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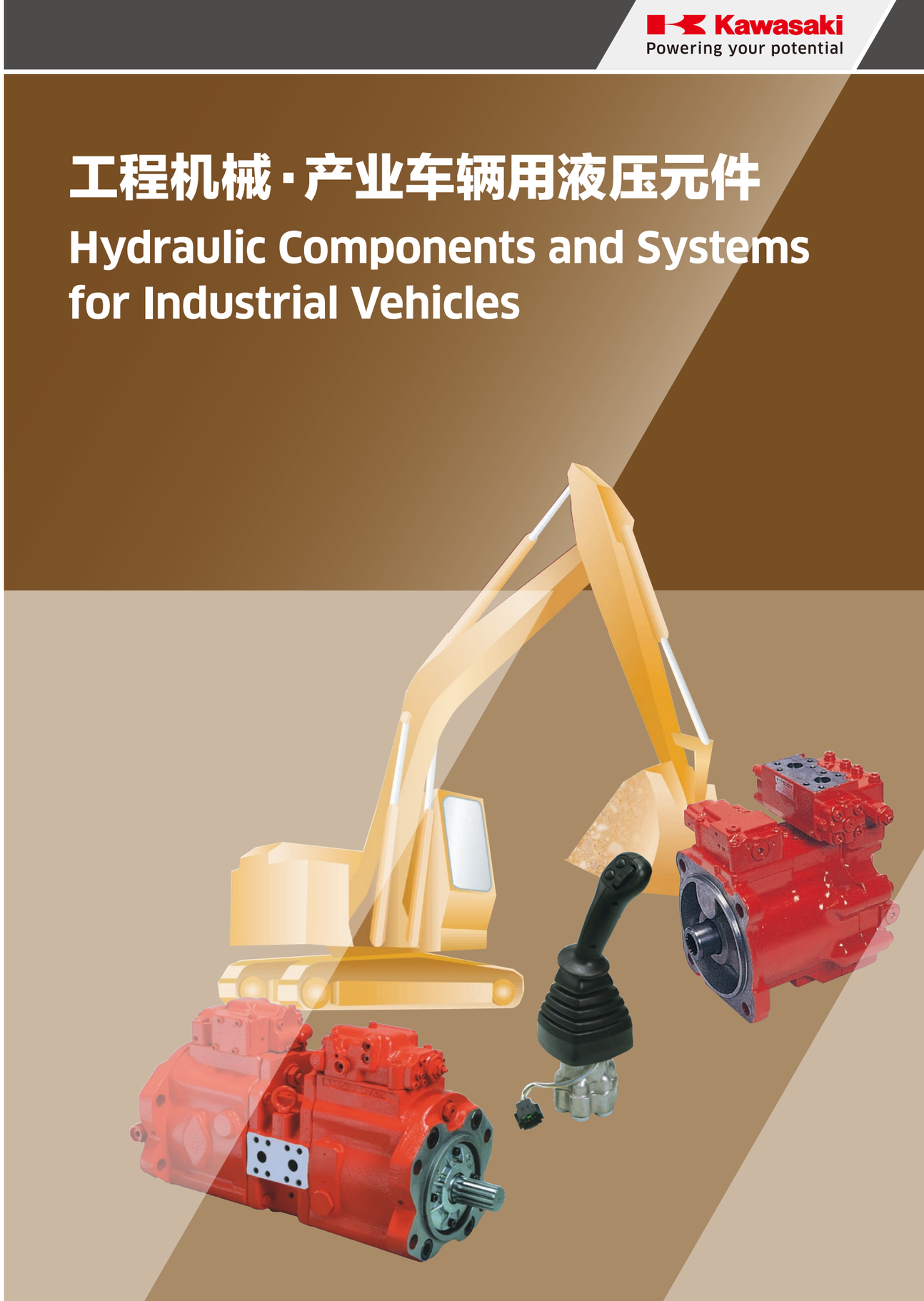
Kawasaki
Powering your potential

工程机械·产业车辆用液压元件

Hydraulic Components and Systems for Industrial Vehicles



强大的动力、精确的控制、和优良的可靠性——
这就是获得广泛好评的Kawasaki的品牌。
Power and Control from Kawasaki.

川崎精密机械 (KPM) 的液压元件及系统被广泛用于以液压挖掘机和起重机为主的作为各种工程机械、铲车等搬运机械、以及农业机械和特殊用途车辆等……要求大「动力」和可靠的「控制性」的各种产业车辆。

对在苛刻的作业条件下工作的这些产业用车辆，最重要的是「可靠性」「控制性」，因此在这方面获得广泛好评的液压元件：“Kawasaki”品牌为世界各国客户所认同。

Kawasaki's Hydraulic Components and Systems are utilized world-wide to provide the power source in Excavators, Cranes, Fork Lifts, Agricultural Machinery and many other Special Purpose Vehicles.
Kawasaki has an enviable reputation for producing high quality hydraulic components for high power applications requiring precise control. Designed for operation in the most rigorous of operating conditions Kawasaki's Hydraulic components are market leaders in reliability and controllability.

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工程机械篇
Construction Machinery

■ 液压挖掘机 Hydraulic Excavator

代表工程机械的液压挖掘机，现在其大多数均由日本生产。可以说日本的挖掘机性能享誉世界。其背景是由于日本的挖掘机厂家对性能的不断挑战，因而事实上伴随此挑战造就了我们的液压元件的不断发展和进化。

本公司自20世纪60年代起，随着液压挖掘机快速的普及，正式参与和开拓了此领域。自那以来、不断开发生产着作为挖掘机的巨大动力源的泵、和将此动力转换成工作的马达、以及能自由自在控制和实现这些的多路控制阀和先导阀，作为在液压系统有着悠久历史及卓越工程声望的厂家，我们为挖掘机的高科技化作出了贡献。

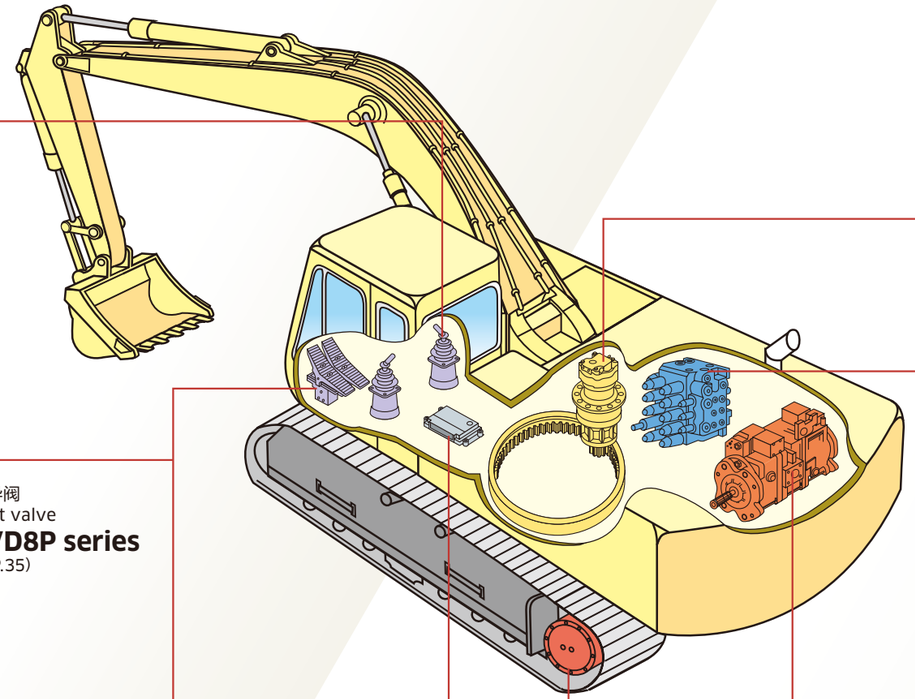
Kawasaki has been supplying hydraulic components to this market since the 1960's when Hydraulic Excavators first became widely established. Since then Kawasaki has been successively developing and manufacturing hydraulic pumps to provide the immense power source required by these earth moving machines. Kawasaki has also developed Hydraulic Motors to apply this power to enable the machines movement and various Control Valves to provide the operator with the precisefeel and control required to undertake a wide range of tasks from delicate soil grading to trenching, rock breaking and demolition.
As a total Hydraulic System engineering company, Kawasaki is continually contributing to the development of these high tech machines.

先导阀
Pilot valve
PV48K series
(→P.35)

先导阀
Pilot valve
PVD8P series
(→P.35)

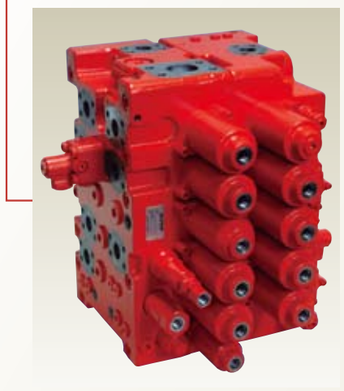
先导阀
Pilot valve
PVD6P series
(→P.35)

控制器
Controller
KC-MB-20 series
(→P.38)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
MCB series (→P.29)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M2X/M5X series (→P.29)



多路控制阀
Multiple control valve
KMX series (→P.32)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V series (→P.25)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K7V series (→P.26)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K7SP series (→P.26)

任选元件 Option

锁定阀
Holding valve
KHCV series (→P.36)
保持油缸不掉落用阀
最适合起重机类使用

电液比例阀 (插装式)
Proportional pressure-reducing valve (cartridge type)
KDRDE5K (→P.36)

先导阀
Pilot valve
PV6P series (→P.35)
偏置、推土铲等
各种工作装置用先导阀

电磁换向阀 (插装式)
Solenoid-operated directional control valve (cartridge type)
KWE5K (→P.36)
使用于切换泵模式、操作类截流用等

多联式电磁阀阀组
Solenoid-operated directional control valve block
KWE5 (→P.36)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

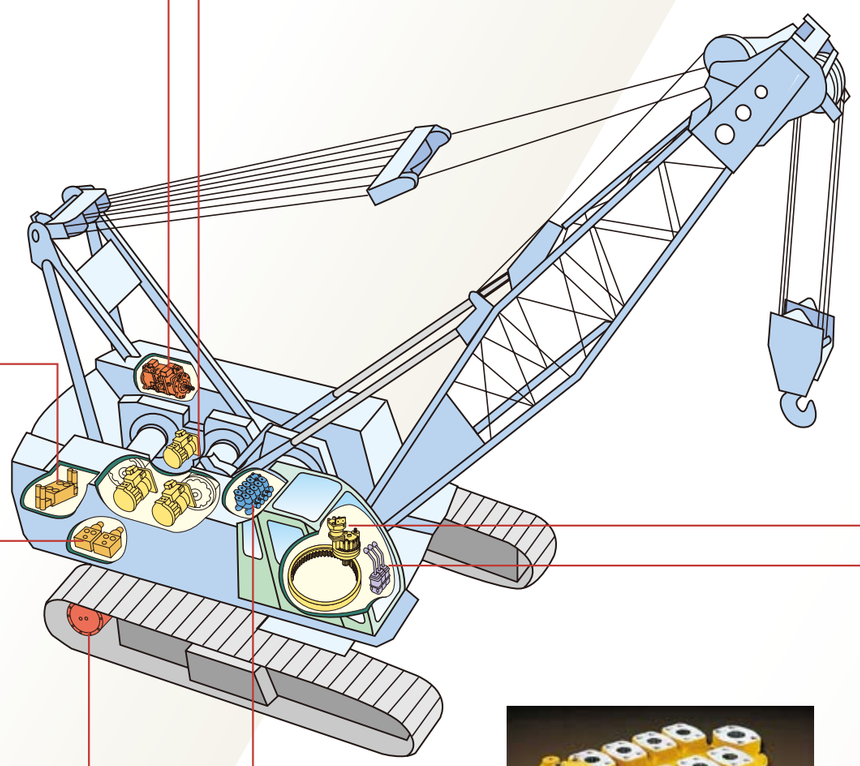
■ 履带式起重机 Crawler Crane

履带式起重机要求功率大和高度控制、且高可靠性，本公司的液压元件可对应这一要求。主泵可提供高可靠性的K3V/K5V/K7V系列的泵、升降用马达有M3X/M3B系列的马达、还有回转马达用的带减速机M2X-RG系列的马达。

Hydraulic Systems used in Crawler Cranes require very high powers with precise control and high reliability. In these systems Kawasaki's robust K3V/K5V/K7V series of pumps are utilized as the main hydraulic power source with M3X/M3B series motors enabling the hoisting application. The M2X-RG motor with an integral reduc-tion gear is used to rotate the main body.

