Introduction
The Alfa Laval ACE Model T is an engineered-to-order air cooled heat exchanger perfectly suited for large, engine driven natural gas compression applications. The pressure vessels (bundles) are installed horizontally above one or more vertically oriented fans, a configuration which enables lower transportation costs by optimizing bundle dimensions. Heat transfer is maximized by taking advantage of the longer available finned tube lengths.

Applications
The Alfa Laval ACE Model T, given the horizontal orientation of pressure vessels, is perfectly suited for all large gas fired engine driven compression applications within the upstream and midstream natural gas industries.

Benefits
- Engineered-to-order design flexibility allows configurations to meet the customer’s exact process fluid cooling requirements.
- Scalable to cool very large amounts of process fluids.
- High reliability due to robust, ASME coded pressure vessels and structures built to withstand the harsh and remote conditions of natural gas compression installations.
- Available ACE Vspeed substantially reduces parasitic motor horsepower and liquid fallout from overcooled process fluids.
- Vertical discharge of waste heat eliminates excess heat load and stress on the engine.
- Lower transportation costs due to narrow design.

Working principle
The three primary components of the Alfa Laval ACE Model T are the bundles, fan/speed reducer sub-assembly and the structure. The horizontal 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 fans used to move the air sit underneath the heat exchanger bundles and force, or push, the air across the bundles. The structure directs the airflow between the bundles and fans and supports the weight of the entire unit.

Design configuration
- Bundles are horizontal with vertical fans and forced draft, vertical air ejection.
- Available in single to five fan configurations.
- Fans are powered by a compression skid engine.
- Structure available in bolted galvanized or welded painted construction.
- Optional ACE Vspeed explosion proof variable fan speed control to reduce parasitic horsepower consumption and liquid fallout from overcooled process fluids.
- Additional structure available, such as manual or automatic louvers hail/bug, service platforms, walkways and ladders.
- Additional accessories such as surge tanks are available.
- Multiple or single process cooling.
### Technical data

#### Pressure vessel (bundle) options
- **Tube bundles**: Straight tube, crossflow or counterflow design
- **Code designs**: Non-code, ASME VIII Div 1, NACE and PED 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
- **Fans**: Diameters available from 2’ to 14’
- **Fan driver**: Fan driven by compression skid engine, Totally enclosed fan cooled (TEFC), Explosion proof or IEC motors available on special request
- **Speed control**: Alfa Laval ACE Vspeed optional

#### Structure options
- **Metal**: Welded and painted construction, Bolted steel with hot-dipped galvanized construction optional
- **Perimeter bug screens**: Metal or fabric screens optional
- **Louvers**: Automatic or manual louvers optional
- **Access package**: Ladders, walkways, platforms and piperacks optional

### Unique features
- **Vspeed**: Automatic fan speed adjustment for minimal power consumption.
- **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](http://www.alfalaval.com/ace)