

VP1 Load Sensing Truck Pumps



The VP1 is the world's first variable displacement pump for truck applications. It can be close-coupled to a gearbox PTO (power take-off) or to a coupling independent PTO (e.g. an engine PTO) which meets ISO standard 7653-1985.

- Variable displacement
- Low noise level
- High power-to-weight ratio
- Compact and lightweight
- Highly efficient
- Sturdy design
- Withstands low temperatures
- Can be close coupled and tandem mounted

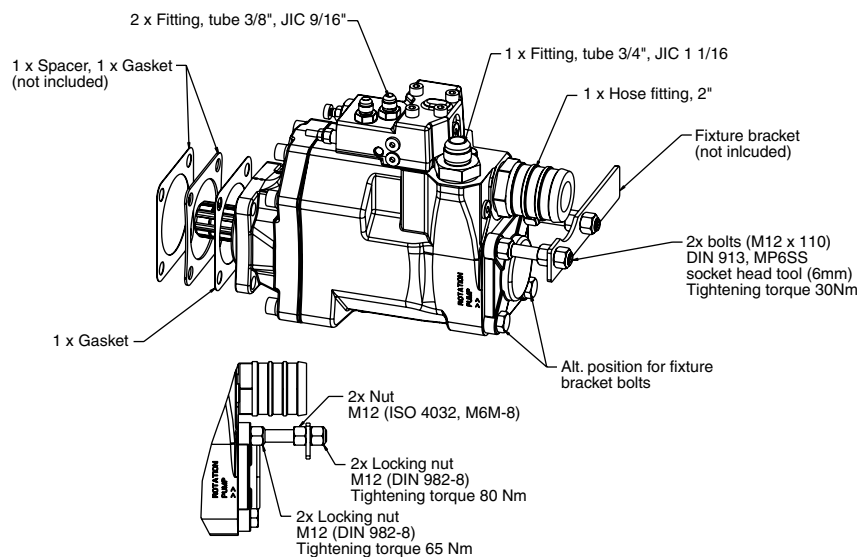
Pump Performance Data

Model Series	Max. Displacement in ³ /rev (cc/rev)	Outlet Pressure PSI (BAR)	Drive Speed RPM	Flow @ Rated RPM GPM (LPM)	Max. Horsepower HP (KW)
VP1-45	2.75 (45)	4350 (300)	2400	26 (98.4)	80 (59.7)
VP1-75	4.58 (75)	4350 (300)	2100	39 (147.6)	120 (89.5)
VP1-120	7.32 (120)	4350 (300)	1800	53 (200.6)	165 (123.0)

Markets

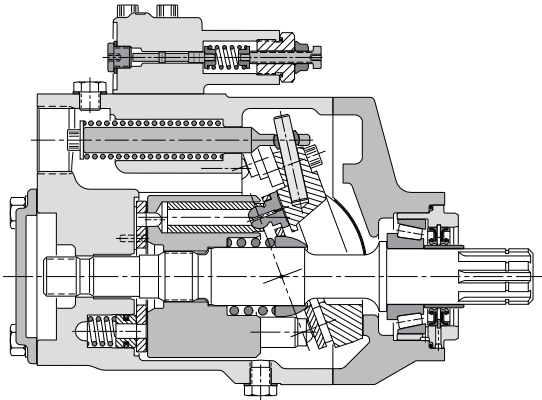
Forestry	Knuckle Boom Loader, Cranes
Construction	Off-Highway Trucks, Fan Drives
Mining	Dump Trucks
Material Handling	Truck Mounted Cranes, Lift Trucks
Recycling	Vaccum Truck Systems, Refuse Trucks - ASL, Rear Loaders
Military	Fan Drives

Applications



Note: Complete Mounting and Fitting Kit available as part number dwg of kit 3785286. Contains BSP to JIC fittings for suction, pressure, load sense and drain lines along with studs for rear support and optional PTO shim plate with extra gasket.

