

KRACHT



**Pressure Relief Valves
SPV, SPVF**

Construction of the Pressure Relief Valves SPV, SPVF

Symbol

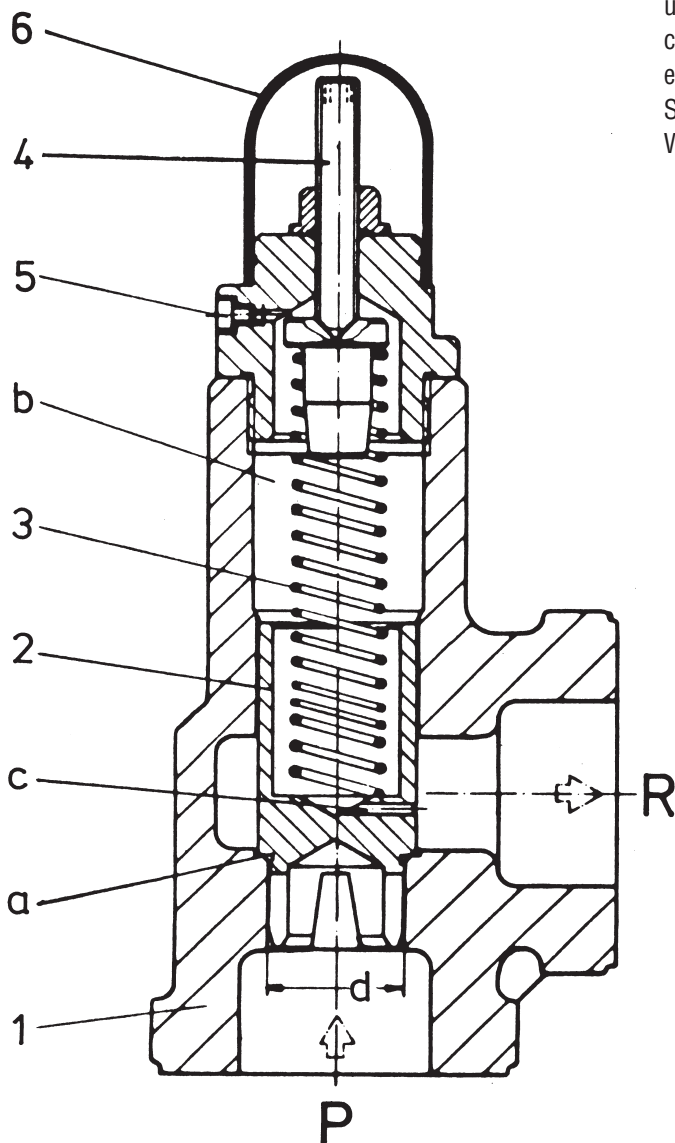


Description

The direct spring, sliding piston Pressure Relief Valve SPV/SPVF is intended for inline mounting and is suitable to safeguard low pressure hydraulic circuits up to 20 (30) bars. The pipe connection is to be effected either by SAE-Mounting Surfaces (3000 psi) or by Whitworth Pipe Threads "G".

Valve Construction

The Sliding Piston **2** is pressed against the Annulated Area **a** by the Compression Spring **3** and separates the Pump Connection **P** from the Reservoir Connection **R** sealing the Bore **d**. As soon as the operating pressure **p** adjusted by the Set Screw **4**, is reached the Sliding Piston **2** releases the oil flow to the reservoir. The Spring Chamber **b** is pressure compensated by the Bore **c**. During starting-up the valve the Spring Chamber **b** must be bled by the Bleeding Screw **5**, (Hex. Socket Width: 4). The valve should preferably be installed in vertical fitting position with the pressure setting arrangement down. The pressure relief valves are available in four different pressure setting ranges because, due to their springrates, each of the compression springs can only cover a limited pressure setting range.



