Size(mm)&Weight(Kg) (DN15~DN100, DIN PN16/25/40)

Body Flange Dimension is According to DIN 2543/2544/2545.

The Face to Face Dimension is According to DIN 3202-F1.

Body Assembly	DN		15	20	25	32	40	50	65	80	100
	L		130	150	160	180	200	230	290	310	350
	V	<300℃	114				105			156	181
		≥300℃	170				167			248	267
	U		48	59	62	70	78	83	93	106	136
Actuator	ØC	SA1	270								
		SA2								400	
	A	SA1	346							404	
		SA2								489	
	H	SA1	493							551	
		SA2								651	
	B		130							150	
	Weight	SA1	20.5	22.5	23	24	31	33	41.5	70	93
		SA2								96	119

Note: Weight=Body assembly+Actuator (without handwheel)

Table 6.2 Figure Size(mm)&Weight (Kg) (1/2"~4", ANSI 150/300)

Flange (ANSI B16.5 CLASS150/300RF/RTJ).Face to Face Dimension ANSI CLASS 150/300RF (IEC 60534-3-1 37/38 series), ANSI CLASS150/300RTJ(ASME B16.10 CLASS150/300RTJ).

Body Assembly	DN		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
	L	RF	178	181	184	200	222	254	276	298	352
		RFJ			197	213	235	267	289	311	365
	L	RF	190	194	197	213	235	267	292	317	368
		RFJ	202	206	210	225	248	282	308	333	384
	V	<300℃	114				105			156	181
		≥300℃	170				167			248	267
Actuator	U		48	59	62	70	78	83	93	106	136
	ØC	SA1	270								
		SA2								400	
	A	SA1	346							404	
		SA2								489	
	H	SA1	493							551	
		SA2								651	
	B		130							150	
	Weight	SA1	20.5	22.5	23	24	31	33	41.5	70	93
		SA2	96							119	

Note: Weight=Body assembly+Actuator (without handwheel)

Table 6.3 Figure Size(mm)&Weight(Kg) (DN150~DN400, DIN PN16/25/40)

**Body Flange Dimension is According to DIN 2543/2544/2545.
The Face to Face Dimension is According to DIN 3202-F1.**

	DN		150	200	250	300	350	400
	L		480	600	730	850	980	1100
Body Assembly	V	<300℃	260	292	357	394	462	518
		≥300℃	355	407	506	543	611	667
	U		189	239	305	335	395	443
Actuator	ØC	SA2	400					
		SA3	596					
	A	SA2	625					
		SA3	840		1010			1080
	H	SA2	888					
	B		200		340			
	Weight	SA2	190	250				
		SA3	330	390	450	750	840	1490

Note: Weight=Body assembly+Actuator (without handwheel)

Table 6.4 Figure Size(mm)&Weight (Kg) (6"~16", ANSI 150/300)

Flange(ANSI B16.5 CLASS150/300RF/RTJ).Face to Face Dimension ANSI CLASS150/300RF (IEC 60534-3-1 37/38 series), ANSI CLASS150/300RTJ (ASME B16.10 CLASS150/300RTJ).

Body Assembly	NPS		6"	8"	10"	12"	14"	16"
	L Cl.150	RF	451	543	673	737	889	1016
		RTJ	464	556	686	750	902	1029
	L Cl.300	RF	473	568	708	775	927	1057
		RTJ	489	584	724	791	943	1073
	V	<300°C	260	292	357	394	462	518
		≥300°C	355	407	506	543	611	667
U		189	239	305	335	395	443	
Actuator	ØC	SA2	400					
		SA3	596					
	A	SA2	625					
		SA3	840		1010		1080	
	H	SA2	888					
	B		200		340			
	Weight	SA2	190	250				
		SA3	330	390	450	750	840	1490

Note: Weight=Body assembly+Actuator (without handwheel)