



Ecology
Energy Saving
Excellent Pump

● **Highly efficient pumps can save the energy consumption!**
Simple choice from simple product line

● **Silent Running! Environmentally friendly**
(Approx. 67dB (A) from 2 MPa, 30 l/min)
Note) Simplified Pump data

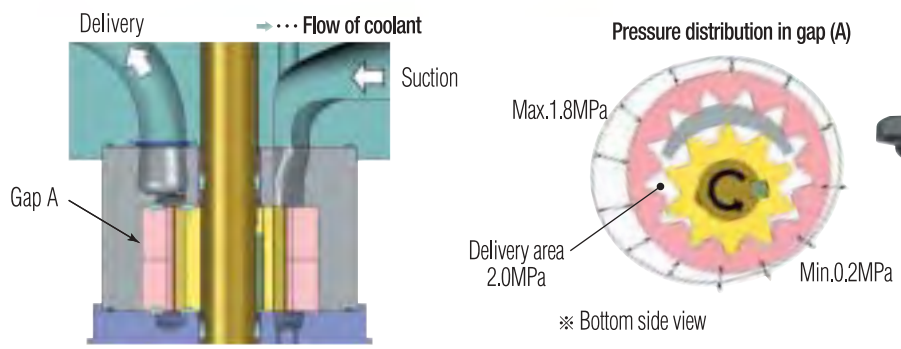
● **Ultra-compact, space-saving**



High Durability and Maintenance-free

In addition to the simple structure, high-pressure coolant fluid automatically lubricate the friction surface of all the parts, thereby allowing no direct contact between parts and even longer lasting.

Furthermore E3P pump adopt built-in relief valves, no need to add it.



Model Number

E3P-16-1.5

Basic model

Theoretical displacement
(cc/rev)

Motor rating

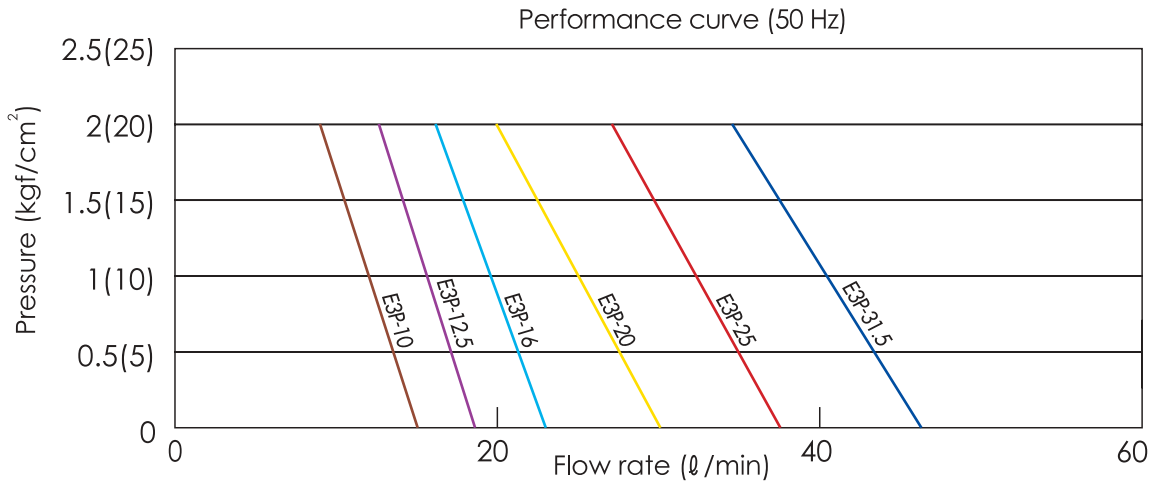
Pump Lineup

| Model No. | pressure (max.) | Delivery (l/min) | | Power input (kW) | |
|-----------|-----------------|------------------|------|------------------|------|
| | | 50Hz | 60Hz | 50Hz | 60Hz |
| E3P-10 | 2.0MPa | 9 | 12 | 0.6 | 0.8 |
| E3P-12.5 | | 13 | 16 | 0.8 | 1.0 |
| E3P-16 | | 16 | 21 | 1.0 | 1.2 |
| E3P-20 | | 20 | 26 | 1.3 | 1.6 |
| E3P-25 | | 27 | 34 | 1.6 | 2.0 |
| E3P-31.5 | | 34 | 44 | 2.0 | 2.5 |

● Non water-base (oil-base) coolant
E3P pumps are also designed to use non water-base coolant fluid. Please contact us with oil-base coolant viscosity (cSt) and its brand information.

