



SHARING THE FUTURE



Preferred product catalogue





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Introduction

With over 80 years' experience, Kawasaki is a world leader in the design and manufacture of hydraulic equipment. Renowned for efficiency, quality and controllability, its range of products continually provide reliable, fluid power for mobile, industrial, marine and other engineering applications. From concept through to application, supply and support, Kawasaki successfully delivers the complete hydraulic solution.

Preferred Product Catalogue

The Preferred Product Catalogue has been designed to provide the technical specifications of some of our most commonly used products. Please contact our sales team with any queries or orders you may have.

How to contact us:

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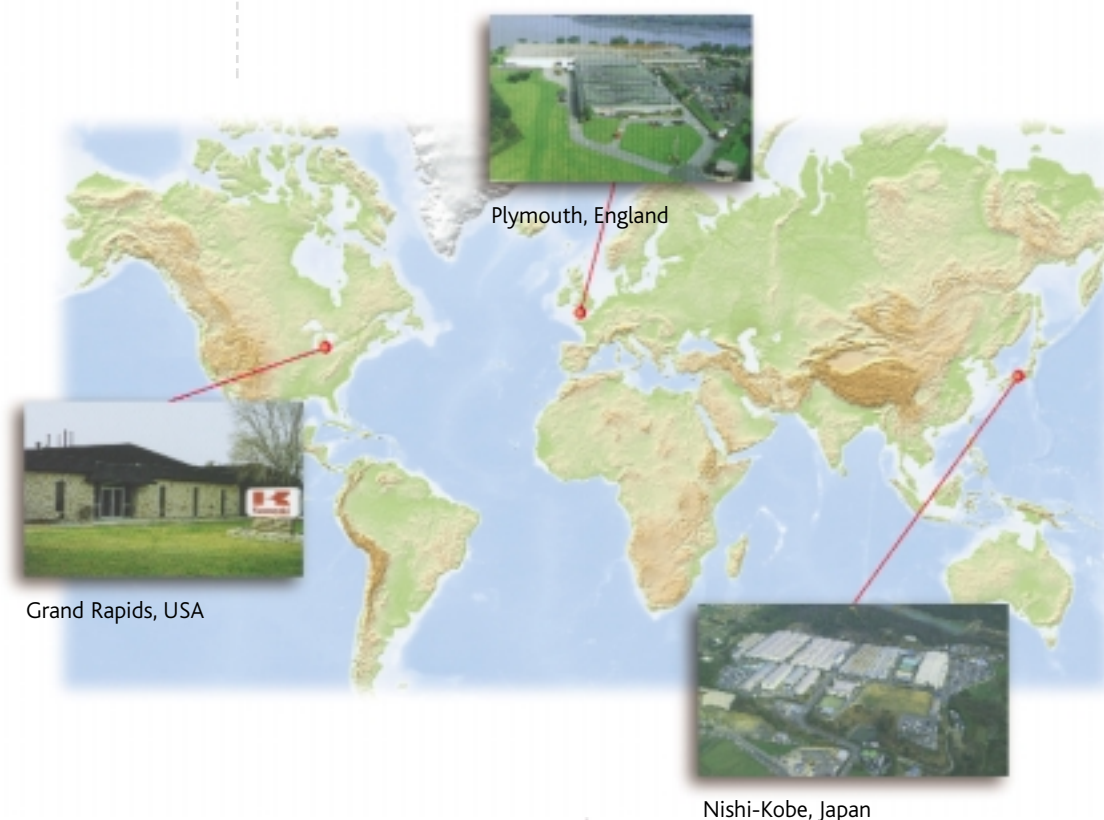
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Worldwide Cover

Kawasaki's hydraulic components and systems are continually expanding on a global scale with a worldwide distribution network, and production sites in Japan (Nishi-Kobe Works) and England (Kawasaki Precision Machinery (UK) Ltd) together with the sales & service bases in Japan, England and USA.

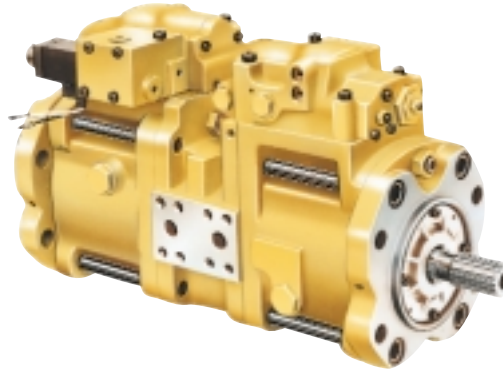


Pumps

High pressure mobile axial piston pump K3VS

Features

- High efficiency
- High power density
- Large self priming capability
- Long life
- Low noise
- Wide range of control options.
- High reliability
- High performance



Description

K3V pumps are high pressure open loop axial piston pumps designed specifically for the earth moving and construction industries where in excess of 700,000 units have been supplied.

The vast number of control options provide the facility for a variety of horsepower controls along with negative and positive flow, load sensing, pressure cut off and electrical control. All of the above are available individually or as virtually any combination to produce a totally comprehensive control package.

