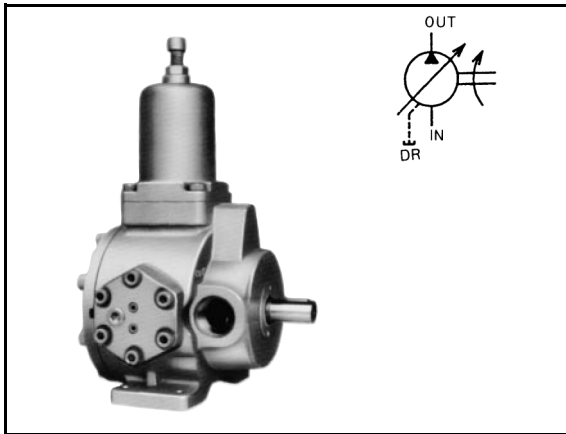


COOLANT VANE PUMP



The vane pump is specially designed based on a concept completely different from existing coolant pumps to feed coolant for long workpieces.

FEATURES

1. Long life and high performance
2. Since the pump is a variable-displacement type, no relief valve is necessary.
3. Available in a series so that the discharge rate most appropriate to the application can be selected.
4. Can be mounted in the same manner as conventional hydraulic pumps.

SPECIFICATIONS

Model	Discharge Rate at No-load (L/min)		Max. Operating Pressure (MPa)		Pressure Adjustment Range (MPa)		Speed (min ⁻¹)	
	1,000 min ⁻¹	1,200 min ⁻¹	SO	SW	SO	SW	Max.	Min.
WVP-VD1-G30-*-B	25	30	7	4	3 to 7	2 to 4	1,200	750
WVP-VD1-F30-*-B								
WVP-VF1-L56-*-B								
WVP-VF1-L90-*-B	47	56	4		2 to 4			
WVP-VF1-L120-*-B	75	90						
WVP-VG1-G160-*-B	100	120	7		3 to 7			

NOTE 1: The pressure adjustment range indicates the range at dead head. The direction of rotation is clockwise when viewed from the shaft end.

NOTE 2: The symbol "*" in the Model column represents the following:

SO: When non-soluble coolant is used.

SW: When water-soluble coolant is used.

● Precautions on Using the Pump

Pump selection: The pump characteristics may differ depending on the operating conditions such as the fluid used, the dead head setting pressure and the circuit. Therefore, it is necessary to select a pump that has sufficient margin.

● Handling

1. Installation

Basically, this series of pumps is installed in the same manner as the HVP-V*1 series of variable-displacement vane pumps.

The pump inlet port must be at the same level or lower than the fluid surface level and the suction filter and the strainer position must not be more than 200 mm lower than the bottom of the reservoir.

For a drain pipe, use a pipe larger than the pump drain port diameter and the drain pipe end must be submerged in the fluid.

2. Removal of Chips

When designing a reservoir, ensure that it will be possible to remove chips from the fluid. Chips of 50 μm or larger should be removed before the fluid is taken into the strainer.

● Chip Management Standard

Coolant Kind	Operating Pressure (MPa)	Contamination Level (mg/L)	Contamination Level (μm)	Workpiece Material
Water-soluble coolant	3 or less	500 or less	50 or less	Aluminum (AL) Iron (Fe)
	3 to 4	250 or less		
Non-soluble coolant	4 or less	500 or less		
	7 or less	250 or less		

3. Coolant

The kind of coolant and recommended coolant brands that can be used with WVP-V*1 series are indicated below.

Coolant Kind	Operating Pressure (MPa)	Dilution Ratio	Recommended Kind of Fluid, and Brand	Fluid Temperature (°C)
Water-soluble coolant	3 or less	50 or less	JIS K 2441 W1 Type 1 to Type 3 W2 Type 1	5 to 50
	3 to 4	25 or less	[HIGHCLEAN (Sanyo Chemical Industries) only]	
Non-soluble coolant	4 or less	-	JIS K 2441 Class 1 Type 1 to Type 5 Class 2 Type 1 to Type 4, and Type 11 to Type 14	
	7 or less	-		

4. Maintenance

- Checking the suction filter and the strainer

Install a vacuum gauge at the pump inlet port to prevent cavitation and prolong pump life.

If the vacuum gauge indicates 150 mmHg or higher, check the suction filter and the strainer and wash them to remove deposits. Use a strainer with a filtering accuracy of 150 mesh or better.

NOTE: Dilute the coolant as specified in the table of "3. Coolant".