Performance Chart

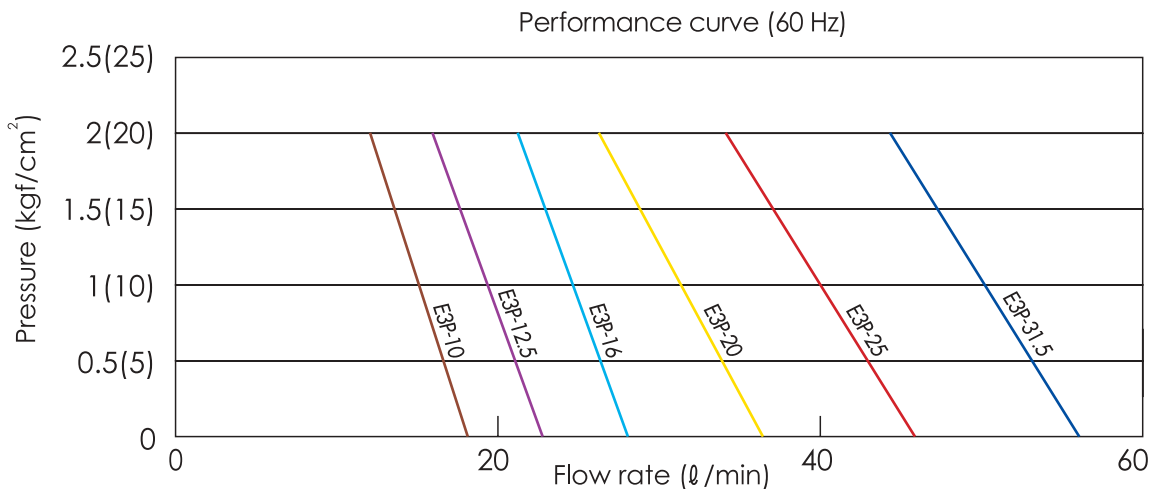
Synchronous rotation speed 1500 min⁻¹ E3P (50 Hz)



50Hz

| Model No. | | E3P-※-1.5 | | | E3P-※-2.2 | | |
|-------------------|-----------|-----------|-------|-----|-----------|-----|-------|
| Pressure | Flow rate | -10 | -12.5 | -16 | -20 | -25 | -31.5 |
| 0MPa | (ℓ/min) | 15 | 19 | 23 | 30 | 38 | 47 |
| 1.0MPa | (ℓ/min) | 12 | 15 | 19 | 25 | 32 | 40 |
| Shaft input power | kW | 0.4 | 0.5 | 0.6 | 0.8 | 0.9 | 1.2 |
| 2.0MPa | (ℓ/min) | 9 | 13 | 16 | 20 | 27 | 34 |
| Shaft input power | kW | 0.6 | 0.8 | 1.0 | 1.3 | 1.6 | 2.0 |

