

How to Build a T-Piece Flow Rate Measurer

1. Take two pieces of plastic pipe about 45 cm long.
2. Cut one piece of pipe to be 2cms longer than the top rim width of your ceramic filter (the horizontal pipe).
3. Cut a horizontal section (about 5cm long) out of half the width of the pipe, at either end to allow the pipe to sit flat on top of a filter element.
4. Drill a hole horizontally through the other pipe, about 3 cm from the end, that will allow the other pipe to insert tightly (the vertical pipe).
5. Insert the horizontal pipe through the hole in the vertical pipe until it forms a T shape.
6. Take a fired filter element and drill a small hole in the bottom.
7. Set up the filter, with the t-piece inside (horizontal pipe resting flat across the top - vertical pipe inserted inside the filter element), and a measuring container below.
8. Fill the filter with water.
9. As 0.5 L is collected in the measuring container below, block the hole and make a notch on the vertical pipe to indicate the water level after that volume of flow.
10. Repeat at 1L, 1.5L, 2L, 2.5L, 3L, etc.
11. Drill a small hole at each notch, and label the volume of flow at that point with water proof paint.

Note:

- the hole drilled at step 6 must be small enough to have a steady but slow flow rate.
- Greater levels of accuracy could be marked onto the t-tester if required.
- Large variations in filter shape and volume will impact on the accuracy of the t-tester.

