20" Series
Type "WU" Heat Exchangers
"U" Tube Design

DESCRIPTION

B & G Types "WU" Heat Exchangers are of the shell and tube type. The tube bundle is of "U" bend construction with tube ends expanded into a stationary tube sheet. This construction permits ample expansion or contraction for wide temperature variations. A fluid entering the tubes is heated or cooled by a fluid being circulated through a baffled shell. The unit is designed primarily for pumped circulation through the shell.

Standard "WU" Heat Exchangers are constructed according to ASME requirements for pressure and temperatures noted in table on back.

RECOMMENDED "WU" HEAT EXCHANGER
MODEL NO. ____________________________
HEATING SURFACE (SQ. FT.) ____________________

<table>
<thead>
<tr>
<th>TUBE SIDE</th>
<th>SHELL SIDE</th>
<th>APPROVALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fluid Circulated..................................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Total Flow Expressed in GPM, GRH or lbs./hr..............</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Temperature In/Out...............................................</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>4. Transfer BTU/hr....................................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Pressure Drop.....................................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Fouling Factor or Percentage of Additional Surface.....</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Following applies only to fluids other than water
7. Specific Gravity......................................................|            |           |
8. Specific Heat.......................................................|            |           |
9. Latent Heat..........................................................|            |           |
10. Viscosity**..........................................................|            |           |
11. Thermal Conductivity..............................................|            |           |

**Expressed in Proper Units and Temperature such as centipoises @ °F

A Manufacturers' Data Report for Pressure Vessels, Form No. U-1, as required by the previsions of the ASME Code Rules, is furnished with each unit upon request. This form is signed by an authorized inspector, holding a national Board Commission, and who is employed by an authorized inspection agency, certifying that construction conforms to the latest ASME code for pressure vessels. The ASME "U" symbol is stamped on each vessel. In addition, each unit is registered with the national Board of Boiler and pressure Vessel Inspectors.
### DESIGN PRESSURES

<table>
<thead>
<tr>
<th>TUBE SIDE</th>
<th>SHELL SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESIGN</td>
<td>TEST</td>
</tr>
<tr>
<td>125 psi</td>
<td>250 psi</td>
</tr>
<tr>
<td>Nuts &amp; Bolts</td>
<td>Cast Iron</td>
</tr>
</tbody>
</table>

### DESIGN TEMPERATURES* TUBE & SHELL SIDE

<table>
<thead>
<tr>
<th>J</th>
<th>K</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>375 °F</td>
<td>300 °F</td>
<td>375 °F</td>
<td>300 °F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### HEATING SURFACE

- **2 PASS**
  - A
  - B
  - C
  - D
  - E
  - F
- **4 PASS**
  - A
  - B
  - C
  - D
  - E
  - F

### APPROX. SHIPPING WEIGHT

- **2 PASS**
  - 6 FLG
  - 20 (508)
  - 81
  - 375 °F
  - 300 psi

- **4 PASS**
  - 6 FLG
  - 20 (508)
  - 101

### DIMENSIONS IN INCHES

#### DESIGN TEMPERATURES* TUBE & SHELL SIDE

- **2 PASS**
  - A
  - B
  - C
  - D
  - E
  - F
- **4 PASS**
  - A
  - B
  - C
  - D
  - E
  - F

### STANDARD CAST IRON UNIT

#### 2 & 4 Pass

<table>
<thead>
<tr>
<th>PART</th>
<th>STANDARD CAST IRON UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>Steel</td>
</tr>
<tr>
<td>Head</td>
<td>Cast Iron</td>
</tr>
</tbody>
</table>

### BRASS UNIT

#### 2 & 4 Pass

<table>
<thead>
<tr>
<th>PART</th>
<th>BRASS UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubes 3/4&quot; O.D.</td>
<td>Cooper</td>
</tr>
<tr>
<td>Tubesheets</td>
<td>Steel</td>
</tr>
<tr>
<td>Royal Naval Brass</td>
<td>Steel</td>
</tr>
<tr>
<td>Baffles</td>
<td>Steel</td>
</tr>
<tr>
<td>Nuts &amp; Bolts</td>
<td>Steel</td>
</tr>
</tbody>
</table>

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