VP1 Load Sensing Truck Pumps



Benefits/Features

- Thru-drive capability on VP1-045 and VP1-075
- Higher self-priming speeds
- Operating pressures to 5801.51 PSI (400 BAR)
- New frame sizes to meet market requirements
- Higher overall efficiency
- Increased reliability
- Reduced noise level
- Smaller installation dimensions

Control

- Load sense and pressure limiter

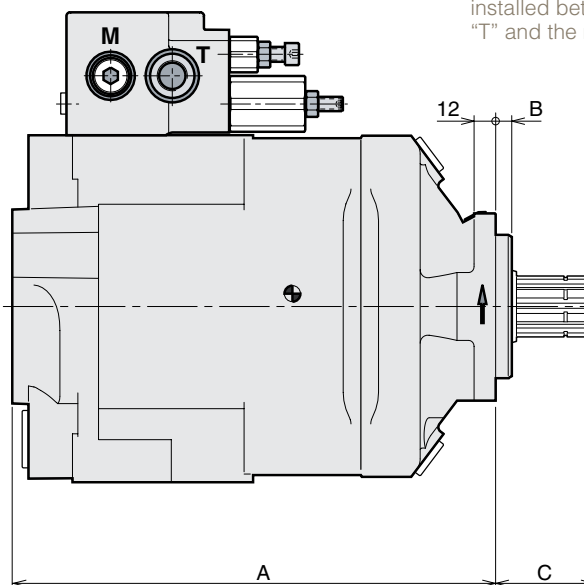
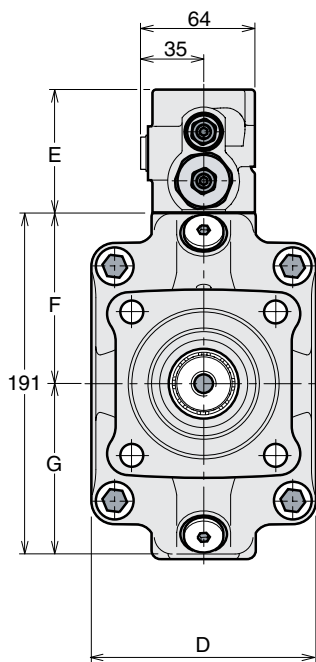
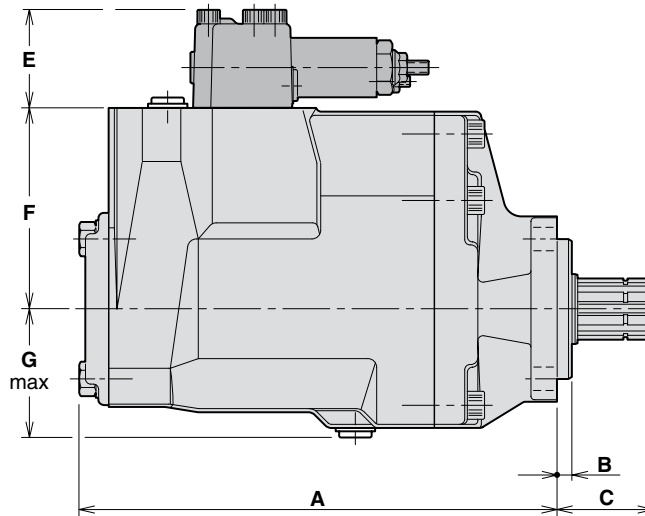
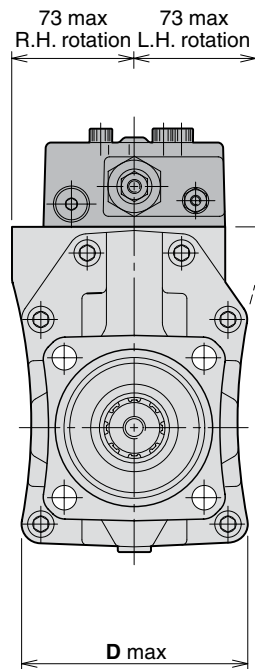
Control Performance

- Data on response

Thru-drive

- Fitting Kit 3797795 will accommodate mounting a DIN 5462 pump to the rear of the VP1. Check the factory for torque limitations on rear mount.

VP1 Load Sensing Truck Pumps



IMPORTANT!
The control is not drained through the pump case. An external line must be installed between the control drain port "T" and the reservoir.