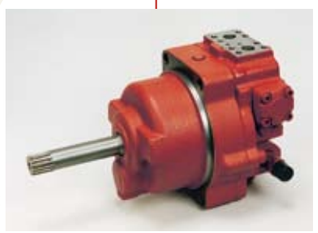
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

电液比例多路控制阀
Proportional multiple control valve
KMC series
(→P.34)



通用阀
Control valve
(→P.39)

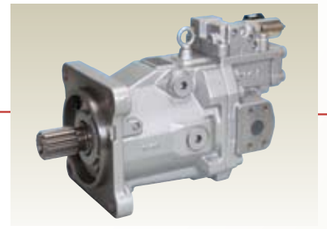
SUN插装阀阀组
SUN cartridge valve block
(→P.40)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
MCB series (→P.31)

多路控制阀
Multiple control valve
MW series (→P.32)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X/M3B series (→P.30)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

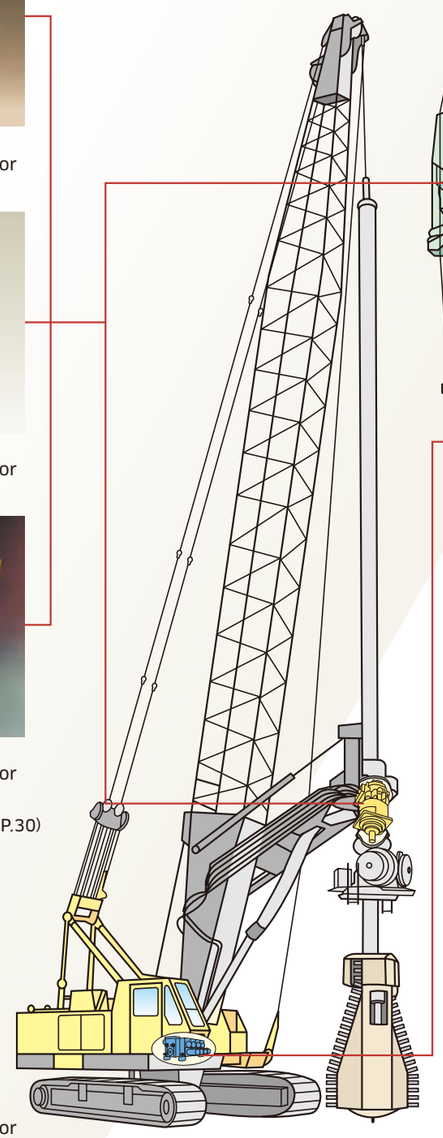
带减速机斜盘式轴向柱塞马达
Swash plate type axial piston motor with reduction gear
M3X/M3B-RG series (→P.30)

起重机回转用带减速机
斜盘式轴向柱塞马达
Swash plate type axial piston motor with reduction gear
M2X/M5X-RG series (→P.29)

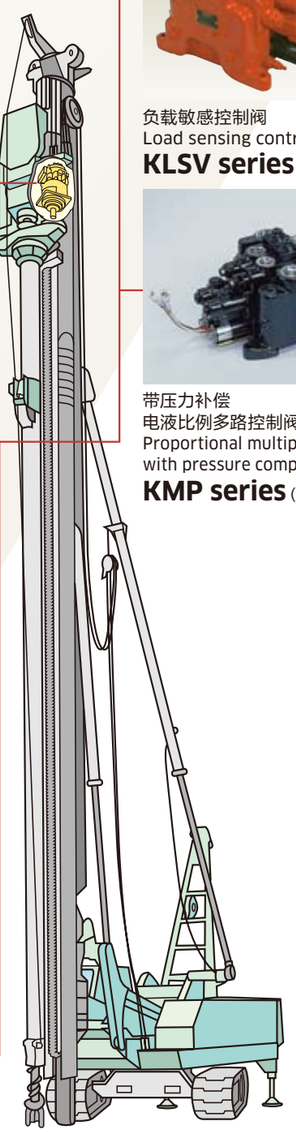
先导阀
Pilot valve
TH40P series (→P.35)

先导阀
Pilot valve
PV6P series (→P.35)

多联式电磁阀阀组
Solenoid-operated directional control valve block
KWE5 (→P.36)



旋挖钻机 **Earth Drill**



打桩机 **Pile Driver**

负载敏感控制阀
Load sensing control valve
KLSV series (→P.33)

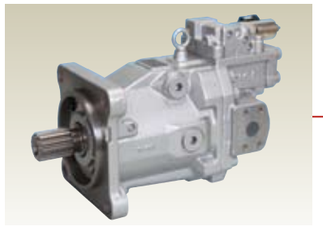
带压力补偿
电液比例多路控制阀
Proportional multiple control valve with pressure compensator
KMP series (→P.34)

■ 越野起重机 Rough Terrain Crane

能运用自如地迅速、正确作业的越野起重机。在该车辆上使用有作为驱动源的高压液压泵、各种卷筒马达、和能忠实执行操作人员操作的各种先导阀、以及进行复杂控制的控制阀。

Various Kawasaki Hydraulic components are utilized on these vehicles including High Pressure Pumps, Motors for winching and precise control valves enabling intricate lifting operations.

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X series (→P.30)

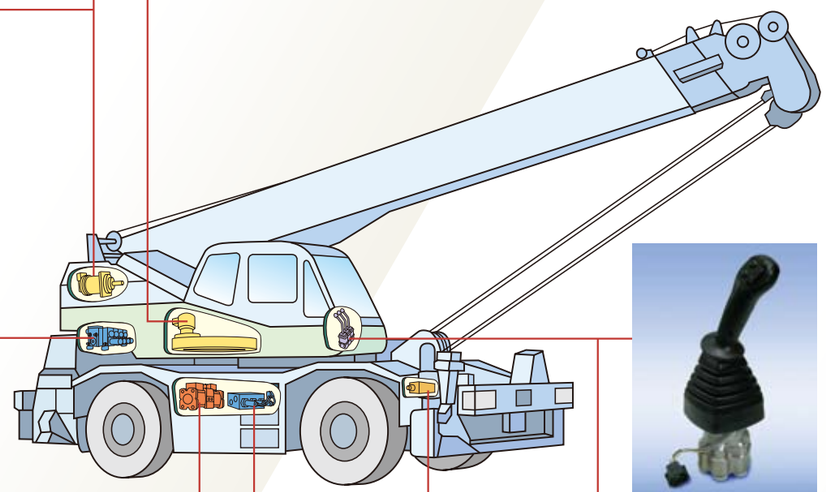


斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

负载敏感控制阀
Load Sensing Control Valve
KLSV series (→P.33)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M2X/M5X-RG series
(→P.29)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M2X/M5Xseries (→P.29)



先导阀
Pilot valve
PV48K series
(→P.35)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

多联式电磁阀阀组
Solenoid-operated directional control valve block
KWE5 (→P.36)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

先导阀
Pilot valve
PV6P series (→P.35)

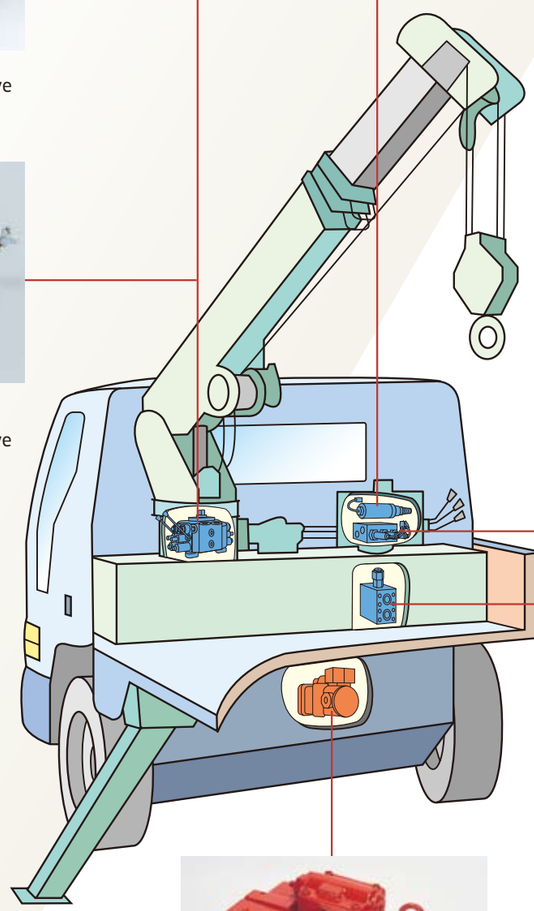
■ 汽车式起重机 Truck Mounted Crane

通过采用可进行远程控制的电液比例控制阀、能进行各种各样的控制。其他的控制阀类、还可进行SUN插装阀组合的紧凑型设计。

Various control options are available including the use of proportional and conventional cartridge valves with appropriate manifolds.

电液比例多路控制阀
Proportional multiple control valve
KMC series (→P.34)

带压力补偿
电液比例多路控制阀
Proportional multiple control valve with pressure compensator
KMP series (→P.34)



插装式电液比例减压阀
Proportional pressure-reducing valve (Cartridge type)
KDRDE5K (→P.36)

多联式电磁阀阀组
Solenoid-operated directional control valve block
KWE5 (→P.36)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

■ 轮式装载机 Wheel Loader

在装载碎石和木材及行驶转向在颠簸路面的轮式装载机上，使用着以专用控制阀KML系列为首、以及在液压挖掘机上经过不断钻研和具有丰富实绩的各种先导阀和液压泵。

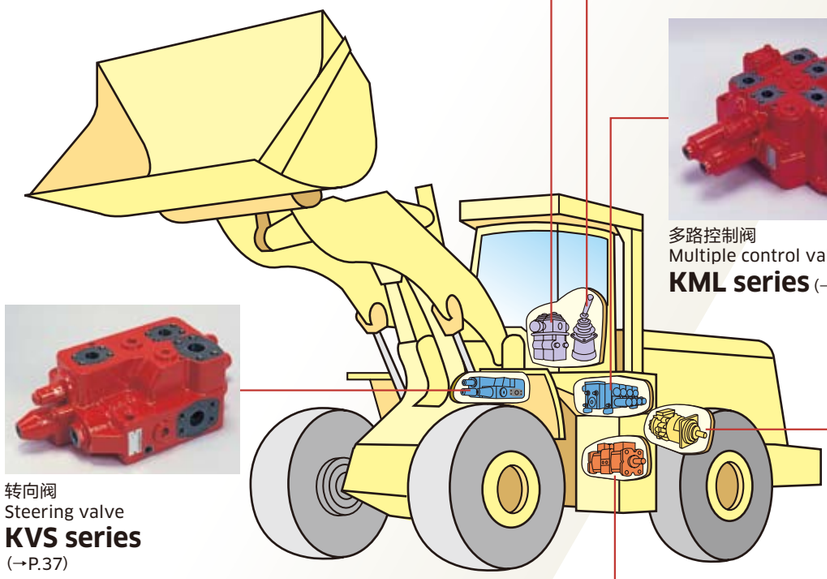
KML multiple control valves and a variety of remote control valves as well as pumps are used to realize precise operation in wheeled loaders for carrying broken stones or timber.

通用阀
Control valve
(→P.39)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

先导阀
Pilot valve
TH40PS series
(→P.35)

先导阀
Pilot valve
TH40MS series
(→P.35)



多路控制阀
Multiple control valve
KML series (→P.33)

负载敏感控制阀
Load sensing control valve
KLW series (→P.33)

转向阀
Steering valve
KVS series
(→P.37)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

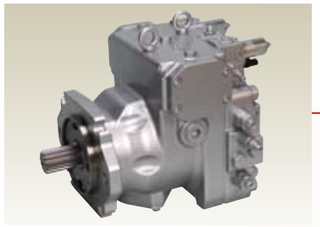
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)

■ 运输车 Carrier

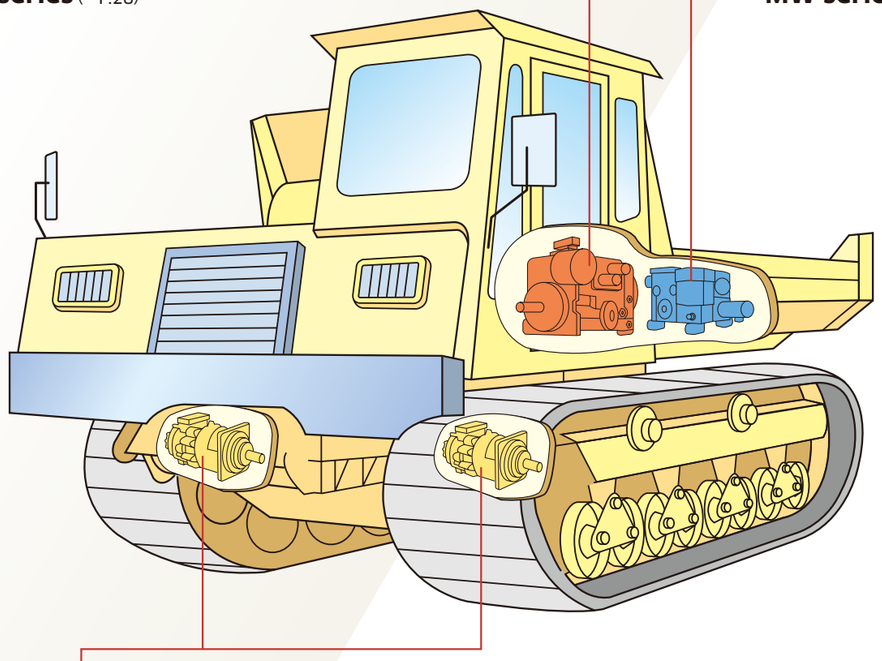
在运输车的行走系统上，使用着作为行走驱动用并获好评的K4V系列的泵及各种控制阀。

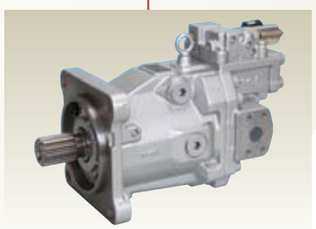
The closed loop K4V pump and a variety of valves are used in a carrier.



斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)

多路控制阀
Multiple control valve
MW series (→P.32)





斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

通用阀
Control valve
(→P.39)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

■ 压路机 Roller

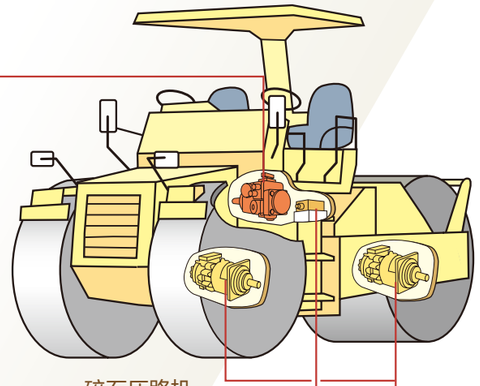
作为主泵、斜盘式轴向柱塞泵K4V系列在高压域当然不用说，而且在低压和小倾角域也发挥了高效率，因此获得广泛好评。

The K4V closed loop pump offers a wide range of power control which is fully utilized in this type of vehicles.

