PSA - PRIMARY/SECONDARY HEADER
Hydraulic Separation Solutions
MODELS
PSA & PSAV
MADE WITH PRIDE IN AMERICA
Wessels Primary / Secondary Headers are used in heating and cooling systems that require the primary and secondary loop of their system to be interlocked. The PSA is designed to keep both connected hydraulic circuits completely independent from one another and to provide a means for system air elimination. The PSAV builds on that functionality with the inclusion of internal coalescence coils in the tank that eliminate entrained air and separate debris associated with start-up and maintenance of the system. As a result, the PSAV replaces the need for an air/dirt separator.

- Separates Primary and Secondary loop hydraulically
- Removes air from system
- Separates and collects sediments
- Easy installation

101 Tank Street, Greenwood, IN 46143 • phone 317 | 888.9800 • www.westank.com

How it Works • 3 Possible Flow Paths

**Equal Flow:** Temperature (T) from boiler and distribution system is equal and flow (F) is balanced with minimal mixing in the center PSA body.

**Greater Secondary Flow:** System demand is greater than boiler output, which results in mixing in the center PSA body and decreased temperature of water delivered to system (T2).

**Greater Primary Flow:** System demand is less than boiler output, which results in mixing in the center PSA body and increased temperature of water returned to boiler (T4).

**Formulas to Determine Temperature**

\[ T_2 = \left( \frac{(F_3 - F_1)T_3 + (F_1)T_1}{F_3} \right) \]

\[ T_4 = \left( \frac{(F_3 - F_1)T_4 + (F_3)T_3}{F_1} \right) \]
### PSA PRIMARY/SECONDARY HEADER
WITH INTERNAL BAFFLE – 150 PSI

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Conn.</th>
<th>Dia.</th>
<th>Height</th>
<th>Width</th>
<th>Flow (GPM)</th>
<th>Wt. (Lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSA-2</td>
<td>71002020</td>
<td>2</td>
<td>6 5/8</td>
<td>34 1/4</td>
<td>14 3/4</td>
<td>69</td>
<td>86</td>
</tr>
<tr>
<td>PSA-2.5</td>
<td>71002025</td>
<td>2.5</td>
<td>6 5/8</td>
<td>39 1/4</td>
<td>14 3/4</td>
<td>108</td>
<td>108</td>
</tr>
<tr>
<td>PSA-3</td>
<td>71002030</td>
<td>3</td>
<td>10 3/4</td>
<td>49 1/2</td>
<td>18 3/4</td>
<td>144</td>
<td>225</td>
</tr>
<tr>
<td>PSA-4</td>
<td>71002040</td>
<td>4</td>
<td>10 3/4</td>
<td>70 1/4</td>
<td>22 3/4</td>
<td>255</td>
<td>312</td>
</tr>
<tr>
<td>PSA-5</td>
<td>71002050</td>
<td>5</td>
<td>14</td>
<td>80 1/2</td>
<td>26</td>
<td>398</td>
<td>214</td>
</tr>
<tr>
<td>PSA-6</td>
<td>71002060</td>
<td>6</td>
<td>18</td>
<td>93 3/4</td>
<td>30</td>
<td>570</td>
<td>298</td>
</tr>
<tr>
<td>PSA-8</td>
<td>71002080</td>
<td>8</td>
<td>24</td>
<td>122 3/4</td>
<td>36</td>
<td>945</td>
<td>520</td>
</tr>
<tr>
<td>PSA-10</td>
<td>71002100</td>
<td>10</td>
<td>30</td>
<td>149 1/4</td>
<td>42</td>
<td>1440</td>
<td>1130</td>
</tr>
<tr>
<td>PSA-12</td>
<td>71002120</td>
<td>12</td>
<td>30</td>
<td>179 1/2</td>
<td>42</td>
<td>2100</td>
<td>1165</td>
</tr>
<tr>
<td>PSA-14</td>
<td>71002140</td>
<td>14</td>
<td>42</td>
<td>199.25</td>
<td>54</td>
<td>2550</td>
<td>2430</td>
</tr>
<tr>
<td>PSA-16</td>
<td>71002160</td>
<td>16</td>
<td>48</td>
<td>224.25</td>
<td>60</td>
<td>3300</td>
<td>3348</td>
</tr>
</tbody>
</table>

Materials = Steel Shell; Coalescing Medium = Stainless Steel; Maximum Pressure = 150 psig; Maximum Temperature = 450°F; Finish = Primer Painted Exterior
Legs come standard with 6" connection models and above.

