

MACWORKS
DRILLING AND MACHINE ATTACHMENTS

The right equipment to make your project more profitable - give us a call to talk through all your Power Pack requirements.

Power Pack Sales Catalogue

0800 MACWORKS
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www.macworks.nz

Power Packs

Macworks supplies a range of Power Packs for many different industrial applications including vibratory hammers, vessels and dam projects. We design according to internationally recognised transport dimensions with fully adjustable flows and pressure. Our range starts at 50 lpm and goes up from there with oil flow at 100 to 400 bar pressure.

We use industry standard Cummins Engines and Kawasaki pumps in most of our Power Pack systems. However, pump, motor and electrical choices can be adjusted to your build requirements. All Macworks Power Packs have cooling systems for hydraulic oil and gearbox.

The advantage of our power packs is we install open-circuit lines for quick repair situations which reduces cost compared to close-circuit systems.

Macworks Power Packs have user-friendly control panels to help operator understand and check system status at a glance. A cable remote-control system is standard. We also offer remote control systems as an option.



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Power Packs General Technical Parameters

We supply four main models:

- **VKMD300L-F120**
- **VKMD300L-F200**
- **VKMD1050L-F340**
- **VKMD1040L-F356**

Spare Parts for Cummins

- Lubrication Filter
- Fuel Filter
- Oil Water Separator
- Oil Suction Strainer (MF-32)
- Thermometer Module (HD-150)
- Filter Element for Pipeline Filter (FAX-1000*20)

Spare Parts for Hyd Pump

- Overflow Valve(RVIA-LCN)
- Electro-hydraulic Directional Valve
- Vibration-proof Pressure Gauge
- Overflow Valve(RPCC-LWN)
- Overflow Valve(RDDA-LCN)
- Two Way CCartridge Valve
- Relief Valve (PRDB-LAN)

Power Pack	VKMD300L-F120	
Diesel Engine	Cummins QSB5.9-C160	
Max. Working Pressure	Bar	300
Max. Flow	l/min	120
Max. Power Diesel Engine	kw/rpm	???/???
Closed Oil Pump	Kawasaki K5V80	
Fuel Tank	lt	200
Hydraulic Tank	lt	300
Electro Hydraulic Directional Valve	I	
Digital Flow Gauge	I	
Air Cooler	Auto/Manual	I
Electric Control Box	I	
Overspeed Protection for Engine	I	
Hydraulic Power line & Quick Coupling	I	
Guarding Frame Structure	I	
Accessories (Pressure guage, Liquidometer etc)	I	
Wireless Remote Control System	I	

Power Pack	VKMD1050L-F340	
Diesel Engine	Cummins QSZ8.9-C360	
Max. Working Pressure	Bar (non adjustable)	340
Max. Flow	l/min (non adjustable)	340
Max. Power Diesel Engine	hp/rpm	360/2200
Closed Oil Pump	Kawasaki K5V200SH/	
Fuel Tank	lt	500
Hydraulic Tank	lt	1050
Clamp Flow	l/min	20
Digital Flow Gauge	I	
Air Cooler	Auto/Manual	I
Electric Control Box	I	
Electro Hydraulic Directional Valve	I	
Hydraulic Power line & Quick Coupling	I	
Guarding Frame Structure	I	
Accessories (Pressure guage, Liquidometer etc)	I	
Remote Control System (8m and 15m)	2	

Power Pack	VKMD300L-F200	
Diesel Engine	Cummins QSB5.9-C180	
Max. Working Pressure	Mpa	30
Max. Flow	l/min	200
Max. Power Diesel Engine	kw/rpm	132/2000
Closed Oil Pump	Kawasaki K5V140	
Fuel Tank	lt	200
Hydraulic Tank	lt	400
Electro Hydraulic Directional Valve	I	
Digital Flow Gauge	I	
Air Cooler	Auto/Manual	I
Electric Control Box	I	
Overspeed Protection for Engine	I	
Hydraulic Power line & Quick Coupling	I	
Guarding Frame Structure	I	
Accessories (Pressure guage, Liquidometer etc)	I	
Wireless Remote Control System	I	

Power Pack	VKMD1040L-F356	
Diesel Engine	Cummins QSZ8.9-C360	
Max. Working Pressure	Bar	379
Max. Flow	l/min	356
Max. Power Diesel Engine	hp/rpm	360/2200
Oil Pump	V90N130DT0VREICJ2K0PB1GM	
Fuel Tank	lt	600
Hydraulic Tank	lt	1040
Clamp Pressure/Flow	Bar - l/min	330 - 20
Digital Flow Gauge	I	
Air Cooler	Auto/Manual	I
Electric Control Box	I	
Electro Hydraulic Directional Valve	I	
Hydraulic Power line & Quick Coupling	I	
Guarding Frame Structure	I	
Accessories (Pressure guage, Liquidometer etc)	I	
Remote Control System (8m length)	I	

Power Pack General Technical Specifications



Hydraulic System Composition

This power pack is composed of Oil tank, engine pump system, valve, filter, fan, pipeline and electrical control system.

