

# DC Hot Water Circulating Pumps

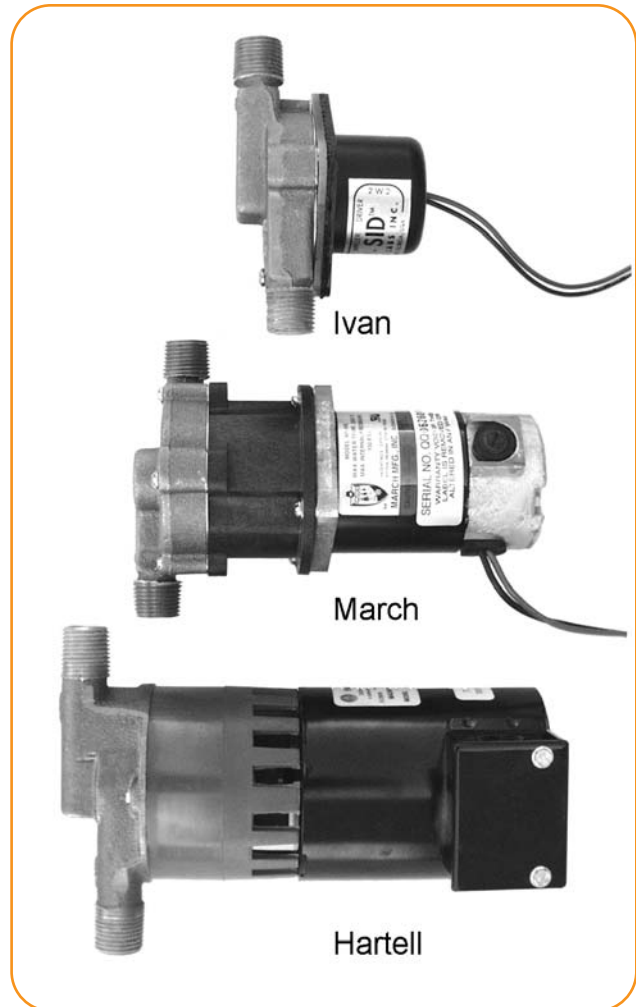
- | PV powered circulation for solar heating closed-loop using water or glycol solution
- | Hydronic radiant floor space heating for off-grid or uninterruptible battery backup
- | Instant hot water distribution (DC controllers also available)
- | Pond management, water treatment, fountains and aeration

### Advantages

- | **For solar water heating (PV-direct)**
  - | Use a small, inexpensive PV module (photovoltaic panel) to power the pump. No battery or electronic controller is used. There is no wiring to the building's electric system.
  - | Sun-synchronous operation: pump speed varies with sunlight, corresponding to the available heat in the collector – natural automation!
  - | This principle has proven highly reliable in solar water heaters since the early 1980's.
- | **For hydronic heating (using battery system)**
  - | Power requirement is less than half that of conventional AC pumps powered by inverter.
  - | Additional energy savings can be realized by using individual zone pumps instead of a single pump with zone valves. This method can reduce power consumption by 75 %.
  - | Energy saving greatly reduces the size and cost of the power system required.

### Features

- | **Magnetic drive**
  - | These pumps feature seal-less magnetic coupling to the impeller. There is no seal friction, no seal wear and no chance of seal leakage.
- | **Advanced motors**
  - | Ivan and Hartell pumps use brushless motors that are maintenance-free.
  - | March pumps use brush-type motors with typical brush life of 2-5 years. Brushes are easy to replace without removing the pump.
- | **Temperature and Pressure Limits**
  - | Maximum: 250 °F (120 °C) at 150 PSI (10 bar)



