

# PRESS-AIRE™ METER

# FORNEY

## MODEL LA-0316

The Press-Aire™ Meter is the industry's most popular kit for testing entrained air. Whether going into the Ready Mix truck or coming down the chute, it gives fast results. Always accurate. The kit contains everything needed to perform the test and — most importantly — to keep the unit in calibration.

This unit measures the air content in fresh compacted concrete. It consists of 2 main parts: the base (measuring chamber) and the cover assembly. It is supplied complete with calibration set.

The cast aluminum base, of cylindrical shape, has machine-flanged rims. The interior surfaces of the base and surfaces of rims, flanges and other component-fitted parts are machined, and these tapered, smooth surfaces facilitate frequent water clean-up. The unit is especially designed for easy disassembly in order to replace worn or damaged parts in the field.

The cover assembly incorporates a pressure gauge, air release lever, air bleeder valve, air pump and valves and petcocks used to perform both tests and calibrations according to ASTM C231.

In order to seal the cover to the base, there are 4 rugged stainless steel clamps with quick locking action. The unit is unaffected by changes in barometric pressure. These clamps are resistant to corrosion from concrete, and they are easier to use and significantly less expensive to replace than older design clamps.

The new high-volume Super Pump requires fewer strokes to attain the test pressures. The check valve eliminates older design O-ring seal problems. The brass petcocks have ball valves for easy, durable operation.

The large 4-inch diameter sealed gauge with adjustable pointer and stainless steel case is durable and easy to read and calibrate.

The unit conforms to ASTM C231, Meter Type B, and uses the principle of Boyle's Law. The base has a capacity of 1/4 cubic feet. It can also be used for unit weight, volume and bulk density determinations in field conditions. ASTM C-231 requires a capacity at least 0.20 ft<sup>3</sup> (0.006 m<sup>3</sup>).



### KIT CONTAINS:

- Syringe
- Tamping Rod
- Strike Off Bar
- Calibration Vessel
- Shipping Weight 39 lb (17.7 kg)
- Calibration Tube, inside
- Calibration Tube, outside
- Carrying Case
- Parts List
- Instructions

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### CALIBRATION INSTRUCTIONS

1. Screw short piece of tubing tightly into petcock hole on underside of cover (note which petcock). Fill base with water. Clamp cover to base.
2. Using syringe, inject water into petcock having short tubing until water is expelled through opposite petcock.
3. Pump until gauge reads slightly beyond pre-established initial pressure line (generally 3%). Wait a few seconds. If necessary, pump or bleed-off air to adjust hand to initial pressure line.
4. Close petcocks. Press needle valve lever to release air in to base. Wait a few seconds until gauge hand stabilizes. Gauge should read 0% if initial pressure line was correct. If two or more tests produce consistent variations from 1%, change initial pressure line to compensate for variation. Use new initial pressure line for subsequent tests.
5. Screw curved tube into petcock having short tubing. Open petcock. Press needle valve lever and fill calibrating vessel.
6. Open opposite petcock allowing water in curved pipe to run back into base. Base now contains 5% air.
7. Pump up air pressure to initial pressure line (3%). Close petcocks. Press needle valve lever. Wait a few seconds for needle to stabilize. Press lever again to release any remaining air. Gauge should now read 5%.
8. If two or more tests show gauge reads incorrectly at 5% air in excess of 0.2%, then reset gauge hand by turning recalibrating screw on gauge hand (older meters, screw is on dial face).
9. When gauge hand reads correctly at 5%, additional water may be withdrawn in the same manner to check results 10%, 15%, 20%, etc.

### OPERATING INSTRUCTIONS

1. Fill base with concrete according to ASTM C-231 and strike off. Clean cover and base rim; clamp together.
2. Open petcocks. Use syringe to inject water through one petcock until water is expelled from opposite petcock.
3. Close air bleeder valve on air chamber. Pump up air initial pressure line gauge. Wait a few seconds, tap gauge lightly. If necessary, add or release air to attain reading at initial pressure line. Close petcocks.
4. Press needle valve lever to release air into base. Continue pressing lever and lightly tap gauge. Read direct percentage of air.
5. Thoroughly clean base, cover and petcock openings with running water.



