



**Air Meter**

**METER NUMBER:** \_\_\_\_\_

**DATE TESTED:** \_\_\_\_\_

**PREDETERMINED INITIAL PRESSURE LINE:** \_\_\_\_\_

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

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.

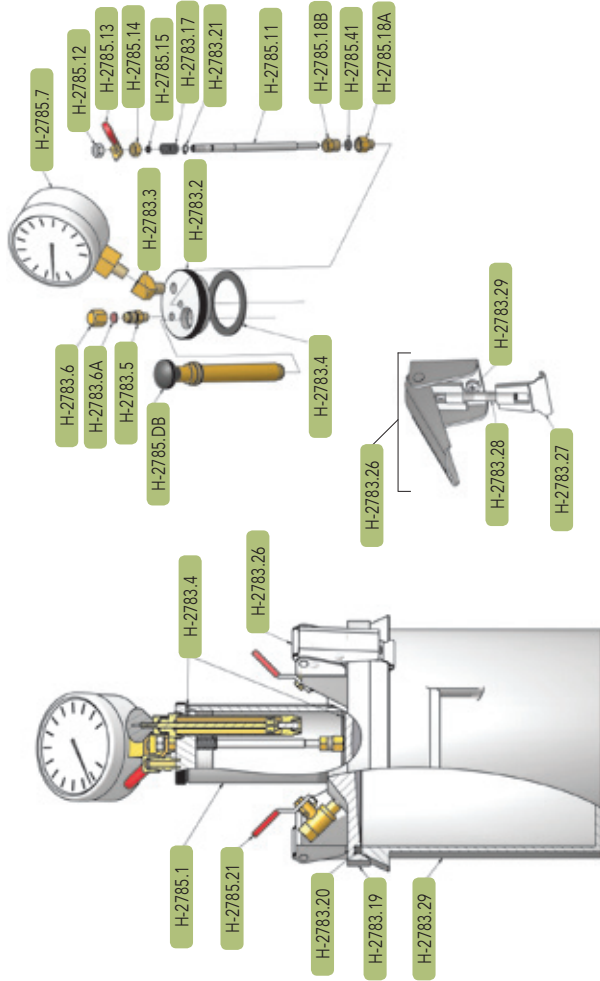
5. Close both petcocks and immediately press down on the thumb lever exhausting air into the base. Wait a few seconds until the hand is stabilized. If all of the air was eliminated and the initial pressure line was correctly selected, the gauge should read zero. If two or more tests show a consistent 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.

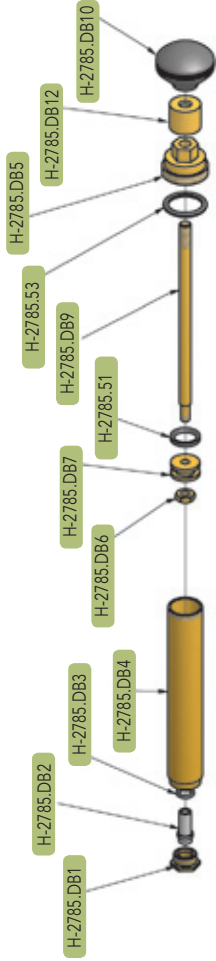
## H-2783 Replacement Parts

H-2785.1	Pressure chamber
H-2783.2	Pressure chamber cap
H-2783.3	Pressure chamber elbow
H-2785.4	Pressure chamber gasket
H-2783.5	Air/Release stem
H-2783.6	Air/Release cap
H-2785.7	Air meter gauge
H-2783.6A	Release cap gasket
H-2785.11	Needle valve stem
H-2785.12	Needle valve nut
H-2785.13	Needle valve lever
H-2785.14	Needle valve spacer
H-2785.15	Needle valve O-ring
H-2783.17	Needle valve spring
H-2785.18A	Needle valve seat assembly
H-2785.18B	Needle valve seat bushing
H-2783.19	Cover
H-2783.20	Cover O-ring
H-2783.21	Needle valve spring retainer
H-2783.24	Cover Petcock
H-2785.29	Base
H-2785.41	Needle valve seat gasket
H-2785.51	Pump piston O-ring
H-2785.53	Pump tube O-ring
H-2783.26	Latch Assembly
H-2783.27	Latch
H-2783.28	Clamp Tap
H-2783.29	Latch Assy. screw
H-2785.DB	Super Pump Assembly



## H-2785DB Super Pump Replacement Parts

H-2785.DB1	Valve nut
H-2785.DB2	Valve
H-2785.DB3	Valve O-ring
H-2785.DB4	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



## 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

# HUMBOLDT

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