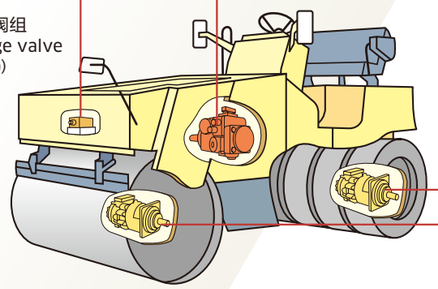
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)

SUN插装阀阀组
SUN cartridge valve block (→P.40)

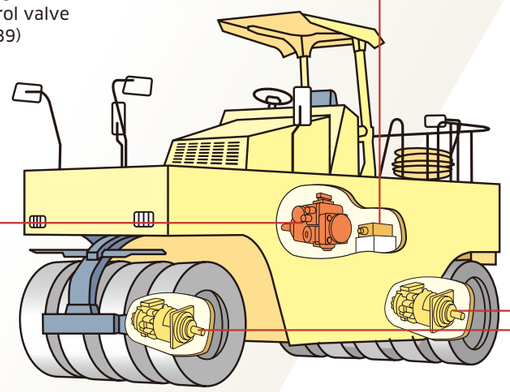
通用阀
Control valve
(→P.39)



碎石压路机
Macadam Roller



振捣压路机 **Vibratory Roller**



轮胎压路机 **Tire Roller**

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

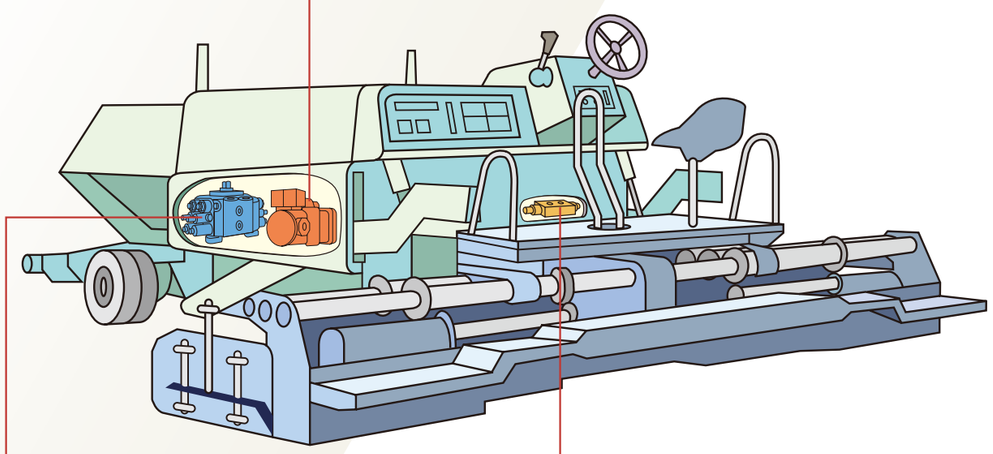
■ 沥青摊铺机 Asphalt Finisher

在沥青摊铺机的行走上使用的是作为闭环回路用的K4V系列泵、作为开环回路用的K3VL系列泵、和KMP10控制阀。另外、还使用了调整撒布量等的各种丰富多彩的液压控制阀。

K3VL open loop pumps and K4V closed loop pumps are utilized in this vehicle. A various valves are also used to control the asphalt volume.

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)



带压力补偿
电液比例多路控制阀
Proportional multiple control valve
with pressure compensator
KMP series (→P.34)

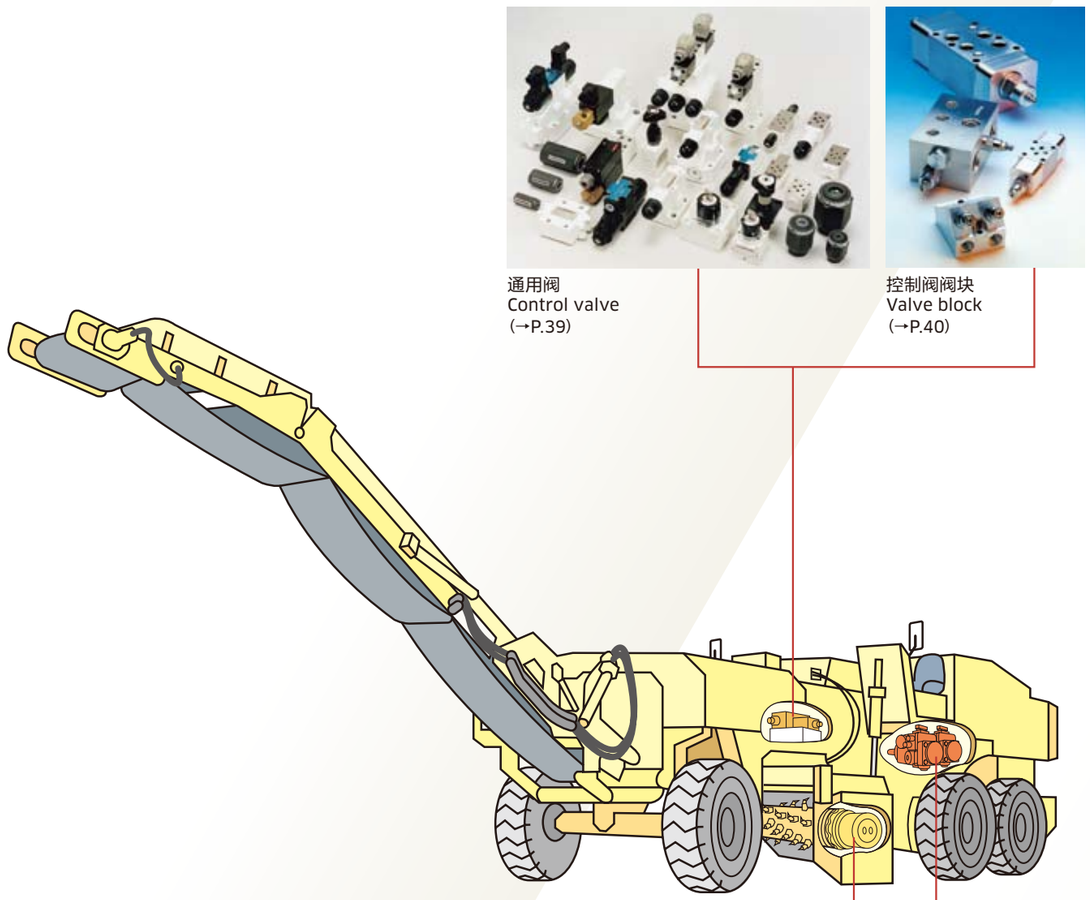
通用阀
Control valve
(→P.39)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

■ 刨路机 Road surface Planer

刨路机是用作补修沥青铺装的车辙破损和裂缝等损坏的机械。主泵多采用闭环回路用泵K4V系列。而刨刀的驱动可根据不同的要求采用本公司丰富多彩的马达群来对应。另外、可利用SUN阀组合的控制阀阀组实现各种控制。

The closed loop K4V pump is utilized as the main source of power for these machines with both M3X and DNB motors meeting the typical specifications for driving the cutter heads. Various control options are achieved by utilizing manifold blocks and cartridge valves.



通用阀
Control valve
(→P.39)

控制阀阀块
Valve block
(→P.40)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3B/M3X series (→P.30)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)

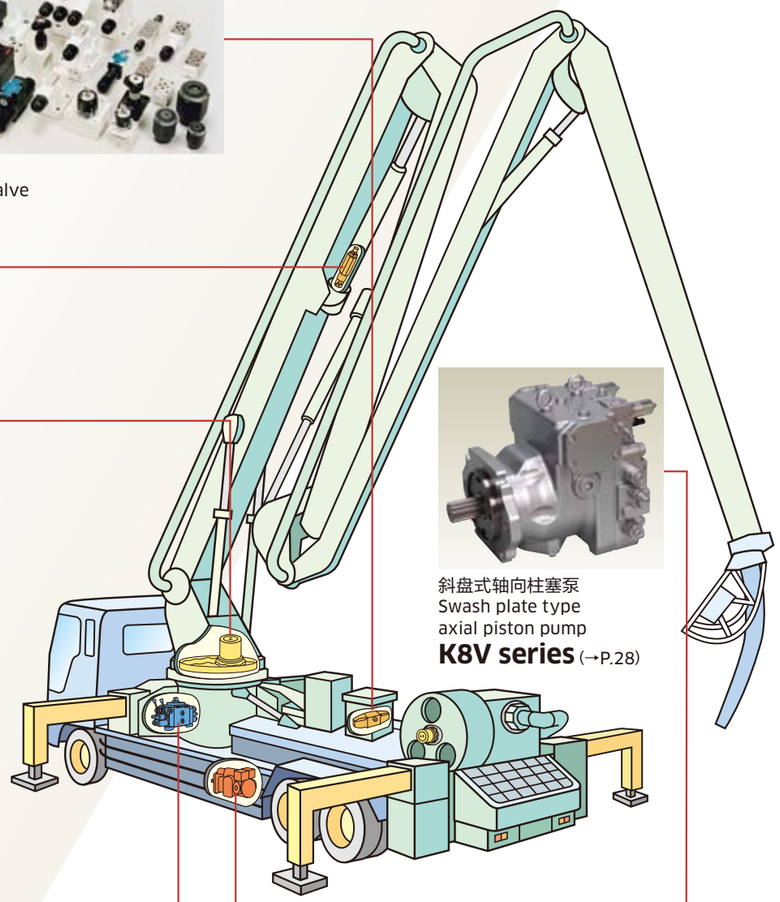
■ 混凝土泵车 Concrete Pumping Vehicle

主泵采用在工程机械获得好评的斜盘式轴向柱塞泵K3V/K3VL系列、臂架的回转采用在液压挖掘机获得好评的M3X系列。另外、在臂架的伸缩处有装入电液比例阀的控制阀，可使伸缩时的冲击得到缓冲。

High pressure K3V and medium pressure K3VL axial piston pumps are typically used in these concrete pumps. M3X Swing motors are used to rotate the boom. These components enjoy an established reputation in excavator manufacture and are equally suited to these applications. Shock less control of boom extension and contraction is achieved by utilising proportional multiple control valves with pressure compensator.

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

通用阀
Control valve
(→P.39)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X series (→P.30)

斜盘式轴向柱塞泵
Swash plate type
axial piston pump
K8V series (→P.28)

电液比例多路控制阀
Proportional multiple control valve
KMC series (→P.34)

带压力补偿
电液比例多路控制阀
Proportional multiple control valve
with pressure compensator
KMP series (→P.34)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series (→P.25～26)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

■ 履带式钻机 Crawler Drill

泵对应的规格为K3V/K5V系列、K3VL系列。另外、控制各种功能的控制阀类，可通过先导阀、电液比例阀、SUN阀、通用阀等的组合，提供与设计要求相匹配的控制阀阀组。

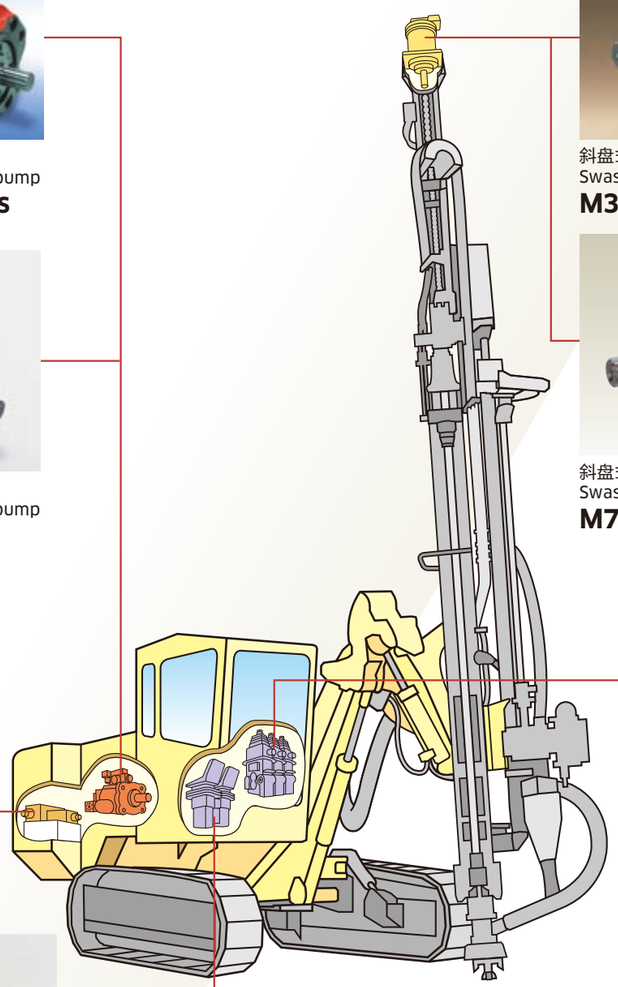
K3V/K5V and K3VL open circuit piston pumps are again typically used in these applications. Composite valve blocks, remote pilot valves and cartridge valves provide a complete range of control options.

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

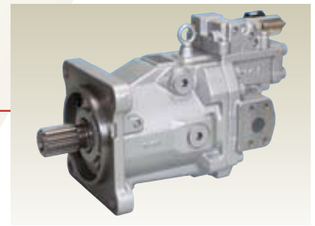
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

控制阀阀组
Valve block
(→P.40)

通用阀
Control valve
(→P.39)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X series (→P.30)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

先导阀
Pilot valve
TH40P series
(→P.35)

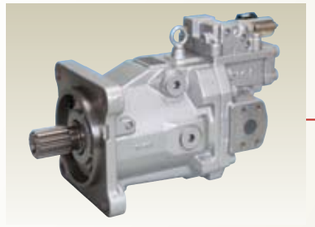
先导阀
Pilot valve
PVD8P series
(→P.35)

■ 套管驱动装置 Casing Driver

广泛使用于钢管的支柱支撑施工和基础障碍物拆去等的回转式套管驱动装置。在要求强大动力的套管的回转上，本公司的斜盘式轴向柱塞马达M3X/M3B发挥了威力。液压源、可提供获得广泛好评的高输出功率密度的K3V/K3VG/K3VL系列泵。

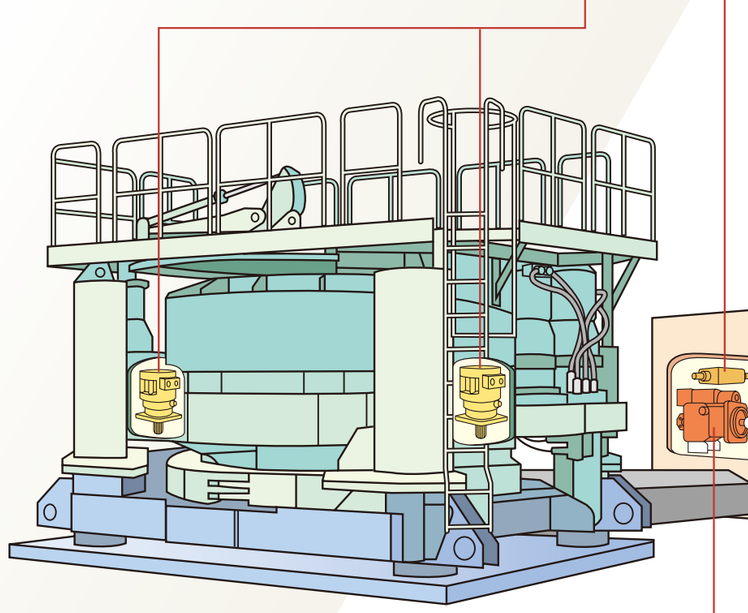
As to the Case rotating type driver that widely takes an active part in removing of the pillar line execution and foundation of the steel tube,the Swash plate type axial piston motor M3X/M3B series is used for the rotation of the casing that requires enormous power. The source of oil pressure is supported by the pumps of K3V, K3VG and K3VL series having the good reputation in high output density design.