Model K3VS	63	112	140	180	280
Capacity (cc/rev)	63	112	140	180	280
Rated pressure (bar)	350	350	350	350	350
Peak pressure (bar)	400	400	400	400	400
Max self prime speed (r/min)	2600	2350	2150	1950	1600
Maximum boosted speed (r/min)	3250	2700	2500	2300	2000
Rated torque (Nm)	343	588	1120	1120	1950
Mass (kg)	48	68	86	86	140

Tandem pumps K3VDT

Features

- High reliability
- High performance
- Wide range of controls
- High self priming capability
- Mid section power take off option (DTP)
- Integral centrifugal pump on larger units (DTH)

Model K3VDT	63DT	112DT	140DT	180DT	280DT
Capacity (cc/rev)	2x63	2x112	2x140	2x180	2x280
Rated pressure (bar)	350	350	350	350	350
Peak pressure (bar)	400	400	400	400	400
Max self prime speed (r/min)	2600	2350	2150	1950	1600
Maximum boosted speed (r/min)	3250	2700	2500	2300	2000
Rated torque (Nm)	343	588	1120	1120	1950
Mass (kg)	81	125	160	160	270



High pressure industrial axial piston pump K3VG

Features

Reliable, high pressure, long life modular design

Low noise and high efficiency

Auxiliary gear pump option

High continuous power rating

High power density

High performance

High self priming capability

Full corner power capability

Wide range of controls



Model K3VG	63	112	180	280
Displacement (cm ³ /rev)	63	112	180	280
Rated Pressure (bar)	350	350	350	350
Peak Pressure (bar)	400	400	400	400
Rated Power (kW)	70	125	200	255
Rated Speeds at suction pressures ≥ -0.1 (bar rpm)	1800	1800	1800	1500
Maximum operating Speeds suction pressures $\geq +1$ (bar rpm)	3250	2700	2300	2000
Mass (kg)	48	68	86	160

Model K3VGDT	180DT	280DT
Displacement (cm ³ /rev)	360	560
Rated Pressure (bar)	350	350
Peak Pressure (bar)	400	400
Rated Power (kW)	405	510
Rated Speeds at suction pressures ≥ -0.1 (bar rpm)	1800	1,500
Maximum operating Speeds suction pressures $\geq +1$ (bar rpm)	2300	2000
Mass (kg)	160	300

Description

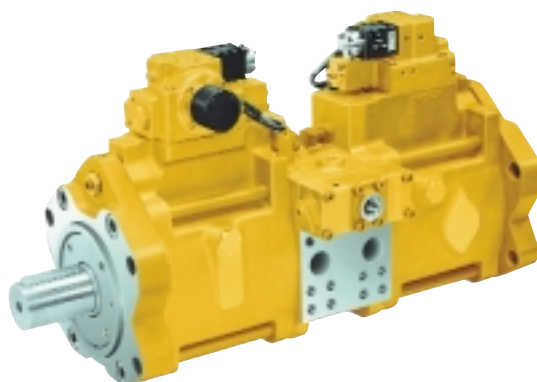
K3VG pumps are high pressure, open loop, axial piston pumps designed specifically for industrial applications.

K3VG pumps are offered with a wide variety of control options and their combinations for pressure, power and pump displacement regulation, in both hydro-mechanical and electrohydraulic forms.

K3VG units are used on continuous casting equipment, rolling & hot strip mills, forging presses, extrusion machines, hydraulic deck machinery and in many other demanding, high pressure applications.

The inherent use of hydrostatic bearing techniques, together with specially selected bearings, provides for an inherently strong and reliable pumping system.

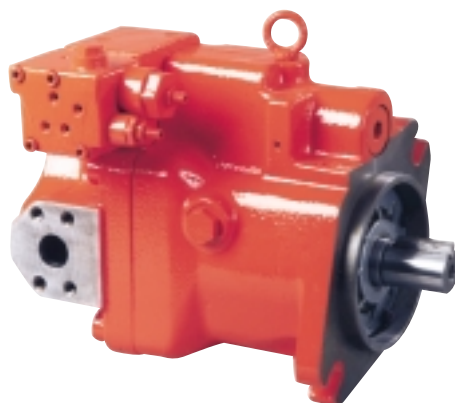
A modular design concept has enabled the pump series to be continuously adapted to the changing and discerning needs of our customers. The concept also allows product availability and service to be matched to customer requirements.



Medium pressure industrial & mobile axial piston pump K3VL

Features

- High power density
- High performance
- High reliability
- High self priming capability
- Low noise
- Wide range of controls
- Rigid compact structure
- Spherical valve plate
- Self compensating piston return mechanism
- Standard ISO and SAE mounting and porting
- Through drive options
- Torque limit, pressure compensator load sensing and pressure control options



Model	45	80	112	140
Capacity (cc/rev)	45	80	112	140
Rated pressure (bar)	320	320	320	320
Peak pressure (bar)	350	350	350	350
Max self prime speed (r/min)	2700	2400	2200	2200
Max boosted speed (r/min)	3250	3000	2700	2500
Rated torque (Nm)	225	400	981	981
Mass (kg)	25	34	60	60

Description

K3VL pumps are medium pressure, open loop, axial piston pumps designed for both industrial and mobile use.

