



### **Humboldt Pressure Meter— H-2783A**

Easy-to-use stainless clamping system employs four, one-piece, self-locking clamps to seal lid to base with proper tension. O-ring assures watertight seal. Easy-to-read (to nearest 1/10th %) 4-inch diameter direct percentage gauge with calibration adjustments. Features all-brass H-2785.DB super pump for reliability and faster operation. Unique pop-it valve eliminates seal failures. Complete with high-impact horizontal plastic carrying case, syringe, tamping rod, strike-off bar, calibration vessel, inside and outside calibration tubes and instructions.

All our Type-B Concrete Air Meters feature our all-brass H-2785.DB Super Pump for reliability and faster operation.

All air meters meet ASTM C231; AASHTO T152.

## **Operation Instructions**

1. Fill the base with a sample of fresh concrete according to ASTM C231 specifications. Next, strike off the base level full with the strike off bar that is furnished with the instrument. Wipe top of base and cover clean.
2. Clamp cover on securely, with petcocks open.
3. Using the supplied syringe, inject water through one petcock until all the air is displaced and expelled through the opposite petcock. Leave petcocks open at the time.
4. With the built-in pump, pump air to the initial pressure line on the gauge.
5. Wait a few seconds and stabilize hand on dial at the initial pressure by pumping up or bleeding off with the air release valve, whichever is necessary.
6. Close both petcocks, then press down on the needle valve lever to release the air into the base. Hold the needle valve lever down a few seconds while lightly tapping on the gauge with your finger to stabilize the hand on the gauge.
7. Read the percent of entrained air in the concrete on the dial.
8. After you release the pressure, clean the base, cover and petcock openings thoroughly with running water. To check the accuracy, refer to the calibration instructions below.

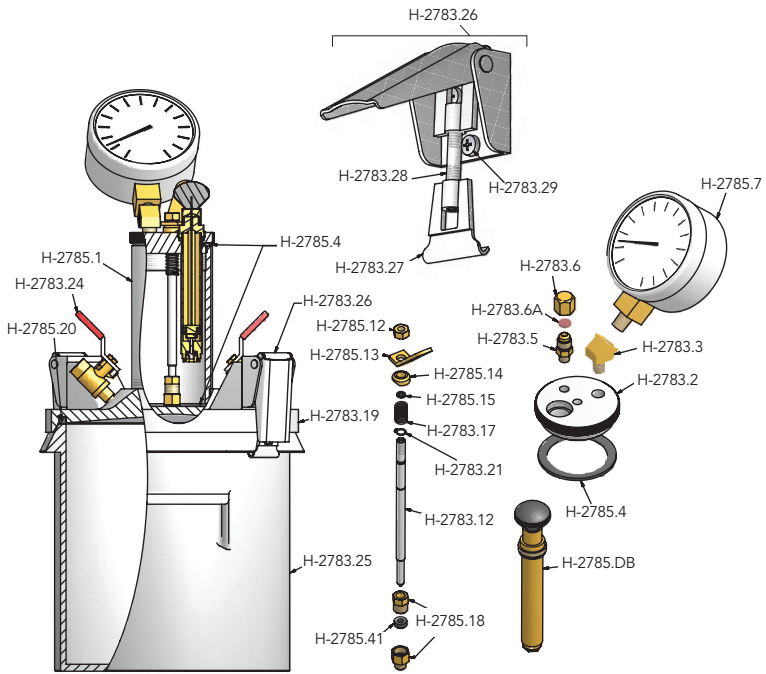
## **To Check Calibration of Meter Gauge**

1. Fill the base full with water.
2. Screw on the short piece of straight tubing supplied with the unit into the threaded petcock hole located on the underside of the cover. Clamp the cover on the base with the tubing extended down into the water.
3. With both petcocks open, add water with the syringe through the petcock until all of the air is forced out of the opposite petcock. Leave both petcocks open.
4. Pump up air pressure to a little beyond the pre-determined initial pressure line on the gauge. Wait a few seconds for the compressed air to cool to normal temperature and then stabilize the gauge hand at the proper initial pressure line by pumping or bleeding off as needed.