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X/M3B series (→P.30)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

通用阀
Control valve
(→P.39)



斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VG series (→P.27)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

■ 破碎机 Crusher

该破碎机的主泵使用的是K3V/K5V · K3VL系列。而作为破碎机驱动用的马达、备有以M3X/M3B系列为主和HMKB系列等丰富多彩的马达。

K3V/K5V and K3VL open circuit piston pumps are frequently installed in these machines.
A range of suitable motor types are also available including M3X/M3B and HMKB series depending upon the specific application.

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3V/K5V/K7V series
(→P.25~26)

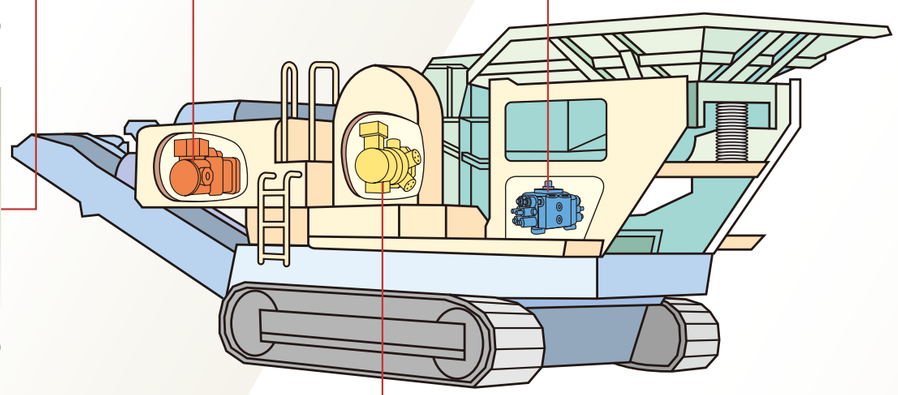
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)

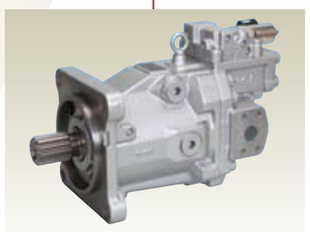
通用阀
Control valve
(→P.39)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

带压力补偿
电液比例多路控制阀
Proportional multiple control valve with pressure compensator
KMP series (→P.34)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M3X/M3B series (→P.30)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

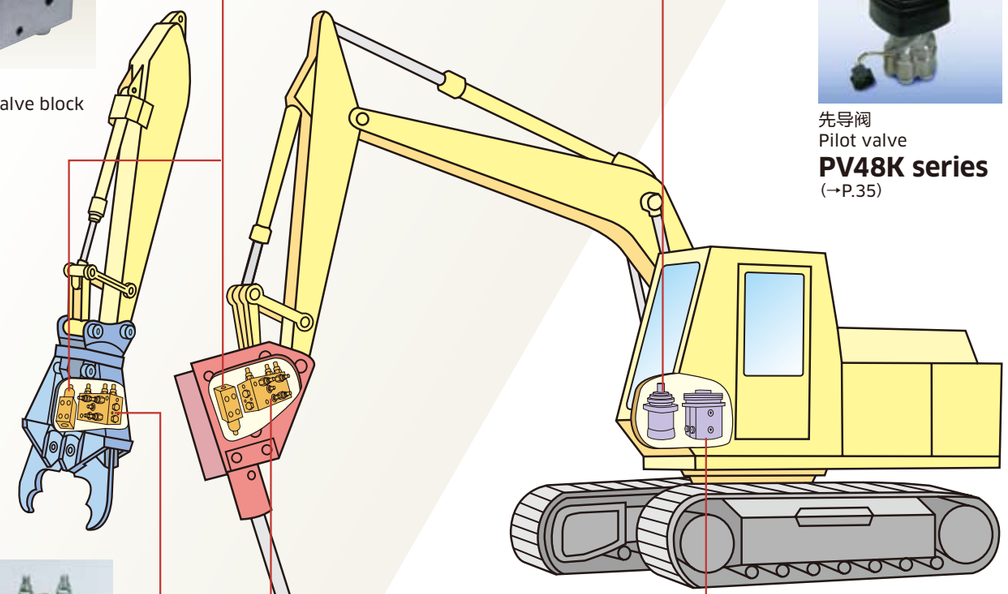
低速大扭矩径向柱塞马达
Low speed, high torque radial piston motor
HMKB series (→P.31)

■ 液压破碎锤/液压剪 Hydraulic Braker / Crusher Jaw

作为液压挖掘机用附属装置而广泛使用的破碎 · 剪碎作业的液压破碎锤和液压剪。这些装置是一种要求：不仅在大功率时能快速工作，而且还能平稳流畅地进行微速操作的装置，用本公司的先导阀和SUN阀组合的增速 · 增压阀可满足这一要求。

These attachments are frequently used to break and crush work pieces and they require both fast powerful movement and, on occasion, the highly controlled smooth and slow application of force. The variety of Proportional, Directional and Pilot valves available from Kawasaki ensure these specifications are always met.

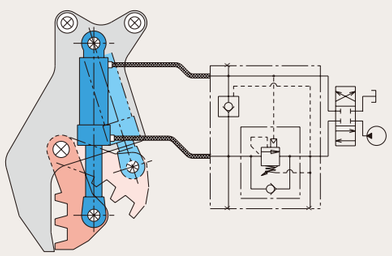
SUN插装阀阀组
SUN cartridge valve block
(→P.40)



先导阀
Pilot valve
PV48K series
(→P.35)

增速用SUN插装阀阀组
SUN cartridge valve block
(→P.40)

先导阀
Pilot valve
PV6P series
(→P.35)



用平衡阀和液动单向阀构成的复合增速阀
An application of regenerative circuit

多联型电磁阀阀组
Solenoid-operated directional control valve block
KWE5 (→P.36)

产业车辆篇
Industrial Vehicle

■ 铲车 Forklift Truck

铲车控制所使用的是获得用户好评的电液比例多路控制阀KMC10L系列，由于其优良的控制性、小泄漏量、元件的紧凑化，为铲车的性能提高作出了极大的贡献。另外、还备有大型机种用的K4V系列泵、MW系列阀。

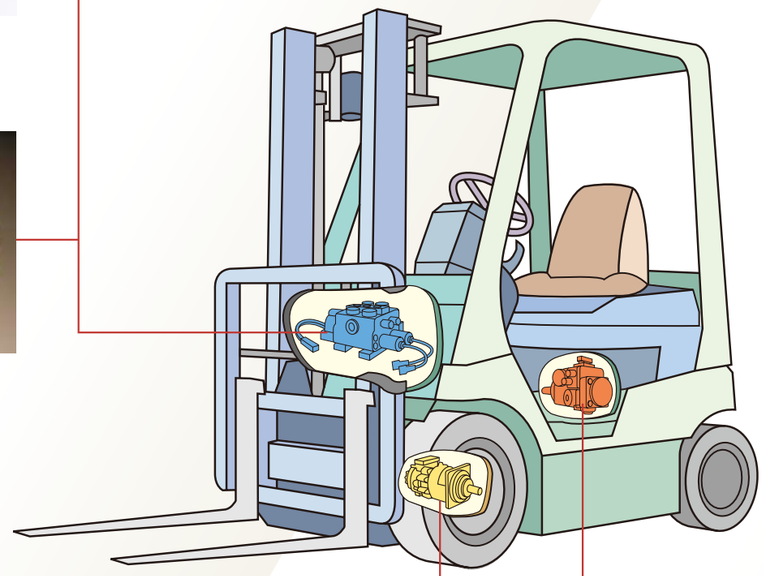
The KMC10L proportional multiple control valve and the compact MW multiple control valve have an exceptional reputation when applied to fork lift applications. Excellent control characteristics, minimum leakage and a very compact installation envelope make these valves the preferred choice in fork lift applications.

电液比例多路控制阀
Proportional multiple control valve
KMC10L series
(→P.34)

多路控制阀
Multiple control valve
MW series
(→P.32)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

插装式电液比例减压阀
Proportional pressure-reducing valve (Cartridge type)
KDRDE5K (→P.36)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.29)

■ 高空作业车 Manlift

KMP系列是一种附带控制性的高压补偿多路控制阀，可由上部车斗进行微速操作，实现同时操作时的速度恒定。另外、主泵用K3VL系列还可进行负载敏感控制。

A combination of the K3VL high pressure pump and the KMP proportional multiple control valve with pressure compensator provide the basis for a highly accurate speed and position control for man lift applications.

斜盘式轴向柱塞马达
Swash plate type axial piston motor
M2X/M5X-RG series
(→P.29)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

带压力补偿
电液比例多路控制阀
Proportional multiple control valve with pressure compensator
KMP series (→P.34)

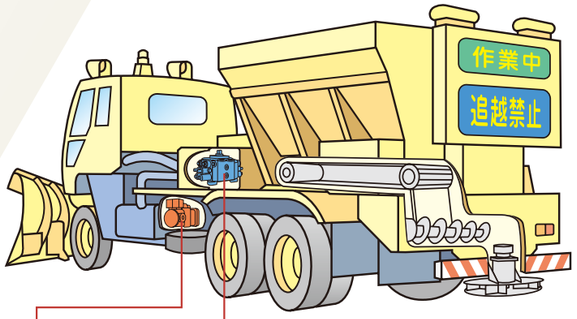
■ 撒布车 Snow Plough / Gritter

往道路上撒布融雪剂等的车辆是寒冷地带生活中必不可少的车辆之一，其所使用的液压元件为本公司的产品。小型多路控制阀KMC/KMP系列主要进行搬运融雪剂用的输送控制、撒布容量调整的阀门控制、及撒布用的圆盘控制。

KMC and KMP multiple control valves are used to control the accurate scatter of de-icing road salts within these gritter applications.

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

通用阀
Control valve
(→P.39)

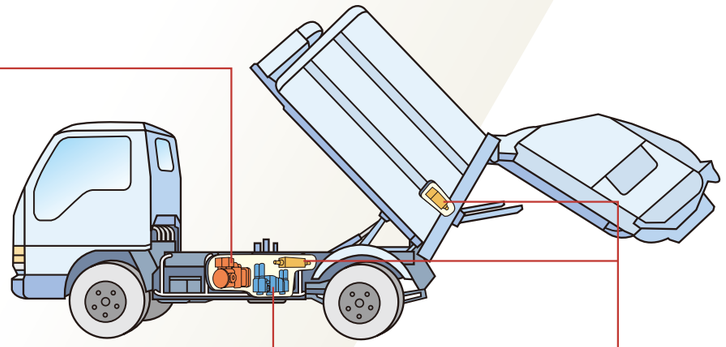


■ 垃圾车
Refuse(Garbage)Truck

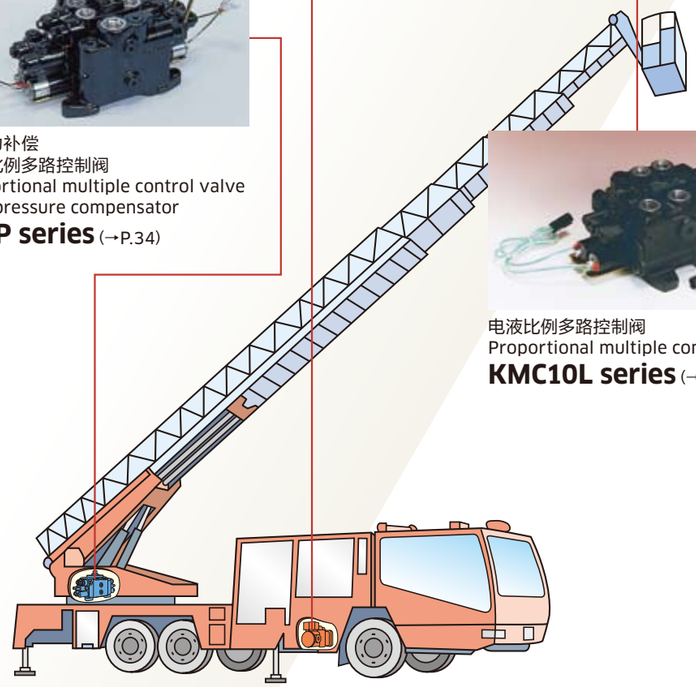
本公司备有适合垃圾车使用的液压元件有：车辆搭载用的小型轻量型的斜盘泵K3VL系列、可进行垃圾车必要联合动作的串联回路的电液比例多路控制阀KMC10L系列、以及对应各种不同回路构成的SUN插装阀等。

Small compact components such as the high pressure K3VL, KMP proportional multiple control valves and cartridge valves are ideally suited to these applications.

