# Alfa Laval ACE Model J

## A flexible yet economical air cooled heat exchanger for medium applications

### Introduction

The Alfa Laval ACE Model J is an engineered-to-order air cooled heat exchanger with compact footprint benefiting from the pressure vessels (bundles) and fan being installed in a vertical orientation. This configuration reduces the overall depth of the unit and enables the hot air to exit vertically, away from critical surrounding components.

### Applications

The Alfa Laval ACE Model J, given the vertical orientation of pressure vessels and fan, is perfectly suited for small to medium size cooling applications in the upstream and midstream industries, as well as downstream power applications. The most common application for the ACE Model J is acting as a radiator for modular power installations from drilling rigs to mobile, commercial based power units.

### Benefits

- Reduced plot space relative to conventional, horizontal bundle air cooled heat exchangers due to vertical orientation of the bundles.
- High reliability due to robust, ASME coded pressure vessels and proven fan assembly.
- Lower perimeter noise due to induced draft design and vertical air ejection.
- Low transportation costs due to compact design. Can easily be designed to fit within standard shipping container for international or mobile power applications.

### Working principle

The three primary components of the Alfa Laval ACE Model J are the bundles, fan/speed reducer sub-assembly and the structure. The vertical bundles, which are the pressure vessels, direct the process liquid or vapor to flow through the inside the finned tubes. The finned tubes transfer heat from the process fluid to the air passing through and around the tube's fins. The fan used to move the air sits behind the heat exchanger bundles and induces, or pulls, the air across the bundles. The structure directs the airflow between the bundles and fan and supports the weight of the entire, self-contained unit.

### Design configuration

- Vertical bundles and fan with horizontal air intake and vertical air ejection.
- Vertical bundles provide easy inspection access and a lowered center of gravity for safer loading, transport and reduced costs.
- Structure available in bolted galvanized or welded painted construction.
- Additional structure available, such as warm air recirculation, manual or automatic louvers, hail/bug screens, service platforms, walkways and ladders.
- Additional accessories available, such as surge tanks and low noise fans.
- Multiple or single process cooling.

### Unique features

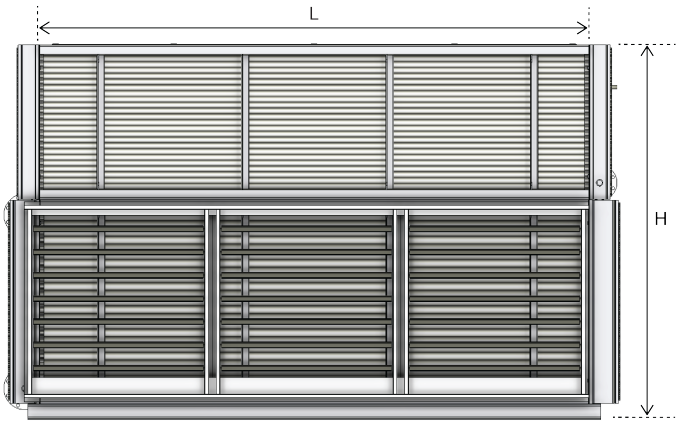
**HyperFin**
Slitted fin design maximizes heat transfer.

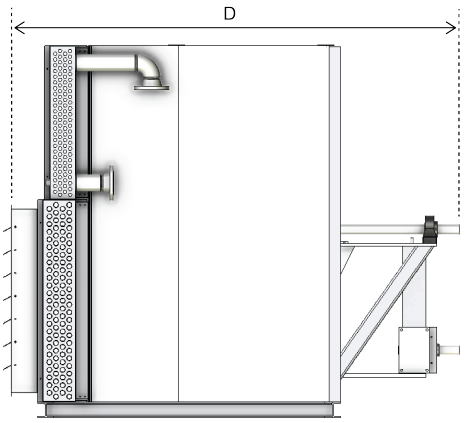
**HybridCool**
Combined wet and dry bulb cooling for minimized water consumption.

**ALOnsite**
Global, onsite service by skilled engineers.

Learn more at **www.alfalaval.com/ace**

## Dimensional drawing




| No. of Fans | Dimensions, feet (m) | | |
|---|---|---|---|
| | Tube Length (L) | Depth (D) | Height (H) |
| 1 only* | 4' – 28' (1.2 – 8.5) | As required | 4' - 17' (1.2 – 5.2) |
| * Representative unit shown in dimensional drawing | | | |

## Technical data

| Pressure vessel (bundle) options | |
|---|---|
| Tube bundles | Straight tube, crossflow or counterflow design |
| Code designs | Non-code, ASME VIII Div 1, NACE and API 661 available |
| Header options | Tubing headers |
| | Plug box ASME code headers optional |
| Header material options | Carbon steel |
| | 300 series stainless steel optional |
| Tube options | 0.625" to 1.5" tube OD available |
| Tube material options | Carbon steel |
| | Stainless steel and high alloy optional |
| Fin options | HyperFin L-footed |
| | Smooth L-footed, embedded or extruded fins optional |
| Bundle accessories | Surge tanks per bundle optional |

| Fan/mechanical options | |
|---|---|
| Fan | Diameters available from 2' to 15' |
| Fan driver | Fan driven by engine |
| | Totally enclosed fan cooled (TEFC), explosion proof or IEC motor optional |

| Structure options | |
|---|---|
| Metal | Welded and painted construction |
| | Bolted steel with hot-dipped galvanized construction optional |
| Air recirculation | Recirculation over front (bundle side) optional |
| Hail/bug screens | Metal or fabric screens optional |
| Louvers | Automatic or manual louvers optional |
| Access package | Ladders, walkways, and platforms optional |

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