Environmental Systems Trainer

H-DAR-1G
Domestic Absorption Refrigeration Trainer

Purpose

The Hampden **Model H-DAR-1G** has been designed to familiarize the student with the continuous cycle absorption system. The operation of this system is based on Dalton's Law, which states "the total pressure of a confined mix of gases is the sum of the pressures of each of the gases in the mixture". In this case, we are using a solution of water and ammonia.

Description

This system consists of a mobile bench with control panel and the domestic absorption refrigeration unit.

Control Panel

Case: 14-gauge furniture stock steel finished in instrument tan texture.

Panel: 11-gauge furniture stock steel finished in instrument white enamel.

Cold Box: Clear Lexan® polycarbonate with stainless steel frame and ny-latch fasteners for access.

Components

Thermocouples: Type-T bonded to the fixture (12-reqd.)

Rotary Selector Switch: 12-position, make-before-break silver plated contacts designed for switching temperature measured circuits.

Digital Temperature Indicator: 4-digit display with 0.1° resolution up to 1000°

AC Power Switch: Electromagnetic Circuit Protector and pilot light

Diagram: Continuous cycle absorption system in color with thermocouple locations and clear Lexan® cover.

Dimensions: 67"H x 42"W x 38"D - Shipping Weight: 370 lbs

Refrigeration System

Refrigerator: Continuous cycle absorption system using ammonia and water. This unit consists of the boiler, condenser, evaporator and absorber in a sealed package.

Fuel: This unit is designed to operate on liquid petroleum gas (LPG). The LPG tank is not supplied.

Temperature Control: Thermostat

Observation Windows: Clear 1/4" Lexan®

General

Nomenclature: 3-ply brown/white core engraving phenolic secured to the panel with self-tapping screws.

Services Required

Voltage: 120V AC, 1Ø, 60Hz

All Hampden units are available for operation at any voltage or frequency

Hampden® ENGINEERING CORPORATION

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