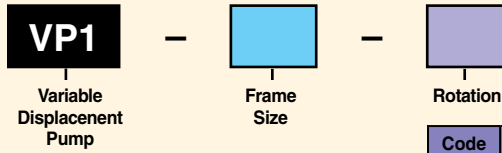
Dimensions, inch (mm)

Series	A max	B	C	D max	E	F	G max	H max
VP1-045 VP1-075	10.89 (276.5)	0.33 (8.5)	2.17 (55)	5.20 (132)	2.20 (56)	4.53 (115)	2.80 (71)	2.87 (73)
VP1-120	10.59 (269)	0.35 (9)	2.17 (55)	4.92 (125)	2.68 (68)	3.78 (96)	3.74 (95)	—



Piston Pumps

VPI Model Ordering Code



Code	Frame Size
045	2.75 in ³ /rev (45 cc/rev)
075	4.58 in ³ /rev (75 cc/rev)
120	7.32 in ³ /rev (120 cc/rev)

Code	Rotation
L	Left Hand (CCW)
R	Right Hand (CW)

- NOTES:**
1. All fittings must be ordered separately.
 2. Use seven digit number when placing order.
 3. Fitting Kit 378 5286 provides adapter fittings for inlet /outlet,

Ordering Code	Ordering No.
VP1-045-R	378 0334
VP1-045-L	378 0335
VP1-075-R	378 0336
VP1-075-L	378 0337
VP1-120-R	378 3182
VP1-120-L	378 3183

load sense and drain ports to JIC connections, along with the mounting gasket and support studs for installation.

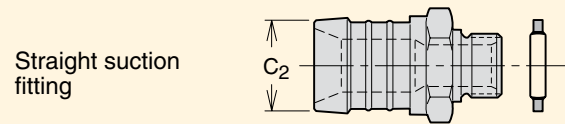
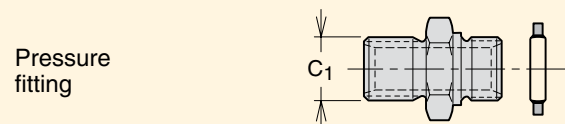
Fitting Kits

Each kit consists of a pressure fitting, a suction fitting and corresponding seal washers.

Kits with straight suction fitting

Ordering no.	C ₁	C ₂ dia.
370 4936	BSP ¾" (19.1mm)	2" (50.8mm)
370 7220*	BSP 1" (25.4mm)	2" (50.8mm)

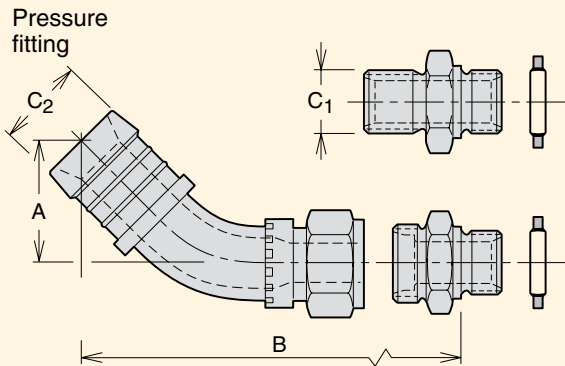
* Above 100 l/min



Kits with 45° suction fitting

Ordering no.	A in. (mm)	B in. (mm)	C ₁	C ₂ dia.
379 9563	2.80 (71)	6.06 (154)	BSP ¾" (19.1mm)	2" (50.8mm)
379 9562*	2.52 (64)	5.79 (147)	BSP 1" (25.4mm)	2½" (63.5mm)

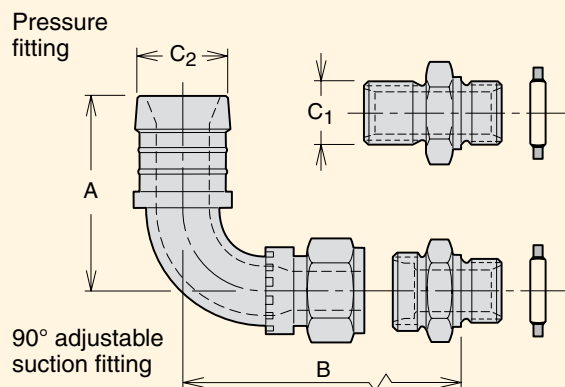
* Above 100 l/min



45° adjustable suction fitting

Kits with 90° suction fitting

Ordering no.	A in. (mm)	B in. (mm)	C ₁	C ₂ dia.
379 9918	5.67 (144)	5.04 (128)	BSP 1" (25.4mm)	2" (50.8mm)



90° adjustable suction fitting