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)



带压力补偿
电液比例多路控制阀
Proportional multiple control valve with pressure compensator
KMP series (→P.34)



电液比例多路控制阀
Proportional multiple control valve
KMC10L series (→P.34)

SUN插装阀阀组
SUN cartridge valve block
(→P.40)

通用阀
Control valve (→P.39)

■ 消防车
Fire Engine

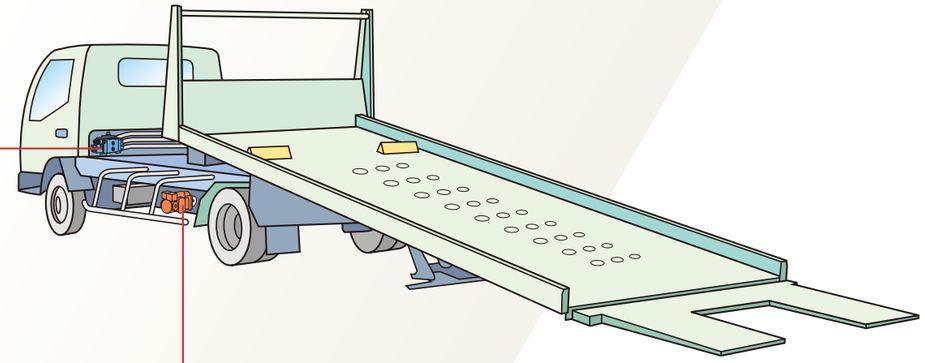
对要求动作准确、迅速的消防车。在高空进行消防作业时的伸缩梯车而言、其梯的伸缩・变幅是至关重要的功能。本公司带压力补偿电液比例多路控制阀KMP系列能运用自如迅速进行伸缩・变幅的同时操作。

Reliable, precise and fast extension of hydraulic ladders is imperative in these applications and the KMP proportional multiple control valve meets this requirement. It is often used in these applications to facilitate the rapid extension of ladder sections simultaneously.

■ 车辆搬运车/车身自倾式车
Car Carrier / Roll-off Dumpster Truck

该车辆使用了适合车辆搭载用的小型轻量型的斜盘泵K3VL系列。控制性高的多路控制阀KMC/KMP系列最适合车厢的微速操作。

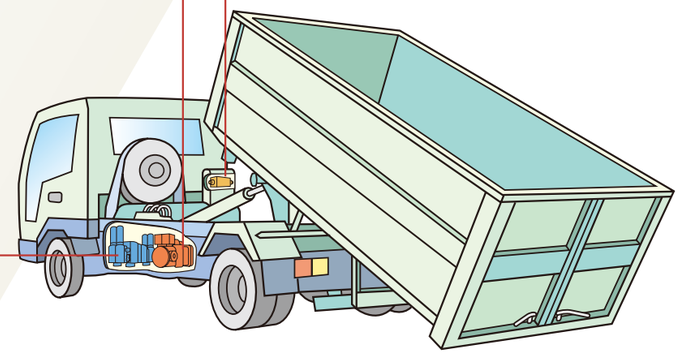
Multiple control valves and the K3VL series of high pressure axial piston pumps are again well suited to these applications.



电液比例多路控制阀
Proportional multiple control valve
KMC series (→P.34)

电液比例多路控制阀
Proportional multiple control valve
KMC10L series
(→P.34)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)



SUN插装阀阀组
SUN cartridge valve block
(→P.40)

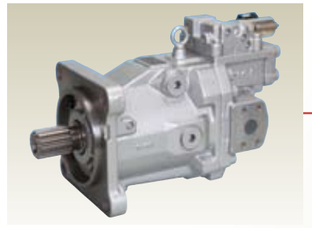
农业机械篇
Agricultural Machinery

■ 拖拉机 Tractor

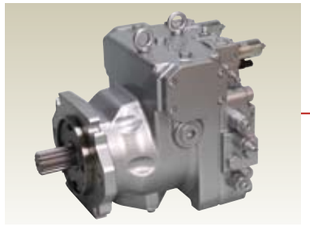
在代表农业机械的拖拉机上，位置和牵引控制采用了电子控制，拥有通过输入电流可任意控制上升・下降速度的功能的电液比例控制阀KTEM8、进行PTO离合器控制的分流阀KFDZE10等……本公司丰富多彩的控制阀均被采用。

The compact KTEM8 series of multiple control valves are often used on this vehicle, KFDZE flow divider and sequence valve are also applied to provide the optimum control of hydraulic attachments.

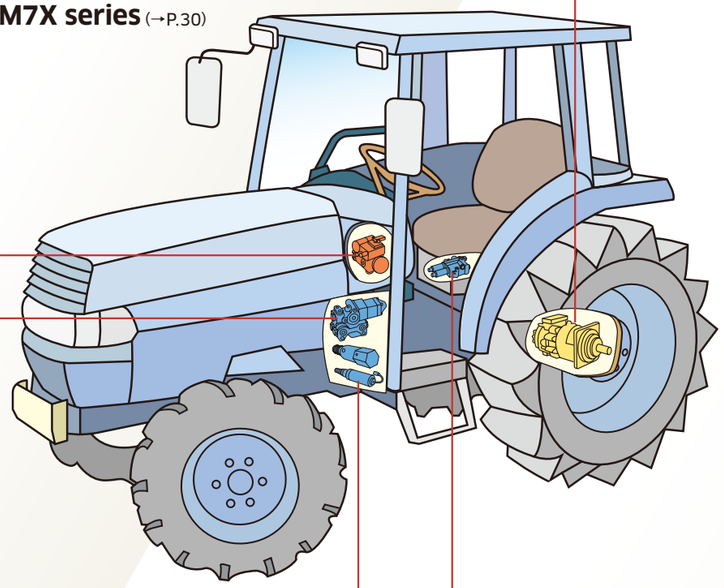
斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)



斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)



带顺序阀的分流阀
Flow dividing valve
with sequence valve
KFDZE10 (→P.37)

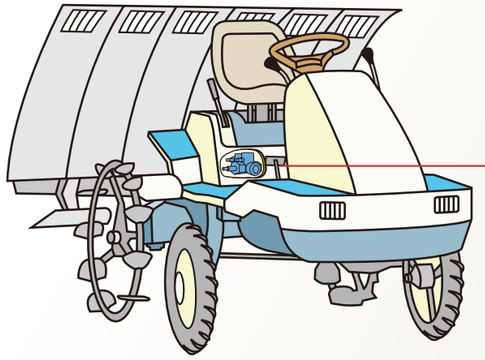
插装式电液比例减压阀
Proportional pressure-reducing valve
(Cartridge type)
KDRDE5K (→P.36)

电液比例控制阀
Proportional control valve
KTEM series (→P.37)

■ 插秧机 / 联合收割机 Rice-planting Machine / Combine

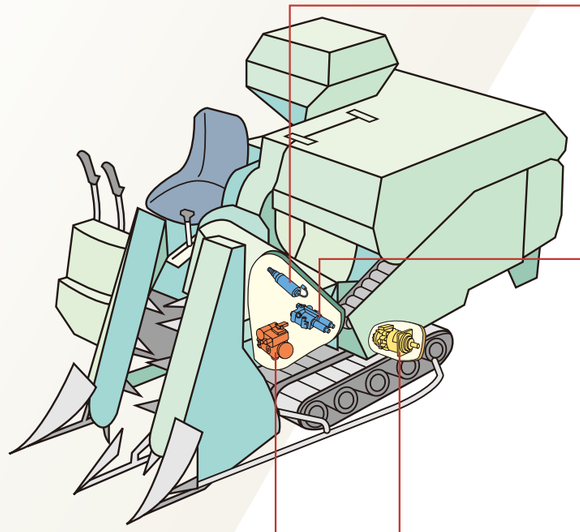
在插秧的插秧机、割稻的联合收割机上，也都使用了本公司的液压元件。为了控制插秧机上插的深度而使用了直动型电液比例控制阀KTMS系列、还有在联合收割机上为了能进行收割位置等微妙的控制而使用了比例减压阀KDRDE5K。

KTMS and KDRDE5K series are applicable to rice planting machines and combines. KTMS series are used to control the depth of planting for rice planting machines and KDRDE5K series are suitable for precise control of the cutting position in combines.



直动型电液比例控制阀
Direct acting proportional
control valve
KTMS series (→P.37)

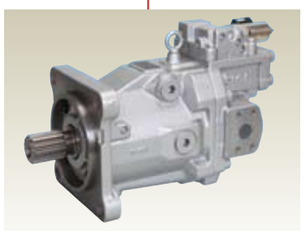
插装式电液比例减压阀
Proportional pressure-reducing valve
(Cartridge type)
KDRDE5K (→P.36)



电液比例控制阀
Proportional control valve
KTEM series (→P.37)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K3VL series (→P.27)

斜盘式轴向柱塞泵
Swash plate type axial piston pump
K8V series (→P.28)



斜盘式轴向柱塞马达
Swash plate type axial piston motor
M7V/M7X series (→P.30)

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K3V series

1. K3V系列作为工程机械用柱塞泵，其高可靠性备受好评。
2. 对应用途、可提供丰富多样型式的旋转机构的结构。
3. 可提供能安装PTO的串联式和并联式的双联泵。

1. K3V series pumps are very popular as reliable power source for construction machines.
2. Various rotary group layouts are available to respond to applications.
3. Tandem type with PTO and Parallel type have joined the series.

型号 model		K3V63	K3V112	K3V140	K3V280
排量 displacement 〔cm^3〕		63	112	140	280
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	34.3 (350)			
	峰值 peak	39.2 (400)			
转速 speed 〔min^{-1}〕	自吸最高 max.for self priming	2,650	2,360	2,150	1,600 (2,000)*
	最高 max.	3,250	2,700	2,500	2,000

*带增压器时 with centrifugal pump

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K5V series

1. 该泵一方面继承了K3V系列的可靠性，并通过采用新技术，实现了高输出功率密度。
2. 与K3V系列相同的外形和安装方式，可对应更大的排量。
3. 能对应大扭矩，进一步提高了可靠性和使用寿命。

1. With new technology the K5V series has realized higher power density.
2. K5V series can cope with enlargement of displacement despite the same installation dimensions and regulator variations as K3V's.
3. K5V series pumps have realized higher reliability and long life so as to meet requirement of larger torque.

型号 model		K5V80	K5V140	K5V160	K5V200
排量 displacement 〔cm^3〕		80	140	160	200
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	34.3 (350)			
	峰值 peak	39.2 (400)			
转速 speed 〔min^{-1}〕	自吸最高 max.for self priming	2,460	2,160	2,000 (2,350)*	1,900 (2,200)*
	最高 max.	3,000	2,500	2,350	2,200

*带增压器时 with centrifugal pump

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K7V series

1. 通过使各部配合间隙的最佳化、及缸体的旋转姿势的稳定化，获得了高效率。
2. 由本公司独自研究诞生的最新低噪声化技术，大幅度降低了噪声。
3. 通过采用大负载容量轴承和增大驱动轴的尺寸，降低了作用在轴承上的极限负载，进一步实现了长寿化。

1. High efficiency is obtained by optimizing clearance and stabilizing cylinder rotation.
2. Remarkable noise reduction has been achieved by the latest technologies for noise reduction based on our original research.
3. A long life is obtained by adopting large capacity of bearing and thicker shaft which reduces the load on the edge of bearing rollers.

型号 model		K7V63	K7V125
排量 displacement 〔cm^3〕		63	130
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	35 (357)	
	峰值 peak	40 (408)	
自吸最高转速 max. speed for self priming 〔min^{-1}〕		2,650	2,360

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K7SP series

K7SP36 + Gear Pump

K7SP36 + K7V28

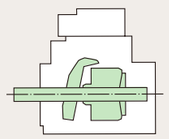
1. K7SP36是小型工程机械及产业车辆用的紧凑型泵。
2. 由本公司独自研究诞生的最新低噪声化技术，大幅度降低了噪声。
3. 在后端可安装变量型柱塞泵和齿轮泵，并对应共用吸口。

1. The K7SP36 swash plate type axial piston pump compact, double pump for mini excavators and other industrial vehicles.
2. Remarkable noise reduction has been achieved by the latest technologies for noise reduction based on our original research.
3. A variable displacement pump or a gear pump can be installed on the pump end, it is possible to apply common-suction type one.

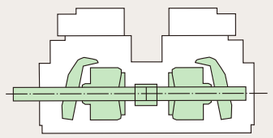
型号 model		K7SP36	K7V28*
排量 displacement 〔cm^3〕		36×2	28
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	30 (306)	
	峰值 peak	32 (326)	
自吸最高转速 max. speed for self priming 〔min^{-1}〕		2,300	

*安装变量型柱塞泵时 with a variable displacement pump

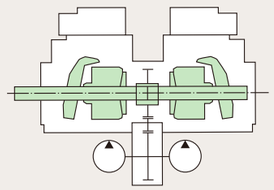
型式变化 Variation



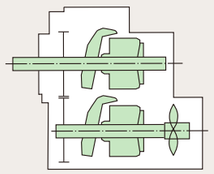
***S
单联泵
Single type
63~280 cm^3



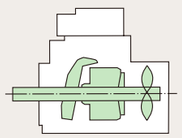
***DT
串联式双联泵
Tandem type
63~200 cm^3



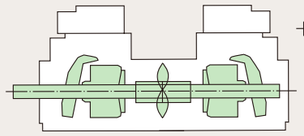
***DTP
可安装PTO串联式双联泵
Tandem type with PTO
63~200 cm^3



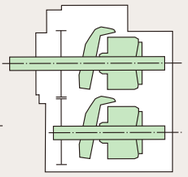
***DPH
内置增压器并联式双联泵
Parallel type
with centrifugal pump
200·212 cm^3



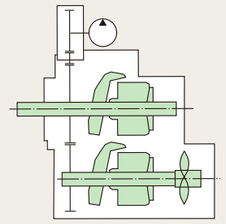
***SH
内置增压器单联泵
Single type
with centrifugal pump
160·200·280 cm^3



***DTH
内置增压器串联式双联泵
Tandem type
with centrifugal pump
160·200·280 cm^3



***DP
并联式双联泵
Parallel type
112·160·200 cm^3



***DPH
可安装PTO内置增压器并联式双联泵
Parallel type
with centrifugal pump & PTO
200·212 cm^3

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K3VL series

(通用产品 standard)

1. K3VL系列是用在工程机械用泵中拥有丰富实绩的K3V系列为基型开发的对应负载敏感和恒压的液压回路型泵。
2. 通过采用由本公司长期研究诞生的独自的新机构，大幅度降低了噪声发生源的压力脉动。
3. 以负载敏感型和恒压型为基本，还可进行卸载及压力可调。在任选的规格中还有可功率控制型。

1. The K3VL series swash-plate type axial piston pump is a heavy duty variable displacement hydraulic pump newly developed for mobile and industrial applications.
2. The unique mechanism obtained through our long research has drastically reduced pressure pulsation.
3. Unload and variable pressure controls are made possible remotely in addition to load-sensing and pressure constant. In addition, the horsepower control is available.