Integrated controls provide options for torque limit, pressure compensation and load sensing in a very compact installation.

Based on the proven K3V design, the K3VL provides exceptional performance and reliability.



Fixed displacement radial piston motor Staffa, series HMB

Features

- High performance
- High reliability
- Good cavitation tolerance
- Alternative fluid capability
- 'Energised' piston seal
- Large variety of porting options
- Double lip shaft seal
- Speed and positioning control options
- High starting and running torque
- Wide range of displacements available



Description

The Staffa HMB high torque, low speed, fixed displacement, radial piston motor is designed for rigorous industrial applications.

Staffa motors provide consistent, controlled acceleration of loads, ensuring smooth, steady, low speed operation.

The only fully hydrostatically balanced design in the industry.

Modular design concept enables the motor to be continuously adapted to changing customer needs. This concept also allows product availability and service to be matched to market requirements.

Model	10	30	45	60	80
Capacity (cc/rev)	188	442	740	983	1344
Rated torque (Nm)	577	1357	2737	3625	4975
Rated speed (r/min)	500	450	400	300	300
Rated power (kW)	25	42	60	80	100
Rated pressure (bar)	207	207	250	250	250
Model	100	125	150	200	270
Capacity (cc/rev)	1639	2050	2470	3080	4310
Rated torque (Nm)	6075	7665	9238	11517	15947
Rated speed (r/min)	250	220	220	175	125
Rated power (kW)	110	100	115	130	140
Rated pressure (bar)	250	250	250	250	250
Model	325	400	700		
Capacity (cc/rev)	5310	6800	11600		
Rated torque (Nm)	19850	25250	36057		
Rated speed (r/min)	100	120	100		
Rated power (kW)	140	190	240		
Rated pressure (bar)	250	250	210		



Dual displacement radial piston motor staffa, series HMC

Features

- Dual displacement
- Constant horsepower control option
- Hydro-mechanical electro-hydraulic & positional control options
- High starting & running torque
- High mechanical efficiency
- Consistent, controlled acceleration of loads
- Smooth, steady, low speed operation.
- High performance
- High reliability
- Good cavitation tolerance
- Alternative fluid capability
- 'Energised' piston seal
- Large variety of porting options
- Double lip shaft seal
- Speed and positioning control options
- Wide range of displacements available



Description

The Staffa HMC high torque, low speed, dual displacement motor is designed for rigorous industrial applications.

Various control options include: continuously variable & constant power, integral shuttle valve, directional valve and electronic positional/speed control systems.

The only fully hydrostatically balanced design in the industry.

Modular design concept enables the motor to be continuously adapted to changing customer needs. This concept also allows product availability and service to be matched to market requirements.

Model		30	45	80	125
Capacity (cc/rev)	high	492	737	1475	2048
Rated torque (Nm)	high	1420	2662	5505	7474
Rated speed (r/min)	high	450	450	300	190
Rated power (kW)	high	60	80	112	104
Rated pressure (bar)	high	207	250	250	250
Capacity (cc/rev)	low	246	246	410	983
Rated torque (Nm)	low	662	800	1327	3200
Rated speed (r/min)	low	600	600	600	390
Rated power (kW)	low	35	24	42	62
Rated pressure (bar)	low	207	250	250	250
Model		200	270	325	
Capacity (cc/rev)	high	3080	4588	5326	
Rated torque (Nm)	high	11650	17350	20100	
Rated speed (r/min)	high	125/175	120	100	
Rated power (kW)	high	134	140	140	
Rated pressure (bar)	high	250	250	250	
Capacity (cc/rev)	low	980	1310	1311	
Rated torque (Nm)	low	3200	4275	4275	
Rated speed (r/min)	low	390	350	350	
Rated power (kW)	low	62	54	54	
Rated pressure (bar)	low	250	250	250	



Fixed displacement axial piston motor MX

Features

- Compact
- High performance
- High reliability
- Male and female shaft options
- Optional thrust bearing package
- Built in parking brake option



Model	150	250	500	750
Capacity (cc/rev)	149	252	485	737
Rated pressure (bar)	250	250	250	250
Max pressure (bar)	350	350	350	350
Max speed (r/min)	1600	1200	900	830
Rated torque (Nm)	579	981	1893	2873

Description

These multi purpose motors are available in a wide range of fixed displacements. Mechanical brake units are also available.

A spherical balanced valve plate provides excellent cylinder support, significantly increasing efficiency. Lowered flow velocity through the cylinder ports enables a large self-priming capability.

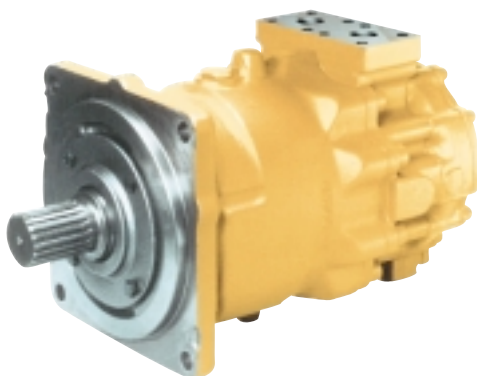
A swash plate with half log type tilting mechanism enables simple construction and reduced maintenance. Extended working life is achieved by a piston return mechanism which self compensates for shoe abrasion.

