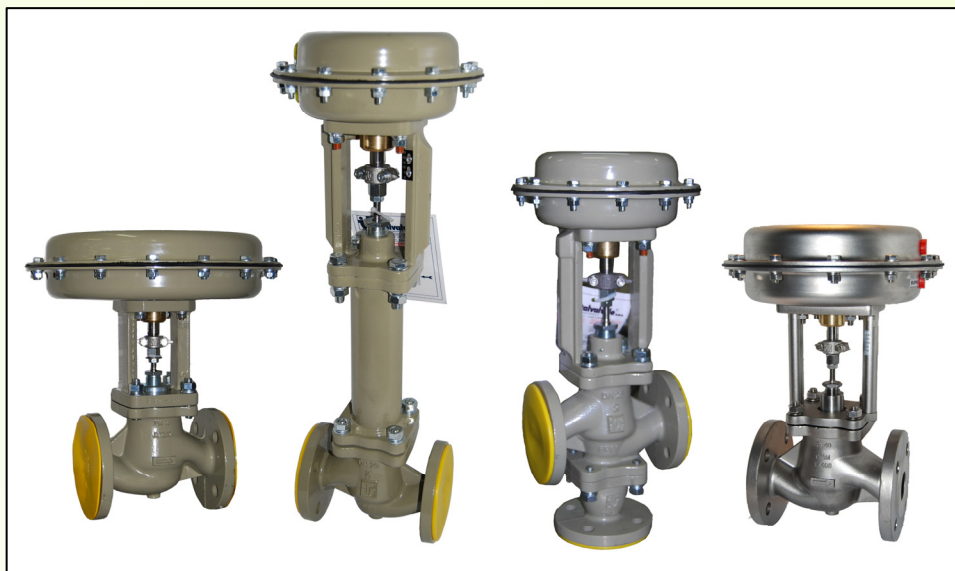


TO DOWNLOAD TECHNICAL SHEETS, CONSULT OUR WEBSITE IN CATALOGUE SECTION

PNEUMATIC VALVES SERIES SBS

FAMILY 04 CONTROL VALVES

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 stellited seal. They are available with flanged connections in accordance with standards EN 1092-2 PN16, EN 1092-1 PN40 and ANSI B16.5 class 150.



TECHNICAL DATA

Model	Globe Valve – Unidirectional - 2 / 3 ways			
Material	EN 1561 GJL-250	EN 1563 GJS-500-7	ASTM A216 WCB	CF8M
DN	15 # 80	15 # 150	15 # 80	
Max Allowed P	16 BAR		40 BAR (30 BAR with bellows)	
End	Flanged PN 16 - EN 1092-2		Flanged PN 40 - EN 1092-1	
Seal	PEEK – Metallic – Stellite			
Seal Class (EN12266-1)	Grade A with PEEK seal Grade B with metallic and stellite seal (stellite plug is advisable with Δp>10 bar)			
Plug Characteristic	Linear - Equipercentual			
Stroke	15 mm (20 mm on demand) DN 15#80 – 30 mm DN 100#150			
Max T	+200°C with PEEK seal			
		+250°C with PEEK and bellows		
		+300°C with metallic seal and/or stellite with bellows		
Min T	-10°C (liquid phase)			
			-28 °C (with bellows)	-40 °C (with bellows)
Air Connection	1/8” GAS (actuator Ø 200) 1/4" GAS (actuator Ø 275, Ø 360, Ø 430).			
Feeding Fluid	Instrument Air			
Feeding Pressure	3÷15 psi, 6÷18 psi, 6÷30 psi, 9÷32 psi, 3÷9 psi, 9÷15 psi.			
Versions / Optionals	Normally Closed – Normally Open – With bellows for high/low temperatures – Manual Override – Pneumatic Positioner – Electropneumatic Positioner – I/P Converter - FR Group			

MATERIALS

Body		EN 1561 GJL-250	EN 1563 GJS-500-7	ASTM A216 WCB	CF8M	
Bonnet		EN 1561 GJL-250	ASTM A216 WCB + Fe 430 B DN 15#80 EN 1563 GJS-500-7 DN 100#150		CF8M + S30400	
Plug	T.PK.	CF8 + S30400 + PEEK			CF8M + S31600 + PEEK	
	T.M.	CF8 + S30400			CF8M + S31600	
Packing		PTFE + PTFE caricato GRAFITE				
Body Seals		NOVATEC				
Actuator		Fe P04			Fe P04	S30400
Nuts and Bolts		Zinc-Plated Steel			S30400	