型号 model		K3VL28	K3VL45	K3VL60	K3VL80	K3VL112	K3VL140	K3VL200
排量 displacement	〔cm^3〕	28	45	60	80	112	140	200
压力 pressure 〔MPa〕 (kgf/cm^2)	额定 rated	32 (326)		25 (255)	32 (326)			
	峰值 peak	35 (357)		28 (286)	35 (357)			
转速 speed 〔min^{-1}〕	自吸最高 max.for self priming	3,000	2,700	2,400	2,400	2,200	2,200	1,900
	最高 max.	3,600	3,250	3,000	3,000	2,700	2,500	2,200

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K3VG series

(通用产品 standard)

1. 适合一般产业机械的开环回路用，可提供排量63～560cm^3规格的泵。
2. 可提供以高精度电液伺服调节器「ILIS(intelligent Liner Servo)」为主，并备齐了丰富的控制方式。
3. 以其高效・高可靠性而获得好评，并追求易使用的低噪声型的高压柱塞泵。

1. The K3VG series is a very suitable pump for industrial machinery with open circuits and has 63-560cm^3 pump sizes.
2. Including a highly precise electro hydraulic servo regulator "ILIS", good varieties of control methods are available.
3. Silent and high-pressure pump with high efficiency and reliability.

型号 model		K3VG63	K3VG112	K3VG180	K3VG280	K3VG180 DT	K3VG280 DT
排量 displacement	〔cm^3〕	63	112	180	280	360	560
压力 pressure 〔MPa〕 (kgf/cm^2)	额定 rated	34.3 (350)					
	峰值 peak	39.2 (400)					
转速 speed 〔min^{-1}〕	额定 rated	1,800			1,200	1,800	1,200
	自吸最高 max.for self priming	2,600	2,200	1,850	1,600	1,850	1,600
	最高 max.	3,250	2,700	2,300	2,000	2,300	2,000

斜盘式轴向柱塞泵
Swash plate type axial piston pump

K8V series

1. 以世界最高水准的泵效率和低噪声,实现了节能和舒适的作业环境。
2. 由于采用的是机械式反馈机构因此可不依靠倾斜传感器,能准确地进行流量控制。
3. 根据必要的功能在HST系统上,可内置充油泵、高・低压溢流阀、高压截断阀等。

1. The world best class pump efficiency and low noise provides high fuel efficiency and comfortable operator environment.
2. Flow rate is precisely controlled, even without angle sensor, by utilization of mechanical feedback structure.
3. The necessary functions for hydrostatic drive systems such as charge pump, high and low pressure relief valves, and high pressure cut-off valve are incorporated.

型号 model		K8V71	K8V90	K8V125
排量 displacement	〔cm^3〕	71	90	130
压力 pressure 〔MPa〕	额定 rated	40		
	峰值 peak	45		
最高转速 max. speed	〔min^{-1}〕	3,300	3,050	2,850

斜盘式轴向柱塞马达
Swash plate type axial piston motor

M2X/M5X series

1. 作为工程机械用的回转马达而开发的斜盘式柱塞马达，内置有机械式制动器、溢流阀、补油阀。
2. 合理布置了柱塞马达部、机械式制动部、各附属阀部，实现了超紧凑型的设计。
3. 在液压马达的安装法兰部采用大空间，可直接与减速机的齿圈连接的结构。
4. M5X是以M2X的技术为基础，兼容了轻型・紧凑化和提高输出功率。

1. The M2X series are swash plate type piston motors developed for application to swinging operation of construction machines, and are provided with a builtin mechanical brake, a relief valve, and a make-up valve.
2. The design has enabled an extraordinarily compact motor with the piston/cylinder part, mechanical brake part, and attached valves part neatly arranged respectively.
3. The mounting flange of the motor has been so enlarged as to enable it to be directly connected with the ring gear of a reduction gear.
4. M5X has been developed to realize the lighter weight, more compact size and stronger output power on the basis of M2X technology.

型号 model		M2X63	M5X80	M5X130	M5X180	M2X210	M5X250
排量 displacement	〔cm³〕	63	79	129	180	210	250
压力 pressure 〔MPa〕(kgf/cm²)	额定 rated	29.4 (300)	33.0 (336)	32.4 (330)		29.4 (300)	33.0 (336)
	最高 max.	34.3 (350)	40.0 (408)	39.2 (400)		34.3 (350)	40.0 (408)
最高转速 max. speed	〔min⁻¹〕	2,200	2,200	1,850	1,680	1,400	1,520

带减速机斜盘式轴向柱塞马达
Swash plate type axial piston motor
with reduction gears

M2X/M5X-RG series

型号 model		M2X63 -RG06	M5X130 -RG11	M5X130 -RG14	M5X180 -RG14	M5X180 -RG16	M5X180 -RG20	M5X250 -RG27
排量 displacement	〔cm³〕	1,229	2,437	2,437	3,395	4,128	4,539	6,303
额定压力 rated pressure	〔MPa〕(kgf/cm²)	28.0 (285)	25.5 (260)	30.9 (315)	25.5 (260)	24.0 (245)	28.4 (290)	26.9 (275)
最高转速 max. speed	〔min⁻¹〕	115	92	92	84	68	67	60

起重机回转用
带减速机斜盘式轴向柱塞马达
Swash plate type axial piston motor
with reduction gears
for swinging operation of crane

M2X/M5X-RG series

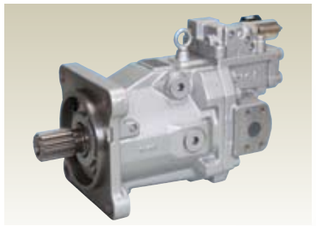
1. 可装着停车制动器(任选件)。
2. M2X系列的减速机，设计成短轴向长度。
3. M2X系列作为挖掘机回转用具有实绩的紧凑型的马达，在马达部内置有停车制动器。

1. The service brake (option) is possible to be installed.
2. The reduction gear of M2X series is designed to shorten the length in the axial direction.
3. The M2X series is a compact motor with good results in the shovel turn. The parking brake is built in the motor.

型号 model	M5X130 -RG17C27	M5X130 -RG23C34	M5X180 -RG17C27	M5X180 -RG23C34
排量 displacement 〔cm³〕	3,530	4,380	4,630	5,740
额定压力 rated pressure 〔MPa〕(kgf/cm²)	30.2 (308)	32.2 (328)	23.0 (235)	24.5 (250)
理论输出扭矩 theoretical output torque 〔N・m〕(kgf・m)	17,000 (1,730)	22,400 (2,280)	17,000 (1,730)	22,400 (2,280)
停车制动器方式 service brake	手动式制动器 hand brake	手动式制动器 hand brake	手动式制动器 hand brake	手动式制动器 hand brake

斜盘式轴向柱塞马达
Swash plate type axial piston motor

M7V/M7X series



1. 卓越的高速运转性能和平稳的启动特性
通过旋转机构的优化设计，实现了卓越的高速运转性能和启动特性。
2. 低速性能
拥有卓越的低速性能，可对应广泛的用途
3. 紧凑的形状
通过采用斜盘式结构，实现了紧凑的形状。
4. 长寿
通过采用斜盘式结构，实现了轴承的长寿化。

1. High speed operation and Smooth starting characteristics
Optimized rotary balance design enables high-speed performance and excellent starting characteristics.
2. Low speed operation
Superior performance in low speed operation provides very good controllability.
3. Compact size by swash plate design
Swash plate configuration enables the motor to be much more compact.
4. Long bearing life
Swash plate configuration results in long bearing life.

型号 type		M7V85 *1	M7V112	M7V160 *1
排量 displacement (cm³)	最大 qmax.	85	112	160
	最小 qmin.	0 - 65	0 - 85	0 - 120
压力 pressure (MPa)	额定 nominal *2	40		
	最高 max. *3	45		
最高转速 max. speed (min⁻¹)	at qmax.	3,900	3,550	3,100
	q < 0.6 qmax.	6,150	5,600	4,900

*1 : 开发中
*2 : 额定压力 = 能获得适当的性能，功能和寿命的最高运转压力
*3 : 最高压力 = 瞬间最高压力
*1 : Under development
*2 : Nominal pressure : design pressure to provide appropriate performance, function and service life.
*3 : Max. Pressure : Maximum intermittent pressure

型号 type		M7X85 *1	M7X112	M7X160 *1
排量 displacement (cm³)	q	85	112	160
压力 pressure (MPa)	额定 nominal *2	40		
	最高 max. *3	45		
最高转速 max. speed (min⁻¹)		3,900	3,550	3,100

*1 : 开发中
*2 : 额定压力 = 能获得适当的性能，功能和寿命的最高运转压力
*3 : 最高压力 = 瞬间最高压力
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*3 : Max. Pressure : Maximum intermittent pressure

斜盘式轴向柱塞马达
Swash plate type axial piston motor

M3X/M3B series

集中了本公司连续长年的斜盘式泵和马达的丰富实绩和技术而开发的马达，是自吸能力和起动效率都为极高的斜盘式轴向柱塞马达。

The M3X/M3B series is a swash plate type axial piston motor with a good selfpriming capability and high starting efficiency, developed based on our many years of experience and technology obtained in swash plate type pumps and motors.

型号 model		M3X 200	M3X 280	M3X 530	M3X 800	M3B 200	M3B 280	M3B 530	M3B 800	
排量 displacement	〔cm³〕	195	280	533	800	195	280	533	800	max.
		106	93	178	267					min.
压力 pressure 〔MPa〕(kgf/cm²)	额定 rated	29.4 (300)				32.0 (326)	29.4 (300)			
	最高 max.	34.3 (350)				35.0 (357)	34.3 (350)			
最高转速 max. speed	〔min⁻¹〕	1,900	1,700	1,400	1,200	1,900	1,700	1,400	1,200	max.
		2,400	2,200	1,700	1,500					min.

带减速机斜盘式轴向柱塞马达
Swash plate type axial piston motor
with reduction gear

M3X/M3B-RG series

型号 model		M3X200-RG03S5.7	M3X280-M3B280-RG06S6.4	M3X530-M3B530-RG10S6.4	M3X800-M3B800-RG16S6.4
排量 displacement	〔cm³〕	840	1,610	3,010	5,120
额定压力 rated pressure	〔MPa〕(kgf/cm²)	21.9 (223)	20.6 (210)	20.6 (210)	19.6 (199)
最高转速 max. speed	〔min⁻¹〕	270	190	150	130

马达 Motors

斜盘式轴向柱塞马达
Swash plate type axial piston motor

MCB series

是以作为工程机械用行走马达具有丰富实绩的DNB系列(带减速机外壳回转式马达)的技术和经验为基础，作为工程机械、产业车辆用而开发的内置式双速行走马达。

The MCB series is a built-in type dual speed motor for traveling of excavators and other industrial vehicles.
This series has been developed based upon the DNB series.

型号 model		MCB195	MCB530
排量 displacement	〔cm^3〕	195/116	530/325
额定压力 rated pressure	〔MPa〕(kgf/cm^2)	34.3 (350)	
最高转速 max. speed	〔min^{-1}〕	1,900/2,300	1,400/1,690

低速大扭矩径向柱塞马达
Low speed, high torque radial piston motor

HMKB (C) series

(通用产品 standard)

1. 作为注塑成形机的螺旋驱动用、深受用户好评的低速大扭矩径向柱塞马达。
2. 备有为了切换双速的控制阀阀安装座等的任选件。
3. 可安装对应负载的大小而自动无级变速(恒功率控制)的CHP阀。

1. Richest and longest service experiences in screw driving of injection molding machines.
2. Available of many kinds of options such as valve-mounting type for speed changing.
3. Available of a CHP valve which can automatically change the speed steplessly in response to the load. (Constant horsepower control)

●定量型 Fixed displacement type

型号 model		HMKB 046	HMKB 075	HMKB 100	HMKB 200	HM (HD) B 270	HM (HD) B 325	HMHDB 400
排量 displacement	〔cm^3〕	745	1,281	1,510	3,087	4,310	5,310	6,800
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	20.6 (210)				24.5 (250)		
	最高 max.	24.5 (250)				29.4 (300)		

●变量型 Dual-displacement type

型号 model		HMKC 046	HMKC 075	HMKC 080	HMKC 200	HMC 270	HMC 325
排量 displacement	〔cm^3〕	745	1,241	1,475	3,087	4,588	5,326
压力 pressure 〔MPa〕(kgf/cm^2)	额定 rated	20.6 (210)				24.5 (250)	
	最高 max.	24.5 (250)				27.5 (282)	

控制阀 Valves

多路控制阀
Multiple control valve

KMX series

1. 是为综合控制液压挖掘机的各工作装置动作的半整体式的多路阀。
2. 在阀体内紧凑地设置排列了复杂的主油路、先导油路。
3. 对应用途可实现包括直线行走、回转优先、行走升压、合流、再生等功能的回路结构。

1. The KMX series multiple control valves are of semi-monoblock type valves which systematically control actuators of an excavator.
2. The complicated main circuits and the pilot circuits are arranged inside the semi-monoblock housing compactly.
3. In response to customers request, unique and original circuits including special functions; for instance, straight traveling, swing priority, highly pressurized traveling, confluence and differential circuit, are possible.

