

DTL SERIES HEAT EXCHANGERS

Reliable Heat Transfer Technology

Thermo Dynamics Limited manufactures an exceptional line of high effectiveness heat exchangers. These heat exchangers have been installed in numerous commercial solar water heating and oil-fired boiler systems. The Model DTL series is the result of several years of research into shell-and-tube heat exchanger performance.

Features

Tube side flow is split between tubes to reduce the head loss. Twisted tape inserts (optional) can be inserted to increase the thermal performance of forced flow by at least 10 percent. The effect of twisted tapes on heat transfer performance is even greater at low flow rates.

Shell side flow is directed across the tubes by baffles and results in significant increases in thermal performance. Cross flow also reduces fouling.

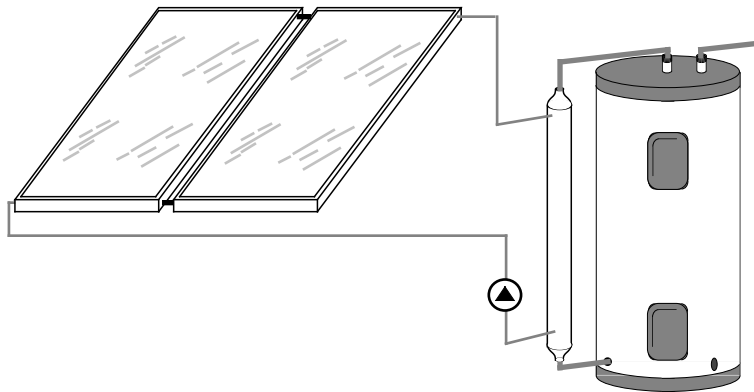
Advantages

Shell-and-tube heat exchangers are constructed with off-the-shelf components making them easy to manufacture and economical.

All copper construction means the heat exchanger is compatible with existing copper plumbing.

More than one heat exchanger can be used in a parallel or series arrangement to meet special heat transfer or physical requirements.

DTL Series heat exchangers have high thermal performance, even with fouled heat transfer fluids.



Quality Control

Ports and endplates are brazed. End caps are soldered with 95/5 tin/antimony.

All heat exchangers are pressure tested to 500 kPa (75 psi) on the shell side and 1000 kPa (150 psi) on the tube side prior to shipping to ensure leak free operation for the customer.

Typical Applications

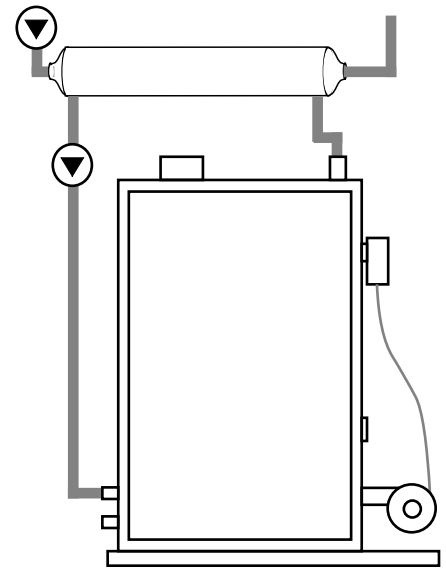
Low Working Pressure, up to 400 kPa (60 psi) domestic hot water boiler.

Commercial, swimming pool and domestic solar water heating systems.

Virtually all low/medium pressure applications where the fluids and existing plumbing are compatible with copper.

Most of our shell-and-tube heat exchangers can be used in a thermosiphoning arrangement with forced circulation on the shell side.

For small heat transfer loads, 2 to 6 kW (6 to 20 MBtu/h), a coil-in-shell heat exchanger may be required, especially when a compact heat exchanger is required. The coil-in-shell is specifically designed for thermosiphon applications and can often be physically half the size of a shell-and-tube heat exchanger with equal thermal performance



DTL Series Heat Exchangers

Technical Specifications

Thermo Dynamics manufactures all shell-and-tube heat exchangers in house and all are engineered and fabricated to strict tolerances. We pride ourselves on consistent quality control over manufacturing.

A single Thermo Dynamics shell-and-tube heat exchanger is capable of transferring from 2 to 120 kW (6 to 400 MBtu). More than one heat exchanger can be used to meet larger heat transfer loads. Nominal shell diameters are from 2, 3 and 4 inches.

The shell-and-tube heat exchanger features all copper construction. High pressure heat exchangers or stainless steel construction is available by special order only.

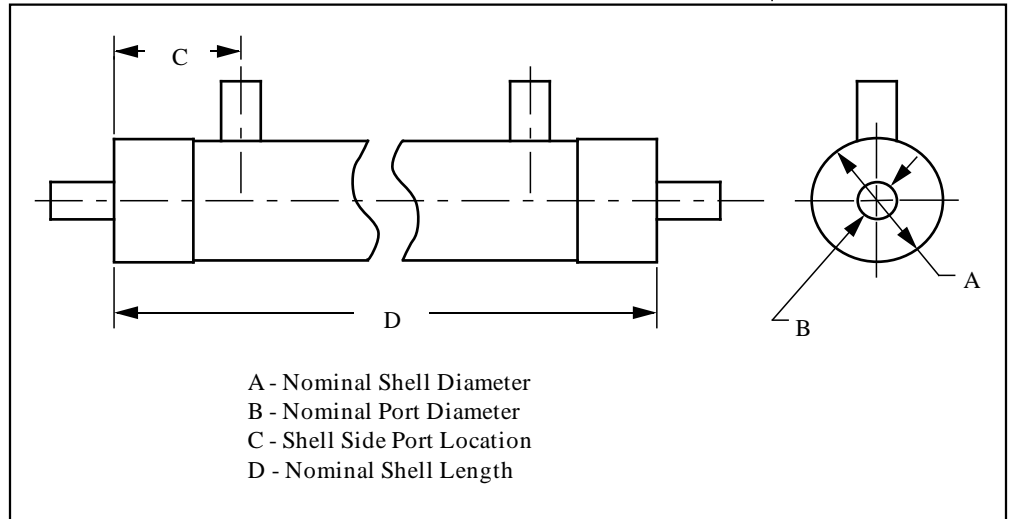
Copper heat exchangers can be supplied with sweated or threaded ports for convenient plumbing.

Thermal Performance

Thermo Dynamics' shell-and-tube heat exchanger has excellent thermal performance, even with fouled heat transfer fluids.

Hydraulic Performance

All shell-and-tube heat exchangers are single pass type. Tube side flow is split between the tubes to reduce head loss. Shell side flow is directed across the tubes by baffles. This cross flow generates high heat transfer coefficients with moderate head loss.



Temperature and Pressure Rating

Recommended shell side working pressures, at 200°F, are 85, 60 and 60 psi for the 2, 3 and 4 inch shell, respectively. Recommended working pressure at 200°F for the tubes is 225 psi. Heat exchangers with higher working pressures are available by special order. Contact the factory for details.

Thermosiphon Applications

Consult the factory for information on shell-and-tube or coil-in-shell heat exchangers for thermosiphon applications.

For More Information

Phone us or fax us with your heat exchanger problem. We promise to attend to all fax inquiries promptly.



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