

3/8" High Precision Flow Meter

V 2.0

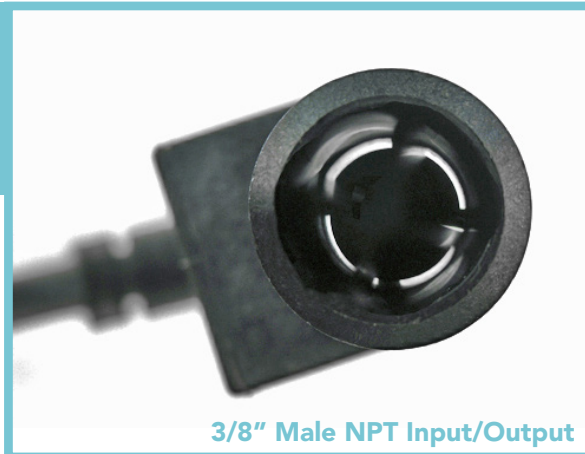
Features

- High accuracy Flow Meter (+/- 2%)
- Each pulse is equal to 367 μ L
- Minimum flow rate 760 mL / min (0.2 GPM)
- Maximum flow rate 7.6 L / min (2 GPM)
- Max operating pressure 1,379 KPA (200 PSI)
- Weighs 37.6g
- Operating temperature
- -20° C to 80° C (-4° F to 176° F)
- Max viscosity 81 SSU
- 3 lead cable 71.1cm (28") long
- Food safe
- Diesel safe
- Kerosene safe
- Gasoline safe

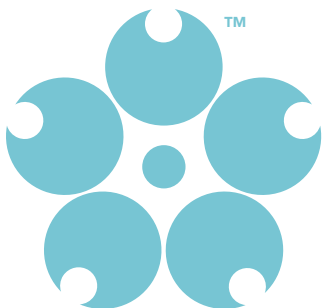


Materials

Body: Noryl
Turbine: Nylon
Axle: Stainless Steel
Bearing: Delrin



3/8" Male NPT Input/Output



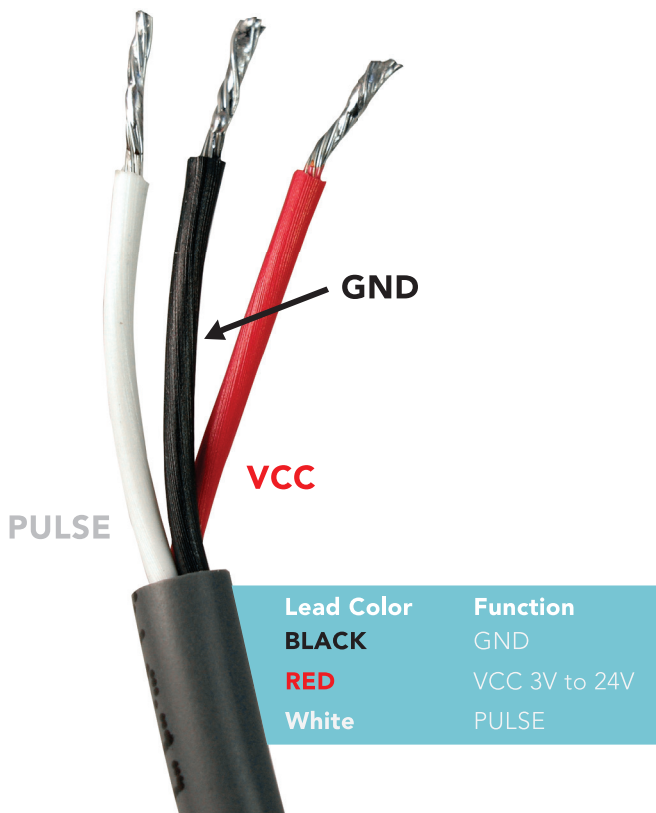
Description

The 3/8" Turbine Flow Meter is an extremely accurate flow meter of low complexity. This flow meter requires specific timing and calculations to provide meaningful data. All of which is described in this datasheet.

The 3/8" Flow Meter provides the user with extremely reliable readings for flow rates from 760 mL/min (0.2GPM) up to 7.6 L / min (4 GPM).

