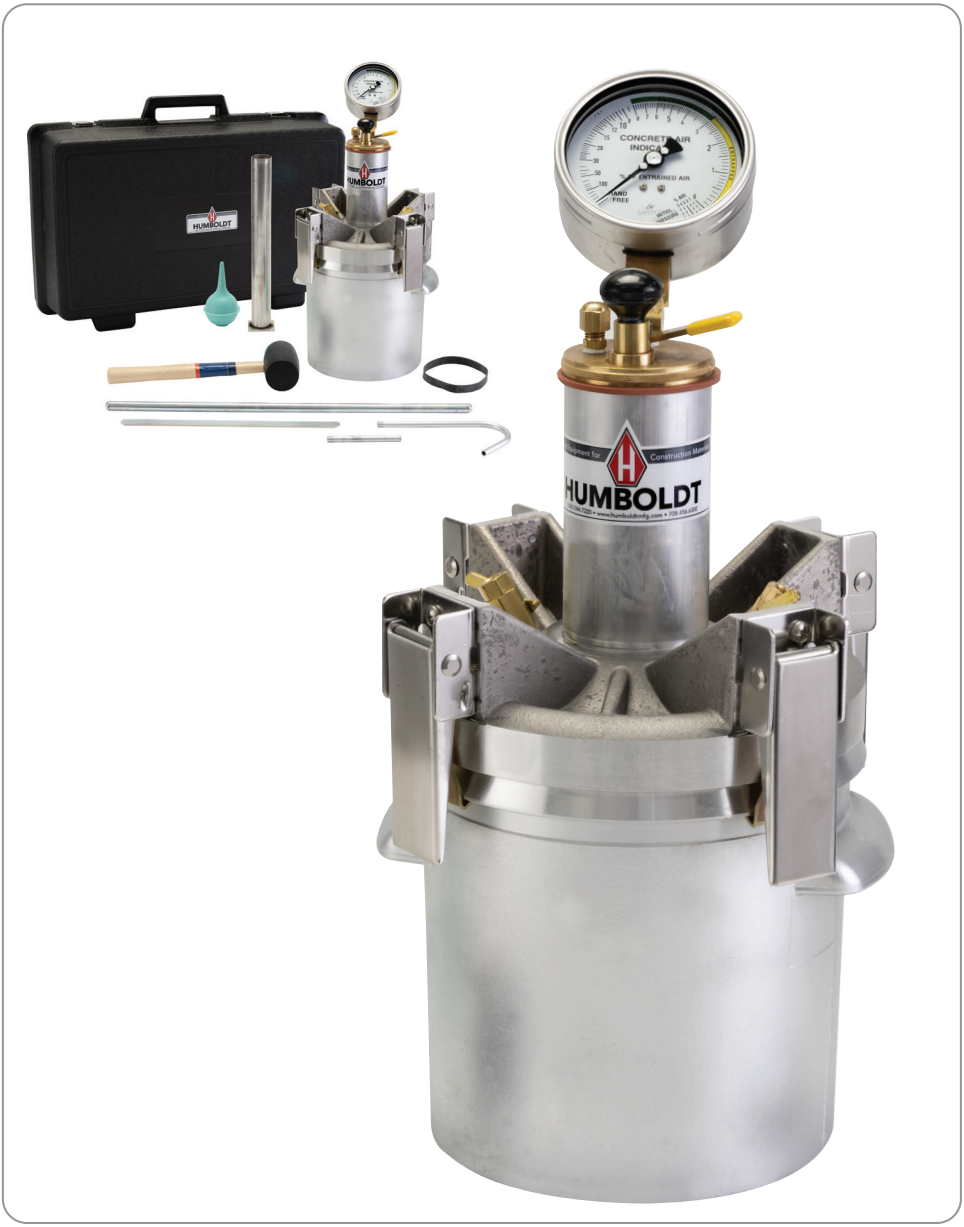
product manual

H-2787



Humboldt Pressure Meter— H-2787

The H-2787 air meter is one of the most precise air content measuring devices available. With heat-treated, cast aluminum construction and cast-in handles on the base, the H-2787 is heavy duty, yet lightweight, and easy to handle.

This air meter utilizes the best clamping system available, with large stainless steel clamp levers and a holding capacity of 2500 lbs. each. This clamping system provides an easy, dependable operation. Employing the use of a superior, high-volume Pump, this system makes operation efficient yet rapid. The meter includes a large, accurate pressure gauge with safety glass and bold color dial face. Color coded for entrapped and entrained air readings.

