

**Product Name :**

Automated Advance Heat Transfer Rig

**Product Code :**

NLAB-TECHNICALAB33010

**Description :**

Automated Advance Heat Transfer Rig

**Technical Specification :**

Automated Advance Heat Transfer Rig

Implementation of a heat exchange.

Analysis of heat exchange performances.

Possible Experiments:

Determination of :

Heat balances.

Global heat transfer coefficients

Flow regimes

Study of the effect of transfer mode (con or counter-current).

Study of the effect of hot and cold fluid supply.

Comparison of the efficiency of 4 types of heat exchangers.

Technical specifications

1 coiled exchanger

1 concentric exchanger

1 plate exchanger with brazed plates

1 Shell & tube exchanger

21 stainless steel manual valves

5 pressure gauges

1 electronic flowmeter (cold circuit)

1 electronic flowmeter (hot circuit)

1 stainless steel pneumatic valve for the cold water flow

1 stainless steel pneumatic valve for the hot water flow

2 converters P/I

1 electrical cabinet

16 temperature probes

2 temperature displays with a 2 positions switch and a 4 positions switch and a communications card type

RS485

4 temperature displays with RS485 output and one RS485/RS232 converter

2 flowmeters displays

The exchangers are out of stainless steel

The external grills of the exchanger with serpentine and the multitubular exchanger are out of glass.

The external grill of the monotubular exchanger is out of stainless steel.  
The circuit is carried out in stainless steel piping and is assembled on welded stainless steel frame.  
A technical manual is delivered with the bench.  
A supervision software designed on Labview allowing to configure remotely the regulators, to select the temperature displays and to control the flow according to the selected exchangers and the transfer mode.

## Naugralabequipments

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