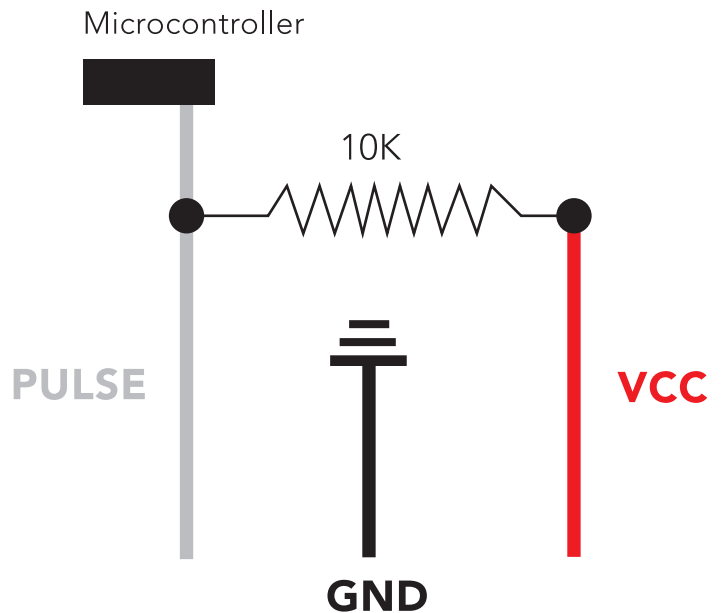
Wiring

The 3/8" Flow Meter has an 71.1 (28") cable, that terminates with three tinned leads.



Current consumption no load 8 mA

Max current consumption 25 mA



REVERSING THE POLARITY WILL DESTROY THE FLOW METER

Pre-filter requirements

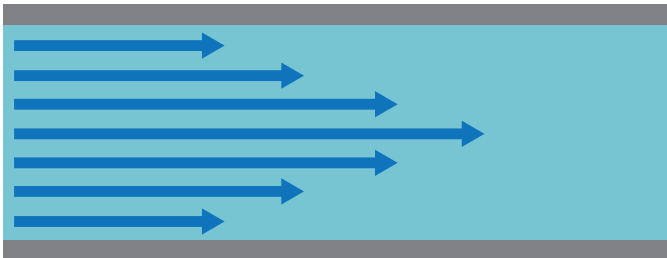
If water with particulate matter will be passing through the flow meter a pre-filter of at least 80 microns must be used. Not using a pre-filter can cause the turbine blades to become jammed. Jammed turbine blades will not damage the flow meter however, it will not be possible to get accurate flow readings until the blockage has been cleared.



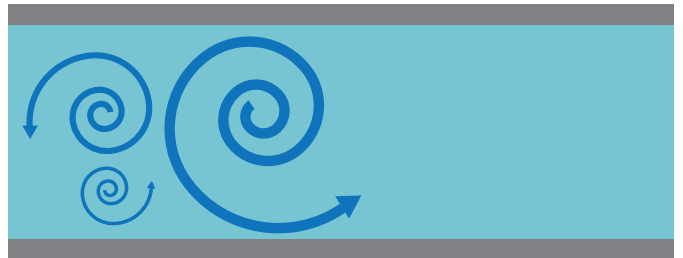
Laminar flow

Laminar flow can be thought of as the opposite of turbulent flow. In order for the flow meter to work properly liquid entering the flow meter should have a streamlined laminar flow. Achieving laminar flow is not hard to do. Simply allow for 20cm (8") of straight pipe just before the liquid enters the flow meter.

Turbulent liquid entering the flow meter can cause inaccuracies in flow rate monitoring.