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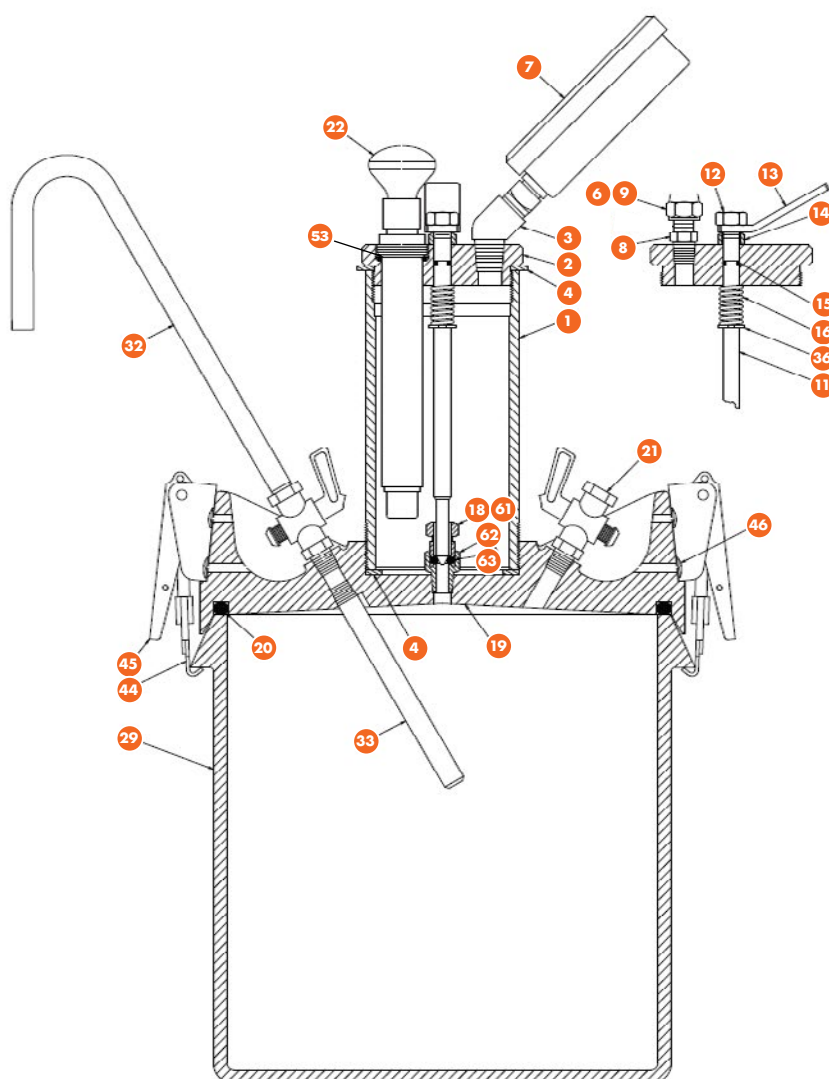
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### MODEL LA-0316

PART	DESCRIPTION	PART #
	FORNEY Press-Aire™ Meter Kit (Air Meter Kit), Unit Only	LA-0316-6
	Carrying Case for FORNEY Press-Aire™ Meter (Air Meter)	LA-0316-39
	Super Pump	LA-0316-22
	Calibration Vessel	LA-0316-31-A
	Tamping Rod, 23-1/4 in (59.1 cm) with 5/8 in (15.9 mm) rounded tip	LA-0280
	Strike Off Bar, Aluminum	LA-0316-34
	Parts List & Instructions	LA-0316-28-01
	Roller Meter - Syringe, 3 oz	LA-0305-28
	FORNEY Press-Aire™ Meter Kit (Air Meter Kit), Top assembly only, without case or base	LA-0316-T
1	Pressure Chamber	LA-0316-01
2	Pressure Chamber Cap	LA-0316-02
3	Chamber Elbow	LA-0316-03
4	Chamber Gasket, two required (top & bottom)	LA-0316-04
6	Air Bleeder Valve Cap	LA-0316-06
7	Gauge for Press-Aire Meter	LA-0316-07-01
8	Air Bleeder Valve Stem	LA-0316-08
9	Air Bleeder Gasket	LA-0316-09
11	Needle Valve Stem	LA-0316-11
12	Needle Valve Nut	LA-0316-12
13	Needle Valve Lever	LA-0316-13
14	Needle Valve Spacer	LA-0316-14
15	Needle Valve O-Ring	LA-0316-15
16	Needle Valve Spring	LA-0316-16
18	Needle Valve Seat	LA-0316-18
19	Lid	LA-0316-19
20	O-Ring Lid Seal	TM-3030
21	Lid Petcock	LA-0316-21
22	Super Pump	LA-0316-22
29	Aluminum Unit Weight Bucket - Base - .25 cu ft (7.1 L)	LA-0316-29
32	Calibration Tube, Outside Bent	LA-0316-32-A
33	Calibration Tube, Inside Straight	LA-0316-33
36	Needle Valve Stem Snap Ring	LA-0316-36
	Gauge Glass	LA-0316-42
	Latch Stud	LA-0316-43

PART	DESCRIPTION	PART #
44	Latch Clamp Tab	LA-0316-44
45	Latch Assembly for Lid	LA-0316-45
46	Pan Hd Screw, HD #10 x 1/2 in	LA-0316-46
61	5/16 in WB Nut	LA-0316-61
62	5/16 in x 1/8 in Adapter	LA-0316-62
63	O-Ring, Needle Valve, Seat	LA-0316-63
	Super Pump Check Valve	LA-0316-82
53	Super Pump Seal	LA-0316-53



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