The H-2787 air meter is furnished complete with the following items:

- Type B pressure meter
- Precisely molded polyethylene case with inner molded reinforced walls to hold the meter and accessories in place.
- Calibrated Vessel
- Calibration Outside Tube
- Calibration Inside Tube
- Strike-off Bar
- 24" Long Tamping Rod 5/8" diameter rounded to a hemispherical tip at both ends
- 3 oz. Bulb Syringe
- 16 oz. Rubber Mallet

Conforms to ASTM C231 & AASHTO T152

Shipping Info: 28" x 11" x 20" – 38 lbs.

Operation Instructions

NOTE: Type B air meters are not to be used for concrete with lightweight or porous aggregate.

1. Wet the meter bowl, and then fill the bowl in three equal layers, uniformly rodding each layer twenty-five times and penetrating 1" into previous layer. Rap the sides sharply ten to fifteen times with a standard 16 oz. rubber mallet, after rodding each layer. There should be no substantial excess or shortage of concrete after consolidation. An excess of 1/8" is optimum.
2. Strike off with a metal strike bar, clean contact surface and dampen rubber seal on cover.
3. Open both petcocks and clamp on cover.
4. Syringe water through one petcock until water is ejected through the other petcock and all air is removed. Jar the meter gently until no air bubbles appear.
5. Close the air bleeder valve and adjust gauge to your initial pressure number, by pumping or bleeding, while tapping the gauge lightly.
6. Close both petcocks, press and hold down the needle valve lever while rapping the base sharply and tapping the gauge lightly.
7. Read the air content on gauge and subtract aggregate correction factor (for aggregate correction factor see ASTM C231).
8. Release the pressure by opening both petcocks.
9. Clean air meter immediately with clean water. refer to the calibration instructions below.

Calibration Instructions

1. With NO pressure in chamber, adjust gauge needle to the "HANDS FREE" line. (use screw on needle)
2. Screw the short calibration tube into the underside of cover at petcock hole.
3. Fill base with water and clamp on cover. (The tube will extend into water).
4. Open both petcocks, then add water (using syringe) through the petcock having the tube extended below, until water is expelled through the other petcock removing all air.

5. Pump up air pressure until pressure reaches slightly beyond the initial pressure numbers. Allow a few seconds for compressed air to cool, and then adjust needle to initial pressure number by pumping, or bleeding.
(example 2.5-3.0-3.5) NOTE: Start with 3.0
6. Close both petcocks, press and hold down the needle valve lever, releasing air into base, and wait for gauge needle to stabilize. Needle will read zero if initial pressure number was correct. If two or more tests show a consistent variation from zero, change the initial pressure number (Do not adjust the needle) to read zero consistently.
7. Remove all air as in step #4. Screw curved calibration tube into other end of petcock having short tube, then press the needle valve lever and open petcock to fill calibration vessel to the top. When vessel is full, open opposite petcock so water in the tube can flow back into the base. There is now 5% air in the base. (354 ml. of water removed)
8. With petcocks open, pump up gauge to your initial pressure number. Close petcocks, press and hold the needle valve lever and wait for gauge needle to stabilize. Gauge should read 5%. If two or more tests show gauge reading incorrectly at 5%, remove the gauge glass and adjust gauge needle by turning the screw on the needle to 5%.
9. When gauge needle reads correctly at 5%, additional water may be withdrawn in the same manner, to check results at additional percent in 5% increments.
10. Prompt cleaning with water of the air meter cover and pot, both inside and out will ensure a proper seal and volume are maintained.
11. Periodic oiling of petcock screws will prevent them from seizing. WD-40 or a similar product is sufficient.

H-2789

H-2793

H-2788

H-2785.35

H-2785.34

H-3399

H-2783.30

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-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

