



# SBS SERIES ELECTRICAL VALVES

## FAMILY 04 CONTROL VALVES

SBS10 Electrical Control Valves.  
2 or 3 way modulating valves, with  
Spring return and manual override

They are equipped with a shutter  
with linear or equipercentage  
typical curve and a soft or metal  
seal.

They are flanged in accordance  
with the standards EN 1092-2 –  
PN 16, EN 1092-1– PN 40 and  
ANSI B16.5 class 150.



### TECHNICAL DATA

<b>Valve type</b>	2- or 3-way globe valve, unidirectional (N.C. angle way in the 3-way STD version).		
<b>Material</b>	EN 1561 GJL-250	EN 1563 GJS-500-7	ASTM A216 WCB
<b>DN</b>	15 # 80	15 # 150	15 # 80
<b>Max. allowed P</b>	16 BAR		40 BAR (30 BAR with bellows)
<b>Connections</b>	Flanged PN 16 according to EN 1092-2		Flanged PN 40 according to EN 1092-1
<b>Seal</b>	PEEK – metal – stellite		
<b>Seal class</b>	Level A for PEEK seal Level B for metal and stellite seal (the stellite seal is recommended for $\Delta p > 10$ bar) In accordance with the standard UNI EN 12266-1		
<b>Shutter features</b>	equipercentage, linear		
<b>Shutter stroke</b>	15 mm (20 mm upon request) DN 15#80 – 30 mm DN 100#150		
<b>Max temperature</b>	+200°C PEEK seal (standard version)		
	+250°C PEEK seal with bellows		
	+300°C metal and/or stellite seal with safety bellows		
<b>Min. temperature</b>	-10°C (in liquid phase standard version)		
			-28 °C (with bellows)
			-40 °C (with bellows)
<b>Electrical connections</b>	Electrical connections with screw (max 2.5 mm <sup>2</sup> )		
<b>Power supply</b>	24 V AC/DC (230 V AC upon request)		
<b>Control signal</b>	0#10 V / 4#20 mA / 2 or 3 POINTS		
<b>Degree of protection</b>	IP66		
<b>Activation time</b>	15 mm stroke: 28 s - 56 s - 84 s / 20 mm stroke: 40 s - 80 s - 120 s		
<b>Versions</b>	normally closed, normally open, bellows for high/low temperatures, emergency lever		

### MATERIALS

<b>Body material</b>	EN 1561 GJL-250	EN 1563 GJS-500-7	ASTM A216 WCB	CF8M
<b>Middle section</b>	ASTM A216 WCB + Fe 430 B15#80 EN 1563 GJS-500-7 + Fe 430 B DN 100#150		CF8M + S30400	
<b>Shutter</b>	<b>T.PK.</b>	CF8 + S30400 + PEEK		CF8M + S31600 + PEEK
	<b>T.M.</b>	CF8 + S30400		CF8M + S31600
<b>Packing gland</b>	PTFE+GRAPHITE-LOADED PTFE			
<b>Body gaskets</b>	NOVATEC or GRAPHITE+KEVLAR			
<b>Electric motor</b>	PC and steel alloys			
<b>Connecting screws</b>	Galvanized steel		S30400	

