

Preferred Percolation Testing Device, San Mateo County Environmental Health

The percolation testing device described below has been developed through trial and error by San Mateo County Environmental Health staff and local percolation testing contractors. While this device is not required for percolation testing in San Mateo County, it is highly recommended, as it avoids many of the pitfalls of other devices, and is familiar to County inspection staff.

Note: Parts list on last page.



The percolation test measuring device consists of a modified photography tripod with a PVC barrel guiding a sliding fiberglass rod. A stainless steel ruler is attached to the top of the PVC barrel to measure the changing water level in the percolation test hole. The sliding rod has a closed cell foam block on the bottom as a float, and aluminum plates attached to the top of the fiberglass rod to aid in measuring water level changes.



The photographic tripod (SLIK model #U2000) has the original center camera-mount barrel removed. The center hole of the tripod must then be drilled out to 7/8-inch diameter to allow the 1/2-inch PVC pipe to be inserted.



The bottom slip cap (and top slip cap) on the PVC barrel are center drilled with a 5/16-inch hole for the sliding fiberglass rod (1/4-inch diameter by at least 60 inches long). The foam block consists of closed-cell foam, cut to approximately 4-inches square by 2-inches thick (your block size may vary), with a center drilled 3/16-inch hole (only through the top half of the block) for the fiberglass rod.



The top slip cap (and bottom slip cap) on the PVC barrel are center drilled with a 5/16-inch hole for the sliding fiberglass rod (1/4-inch diameter by at least 60 inches long). The 24-inch stainless steel ruler is fixed to the top of the PVC barrel using 7/8-inch Bimini Rail Mounts (and 1/4-inch-diameter rubber hole grommets as spacers, seen in photo on right). Drill the ruler to fit the Rail Mounts.



The flat aluminum bars are attached to the top of the fiberglass rod with the wire rope clip, one aluminum bar on each side of ruler. Several washers are on arms of wire rope clip, separating the two aluminum bars to allow them to slide freely along ruler as water level falls.

Parts List:

Item	Number	Purchased	Approx. Cost	Size	Comment
Tripod SLIK model # U2000	1	Ritz	\$25.00		Drill Center Hole to 7/8 " Dia.
Fiber Glass Rod	1	Tap Plastic	\$3.00	1/4 "dia 6 Feet Long	Cut to 60"
PVC 1/2" Pipe Schedule 40	1	OSH	\$2.00	10 Ft	Cut to 40"
PVC 1/2 " End Cap	2	OSH	\$0.50	1/2 "	Drill Center to 5/16 "
Closed Cell Foam	1	House of Foam, P. A.	\$2.00	4 1/2 " Sq 2 1/4 " Thick	Drill center 3/16 "
Ruler, stainless steel	1	University Arts P.A.	\$10.00	24"	Cut to 21 " Drill to fit Rail Mounts 1/16" minimum increments
Bimini Rail Mount 7/8 "	2	West Marine SSF	\$7.00	7/8"	2 Pack
Wire Rope Clips	1	OSH	\$1.50	1/8 "	2 Pack
Hole Grommets	2	OSH	\$1.50	1/4 " Inside Dia.	6 Pack
SAE Washers	4	OSH	\$0.50	#8 5/32 "	25 Pack
Aluminum Flat Bar	2	OSH	\$6.00	1/16 " - 3/4" - 6' Ft.	Cut to 3 1/2 " Drill Two Holes Offset to fit U-Bolt