



PNEUMATIC VALVES SERIES SBS

FAMILY 04: CONTROL VALVES GROUP: 120#129

Valves series SBS are modulating globe valves, with 2 or 3 ways.

They mount a multi-spring pneumatic diaphragm actuator. Their plug is available with linear or equipercentual characteristic, with soft, metallic or stellated seal.

They are available with flanged connections in accordance with standards EN 1092-2 PN16, EN 1092-1 PN40.



TECHNICAL DATA

Model					Globe Valve Unidirectional - 2 / 3 ways (Third way closed in standard version)				
Material		EN 1561 GJL-250		EN 1563GJS-500-7		ASTM A216 WCB		CF8M	
DN		15 # 80		15 #150		15 # 80			
Max Allowed P		16 BAR				40 BAR			
End		Flanged PN 16- EN 1092-2				Flanged PN 40- EN 1092-1			
Seal		PEEK Metallic Stellited							
Seal Class (EN12266-1)		Grade A with PEEK seal Grado B with metallic and stellited seal (stellited plug is advisable with p>10 bar) In according to UNI EN 12266-1							
Plug Characteristic		Linear - Equipercentual							
Stroke 15 mm		2 ways DN 15#25 3 ways mixing valve							
Stroke 20 mm		2 ways DN 32#80 3 ways deviator valve on request 3 ways mixing valve							
Stroke 30 mm		DN 100#150							
Max T		+200°C with all seal							
Min T		-10°C (liquid phase)							
Air Connection		actuator Ø 200) 1/4" GAS (actuator Ø 275, Ø 360, Ø 430).							
Feeding Fluid		Instrument Air							
Feeding Pressure		3÷15 psi, 6÷18psi, 6÷30psi, 9÷32psi, 3÷9psi, 9÷15psi.							
Versions / Optionals		Normally Closed Normally Open With bellows for high/low temperatures (see specific sheet) Manual Override Pneumatic Positioner Electropneumatic Positioner I/P Converter- FR Group							
MATERIALS									
Body		EN 1561 GJL-250		EN 1563GJS-500-7		ASTM A216 WCB		CF8M	
Bonnet		EN 1561 GJL-250 ASTM A216 WCB + Fe 430 B DN 65#80 EN 1563GJS-500-7 DN 100#150				ASTM A216 WCB + Fe 430 B		CF8M + S30400	
Plug	T.PK.	CF8 + S30400 + PEEK						CF8M + S31600 + PEEK	
	T.M.	CF8 + S30400						CF8M + S31600	
Packing		PTFE + PTFE caricato GRAFITE							
Body Seals		FASIT 400							
Actuator		Fe P04				Fe P04		S30400	
Nuts and Bolts		Zinc-Plated Steel						S30400	