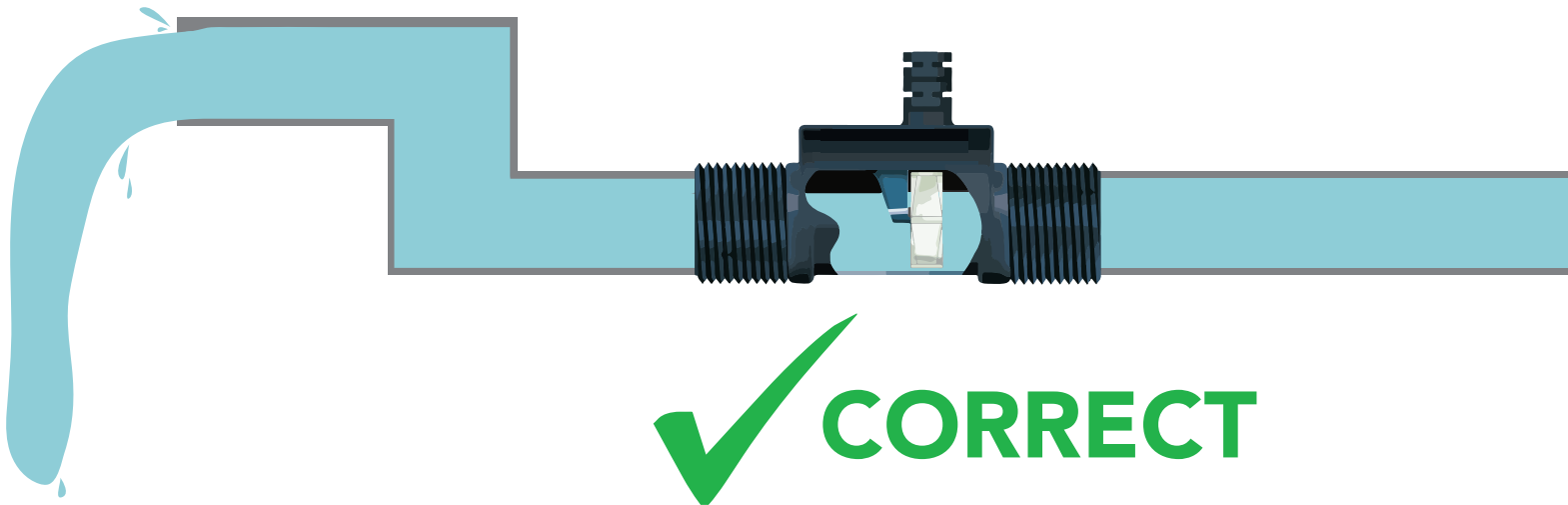
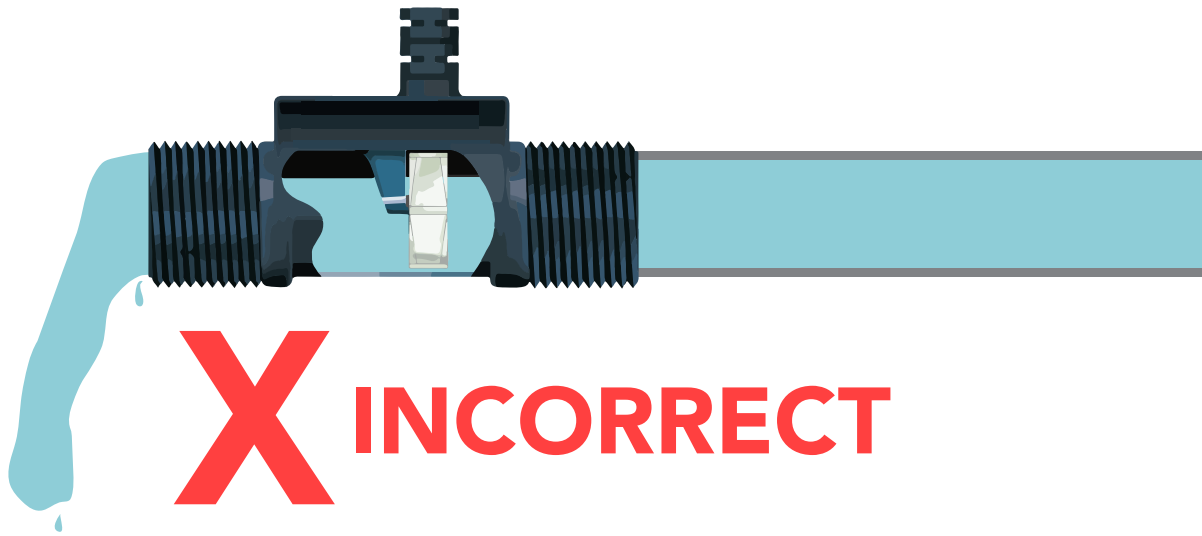
Laminar flow



Turbulent flow

Liquid exiting the flow meter

Liquid should not be permitted to simply fall out of the flow meter. This would let air enter the device and lead to inaccurate readings.