- | | |
|----------------------|------------------|
| 1 Housing | 4 Set Screw |
| 2 Sliding Piston | 5 Bleeding Screw |
| 3 Compression Spring | 6 Protective Cap |

Characteristics

Characteristics acc. to VDI 3267

Pressure Relief Valve

directly spring operated

Nom. Size:	10	25	40	50	80
Max. Flow Capacity:	40	90	450	550	800 l/min
Nom. Operating Pressure:	30	20	20	20	20 bars

General Characteristics

Construction:	Sliding Piston Relief Valve
Mounting:	Inline
Pipe Connection:	SAE-Flange (3000 psi) Whitworth Pipe Thread "G"
Dimensions:	Pages 7, 9, 10
Weight:	Pages 7, 9, 10
Fitting Position:	Set Screw down

Perm. Ambient Temp.: $\vartheta_{u \min} = -20 \text{ }^{\circ}\text{C}$
 $\vartheta_{u \max} = +60 \text{ }^{\circ}\text{C}$

Hydraulic Characteristics

Nom. Size:	10	25	40	50	80	
Pressure Setting Ranges:	$p_{v \min}$	0,5	0,5	0,5	0,5	0,5 bars
	$p_{v \max}$	30	20	20	20	20 bars
Fluid Temperature Range:	$\vartheta_{m \min}$	= $-20 \text{ }^{\circ}\text{C}$				
	$\vartheta_{m \max}$	= $+80 \text{ }^{\circ}\text{C}$				
Viscosity Range:	ν_{\min}	= 6 mm ² /s				
	ν_{\max}	= 600 mm ² /s				

Δp -Q-Characteristics: Page 5

Hydraulic Fluids: Hydraulic Oils acc. to DIN 51 524/25
Other Fluids on request

Type Setting

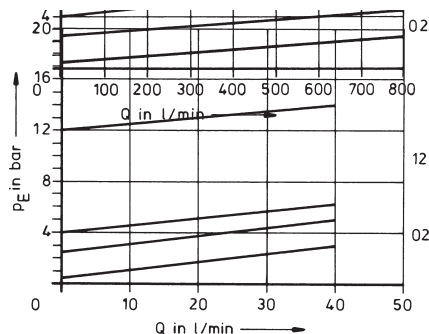
mechanical	Set Screw Knob
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Accessories

Welding Flange SAE (3000 psi) Page 10

Characteristic Curves

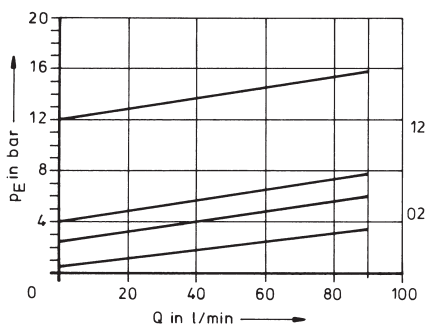
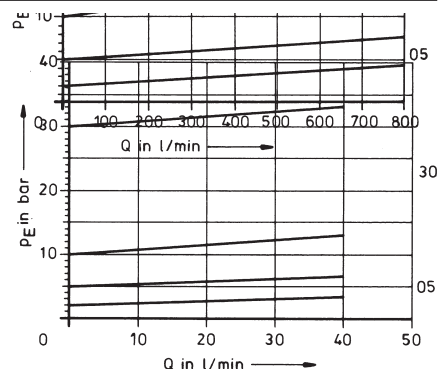
Characteristic Curves $p_E - Q$ Viscosity = 34 mm²/s



SPV 10
Pressure Setting Ranges

02
12

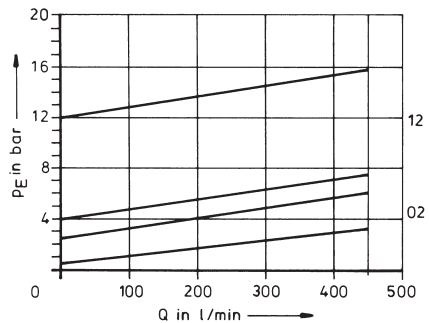
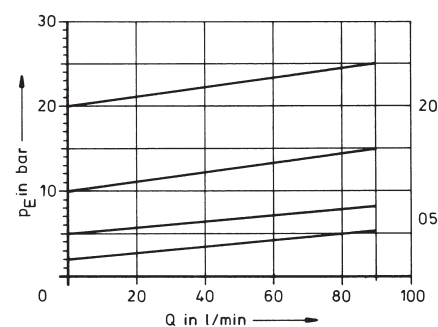
05
30



