

Product Name :
Changes of state in the Refrigeration Circuit

Product Code :
LIM-CAT-L0045-00002



Description :

Changes of state in the Refrigeration Circuit

Technical Specification :

Changes of state in the refrigeration circuit

Energetic analyses of the refrigeration cycle; transparent components offer insights into the changes of state. Energetic analyses of the refrigeration cycle; transparent components offer insights into the changes of state. The evaporator and condenser are transparent to provide good monitoring of the phase transition process during evaporation and condensation. The operation of the float valve as expansion valve is also easy to observe. Before the entry into the evaporator the aggregate state of the refrigerant can be monitored at a sight glass. A water circuit cools the condenser or supplies the cooling load for the evaporator. Cold and hot water and refrigerant flows are adjustable. The low pressure level of the refrigerant used permits the use of an evaporator and condenser out of glass. Temperatures and pressures are recorded and displayed.

Learning Objectives/Experiments:

- Design and operation of a compression refrigeration system.
- Observe the evaporation and condensation of the refrigerant.
- Represent and understand the refrigeration cycle in the log p-h diagram.
- Energy balances.
- Calculation of the coefficient of performance.
- Design and operation of a compression refrigeration system.



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