

The reliable PMP-450S is Koolance's highest-flow 24V pump which can also run at 12V. (If pump speed will be externally throttled from 12V or 24V, [PMP-450](#) is recommended for smoother operation.)

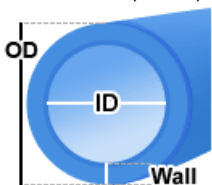
- Maximum Flow Rate: 12L/min (3.2 gal/min) @ 12V, 20L/min (5.3 gal/min) @ 24V
- Maximum Head Pressure: 3.2m (10.5ft) @ 12V, 6m (19.7ft) @ 24V
- Motor: Brushless DC, electronically commutated, spherical motor
- Power: 8-24VDC, 3-50W, 0.13-2.1A
- Startup Voltage: 9 to 13.2 VDC
- Maximum System Pressure: 3.5 kgf/cm² (50 PSI)
- Maximum Temperature: 60° C (140° F)
- Electrical Connector: 4-pin Molex power supply connection + 3-pin (single lead) tach
- Hose Connections: 13mm (1/2in) ID hose barbs
- Wetted Materials: PPO, Carbon/Allumina Ceramic, EPDM or Viton, 316 SS
- Noise: Less than 40dBA
- Weight: 862g (1.9lbs)
- MTBF 50k hours

Intended Tubing Size

ID: 13mm (1/2")

OD: 16mm (5/8")

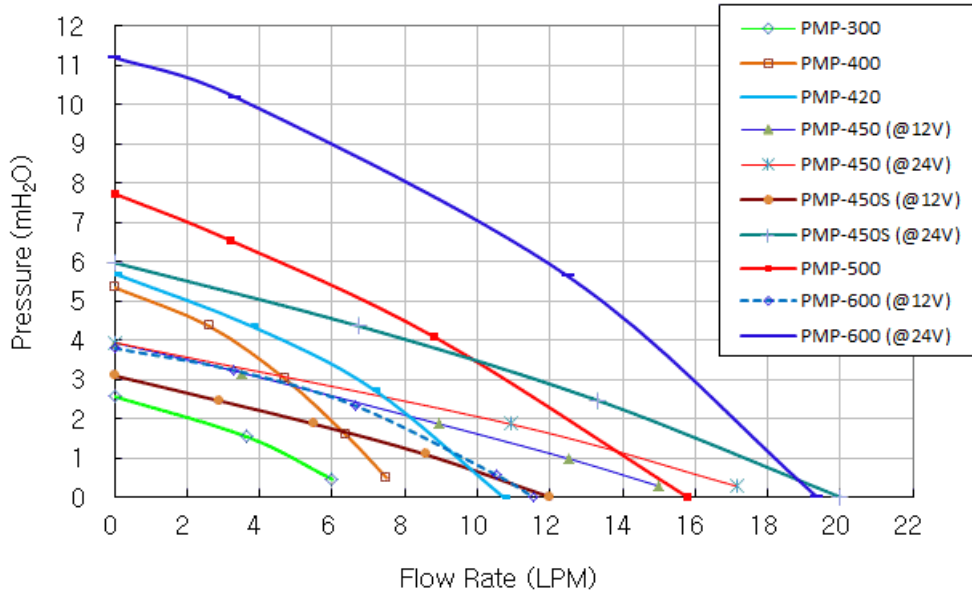
Wall: 1.5mm (1/16")

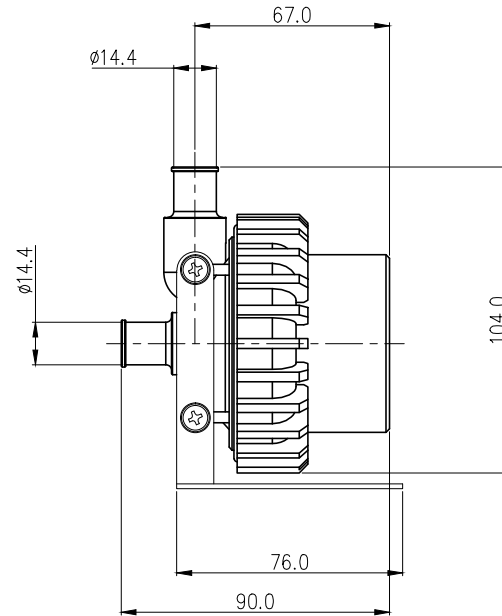
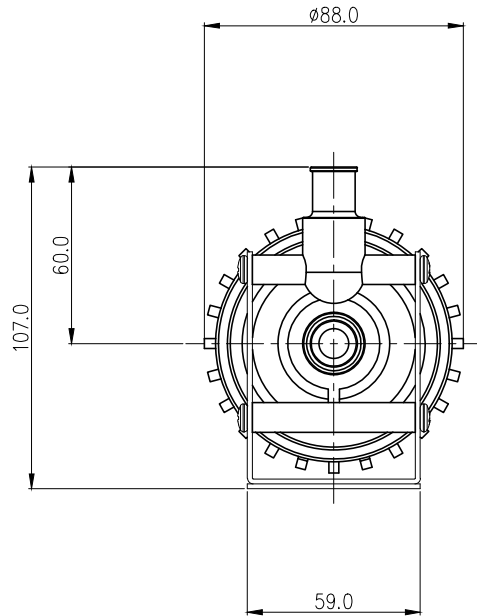
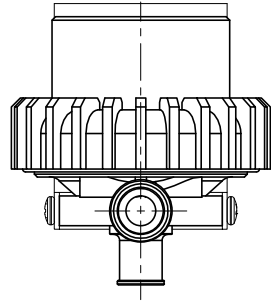


| General | |
|-------------------------------|---|
| Weight | 1.20 lb (0.54 kg) |
| Materials | PPO, Carbon/Allumina Ceramic, EPDM or Viton, 316 SS |
| Max Pressure @ 25° C | 3.5kgf/cm ² (50 psi) |
| Max Temp. Operating Tolerance | 60° C (140° F) |
| Pumps | |
| Expected Lifetime | 50,000 hrs. MTBF |
| Max Flow Rate | 12L/min (3.2GPM) @ 12V, 20L/min (5.3GPM) @ 24V |
| Max Power | 26W @ 12V, 55W @ 24V |
| Max Static Head | 3.2m (10.5ft) @ 12V, 6m (19.7ft) @ 24V |
| Native Hose Connection | Barbs for ID 13mm (1/2in) |
| Speed Knob | no |
| Tachometer | yes |

| General | |
|---------|----------------------|
| Type | Magnetic Centrifugal |
| Voltage | 8-24 VDC |

Flow Rate vs. Head Pressure





| NO. | DESCRIPTION | | | | MATER'L | | QUANTITY | REMARKS |
|------------|-----------------|--|--|--|----------|-----|-------------------|---------|
| | | | | | UNIT | MM | | |
| | KOOLANCE | | | | SCALE | N/S | PART NO. PMP-450S | TITLE |
| DATE | | | | | BY | BY | | |
| 05/12/2017 | S.J.LEE | | | | DWG. NO. | | ITEM | |