SPVF 25
Pressure Setting Ranges

02
12

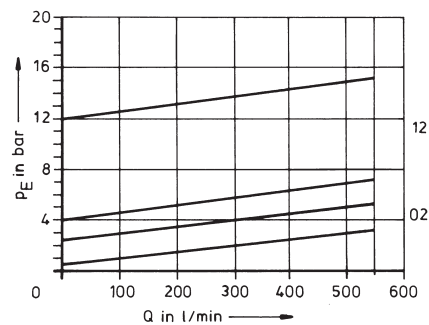
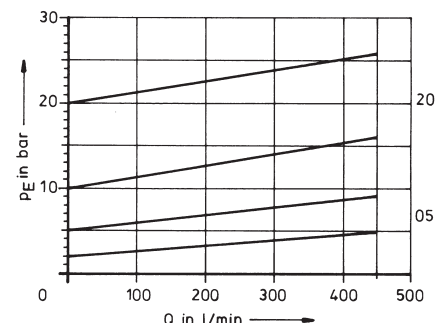
05
20



SPVF 40
Pressure Setting Ranges

02
12

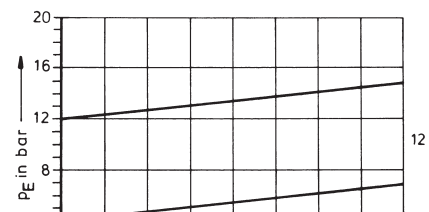
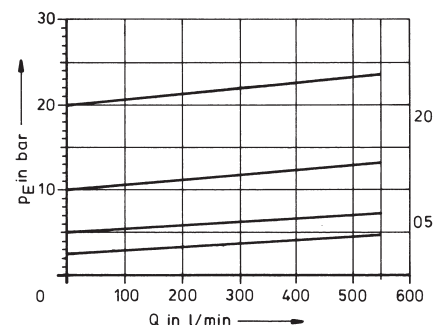
05
20