The later M3X design offers a smaller installation envelope with higher torque and speed capabilities.

Fixed displacement axial piston motor M3X

Features

- Compact
- High performance
- High reliability
- Male and female shaft options
- Optional thrust bearing package
- Built in parking brake
- Advanced low speed characteristics
- Smooth starting characteristics
- High speed operation
- Wide capacity range



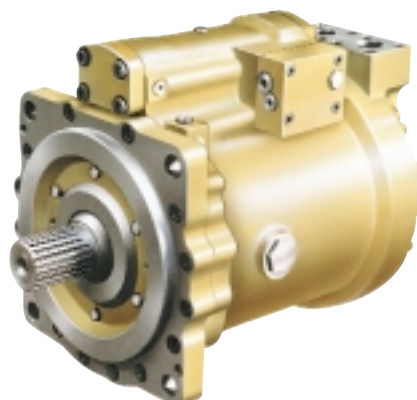
Model	125	200	280	400	530	800	1000
Capacity (cc/rev)	125	195	270	384	533	800	1027
Rated pressure (bar)	300	300	300	300	300	300	300
Max pressure (bar)	350	350	350	350	350	350	350
Max speed (r/min)	2200	1900	1700	1500	1400	1200	1100
Rated torque (Nm)	588	910	1280	1800	2490	3750	4810

The MX series motors have proved extremely reliable in numerous applications including Industrial vehicles, construction equipment, marine and industrial machinery.

Dual displacement axial piston motor MB

Features

Dual displacement
High performance
High reliability
Optional bolt on relief valves
Optional bolt on anti cavitation valves
Compact



Model	500		750	
Capacity (cc/rev)	485	242	737	369
Rated pressure (bar)	250		250	
Max pressure (bar)	350		350	
Max speed (r/min)	960	1200	830	1050
Rated torque (Nm)	1920	955	2900	1465

Description

These multi-purpose motors are available in a range of dual displacements.

The MB series have a range of displacement control options to include:

a) Directional Control Valve

Shifts displacement small or large by remote control signal.

b) Sequence Control Regulator

Automatically shifts displacement small or large depending on the load.

c) Constant Horsepower Control Regulator

Maintains constant horsepower regardless of the load.

d) Speed & CHP Control Regulator

Controls displacement any position by pilot pressure. The pilot pressure can be controlled by a solenoid-operated directional control valve or a pressure-reducing valve.

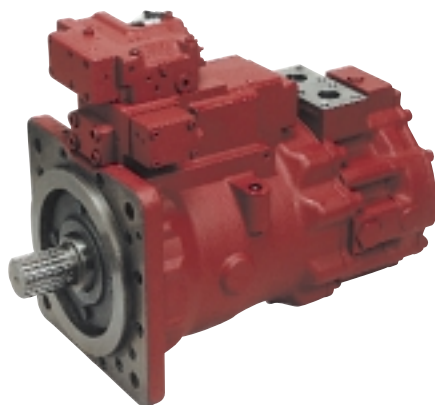
The later M3B design offers a smaller installation envelope with higher torque and speed capabilities.

The MB series motors have proved extremely reliable in numerous applications including Industrial vehicles, construction equipment, marine and industrial machinery.

Dual displacement axial piston motor M3B

Features

Advanced low-speed characteristics
Smooth starting characteristics.
The range of displacement is 100% - 33%
High speed operation
Electric displacement control
Dual displacement (2:1 or 3:1)
High performance
High reliability
Optional bolt on relief valves
Compact



Model	530			800		
Capacity (cc/rev)	533	267	178	800	400	267
Rated pressure (bar)	300			300		
Max pressure (bar)	350			350		
Max speed (r/min)	1400	1700	1700	1200	1500	1500
Rated torque (Nm)	2490	1245	830	3750	1825	1250

Fixed displacement axial piston motor M2X/M5X

Features

Constructed specifically for excavator swing operation

Integrated valving

Direct connection to reduction gear

High performance & reliability

Built in shockless relief valves

Built in anti cavitation valves

Built in parking brake

Optional time delay valve

Optional anti reaction valve



Model M2X	22	45	63	210		
Model M5X				130	180	
Capacity (cc/rev)	22	45	64	129	180	210
Rated pressure (bar)	210	210	300	330	330	300
Max pressure (bar)	250	250	330	400	400	330
Max speed (r/min)	2500	2000	2200	1850	1680	1400
Rated torque (Nm)	72	148	300	670	930	980

Description

The M2X/M5X fixed displacement axial piston motor is specifically designed for excavator swing operation.

This design provides for an extraordinarily compact motor whereby the motors rotating group, integral mechanical brake element and the attached valve options are neatly packaged together. Assembling the mechanical brake around the rotating group means that there is no configuration difference in motor installation which allows for the simple provision of the brake option.