Max Differential Pressure p for SBS Valves - DN 15÷150 2 Ways

			3÷15	6÷18	6÷30	9÷32	3÷9	9÷15	Valve definition N°	
Control signal in PSI ⁽¹⁾			0,2÷1	0,42÷1,26	0,4÷2,1	0,6÷2,24	0,2÷0,6	0,6÷1,0		
Control signal in BAR			1	1,26	2,21	2,4	0,8	1,2		
Max control pressure BAR			Valve definition letters							
ND	Øseat [mm]	ØeSERV. [mm]	A	B	C	D	R	S		
			15	3	200	40	40	40		40
15	6	200	40	40	40	40	40	40	40	3
		275	40	40	40	40	40	40	40	4
	15	200	13	26	26	39	13	39	39	5
		275	32	40	40	40	32	40	40	6
	20	200	7	14	14	21	7	21	21	101
			275	18	36	36	40	18	40	102
360			36	40	40	40	36	40	103	
20	8	200	40	40	40	40	40	40	40	7
		275	40	40	40	40	40	40	40	8
	15	200	13	26	26	39	13	39	39	9
		275	32	40	40	40	32	40	40	10
	20	200	7	14	14	21	7	21	21	13
		275	18	36	36	40	18	40	40	14
360	36	40	40	40	36	40	40	15		
25	15	200	13	26	26	39	13	39	39	17
		275	32	40	40	40	32	40	40	18
	20	200	7	14	14	21	7	21	21	21
		275	18	36	36	40	18	40	40	22
	360	36	40	40	40	36	40	40	23	
		200	5	10	10	15	5	15	15	25
26	275	12	24	24	34	12	34	34	26	
	360	24	40	40	40	24	40	40	27	
	430	28	40	40	40	28	40	40	28	
	200	7	14	14	21	7	21	21	29	
32	20	275	18	36	36	40	18	40	40	30
		360	36	40	40	40	36	40	40	31
		200	5	10	10	15	5	15	15	33
	26	275	12	24	24	34	12	34	34	34
		360	24	40	40	40	24	40	40	35
		430	28	40	40	40	28	40	40	36
31	200	4	8	8	12	4	12	12	37	
	275	10	20	20	30	10	30	30	38	
	360	20	40	40	40	20	40	40	39	
	430	23	40	40	40	23	40	40	40	
40	26	200	5	10	10	15	5	15	15	41
		275	12	24	24	34	12	34	34	42
		360	24	40	40	40	24	40	40	43
		430	28	40	40	40	28	40	40	44
	31	200	4	8	8	12	4	12	12	45
		275	10	20	20	30	10	30	30	46
38	360	20	40	40	40	20	40	40	47	
	430	23	40	40	40	23	40	40	48	
	200	2,8	5,5	5,5	8	2,8	8	8	49	
	275	7	14	14	20	7	20	20	50	
50	31	360	14	28	28	40	14	40	40	51
		430	15	32	32	40	15	40	40	52
		200	4	8	8	12	4	12	12	53
		275	10	20	20	30	10	30	30	54
	38	360	20	40	40	40	20	40	40	55
		430	23	40	40	40	23	40	40	56
48	200	2,8	5,5	5,5	8	2,8	8	8	57	
	275	7	14	14	20	7	20	20	58	
	360	14	28	28	40	14	40	40	59	
	430	15	32	32	40	15	40	40	60	
50	200	1,6	3,2	3,2	4,5	1,6	4,5	4,5	61	
		275	4	8	8	10,5	4	10,5	10,5	62
	360	8	16	16	21	8	21	21	63	
430	9,3	18	18	24	9,3	24	24	64		

		Control signal in PSI ⁽¹⁾						Valve definition N°	
		3÷15	6÷18	6÷30	9÷32	3÷9	9÷15		
		Control signal in BAR							
		0,2÷1	0,42÷1,26	0,4÷2,1	0,6÷2,24	0,2÷0,6	0,6÷1,0		
		Max control pressure BAR							
		1	1,26	2,21	2,4	0,8	1,2		
ND	Øseat [mm]	Ø _e SERV. [mm]	Valve definition letters						
			A	B	C	D	R	S	
65	38	200	2,8	5,5	5,5	8	2,8	8	65
		275	7	14	14	20	7	20	66
		360	14	28	28	40	14	40	67
		430	15	32	32	40	15	40	68
	48	200	1,6	3,2	3,2	4,5	1,6	4,5	70
		275	4	8	8	10,5	4	10,5	71
		360	8	16	16	21	8	21	72
		430	9,3	18	18	24	9,3	24	73
	63	200	1	2	2	2,5	1	2,5	75
		275	2,5	5	5	6,5	2,5	6,5	76
		360	5	10	10	13	5	13	77
		430	5,5	10,5	10,5	16	5,5	16	78
80	48	200	1,6	3,2	3,2	4,5	1,6	4,5	80
		275	4	8	8	10,5	4	10,5	81
		360	8	16	16	21	8	21	82
		430	9,3	18	18	24	9,3	24	83
	63	200	1	2	2	2,5	1	2,5	85
		275	2,5	5	5	6,5	2,5	6,5	86
		360	5	10	10	13	5	13	87
		430	5,5	10,5	10,5	16	5,5	16	88
	78	275	1,5	3	3	4	1,5	4	91
		360	3	6	6	8,5	3	8,5	92
		430	3,5	7	7	10,5	3,5	10,5	93
		430 S ⁽²⁾	2,5	5	5	7,5			5
100	92	430 D ⁽³⁾	5	10	10	15			6
		430 S ⁽²⁾	1,5	3	3	4,5			11
125	115	430 D ⁽³⁾	3	6	6	9,5			12
		430 S ⁽²⁾	1	2	2	3,5			17
150	135	430 D ⁽³⁾	2	4	4	7			18

⁽¹⁾ In NO valves, to obtain the same p as NC valves, maximum control signal must consist of the addition of two signals; for example, in a NO valve with 3÷15 PSI signal, the maximum control signal must be taken to 18 PSI (3+15) to obtain p of similar NC valve.