SPVF 50
Pressure Setting Ranges

02
12

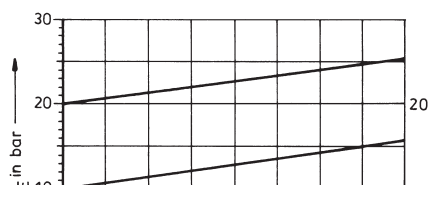
05
20



SPVF 80
Pressure Setting Ranges

02
12

05
20

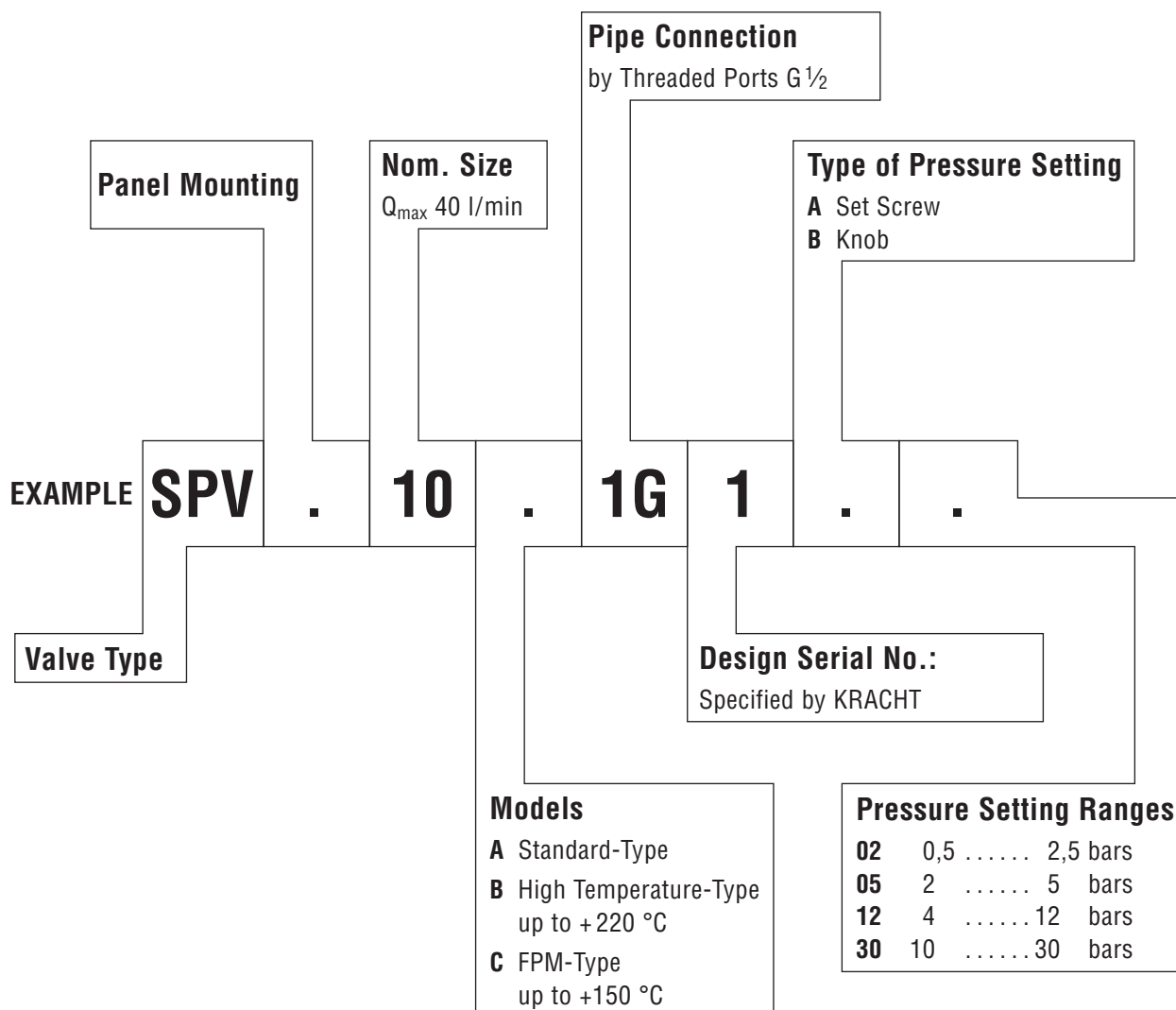


Type Key

Nominal Size 10

Pressure Relief Valve

directly spring operated



Ordering Example: SPV 10 B 1G 1 A12

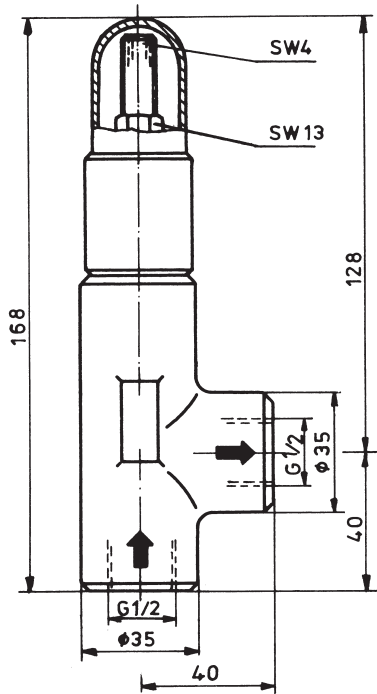
Pressure Relief Valve, directly spring operated, Nominal Size 10 (Q_{max} 40 l/min), High Temperature-Type (up to +220 °C) with Threaded Ports G 1/2, Pressure Setting by Set Screw, Pressure Setting Range: 4 up to 12 bars

Ordering Example: SPVM 10 A 1G 1 B30

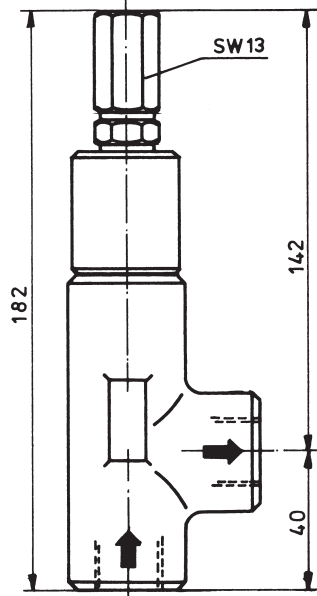
Pressure Relief Valve, directly spring operated for Panel Mounting, Nominal Size 10 (Q_{max} 40 l/min), Standard-Type with Threaded Ports G 1/2, Pressure Setting by Knob, Pressure Setting Range: 10 up to 30 bars