Fixed displacement axial piston motor K3X

Features

Spherical valve plate

Simple construction

High efficiency

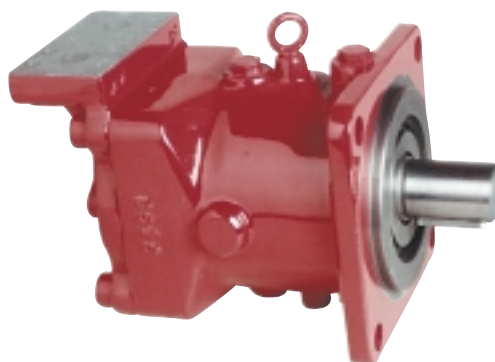
Low noise

High reliability

High performance

High speed capability

Heavy duty versions available



Model	63	80	90	112
Capacity (cc/rev)	64	82	89	111
Rated pressure (bar)	320	320	320	320
Max pressure (bar)	350	350	350	350
Max speed (r/min)	2400	2200	2200	2200
Rated torque (Nm)	250 / 320*	320 / 410*	348 / 446*	432 / 554*

*Heavy duty variant

Description

The K3X fixed displacement axial piston motor is a small, compact motor designed for high speed applications.

The K3X is based on the proven K3V design and provides a small, robust, high speed solution.

Mobile valves

Control valve KMX

Features

- Negative control system
- Diversified multiple functions
- Excellent controllability
- Compact
- Swing priority function
- Straight travel function
- High pressure boost and confluence functions



Description

KMX series multiple control valves are high pressure semi-monobloc type valves, specifically designed to control excavator actuators.

Main and pilot circuits are incorporated in the semi-monobloc housing providing customer specific functions.

Straight line travel, swing priority, and delicate inching operations are all achievable within this highly flexible, compact energy efficient valve block.

Model	13	15	32
Rated flow (L/min)	130	240	360
Max pressure (bar)	350	350	350
Mass (kgf)	95	130	300

Control valve MW

Features

- Conventional open centre bypass
- Diversified multiple functions
- Excellent controllability: a delicate inching operation is possible
- Compactness
- High pressure boost and confluence functions
- Operational mode: manual and hydraulic pilot operations.
- Increased efficiency: a combination of a remote control valve and a variable displacement pump attains an energy saving circuit.



Description

The MW series high pressure, multiple valves are of a sectional type.

They include integral relief valves, load check and service relief valves. They are reputed as high quality control valves for mobile equipment and are often used in crane applications.

These multiple valves have three kinds of sections of parallel, series and tandem circuits. Accordingly, they are applicable to many hydraulic circuits. When necessary, a flow control of one valve section independent of other sections is possible by inserting a pressure compensation valve.

Model	25	28
Rated flow (L/min)	240	350
Max pressure (bar)	350	350
Mass (kgf)	75	4 sections 126 4 sections

Control valve PV48

Features

- High responsiveness
- Low hysteresis
- Optimum damping characteristics
- Compact alloy body
- Variety of control characteristics
- Ability to tailor handle loading requirements
- Wide range of handle options
- Proven reliability



Model	48K	48M
Rated flow (L/min)	20	15
Max inlet pressure (bar)	70	70
Control pressure range (bar)	5 - 44	5 - 44
Lever angle (degrees)	+/- 19	+/- 19

Benefits

The PV48 series are pressure reducing type pilot valves. A unique differential area spool design provides optimum operator feel, control and repeatability.

Various operating curves, detents and handle loadings are available to meet specific application needs.

Low operating forces and integral damping enable extremely fine, precise control.



Control valve PV6P

Features

The operational torque can be tailored to the customer's requirement.

Optional detents available.

The banked design enables a maximum of six directional control valves to be assembled in one unit.

Reduced pressure drop with quick response.

Stable performance over a wide range of operating temperature.



Description

The PV6P is a pressure reducing pilot valve. The 'banked' design enables the option of selecting up to 6 'two spool' controls.

Specifications

Max Inlet pressure (bar)	100
Output pressure (bar)	0~30
Max Back pressure (bar)	3
Rated flow (L/min)	10
Operating torque (max angle) N·m	1~4.1

Control valve RCV

Features

Unique integral damping mechanism (option)

Multiple options

Unique damping mechanism

Resilient dust proof boot

Large return and control flow galleries

Integral check valve (option)

Variety of control characteristics

Robust monobloc construction

Foot pedal or lever type



Description

The RCV series are monobloc reducing pilot valves specifically designed for foot operation.

Four, two and single spool variants are available. An integral damping mechanism and internal check valves are also available.

The robust monobloc construction provides a reliable foot operated valve with superb damping and control characteristics.

Specifications

Rated flow (L/rev)	10
Max Inlet pressure (bar)	100
Control pressure range (bar)	5-44
Lever angle (degrees)	+/-12.5

Industrial valves

Directional spool valve DE6

Features

High durability

Oil immersed wet pin AC & DC solenoid with removable coil

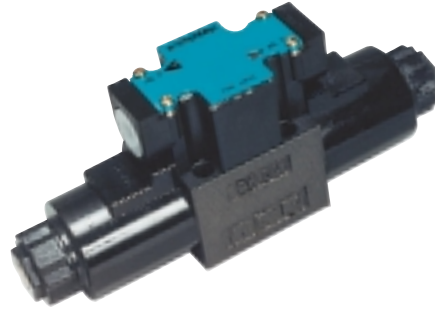
Manual override as standard

Various voltage solenoid available

Large variety of spool configurations available.