## $\Delta p$ valves SBS DN 15÷150 2-way electrical control

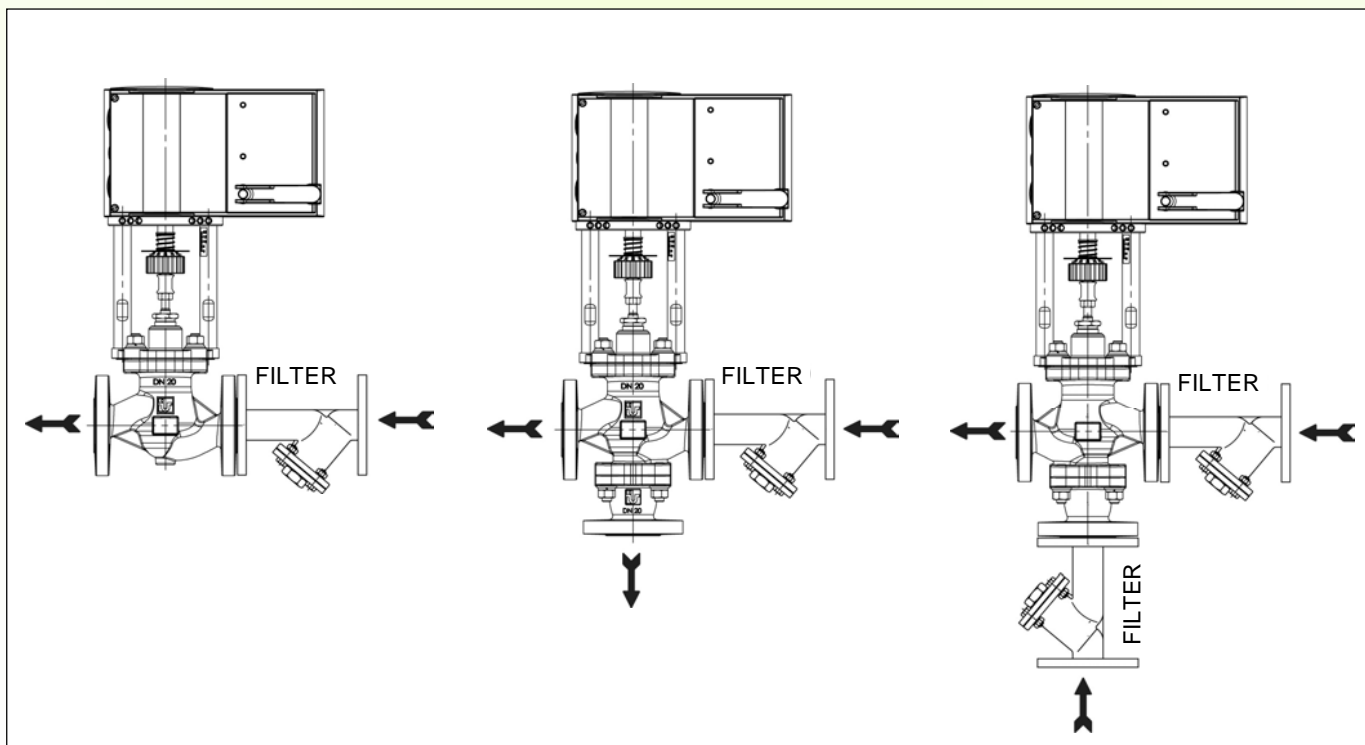
DN	$\Phi$ ff. <sup>(1)</sup> [mm]	Stroke <sup>(2)</sup> [mm]	Kvs		CV		Motor type	$\Delta p$ Valve
			Linear shutter	Equiperc. shutter	Linear shutter	Equiperc. shutter		
15	15	15	4.3	4.5	5	5.2	SUT 2000	40
	20	15	5	5	5.8	5.8	SUT 2000	40
20	20	15	8	7.5	9.3	8.7	SUT 2000	40
25	26	15	11.8	11.3	13.7	13.1	SUT 2000	28
32	31	15	20	15.2	23.3	17.7	SUT 2000	20
40	38	15	26	22.3	30.2	25.9	SUT 2000	14
50	48	15	38.4	34.6	44.7	40.2	SUT 2000	8
65	63	15	74.1	62.7	86.3	73.0	SUT 2000	5
80	78	15	89.8	76.0	104.5	88.5	SUT 2000	3
100	92	30	/	115	/	134	SUT 2000	2
125	115	30	/	190	/	222	SUT 2000	1,3
150	125	30	/	250	/	292	SUT 2000	0,8

(1) For valves with reduced seat please contact our technical office

(2) Upon request we can supply 20 mm stroke valves

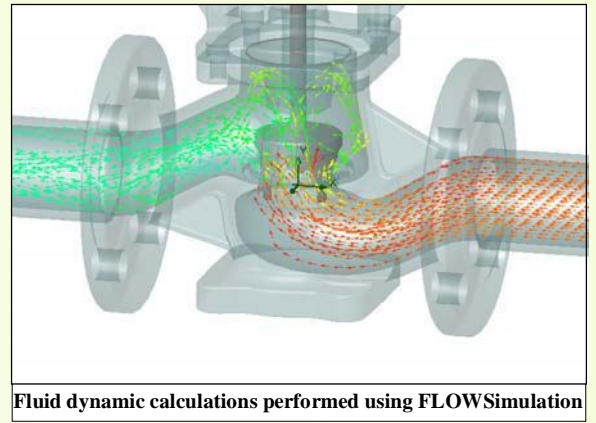
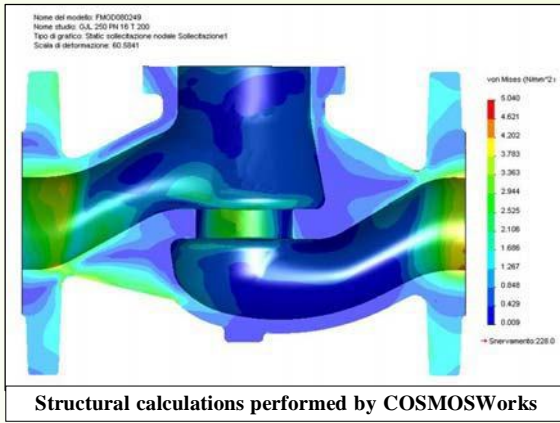
The K<sub>v</sub> has been calculated using the FLOWSimulation fluid dynamics program in accordance with the UNI EN 1267:2001 standard and refers to a 2-way valve