Dimensions

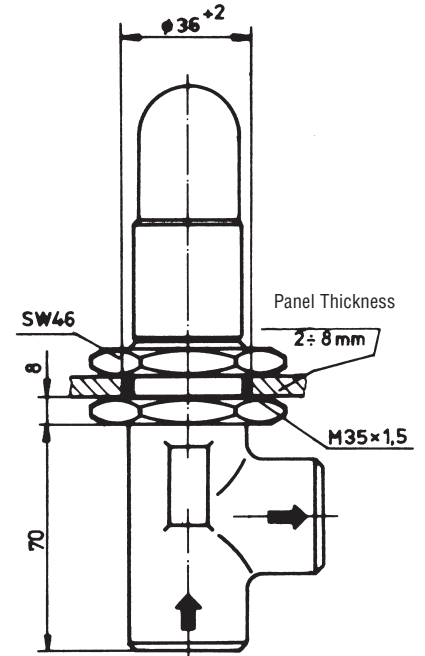
Ordering Code
SPV 10 A 1G 1 A .



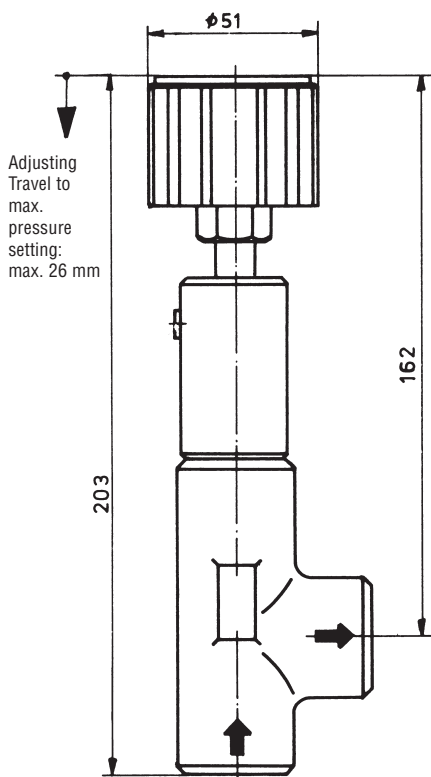
Ordering Code
SPV 10 B 1G 1 A .



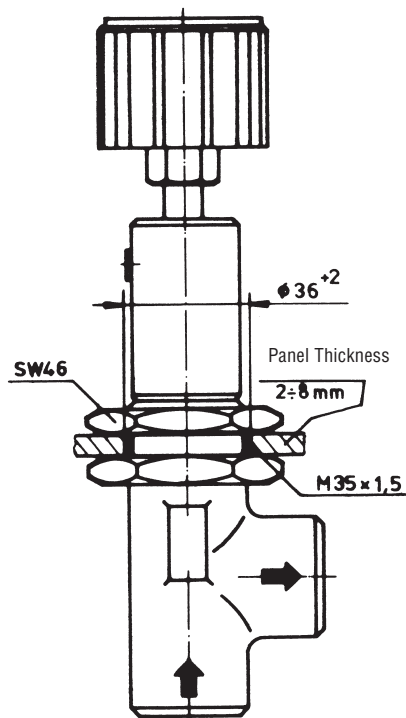
Ordering Code
SPVM 10A 1G 1 A .



Ordering Code
SPV 10 A 1G 1 B .



Ordering Code
SPVM 10 A 1G 1 B .