P port throttle option available

Various fluid capabilities



Description

Type DE6 series 20 Directional Spool Valves are solenoid operated directional spool valves that are used to control (start, stop and direction) fluid flow.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Electrically operated, DC & AC voltages, wet pin, subplate mounting	6	60	315

Directional control valve DE10

Features

High durability

Oil immersed wet pin AC & DC solenoid with removable coil

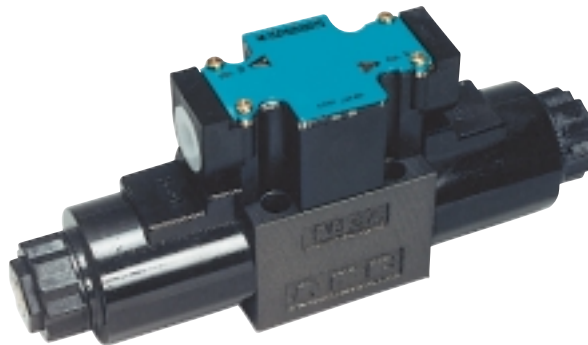
Manual override as standard

Various voltage solenoid available

Large variety of spool configurations available

P port throttle option available

Various fluid capabilities



Description

Type DE10 series 20 Directional Spool Valves are solenoid operated directional spool valves that are used to control (start, stop and direction) fluid flow.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Electrically operated, DC & AC voltages, wet pin, subplate mounting	10	120	315

Directional spool - pilot operated valve DEH16

Features

Optimised casing and spool profile to increase flow capability.

Spring centred and offset versions

Wet pin AC and DC solenoids available

Manual override as standard

Numerous spool configurations

Stroke adjuster option

Various fluid capabilities



Description

Type DEH16 valves are 3/ 4 way directional spool valves with a spring centring control spool. These valves are electro-hydraulic directional spool valves that are used to control (start, stop, and direction) fluid flow.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Electrically operated, DC & AC voltages, wet pin, subplate mounting	16	240	350



Check valve C

Features

In-line threaded connection or angled sub plate versions

High durability

6 cracking pressure options

Leak free enclosure in one direction

Various fluid capabilities



Description

Type C series 10 check valves are direct acting valves that allow free flow in one direction and block any reverse direction flow.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Threaded connections only	6	15	315
Threaded connections only	8	35	315
Subplate & threaded connections	10	50	315
Threaded connections only	15	120	315
Subplate & threaded connections	20	200	315
Threaded connections only	25	300	315
Subplate & threaded connections	30	400	315
Subplate mounting only	52	700	315
Subplate mounting only	62	1100	315
Subplate mounting only	82	1800	315
Subplate & threaded connections	102	3000	315
Subplate & threaded connections	125	4400	315
Subplate & threaded connections	150	6400	315

Check valve CH

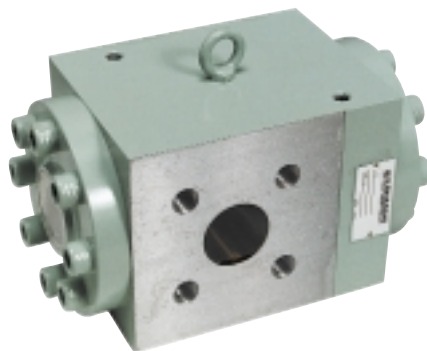
Features

Sub-plate mounting and threaded connections

Shock-free directional control

Internal or external drain port

Various fluid capabilities



Description

Type CH series 10 Check valves are pilot operated valves that may be hydraulic operated to permit reverse flow. Valves may be supplied with or without drain ports.

These valves are used to isolate a hydraulic circuit under pressure.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Threaded connections only	6	15	315
Threaded connections only	8	35	315
Subplate & threaded connections	10	50	315
Threaded connections only	15	120	315
Subplate & threaded connections	20	200	315
Threaded connections only	25	300	315
Subplate & threaded connections	30	400	315
Subplate mounting only	52	700	315
Subplate mounting only	62	1100	315
Subplate mounting only	82	1800	315
Subplate & threaded connections	102	3000	315
Subplate & threaded connections	125	4400	315
Subplate & threaded connections	150	6400	315

Direct acting pressure relief valve RD

Features

High Response

Cartridge type available

Easily built into manifold

Compact

Seat type minimises internal leakage compared to balanced type relief valve

Various fluid capabilities



Description

Type RD Series 10 Pressure relief valves are direct operated, seat type, relief valves, used to prevent sudden pressure increases and to support the load within a hydraulic system.

