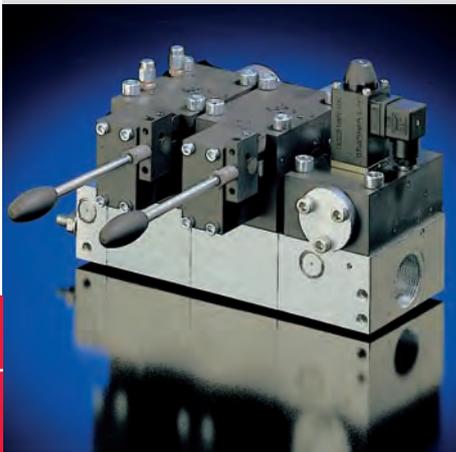


# Prop. directional spool valve type PSLF and PSVF - Manifold mounting design

The directional spool valve bank type PSLF/PSVF consists of valve sections attached via manifolds. Type PSLF is designed for constant delivery pump systems (pressure/flow controller) whereas the type PSVF is for variable displacement pump systems. Both are available in two sizes. They serve to control the direction of motion and provide infinite control of the speed of motion of hydraulic consumers regardless of their load. Several consumers may be operated simultaneously and independently of each other. The main field of application is mobile hydraulics (e.g. boom



controls of concrete pumps etc.).

Main advantage against type PSL/PSV is simplified servicing as individual valve sections can be replaced easily.

The main field of application is mobile hydraulics (e.g. crane controls etc.). These valve banks can be tailored to a specific application, requiring unequal max. consumer flows at port A and B as well as additional functions such as functional cut-off.

**Nomenclature:** Prop. directional spool valve acc. to the Load-Sensing principle

**Design:** Individual manifold mounting valve  
Valve bank via individual manifold mounting valves

**Actuation:** Manual  
• Return spring  
• Detent  
Electro-hydraulic  
Pressure  
• Hydraulic  
• Pneumatic

$P_{max}^{\ast}$ : 400 ... 420 bar

$Q_{max. consumer}^{\ast}$ : 3 ... 240 lpm

$Q_{pu max}^{\ast}$ : approx. 350 lpm

## Basic types and general parameters

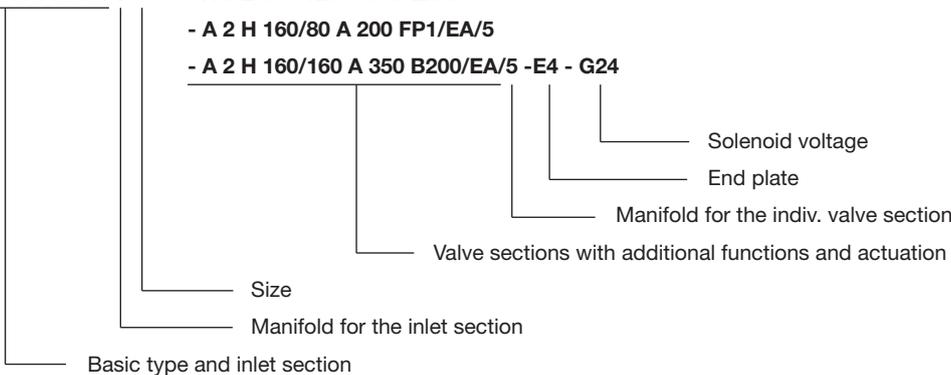
Basic type and size	Flow (lpm)		Oper. pressure $p_{max}$ (bar)	Tapped ports	
	$Q_{consumer}$	$Q_{pu max}$		P and R	A and B
PSLF ... - 3	3 ... 120	200	420	G 3/4, 1 1/16-12 UN-2B	G 1/2, G 3/4, 7/8-14 UNF-2B
PSVF ... - 3	3 ... 120	200	420	G 3/4, 1 1/16-12 UN-2B	G 1/2, G 3/4, 7/8-14 UNF-2B
PSLF ... - 5	16 ... 210	350	400	G 1, G 1 1/4, SAE 1 1/2	G 1, SAE 1 1/4
PSVF ... - 5	16 ... 240	350	400	G 1, G 1 1/4, SAE 1 1/2	G 1, SAE 1 1/4

G = BSPP

## Valve bank coding

PSVF A 1 F/400/7-5

- A 5 L 160/120 C 350/EA/5
- A 2 H 160/80 A 200 FP1/EA/5
- A 2 H 160/160 A 350 B200/EA/5 -E4 - G24



**Connection blocks**

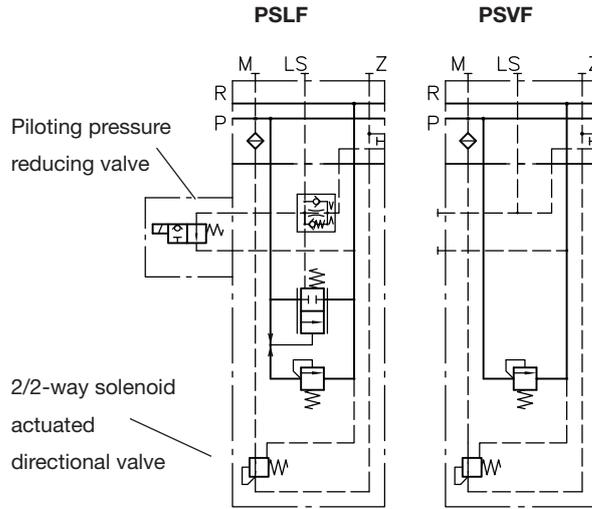
**Basic type**

**Brief description**

**Symbol**

**PSLF** Connection block for constant delivery pump systems with incorporated 3-way flow controller and pressure limiting valve