### Overcurrent Protection Requirements

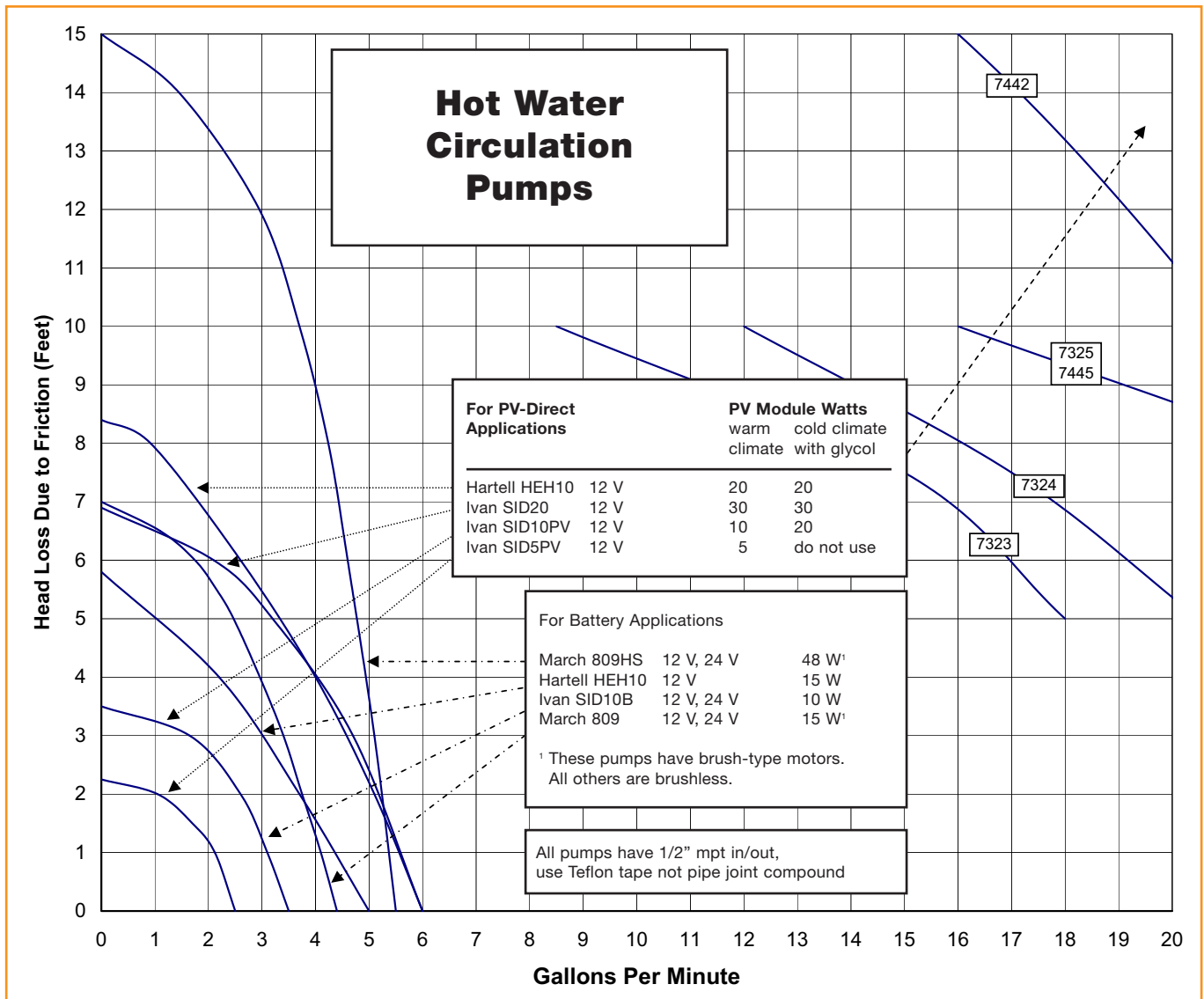
- | PV-direct: No fuse is required, unless PV module is sized greater than 1.5x recommended size.
- | Battery system: Fuse is required. See watts on chart.  
Fuse size = watts/volts x 1.5 to 2.

### Warranty

- | One year against defects in materials and workmanship



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Available from:

SOLAR THERMAL