

# U-Tube Type Model - Acrylic



## Model: 115-UTB

A common characteristic of most mechanical and chemical systems is the need to transfer heat from one fluid (liquid or gas) to another, and most systems use heat exchangers to accomplish this task. In a heat exchanger, the two fluids do not make direct contact. Instead, heat passes from the hotter fluid to the metal isolating the fluids and then to the cooler fluid.

Common applications of heat exchangers include heating, ventilation, and air conditioning (HVAC) systems; preheaters or coolers in fluid systems; radiators on internal combustion engines; and boilers, evaporators, and condensers used with fluids like oils, wastewater, hydrocarbons, biogases, etc. in industries such as oil and gas refining and power generation.

Although heat exchangers come in a wide variety of shapes, sizes, and designs, the most common and basic type is the shell and tube heat exchanger, which consists of a set of tubes inside a cylindrical shell. Fluids flow inside the tubes (tube-side fluids) and outside the tubes (shell-side fluids) and remain separated at the ends of the tubes by the tube sheets.

In a u-tube type heat exchanger, the tube bundle consists of continuous tubes bent into a "U" shape and secured to the shell by a tube sheet. The shape of the tubes directs fluid flow back and forth across the length of the heat exchanger, creating an inherent multi-pass design.

Since the bend side of the tubes is free floating in the shell, this design allows thermal expansion to occur without requiring expansion joints. This allows these types of heat exchangers to accommodate greater temperature differences than other designs.

Bayport Technical's U-Tube Type Model - Acrylic (115-UTB) showcases the operational features of a u-tube type heat exchanger. This sturdy, transparent acrylic training model allows learner to dismantle the training aid, examine the component parts, and understand how the unit is assembled, including gasket positioning. Instructors can then let learners reassemble the unit for training purposes.

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## **SPECIFICATIONS**

- Allows for dismantling and reassembling

## **PRODUCT DIMENSIONS**

- For overall dimensions, please contact Bayport Technical.

### **Address**

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