REOTEMP Cooling Towers protect pressure instruments from extremely hot process media without the pain and hassle of remote mounting the instrument. It is specifically designed to mount above a diaphragm seal or thread directly into the process. REOTEMP's unique design can reduce the process temperature by up to 600°F!

**Application Notes**
- Cooling towers may be threaded directly into process media in applications where the fluid viscosity is low enough to flow through a 3mm ID tube without clogging. For best performance, mount a cooling tower above a diaphragm seal.
- If mounting between a pressure instrument and diaphragm seal, use a 3-digit mounting code in the diaphragm seal part number (pg. 57)
- Pigtail siphons (pg. 113) or diaphragm seals should be used for steam service.

**SPECIFICATIONS**
- Protects Pressure Instruments from High Process Temperatures
- Reduces Temperature while Maintaining a Direct Mount
- Fully Welded, 316 Stainless Steel Construction

**Performance of Cooling Elements**

<table>
<thead>
<tr>
<th>Process Temperature in °F</th>
<th>Instrument Connection Temperature in °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>0</td>
</tr>
<tr>
<td>900</td>
<td>0</td>
</tr>
<tr>
<td>800</td>
<td>0</td>
</tr>
<tr>
<td>700</td>
<td>0</td>
</tr>
<tr>
<td>600</td>
<td>0</td>
</tr>
<tr>
<td>500</td>
<td>0</td>
</tr>
<tr>
<td>400</td>
<td>0</td>
</tr>
<tr>
<td>300</td>
<td>0</td>
</tr>
<tr>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Example: Using an RTR, 800°F process temp is reduced to 175°F at the instrument connection.

Note: at 70°F ambient temperatures. Actual temperature performance will vary based on the process application.

**HOW TO ORDER:** Choose options to build a part number. For example: STW4M4M

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INSTRUMENT CONNECTION</th>
<th>PROCESS CONNECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTR</td>
<td>4M 1/4&quot; Male NPT</td>
<td>4M 1/4&quot; Male NPT</td>
</tr>
<tr>
<td>STW</td>
<td>4F 1/4&quot; Female NPT</td>
<td>2M 1/2&quot; Male NPT</td>
</tr>
<tr>
<td></td>
<td>2F 1/2&quot; Female NPT</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Working Pressure**

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>RTR psi</th>
<th>STW psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>5000</td>
<td>5000</td>
</tr>
<tr>
<td>500</td>
<td>3500</td>
<td>3500</td>
</tr>
<tr>
<td>800</td>
<td>1000</td>
<td>1500</td>
</tr>
</tbody>
</table>

Maximum working temperature is 800°F.
Diaphragm Seals

INSTRUMENT MOUNTING CONFIGURATIONS

DIRECT MOUNT

Direct Mounting a pressure gauge, switch, or transmitter is the most common diaphragm seal assembly.

- Threaded
- Welded

- Allows Replaceability
- High Quality Thread Sealant
- Inspector Seal
- Tamper Proof
- Rated for High Temps
- Leak Resistant

Remote Mounting a pressure instrument using flexible capillary is a common mounting method when the point of measurement is in a hazardous or inconvenient location.

Remote Mounting Notes:
- PVC Coated SS Flex Armor
- SS Flex Armor

Code | Description | Max. Temp
---|-------------|------------
-DTD | Threaded Instrument Connection | 400°F
-DWD | Welded Instrument Connection | 600°F

Assembly Notes: Welded connection recommended for pressure exceeding 1,500 psi for purposes of leak prevention.

COOLING ELEMENTS

Used in either high temp or cold temp applications, Cooling Elements mounted above diaphragm seals quickly normalize fluid temperature toward ambient. This protects the pressure instrument while still maintaining the convenience of a direct mount.

- -RTR
- -STW

- Threaded Instrument Connection
- Welded Instrument Connection

Code | Description | Max. Temp
---|-------------|------------
-RTR | 6" Cooling Tower | 750°F
-STW | 3" Cooling Standoff | 600°F

Tree Assemblies offer the ability to mount two pressure instruments onto one diaphragm seal, allowing the user to gain both a local indication and a remote signal without adding an additional pipe insertion.

- -TRE & -TRX
- -TRM

Code | Description | Max. Temp
---|-------------|------------
-TRE | Goal Post, Low Pressure Assembly (Max. 150 psi) | 400°F
-TRX | Goal Post, Heavy Duty (Max. 3,000 psi) | 600°F
-TRM | Compact Tree Assembly (Max. 3,000 psi) | 600°F

Assembly Notes: Threaded joints are fully welded for consistent instrument orientation. Instrument connections are threaded unless specified by customer. Diaphragm seal must displace enough fluid to drive both instruments.

Assembly Notes: Capillary has a 2mm inner diameter unless specified differently by customer. Ambient temp limit of PVC coated armor is 250°F. Standard instrument connection is threaded (Smart Transmitters are welded), unless specified by customer.

Note: ?? = Length in feet (e.g. 05 = 5 feet)

Assembly Notes: Cooling elements are welded to diaphragm seal. Instruments are threaded to cooling element unless specified. All lengths are nominal.