THERMAL – Double Tube (TDT)

The Double Tube Heat Exchanger (TDT) consists of two concentric tubes — one fluid flows through the inner tube while the other flows through the outer annulus — delivering highly efficient, reliable heat transfer across chemical, petrochemical, food, pharmaceutical, cosmetics, and pulp & paper industries.

Its modular architecture allows multiple modules to be arranged in series or parallel on a single skid, combining different tubing standards (SCH, DIN, and OD) for operating pressures from 0 to 500 bar with easy future expansion.





Advantages & Modular Architecture:

- Modular series or parallel layouts for simplified maintenance and straightforward future capacity expansion;
- Compatible with multiple piping standards (SCH, DIN, and OD) to achieve maximum efficiency at optimal cost;
- Wide operating pressure range: engineered solutions from 0 to 500 bar;
- Ideal for heating, cooling, and heat regeneration, including viscous or particulate-laden fluids;
- Manufactured with certified materials selected for each fluid and hydrostatically tested prior to shipment.

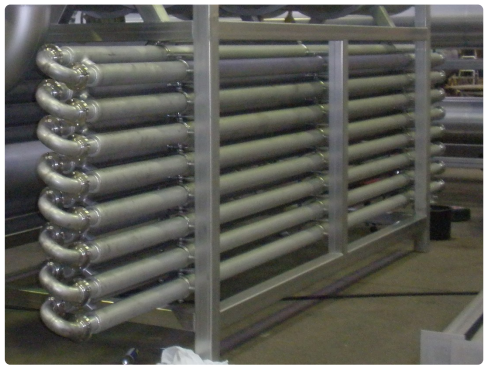
High Pressure vs. Low Pressure:

- Low-Pressure Version: suited for conventional duties with lower velocities and lower CAPEX;
- High-Pressure Version: operates at higher velocities and pressure drops, boosting heat transfer efficiency, reducing residence time, and minimizing fouling for longer production runs and lower OPEX;
- High-pressure units are equipped with our proprietary FHP (Flow High Pressure) accessories.

> **Notice:** We do not limit clients to fixed off-the-shelf TDT models — module count, tube standards, and pressure ratings are custom-engineered for each process.

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Safety & Maintenance Instructions:

Utility Isolation:	Before performing any maintenance or inspection, ensure the equipment is shut down and locked out from all water, steam, process fluid, and power sources.
Pressure & Vacuum Relief:	Heat exchangers may operate under pressure or vacuum. Gradually and completely relieve internal pressure before opening any connections or flanges. Never tighten unions while the unit is operating.
Temperature Check:	The equipment may operate at high temperatures. Allow the unit to cool down to safe handling levels before servicing.
Overpressure Protection:	Never exceed the specified design pressure or temperature. Whenever overpressure risks exist (improper valve closure, pump shutoff head, etc.), properly sized safety relief devices must be installed.
Gasket Maintenance:	Periodic inspection and annual replacement of all gaskets (or shorter intervals depending on process media) is recommended to prevent leaks. Periodic hydrostatic tests must be performed by qualified personnel.

⚠ During operation and maintenance of thermal equipment, proper PPE is mandatory: safety helmet, safety glasses, thermal/mechanical gloves, safety boots, and hearing protection.

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