

COEFFICIENT AND K-FACTOR TABLE FOR VARIOUS FLOW DEVICES

| PITOTLESS NOZZLE™ | K-FACTOR | COEFFICIENT | ORIFICE DIAMETER | psi RANGE | FLOW RANGE (GPM) |
|---|----------|-------------|------------------|-----------|------------------|
| 2" Pitotless Nozzle + Little Hose Monster | 156.0 | 1.31 | 2" | 10-70 | 493-1305 |
| 2" Pitotless Nozzle + 2 1/2" Hose Monster | 164.8 | 1.38 | 2" | 10-70 | 521-1379 |
| 2" Pitotless Nozzle + Open Atmosphere | 167.2 | 1.40 | 2" | 10-70 | 529-1399 |
| 1 3/4" Pitotless Nozzle + Little Hose Monster | 104.7 | 1.15 | 1.75" | 10-80 | 331-936 |
| 1 3/4" Pitotless Nozzle + 2 1/2" Hose Monster | 106.6 | 1.17 | 1.75" | 10-80 | 337-953 |
| 1 3/4" Pitotless Nozzle + Open Atmosphere | 109.7 | 1.20 | 1.75" | 10-80 | 347-981 |
| 1 1/8" Pitotless Nozzle + Little Hose Monster | 37.2 | 0.98 | 1.125" | 10-80 | 83-333 |
| 1 1/8" Pitotless Nozzle + 2 1/2" Hose Monster | 37.4 | 0.99 | 1.125" | 10-80 | 84-335 |
| 1 1/8" Pitotless Nozzle + Open Atmosphere | 37.0 | 0.98 | 1.125" | 10-80 | 83-331 |
| 1" Pitotless Nozzle + Little Hose Monster | 27.2 | 0.91 | 1" | 3-80 | 47-243 |
| 1" Pitotless Nozzle + 2 1/2" Hose Monster | 27.6 | 0.93 | 1" | 3-80 | 48-247 |
| 1" Pitotless Nozzle + Open Atmosphere | 27.7 | 0.93 | 1" | 3-80 | 48-248 |

| IN-LINE PITOTLESS NOZZLE™ | K-FACTOR | COEFFICIENT | ORIFICE DIAMETER | psi RANGE | FLOW RANGE (GPM) |
|---------------------------------|----------|-------------|------------------|-----------|------------------|
| 2" In-line Pitotless Nozzle | 165.3 | 1.38 | 2" | 10-75 | 523-1432 |
| 1 3/4" In-line Pitotless Nozzle | 109.9 | 1.20 | 1.75" | 5-80 | 246-983 |
| 1 1/8" In-line Pitotless Nozzle | 38.4 | 1.02 | 1.125" | 5-70 | 86-321 |
| 1 1/2" In-line Pitotless Nozzle | 31.7 | 1.06 | 1.0" | 2-90 | 45-301 |

| BIGBOY HOSE MONSTER™ | K-FACTOR | COEFFICIENT | ORIFICE DIAMETER | psi RANGE | FLOW RANGE (GPM) |
|--------------------------------|----------|-------------|------------------|-----------|------------------|
| 5-11psi (BigBoy Hose Monster) | 382.9 | 1.38 | 3.05" | 5-11 | 856-1270 |
| 12-38psi (BigBoy Hose Monster) | 376.0 | 1.35 | 3.05" | 12-38 | 1303-2318 |
| 39-55psi (BigBoy Hose Monster) | 372.0 | 1.34 | 3.05" | 39-55 | 2323-2759 |

NOTE: Due to the shape and size of the BigBoy Pitotless Nozzle, the BigBoy Hose Monster uses three different K-factors over its operating range.

| 2 1/2" Hose Monster® | K-FACTOR | COEFFICIENT | ORIFICE DIAMETER | psi RANGE | FLOW RANGE (GPM) |
|----------------------|----------|-------------|------------------|-----------|------------------|
| 2 1/2" Hose Monster | 168.67 | 0.906 | 2.5" | 10-70 | 533-1411 |
| 1 3/4" Nozzle Insert | 89.04 | 0.975 | 1.75" | 10-70 | 282-745 |
| 1 1/8" Nozzle Insert | 37.36 | 0.990 | 1.25" | 10-70 | 118-313 |

| 4" & 4 1/2" Hose Monster® | K-FACTOR | COEFFICIENT | CONNECTION DIAMETER | psi RANGE | FLOW RANGE (GPM) |
|---------------------------|----------|-------------|---------------------|-----------|------------------|
| 4 1/2" Hose Monster | 331.07 | 0.548 | 4.5" | 10-70 | 1047-2770 |
| 4" Hose Monster | 339.65 | 0.712 | 4" | 10-70 | 1074-2842 |

USING SOFTWARE

Use the table to the right if you are using software that requires the coefficient input to be less than '1.0.' Notice that the orifice diameter must be changed from its true diameter in order to accommodate the lower coefficient. This is necessary only for the 2" Pitotless Nozzle and the 3/4" Pitotless Nozzle.

| DEVICE | COEFFICIENT | ORIFICE DIAMETER |
|---|-------------|------------------|
| 2" Pitotless Nozzle + Little Hose Monster | 0.99 | 2.30" |
| 2" Pitotless Nozzle + 2 1/2" Hose Monster | 0.99 | 2.36" |
| 2" Pitotless Nozzle + Open Atmosphere | 0.99 | 2.38" |
| 1 3/4" Pitotless Nozzle + Little Hose Monster | 0.99 | 1.88" |
| 1 3/4" Pitotless Nozzle + 2 1/2" Hose Monster | 0.99 | 1.90" |
| 1 3/4" Pitotless Nozzle + Open Atmosphere | 0.99 | 1.93" |

NOTE: If your software uses the Theoretical Discharge Formula, found in NFPA 291, 4.7.3, the coefficient of discharge can be used to produce flow rates that will match our flow charts.

A HAND-HELD PITOT DIRECTLY AT A HYDRANT OUTLET

| OUTLET TYPE | COEFFICIENT |
|--|-------------|
| Outlet smooth and rounded | 0.9 |
| Outlet square and sharp | 0.8 |
| Outlet square and projecting into barrel | 0.7 |
| If a stream straightener is used | 0.95 |

CLASSIFYING AND MARKING OF HYDRANTS

| Rated Capacity at 20psi | Class | Marking Color of Hydrant Tops and Nozzles |
|-------------------------|-------|---|
| ≥1500 GPM | AA | Light Blue |
| 1000-1499 GPM | A | Green |
| 500-999 GPM | B | Orange |
| ≤499 GPM | C | Red |

The above are the NFPA hydrant classifications and color marking for various rated capacities. Source NFPA 291, Chapter 5 2019