⁽²⁾

⁽³⁾

kv SBS/10 2-ways Valve

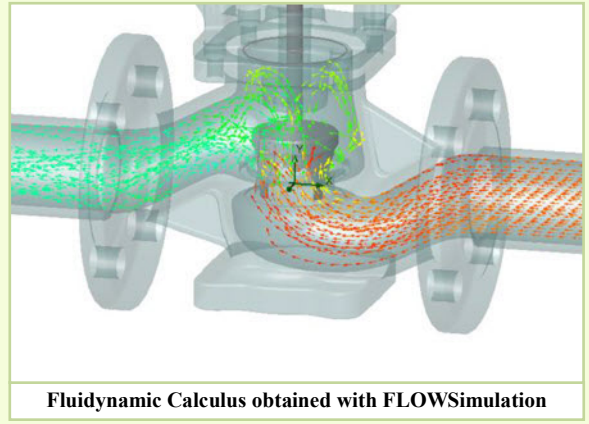
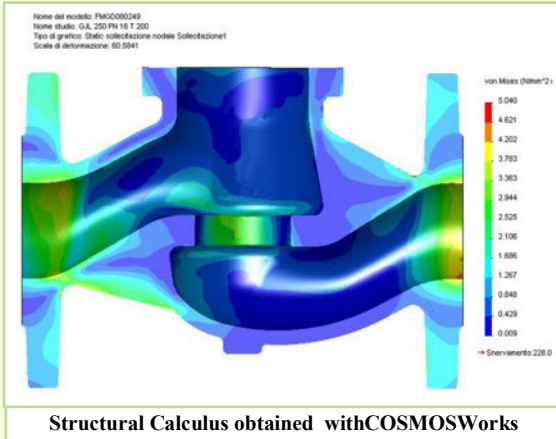
ND	Seat [mm]	Stroke [mm]	Kvs		CV	
			Linear	Equiperc.	Linear	Equiperc.
15	3	15	UT	UT	UT	UT
	6	15	UT	UT	UT	UT
	15	15	4,3	4,5	5	5,2
	20	15	5	5	5,8	5,8
20	8	15	UT	UT	UT	UT
	15	15	6	4,8	7	5,6
	20	15	8	7,5	9,3	8,7
25	15	15	5,4	5,3	6,3	6,2
	20	15	9,3	9,1	10,8	10,6
	26	15	11,8	11,3	13,7	13,1
32	20	15	9,6	9,5	11,2	11
		20	10,2	10,5	11,8	12,2
	26	15	14,5	13,5	16,9	15,7
		20	14,9	15,4	17,3	17,9
	31	15	20	15,2	23,3	17,7
		20	18,9	18,9	22	22

ND	Seat [mm]	Stroke [mm]	Kvs		CV	
			Linear	Equiperc.	Linear	Equiperc.
40	26	15	16,5	15,6	19,2	18,4
		20	18,1	18,5	21,1	21,4
	31	15	21,9	19	25,5	22,1
		20	24,5	24,7	28,5	28,7
	38	15	26	22,3	30,2	25,9
20		29,3	28,3	34,1	32,9	
50	31	15	22,1	19,1	25,7	22,2
		20	25,1	25,1	29,1	29,1
	38	15	27,6	23	32,1	26,7
		20	33,8	32	39,3	37,2
	48	15	38,4	34,6	44,7	40,2
		20	42,4	44,7	49,3	52
65	38	15	27,9	24	32,4	27,9
		20	34,1	33	39,7	38,4
	48	15	45,5	42	53,5	49,4
		20	56,9	55	66,9	64,7
	63	15	61	36,3	71,0	42,3
		20	69	63,1	80,3	73,5
80	48	15	43,2	41,6	50,3	48,4
		20	55,5	53,5	64,6	62,3
	63	15	62,2	37	72,4	43,1
		20	76,6	62,2	89,2	72,4
	78	15	61,9	43,16	72,1	50,3
		20	85,8	77,9	99,9	90,7
100	92	30	UT	115	UT	134
125	115	30	UT	190	UT	222
150	135	30	UT	250	UT	292

