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**Product Name :**  
Adjustment And Operation Of Expansion Valves

**Product Code :**  
LBNY-0005-12500040



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#### **Description :**

The expansion valves can be selected via valves. Via an evaporator with glass tubes the correct injection and evaporation of the refrigerant can be monitored. An additional electrically heated superheater at the output of the evaporator enables the investigation of the control behaviour with different refrigerant superheating. In the refrigeration circuit the expansion valves, also called primary controllers, also play an important role. The correct selection and adjustment decisively affects the capacity of the overall refrigeration system. The trainer enables the investigation of four different expansion valves: TEV (Thermostatic Expansion Valve) with internal pressure compensation, TEV with external pressure compensation, TEV with MOP function (Maximum Operating Pressure) and AEV (Automatic Expansion Valve). The control behaviour can be monitored at a flow meter. Pressure and temperature sensors upstream and downstream of the expansion valve and at the evaporator outlet provide information about the state of the refrigerant and the degree of superheating. The locations of the temperature sensor at the evaporator output can be selected.

#### **Technical Specification :**

Evaporator with glass tubes to monitor injection and evaporation  
Valve downstream of the evaporator to simulate different pressure losses  
Adjustable electric heater for superheating  
Refrigeration system with different expansion elements: thermostatic expansion valve TEV with internal pressure compensation, thermostatic expansion valve TEV with external pressure compensation, thermostatic expansion valve TEV with MOP function, pressure-controlled expansion valve AEV  
Trainer from the practical series for the training of mechatronics engineers for refrigeration  
Air-cooled condensing unit  
Sensors record pressures, temperatures, flow rate.



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