5. Close both petcocks and immediately press down on the thumb lever exhausting air into the base. Wait a few seconds until the hand is stabilized. If all of the air was eliminated and the initial pressure line was correctly selected, the gauge should read zero. If two or more tests show a consistent variation from  $\pm 0.1\%$  in the result, then change the initial pressure line to compensate for the variation. Use the newly established initial pressure line for subsequent tests.
6. Screw the supplied curved tube into the outer end of the petcock and by pressing on the thumb lever and controlling flow with the petcock lever. Fill the supplied 5% calibrating vessel (354ml) level full of water from the base.
7. Release the air at the free petcock. Open the other petcock and let the water in the curved pipe run back into the base. There is now 5% air in the base.
8. With both petcocks open, pump air pressure in the exact manner as outlined in step
4. Close the petcocks and immediately press the thumb lever. Wait a few seconds for exhaust air to warm to normal temperature and for the needle to stabilize. The dial should now read 5%.
9. If two or more consistent tests show that the gauge reads incorrectly at 5% air in excess of  $\pm 0.1\%$  (or whatever is considered satisfactory), then remove the gauge glass and reset the dial hand to 5% by turning the calibration screw located on the indicating pointer.
10. When the gauge hand reads correctly at 5%, additional water may be withdrawn in the same manner to check results at 10%, 15%, 20%, etc.

## **Maintenance Tips**

1. Prompt cleaning with water of the air meter cover and pot, both inside and out will ensure a proper seal and volume are maintained.
2. Periodic oiling of petcock screws will prevent them from seizing. WD-40 or a similar product is sufficient.

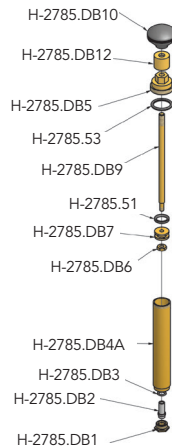


### H-2783A Air Meter Replacement Items

Part No.	Description	Part No.	Description
H-2785.1	Pressure chamber	H-2785.18	Needle valve seat assembly
H-2783.2	Pressure chamber cap	H-2783.19	Cover
H-2783.3	Pressure chamber elbow	H-2785.20	Cover o-ring
H-2785.4	Pressure chamber gasket	H-2783.21	Needle valve spring retainer
H-2783.5	Air-release stem	H-2783.24	Cover petcock
H-2783.6	Air-release cap	H-2783.25	Base
H-2783.6A	Release cap gasket	H-2785.41	Needle valve seat gasket
H-2785.7	Air meter gauge	H-2783.26	Latch assembly
H-2783.12	Needle valve stem	H-2783.27	Latch
H-2785.12	Needle valve nut	H-2783.28	Adjusting rod
H-2785.13	Needle valve lever	H-2783.29	Latch assembly screw
H-2785.14	Needle valve spacer	H-2785.DB	Super Pump assembly
H-2785.15	Needle valve o-ring	H-2783.39	Gasket replacement kit
H-2783.17	Needle valve spring		

### H-2785DB Super Pump Replacement Parts

Part No.	Description
H-2785.DB1	Valve nut
H-2785.DB2	Valve
H-2785.DB3	Valve O-ring
H-2785.DB4A	Pump tube
H-2785.DB5	Pump cap
H-2785.DB6	Stem nut
H-2785.DB7	Pump piston
H-2785.DB9	Pump stem
H-2785.DB10	Pump handle
H-2785.DB12	Stem cap
H-2785.51	Pump piston O-ring
H-2785.53	Pump tube O-ring





H-2789



H-2793



H-2788



H-2785.35

H-2785.34

### Air Meter Calibrators (5%)

Calibrators check the accuracy of any pressure-type concrete air meter. Set the specially-designed canister upright at the bottom of the water-filled base, and the meter should read 5% air by volume. Two calibrators are used for a 10% air reading.

- Air Meter Calibrator, Brass H-2789
- Air Meter Calibrator, Aluminum H-2793
- Air Meter Calibrator, Plastic H-2788



Ship wt. 3 lb (1.3kg)



H-3399



H-2783.30



H-2783.26



H-2785.36



H-2783.31

H-2783.32

### Air Meter Replacement Accessories

Item	Part No.
Calibration Vessel, plastic	H-2783.30
Calibration Tube (outside)	H-2783.31
Calibration Tube (inside)	H-2783.32
Wash Bottle	H-3399
Strike-off Bar	H-2785.34
Tamping Rod 5/8" x 16"	H-2785.35
Syringe, Rubber Bulb	H-2785.36
Latch Assembly	H-2783.26
Plastic Case, Horizontal	H-2783.62H



H-2783A.62H

# CLEAN, REPAIR CALIBRATE



**Call: 1.800.544.7220**

## 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.

### **Humboldt Mfg. Co.**

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Testing Equipment for



Construction Materials

# HUMBOLDT

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