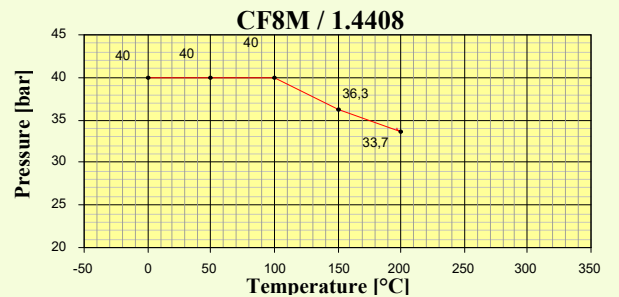
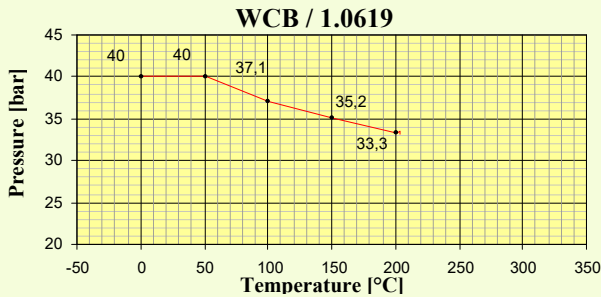
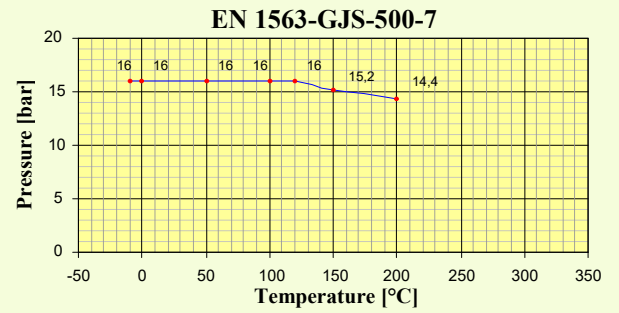
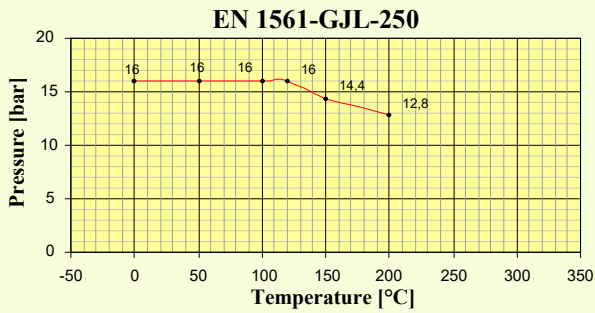
UT please contact our technical department

Kv has been calculated with fluidynamics software FLOWSimulation in accordance with standard EN 1267:2001 and refers to a 2-way valve.

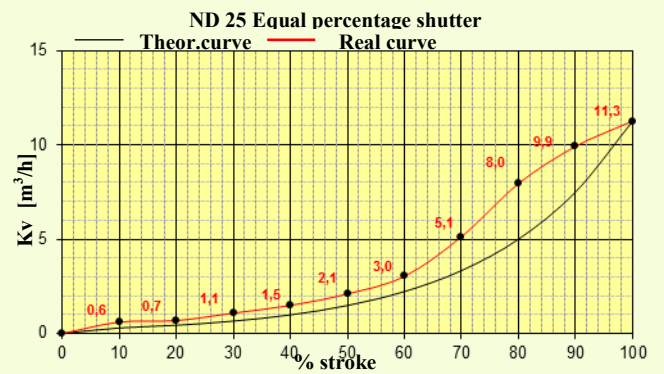
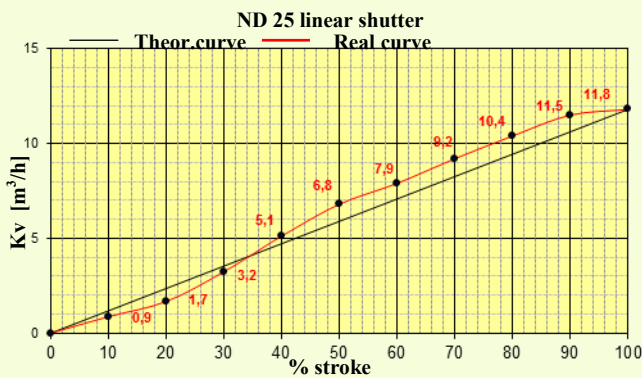
Project Calcula Samples



