Alfa Laval air cooled heat exchanger model G

Flexible, modular design for general purpose cooling

Ensuring efficient and reliable cooling of your processes is key to staying productive and profitable. With ACHE model G for well-defined cooling needs, project execution has never been easier or faster thanks to the modular design, which ensures rapid ordering and delivery. ACHE model G can be used for general cooling duties in gas compression, downstream refrigeration and fuel gas compression applications.

Model G
ACHE model G is a modular air-cooled heat exchanger that provides reliable and cost-effective cooling of natural gas, water and/or synthetic oils — cooling duties that can be found around a natural gas compressor, for example. A flexible modular design allows the cooling units to be easily customized to the needs and options within ACHE model G’s design limits. ACHE model G has been designed by experts in the field — Alfa Laval Olmi — a reliable and well-known supplier of air-cooled heat exchangers to industry.

Modular design
To meet tight budgets and schedules, Alfa Laval’s engineering team has developed a modular air-cooler design. The modular design provides the flexibility to adapt to different conditions and requirements, while the pre-defined key parameters common to all ACHE model G units ensure a rapid ordering and delivery process.

Designed for easy transport
Transporting air-cooled heat exchangers can be a time-consuming and expensive exercise, especially if the units are oversized. All ACHE model G units can be transported on a normal truck or in a 40-ft container for convenient transport to the customer’s site by land or sea.
ACHE model G is a modular air-cooled heat exchanger that is fast and easy to:

- **Size and buy**—pre-configured modules in flexible configurations
- **Manufacture and deliver**—pre-engineered blocks in compact design for rapid transportation
- **Erect and install**—bolt down the modules, plug in the power cables, connect the flanges and start

Selected main applications include:

- **Gas compression**
  Compressing gas is demanding. ACHE model G enables robust, cost-effective solutions adapted to the pressures, gas composition and maintenance needs of the specific application. Compression skids, which are often used at the wellhead to bring natural gas to the required pipeline pressure, require purpose-built cooling solutions that withstand harsh operating conditions. Unmanned compression stations that secure pressure in a gas pipeline must operate reliably with minimal maintenance.

- **Refrigeration units and industrial gas compression**
  Refrigeration units (refrigerant condensers) and compression of industrial gas (N₂ and air) has many applications in all fields; the fluids, gas or vapor involved work in cycles in a well-proven standardized package. ACHE model G meets requirements for very stable operations, contributing to the compactness of the whole system.

- **Synthetic oil cooling**
  Synthetic oils are utilized in lubricated systems and in the transfer of heat when other auxiliary fluids fail. ACHE model G, with or without inserts inside the tubes, can minimize the surface area even where fluid viscosity plays an important role, enabling safe operation and simple constructability.

- **Fuel gas compression**
  Fuel gas compression applications are often sited in remote areas where water supply is either restricted or unavailable. ACHE model G is designed to provide both interstage and discharge cooling in the compressor package.
Service and maintenance

Our global network of local service technicians is ready to assist you on site whenever you need help. We know the importance of keeping service stops short and our organization is both flexible and available at short notice. We have the capacity to perform complex, large-scale service work and always do our best to minimize plant downtime. By working closely with our customers, we can prepare for planned service stops well in advance to make sure work is executed efficiently in the shortest possible time. Our specialists can help with everything from audits and advice on maximizing your return on investment, to performing a full reconditioning on any type of air-cooled heat exchanger.

Extending performance with the Alfa Laval 360° Service Portfolio

Alfa Laval 360° Service Portfolio contains all the services needed to secure and enhance performance throughout your equipment’s life cycle. Our service offer includes:

- **Commissioning**
- **Supervision**, engineering and project management
- **Audits**, including all types of testing (ultrasonic, X-ray and gamma ray, hydro, pressure, dye penetrant, etc.)
- **Spare parts** and supply of material
- **Service tools** and equipment required for the service
- **Training**

We can also create a Performance Agreement — a customized service agreement for you that includes any or all of the above services.

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### Technical data

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure equipment certification and standards</td>
<td>PED 2014/68/EU, ASME VIII div.1, API661</td>
</tr>
<tr>
<td>Design pressure</td>
<td>0–100 bar(g)</td>
</tr>
<tr>
<td>Design temperature</td>
<td>−40 °C– +250 °C</td>
</tr>
</tbody>
</table>

### Design and materials

**Pressure vessel and structure**

- Header and tube: Plugged header in:
  - Carbon steel
  - Stainless steel 304 or 316
- Fins: Aluminium KL – knurled footed
- Structure: Bolted structure in hot-dip galvanized carbon steel

**Fan and electrical components**

- Fan: Max. sound pressure level 85 dB(A) at 1 m from equipment
- Transmission type: Toothed belt
- Fan motors: High efficiency, explosion-proof
- Electrical control and options:
  - Frequency converter (VFD)
  - PLC integrated functions for local and/or remote control
  - Automatic louver with actuator and positioner
  - Temperature transmitters

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### Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>Nr. of fans</th>
<th>Fan diameter (mm)</th>
<th>Shipping module dimensions L1 × W1 × H1 (mm)</th>
<th>Air cooler complete dimensions L1 × W1 × H2 (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS1</td>
<td>1</td>
<td>2,100</td>
<td>5,000 × 2,300 × 2,300</td>
<td>5,000 × 2,300 × 4,305*</td>
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<tr>
<td>XLS1</td>
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<td>SLS2</td>
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<tr>
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<td>9,050 × 3,000 × 4,305*</td>
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<td>SLS3</td>
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<tr>
<td>SLS3 SHORT</td>
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<tr>
<td>XLS3</td>
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<td>13,100 × 3,000 × 2,300</td>
<td>13,100 × 3,000 × 4,305*</td>
</tr>
</tbody>
</table>

* Equipment performance requires minimum 2,000 mm supporting structure for air intake underneath the module (extended columns, if any, are available as option).