### Installation diagrams of the electrically controlled SBS valves

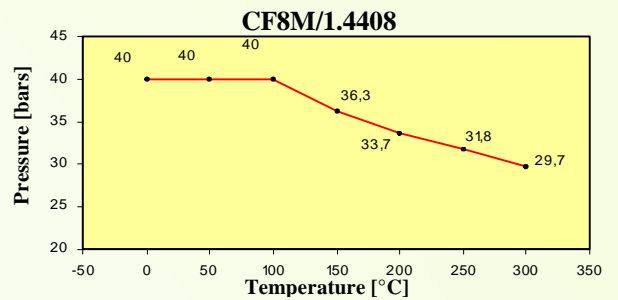
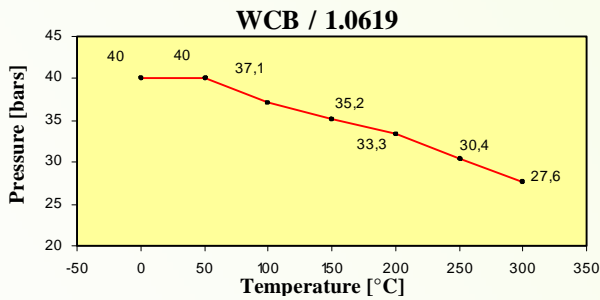
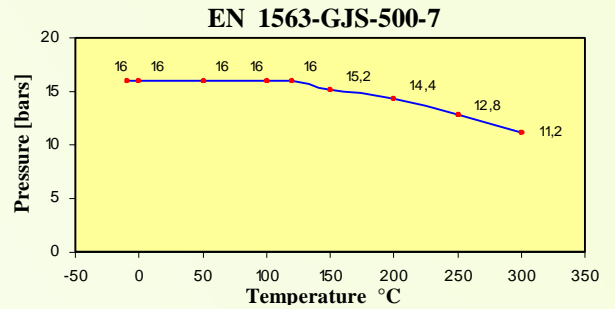
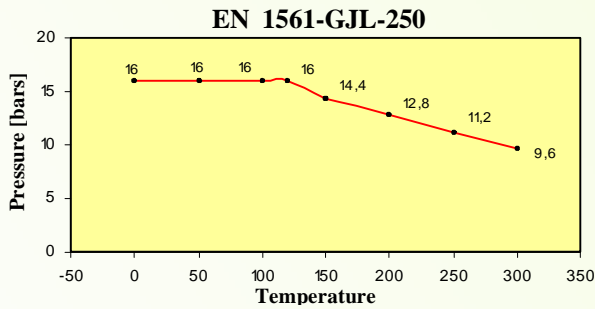


It is important that you install a filter on the valve inlets to prevent any slugs or impurities from damaging the valve seat or shutter, prejudicing proper operation.

