



Orbital De-Airing Device
For Use with H-1750

Introduction

This item is generally used with other Rice test apparatus specifically to keep sample material loose for more reliable results. It accepts the 2 kg capacity canister, H-1750, is variable speed from 1.0 to 240 RPM and reversible, with time selectable by the user in seconds, minutes or hours.

General Information

Inspection:

Your Rice De-airing Device was thoroughly inspected before it was shipped and should be ready to operate as soon as you have completed the set-up procedure. Notify Humboldt Mfg. Co. or your local agent and file a claim with any carriers involved if you find any damage to the machine.

Physical Specification:

Shipping weight 28 lbs. (13 kg)

Overall height 16 inches

Base dimension 11in. X 11in.

Power supply:

115 VAC 60 Hz

220V 50/60Hz

Check that your machine has the correct voltage for your local supply.

Initial Installation

Set the machine base up at the place it is to be used in the laboratory and then decide if you plan to operate the machine resting on the four rubber feet as supplied or permanently mounted through the extra mounting holes in the base.

Put your H-1750 Pycnometer with cover into place on the H-1782 by sliding it through the top ring slot and into position under the top ring. If not already engaged press down on the ring to compress the springs and hook the screw heads from the latches into the keepers on the ring. Now try latching the ring down. If you can't get the latches down, or if they go down and are too loose to hold the ring down, you can make a final adjustment by turning the latch screw(s) and re-tightening their nuts. The proper setting is when the keepers are deflected downward slightly when latched. This pressure on the keepers should hold the pycnometer in place when there is a vacuum drawn on it.

Operation

Before plugging in the electric line-cord select the direction and speed then set the time period using the three knobs on the front of the timer (as furnished the units are minutes). Start by turning the On/Reset switch clockwise if the unit does not start on plug-in. The elapsed time will be displayed until shut-off which is at the present time.

Maintenance

The machine can generally be maintained by keeping it clean, correcting any looseness that may occur, and protecting the electrical cord.

Safety Warnings

Operators should take care to operate this machine under the maximum load restrictions. The machine is programmed at the factory to provide safety shutdown if the upper or lower maximum travel is exceeded as well as if the upper instrument calibration is exceeded.

Electrical Warnings

Typically, there is no reason for the operator to open the machine. However, if the customer's engineers attempt to change settings to the circuit board connected to the back panel, the machine must always be unplugged before this operation. Unplugging the internal connection to the back panel circuit board while the machine is under power will result in permanent damage to the circuit board.

Warranty

Humboldt Mfg. Co. warrants its products to be free from defects in material or workmanship. The exclusive remedy for this warranty is Humboldt Mfg. Co., factory replacement of any part or parts of such product, for the warranty of this product please refer to Humboldt Mfg. Co. catalog on Terms and Conditions of Sale. The purchaser is responsible for the transportation charges. Humboldt Mfg. Co. shall not be responsible under this warranty if the goods have been improperly maintained, installed, operated or the goods have been altered or modified so as to adversely affect the operation, use performance or durability or so as to change their intended use. The Humboldt Mfg. Co. liability under the warranty contained in this clause is limited to the repair or replacement of defective goods and making good, defective workmanship.

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Testing Equipment for

Construction Materials

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HUMBOLDT

Specific Gravity (Rice Test) Testing Equipment

Rice Test Pycnometers

Vacuum Pycnometer Set— H-1750

Used in Rice testing to determine the maximum specific gravity of bituminous paving mixtures with maximum aggregate size up to 19.1mm (3/4in.). 2000g capacity, 7-1/2" ID x 6" depth. Set includes aluminum volumetric canister; volumetric lid; flat, Plexiglas vacuum lid with o-ring; volumeter; release valve and fittings, and a metal water vacuum aspirator with 3/8" IPT and 6' hose. Unit achieves vacuum using the aspirator or optional vacuum pump. Meets ASTM D2041; AASHTO T209, T283.

Small Vacuum Pycnometer Set— H-1751

Same as H-1750 except 1500g capacity, 7-1/2" ID x 4" depth.