型号 model		KMX13	KMX15	KMX32
最高压力 max. pressure	〔MPa〕(kgf/cm^2)	34.3 (350)		
额定流量 rated flow	〔L/min〕	130	240	500

多路控制阀
Multiple control valve

MW series

1. 是将多个换向阀集中在一个上的拼合式的多路阀，内置有溢流阀、负载单向阀。
2. 拥有并联、串联、串并联回路用的各种阀块，因此可以对应几乎所有的回路种类。

1. The MW (P) series multiple valves are of sectional type with several directional control valves assembled in one unit. They include relief valves, load-check valves, etc.
2. These multiple valves have three kinds of sections of parallel, series, and tandem circuits. Accordingly, they are applicable to many hydraulic circuits.

型号 model		MW (P) 25	MW (P) 28
最高压力 max. pressure	〔MPa〕(kgf/cm^2)	34.3 (350)	
额定流量 rated flow	〔L/min〕	240	350

多路控制阀
Multiple control valve

KML series

专为轮式装载机而开发的多路控制阀。可顺畅运行自如地同时控制动臂的升降、及铲斗操作。

The multiple control valve has been developed for the wheel loader. The simultaneous control of the boom and the bucket operation is smoothly executed.

型号 model		KML22	KML28	KML35
最高压力 max. pressure	〔MPa〕(kgf/cm²)	25 (255)		
额定流量 max. flow	〔L/min〕	200	315	600

负载敏感控制阀
Load Sensing Control Valve

KLSV series

即使同时操作也不影响其他阀芯的动作，能不依存负载压力对流量进行控制。
备有使各阀芯的流量按比例分配恒定的防饱和功能。
通过对油路进行最佳设计，实现了低压损。
通过对应高压力，实现了高效率化和结构紧凑化。

Flow can be controlled independently of the load pressure even in multiple control.
Anti-saturation function enables a constant flow ratio among each section.
Low pressure loss is achieved with the optimum design.
High pressure capability makes the hydraulic system more efficient and compact.

型号 model			KLSV18		KLSV28	
最高压力 max. pressure		〔MPa〕	40		35	
最大流量 max. flow		〔L/min〕	240 (P port)		450 (P port)	
最大控制流量 max. controlled flow*		〔L/min〕	180 (A, B port)		400 (A, B port)	
阀的联数 max. number of sections			9		7	
比例电磁线圈 proportional solenoid	额定电流 rated current	〔A〕	0.7	1.6	0.7	1.6
	线圈电阻 coil resistance	〔Ω〕	17.5	3.2	17.5	3.2

*P油口与LS油口的压差为1.5MPa。
*Pressure difference between P port and LS port = 1.5 MPa

负载敏感控制阀
Load Sensing Control Valve

KLW series

1. 为轮式装载机用而开发的负载敏感控制阀。
2. 动臂与铲斗即使同时操作也不影响其它动作，能不依靠负载压进行流量控制。
3. 具有各联的流量分配，按一定比率的防饱和功能。
4. 可安装举升减振阀(行驶控制功能)。
5. 可内置锁定阀。

1. The KLW series load sensing control valve has been developed for the wheel loader.
2. The boom and the bucket can be controlled independently of the load pressure even multiple control.
3. Anti-saturation function enables a constant flow rate among each section.
4. Damper Valve (Ride control function) can be attached.
5. Lock valve (Anti-Drift function) can be built in.

型号 model			KLW28	
最高压力 max. pressure		〔MPa〕	35	
最大流量 max. flow		〔L/min〕	450 (P port)	
最大控制流量 max. controlled flow*		〔L/min〕	400 (A, B port)	
比例电磁线圈 proportional solenoid	额定电流 rated current	〔A〕	0.7	1.6
	线圈电阻 coil resistance	〔Ω〕	17.5	3.2

*P油口与LS油口的压差为1.5MPa。
*Pressure difference between P port and LS port = 1.5 MPa

电液比例多路控制阀
Proportional multiple control valve

KMC series

1. 是拼合式的电控制阀、广泛使用于铲车、高空作业车等。
2. 由于是内部先导方式，所以无需先导用的外部压力源。
3. 对应用途、可提供并联回路或串并联回路结构的阀。

1. The KMC series proportional multiple control valves are applicable to various industrial vehicles such as fork-lift truck, manlift etc.
2. The internal pilot system eliminates external pilot pressure sources.
3. Parallel or tandem circuit is available on request.

型号 model			KMC	
最高压力 max. pressure		〔MPa〕(kgf/cm²)	24.5 (250)	
最大流量 max. flow		〔L/min〕	70	
比例电磁线圈 proportional solenoid	额定电流 rated current	〔A〕	0.7	1.6
	线圈电阻 coil resistance	〔Ω〕	17.5	3.2

电液比例多路控制阀
Proportional multiple control valve

KMC10L series

1. 以KMC10为基型，专为电瓶式铲车用而开发的电液比例多路控制阀。
2. 与KMC10比、内泄漏量降低到仅KMC10的1/10，使铲刀架在停止时的自然落下、自然倾斜得到大幅度地改善。
3. 与KMC10比，大幅度降低了压力损失。

1. The proportion multiple control valve has been developed for the battery type fork lift based on KMC10.
2. The leakage has been reduced to 1/10 in comparison with KMC10. Natural descent and natural inclination while the fork is stopped have been substantially improved.
3. In comparison with KMC10, the pressure loss has been substantially reduced.

型号 model			KMC10L	
最高压力 max. pressure		〔MPa〕(kgf/cm²)	24.5 (250)	
最大流量 max. flow		〔L/min〕	70	
比例电磁线圈 proportional solenoid	额定电流 rated current	〔A〕	0.7	1.6
	线圈电阻 coil resistance	〔Ω〕	17.5	3.2

带压力补偿电液比例多路控制阀
Proportional multiple control valve with pressure compensator

KMP series

1. 是内置压力补偿阀的拼合式的电控制阀，使用用途广泛。
2. 由于是内部先导方式，所以无需先导用的外部压力源。
3. 为手动操纵杆并用型，因此能简单地进行紧急手动操作。

1. The KMP Series proportional multiple control valves with pressure compensator are applicable to electrical control of various industrial vehicles.
2. The internal pilot system eliminates external pilot pressure sources.
3. In case of emergency, manual operation is available by the attached lever.

型号 model			KMP	
最高压力 max. pressure		〔MPa〕(kgf/cm²)	30.9 (315)	
最大流量 max. flow		〔L/min〕	80 (P, T port)	
最大控制流量 max. controlled flow		〔L/min〕	70 (A, B port)	
比例电磁线圈 proportional solenoid	额定电流 rated current	〔A〕	0.7	1.6
	线圈电阻 coil resistance	〔Ω〕	17.5	3.2

先导阀
Pilot valve

PV series

PV48K

PV48M

PVD6P

PVD8P

PV6P

1. 可同时进行多路控制阀的滑阀控制和变量泵的倾角控制的减压式的先导阀。
2. 操作力矩能根据客户要求变小，能用很小的操作力进行微妙的控制。
3. 该阀压力损失小、响应性优良。(美国专利号: No.6,125,886)
4. 人机控制手柄、最大可安装5个开关。
5. 在操纵杆的全范围内，对应操作速度实施减振。(PVD6P、PVD8P系列)

1. PV series valves are pressure-reducing type pilot valves to simultaneously control spools of multiple control valves and the tilting angle of variable displacement pumps and so forth.
2. The operational torque can be reduced according to the customer's requirement (Patent registered), and the small operational force enables minute control.
3. Reduced pressure drop and quick response. (US PAT. No.6, 125, 886)
4. Ergonomic handle can contain 5 switches at the maximum.
5. Damping force depending on velocity is given at any position of the operating lever. (PVD6P, PVD8P series)

型号 model	PV48K	PV48M	PVD6P	PVD8P	PV6P
一次侧压力(最高) inlet pressure (max.) 〔MPa〕(kgf/cm²)	6.9 (70)				
二次侧控制压力 output pressur 〔MPa〕(kgf/cm²)	0～2.9 (0～30)				
额定流量 rated flow 〔L/min〕	20	15	10		
主要用途 rated flow	挖掘机 Excavator	小型挖掘机 Mini Excavator	(小型)挖掘机 (Mini) Excavator	(小型)挖掘机 (Mini) Excavator	越野起重机 Rough Terrain Crane
特长 features	手柄式 (4方向操作) Joy stick type	手柄式 (4方向操作) 紧凑型 Joy stick type compact	行走用踏板 内置缓冲器 Pedal for propelling with damper	行走用踏板 内置缓冲器 Pedal for propelling with damper	拼合式 (最大6联) 紧凑型 Bankable type compact

先导阀
Pilot valve

TH40 series

TH40P

TH40PS

TH40MS

可在适合多路控制阀的滑阀控制的减压型先导阀上,追加机械式或电磁式的定位装置功能。

TH40 series are pressure-reducing type pilot valves suitable for controlling the spools of multiple control valves, it can be added the detent function of mechanical or electromagnetic type.

型号 model	TH40P	TH40PS	TH40MS
一次侧压力(最高) inlet pressure (max.) 〔MPa〕(kgf/cm²)	9.8 (100)		
二次侧控制压力 output pressure 〔MPa〕(kgf/cm²)	0～2.9 (0～30)		
额定流量 rated flow 〔L/min〕	20		15

插装式电磁换向阀
Solenoid-operated directional control valve

KWE5K

插装式电液比例减压阀
Proportional pressure-reducing valve

KDRDE5K

-20系列／-20 series

-30系列／-30 series

-50系列／-50 series

1. 作为各种先导系统的 开-关而开发的电磁换向阀，是一种最适合在屋外使用的产业车辆的先导换向用的阀。
2. 作为各种先导系统的压力控制用而开发的插装式的电液比例减压阀，使用于多路控制阀的滑阀和变量泵的倾角控制。

1. The KWE5K series valves are solenoidoperated directional control valves which work as on/off valves for various kinds of pilot circuits. They are the most suitable for industrial mobiles operated outdoors.
2. The KDRDE5K series valves are proportional pressure-reducing valves. They are mainly used for controlling spools of multiple control valves and tilting angles of variable displacement pumps.

型号 model	KWE5K/KDRDE5K
最高使用压力 max. supply pressure 〔MPa〕(kgf/cm²)	8.8 (90)
允许背压(耐压) max. back pressure (allowable pressure) 〔MPa〕(kgf/cm²)	1 (10)
最大流量 max. flow rate 〔L/min〕	10

-20系列: 导线式 - 20 series : Lead wire type
-30系列: 连接器一体成型式 - 30 series : Mold Connector type
-50系列: 连接器一体成型式 - 50 series : Mold Connector type

多联式电磁阀阀组
Solenoid-operated directional control valve

KWE5

1. 因是多联型，故可设置在狭窄的空间。
2. 由于P · T接口为共用，因此容易排管。

1. Installation in small space is possible on account of monoblock construction.
2. Easy piping due to the provision of only one P port and one T port for all the valves.

型号 model		KWE5
最高使用压力 max. pressure 〔MPa〕(kgf/cm²)	port P, A	8.8 (90)
	port T	1 (10)
最大流量 max. flow rate 〔L/min〕		16

锁定阀
Holding valve

KHV/KHCV series

1. 在保持部采用逻辑结构，因此泄漏量极小。
2. 内置有油缸的溢流阀。
3. 通过滑阀的位置控制，可控制微小的流量。(KHCV系列)

1. The usage of a poppet type holding part minimizes the leakage.
2. A relief valve is incorporated.
3. Position control of the spool enables a fine control of flow rate. (KHCV series)

型号 model	KHV		KHCV			
公称尺寸 size	10	20	10	15	20	25
最高使用压力 max. pressure 〔MPa〕(kgf/cm²)	34.3 (350)		35 (357)	42 (428)		
额定流量 rated flow (A→B) 〔L/min〕	100	280	60	150	250	360
泄漏量 leakage (20cSt, 20MPa時) (at 20cSt, 20MPa) 〔cm³/min〕	5		0.8			

转向控制阀
Steering control valve

KVS series

1. 使转向回路优先的控制阀。
2. 能将转向剩余的油转移到其他回路使用。
3. 可提供方向盘转动式和液压先导式。

1. This is a control valve giving priority to the steering circuit.
2. Steering surplus oil is able to be used for other circuits with the carry-over.
3. Two methods of orbit-roll and hydraulic pressure pilot are possible.

型号 model	KVS25	KVS32
最高使用压力 max. pressure〔MPa〕(kgf/cm²)	21 (214)	32 (326)
最大流量 max. flow rate 〔L/min〕	250	400

农业机械用带顺序阀的分流阀
Flow dividing valve with sequence valve for agricultural machinery

KFDZ

1. 分流式「KFDZ」因内置有顺序阀，主回路的压力即使在卸载时，分流侧仍能提供必要的流量。
2. 分流侧的最高压力、因是通过减压阀被控制，所以最适合液压离合器的控制用。

1. KFDZ is a flow dividing valve with sequence valve.Necessary pressure at the divided flow can be maintained by operation of the built-in sequence valve even when the main circuit is unloaded.
2. As the maximum pressure of the branch flow is restricted by the reducing valve, this valve is especially suitable for controlling a hydraulic clutch.

型号 model	KFDZ
最高使用压力 max. pressure〔MPa〕(kgf/cm²)	19.6 (200)
最大流量 max. flow rate 〔L/min〕	35

农业机械用电液比例控制阀
Proportional control valve for agricultural machinery

KTEM series

此电液比例控制阀、与工作装置的工作压力无关。进油侧，回油侧的流量通过电磁线圈的输入电流可自由自在地控制。

This proportional control valve controls the flow rates into and from the actuator in proportion to the input currents to the solenoids irrespective of the working pressure.

型号 model	KTEM8/20	KTEM8/30	KTEM8/60
最高使用压力 max. pressure〔MPa〕(kgf/cm²)	20.6 (210)		
额定流量 rated flow 〔L/min〕	20	30	60

农业机械用直动型电液比例控制阀
Direct acting proportional control valve for agricultural machinery

KTMS6

1. 此控制阀能用于单作用油缸驱动悬挂机具的升降，上升与下降均带有压力补偿。
2. 采用直动型电液比例电磁线圈结构，实现了紧凑化的结构。

1. This control valve is able to control the up-and-down operation of the out section by single acting cylinder with pressure compensator.
2. The more compact size has been realized by the adoption of a direct acting proportional control mechanics.