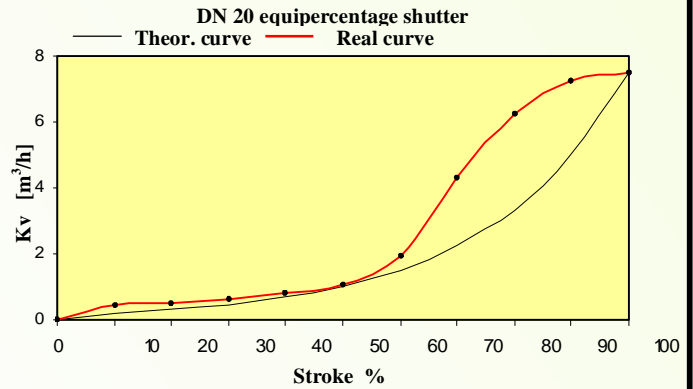
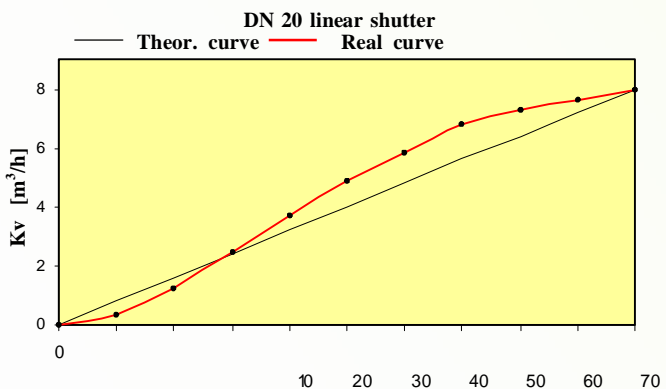
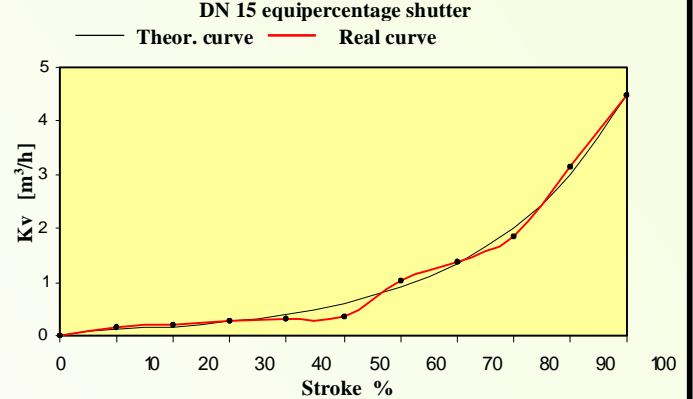
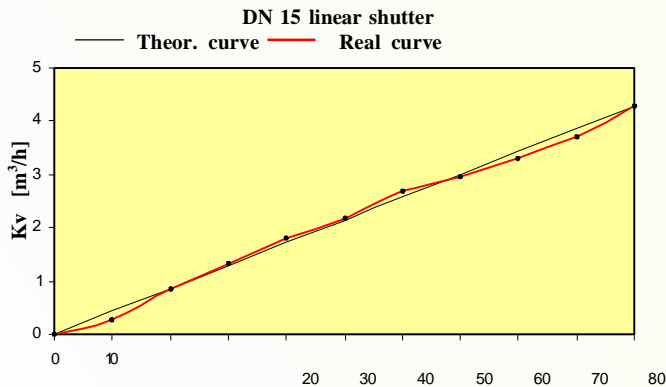
# Examples of design calculations

