

# Solar Pump Station M

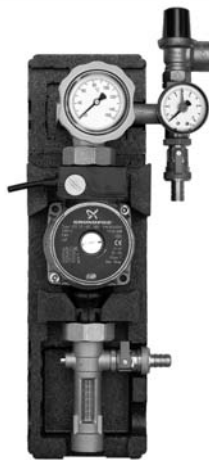
## Meibes M-Series Solar Thermal Pump Stations

Meibes M-Series Solar Thermal Pump Stations are used for circulating the heat transfer medium from the collector to the storage tank or solar water heater. They are a proven, cost effective solution and the heart of any solar thermal system. M-Series pump stations are designed for use in solar thermal systems with approximately 129 ft<sup>2</sup> (12m<sup>2</sup>) of solar collector area. The pump station is activated by a solar controller based on the differential temperature between the solar storage unit and the collectors.

These single and dual-line solar pumping stations integrate all the major functional and safety components needed into one compact, pre-assembled, pre-insulated unit making them extremely easy to install, operate and maintain. The integration of components saves installation time and money by eliminating the need to purchase and install separate components (e.g. pump, pressure relief valve, gauge, air separator, expansion tank connection, isolation and check valves, flow control/sight glass and fill/drain connections).

Single-line pump stations are connected to the return side from the solar water heater or storage tank to the panel. The single line station comes complete with a Grundfos circulator pump, pressure relief valve, pressure and temperature gauges, connection for an expansion tank and 2 metre cable. Mounting hardware is included, and the unit is enclosed and protected by a two-piece EPP insulated cover. Meibes dual-line stations are connected to both the supply and return side of the system. The dual-line station comes complete with a Grundfos circulator pump, pressure relief valve, pressure and temperature gauges, an air separator on the supply side and a connection for an expansion tank.

- Shipped complete and preassembled with circulation pump, pressure relief valve, pressure gauge(s) and connection for an expansion tank
- Available in single and dual-line version
- Equipped with 3/4" NPT connections
- Approved for use with most solar heat transfer fluids
- Includes fully insulated EPP housing and mounting hardware



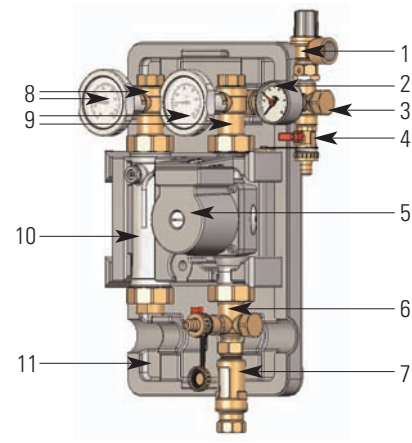
Single-line M



Dual-line M

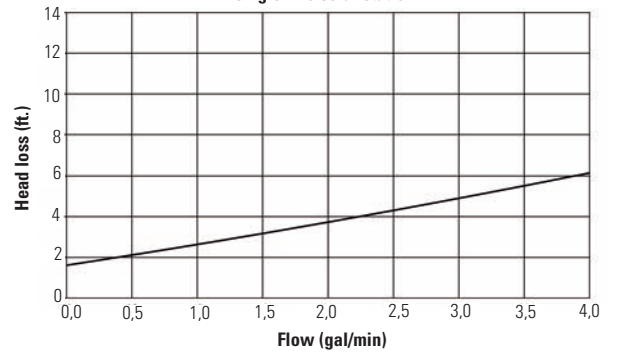
## System Components

1. Pressure relief valve
2. Pressure gauge
3. 3/4" male threaded connection for expansion tank
4. Upper fill/drain valve
5. Grundfos circulation pump
6. Lower fill/drain valve
7. Flow meter / Sight glass
8. Shut-off ball valves with integral backflow preventer and temperatur gauge-Supply
9. Shut-off ball valves with integral backflow preventer and temperatur gauge-Return
10. Air separator and vent with manual quick action ventilation valve
11. Two-piece EPP insulation

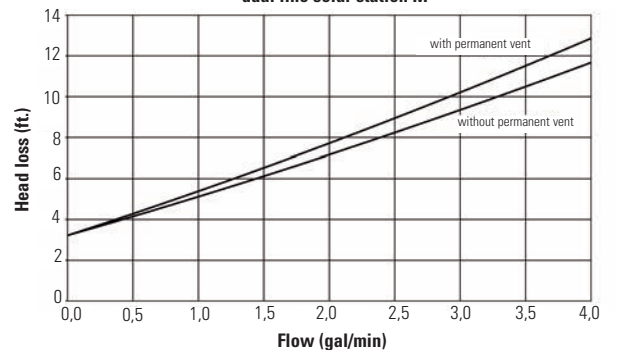


<b>Connections</b>	Solar loop : 3/4" female thread Expansion tank : 3/4" male thread
<b>Max. permissible temperature</b>	230°F (+110°C), temporary 266°F (+130°C) (observe the max. permissible pump temperature!)
<b>Max. permissible pressure</b>	145psi (10bar) observe the activation pressure of the safety valve!
<b>Collector area</b>	Up to 129 sq ft (12m <sup>2</sup> )
<b>Backflow preventer</b>	1-string: 1x 19.69 inch (500 mm WC) 2-string: 2x 19.69 inch (500 mm WC)
<b>Volume flow indicator</b>	Combined scale : Water 0,5-5,5 gpm (1...13 l/m) Instead of the volume flow indicator, a measurement capsule can be mounted to record the output or yield (must be adjusted by the customer)
<b>Thermometer</b>	Display range 68...302°F (20...150°C)
<b>Pressure gauge</b>	Display range 0...145psi (0...10bar)
<b>Safety valve</b>	Activation pressure 45psi (3bar)
<b>Overall dimensions</b>	Height : 19.69inch (500mm) Width : 12.40inch (315mm) (1-string: 7.48inch (190mm)) Insulation depth : 9.69inch (246mm) (1-string: 6.69inch (170mm)) Center distance : 4.92inch (125mm)

Volume flow pressure loss diagram  
single line solar station M



Volume flow pressure loss diagram  
dual line solar station M



## Accessories

Meibes offers a number of accessories to enhance your system and to allow the M-Series pump stations to operate at peak performance.

The Meibes PowerFill™ Solar Fill Pump is a lightweight and portable unit that allows the installer to quickly and easily fill, remove air and pressurize a solar system within minutes.

Meibes Solar Controllers are designed for solar thermal applications and are compatible with a wide range of pump stations. A powerful microprocessor is used to control the system and performs important system monitoring and safety functions as well. System parameters and measured values can be viewed and adjusted via the LCD display.



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Schnellmontagetechnik

## Meibes Incorporated

North American Headquarters  
68 Mazzeo Drive, Randolph, MA 02368 - USA  
(877) 257-5473 Tel/Fax  
www.meibes.us.com