The valves primarily comprise a body, spring, poppet with damping spool (pressure stages 25 to 400 bar), (or ball pressure stage 630 bar – size 10 only) and an adjustment element that facilitates setting system pressures.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Cartridge valve & threaded connections	6	50	400
Cartridge valve & threaded connections	8	120	630
Subplate mounting, cartridge valve & threaded connections	10	120	630
Cartridge valve & threaded connections	15	250	400
Subplate mounting, cartridge valve & threaded connections	20	250	400
Cartridge valve & threaded connections	25	330	315
Subplate mounting, cartridge valve & threaded connections	30	330	315

Pilot relief valve RB/RBE

Features

Accurate movement

Quick response

High stability

Relatively small pressure override

Smooth unload function

3 adjustment methods

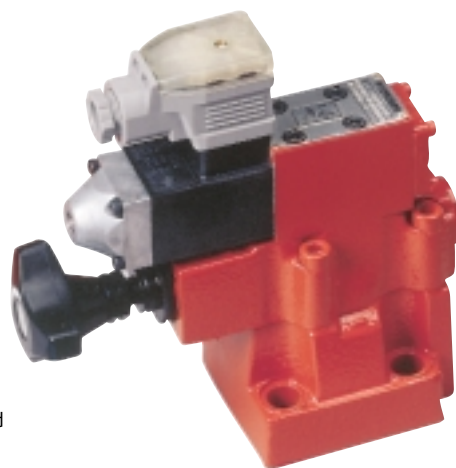
2 pressure ratings

Low internal pressure

Various fluid capabilities

Suitable for installation in manifolds

Solenoid operating unloading via a built on directional spool valve.



RBE pictured

Description

Type RB and RBE series 10 Pressure relief valves are balance piston, seat type, relief valves that are used:

To control the maximum pressure within a hydraulic circuit, preventing overload.

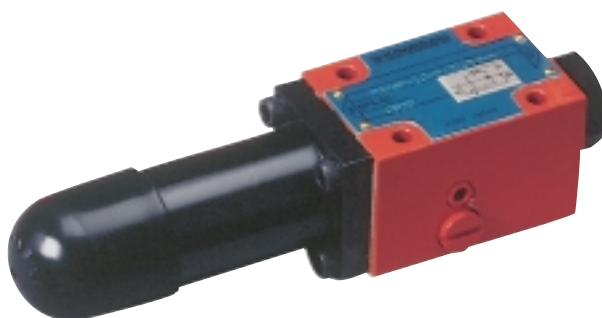
To control by loading/unloading hydraulic circuit pressure.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounted	10	200	315
Subplate mounted	20	400	315
Subplate mounted	30	600	315

Direct acting pressure reducing valve PRD

Features

- High response
- Cartridge type available
- Easily built into manifold
- Compact
- Seat type minimises internal leakage compared to balanced type relief valve
- Various fluid capabilities
- 4 pressure ranges
- 3 adjustment methods
- With or without free-flow check
- Stable pressure control
- Suitable for manifold mounting



Description

Type PRD6P Pressure Reducing Valve is a direct operated valve of the 3 way design ie with pressure relief function on the reduced pressure side. The valve is used to reduce the pressure on a section of a circuit.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounted	6	30	315
Subplate mounted	10	45	315

Pilot reducing valve PRB

Features

- Compact construction
- Large flow capability
- 2 pressure range settings
- 3 adjustment methods
- Various fluid capabilities
- Stable pressure control
- Suitable for manifold mounting



Description

Type PRB series 10 pressure reducing valves are balanced piston, pilot operated reducing valves that are used to reduce pressure in a hydraulic circuit. Type PRB series 10 pressure reducing valves will maintain the specified secondary side pressure even when the primary side pressures fluctuate.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounted	10	80	315
Subplate mounted	20	200	315
Subplate mounted	30	300	315

Brake valve

B

Features

- Quick response
- Minimal internal leakage
- Chatter resistant mechanism
- Stable operation
- 4 circuit configurations



Description

Type B series 10 brake valves primarily comprise housing, direct acting relief valve, check valve and throttle valve.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate & threaded connections	10	110	315
Subplate & threaded connections	15	230	315
Subplate & threaded connections	20	230	315
Subplate & threaded connections	25	330	315
Subplate & threaded connections	30	330	315

Counterbalance valve

CBD

Features

- Compact construction
- Quick response
- Chatter resistant mechanism
- Seat type relief minimises internal leakage
- Various fluid capabilities



Description

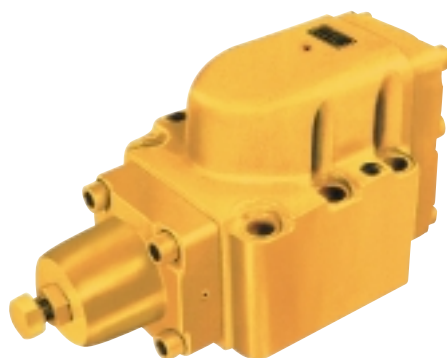
Type CBD Counterbalance valves primarily comprise housing, direct acting relief valve and check valve.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounted only	6	45	315
Subplate & threaded connections	10	110	315
Subplate mounted only	15	230	315
Subplate & threaded connections	20	230	315
Subplate mounted only	25	330	315
Subplate & threaded connections	30	330	315

Counterbalance valve KDZ

Features

- Minimal internal leakage
- Stable breaking action
- 3 braking pressure ratings
- 2 braking flow ratings
- Unloading function



Description

Type KDZ counterbalance valves primarily comprise housing, spool, piston, springs, adjusting screw and check valve.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounted	15	120	250
Subplate mounted	25	240	250
Subplate mounted	40	500	250
Subplate mounted	63	1200	250