(1) Oil Tank

The tank adopts steel welded structure(rectangular), is made of Q235 hot rolled steel plate with 4mm thickness. It contains air filter, level oil temperature gauge, tank level lower limit relay, etc. Please refer to Page 3 for individual hydraulic oil tank and diesel tank capacities.

(2) Engine Pump System

The engine pump group are composed of one set electric proportional variable piston pump(Kawasaki K5V80), one set QSB5.9-C160 Cummins diesel engine, plum-shaped coupling and bell jar. The engine can be started by wireless remote control system, the hydraulic working pressure ranges between 300-379 bar and rated displacement is not less than 80cc/r.

(3) Valve System

All solenoid valves adopt DC24V power supply, nickel plating treatment for integrated block. The solenoid valves runs normally without tremor. The size of input and output for hydraulic hose is 1-1/4 "BSP.

(4) Filter System

Filter system is assembled where the oil absorption and oil return, a differential pressure indicator is also installed in the pipeline filter to give an alarm when the filter is blocked. Because this system adopts electro-hydraulic directional valve, the cleanliness of the oil is not less than NAS7 level, it is recommended to use Shell anti-wear hydraulic oil L-HM46 or L-HM68.

(5) Fan System

The air cooler has sufficient cooling area and oil passing capacity. To ensure the normal operation of the system, the operating temperature of the fan is 45°C. The stopping temperature is 30°C. The pressure loss is less than 3-bar.

(6) Pipeline System

The hydraulic pipeline system adopts seamless steel pipe and flexible rubber joint to absorb oil, the pressure pipeline adopts braided hose. Each pipeline is fixed with pipe clamp to prevent vibration.

(7) Electrical Control System.

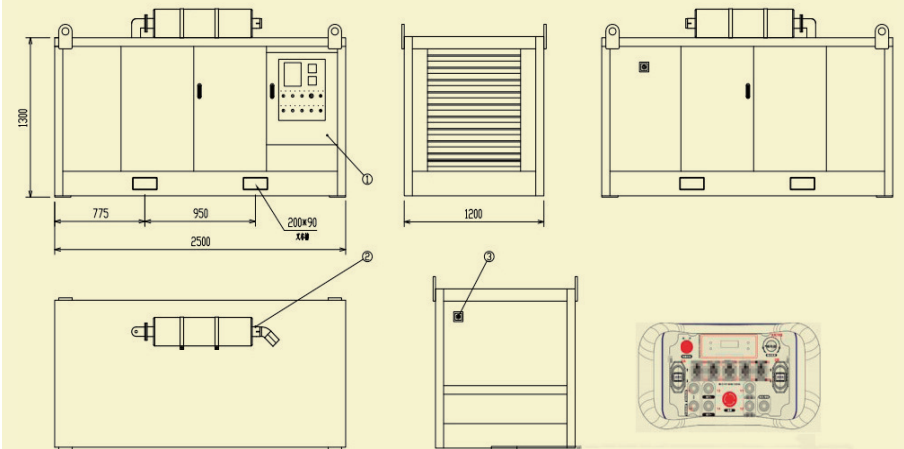
The electrical control system is suitable for power distribution of hydraulic engine and reversing valve, to realize the control operation and condition monitoring of related equipments.

Equipment control requirements are as below:

1. Starting of hydraulic station: start with one button;
2. Adjustable flow and electronic display of specific flow;
3. Adjustable pressure and electronic display of specific pressure;
4. Output driving device with positive and negative rotation, the electromagnetic directional valve control flow in and out;
5. Four emergency stop buttons (two on two sides of the cover + one on the control panel), plus one on wireless remote control, emergency stop buttons will disconnect the operation of all system executive components.
6. Local set on the electric control box or remote control.

The outside surface of the electrical control box should be rust-proof, and the internal surface should be water-proof and dust-proof. All components need ventilation and heat dissipation. The design of control box should fully consider the convenience, safety and reliability of operation, and easy to clean, overhaul, maintenance and adjustment;

Layout Drawing For Diesel Power Pack



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