Max Differential Pressure Δp for SBS Valves - DN 15÷80 2 Ways

							Δp						Numbers for Valves Choice	
Control Signal (psi) ⁽¹⁾							3/15	6/18	6/30	9/32	3/9	9/15		
Control Signal (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)							1,2	1,4	2,2	2,4	0,8	1,2		
DN	Ø Seat ⁽²⁾ [mm]	Stroke ⁽³⁾ [mm]	Kvs		CV		Ø Actuator [mm]	Alphabet Letters for Valves Choice						
			Linear	Equiperc.	Linear	Equiperc.		A	B	C	D	R	S	
15	15	15	4,3	4,5	5	5,2	200	13	26	26	39	13	39	5
							275	32	40	40	40	32	40	6
	20	15	5	5	5,8	5,8	200	7	14	14	21	7	21	101
							275	18	36	36	40	18	40	102
20	20	15	8	7,5	9,3	8,7	200	7	14	14	21	7	21	13
							275	18	36	36	40	18	40	14
							360	40	40	40	40	40	40	15
25	26	15	11,8	11,3	13,7	13,1	200	4	8	8	12	4	12	25
							275	10	20	20	30	10	30	26
							360	20	40	40	40	20	40	27
							430	23,5	40	40	40	23,5	40	28
32	31	15	20	15,2	23,3	17,7	200	4	8	8	12	4	12	37
							275	10	20	20	30	10	30	38
							360	20	40	40	40	20	40	39
							430	23	40	40	40	23	40	40
40	38	15	26	22,3	30,2	25,9	200	2,8	5,6	5,6	8,4	2,8	8,4	49
							275	7	14	14	20	7	20	50
							360	14	28	28	40	14	40	51
							430	16	32	32	40	16	40	52
50	48	15	38,4	34,6	44,7	40,2	200	1,6	3,2	3,2	4,8	1,6	4,8	61
							275	4	8	8	12	4	12	62
							360	8	16	16	24	8	24	63
							430	9	18	18	27	9	27	64
65	63	15	74,1	62,7	86,3	73,0	200	1	2	2	3	1	3	75
							275	2,5	5	5	7,5	2,5	7,5	76
							360	5	10	10	15	5	15	77
							430	5,8	11	11	16	5,8	16	78
80	78	15	89,8	76,0	104,5	88,5	200	0,6	1,2	1,2	1,5	0,6	1,5	90
							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
100	92	30		115		134	430 S ⁽⁴⁾	2,5	5	5	7,5	2,5	7,5	5
							430 D ⁽⁵⁾	5	10	10	15	5	15	6
125	115	30		190		222	430 S	1,5	3	3	4,5	1,5	4,5	11
							430 D	3	6	6	9	3	9	12
150	125	30		250		292	430 S	1	2	2	3	1	3	17
							430 D	2	4	4	6	2	6	18

⁽¹⁾ For N.O. (Normally Open) valves, maximum pilot signal must be the sum of two limit signals; for example, for a N.O. valve with 3-15 pilot signal you must bring at 18 psi (3+15) maximum pilot signal to obtain same value of Δp of corresponding N.C. valve.

For 3-way valves, Δp makes reference to closed way with feeding pressure. To obtain the same Δp on the other way, follow same procedure indicated for N.O. valves.

⁽²⁾ For reduced bore valves, contact our Technical Department.

⁽³⁾ Valves with 20-mm stroke are available on request.

