



OPERATING MANUAL

4in (100mm) and 6in (150mm) Laboratory Asphalt Permeameters AP-14 & AP-16



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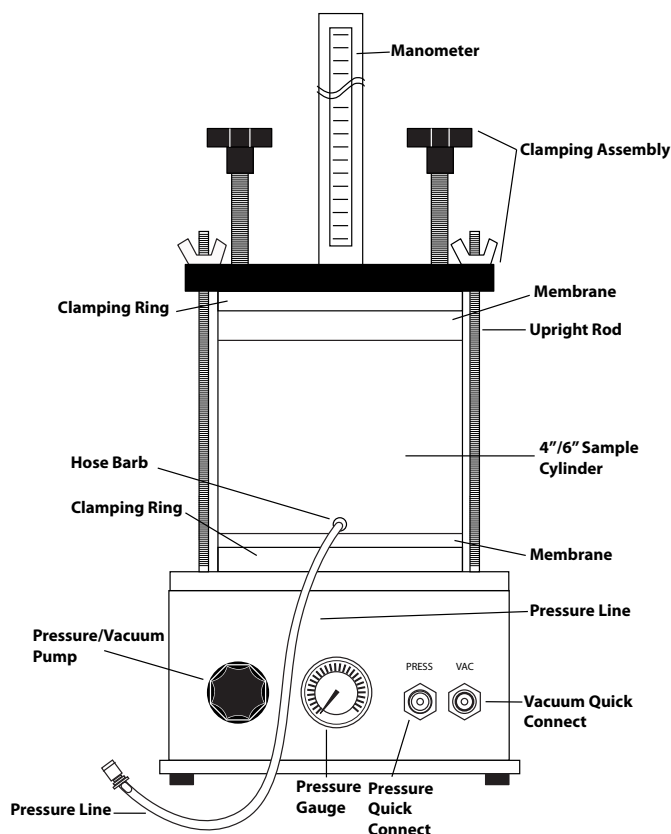
INTRODUCTION:

Gilson Asphalt Permeameters measure permeability of water through asphalt cores or laboratory compacted specimens. AP-16 Permeameter meets the requirements of Florida DOT FM 5-565 test method for testing 6in (152mm) samples. AP-14 Permeameter is similar and produces reliable results, but tests 4in (102mm) samples, which do not meet the required specimen size of the Florida DOT method.

INSTALLATION:

Place the Asphalt permeameter on a sturdy, level surface. Attach the included outlet pipe to the brass ball valve on the backside of the unit. The pipe should be positioned so that outflow is aided by gravity. Next, screw the two upright rods into the base on either side of the cylinder. Secure the rods by installing a hex nut on the bottom of each rod and tightening. Place a wingnut at the top of either rod. These will be used to secure the clamping assembly during testing.

Included Parts	Qty.
Asphalt Permeameter	1
Outlet Pipe	1
Upright Rod	2
Hex Nut	2
Wing Nut	2



OPERATING INSTRUCTIONS:

1. Select and prepare the samples in accordance with Florida DOT FM 5-565.
2. Insert the rubber membrane inside the cylinder. Fold the membrane over the top and bottom until tight. Secure using the two included clamping rings.
3. To seat the sample, first attach the pressure line to the vacuum quick connect on the front panel of the Permeameter base. Use the hand pump on the left of the front panel to pull the membrane to the sides of the cylinder. Seat your sample in accordance with FM 5-565.
4. Place the top cap, clamping assembly and manometer over the sample. Align the clamping assembly on the top cap by resting the nylon nuts in the indentations then secure using the wingnuts on the upright rods.

NOTE: It is easier to seat the manometer and clamping assembly in the top cap assembly prior to seating it on the sample.

5. To pressurize the membrane, switch the tube from the vacuum quick connect to the pressure quick connect. Use the hand pump to achieve the desired pressure.
6. Follow the Florida DOT Specification, FM 5-565, to complete the asphalt permeability test.
7. To remove the sample after testing, insert the pressure line into the vacuum quick connect and use the hand pump to pull the membrane away from the sample. Remove the manometer, clamping assembly and top cap. Remove the sample and wipe off the membrane.

NOTE: The same membrane can be used for multiple tests. Check for holes in the membrane or a poor seal by pressurizing the membrane without a sample prior to testing. Check to make sure the pressure is held. If the pressure drops over time check the seals. If the seals are sound, replace the membrane.

PARTS & ACCESSORIES:

Parts	Description
APA-105	500cc Manometer Tube
APA-120	2000cc Manometer Tube
APA-144	4in (100mm) Rubber Membranes (Pkg. 6)
APA-166	6in (150mm) Rubber Membranes (Pkg. 6)
RPAP-14-1	4in (100mm) O-Rings (Set of 2)
RPAP-16-1	6in (150mm) O-Rings (Set of 2)
RPAP-16-3	Pressure Gauge

Accessories	Description
MA-238	Traceable Workhorse Thermometer
GW-34	600mL Beaker
MA-30	Large Display Digital Stopwatch
TSA-271	Digital Caliper, 0-6in Range
HMA-10	Spatula (4 x 0.7in Blade)
HM-450	Square Plastic Sample Bucket