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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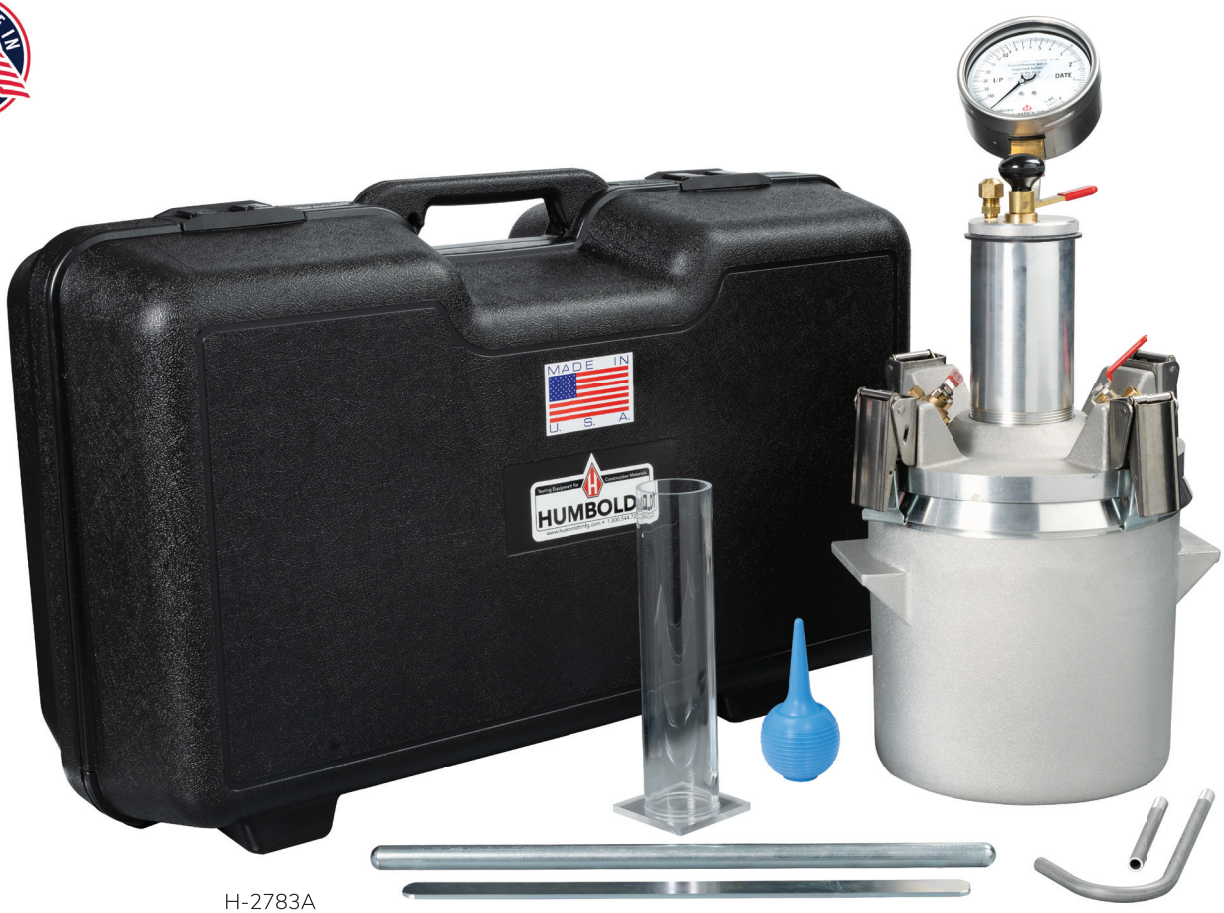
Testing Equipment for Construction Materials

HUMBOLDT

Air Meters



H-2783A

Humboldt Concrete Air Meter

ASTM C231, AASHTO T152

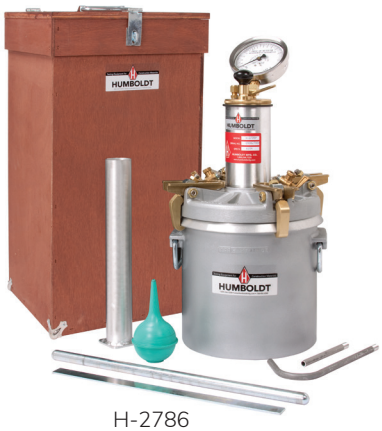
The H-2783A air meter, which exceeds ASTM requirements, features the Humboldt, all-brass super pump, the most reliable and highest quality pump available. The meter's easy-to-use, and extra durable stainless steel clamping system employs four, one-piece, self-locking clamps that quickly seal the lid to the base with proper tension aided by an o-ring to assure a watertight seal. The large, easy-to-read, 4-inch diameter, heavy-duty, direct percentage gauge with calibration adjustments is accurate to the nearest 0.1%. The bucket, or pressure chamber, features EZ-grip, cast handles, which improve usability. This is especially true when the bucket is also used as a 0.25 cu. ft. unit weight measure. The lid of the pressure meter features a smooth sloped top so water and concrete wipe right off.

By eliminating the cavities in the lid that trap and hold concrete, maintenance and repair problems are greatly reduced. The meter also features a machined base, which ensures the meter sets level when conducting tests. The kit includes a durable plastic carrying case; a tamping rod; strike-off bar; rubber bulb syringe; plastic calibration vessel; inside calibration tube, outside calibration tube and operating instructions.