Pressure/Temperature relationship for Cast-Iron WCB CF8M Bodies

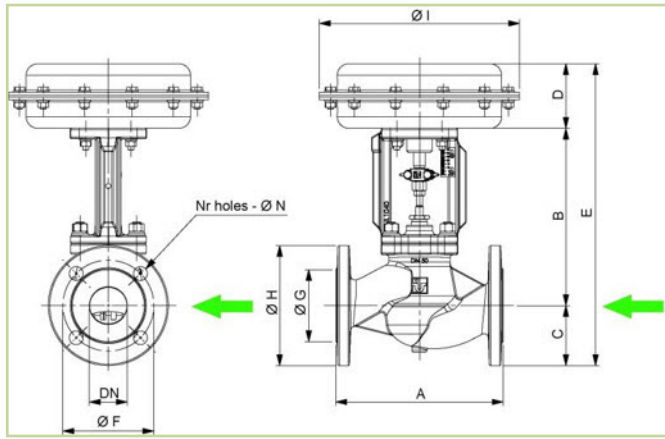


Example of linear and equal percentage shutters features of SBS valves stroke 15.

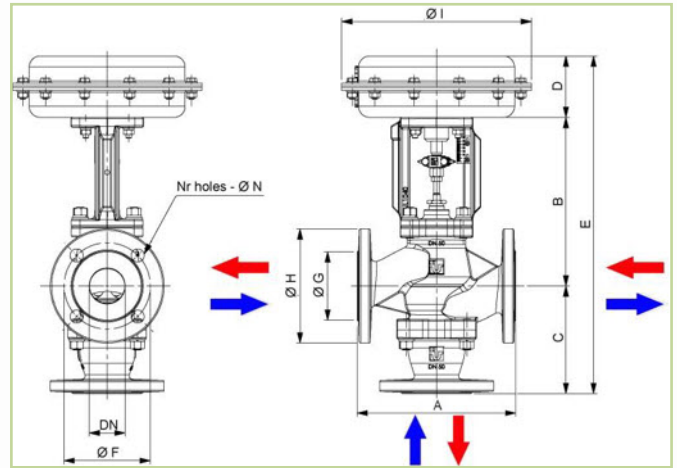


For all graphs refer to the curves and flow of the shutters Linear and equal percentage, see the Guide to selection, use and maintenance (website and / or CD)

