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Part Number DX-6, DX-Series Directional Control Valves

DX-6 is a sectional valve designed for max. operating pressures up to 5000 psi (350 bar) and max. pump flows up to 180 l/min with "Q-inlet". For standard inlets without flow regulator the recommended max. pump flows is 37 gpm (140 Lpm). The valve is available with 1 to 10 working sections per valve assembly.

DX-6 includes as standard a variety of sections, spools, spool controls and additional parts in a modular design. That makes the valve very flexible.



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Specifications

Brands HYDAC

Pressures/Flows

Maximum Operating Pressure per Port (P1, P2, PM)	5000 psi	350 bar
Maximum Operating Pressure per Port (A,B)	5800 psi	400 bar
Maximum Operating Pressure per Port (T1, T2, T3)	300 psi 20 bar	
Maximum Operating Pressure per Port (Pp)	450 psi	30 bar
Maximum Operating Pressure per Port (Tp)	75 psi 5 bar	
Maximum Operating Pressure per Port (X, Y)	360 psi	25 bar
Typical Nominal Inlet Flow Rate without Flow Control Function	37 gpm 140 L/min	
Typical Nominal Inlet Flow Rate with Flow Control Function	48 gpm	180 L/min

Fluid Temperature	5 to 176 °F -15 to 80 °C
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Technical Data		
Nominal Spool Stroke (±)	0.27 in	7 mm
Spool Control Force at Neutral Position (9M1)	20 lb	90 N
Spool Control Force at Maximum Spool Stroke (9M1)	24 lb 105 N	
Permissible Contamination Level	Spool Control H, EH: Equal or Better than 20/17/13 as per ISO 4406	Spool Control M: Equal or Better than 20/18/14 as per ISO 4406
Viscosity¹	10 to 400 mm ² /s	
Leakage²	<12 cm ³ /min	
Pressure Fluid	Mineral Oil and Synthetic Oil Based on Mineral Oil HL, HLP according to DIN 51524	

Q-Inlet	
Q-Inlet	<p>The Q-inlet is designed with a flow control (Q-function) that by-passes the major part of the pump flow to tank when the system is idling, still giving access to full pump flow when the working sections are operated. Besides greatly reducing heat generation this also provides improved operating characteristics.</p>

Remote Control	
Remote Control	<p>As remote controlled the valve offers compact design with internal pilot oil supply, solenoids in a compact assembly on one side of the valve and integrated hand levers for manual override/manual operation.</p> <p>The integrated pilot supply system for the electro hydraulic remote control makes the valve easy to install and gives a reliable remote control function. It is also possible to supply the pilot system externally. The hydraulic remote control can also be configured both for internal and external pilot</p>

supply.

Features

The valve is, as standard, setup for both manual and remote control. The manual controlled sections can either be with open spool ends or encapsulated. The encapsulation decreases in a significant way the risk for external leakage and makes the valve well adapted for applications in demanding environment. The spool controls for remote control are generally designed as complete modules for assembling on one of the valve sides.

DX-6 is in first place designed as an open center valve for fixed displacement pumps but can also be configured for variable displacement pumps. It is available with manual, hydraulic or electro hydraulic proportional remote control.

DX-6 can be fully adapted for marine applications. The valve offers excellent operating characteristics, and good controllability on a wide range of machinery due to the specially designed spools.

Low and uniform spool forces are the result of careful balancing of the flow forces.

Applications

Applications

The DX-6 is ideal for applications where you need excellent control characteristics such as cranes, sky-lifts, garbage trucks, demountable bodies, excavators, telescopic load handlers, skid-loaders, wheel loaders etc.

Accessories

Accessories

- A wide choice of spools and spool controls for different flow combinations and for several applications and systems
- A full range of service port valves
- Possibility of high pressure carry-over
- Inlet with electrical unloading valve
- Manual versions easily convertible to remote control

Note

Higher values are possible, depending on application.

¹ Higher viscosity allowed at start up.

² At 1450 psi, 32 cSt, 100 °F (100 bar, 32 cSt and 40 °C)