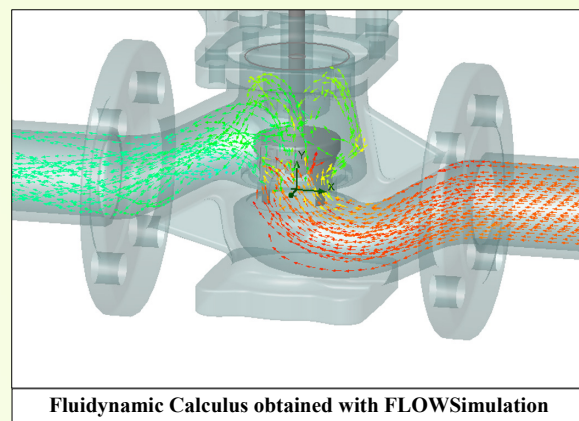
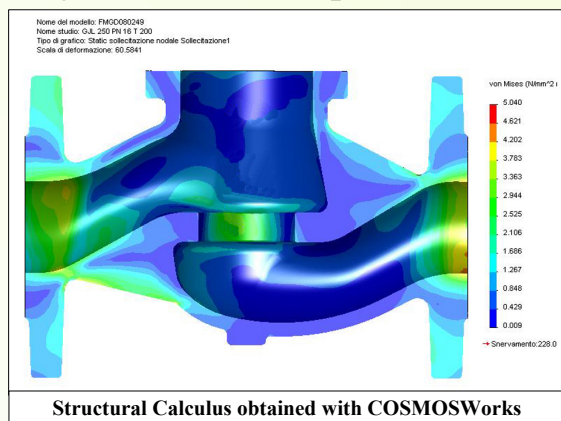
⁽⁴⁾ "S" means single actuator

⁽⁵⁾ "D" means double actuator

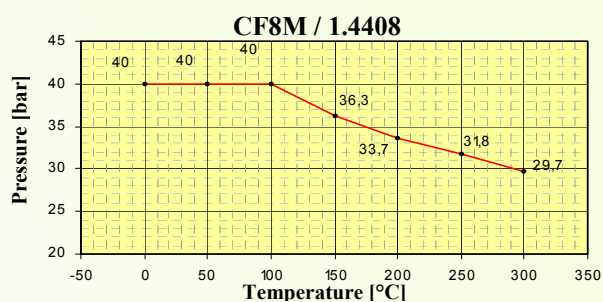
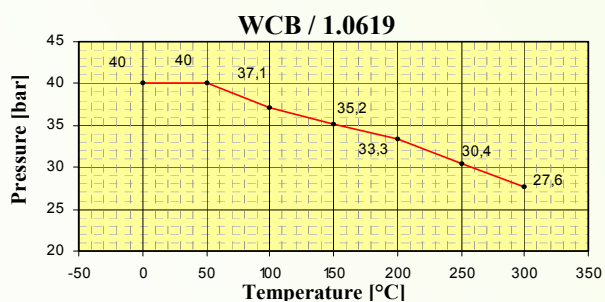
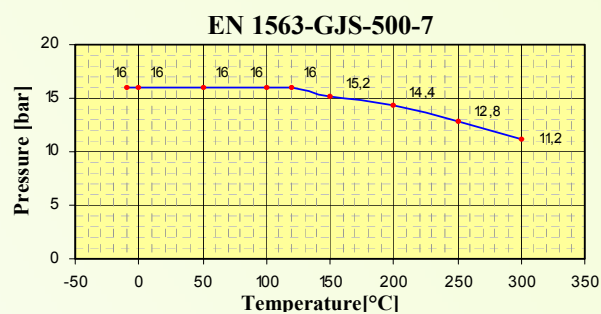
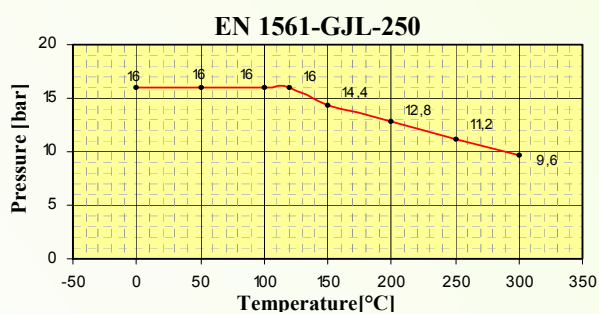
Max Δp is obtained without feeding pressure (*only for N.C. valves*).