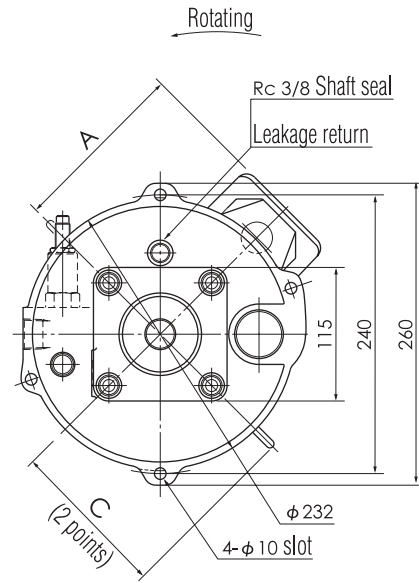
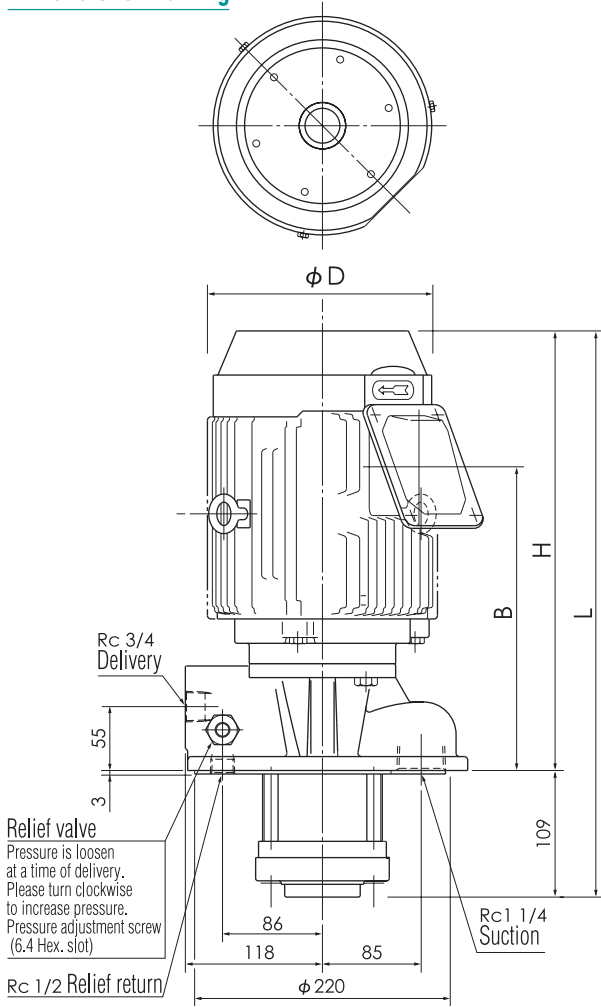
Synchronous rotation speed 1800 min⁻¹ E3P (60 Hz)



60Hz

| Model No. | | E3P-※-1.5 | | | E3P-※-2.2 | | E3P-※-3.7 |
|-------------------|-----------|-----------|-------|-----|-----------|-----|-----------|
| Pressure | Flow rate | -10 | -12.5 | -16 | -20 | -25 | -31.5 |
| 0MPa | (ℓ/min) | 18 | 23 | 28 | 36 | 45 | 56 |
| 1.0MPa | (ℓ/min) | 15 | 19 | 24 | 31 | 39 | 50 |
| Shaft input power | kW | 0.5 | 0.6 | 0.7 | 0.9 | 1.2 | 1.5 |
| 2.0MPa | (ℓ/min) | 12 | 16 | 21 | 26 | 34 | 44 |
| Shaft input power | kW | 0.8 | 1.0 | 1.2 | 1.6 | 2.0 | 2.5 |

Dimensions Drawing



Dimensional data

| Model No. | Motor | A | B | C | D | H | L | Weight (kg) |
|-----------|-------|-----|-------|-----|-----|-----|-----|-------------|
| E 3 P | 1.5kW | 153 | 232.5 | 137 | 198 | 350 | 459 | 37 |
| | 2.2kW | 153 | 261.5 | 137 | 198 | 379 | 488 | 43 |
| | 3.7kW | 164 | 312.5 | 148 | 214 | 448 | 557 | 50 |

Suction / Relief Return / Delivery Piping Flanges (Not included in pump package)

