WideGap 350

Wide-gap plate heat exchanger

Applications
Wide-gap plate heat exchanger for general heating, cooling and heat recovery of media containing fibres and coarse particles. In addition the wide-gap channels are suitable for highly viscous fluids.

Standard design
The plate heat exchanger consists of a pack of corrugated metal plates with portholes for the passage of the two fluids between which heat transfer will take place.

The plate pack is assembled between a fixed frame plate and a movable pressure plate and compressed by tightening bolts. The plates are fitted with a gasket, which seals the interplate channel and directs the fluids into alternate channels. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The WideGap plates feature coarse corrugations with a cross-section width between 8 and 17 mm (5/16" and 11/16") between the plates, and have flat non-corrugated portholes for the product channels. The WideGap plate heat exchanger can be used in four different configurations, wide-gap to super wide-gap.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column.

Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plates.

Typical capacities
Liquid flow rate
Up to 500 kg/s (8000 USGPM), depending on media, permitted pressure drop and temperature program.

Plate types
WideGap 350S, WideGap 350X

Frame types
FM, FG
**Working principle**

Channels are formed between the plates and the corner ports are arranged so that the two media flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.

**STANDARD MATERIALS**

**Frame plate**
Mild steel, Epoxy painted

**Nozzles**
Carbon steel
Metal lined: Stainless steel, Titanium

**Plates**
Stainless steel Alloy 316 / Titanium

**Gaskets**
Nitrile, EPDM

**TECHNICAL DATA**

**Pressure vessel codes, PED, ASME, pvcALS™**

**Mechanical design pressure (g) / temperature**

<table>
<thead>
<tr>
<th>Type</th>
<th>pvcALS™</th>
<th>PED</th>
<th>ASME</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM</td>
<td>1.0 MPa / 180 C</td>
<td>1.0 MPa / 180 C</td>
<td>100 psig / 300 F</td>
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<tr>
<td>FG</td>
<td>1.0 MPa / 180 C</td>
<td>1.0 MPa / 180 C</td>
<td>150 psig / 350 F</td>
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**FM pvcALS™**
Size 350 mm DIN PN10

**FM PED**
Size 350 mm DIN PN10

**FM ASME**
Size 14” ASME Cl. 150

**FG pvcALS™**
Size 350 mm DIN PN10

**FG PED**
Size 350 mm DIN PN10, ASME Cl. 150

**FG ASME**
Size 14” ASME Cl. 150

**CONNECTIONS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Width (inch)</th>
<th>Height (inch)</th>
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</thead>
<tbody>
<tr>
<td>WideGap 350-FM</td>
<td>3210 (126&quot;)</td>
<td>1154 (45&quot;)</td>
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The number of tightening bolts may vary depending on pressure rating.

**Particulars required for quotation**

- Flow rates or heat load
- Temperature program
- Physical properties of liquids in question (if not water)
- Desired working pressure
- Maximum permitted pressure drop
- Available steam pressure

**Maximum heat transfer surface**

770 m² (8300 sq. ft)