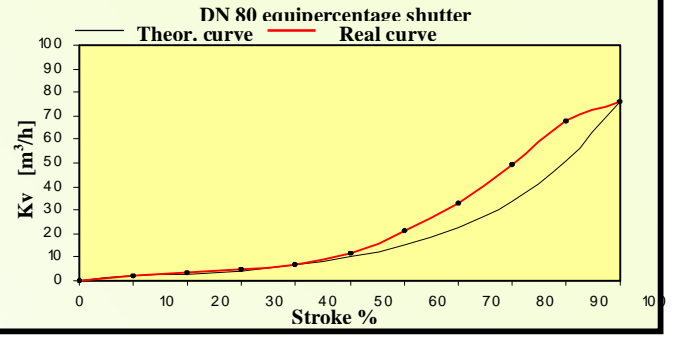
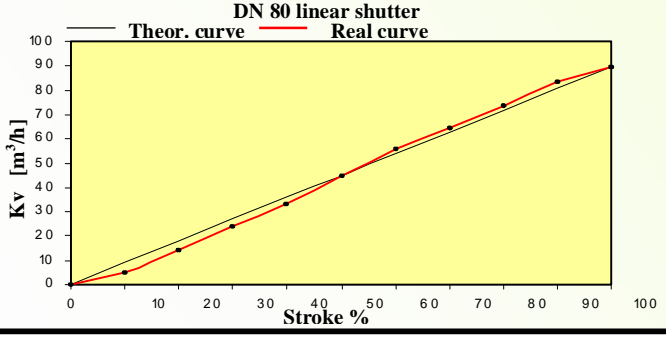
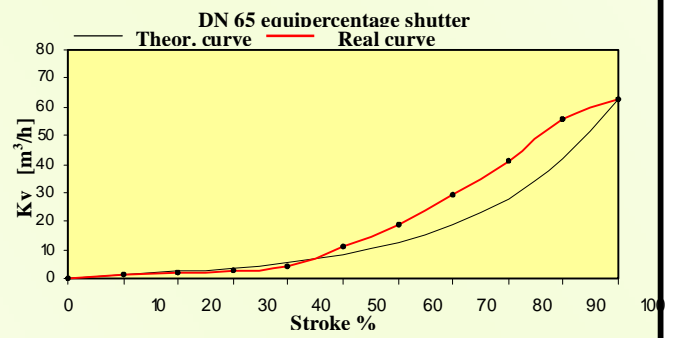
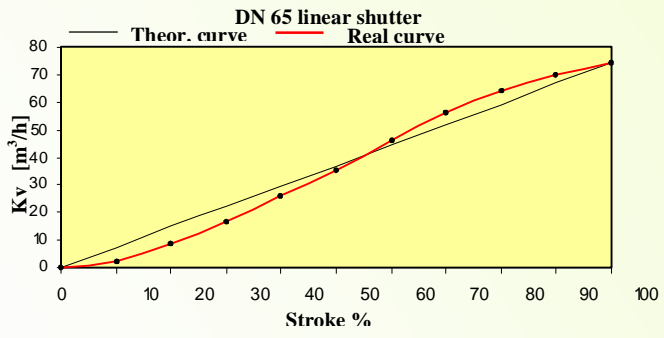
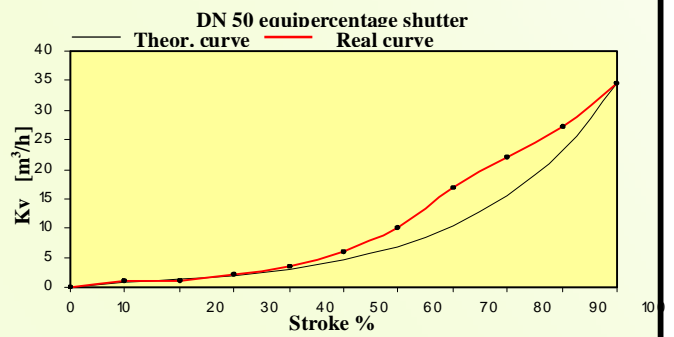
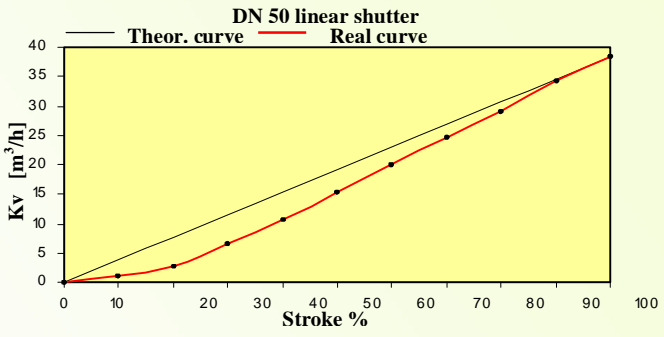
