

Directional spool valve

2.1 Directional spool valve type HSF

Directional spool valves are a type of directional valve. They control the direction of movement and the velocity of single and double-acting hydraulic consumers.

The directional spool valve type HSF is a manifold mounting valve. Due to the robust design, it reaches operating pressures of up to 400 bar.

Adjustable threaded throttles are used to adjust the response time. Harsh switching operations and decompression surges, particularly in the event of high pressure and large consumer volumes, can be avoided this way.

Features and benefits:

- Smooth switching for large flow rate
- Suitable for high pressures due to steel housing

Intended applications:

- Mining machinery (incl. oil production)
- Cranes and lifting equipment
- Construction and construction materials machinery
- Material handling (industrial trucks, etc.)



Nomenclature:	Directional spool valve
Design:	Individual valve for manifold mounting
Actuation:	Electro-hydraulic Hydraulic
p_{max}:	400 bar
Q_{max}:	160 l/min

Design and order coding example

HSF4 /C321 - L - 1 - G24 - 300

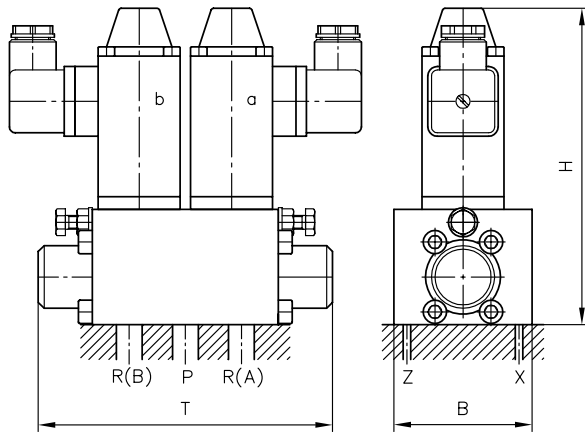
HSF4	/C321	- L	- 1	- G24	- 300	
						Pressure setting pressure limiting valve [bar]
						Solenoid voltage 12V DC, 24V DC, 98V DC, 205V DC, 110V AC, 230V AC
						End plate Internal or external control oil return
						Valve sections With/without adjustable switching speed
						Connection block <ul style="list-style-type: none"> ▪ With/without pressure limiting valve (Fixed or manually adjustable) ▪ Internal or external control oil supply (max. 160 bar)
Basic type and size	Type HSF: Manifold mounting					

Function

Valve sections:

Basic symbol	Symbol									
HSF	G	D	E	C	W	B	L	H	F	
Manifold mounting valve	All flow pattern symbols also available with adjustable response time									

General parameters and dimensions



	Q_{max} [l/min]	p_{max} [bar]	Dimensions [mm]			m [kg]
			H	B	T	
HSF 3	80	400	137	59	126	2,8
HSF 4	160	400	157	70	184	5

Associated technical data sheets:

- Directional spool valve type PSL and PSV: [D 7700-2](#); [D 7700-3](#)
- [Directional spool valve type HSF: D 7493 E](#)
- [Directional spool valve type HSL: D 7493 L](#)

Male connectors:

- [Line connector type MSD and others: D 7163](#)
- With economy circuit: [D 7813](#), [D 7833/1](#)