PRECISION MIST
HIGH PRESSURE MIST & FOG SYSTEMS

MISTING PUMP MANUAL

1000 PSI MISTING PUMPS
MINI ENCLOSED DIRECT DRIVE

Includes:

- Specification Data
- Operation
- General Safety Precautions
- Maintenance & Parts
- Installation
- Warranty

SKUs:

- PRME1502M
- PRME1802M

Enclosure Color Options



Enclosed Direct Drive Misting Pump Specifications

Pump Models	Flow GPM	Motor HP	Amps	Noise Db(A)	.008 Minimum Nozzle Capacity	.008 Maximum Nozzle Capacity	.012 Minimum Nozzle Capacity	.012 Maximum Nozzle Capacity
PRME1502	0.25GPM	1/2HP	120/220V 60 Hz 9,11,/4,6 FLA	54	8	15	5	11
PRME1802E	0.5GPM	1/2HP	120/220V 60Hz 11,13/5,7FLA	60	16	28	12	24

Features

- GP Pump
- Heavy Duty Electric Motor
- Inlet Solenoid Valve
- Liquid Filled Pressure Gauge
- Completely Enclosed w/Internal Fan
- Acoustical Foam for Low Noise Level
- Powder Coat Finish
- On/Off Switch
- Cord Connected
- Rubber Feet

Dimensions
17"L x 12" W x 11" H

Weight
50 lbs

Technical Data

Max. Discharge Pressure	1000 PSI
Single Phase Voltage	1PH
Motor RPM	1725
Electric Motor Type	Totally Enclosed Fan Cooled 1PH 110v/220v
Motor Overload	Automatic
Filter	5 Micron
Inlet PSI Range	30-60 PSI
Max. Liquid Temperature	165°F
Water Inlet Valve	3/8" Solenoid
Pressure Gauge	0-2000 PSI
Switch	Rocker Switch, DPST, 20A 4 Connections
6 FT. Power Cord	NEMA 5-20P 3.0GPM-NEMA 6-20P
Oil Capacity	8.5 oz

Operation

Precision Mist 1000 PSI pump takes standard city water pressure, which is normally about 50-70 PSI, and “boosts” it up to 1000 PSI. The higher water pressure created by the pump enhances mist cooling and heat absorption in two ways. First, it produces a higher flow of water through the nozzle. More water being expelled from the nozzle means more cooling. Second, it creates a smaller finer mist droplet that allows the droplet to evaporate more quickly. Better evaporation means better cooling.

There are many applications for the 1000 PSI pump. Applications include patio cooling for homes and restaurants, greenhouses, humidification, dust control, odor control and many more.

Caution, Warning and Safety Instructions:

1. **Warning:** Before plugging in unit for the first time, read the following section carefully. To reduce the risk of electric shock, plug in supplied grounded cord into a properly grounded receptacle. When servicing this unit, unplug the power cord before attempting any service or repair.
2. **Outdoor Use ONLY!** Not for indoor use.
3. **Install pump in a suitable place to prevent property damage, in the event that a leak should occur.**
4. Turn water off, and disconnect power to the unit when not in use for extended periods of time.
5. Do not place pump in damp or wet environments.
6. Feed system with potable cold water supply only. Do not connect pump to hot water supply.

Do not expose pump to freezing temperatures. When winterizing disconnect pump from power and water supply, and store in dry safe place. Make sure all water is drained from the system to prevent damage in the event of a freeze.

Installation

1. Install pump above grade level on a preformed concrete pad (16" x 24"). This pump is non-submersible. Locate pump in a location where flooding and roof runoff does not occur to avoid water damage to the electric motor.
2. Verify water feed to pump location is potable cold water supply only.
3. Connect cold water feed to pump inlet and connect nylon tubing to pump outlet. **Important**: **Install 50 ft. or more of nylon tubing from the pump to the metal line to prevent line noise and vibration.**
4. Remove red shipping cap on the pump crankcase and install the oil dipstick provided. Unit is prefilled with oil and ready to operate. Oil should be half full on the sight glass when unit is off. Do not overfill.
5. Plug pump into a properly grounded receptacle. Do not use extension cords!
6. On new misting systems, flush lines before installing nozzles. The pump will not build pressure until all of the nozzles are installed.
7. Do not exceed 1000 PSI and do NOT run the pump without water.

General Safety Precautions

Can cause DEATH, SEVERE INJURY or substantial property damage.

