Delphi MCHX® Condenser

The Delphi MCHX® Condenser is a highly efficient, compact heat exchanger suitable for outdoor residential cooling units as well as chiller, transport truck, and bottle cooling applications. The coil is specially designed to condense compressor discharge gas, as well as provide liquid subcooling.

The design leverages Delphi’s 25 years of experience developing micro channel heat exchangers for automotive air conditioning systems. That same experience and expertise back Delphi’s complete lineup of heat exchangers for the residential and commercial markets. They include the Delphi MCHX® Evaporator, which is in production, and the Delphi MCHX® Heat Pump Coil, which is under development.

Delphi produces more than 37 million heat exchangers every year. A suite of proprietary computing systems provides the ability to model components as well as entire systems. Delphi's heat transfer simulation capabilities help ensure an optimally designed system for nearly any application.

Benefits

- Compact overall design — up to 30 percent smaller and lighter than existing tube and fin products
- Compact, reduced coil size meets the market's need for less storage space, easy installation, and aesthetics
- Superior thermal performance
- Aluminum construction yields high durability and is easy to recycle
- Easy to handle, minimizing fin damage
- Substantial refrigerant charge reduction compared to tube and fin designs, enhancing environmental friendliness and helping reduce operating costs
- Helps original equipment manufacturers meet high SEER (Seasonal Energy Efficiency Ratio) requirements

Typical Applications

The Delphi MCHX® Condenser is suited for use in:

- Residential air conditioning (outdoor units)
- Commercial cooling applications, including chillers and rooftop units
- Refrigeration applications, including retail food storage and bottle cooling
- Transportation (e.g., refrigerator trucks)

Performance Advantages

The Delphi MCHX® Condenser, like all of Delphi’s heat exchangers, uses brazed aluminum construction and is based on the unique micro channel technology, which consists of three components: a flat micro channel tube, fins and two refrigerant manifolds joined together in a single coil. The design provides greater efficiency than traditional mechanical tube and fin heat exchanger designs.