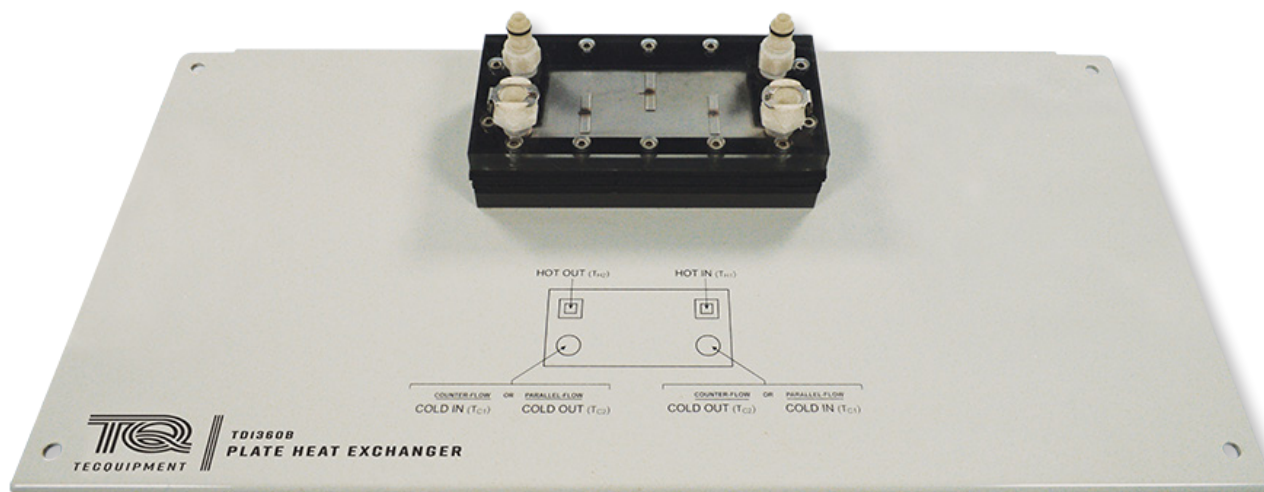


≡ PLATE HEAT EXCHANGER

TD1360B

Shows how a compact plate heat exchanger works.



KEY FEATURES

- One of a set of optional heat exchangers for use with TecEquipment's TD1360V Heat Exchanger Service Module
- Popular type of heat exchanger, used in industry but designed for teaching
- Simple and safe to use – foolproof fittings allow students to change and connect the heat exchanger quickly and easily – needs no tools
- Clear outside casing, so students can see its construction
- Bedplate with a clear schematic diagram to help students understand how to connect the heat exchanger
- Corrosion-resistant materials for use with ordinary clean water at safe temperatures

≡ PLATE HEAT EXCHANGER

TD1360B

DESCRIPTION

This heat exchanger is a set of metal plates separated by spacers (gaskets). The plates and gaskets have holes that make the hot and cold flow run on alternate sides of the plates, therefore transferring heat. The metal plates have flow disturbers on their sides to help improve the heat transfer. Plate heat exchangers are compact and therefore good for applications with limited space. It is also easy to alter their design to change their capacity - you simply add or remove plates and spacers.

The Heat Exchanger Service Module (TD1360V) provides hot and cold water to the heat exchanger and all the instruments needed to measure its performance. All fluid connections to the heat exchanger are self-sealing quick connectors - for safety and simplicity. The hot and cold fluid streams have different connectors to reduce errors. Connecting the heat exchanger takes less than one minute.

The heat exchanger is on a bedplate that has a clear schematic diagram showing the connections.

STANDARD FEATURES

- Five-year warranty
- Made in accordance with the latest European Union directives
- ISO9001 certified manufacturer

LEARNING OUTCOMES

- Demonstration of heat transfer from one fluid to another through a solid wall.
- Energy balance and efficiency calculations.
- Demonstration of parallel-flow and counter-flow operation of heat exchangers.
- Measurement of the heat transfer coefficient, and the effect of fluid flow rates and the driving force (temperature differential) upon it.
- Introduction to the logarithmic mean temperature difference in heat exchangers.
- Comparison of different types of heat exchanger in terms of performance, size and relative cost (only if you have two or more optional heat exchangers).

ESSENTIAL BASE UNIT

- Heat Exchanger Service Module (TD1360V)

OPERATING CONDITIONS

OPERATING ENVIRONMENT:

Laboratory

STORAGE TEMPERATURE RANGE:

-25°C to +55°C (when packed for transport)

OPERATING TEMPERATURE RANGE:

+5°C to +40°C

OPERATING RELATIVE HUMIDITY RANGE:

80% at temperatures < 31°C decreasing linearly to 50% at 40°C

SOUND LEVELS

Less than 70 dB(A)

SPECIFICATIONS

TecEquipment is committed to a programme of continuous improvement; hence we reserve the right to alter the design and product specification without prior notice.

NETT DIMENSIONS AND WEIGHT:

95 mm (height), 240 mm (width), 245 mm (depth), 2.7 kg

OTHER DETAILS:

- Transparent top cover
- Four stainless steel plates each 0.005 m² and 1 mm thick with flow disturbers on surface
- EPDM rubber plate spacers
- Heat transfer area 0.02 m²
- Connection to Service Module with quick connectors