K-factor

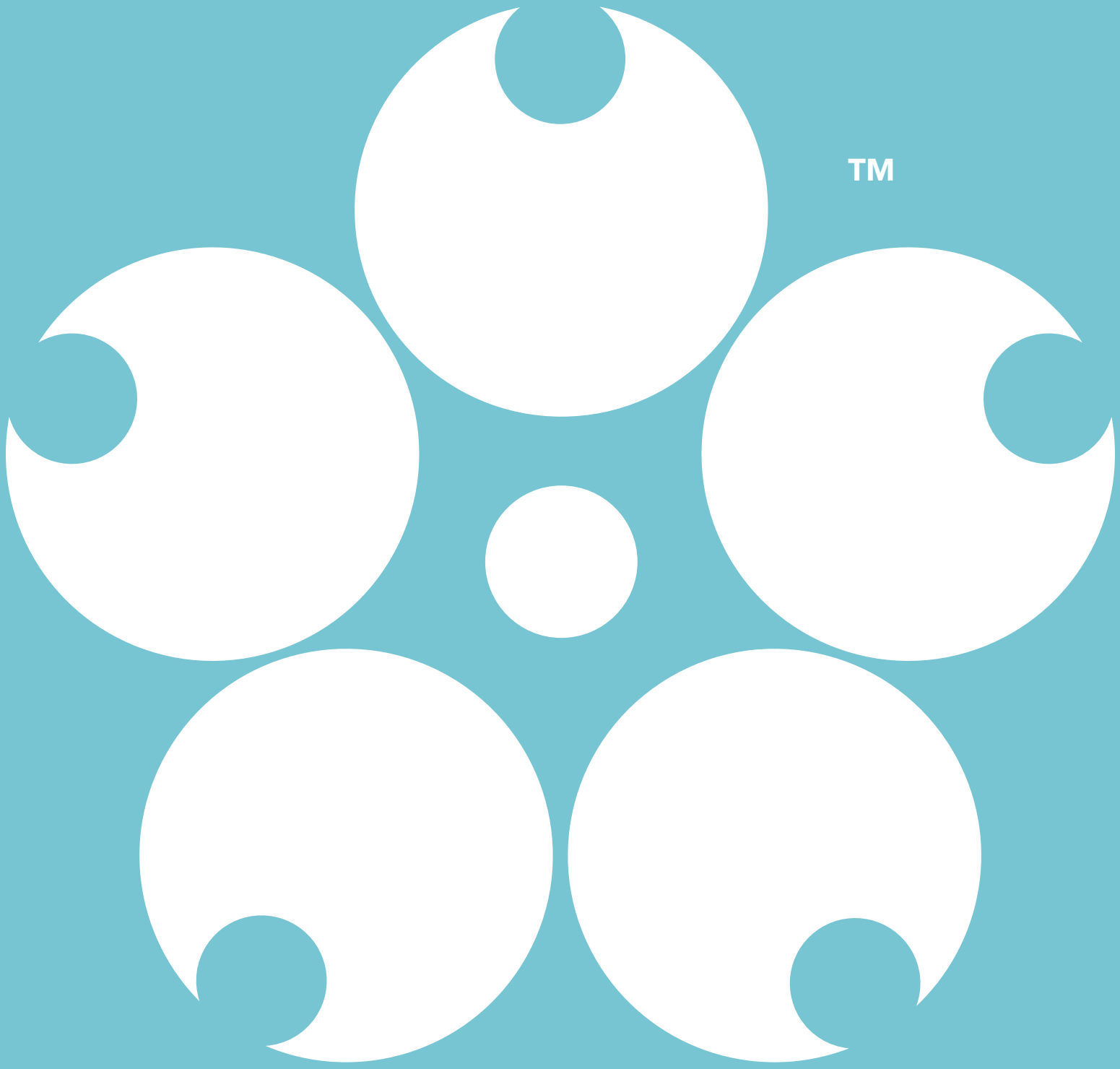
Each pulse is equal to 367 μ L

3 pulses are equal to 1.1 mL

2,724 pulses are equal to 1L

10,313 pulses are equal to 1 Gallon

**FOR ACCURATE READINGS
YOU CANNOT HAVE AIR
IN THE LINE**



TM