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

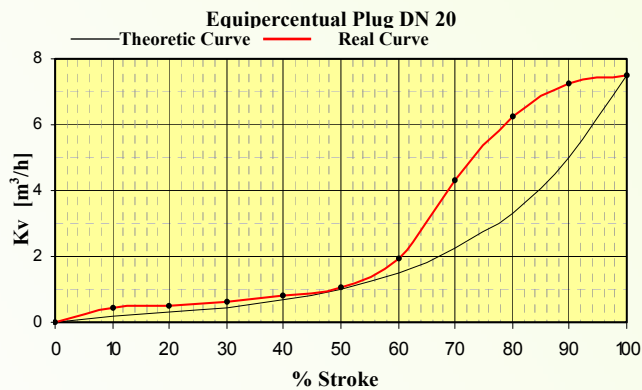
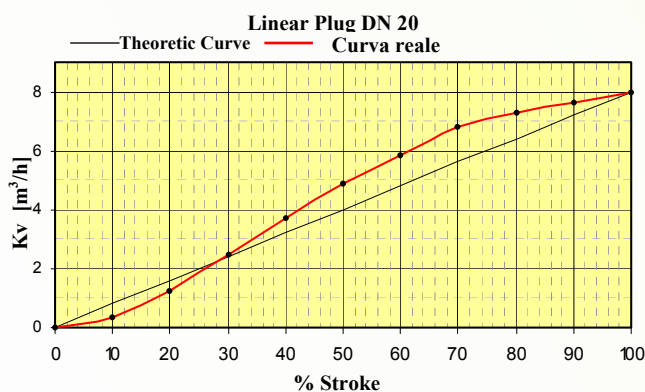
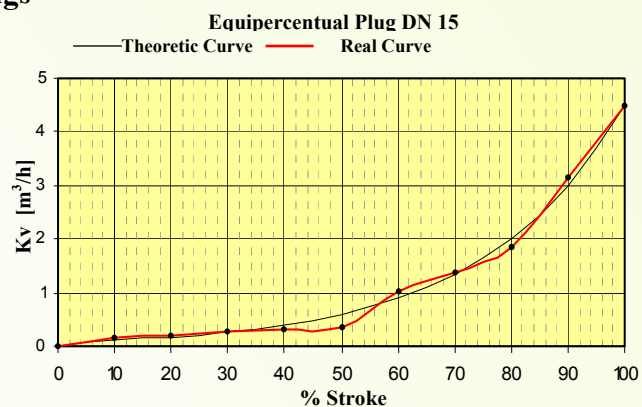
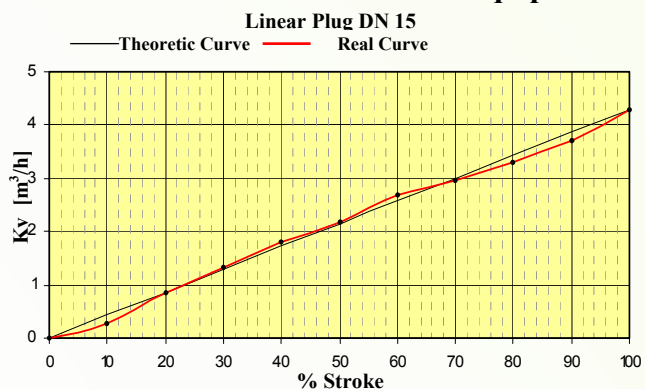
Project Calcula Samples

