



# HOSE MONSTER

COMPANY

## STANDPIPE & PRV TESTING

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APPLICATION CATALOG



# ABOUT HOSE MONSTER



## HOSE MONSTER IS THE ONE-SOURCE SOLUTION FOR ALL OF YOUR TESTING NEEDS!

Our business was launched in 1996 with our flagship product, the Hose Monster®. It was the first flow-measuring device to enable safe discharge of high-flowing water, minimizing property damage and traffic interference.

The professionals at The Hose Monster Company understand the industries and sectors in which our clients operate. We turn our practical knowledge into clear advice and find solutions that nobody else can provide. When you face unique and challenging testing situations, our knowledgeable staff stands ready to find the best equipment and procedural solutions for you. Your satisfaction is the truest mark of our excellence.

**HYDRANT FLOW TESTING**

**MAIN FLUSHING**

**DECHLORINATION**

**FIRE PUMP TESTING**

**APPARATUS TESTING**

**SOFTWARE**

**STANDPIPE TESTING**

## HOW TO ORDER

### ONLINE:

Go to [hosemonster.com](http://hosemonster.com) and explore our products

### PHONE:

Call 1 (888) 202-9987 to speak with one of our helpful customer service representatives

### PURCHASE ORDER:

Send to [service@hosemonster.com](mailto:service@hosemonster.com) or fax to 1 (847) 434-0073  
(Note: Requires a credit account with HM)

# STANDPIPE & PRV TESTING

A standpipe is the vertical piping that connects fire sprinkler systems and hose stations between multiple floors. It is common to see standpipes in stairwells of high-rise buildings. A rooftop standpipe test verifies the water supply, pump and piping at the topmost part of the system.

In the past, the only way to perform rooftop standpipe tests was with playpipes and hand-held pitots. Safely securing playpipes and controlling discharge water to avoid interfering with pedestrian and vehicle traffic was a significant challenge, typically requiring that testing be in the early morning hours. The introduction of the Hose Monster® line of equipment changed all that.

The In-Line Pitotless Nozzle™ allows you to take flow rate measurements at the valve, allowing you to run hose or piping to an express drain, or down several flights of stairs to discharge the water safely, outside in the street.

## COMMON APPLICATIONS

- Stairwell standpipe flow testing
- Pressure reducing valve flow testing
- Rooftop manifold testing
- Fire pump flow testing
- Fire flow testing of hydrants
- An in-line bypass flow meter for fire pumps

## HOW OFTEN DO I TEST A STANDPIPE OR PRV?

In accordance with the 2020 Edition of NFPA 25, 6.3.1.1, “a flow test shall be conducted every 5 years on all automatic standpipe systems to verify that required flow and pressure are available at the hydraulically most remote hose valve outlet(s) while flowing the standpipe system demand.”

NFPA 25, Chapter 13 outlines the testing parameters for all pressure-reducing and pressure-regulating valves as follows: “a full flow test shall be conducted on each devices at 5-year intervals and compared to previous test results”. Master pressure-regulating device are to be tested as such: “a full flow test shall be conducted on each valve annually and shall be compared to previous test results.”

## WHERE DO I FIND MORE INFORMATION ON STANDPIPES & PRV'S?

NFPA 14 — Standard for the Installation of Standpipe and Hose Systems

NFPA 25 — Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

- **Chapter 6** — Standpipe and Hose Systems
- **Chapter 13** — Valves, Valve Components, and Trim

# IN-LINE PITOTLESS PRODUCTS

Hose Monster has the right products for your job. With a range of connection sizes, you'll always have the right diameter nozzle for any standpipe or valve. This collection of high quality, durable in-line pitotless nozzles and accessories are the perfect products to round out your flow test tool kit! Highly accurate, highly rated, and highly recommended; you can't go wrong with Hose Monster.

## 2½" CONNECTION

### IN-LINE PITOTLESS NOZZLE™ MASTER KIT

#INPNWCK – GPM Range: 86–1432 (Depending on Nozzle Used)

QTY	DESCRIPTION
1	Differential Chamber
1	2" Pitotless Nozzle™, Threaded
1	1¾" Pitotless Nozzle™, Threaded
1	1½" Pitotless Nozzle™, Threaded
1	Monster Meter
1	2½" Line Gauge, 0–200 psi
1	Discharge Valve
1	Monster Meter™ Case
1	Equipment Case

### 2" IN-LINE PITOTLESS NOZZLE

#INPNWC2 – GPM Range: 523–1432

QTY	DESCRIPTION
1	Differential Chamber
1	2" Pitotless Nozzle™, Threaded
1	Monster Meter
1	2½" Line Gauge, 0–200 psi
1	Discharge Valve
1	Equipment Case



