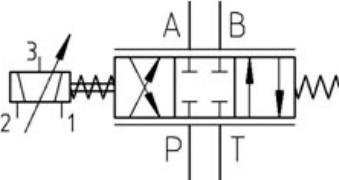
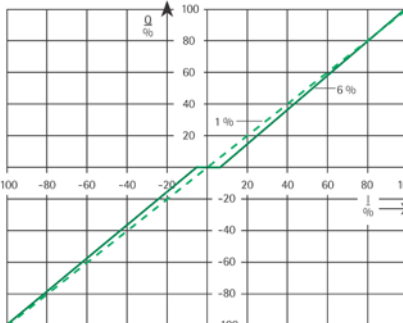
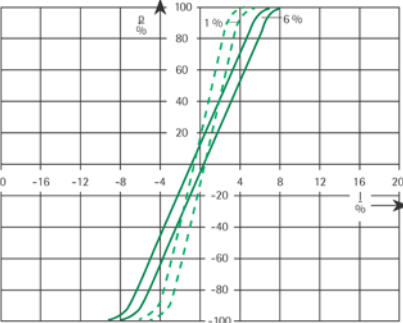
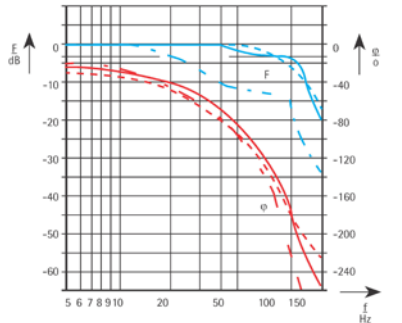
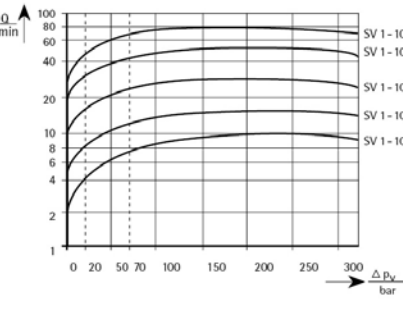
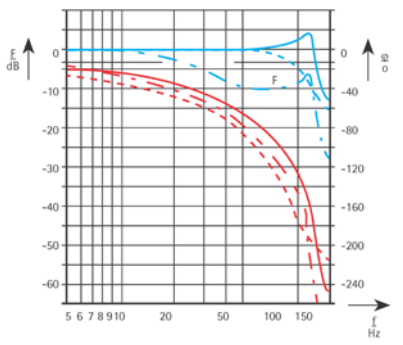
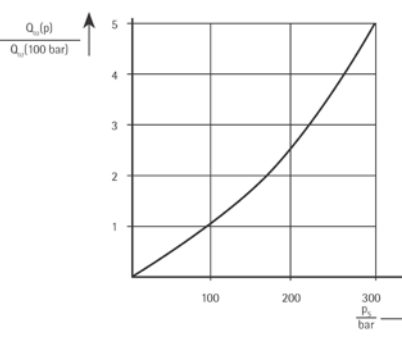
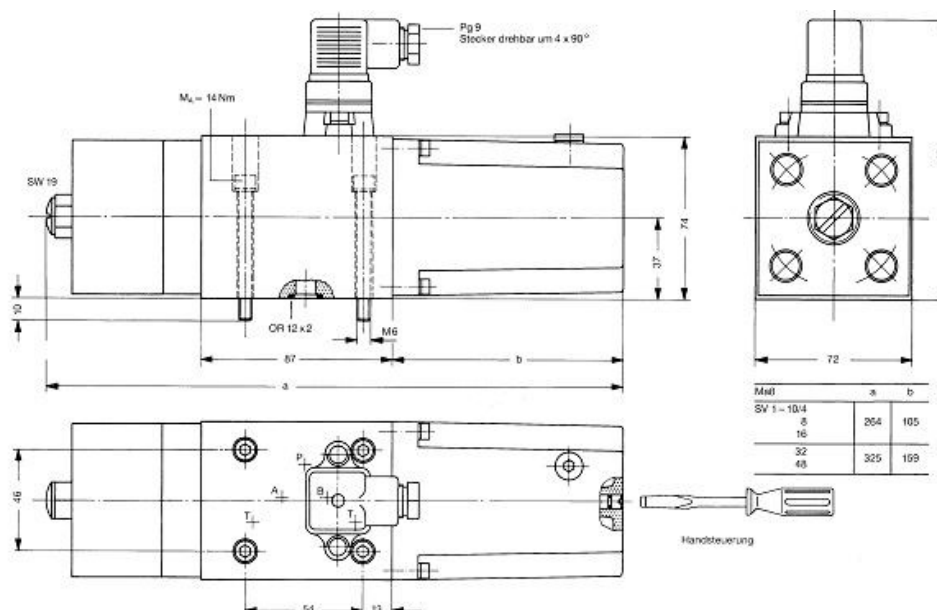


SV 1-10 servo valve

View	Application/Functional description	
	Function:	4/3 way proportional valve, single-stage
	Drive	Electromagnetic rotary drive with return springs (patented)
	Hydraulic connection:	ISO 4401 NG10 /Cetop 5
	Size/weight:	HxWxL 127x72x264(325) mm 6.5 kg or 7.5 kg (depending on version)
Hydraulic symbol: 	Intended purpose: The servo valve SV 1-10 controls an hydraulic output value (volume flow) proportional to an electrical input value, at a constant pressure drop over the internal control edges. MTTFd - value according to EN ISO 13849 in years: MTTFd = 150	
		
