Product Information - Vat Pasteurization

Vat Pasteurization - Electronic Controls Package

Introduction

In today’s Dairy industry, vat pasteurization continues to be a commonly used process. Traditional controls use mercury in glass thermometers for the airspace and product references. As leaders in the sanitary marketplace, Anderson-Negele is proud to offer an all electronic controls package. Production plants utilizing vat pasteurization, along with small farmstead operations, no longer need to worry about dealing with hazardous materials.

First and foremost, this package consists of a dual pen circular chart recorder. The time proven AJ-300 series recorder is provided. This unit offers NEMA 4X wash-down protection in an enclosure that is easily wall or panel mounted. Front mounted displays provide convenience to the operator for monitoring the process.

Next, two dual element all stainless steel temperature probes are provided. One probe is used for monitoring airspace temperature, and the other for monitoring product temperature. Each probe has an integral display, easily viewable by the operator. It is this display that replaces the traditional mercury in glass thermometer. One temperature element of each of the probes directly wires to the AJ recorder. This provides recording for the hot product, recorder pen one, and the airspace, recorder pen two. The remaining temperature element of each probe provides a signal directly to the integral display. This display functions as the airspace and product reference temperatures in each of the respective probes.

As in the traditional process, the operator simply views the temperature from the display on each of the probes, and matches to the recording trace on the recorder. As the temperatures on the reference probes are now digital, difficulty in reading mercury in glass thermometer scales is also eliminated.

Safety, accuracy and reliability; all in a simple to operate package.

Complete specifications and ordering information are available inside. For more information please visit our Web Site at www.anderson-negele.com, or contact your local Authorized Anderson-Negele Distributor.

Authorizations

Features

- All electronic components, without mercury in glass thermometers
- Digital displays easier to read than thermometer scales
- All stainless steel probes provide rugged reliability in harsh conditions
- Circular chart recorder uses 12” chart for maximum readability
- Nema 4X case withstands demands of wash down environment
- Complete package compliant with Pasteurized Milk Ordinance (PMO) requirements; 3-A Sanitary Standards
Both air space and product sensors contain dual independent elements.

The integral display acts as the reference temperature, replacing a traditional mercury in glass thermometer.

As shown, the product sensor is at the base of the vat, through the side wall. A "41247A0001" thermowell is typical for existing well connections, and a good choice for new installations. If well already exists, be sure to properly identify.

In many instances you may find a "top" mounted installation of the product sensor. Top mounts typically utilize an Umbrella style fitting, or a Clamp style fitting.
### Circular Chart Recorder Ordering Matrix

#### Order Information

<table>
<thead>
<tr>
<th>PEN 1</th>
<th>Recorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEN 2</td>
<td>Recorder</td>
</tr>
<tr>
<td></td>
<td>Recording Controller *</td>
</tr>
</tbody>
</table>

#### RELAY OUTPUTS

- 0: None
- 1: One SPST
- 2: Two SPST
- 4: Four SPST

#### 4-20mA ISOLATED OUTPUTS**

- 0: None
- 1: One
- 2: Two

#### TRANSMITTER POWER SUPPLY

- 1: 24 Volt, regulated (standard)

#### ENCLOSURE

- 2: Standard Nema 4X

#### VOLTAGE

- 1: 115V Standard
- 2: 115/230V

#### OPTION SUFFIX

- 01: Sealable Chart Plate

* Pen 2 available as Recording Controller, only if Pen 1 is Recording Controller.

** Required for each controller, if modulated output is required.

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#### CHARTS

- 00215307 90-190 12hr (Std °F range)
- 00215303 0-200 24hr (If pasteurization is above 160°F)
- 00215357 30-90 12hr (Std °C range)

#### PENS

- 60500402 (Red, Pen #1)
- 60500401 (Green, Pen #2)

#### Sanitary Projectile Well

<table>
<thead>
<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>41247A0001</td>
<td>Weld-in Sanitary Projectile Well</td>
</tr>
</tbody>
</table>

**NOTE:** For new installations, the sanitary well 41247A0001 is typically installed into the side wall of the vessel. This well will then hold the product sensor.
## Sensor Wiring Head Ordering Matrix