H-1750 and H-1751 Pycnometers are also available in stainless steel.

Large-Capacity Vacuum Pycnometer Set— H-1820

Large-capacity unit, 10L (2.64 gal.), 6000g (13.2 lbs.) sample weight, with maximum aggregate size of 50mm (2in.). Set features domed transparent cover for easy observation of sample testing, perforated plastic shelf, which some States require; water inlet valve and 1/4" ID hose, vacuum hose and aspirator with 3/8" NPT fitting. Flange OD is 10-3/4" (273mm); maximum clearance above plate is 7-3/4" (197mm). Dimensions: 9-7/16" ID x 12-1/8" (240 ID x 311mm). Meets AASHTO T209, T283.

Digital Manometer— H-1754D

Digital Manometer, Certified— H-1754DCA

A precise measurement device designed to replace mercury-filled manometers used in Rice test applications. This portable, hand-held device can be easily moved around the laboratory. Holes are provided for bench or wall mounting and a 3/8" barb fitting is used for quick connections. The instrument features a digital display range of 0 to 1000mm Hg (absolute) at a resolution of 0.1mm Hg. The device has a rated accuracy of +/-0.5% full scale and is powered by one 9V battery.

Slow Release Valve for Vacuum Pycnometers— H-1749

For use with H-1750, H-1751 and H-1820 for greater accuracy and shorter dry back time. Brass valve maintains 30mm vacuum pressure on sample. Meets ASTM D2041, AASHTO T283.



Typical Rice Test Setup



H-1750



H-1820



H-1754D



H-1749

Specific Gravity (Rice Test) Equipment

Orbital De-Airing Table for H-1750 Pycnometer— H-1782

The Humboldt Orbital De-Airing Table is designed for use in maximum specific gravity and density determinations of bituminous paving mixtures. Through the use of an orbital shaking action, material densification that entraps air is virtually eliminated, resulting in more accurate and uniform test results. The H-1782 incorporates a variable speed controller with a range of 10 to 250 rpm and an LED programmable timer with an accuracy of better than $\pm 0.1\%$. The orbital diameter of the 11" x 12" (279 x 305mm) table is set at 1-1/2" (38.1mm). Taking up little counter space, the base is 10" x 10" (154 x 154mm) and has an overall height of 16" (406mm). Quick release clamps are used to permit quick mounting and removal of the pycnometer.

Shipping wt. 28lbs (13kg)

Note: For 220V operation, order H-1042 Transformer.



H-1756A

Vibrating Table for H-1750 Pycnometer— H-1756A

Vibrating Table for Pycnometer, 220V 50Hz— H-1756A.5F

Heavy-duty vibrating tables keep sample material loose for more reliable test results. Strong, rugged-duty vibrators and sturdy bases having integral, heavy-duty on/off switches. Exclusive quick-release cam/lock fasteners allow quick placement and removal of canister.

Vibrating Table for H-1820— H-1826A

Vibrating Table for H-1820, 220V 50Hz— H-1826.5F

Heavy-duty vibrating table keeps sample material loose for more reliable test results. Strong, rugged-duty vibrator and sturdy base have integral, heavy-duty on/off switches. Exclusive quick-release cam/lock fasteners allow quick placement and removal of canister. Shipping wt. 12lbs (5.4kg)



H-1782



H-1753 shown in
use with H-1782



H-1826A

Flask Attachment— H-1753

For use with H-1756A and H-1782, flask not included.

Indicating Drierite Air Drying Unit— H-1759

Easily installs in-line between vacuum pump and rice test equipment. This refillable unit measures 2-5/8" by 11-3/8" (667 x 289mm) with hose barbs at both ends, which can accept 1/4" to 3/8" flexible tubing. Supplied complete with 650g of indicating desiccant.

Drierite Desiccant— H-1757

Meets ASTM D2041.

Indicating Drierite Desiccant— H-1758

Blue desiccant turns red to show absorption and may be reused.



H-1759



H-1757



H-1758