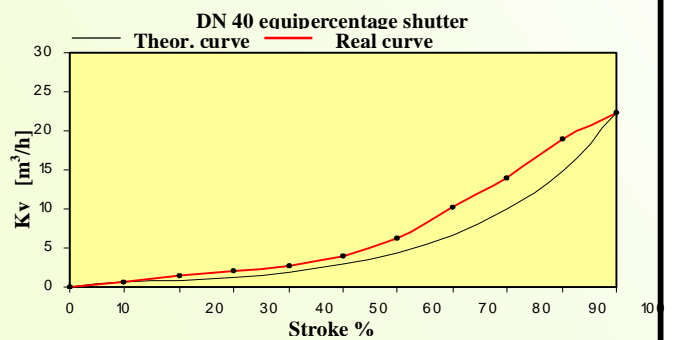
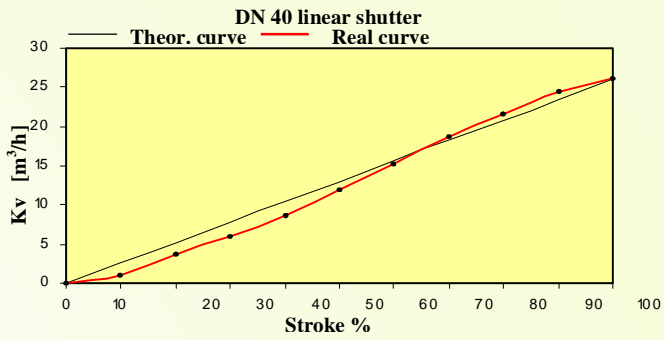
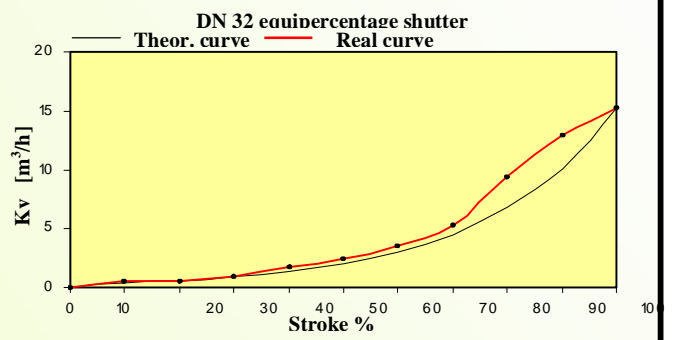
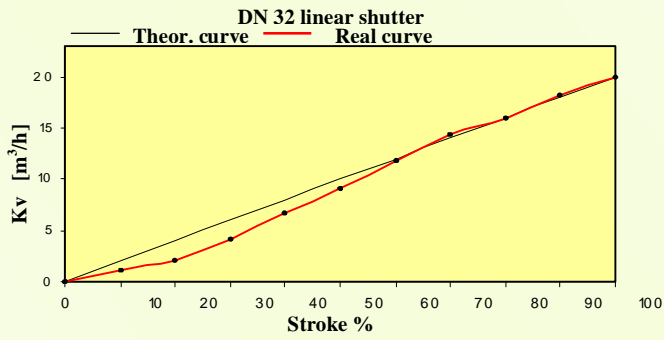
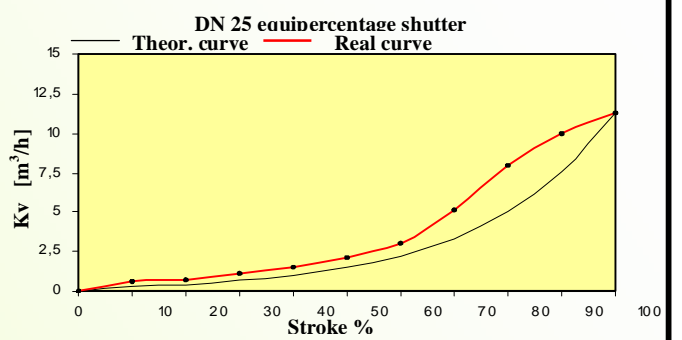
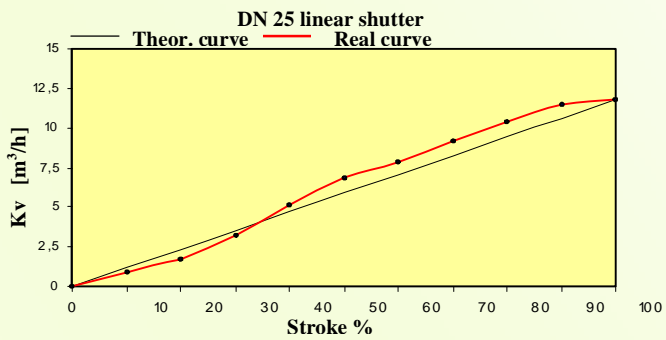