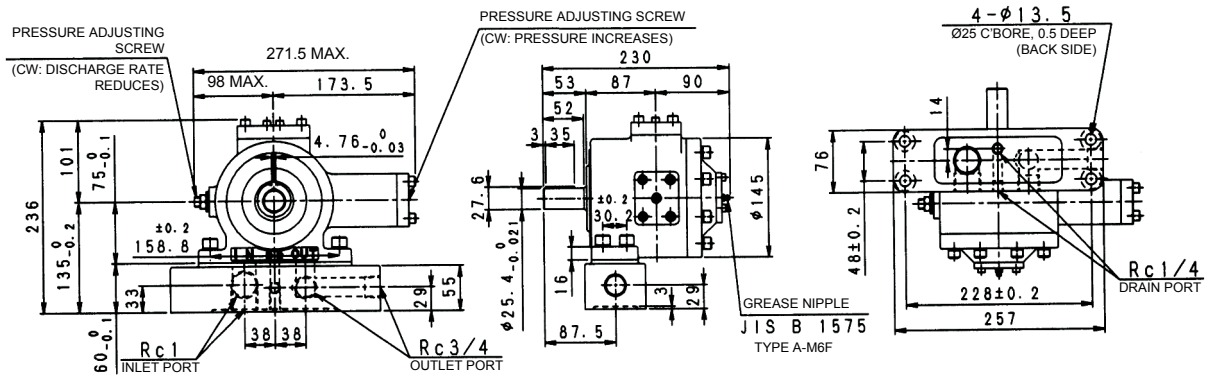
- Checking the water-soluble coolant

When water-soluble coolant is used, check the coolant to avoid degradation of rust-prevention performance and bacterial decay.

Degraded rust-prevention performance can cause rusting in the pump, which leads to low pump performance and short pump life. Development of bacteria will cause clogging of the suction filter and the strainer as well as corrosion of the pump component parts.