Weight 0,9 kg

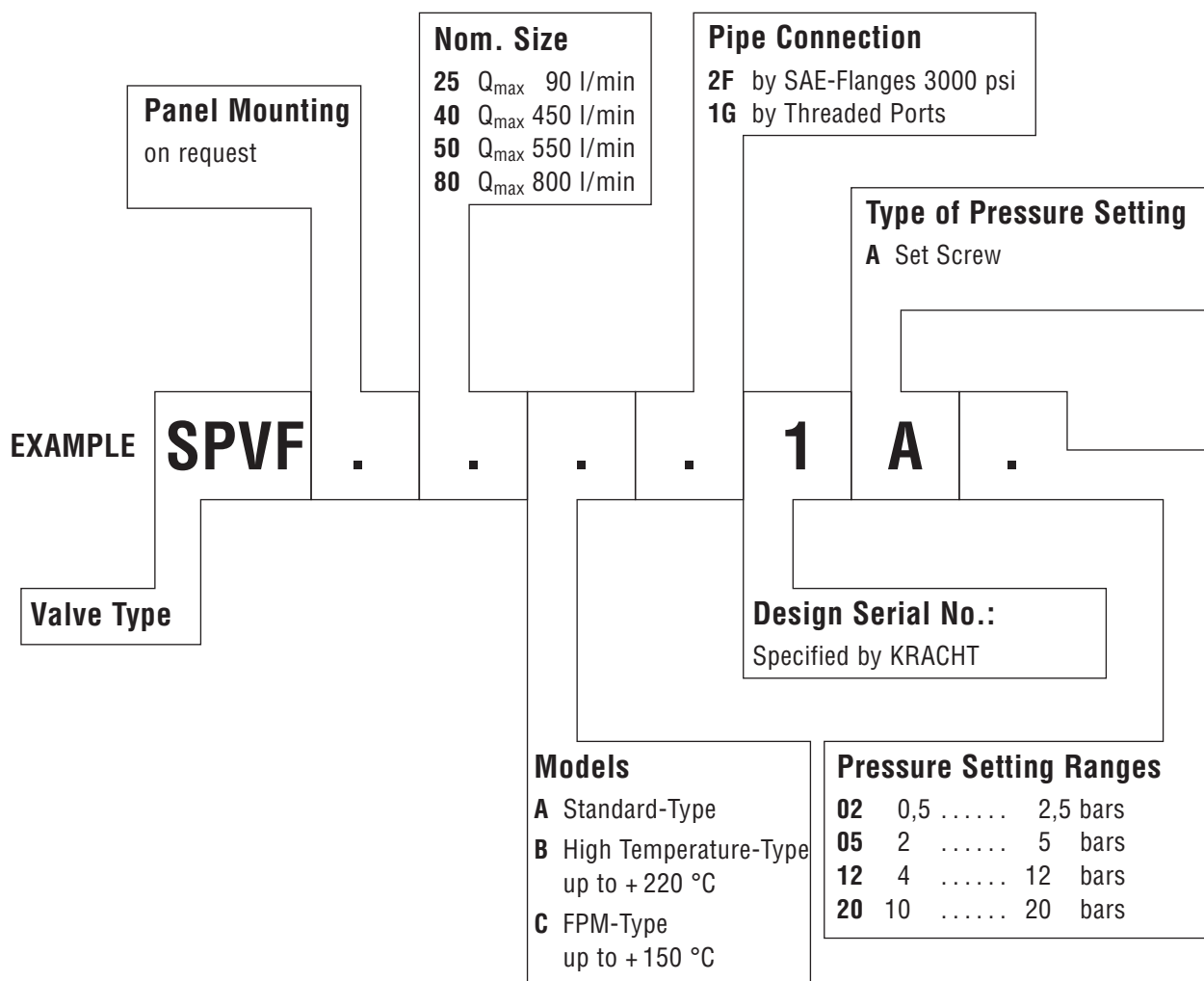
SW = Wrench Size
or
Hex. Socket Width

Type Key

Nominal Size 25...80

Pressure Relief Valve

directly spring operated, flange-type



Ordering Example: SPVF 80 A 1G 1 A12

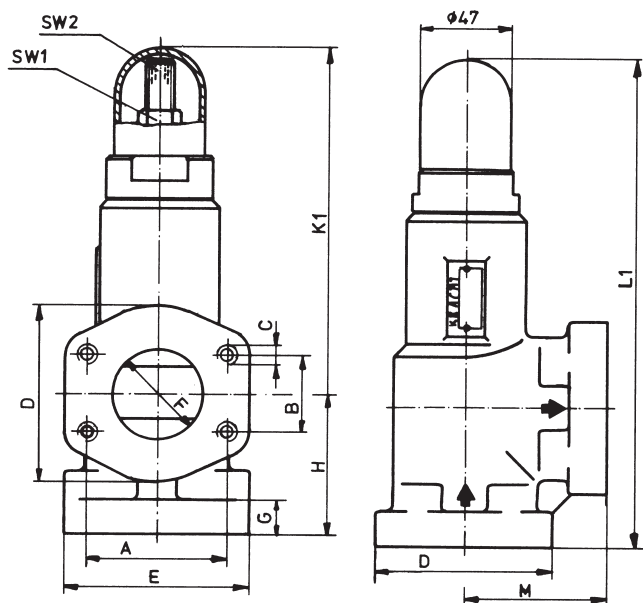
Pressure Relief Valve, directly spring operated, Flange-Type, Nominal Size 80 (Q_{max} 800 l/min), Standard-Type with Threaded Ports G3, Pressure Setting by Set Screw, Pressure Setting Range: 4 up to 12 bars