## Pressure/temperature ratios for SBS cast iron bodies

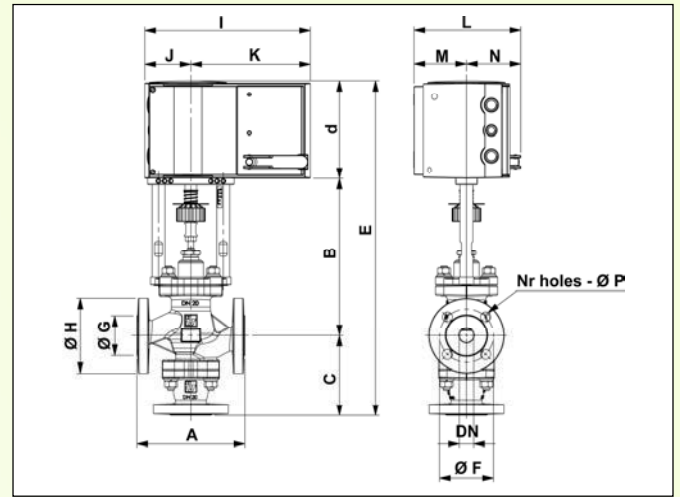
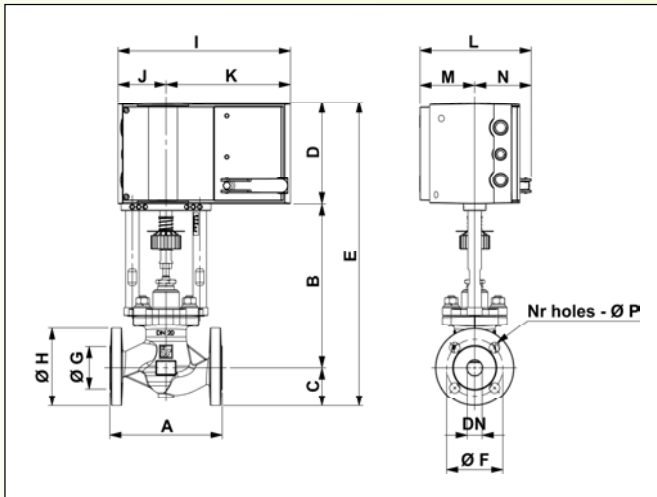


## Curves and flow rates of the Linear and Equipercantage shutters of the SBS for 2-way valves





## Dimensions



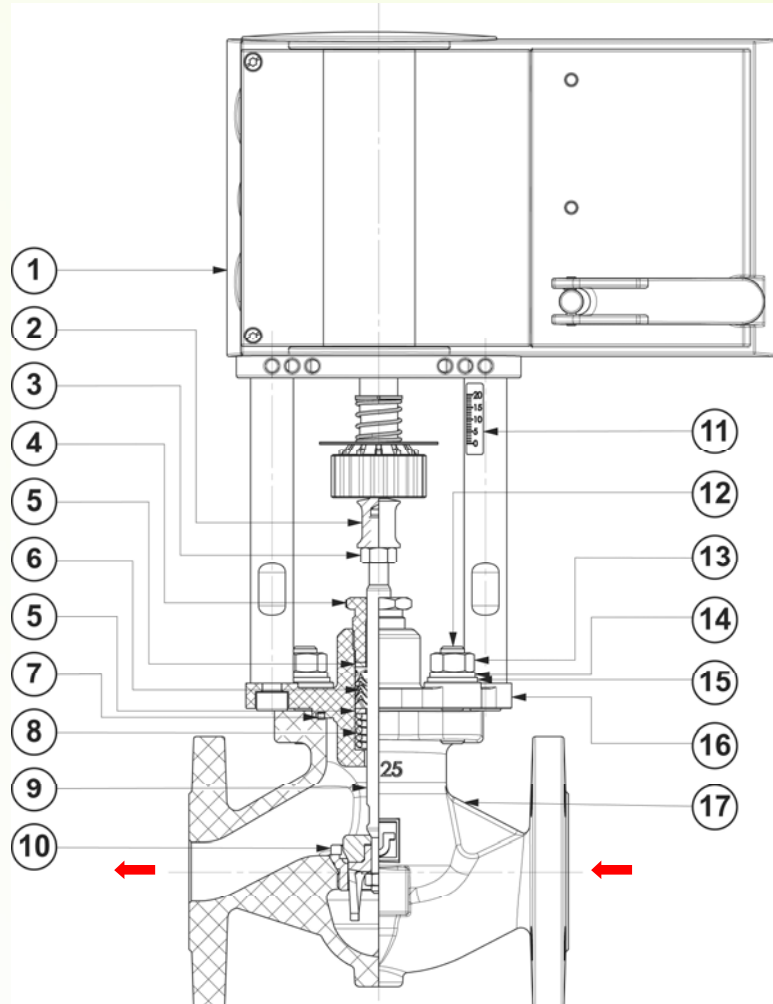
DN	A	B	C (2-way)	C (3-way)	D	E (2-way)	E (3-way)	Ø F	Ø G	Ø H	I	J	K	L	M	N	Ø P		No. of holes	
																	PN 16	PN 40	PN 16	PN 40
15	130	219	47.5	112	137	403.5	468	65	45	95	230	64	166	148.5	73	75.5	14		4	
20	150	219	52.5	112	137	408.5	468	75	58	105	230	64	166	148.5	73	75.5	14		4	
25	160	219	57.5	125	137	413.5	481	85	65	115	230	64	166	148.5	73	75.5	14		4	
32	180	240	70	145	137	447	522	100	76	140	230	64	166	148.5	73	75.5	19	18	4	
40	200	237	75	145	137	449	519	110	84	150	230	64	166	148.5	73	75.5	19	18	4	
50	230	237	82.5	161	137	456.5	535	125	99	165	230	64	166	148.5	73	75.5	19	18	4	
65	290	289	120	237	137	546	663	145	118	185	230	64	166	148.5	73	75.5	19	18	4	8
80	310	288	121	239	137	546	664	160	132	200	230	64	166	148.5	73	75.5	19	18		8
100	350	360	192.5	265	137	689.5	762	180	158	220	230	64	166	148.5	73	75.5	18		8	
125	400	383	215.5	318	137	735.5	838	210	188	250	230	64	166	148.5	73	75.5	18		8	
150	480	408	245	382	137	790	927	240	212	285	230	64	166	148.5	73	75.5	22		8	