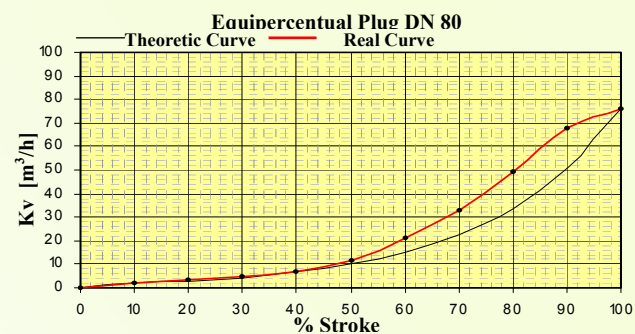
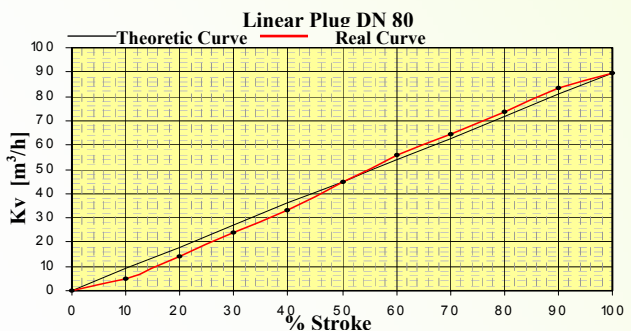
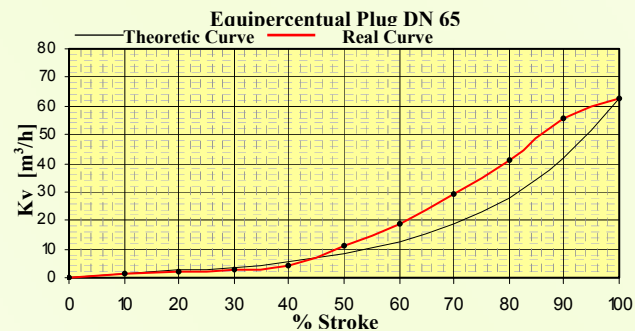
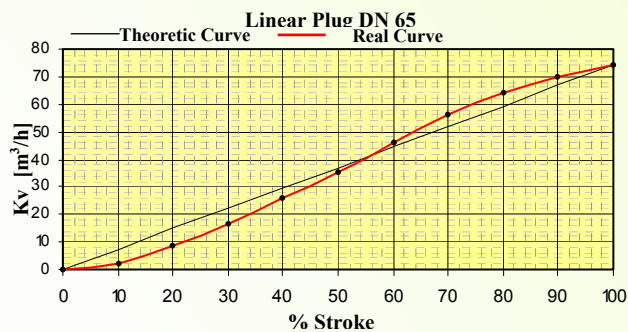
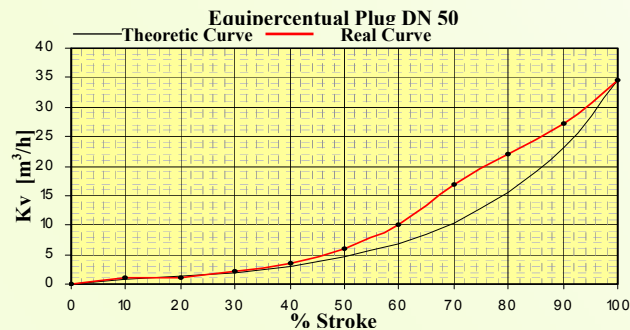
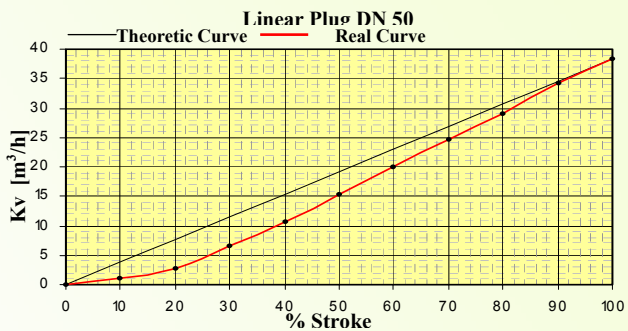