Ordering Example: SPVF 40 B 2F 1 A20

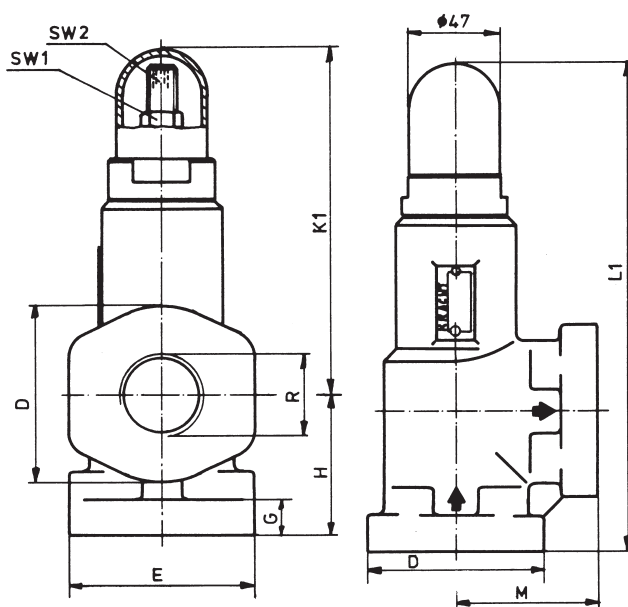
Pressure Relief Valve, directly spring operated, Flange-Type, Nominal Size 40 (Q_{max} 450 l/min), High Temperature-Type (up to + 220 °C) with SAE-Mounting Surfaces (3000 psi), Pressure Setting by Set Screw, Pressure Setting Range: 10 up to 20 bars

Dimensions

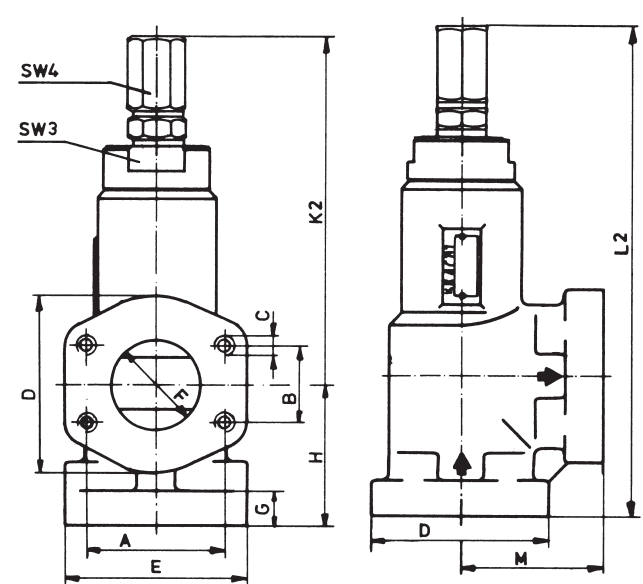
Ordering Code SPVF . A 2F 1 A .