Dimensions



→ Flow direction for 2-way valve



→ Flow direction for 3-way deviator valve

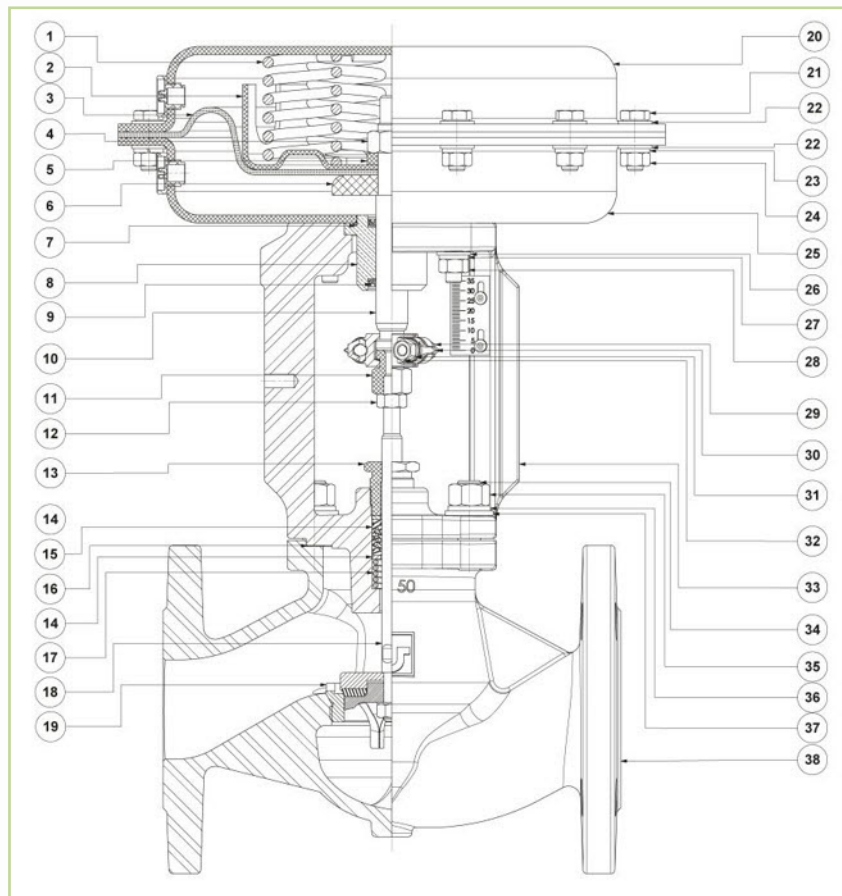
→ Flow direction for 3-way mixing valve

ND	A	B	C		D			E (2 ways)			E (3 ways)			Ø F	Ø G	Ø H	Ø I	Ø N		N° Holes	
			2 way	3 way	Actuator			Actuator			Actuator							PN 16	PN 40	PN 16	PN 40
					200	275	360	430	200	275	360	430	200					275	360	430	
15	130	227	48	111	77	89	123	352	364	398	415	427	461	65	45	95	A seconda del p di tenuta (200-275-360-430)	14	4		
20	150	227	53	111	77	89	123	357	369	403	415	427	461	75	58	105		14	4		
25	160	227	58	124	77	89	123	362	374	408	428	440	474	85	65	115		14	4		
32	180	248	70	144	77	89	123	395	407	441	469	481	515	100	76	140		19	18	4	
40	200	245	75	144	77	89	123	397	409	443	466	478	518	110	84	150		19	18	4	
50	230	245	83	160	77	89	123	405	417	451	482	494	528	125	99	165		19	18	4	
65	290	299	93	236	77	89	123	469	481	515	612	624	658	145	118	185		19	18	4	8
80	310	298	100	238	77	89	123	469	481	515	614	626	660	160	132	200		19	18	8	
100	350	384	193	265	/	/	123	/	/	700	/	/	772	180	158	220		18	/	8	/
125	400	407	216	318	/	/	123	/	/	746	/	/	848	210	188	250		18	/	8	/
150	480	432	245	382	/	/	123	/	/	800	/	/	937	240	212	285		22	/	8	/

Dimensions are express in mm.

Parts SBS 2 Ways

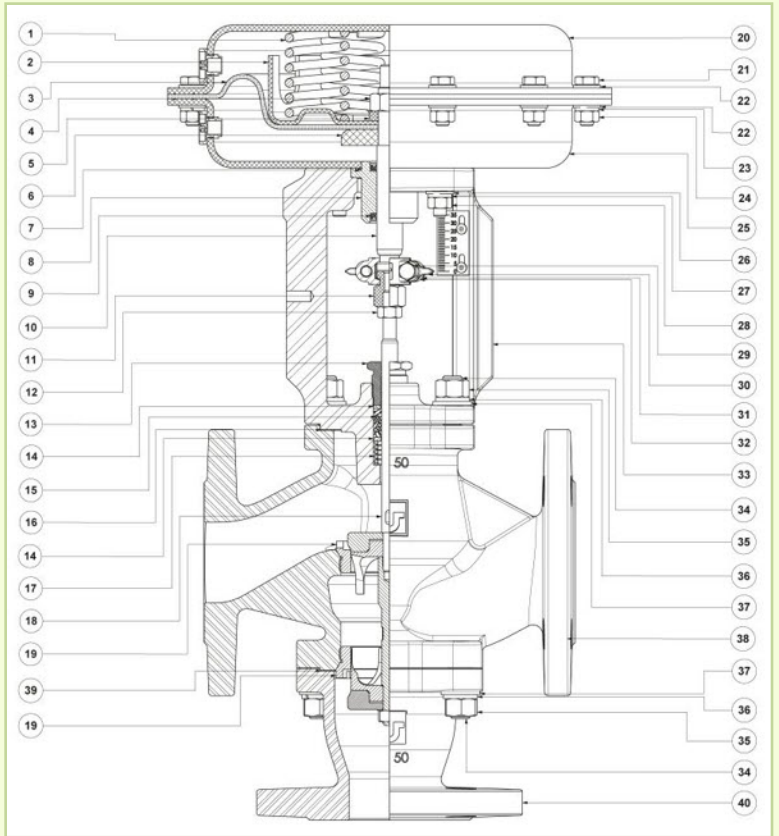
N°	DESCRIPTION
1	Actuator Spring
2	Spring-bearer Disc
3	Membrane
4	Hexagonal Nut
5	Spacer Washer
6	Counter-Disc diaphragm
7	OR
8	Guide Bushing
9	BA Gasket
10	Actuator Stem
11	Adjusting Nut
12	Hexagonal Nut
13	Packing Screw
14	Spacer Washer
15	Packing
16	Body Gasket
17	Packing Spring
18	Shutter
19	Seat
20	Upper Head
21	Hexagonal-Head Screw
22	Plan Washer
23	Elastic Washer
24	Hexagonal Nut
25	Lower Head
26	Plan Washer
27	Elastic Washer
28	Hexagonal Nut
29	Hexagonal-Head Screw
30	Disc with indicator
31	Elastic Washer
32	Hexagonal Nut
33	Bonnet/Intermediate Body
34	Prisoner
35	Hexagonal Nut
36	Elastic Washer
37	Plan Washer
38	Body