**PSVF** Connection block for variable displacement pump systems with or without pressure limiting valve



**Additional versions (connection blocks)**

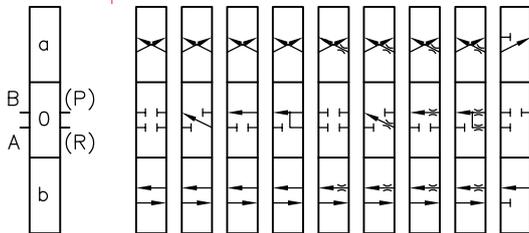
- Integrated piloting pressure reducing valve, feeding the electro-hydraulic actuation
- 2/2-way solenoid actuated directional valve for arbitrary idle pump circulation

- Additional damping of the 3-way flow controller or pump controller

**Symbols**

max. 12 valves may be combined in a valve bank

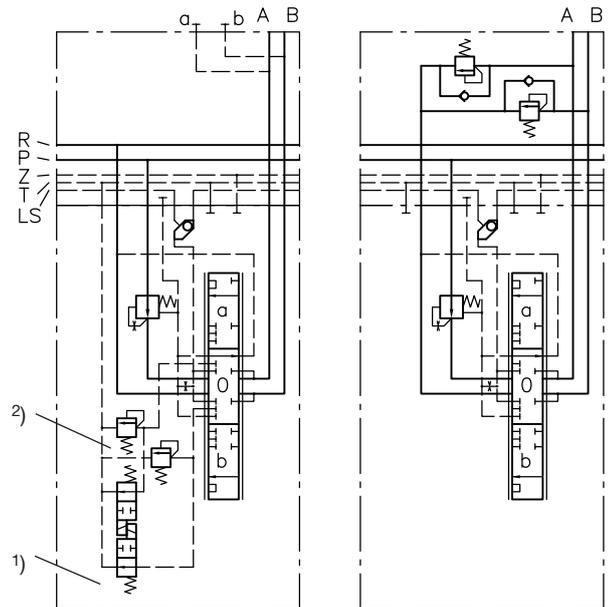
**Basic symbol** L M F H J B R O G



- 1) Functional cut-off
- 2) Secondary pressure limiting valves (optional for consumer port A and/or B)

**Additional functions in the valve sections**

**Additional functions in the manifold**



**Coding for max. consumer flow**

size 3	3	6	10	16	25	40	63	80
size 5		16	25	40	63	80	120	

- Coding represents the max. flow (lpm) at consumer ports A or B for version with inflow controller
- Flow for A or B may be selected individually
- Increased flow per consumer port 120 lpm (size 3), 240 lpm (size 5) via raised control pressure.
- Version with 2-way inflow controller and check valve function

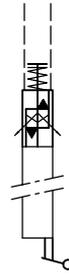
**Additional versions (valve sections)**

- Load pressure signal pick-up with A, B; joint for A and B
- Version without 2-way inflow controller
- Prop. pressure limitation for individual functions
- Manifold with various additional functions
- Combination of differing sizes within a valve bank
- Version with ATEX-approved solenoids for use in potentially explosive areas
- Version with flameproof, intrinsic safe solenoids for mining applications

**Actuations**

Basic type	Brief description
<b>A</b>	Manual actuation
<b>C</b>	Detent (stepless)
<b>E</b>	Electro-hydraulic actuation
<b>EA</b>	in combination with manual actuation
<b>H, P</b>	Hydraulic and pneumatic actuation
<b>HA, PA</b>	in combination with manual actuation
<b>HEA</b>	Combination of actuation H, E, and A

**Symbol (example)**



For combination of electro-hydraulic and manual actuation

Solenoid voltage 12V DC, 24V DC  
Solenoids with differing plug versions

**End plates**

Basic type	Brief description	Symbol
<b>E 1</b>	End plate (std. )	E 1    E 2
<b>E 2</b>	With additional Y-port for LS-input signal	

**Additional versions (end plates)**

- End plate with internal drain line (without T-port)
- End plates with an additional port R
- Adapter plate enabling combination of size 5 with size 3 (coding ZPL 53)

**Example**

PSVF A1/380/4 - 3 - A2 J 40/40 A200 B200 /E /3 AN210 BN210  
 - A2 J 80/40 A280 B130 /E /3 AN290 BN140  
 - A2 J 25/16 /EA /3  
 - E1 - G24

Valve bank type PSVF for variable displacement pump systems

Connection block:

- Coding for manifold mounting design (here A.)
- Coding for piloting pressure reducing valve (here 1)
- Coding for set pressure at pressure limiting valve (here 380 bar)
- Coding for manifold (here /4 = G 3/4)

Size:

- Coding (here -3)

1. Valve section (as an example for all additional sections):

- Directional valve section, manifold mounting (here A.)

- Coding for basic function of the valve section (here 2)

- Flow pattern (here J)

- Coding for max. flow rate at consumer port A and B (here 40 and 40 lpm)

- Coding for additional functions (here A 200 B 200; secondary-pressure limiting valve at port A and B, factory set to 200 bar)

- Coding for the actuation (here E = electro-hydraulic)

- Coding for manifold (here 3 AN210 BN210, G 1/2 with shock and suction valve)

End plate:

- Coding for end plate (here E1)

- Coding for solenoid voltage (here G24 = 24V DC)

