

# Directional Control Valves

## Open Centre Valves

Mobile Valves

VO40



P70CF



F130CF



H170CF



Open centre valves tend to be used most in applications requiring simple, uncomplicated systems that are undemanding in terms of operating characteristics. However, our considerable experience and high-quality products mean that we can offer open centre valves offering much more, especially in terms of operation. Our open centre valves are used by several market leaders in the mechanical engineering industry, which are extremely demanding in terms of repeatability and precision of operation.

P70CF and F130CF are of modular construction. The H170CF is a flangeable monoblock type meaning valve blocks can be flanged together to form a valve package for either single or multi-pump operation. The valves are designed for many different applications and used extensively in machines such as lorry cranes, small wheel loaders, concrete placing cranes, forestry machines, refuse trucks, drill rigs, garbage trucks, container trucks, forklift trucks etc.

These valves can be equipped with a large number of optional components and assemblies such as:

- Pump unloading with blocked pump channel for emergency stop
- Main pressure relief valve
- Port relief valves with or without anti cavitation function
- Anti cavitation valves
- Counter pressure valve
- Application adapted spools
- Pressure compensated spools
- Load hold check valve
- Power beyond feature
- For single or multi-pump operation
- For single or multi-valve operation

(Options vary for different valves)



zv 01

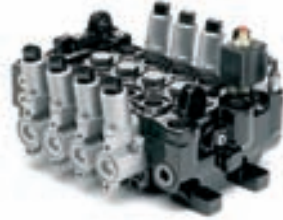
Valve	Operation					
	Pump Flow l/min	Pressure bar	Manual	Pneumatic	Hydraulic	Electrohydraulic
VO40	40	300	X	X	X	X
P70CF	70	320	X	X	X	X
F130CF	110	320	X	X	X	X
H170CF	170	250	X	X	X	X

# Directional Control Valves

## Constant Pressure Valves

Mobile Valves

P70CP



Valves for constant pressure systems are mainly used where operational characteristics are critical and energy consumption is not. In these systems, simultaneous function operation is possible. Valves for constant pressure can return an un-loading signal to the variable pump when they are not in use.

These valves can be equipped with a large number of optional components and assemblies such as:

- Main pressure relief valve
- Port relief valves with or without anti cavitation function
- Anti cavitation valves
- Pressure compensated spools
- Load check valve
- Wide range of adaptors for system unique functionality
- For single or multi-pump operation
- For single or multi-valve operation

F130CP



(Options vary for different valves)



zv 02

Valve	Operation					
	Pump Flow l/min	Pressure bar	Manual	Pneumatic	Hydraulic	Electrohydraulic
P70CP	90	320	X	X	X	X
F130CP	150	320	X	X	X	X

# Directional Control Valves

## Load Sensing Valves

Mobile Valves

L90LS



K170LS



K220LS



K + L Midinlet



VP170



M200LS



M400LS



zv 03

Valves for load sensing systems have the same operating characteristics as valves for constant pressure systems, except that the pressure in the motor port is sent as a signal either to a variable load sensing pump or to a bypass in the inlet. Bypasses are used with fixed displacement pumps. The load sensing system can be used to achieve complex system structures, for example including flow sharing, pressure compensation and pressure limitation in the motor ports. Correctly used, the load sensing system can significantly reduce energy consumption (heat generation) and therefore reduce operating costs, primarily in systems with wide variations in loads and operating times.

These valves can be equipped with a large number of optional components and assemblies such as:

- Options for variable or fixed displacement pumps
- Pump unloading with blocked pump channel for emergency stop
- For single or multi-pump operation
- For single or multi-valve operation
- Flanged multi-valves, L90LS, K170LS, K220LS
- Counter pressure valve
- Pressure relief valve
- Port relief valves with or without anti cavitation function
- Anti cavitation valves
- Port specific feed reducers
- Application adapted spools
- Port specific force feedback
- Load check valve
- Sections with pressure compensators

(Options vary for different valves)

Valve	Operation					
	Pump Flow l/min	Pressure bar	Manual	Pneumatic	Hydraulic	Electrohydraulic
L90LS	200	320	X	X	X	X
VP170**	220	350	X	X	X	X
K170LS	280*	330			X	X
K220LS	280*	350			X	X
M200LS	400	280			X	X
M400LS	900	280			X	X

\* 2x280 l/min if intermediate inlet used \*\* Flow sharing

# Directional Control Valves

## Subplate Mounted CETOP/NG Style Valves

D1VW



The D1VW is a 3 chamber-, electrically controlled 4/3 or 4/2 way directional control valve. It is activated directly by solenoids with screwed in wet pin armature. The soft shifting of the D1VW soft shift valve is achieved by damping the plunger in the tube with an orifice. The D3W is a 3 chamber-, electrically controlled 4/3 or 4/2 way directional control valve. It is activated directly by solenoids with screwed in wet pin armature.

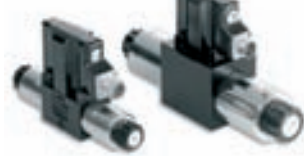
D3W



D1FB



D1FB OBE



D3FB OBE



zv 04

Operation					Remarks
Valve	Pump Flow l/min	Pressure bar	Solenoid		
D1VW	80	350	X		Standard, Soft Shift, NG6
D3W	150	350	X		Standard, Soft Shift, NG10
D1FB	20	350	X		Proportional DC Valve, ext. or onboard (OBE) electronics
D3FB	60	350	X		Proportional DC Valve, ext. or onboard (OBE) electronics
Subplates					CETOP03/05, NG06/10

## Bankable Mini Valves

SMV6



Series SMV6 is a bankable valve with 3- or 4-way, 2 or 3 positions valves. On mobile machines there is a need for valves with low flow functions. Auxiliary functions such as parking breaks, pilot pressure feed, accumulator charging etc. can be solved with this type of valve. SMV6 offers a number of different functions that can be stacked together in a valve package to reduce space. All functions have common tank and pressure ports. It is also possible to fit a plug in between two functions to create 2 separate systems.



zv 05

Operation					Remarks
Valve	Pump Flow l/min	Pressure bar	Solenoid		
SMV6	11	210	X		3- and 4-way, 2 and 3 positions