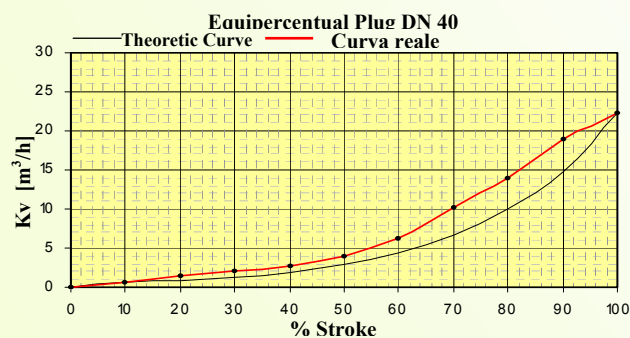
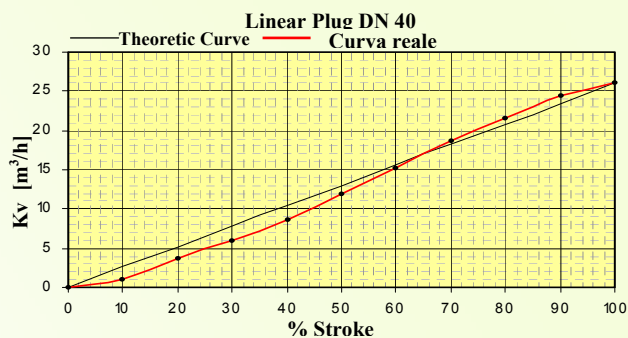
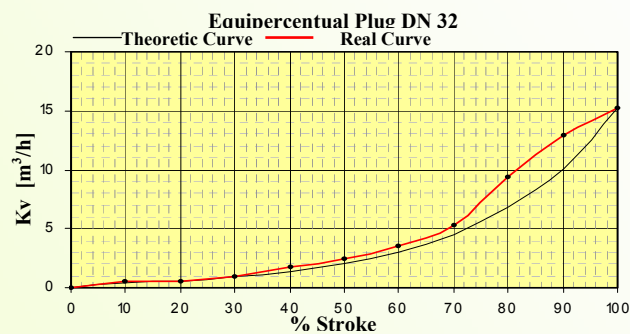
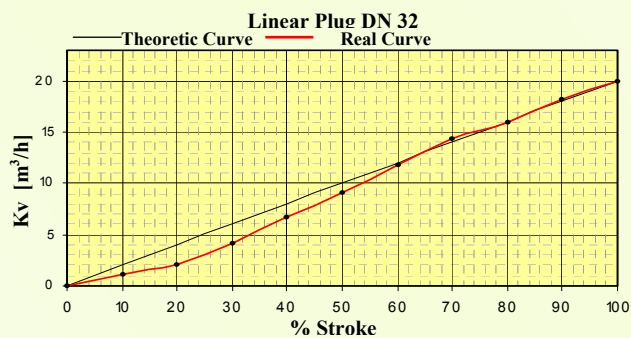
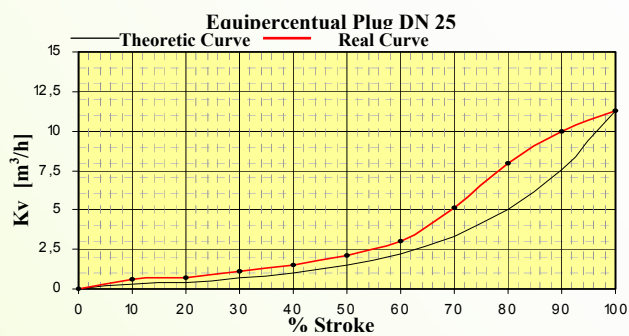
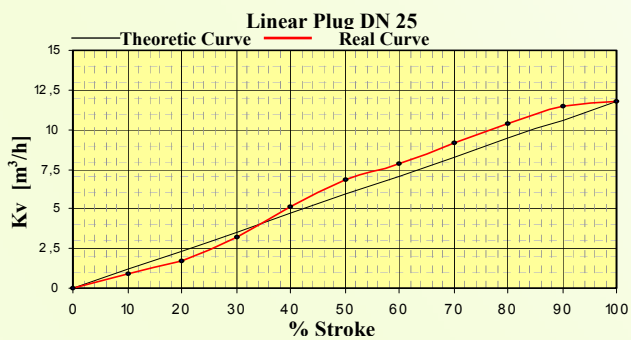