● Model of suction piping

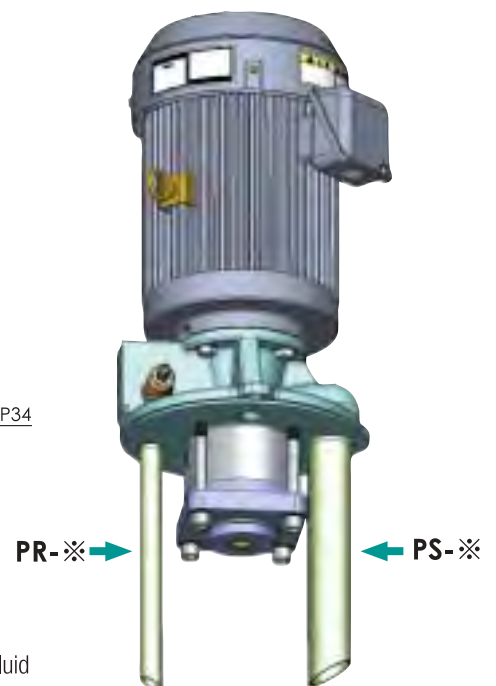
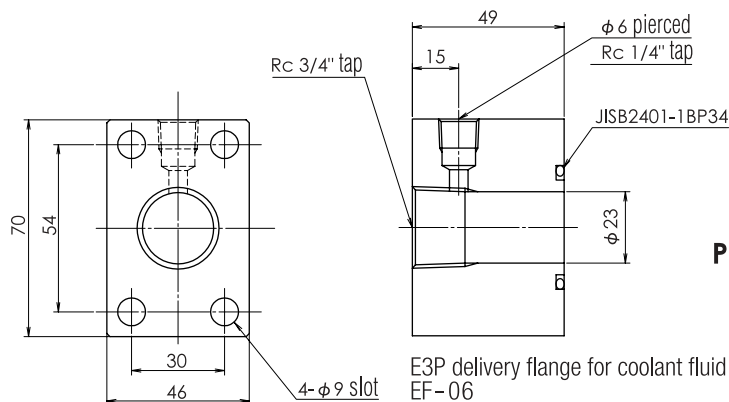
| Model | Size |
|-------|-------|
| PS-L | 350mm |
| PS-S | 250mm |

● Model of relief return piping

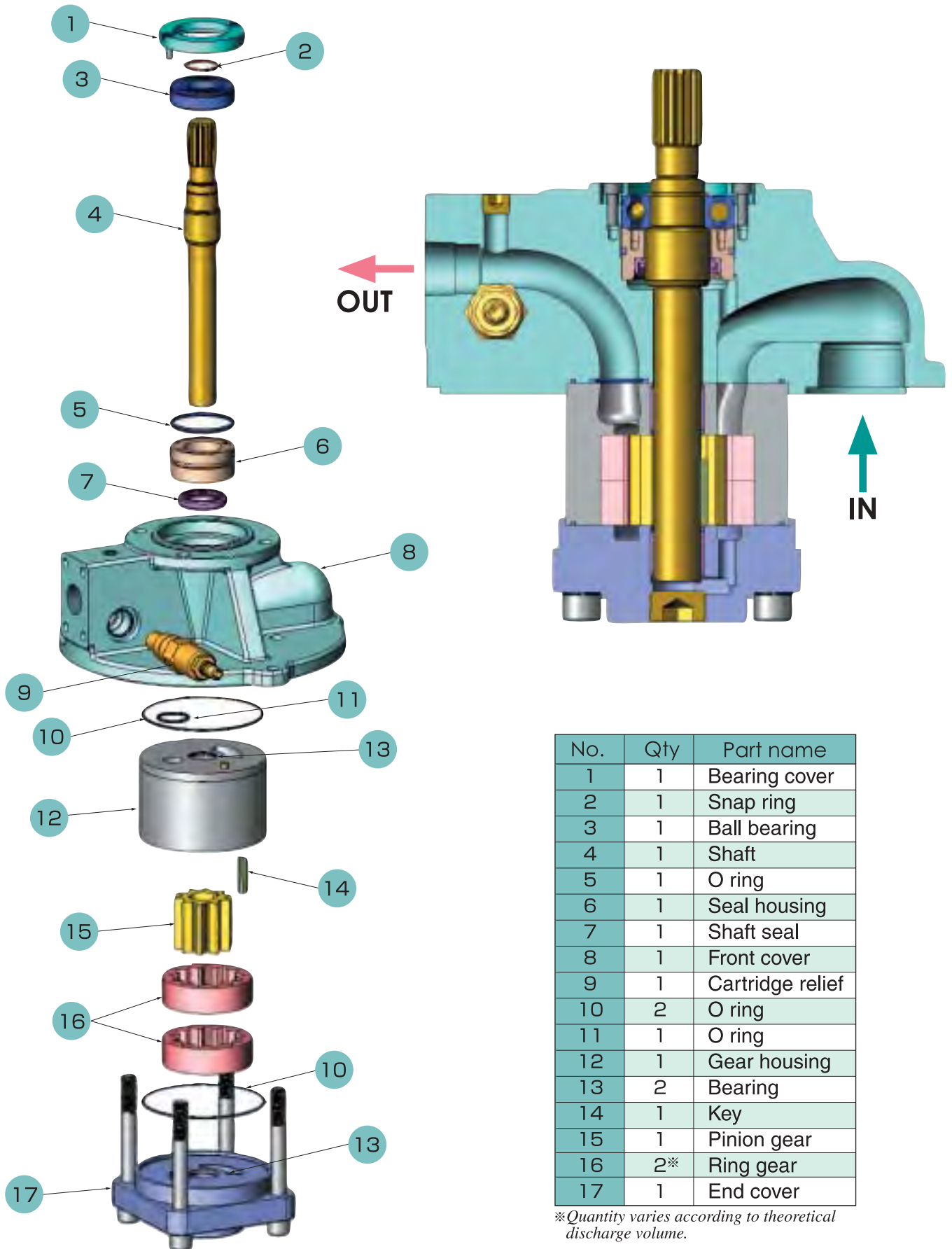
| Mode | Size |
|------|-------|
| PR-L | 350mm |
| PR-S | 250mm |