Dimensions are in mm

## 2-way SBS electrical valve components

No.	DESCRIPTION
1	Axial electric motor
2	Valve/Motor joint
3	Hexagon nut
4	Packing gland screw
5	Distance ring washer
6	Packing gland
7	Body gasket
8	Packing gland spring
9	Shutter
10	Seat
11	Stroke graduated label
12	Stud-bolt
13	Hexagon nut
14	Spring washer
15	Flat washer
16	Intermediate body with closing flange
17	Valve body

→ Flow direction

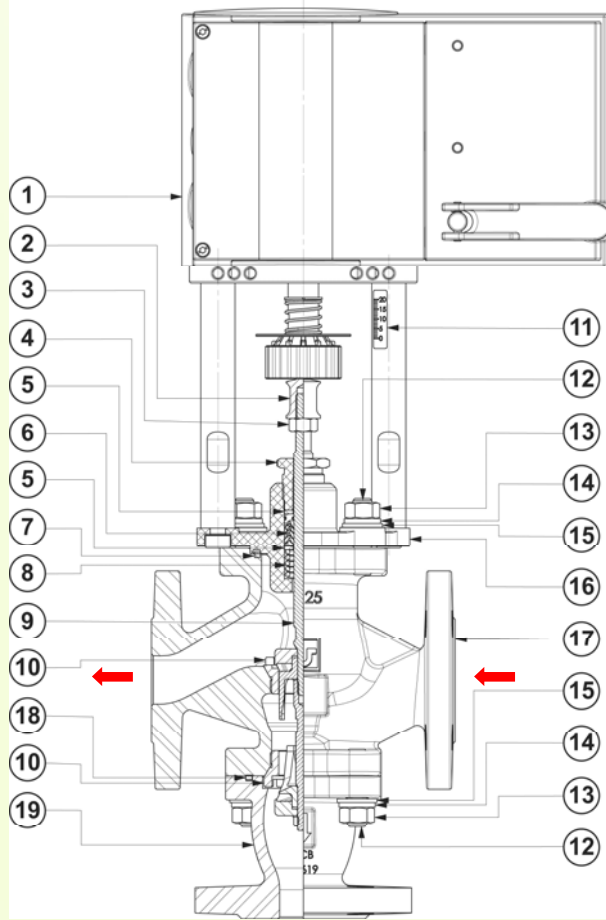


### 3-way deviation/mixer electrical valve components

No.	DESCRIPTION
1	Axial electric motor
2	Valve/Motor joint
3	Hexagon nut
4	Packing gland screw
5	Distance ring washer
6	Packing gland
7	Body gasket
8	Packing gland spring
9	Shutter
10	Seat
11	Stroke graduated label
12	Stud-bolt
13	Hexagon nut
14	Spring washer
15	Flat washer
16	Intermediate body with closing flange
17	Valve body
18	Bottom base gasket
19	Bottom base

→ Flow direction

Deviation



Mixer