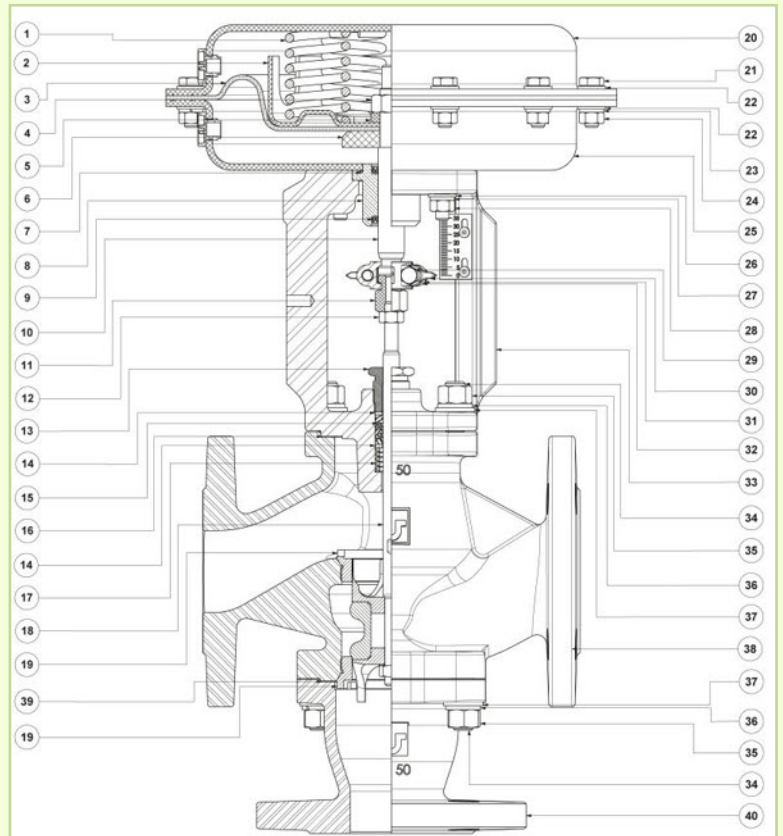
Parts - SBS 3 Ways - Deviator/Mixing

N°	DESCRIPTION
1	Actuator Spring
2	Spring-bearer Disc
3	Membrane
4	Hexagonal Nut
5	Spacer Washer
6	Counter-Disc diaphragm
7	OR
8	Guide Bushing
9	BA Gasket
10	Actuator Stem
11	Adjusting Nut
12	Hexagonal Nut
13	Packing Screw
14	Spacer Washer
15	Packing
16	Body Gasket
17	Packing Spring
18	Shutter
19	Seat
20	Upper Head
21	Hexagonal-Head Screw
22	Plan Washer
23	Elastic Washer
24	Hexagonal Nut
25	Lower Head
26	Plan Washer
27	Elastic Washer
28	Hexagonal Nut
29	Hexagonal-Head Screw
30	Disc with indicator
31	Elastic Washer
32	Hexagonal Nut
33	Bonnet/Intermediate Body
34	Prisoner
35	Hexagonal Nut
36	Elastic Washer
37	Plan Washer
38	Body
39	Bottom Gasket
40	Bottom

Deviator



Mixing



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