CAUTION **Can cause MINOR INJURY or property damage.**

GENERAL SAFETY PRECAUTIONS

Following the instructions in this manual is crucial. Failure to do so may result in serious injury or damage to property. It is the responsibility of the operator to ensure that all safety precautions are followed at all times. If you are unsure about any aspect of operating this equipment, please consult the manual or contact a qualified technician for assistance. Remember, safety is always the top priority when using any type of machinery or equipment.

HAZARDOUS VOLTAGE

Can cause serious injury or detach. Disconnect power before servicing. Lockout/tagout misting pump.

MOVING PARTS

Pump may start automatically. Disconnect power before servicing. Lockout/tagout misting pump.

HOT SURFACES

Can cause serious injury. Do not touch. Allow cooling before servicing.

HIGH PRESSURE WATER

Bypassing, modifying, or removing safety/relief regulator valves can cause serious injury or death. Do not bypass, modify, or remove safety/relief valves. If a leak should occur, shut unit off before attempting to tighten any fittings or tube repairs. Do not change any pressure settings above maximum rating. Maximum pressure is 1000 PSI / 70 Bar.

RISK OF LEAKING OR BURSTING

Use only suitable tubing and fittings acceptable for pressure of not less than minimum allowable working pressure of the pump. Remove water from lines and filter bowls during winter months to prevent freezing damage to pump or tubing.

Install pump in a suitable place to prevent property damage in the event a leak should occur.

Electrical installation and service should be performed by a qualified electrician who is familiar with all applicable local, state. and federal laws and regulations.

GENERAL. The motor rating, as shown on the motor nameplate, and the power supply must have compatible voltage, phase, and hertz characteristics.

WIRE SIZE. The electrical wiring between the power supply and electric motor varies according to motor horsepower and other factors. Install adequately sized power leads to protect against excessive voltage drop during startup. Refer to the National Electric Code (NEC) for information on selecting the proper wire size and securing electrical connections. If you connect additional electrical equipment to the same circuit, consider the total electrical load when selecting the proper wire size.

DO NOT UNDERSIZE WIRING. DO NOT USE EXTENSION CORDS.

Maintenance & Parts

Change oil every 500 hours of operation or once a year. Use approved pump oil (SKU: O4322) Proper oil level is half full on the sight gauge when the unit is off. Do not overfill. Oil capacity is 12 oz.

Change water filter cartridges annually or as needed. (SKU: FBSD10 and SKU: FBB39) 5 micron cartridge and 1 micron

Winter shutdown:
Unplug pump power cord, shut off water supply, remove filter bowl and drain water. Drain water out of all lines using compressed air to prevent freeze damage.

1/4" NPT Liquid Filled
Pressure Gauge 2000 PSI
2.00" (Thread on bottom)
SKU:90020

Misting System Service Kit
(Scale X, Carbon, Sediment Filter)
SKU: MK10110051

Electric Solenoid Valve
120V 3/8" FNPT
SKU: ES117

Pressure Regulator
3/8MPT Output x 3/8MPT
Input (3/8"FNPT Bypass)
SKU: YVB3K

Low Pressure Sensor 120v
SKU: 90000

Direct Drive Pump Head
SKUs:
PRM1502H - 0.25GPM
PRM1802H - 0.5GPM
PRM1505H - 1.0GPM
PRM1507H - 1.5GPM
PRM1509H - 2.0GPM
PRM1809H - 3.0GPM

10" Water Filter
Black/Blue 3/8"FNPT
SKU: FBB11

3/8" Brass Compression
Union w/ Drain Nozzle
SKU: BR433

Axial Cooling Fan 4.5"
120V
SKU: 90009

Rocker Switch, DPST, 20A
4 Connections
SKU: 91009

Installation - Instructions and Recommendations

Maximum temperature of the water through the pump is 165°F (73°C).

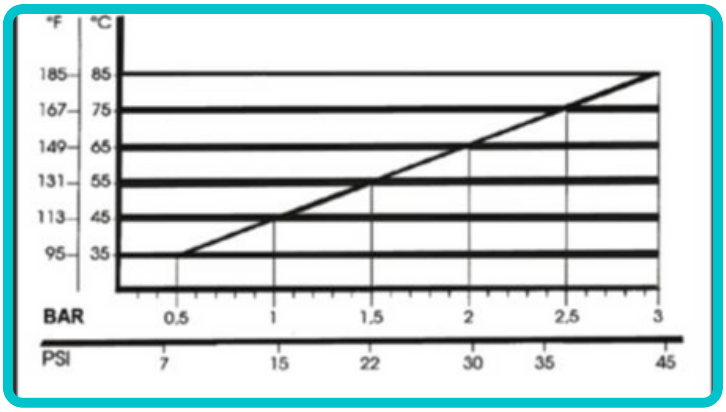
In order to obtain maximum performance in terms of duration of seals and valves, it is necessary to respect a few simple rules, as follows:

1) In order to avoid damage caused by cavitation, the pump must be pressure fed.