Flow curve (overlap 1 % resp. 6 %)	Pressure curve (overlap 1 % resp. 6 %)	Frequency response $p_s = 20 \text{ bar}$ $I / I_N = 10 \%$ (dashed line); 30% (continuous line); 100% (dotted/dashed line)
		
Relationship of volume flow to valve pressure drop at rated motion	Frequency response $p_s = 200 \text{ bar}$ $I / I_N = 10 \%$ (dashed line); 30% (continuous line); 100% (dotted/dashed line)	Relationship of leakage volume flow to operating pressure

Dimensions



Type code	SV 1- 10 / 16 / 100 / 1 / D
SV	Servo valve
1	single-stage
10	Nominal size 10 (DIN 24340)
16	Nominal flow rate (4, 8, 16, 32 or 48 l/min) at PN = 20° bar
100	Supply pressure in bar (30-315 or 5-100)
1	Overlap (1 % or 6 %)
D	Hydraulic oil - no reference (C = HFC, D = HFD)

Hydraulic parameters	SV1-10/...		4	8	16	32	48
Operating pressure range p ^s	30 ... 315 5 ... 100	bar bar					
max. permissible return pressure p _T	30	bar					
Nominal flow rate Q _N at Δ p _N = 20 bar at Δ p _N = 70 bar		l/min l/min	4 7	8 13	16 24	32 46	48 70
External leakage volume flow	0						
Operating temperature range	-10 ... +70	°C					
Storage temperature range	-20 ... +80	°C					
typ. internal leakage volume flow Q _{O2} at p _S = 100 bar; I = 0 mA; t = 50 °C; Q _A = 0 l/min; Q _B = 0 l/min		l/min	0.15	0.25	0.4	0.7	1
SV 1-10 / .. / 315 / 6 - SV 1-10 / .. / 210 / 6 / Ex		l/min	0.25	0.4	0.7	1	1.5
SV1-10/ .. / 315 / 1 – SV1-10 / .. / 210 / 1 / Ex		l/min	0.25	0.4	0.7	1	1.5
SV1-10/ .. / 100 / 6 – SV1-10 / .. / 100 / 6 / Ex		l/min	0.4	0.6	1	1.5	2.2
SV1-10/ .. / 100 / 1 – SV1-10/.. / 100 / 1 / Ex		l/min	0.4	0.7	1.2	1.8	2.8
SV1-10/ .. / 50 / 6 – SV1-10/.. / 50 / 6 / Ex		l/min	0.7	1.2	1.8	2.8	3.8

Hydraulic parameters	SV1-10/...		4	8	16	32	48
SV1-10/ .. / 50 / 1 – SV1-10../ 50 / 1 / Ex							
Hysteresis ¹⁾		%	<2	<2	<2.5	<2.5	<2.5
Hysteresis error		%	<0.1	<0.1	<0.2	<0.2	<0.2
Response sensitivity		%	<0.1	<0.1	<0.2	<0.2	<0.2
Flow nonlinearity		%	<2	<3	<4	<5	<6
Flow asymmetry		%	<5	<5	<5	<5	<5
typ. relative pressure intensifier <u>$\Delta p_L / p_s$</u> <u>$\Delta I / I_N$</u> SV 1-10 / .. / 315 / 6 - SV 1-10 / .. / 210 / 6 / Ex SV1-10 / .. / 315 / 1 – SV1-10../ 210 / 1 / Ex SV1-10 / .. / 100 / 6 – SV1-10../ 100 / 6 / Ex SV1-10 / .. / 100 / 1 – SV1-10../ 100 / 1 / Ex SV1-10 / .. / 50 / 6 – SV1-10../ 50 / 6 / Ex SV1-10 / .. / 50 / 1 – SV1-10../ 50 / 1 / Ex	14 25 12 20 12 20						
Overlap SV 1-10 / .. / ... /1 SV1-10../.../6	0.5...2.5 4...8	% %					
Temperature drift of the zero point	Not measurable, theoretically zero						
Recommended pressure medium ²⁾	Mineral oil VG46 according to DIN 51524 or Mineral oil HLP/HVLP VG46 according to DIN 51524 / ISO 6743-4						
Recommended filtration	Filter class 17/15/12, contamination class ISO 4406:1999 Filter class 7, contamination class SAE AS 4059 Filter class 6, contamination class NAS 1638						

¹⁾ largest part due to the magnet ²⁾ other pressurising media after consultation: HFC, HFD

Electrical parameters	SV1-10/...	4	8	16	32	48
Connection 1 - 2:						
Rated current	mA	±300	±300	±300	±300	±1000
Rated dither signal						
50 Hz	mA	10	10	20	20	40
150 Hz	mA	20	20	40	40	80
Resistance	Ω	40	40	40	44	11
Inductance	H	0.16	0.16	0.16	0.2	0.05
Connection 1 - 3						
Rated current	mA	±600	±600	±600	±600	
Rated dither signal						
50Hz	mA	20	20	40	40	
150 Hz	mA	40	40	80	80	
Resistance	Ω	20	20	20	22	
Inductance	H	0.08	0.08	0.08	0.1	
Plug device	three-pin cable plug A with protective contact, DIN 43650					
Protection class	IP 65 (plug device screwed together)					
Electrical Connection	 SV 1-10/48					