# IN-LINE PITOTLESS PRODUCTS

## 1¾" IN-LINE PITOTLESS NOZZLE™

#INPNWC1.75 – GPM Range: 246–983

QTY	DESCRIPTION
1	Differential Chamber
1	1¾" Pitotless Nozzle™, Threaded
1	Monster Meter
1	2½" Line Gauge, 0–200 psi
1	Discharge Valve
1	Equipment Case

## 1⅝" IN-LINE PITOTLESS NOZZLE™

#INPNWC1.125 – GPM Range 86–321

QTY	DESCRIPTION
1	Differential Chamber
1	1⅝" Pitotless Nozzle™, Threaded
1	Monster Meter
1	2½" Line Gauge, 0–200 psi
1	Discharge Valve
1	Equipment Case

## 1½" CONNECTION

## 1½" IN-LINE PITOTLESS NOZZLE™

#INPNWC1.5 – GPM Range: 45–301

QTY	DESCRIPTION
1	1½" In-Line Pitotless Nozzle™
1	Monster Meter
1	0-200 psi Static / Residual Gauge
1	Discharge Valve
1	Equipment Case

## K-FACTOR TABLE FOR VARIOUS FLOW DEVICES

### IN-LINE PITOTLESS NOZZLE™

ITEMS #	K-FACTOR	ORIFICE DIAMETER	PSI RANGE	FLOW RANGE GPM
2" In-line Pitotless Nozzle™	165.3	2"	10-75	523-1432
1¾" In-line Pitotless Nozzle™	109.9	1.75"	5-80	246-983
1½" In-line Pitotless Nozzle™	38.4	1.125"	5-70	86-321
1¼" In-line Pitotless Nozzle™	31.7	1.0"	2-90	45-301

## CALCULATING FLOW RATES

### K-FACTOR FORMULA:

Computes a flow rate in GPM given a psi and a K-factor of the different flow devices.

$$Q = \sqrt{P \times K}$$

Q = flow rate in GPM  
P = velocity pressure in psi  
K = K-factor of flow device

### THEORETICAL DISCHARGE THROUGH CIRCULAR ORIFICES FORMULA:

Computes a flow rate in GPM given a psi and a given coefficient of the different flow device.

$$Q = 29.84 \times \sqrt{P \times D^2 \times C}$$

Q = flow rate in GPM  
P = velocity pressure in psi  
D = orifice diameter in inches  
C = coefficient of flow device

## US/METRIC CONVERSIONS

### FLOW RATE:

US Gallons/Minute x 3.785 = Liters/Minute  
Liters/Minute x 0.264 = US Gallons/Minute

US Gallons/Minute x 0.1337 = Feet³/Minute  
Feet³/Minute x 7.481 = US Gallons/Minute

### WEIGHT OF WATER:

US Gallons of Water x 8.3454 = Pounds  
Foot³ of Water x 62.42796 = Pounds

### VOLUME:

US Gallons x 3.785 = Liters  
Liters x 0.264 = US Gallons

US Gallons x 0.8327 = Imperial Gallons  
Imperial Gallons x 1.201 = US Gallons

Feet³ x 7.48051945 = US Gallons  
US Gallons x 0.1337 = Feet³

### LENGTH:

Meters x 3.2808 = Feet  
Feet x 0.3048 = Meters

### PRESSURE:

psi x 0.0689 = Bars  
Bars x 14.5038 = psi

psi x 6894.757 = Pascals  
Pascals x 0.000145 = psi

Bars x 100,000 = Pascals  
Pascals x 0.00001 = Bars

# MONSTER METER

## ABOUT THE MONSTER METER

The Monster Meter is a required component of In-line Pitotless Nozzle™ Kits. This item comes with the INPN kits or can be purchased separately.

The Monster Meter features smart functions like real-time GPM display, an intuitive user interface with pre-programmed device selection, and test data storage/recall capability.



## METER FEATURES

### REAL-TIME DATA

Show the AHJ the flow rate, not the PSI. No need to refer to the flow chart or perform mathematical calculations to find the GPM.

### UNSURPASSED ACCURACY

Our electronics pressure transducers are calibrated with our proprietary, patent-pending technology to +/- 0-3% of read. All our In-Line Pitotless Nozzles™ are FM Approved.

### RATED UP TO 250 PSI

The Monster Meter is designed, produced and tested for pressures up to 250 PSI.

### WIRELESS CHARGING CAPABILITY AND LITHIUM-ION BATTERY

Excess wires can be a hassle; leave them at the office. The Lithium-ion battery has a long life span so you don't have to worry about it dying on the job.

### WATER RESISTANT

On the job, it's going to get wet. No worries. Water from simple splashing will not penetrate our O-ring seals.

### USE WITH ALL OUR IN-LINE NOZZLES

It's simple. Select the nozzle you are using, connect the pressure tubes, open the valves, and begin reading precision flow rates.





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