The higher the inlet pressure, the longer the life of the wet end of the pump.

When working at 165°F (73°C), the minimum feed pressure - measured directly in the inlet port of the pump when it is working - is 45 PSI (3 bar).

The minimum feed according to the different temperatures are:



Naturally, if the application allows for feeding the pump with 45 PSI (3 bar) even at low temperatures (for example: 115°F/45°C the life of the wet end of the pump will be even longer.

2) The plumbing which feeds the pump must be of a diameter at least equal to the inlet port.

Also, follow the suggestions below:

a) Make the plumbing as short and straight as possible, preferably in an upward direction to facilitate the expulsion of eventual air bubbles naturally if compatible with the requirements of the system.

b) It is always useful to put a filter at the inlet with capacity of 4 to 5 times the flow of the pump, for example, for a 4 gpm (15 l/min) pump, put a filter from 16 to 20 gpm (60-75 l/mi) The mesh size suitable for this application is 0.016" (.4 mm).

c) It is extremely important to put a pressure switch on the suction port of the pump, and in any case downstream from the filter, so that it can stop the pump should the feed pressure drop by 20% due to the filter clogging or failure of the feed pump, etc.

3) Change of oil

We recommend the **first oil change after the first 50 hours,** with the ***pump stopped*** and ***oil still warm***.

This change is not recommended because the oil has lost its properties, but rather to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, but are allowed to remain in the oil, they *may cause premature wear* to the moving parts and oil seals. **After this initial change, the oil can then be changed every three months or 300 hours of operation thereafter.**

Please note: If the pump works in conditions with high humidity and with sharp temperature changes, it is possible that condensation will appear inside the crankcase, which mixing with the oil can change its properties. This is easy to see because the oil changes to a white, milky color.

If the pump does not have excessive water leaking from the packings, and the oil becomes milky, the oil has to be changed more frequently. The percentage of water in the oil must not exceed 20%.

Use oil per the following chart:

CHART OF COMPATIBLE OILS SAE15W40	
General Pump	Series 100
BP	VISCO 2000
CASTROL	CWX
MOBIL	SUPER
SHELL	HELIX SUPER
TOTAL	QUARTZ 4000-5000

Warranty

Precision Mist offers specialized services to all our clients and it is always a pleasure engaging with our customers from all over the region. We have a dedicated team of experts who work tirelessly to render services that exceed expectations. As a result, we always strive to ensure that our most esteemed customers get their money's worth by offering an assortment of misting products to choose from. If you want to have a mist system that compares to no other, you're in the right place.

1. Terms and conditions

Precision Mist offers it's customers a 1 year warranty on all its pressure misting products as per the following terms:

The benefits of the warranty are subject to proof of purchase and proper use. Any product that qualifies for the warranty will be repaired by an authorized Precision Mist technician. Normal wear and tear on nozzles, fittings, valves, plungers, tubing, hoses, filters and/or any electronic components are excluded from this warranty.

This warranty does not cover for misting products that have been worked on or attempted repairs by an unauthorized technician.

The warranty, also, does not apply to damaged products due to, freezing, running the pump dry, directly or indirectly, to abuse, negligence, misuse, accidents, alterations, or lack of maintenance thereof.

Precision Mist also will not be liable for injuries to persons or property, death of a person, or for accidental, special, contingent or consequential damages that may arise from the use of our products.

This warranty is subject to the current laws and regulations.

Precision. Quality. Innovation.

Sales/Service/Parts/Accessories

Contact Us

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Enclosed Direct Drive Pump

Rocker Switch

Dual Water Filtration

Water Supply Hose

Breather Cap

Electric Inlet Solenoid Valve

Glycerin Filled Pressure Gauge

110V Power Cord

Pressure Regulator

Energy Efficient Motor

High Efficiency Pump

On/Off Remote *(optional)*

Inlet

Installation Guide
Enclosed Direct Drive Misting Kit