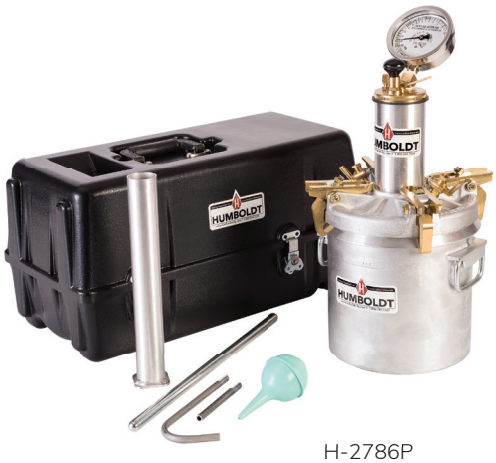
Features Include:

- Humboldt all-brass Super Pump
- Large, heavy-duty, easy-to-read gauge
- Cast handles for secure grip
- Bucket can be used as a 0.25 cu. ft. unit weight measure
- Complete with all needed accessories and case.

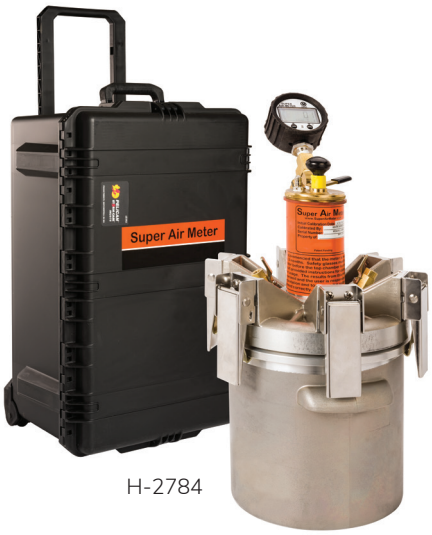
Air Meters



H-2786



H-2786P



H-2784

Press-Ur-Meter Concrete Air Meter, Wood Case

ASTM C231, AASHTO T152

This is the original Press-Ur-Meter for field and laboratory tests. This air meter is designed to provide air content and the determination of specific gravity and free moisture of aggregate. Designed to save time, reduce water use, ensure accuracy and maintain sample integrity (sample may also be used for slump and compression tests). The meter uses brass cover clamps, which can be adjusted for clamping pressure. A large, easy-to-read, 4" diameter, direct percentage gauge with calibration adjustments is accurate to nearest 0.1%.The H-2786 meter also features the Humboldt, all-brass super pump, the most reliable and highest quality pump available. The meter's base/bucket can be used as a 0.25 cu. ft. unit weight measure. This kit includes a wood carrying case; tamping rod; strike-off bar; rubber bulb syringe; aluminum calibration vessel; inside calibration tube, outside calibration tube and operating instructions.

Press-Ur-Meter Concrete Air Meter, Plastic Case

ASTM C231, AASHTO T152

This is the original Press-Ur-Meter for field and laboratory tests. This air meter is designed to provide air content and the determination of specific gravity and free moisture of aggregate. Designed to save time, reduce water use, ensure accuracy and maintain sample integrity (sample may also be used for slump and compression tests). The meter uses brass cover clamps, which can be adjusted for clamping pressure. A large, easy-to-read, 4" diameter, direct percentage gauge with calibration adjustments is accurate to nearest 0.1%.The H-2786 meter also features the Humboldt, all-brass super pump, the most reliable and highest quality pump available. The meter's base/bucket can be used as a 0.25 cu. ft. unit weight measure. This kit includes a molded-plastic carrying case; tamping rod; strike-off bar; rubber bulb syringe; aluminum calibration vessel; inside calibration tube, outside calibration tube and operating instructions.

Humboldt Super Air Meter

ASTM C231, AASHTO T152, T395

The Humboldt H-2784 Super Air Meter (SAM) quickly measures air void spacing and volume in fresh concrete, providing crucial data for freeze-thaw durability. Unlike conventional methods, the SAM assesses air-void spacing, which is a better indicator of durability than total air content. It operates in two modes: first, as a standard Type B meter (ASTM C231), then under higher pressures to evaluate the concrete's air-void system in more detail. The SAM uses two sequential pressurizations at 14.5, 30, and 45 psi to calculate the SAM number, which correlates to the average spacing of air voids. A SAM number of 0.20 or lower indicates concrete that is less likely to experience freeze-thaw damage. The H-2784 includes the SAM device, calibration tools, and accessories for both Type B and SAM tests. It is recommended to pair the SAM with the CAPE System for optimal results.

Testing Equipment for Construction Materials

HUMBOLDT

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