Pressure/Temperature Relationship for Cast-Iron Bodies

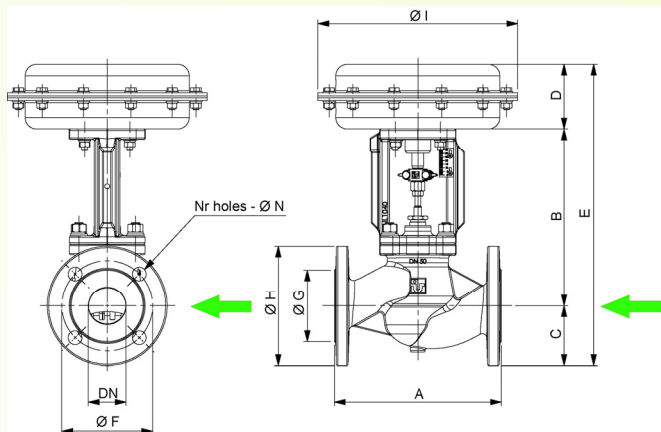


Curves and Flows of Linear and Equipercutal Plugs

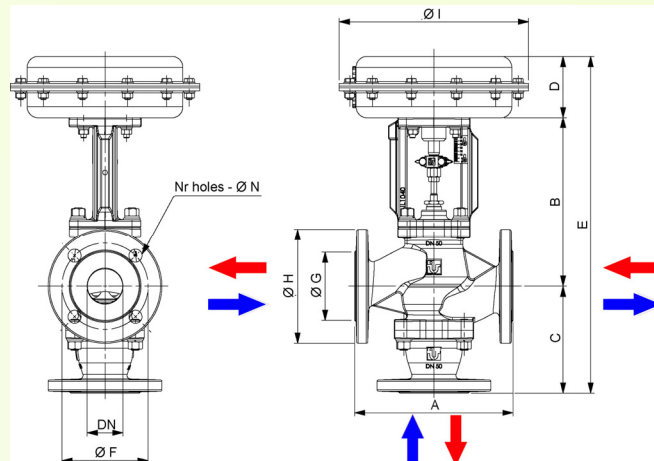




Dimensions



→ Flow direction for 2-way valve



→ Flow direction for 3-way diverting valve

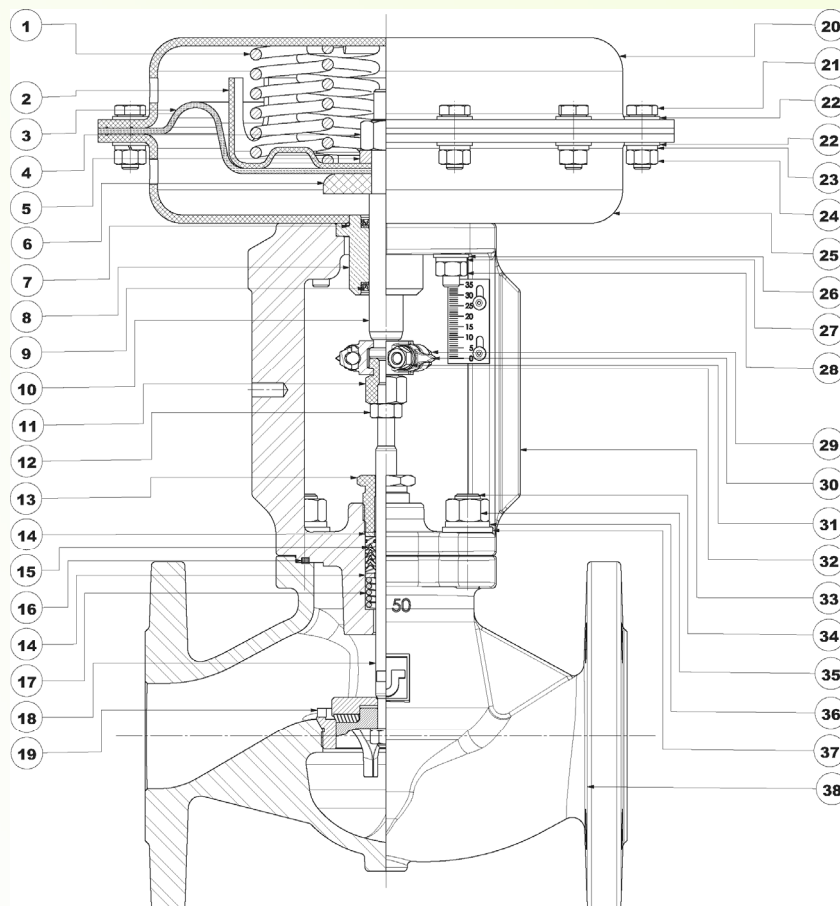
→ Flow direction for 3-way mixing valve

DN	A	B	C (2 vie)	C (3 vie)	D			E (2 ways)			E (3 ways)			Ø F	Ø G	Ø H	Ø I	Ø N		N° Holes	
					Ø I Actuator			Ø I Actuator			Ø I Actuator										
					200	275 360	430	200	275 360	430	200	275 360	430					PN 16	PN 40	PN 16	PN 40
15	130	227	47,5	112	77	88,5	123	351,5	363	397,5	416	427,5	462	65	45	95	A seconda del Ap di tenuta (200-275-360-430)	14		4	
20	150	227	52,5	112	77	88,5	123	356,5	368	402,5	416	427,5	462	75	58	105		14		4	
25	160	227	57,5	125	77	88,5	123	361,5	373	407,5	429	440,5	475	85	65	115		14		4	
32	180	248	70	145	77	88,5	123	395	406,5	441	470	481,5	516	100	76	140		19	18	4	