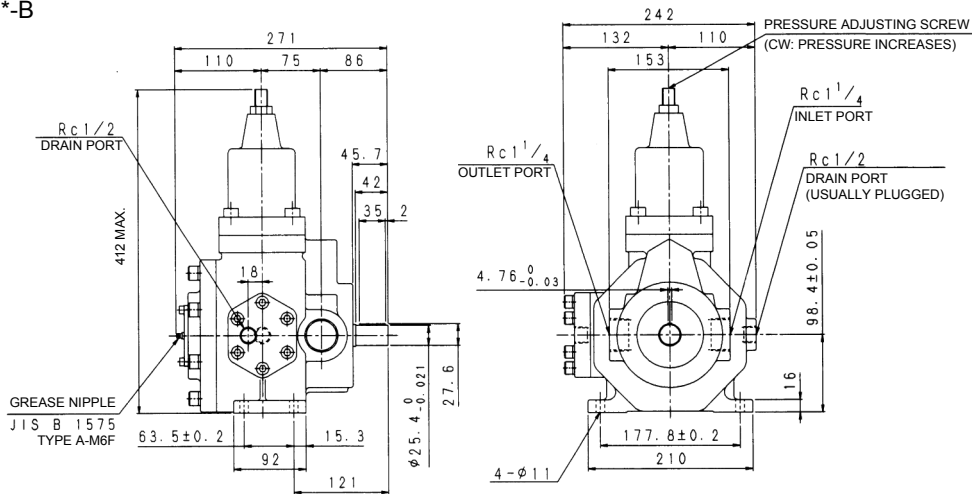
EXTERNAL DIMENSIONS

● WVP-VD1-G30-*-B



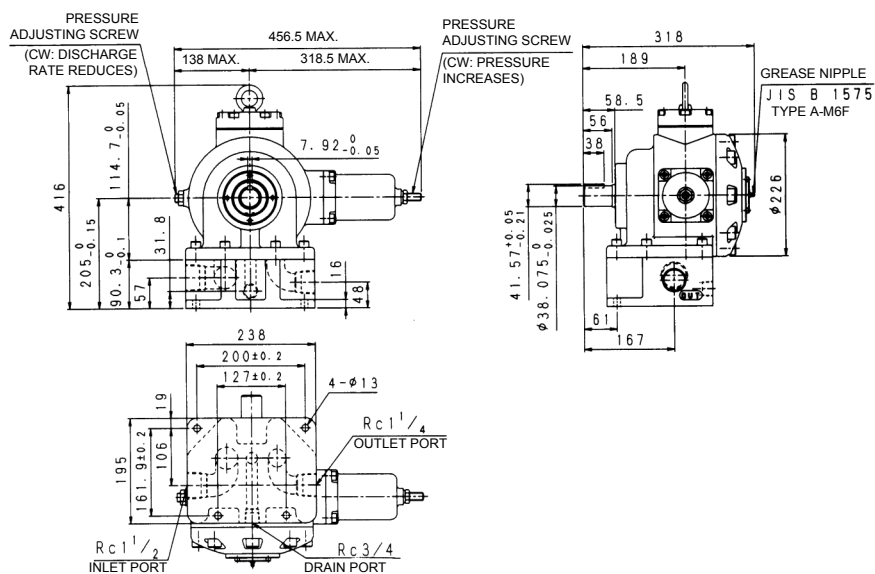
MASS: 27 kg

● WVP-VF1-L-*-B



MASS: 48 kg

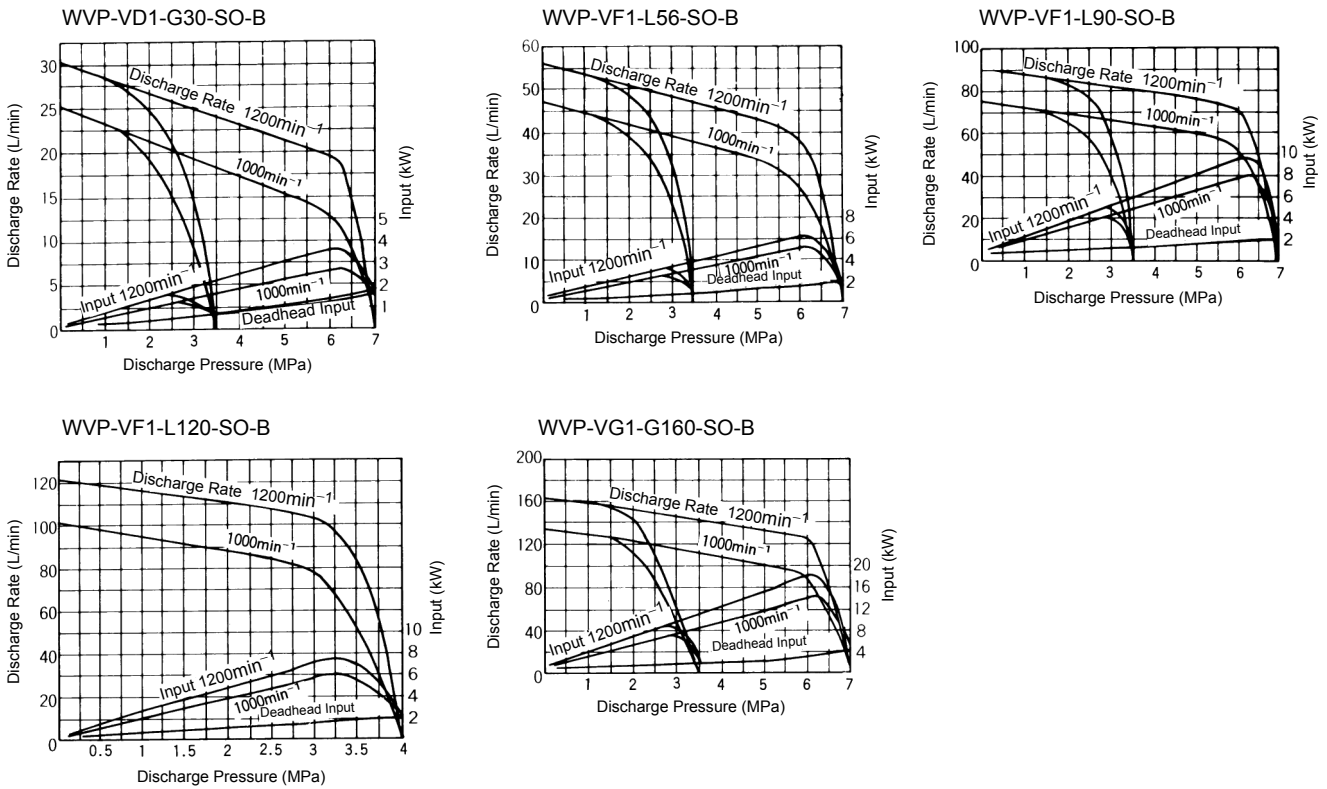
● WVP-VG1-G160-*-B



MASS: 86 kg

CHARACTERISTICS

- Non-soluble coolant (Conditions: Temperature 30°C, Viscosity 10.7 mm²/sec)



- Water-soluble coolant (Conditions: Temperature 30°C, Viscosity 0.9 mm²/sec), Coolant: W1 kind, type 2 (50-time dilution)