型号 model	KTMS6
最高使用压力 max. pressure〔MPa〕(kgf/cm²)	20.6 (210)
额定流量 rated flow 〔L/min〕	20

工程机械用控制器
Multifunctional Controller for Construction Machinery

KC-MB-20 series
KC-ESS-40 series

KC-MB-20

KC-ESS-40

1. 高性能且丰富的输出入
2. 适合工程机械使用环境的牢固设计
3. 拥有检测异常・保护功能的I/O

1. A high degree of functionality and large number of inputs and outputs
2. Robust design for construction machinery
3. I/O with protection and fault detection

●输出入点数 Number of Input & Output

型号 model		KC-MB-20	KC-ESS-40
输出数 Number of Outputs	比例电磁线圈 Proportional Solenoid	15	3
	ON/OFF电磁线圈 Directional Solenoid	12	—
	油门电机 Accelerator Motor	1	1
输入数 Number of Inputs	输入模拟信号 Analog	23	5
	输入脉冲信号 Pulse	1	1
	输入开关信号 Switch	12	5
	输入电阻 Resistance	4	—
接口 Interfaces	CAN总线 CAN-BUS	2	2
	RS232C	—	1
	LAN	1	—

型号 model		KC-MB-20	KC-ESS-40
电源电压 Power supply range	额定 Nominal	24 V	24 V
	容许 Available	18V ～ 32V	18V ～ 32V
温度范围 Ambient temperature range	动作 Operate	−40℃～ 85℃	−40℃～ 75℃
	保存 Strage	−40℃～ 85℃	−40℃～ 85℃
过渡电压特性（负载切断电源） Transition voltage (Power supply load dump)		173V, 350ms, 10pulse (ISO16750-2)	110V, 400ms, 1pulse (ISO16750-2)
辐射电磁环境 Radiated immunity		100 V/m, 20MHz ～ 1GHz (ISO11452-2)	100 V/m, 20MHz ～ 1GHz (ISO11452-2)
传导电磁环境 Transient immunity		100mA, 20MHz ～ 1GHz (ISO11452-4)	100mA, 20MHz ～ 1GHz (ISO11452-4)
保护等级 Environmental protection		IP67	IP67
耐振性 Vibration resistance		7G, 5Hz～2000Hz	7G, 5Hz～2000Hz
机械安全 Safety of Machinery		ISO13849-1 PL-c	—

1. 提高软件的功能・性能
（1）输出入点数的增强
可通过软件变更输出入的型式。
（2）高精度・高速通讯
采用高性能的车载式用CPU。

2. 提高维护性
通过维修保养支援工具可缩短维护时间。

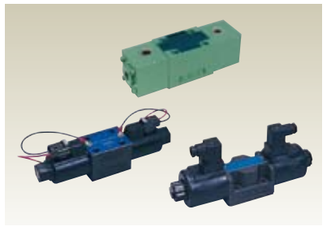
3. 变更程序的简易化
变更程序比原来速度快了、降低了油耗、提高了操作性并且可迅速地对应。

1. Improve the performance and functionality of the hardware
(1) Enhanced IO
IO setting flexibility is advanced by configurable I/Os.
(2) Accurate high-speed communication
Processing speed has been improved with the use of automotive CPUs.

2. Easy maintenance
Reduce maintenance time by the Maintenance Tool

3. Program customisation
Customers will be able to customise their program using KPM's development tool.

方向控制阀
Directional control valve



(通用产品 standard)

压力控制阀
Pressure control valve

(通用产品 standard)

流量控制阀
Flow control valve

(通用产品 standard)

产品 product	型号 model	最高压力 max. pressure MPa (kgf/cm²)	最大流量 max. flow L/min
方向控制阀 Directional control valve			
电磁换向阀 sol. operated directional valve	DE	30.9 (315)	6, 10
电液换向阀 sol. controlled pilot operated directional valve	DEH	34.3 (350)	16, 22, 32
液动换向阀 pilot operated directional valve	DH	30.9/34.3 (315/350)	6, 10, 16, 22, 32
手动换向阀 manually operated directional valve	DM	30.9/34.3 (315/350)	6, 10, 16, 22, 32
手动换向阀 manually operated directional valve	K4LA	24.5 (250)	6
单向阀 check valve	C/C1M	30.9 (315)	6, 8, 10, 15, 20, 25, 30, 52, 62, 82, 102, 125, 150
液控单向阀 pilot operated check valve	CH (Y)	30.9 (315)	6, 8, 10, 15, 20, 25, 30, 52, 62, 82, 102, 125, 150
压力控制阀 Pressure control valve			
溢流阀—直动式 relief valve–direct type	RD	30.9/39.2/61.8 (315/400/630)	6, 8, 10, 15, 20, 25, 30
溢流阀—先导式 relief valve–balanced piston type	RB/ RBE	30.9 (315)	10, 20, 30, 35, 52, 82
减压阀—直动式 reducing valve–direct type	PRD	30.9 (315)	6, 10
减压阀—先导式 reducing valve–balanced piston type	PRB	30.9 (315)	10, 20, 30
顺序阀—直动式 sequence valve–direct type	SD	20.6 (210)	6, 10
顺序阀—先导式 sequence valve–balanced piston type	SB	30.9 (315)	10, 20, 30
卸载阀 unloading relief valve	PU/ PUE	30.9 (315)	10, 20, 30, 35
3级溢流阀 pressure relief valve (3 pressure ratings)	3RBE	30.9 (315)	10, 20, 30
制动阀 brake valve	B	30.9 (315)	10, 15, 20, 25, 30
平衡阀 counterbalance valve	CBD	30.9 (315)	6, 10, 15, 20, 25, 30
平衡阀—带卸载功能 counterbalance valve-with unloading function	KDZ	24.5 (250)	15, 25, 40
流量控制阀 Flow control valve			
节流阀 throttle valve	T/T1M	30.9 (315)	6, 8, 10, 15, 20, 25, 30, 52, 62, 82, 102
单向节流阀 throttle and check valve	TC	30.9 (315)	6, 8, 10, 15, 20, 25, 30, 52, 62, 82, 102
精密节流阀 fine throttle valve	F	20.6 (210)	5, 10
调速阀（压力—温度补偿） pressure-temperature compensated flow control valve	FJC	20.6/30.9 (210/315)	5, 10, 16, 30
3方向调速阀 3-directional flow control valve	FK	30.9 (315)	10, 16

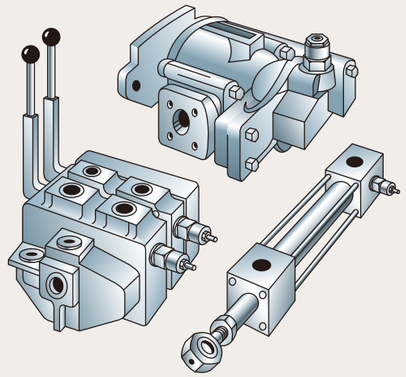
SUN插装阀阀组
SUN cartridge valve block

(通用产品 standard)

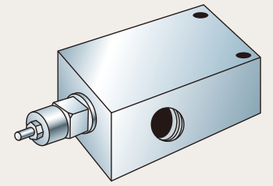
阀块 Valve block

Available for
Japanese customers only.

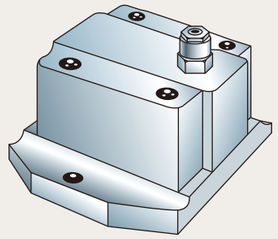
可安装SUN插装阀
Versatile application potential



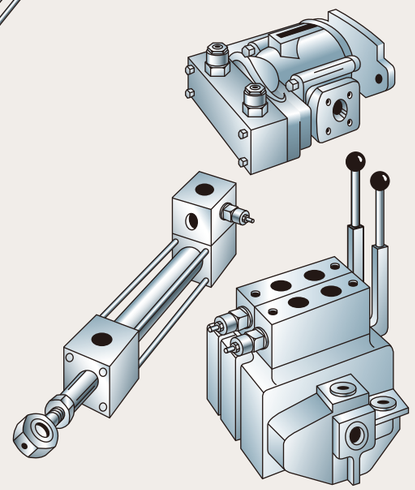
插装内藏
Direct integration



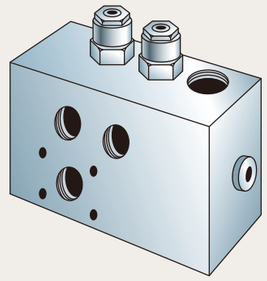
标准螺纹连接阀块
Line mounted standard block



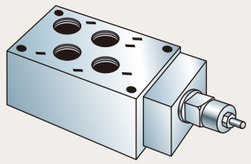
旧型阀的替代品
Industrial subplate mounted valve



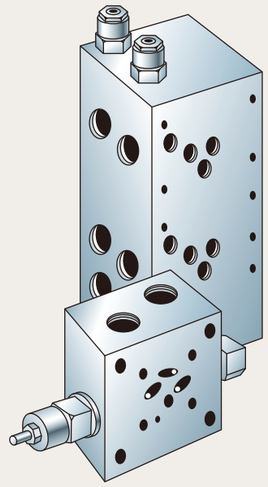
直接安装用阀块
Directed mounted package



专用型阀块
Custom valvepac

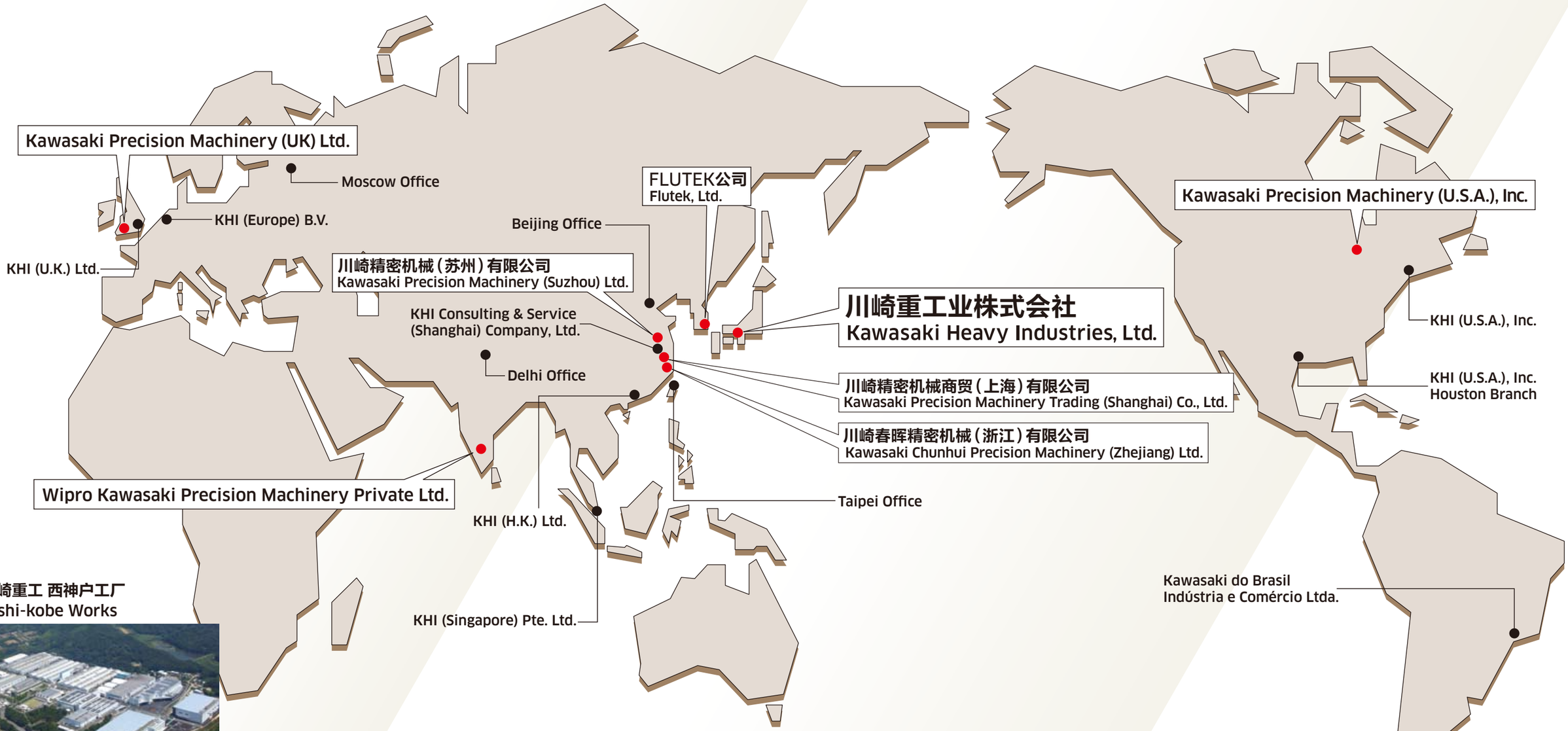


夹层阀
Sandwich valve



带插装阀油路连接板
Subplates and manifold

Global Network



川崎重工 西神户工厂
Nishi-kobe Works

Kawasaki Precision Machinery (UK) Ltd.

address : Plymouth, Devon, United Kingdom
established : December, 1993

Kawasaki Precision Machinery (U.S.A.), Inc.

address : Grand Rapids, MI, USA
established : January, 1994

川崎精密机械（苏州）有限公司
Kawasaki Precision Machinery (Suzhou) Ltd.

地址 ： 中国江苏省苏州市
设立 ： 2005年12月

address : New District, Suzhou, China
established : December, 2005

川崎春晖精密机械（浙江）有限公司
Kawasaki Chunhui Precision Machinery (Zhejiang) Ltd.

地址 ： 中国浙江省上虞市
设立 ： 2009年8月

address : Shangyu, Zhejiang, China
established : August, 2009

Flutek, Ltd.

address : Changwon, Kyungnam, Korea
established : May, 2000

Wipro Kawasaki Precision Machinery Private Ltd.

address : Bangalore, India
established : December, 2011