DC Hot Water Circulating Pumps

High efficiency brass magnetic drive pumps for solar water heating, hydronic heating and more ...

- 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, aeration, etc.

Advantages

For solar water heating (PV-direct)
- Use a small, inexpensive PV module (photovoltaic panel) to power the pump. No electronic controls are used. There is no wiring to the building's electric system.
- Sun-synchronous operation: the pump speed varies with the sunlight, closely 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)
- 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 electric 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.

Brushless motors
- Ivan and Hartell pumps use brushless (electronically commutated) motors that are maintenance-free.
- March pumps use brush-type motors with typical brush life of 2-5 years. Brushes are easily replaceable without removing the pump.

Overcurrent Protection
- PV-direct: No fuse is required, unless PV module is oversized beyond 1.5X recommended size.
- Battery system: Fuse is required. See watts on chart. Fuse size = watts/volts X 1.5 to 2.

Temperature and Pressure Limits
- Maximum: 250°F (120°C) at 150 PSI (10 bar)

Warranty
- One year against defects in materials and workmanship.

Available From:

April 2001
HOT WATER CIRCULATION PUMPS from Dankoff Solar Products

APRIL 2001

FOR BATTERY APPLICATIONS

<table>
<thead>
<tr>
<th>Pump</th>
<th>Voltage</th>
<th>Power (Watts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartell HEH10</td>
<td>12V</td>
<td>15</td>
</tr>
<tr>
<td>March 809 HS</td>
<td>12V, 24V</td>
<td>15</td>
</tr>
<tr>
<td>Ivan SID10B</td>
<td>12V, 24V</td>
<td>10</td>
</tr>
<tr>
<td>March 809</td>
<td>12V, 24V</td>
<td>10</td>
</tr>
</tbody>
</table>

* These pumps have brush-type motors. All others are brushless.

Solar water pumps since 1983
(888) 396-6611
(505) 473-3800
www.dankoffsolar.com

FOR PV-DIRECT APPLICATIONS

<table>
<thead>
<tr>
<th>Pump</th>
<th>Voltage</th>
<th>Solar Module Watts (Warm Climate)</th>
<th>Solar Module Watts (Cold Climate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartell HEH10</td>
<td>12V</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Ivan SID10PV</td>
<td>12V</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Ivan SID5PV</td>
<td>12V</td>
<td>5</td>
<td>do not use</td>
</tr>
</tbody>
</table>

Solar modules may require higher heating values during cold climate.

All pumps have 1/2" MPT in/out
Use Teflon tape NOT pipe joint compound

For this range and greater use the DANKOFF SUNCENTRIC™
Refer to SunCentric specifications

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