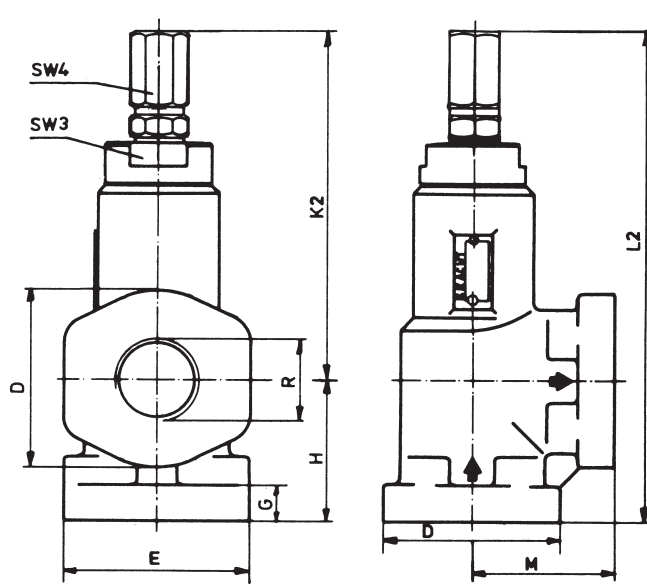
Ordering Code SPVF . A 1G 1 A .



Ordering Code SPVF . B 2F 1 A .



Ordering Code SPVF . B 1G 1 A .

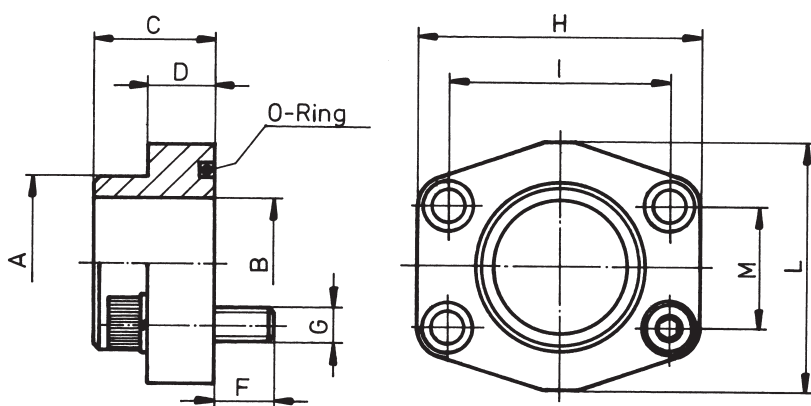


Nom. Size	SAE Flange	Thread R														Wrench Size or Hex. Socket Width				Weight kg
			A	B	C	D	E	F	G	H	K ₁	K ₂	L ₁	L ₂	M	SW1	SW2	SW3	SW4	
25	1"	G 1	52,4	26,2	M10	59	70	24	20	50	160	167	210	217	55	17	5	46	17	3,0
40	1½"	G 1½	69,9	35,7	M12	83	94	38	20	65	170	172	235	237	65	17	5	46	17	6,0
50	2"	G 2	77,8	42,9	M12	97	102	50,5	20	75	192	209	267	284	75	19	6	46	19	8,2
80	3"	G 3	106,4	61,9	M16	131	135	79	25	110	190	207	300	317	110	19	6	-	19	18,5

Accessories

Welding Flange SAE (3000 psi)

Ordering Code SPVF 40 B 2F 1 A 20 + 2 x CFS 106-ST



Ordering Code	SAE Flange											O-Ring	Weight kg
		A	B	C	D	F	G	H	I	L	M		
CFS 102-ST	1"	34,5	25	38	18	14	M 10	71	52,4	53	26,2	4131	0,6
CFS 106-ST	1½"	48,6	38	44	25	18	M 12	94	70	77	35,7	4187	1,2
CFS 108-ST	2"	61	50	45	25	18	M 12	103	77,8	89	42,9	4225	1,5
CFS 112-ST	3"	89	73	50	27	23	M 16	135	106,4	124	62	4337	2,7

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SPV/SPVF.e.7.00