### PSAV PRIMARY/SECONDARY HEADER • WessVent
WITH AIR/DIRT SEPARATION – 150 PSI

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Conn.</th>
<th>Dia.</th>
<th>Height</th>
<th>Width</th>
<th>Flow (GPM)</th>
<th>Wt. (Lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSAV-2</td>
<td>71102020</td>
<td>2</td>
<td>6 5/8</td>
<td>34 1/4</td>
<td>14 3/4</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>PSAV-2.5</td>
<td>71102025</td>
<td>2.5</td>
<td>6 5/8</td>
<td>39 1/4</td>
<td>14 3/4</td>
<td>108</td>
<td>115</td>
</tr>
<tr>
<td>PSAV-3</td>
<td>71102030</td>
<td>3</td>
<td>10 3/4</td>
<td>49 1/2</td>
<td>18 3/4</td>
<td>144</td>
<td>250</td>
</tr>
<tr>
<td>PSAV-4</td>
<td>71102040</td>
<td>4</td>
<td>10 3/4</td>
<td>70 1/4</td>
<td>22 3/4</td>
<td>255</td>
<td>342</td>
</tr>
<tr>
<td>PSAV-5</td>
<td>71102050</td>
<td>5</td>
<td>14</td>
<td>80 1/2</td>
<td>26</td>
<td>398</td>
<td>254</td>
</tr>
<tr>
<td>PSAV-6</td>
<td>71102060</td>
<td>6</td>
<td>18</td>
<td>93 3/4</td>
<td>30</td>
<td>570</td>
<td>366</td>
</tr>
<tr>
<td>PSAV-8</td>
<td>71102080</td>
<td>8</td>
<td>24</td>
<td>122 3/4</td>
<td>36</td>
<td>945</td>
<td>720</td>
</tr>
<tr>
<td>PSAV-10</td>
<td>71102100</td>
<td>10</td>
<td>30</td>
<td>149 1/4</td>
<td>42</td>
<td>1440</td>
<td>1443</td>
</tr>
<tr>
<td>PSAV-12</td>
<td>71102120</td>
<td>12</td>
<td>30</td>
<td>179 1/2</td>
<td>42</td>
<td>2100</td>
<td>1490</td>
</tr>
<tr>
<td>PSAV-14</td>
<td>71102140</td>
<td>14</td>
<td>42</td>
<td>199.25</td>
<td>54</td>
<td>2550</td>
<td>3067</td>
</tr>
<tr>
<td>PSAV-16</td>
<td>71102160</td>
<td>16</td>
<td>48</td>
<td>224.25</td>
<td>60</td>
<td>3300</td>
<td>4180</td>
</tr>
</tbody>
</table>

Materials = Steel Shell; Coalescing Medium = Stainless Steel; Maximum Pressure = 150 psig; Maximum Temperature = 450°F; Finish = Primer Painted Exterior
Legs come standard with 6" connection models and above.

Model PSA and PSAV comes ASME certified, meeting rigorous standards of construction and insurance compliance. Non-ASME also available (Models PSN and PSNV).
OTHER PRODUCTS BY WESSELS COMPANY

Thermal Expansion Vessels
- Fixed Diaphragm Tanks
- Replaceable Bladder Tanks
- ASME and Non-ASME in stock

Wess-Vent Air & Dirt Separators
- Coalescing Media Separators
- Up to 36" available
- ASME standard in stock

Hydro-Pneumatic Vessels
- Fixed Diaphragm Tanks
- Replaceable Bladder Tanks
- ASME and Non-ASME in stock

Air Elimination Equipment
- Tangential Air Separators
- Inline Air Purgers
- In stock

Severe Service Products
- All models available in stainless steel
- Purgers
- Air Purgers
- Air Separators

Hydronic Accessories
- Compression Tanks
- Replaceable Bladder Tanks
- Epoxy-lined designs available
- Chilled Water Buffer Tanks
- Primary/Secondary Headers
- Chemical Pot Feeder Tanks
- Flash Tanks
- Blowdown Tanks

Custom Vessels
- Stainless Steel Tanks
- Rubber-lined
- Galvanized
- Insulated
- Up to 25,000 gallons

Storage Tanks
- Insulated and Jacketed Tanks
- Glass-Lined, Epoxy-Lined, and Non-Jacketed Tanks
- ASME in stock

Shock & Surge Vessels
- ASME Shock & Surge Tanks
- Fire protection for municipal engineered vessels
- Bladder and Epoxy-lined designs available

Glycol Make-Up Packages
- Glymatic Package
- Glycol Make-Up Package
- In stock

Hydronic Expansion Vessels
- Fixed Diaphragm Tanks
- Replaceable Bladder Tanks
- Compression Tanks
- ASME and Non-ASME in stock

Wessels Company • 101 Tank Street, Greenwood, IN 46143 • phone 317 888.9800 • www.westank.com