

ABSORPTION REFRIGERATION DEMONSTRATOR 816



Year 1
study

Features

- Demonstrates the Operation of An Ammonia-Water Absorption Refrigerator
- Electrically Driven With Optional Computerised Data Acquisition.
- Allows Investigation of Refrigerator Performance Under Load.
- All Major Components Visible.

Description

The absorption refrigerator 816 is a fully operational ammonia-water refrigerator with all of the of the main absorption cycle components visible at the rear of the unit. With the built-in load and optional instrumentation students can investigate a refrigeration system that operates from an electrical heat source. The unit is robustly constructed entirely from standard commercial components. An instrumentation console with digital wattmeter and multi-way temperature indicator allow all of the important system parameters to be recorded. The system allows the ammonia generator and evaporator load to be independently varied and measured using the wattmeter. The unit has thermocouples located at 10 strategic and important locations around the refrigeration circuit. These together with a comprehensive system diagram and description in the manual, assist in student understanding of this complex system. An optional computerised Data Acquisition system, allows all 10 thermocouples to be monitored as well as the ammonia generator power consumption and load current and voltage. This allows the system start to fully operational condition to be monitored, which aids student understanding plus the system performance variation with change of load. All parameters can be monitored and plotted against time or transferred to a spreadsheet for analysis.

Related Laws/Applications

- Refrigeration
- Air conditioning
- Electrical heat source

Learning capabilities

- Observation of the components and operation of an absorption refrigerator.
- Measurement of the performance of the absorption refrigerator under load.
- Investigation of the start sequence and system component temperatures of an absorption refrigerator.

Technical Specification

- Variable electrical load inside the freezer compartment
- Variable generator heater
- Digital temperature indicator
- Digital wattmeter to give instantaneous indication of generator heater input and evaporator load.
- Optional Computerised Data Acquisition System.
- Safety:
 - - The unit is protected by double pole combined switches and circuit breakers
 - - A residual current circuit breaker to protect against earth leakage.

What's in the Box?

- 1 x 816
- 1 x Transformer (115V only)
- Instruction manual
- Packing list
- Test sheet

Weights & Dimensions

- Weight: 25 kg
- Weight: 29 kg (115V version)
- Length: 430mm
- Width: 400mm
- Height: 730mm

Essential Services

- 1 Amp, 220-230 Volts, Single Phase, 50Hz (With earth/ground).
- 2 Amp, 110-120 Volts, Single Phase, 60Hz (With earth/ground).

Ordering information

To order this product, please call PA Hilton quoting the following codes:

816/230
816/115
816/230/C
816/115/C

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COUNTRY OF ORIGIN - UK WARRANTY PERIOD - 5 YEARS