40	200	245	75	145	77	88,5	123	397	408,5	443	467	478,5	513	110	84	150		19	18	4	
50	230	245	82,5	161	77	88,5	123	404,5	416	450,5	483	494,5	529	125	99	165		19	18	4	
65	290	299	120	237	77	88,5	123	496	507,5	542	613	624,5	659	145	118	185		19	18	4	8
80	310	298	121	239	77	88,5	123	496	507,5	542	615	626,5	661	160	132	200		19	18	8	
100	350	384	192,5	265			123			699,5			772	180	158	220		18		8	
125	400	407	215,5	318			123			745,5			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

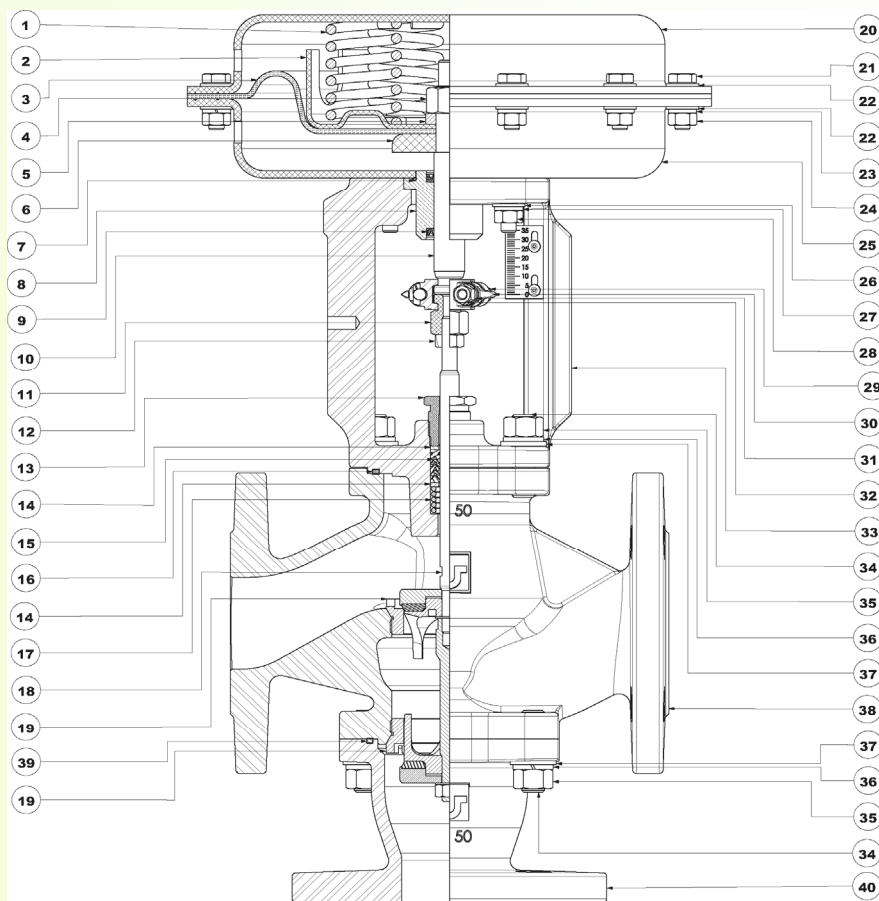
N°	DESCRIPTION
1	Actuator Spring
2	Spring-bearer Disc
3	Membrane
4	Hexagonal Nut
5	Spacer Washer
6	Counter-Disc diaphragm
7	OR
8	Guide Bushing
9	BA Gasket
10	Actuator Stem
11	Adjusting Nut
12	Hexagonal Nut
13	Packing Screw
14	Spacer Washer
15	Packing
16	Body Gasket
17	Packing Spring
18	Plug
19	Seat
20	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 - Diverting/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	Plug
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

Diverting



Mixing