● Model of delivery piping flange EF-06 (Rc 3/4)

※Suction pipes can be threaded into pumps without this flange.



Configuration



| No. | Qty | Part name |
|-----|-----|------------------|
| 1 | 1 | Bearing cover |
| 2 | 1 | Snap ring |
| 3 | 1 | Ball bearing |
| 4 | 1 | Shaft |
| 5 | 1 | O ring |
| 6 | 1 | Seal housing |
| 7 | 1 | Shaft seal |
| 8 | 1 | Front cover |
| 9 | 1 | Cartridge relief |
| 10 | 2 | O ring |
| 11 | 1 | O ring |
| 12 | 1 | Gear housing |
| 13 | 2 | Bearing |
| 14 | 1 | Key |
| 15 | 1 | Pinion gear |
| 16 | 2* | Ring gear |
| 17 | 1 | End cover |

*Quantity varies according to theoretical discharge volume.

Motor Current Value

● **Directly Coupled Type** [Unit : A]

| Capacity | Voltage / Frequency | With 100% load |
|----------|---------------------|----------------|
| 1.5 kW | 200V/50Hz | 7.00 |
| | 200V/60Hz | 6.20 |
| | 220V/60Hz | 6.00 |
| | 380V/50Hz | 3.70 |
| 2.2 kW | 200V/50Hz | 9.80 |
| | 200V/60Hz | 8.90 |
| | 220V/60Hz | 8.50 |
| | 380V/50Hz | 5.20 |
| 3.7 kW | 200V/50Hz | 16.0 |
| | 200V/60Hz | 14.8 |
| | 220V/60Hz | 14.0 |
| | 380V/50Hz | 8.50 |
| 5.5 kW | 200V/50Hz | 23.8 |
| | 200V/60Hz | 21.0 |
| | 220V/60Hz | 20.0 |
| | 380V/50Hz | 12.5 |
| 7.5 kW | 200V/50Hz | 31.8 |
| | 200V/60Hz | 28.2 |
| | 220V/60Hz | 27.0 |
| | 380V/50Hz | 16.7 |