Throttle & throttle check valve T/TC

Features

Suitable for direct in-line mounting

Pressure & viscosity dependant

Threaded connection for easy installation

Scale provided for accurate and repeatable settings

High precision control notch incorporated for precise settings

Various fluid capabilities



Description

Type T series 10 throttle valves and type TC throttle check valves are pressure and viscosity dependent throttle check valves. The valves throttle the flow in one direction and allows free flow in the reverse direction.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Pipe fitting connection	6	15	315
Pipe fitting connection	8	30	315
Pipe fitting connection	10	50	315
Pipe fitting connection	15	120	315
Pipe fitting connection	20	200	315
Pipe fitting connection	25	300	315
Pipe fitting connection	30	400	315

Two way compensated valve FJC

Features

Thin "blade" type orifice provides superior temperature and viscosity compensation

Integral check option

Numerous flow ranges available

Various fluid capabilities

Stroke limiter can be mounted to stop jumping at start up (optional)

Large selection of maximum flow rates to enable optimum control.

Rotary knob with scale

Rotary adjusting knob has a lock to stop accidental adjustment



Description

Type FJC series 10 Flow Control Valves are used to maintain a constant flow independent of pressure and temperature. These valves do not have the options of external closing and check valves.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Subplate mounting	5	15	210
Subplate mounting	10	50	315
Subplate mounting	16	160	315

Sandwich check valve SC

Features

Direct operated check design

7 different isolating functions available

leak-free closure ports

Used in vertical stacking assemblies

Various fluid capabilities



Description

Type S-C6 and S-C10 series 10 check valves are directly controlled valves of sandwich plate design. The valves provide leak free closure in one direction and free flow in the opposite direction.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Sandwich type	6	40	315
Sandwich type	10	100	315

Sandwich pilot check valve S-CH

Features

Pilot operated check design

Used in vertical stacking assemblies

Leak-free closure of one or two actuator ports

Various fluid capabilities



Description

Sandwich Type S-CH 10 series 10 Check Valves are pilot controlled valves of sandwich plate design. The valves provide leakage free closure in one direction for one or two actuator ports and free flow in the other direction. These valves can be used for prolonged standstill periods.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Sandwich type	6	50	315
Sandwich type	10	80	315

Sandwich relief valve S(2)RB

Features

Pilot operated relief design

Used in vertical stacking assemblies

2 pressure ranges

5 or more circuit configurations

Single or dual relief cartridges can be incorporated

Various fluid capabilities



Description

Type Sandwich S-2RB series 10 Pressure Relief Valves are pilot controlled valves of sandwich plate design. The valves provide pressure limitation within a hydraulic system.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Sandwich type	6	60	315
Sandwich type	10	100	315

Pressure reducing valve S-PRD

Features

Direct acting pressure reducer design

Used in vertical stacking assemblies

4 pressure ranges

Optional check valve

3 adjustment methods

Various fluid capabilities



Description

Type S- PRD series 10 pressure reducing valves are direct acting valves of sandwich plate design, that provide pressure reduction with a pressure relief function on the secondary side.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Sandwich type	6	30	315
Sandwich type	10	45	315

Double throttle check valve S-2TC

Features

Dual Throttle design

Used in vertical stacking assemblies

Meter-in and meter-out circuitry available

Used to control and limit the actuators main and pilot flows

Various fluid capabilities



Description

Type Sandwich S-2TC series 10 valves are double throttle /check valves of sandwich plate design. The valves provide pressure limitation to the main or pilot flow of one or two actuators. The valves limit the flow in one direction and allow free flow in the other.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Sandwich type	6	20	315
Sandwich type	10	65	315



Logic Elements

Logic elements

KLD

Features

Installation to DIN 244342

Porting patterns to DIN 244342

Poppet with and without damping

Two area ratios

5 different springs available



Description

Logic KLD type valves provide a reliable and cost effective method of controlling high pressures and flows.

The complimentary LU range of control covers provide various control options which can be integrated into the cover or provide the ability to mount additional secondary valves.

Control caps

LU

A range of mountable control caps are available for the logic elements.

Description	Nominal size	Qmax (L/min)	Pmax (bar)
Cartridge Type	16	180	420
Cartridge Type	25	450	420
Cartridge Type	32	680	420
Cartridge Type	40	1200	420
Cartridge Type	50	2100	420
Cartridge Type	63	3000	420
Cartridge Type	80	5200	420
Cartridge Type	100	8200	420



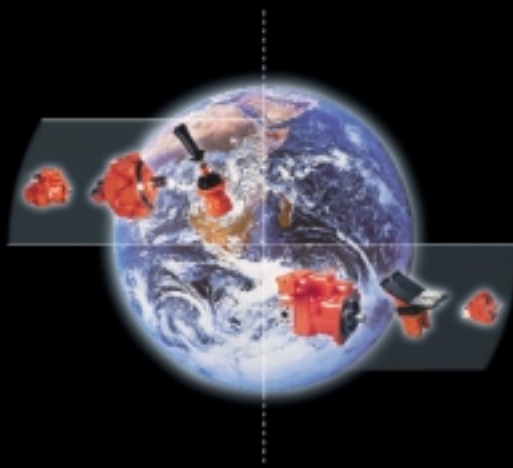


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