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>STYLE</th>
<th>SENSOR MODULES</th>
<th>OUTPUT RANGE</th>
<th>ENGINEERING UNITS</th>
<th>DISPLAY/UNITS</th>
<th>PRE-WIRED ELEMENT</th>
<th>MOUNTING</th>
<th>CABLE LENGTH*</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>SS (Dual, Single Port) w/ Display W/Health Code Seal Provision</td>
<td>Dual Module - Electronic Vat Pasteurization Option (airspace or product)</td>
<td>0-100°C</td>
<td>F (choose with output range 075)</td>
<td>°F (choose with output range 075)</td>
<td>Vertical Mount</td>
<td>Direct (Standard)</td>
<td>None Supplied (Standard)</td>
</tr>
<tr>
<td>071</td>
<td>075</td>
<td></td>
<td>0-200°F</td>
<td>C (choose with output range 071)</td>
<td>°C (choose with output range 071)</td>
<td></td>
<td>00</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
- Specify CT/SA combo for airspace, and CT/SA combo for product
- If supplying cable, Belden 9534 or equivalent (4 wire w/ continuous drain)

## RTD Temperature Element Ordering Matrix

<table>
<thead>
<tr>
<th>WIRING STYLE</th>
<th>ELEMENT TYPE</th>
<th>Fitting</th>
<th>Insertion Length</th>
<th>Cable Length</th>
<th>Cable Type</th>
<th>Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100 ohm Dual (DIN stnd.)</td>
<td>004-037</td>
<td>1-1/2&quot; Tri-Clamp&lt;sup&gt;®&lt;/sup&gt;</td>
<td>2-3/4&quot;</td>
<td>No Cable</td>
<td>Standard probe (choose for well fittings)</td>
</tr>
<tr>
<td>005-049</td>
<td></td>
<td>2&quot; Tri-Clamp&lt;sup&gt;®&lt;/sup&gt;</td>
<td>3-1/2&quot;</td>
<td>00</td>
<td>No Cable Required</td>
<td></td>
</tr>
<tr>
<td>006-049</td>
<td></td>
<td>2-1/2&quot; Tri-Clamp&lt;sup&gt;®&lt;/sup&gt;</td>
<td>3-1/2&quot;</td>
<td>00</td>
<td></td>
<td>Heavy duty probe (choose for probes over 6&quot; e.g. umbrellas or tri-clamps over 6&quot;)</td>
</tr>
<tr>
<td>060-053</td>
<td>Umbrella</td>
<td>060-073</td>
<td>Umbrella</td>
<td>5&quot;</td>
<td>00</td>
<td>1</td>
</tr>
<tr>
<td>060-109</td>
<td>Umbrella</td>
<td>060-221</td>
<td>Umbrella</td>
<td>7-1/4&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>060-360</td>
<td>Umbrella</td>
<td>060-435</td>
<td>Umbrella</td>
<td>22-15/16&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>060-532</td>
<td>Umbrella</td>
<td>060-650</td>
<td>Umbrella</td>
<td>33-11/16&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>060-680</td>
<td>Umbrella</td>
<td>062-139</td>
<td>Projective Well (41247)&lt;sup&gt;®&lt;/sup&gt;</td>
<td>9-1/8&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>063-161</td>
<td>Projective Well (41280)&lt;sup&gt;®&lt;/sup&gt;</td>
<td>064-187</td>
<td>Projective Well (41279)&lt;sup&gt;®&lt;/sup&gt;</td>
<td>10-1/2&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td>083-137</td>
<td>Bi-Metal Well - 1/4&quot; NPT&lt;sup&gt;®&lt;/sup&gt;</td>
<td>084-089</td>
<td>Bi-Metal Well - 1/2&quot; NPT&lt;sup&gt;®&lt;/sup&gt;</td>
<td>9&quot;</td>
<td>00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6&quot;</td>
<td>00</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
1. NOTE: Must specify length if other than standard. Additional charges apply for lengths greater than 6" Maximum insertion length is 43-1/2"
2. Sensors with these fittings are non-cancellable/ non-returnable for credit.
3. Meets 3-A when used with a 3-A compliant well

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