● **Bell Flange Type** [Unit : A]

| Capacity | Voltage / Frequency | With 100% load |
|----------|---------------------|----------------|
| 5.5 Kw | 200V/50Hz | 21.5 |
| | 200V/60Hz | 20.6 |
| | 220V/60Hz | 19.2 |
| | 380V/50Hz | 11.1 |
| 7.5 Kw | 200V/50Hz | 28.7 |
| | 200V/60Hz | 27.6 |
| | 220V/60Hz | 25.5 |
| | 380V/50Hz | 14.8 |
| 11.0 Kw | 200V/50Hz | 41.8 |
| | 200V/60Hz | 39.7 |
| | 220V/60Hz | 37.0 |
| | 380V/50Hz | 21.4 |
| 15.0 Kw | 200V/50Hz | 55.4 |
| | 200V/60Hz | 52.9 |
| | 220V/60Hz | 49.3 |
| | 380V/50Hz | 28.4 |
| 18.5 Kw | 200V/50Hz | 67.0 |
| | 200V/60Hz | 65.1 |
| | 220V/60Hz | 59.8 |
| | 380V/50Hz | 34.7 |
| 22.0 Kw | 200V/50Hz | 80.2 |
| | 200V/60Hz | 77.3 |
| | 220V/60Hz | 71.6 |
| | 380V/50Hz | 41.3 |
| 30.0 Kw | 200V/50Hz | 108.0 |
| | 200V/60Hz | 104.0 |
| | 220V/60Hz | 96.1 |
| | 380V/50Hz | 55.7 |

Micron VS. Mesh Conversion Table

| | | | | | | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Mesh | 150 | 170 | 200 | 250 | 270 | 300 | 500 | 600 | 800 | 1000 | 1450 |
| Micron(μm) | 100 | 88 | 75 | 60 | 53 | 50 | 30 | 25 | 20 | 15 | 10 |

Nozzle dia. VS. Pressure

| Nozzle dia. φx2 | Nozzle outlet pressure MPa(kgf/cm ²) | | | | | | | |
|--------------------|--|---------|---------|---------|---------|---------|---------|---------|
| | 6.9(70) | 5.9(60) | 4.9(50) | 3.9(40) | 2.9(30) | 2.0(20) | 1.5(15) | 1.0(10) |
| 0.5 x 2 points | 2.3 | 2.1 | 1.9 | 1.7 | 1.5 | 1.2 | 1.1 | 0.9 |
| 1.0 x 2 points | 9.2 | 8.5 | 7.7 | 6.9 | 6.0 | 4.9 | 4.2 | 3.5 |
| 1.2 x 2 points | 13.2 | 12.2 | 11.2 | 10.0 | 8.6 | 7.1 | 6.1 | 5.0 |
| 1.4 x 2 points | 18.0 | 16.6 | 15.2 | 13.6 | 11.8 | 9.6 | 8.3 | 6.8 |
| 1.6 x 2 points | 23.5 | 21.7 | 19.8 | 17.7 | 15.4 | 12.5 | 10.9 | 8.9 |
| 1.8 x 2 points | 29.7 | 27.5 | 25.1 | 22.5 | 19.4 | 15.9 | 13.7 | 11.2 |
| 2.0 x 2 points | 36.7 | 33.9 | 31.0 | 27.7 | 24.0 | 19.6 | 17.0 | 13.9 |
| 2.5 x 2 points | 57.3 | 53.0 | 48.4 | 43.3 | 37.5 | 30.6 | 26.5 | 21.7 |
| 3.0 x 2 points | 82.5 | 76.4 | 69.7 | 62.4 | 54.0 | 44.1 | 38.2 | 31.2 |

Note) The above flow rate are calculated based on inlet pressure with no reference to pressure loss from pump to nozzle.

Instructions

Please read the “Product Manual” carefully and understand it completely before you use this product.

●Coolant fluid

1. In case of using water-soluble coolant, the fluid concentration should be 2% or more.

(Dilution ratio less than 50 times)

2. The cleanliness of coolant should be filtered by 20~30 μ m filter.

●Operating instructions

1. Make sure enough amount of coolant fluid is applied in the tank.

Before starting up, please check to see no foam in coolant fluid that might be generated by pouring.

2. Try activating the motor to check the rotating direction.

It should turn right (clockwise) when you view from the motor fan.

3. At initial testing or after pump change, inch the motor a couple of times (=activate the motor intermittently) in order to fill the pump with coolant fluid.

Activate the motor for 0.5 to 1 second each time for inching.

4. Please contact us for disassembly and re-assembly.

5. **E3P relief valve pressure is set to no load at a time of delivery. Please adjust the pressure to match the conditions for use.**

Turn the pressure adjustment screw to right (clockwise) to increase pressure.