



*In-line*  
**PITOTLESS  
NOZZLE™**

**USER GUIDE**

Item#: INPN1.5  
US Patent#: 6,874,375

**OVERVIEW**

Use the 1 ½" Inline Pitotless Nozzle™ for flow testing from 1 ½" diameter connections such as hose cabinets, standpipes, or valves. Hose or piping can be attached downstream of the unit without affecting the accuracy of the readings. The 1 ½" Inline Pitotless Nozzle determines flow-rate by measuring the differential pressure between the two gauge ports.



**COMPONENTS**

- 1) **1 ½" Differential Chamber Nozzle.**
- 2) **1 ½" Discharge Valve.**
- 3) **Monster Meter™.**
- 4) **Gauge Tubes.**
- 5) **Residual Gauge 0 – 200 PSI 1% accuracy rated.**

**OPTIONAL ACCESSORIES**

- 1) **Adapter 1 ½" F NH x 2 ½" NH M.** This would allow you to connect 2 ½" hose to the discharge side of the 1 ½" In-line Pitotless Nozzle. (Item#: AD1.5FNHX2.5MNH)
- 2) **Reducing Adapter 2 ½" F NH x 1 ½" M NH.** This would allow you to connect the 1 ½" In-line Pitotless Nozzle to a 2 ½" NH connection. (Item#: 2.5FNHX1.5MNH)

## OPERATION

All connections in this assembly must be water-tight. Any leakage can affect readings.

- 1) Secure the female swivel coupling of the 1 ½" Inline Pitotless Nozzle to the water source. You may attach the unit to a 1 ½" valve, a valve larger than 1 ½" by using reducing adapters, or an end of a secured 1 ½" hose.
- 2) Attach the two gauge tubes to the differential gauge by inserting the free tube-ends into the push-to connect tube fittings on the differential gauge.
- 3) Attach the opposite ends of the gauge tubes to their respective gauge port connections on the differential chamber. Connect the "High Pressure" to the gauge port that is closer to the supply-side. Connect the "Low Pressure" side to the gauge port that is closer to the discharge-side.
- 4) Before flowing water verify that the discharge valve is fully closed and all connections are fastened securely. Any leakage can affect readings. Slowly open the water source when ready. Allow the differential chamber to completely fill with water and become pressurized.
- 5) Slowly open the differential valve to the desired flow rate. The Monster Meter™ displays the real-time GPM and differential pressure. Use the 1 ½" Inline Pitotless Nozzle flow chart to convert the pressure reading (PSI) to flow-rate (GPM) if needed.
- 6) When the test is complete, close the discharge valve and the water source.

## MAINTENANCE

- Avoid getting the digital manometer wet. Because it is an electronic device excessive moisture can cause it to malfunction.
- Clean dirt and debris from your equipment after use by wiping down with a cloth.

## FLOW CHARTS

Verify the correct flow chart is used. It should have the title "1 ½" Inline Pitotless Nozzle™" in the title. Additional copies are available at: [www.hosemonster.com](http://www.hosemonster.com). The pressure readings in the chart are in net PSI (differential pressure). Differential pressure is the difference between the upstream pressure and the downstream pressure.

## TECHNICAL INFORMATION

**K-Factor:** 31.7

**Operating Pressure Range:** 2 to 90 PSI

**Operating Flow Range:** 45 to 301 GPM



**CAUTION:** ALL CONNECTIONS IN THIS ASSEMBLY MUST BE ATTACHED SECURELY. DIRECT WATER DISCHARGE AWAY FROM ANY PEOPLE OR PROPERTY THAT MAY BE AFFECTED. DO NOT ATTACH THE DEVICE TO THE END OF A HOSE UNLESS A *HOSE MONSTER*® IS ATTACHED TO IT OR UNLESS THE HOSE IS PROPERLY SECURED. THE USE OF THIS PRODUCT INVOLVES HEAVY WATER FLOW WHICH CAN RESULT IN SERIOUS INJURY OR DEATH IF USED IMPROPERLY. PRODUCTS THAT HAVE BEEN ALTERED OR MODIFIED IN ANY WAY POSE A SAFETY RISK AND WILL VOID THE MANUFACTURER'S WARRANTY. THE MANUFACTURER AND ITS DISTRIBUTORS ARE NOT RESPONSIBLE FOR ANY DAMAGE OR INJURY CAUSED BY THE USE OF THIS PRODUCT.

For questions or comments please call The Hose Monster Company at **888-202-9987** or email [service@flowtest.com](mailto:service@flowtest.com).