



11640 U.S. Highway 1
Sebastian, Florida 32958
Phone: 772 794 9448
Fax: 772 589 9072
Website: www.mcmiller.com

MAN220

Operating Instructions for the Miller Soil Cylinder (Catalog # 37020)

Processing Steps:

- 1) If the unit has been used, remove the top and bottom caps from the cylindrical body by unscrewing them using an adjustable wrench - attach the wrench to the protruding square block on top of each cap.
- 2) Remove any residual particulate matter from the metal plates and make sure the plates are clean and dry. Also, remove the o-ring seals and make sure that the o-ring seats are clean. Finally, lightly lubricate both o-rings and re-install them onto their seats. **Note: Use a non-conducting lubricant, such as silicone.**
- 3) Screw on the bottom cap until finger tight and then (carefully), using a wrench, tighten the cap until the "Y" index mark is aligned. DO NOT tighten beyond the "Y" index mark.
- 4) Add your crushed rock or soil material to the cylinder up to the o-ring seat level (of the upper seat). DO NOT fill above this level.
- 5) Remove (unscrew) the small plug from the top cap. This plug has two purposes: It allows for pressure equalization as the top cap is screwed on and it allows you to add water to your material for saturation purposes.
- 6) Screw on the top cap until finger tight and then (carefully), using a wrench, tighten the cap until the "X" index mark is aligned. DO NOT tighten beyond the "X" index mark.
- 7) Add water, either de-ionized water, or rain water (actual or simulated), based on your specifications, via the plug hole up to about a ¼ inch from the top by tilting the cylinder at an angle while adding the water, in order to allow the water to enter the unit.
- 8) Screw the plug back on until finger tight and (carefully) tighten using an adjustable wrench so that there is no leakage around the plug.
- 9) Turn the unit on its side and connect the 4 test leads to the labeled terminals (C1 and P1 on one end and C2 and P2 on the other end)
- 10) Record the resistance value using a 4-terminal resistance meter.
- 11) Finally, multiply the resistance value by 16.7cm to obtain the resistivity value.