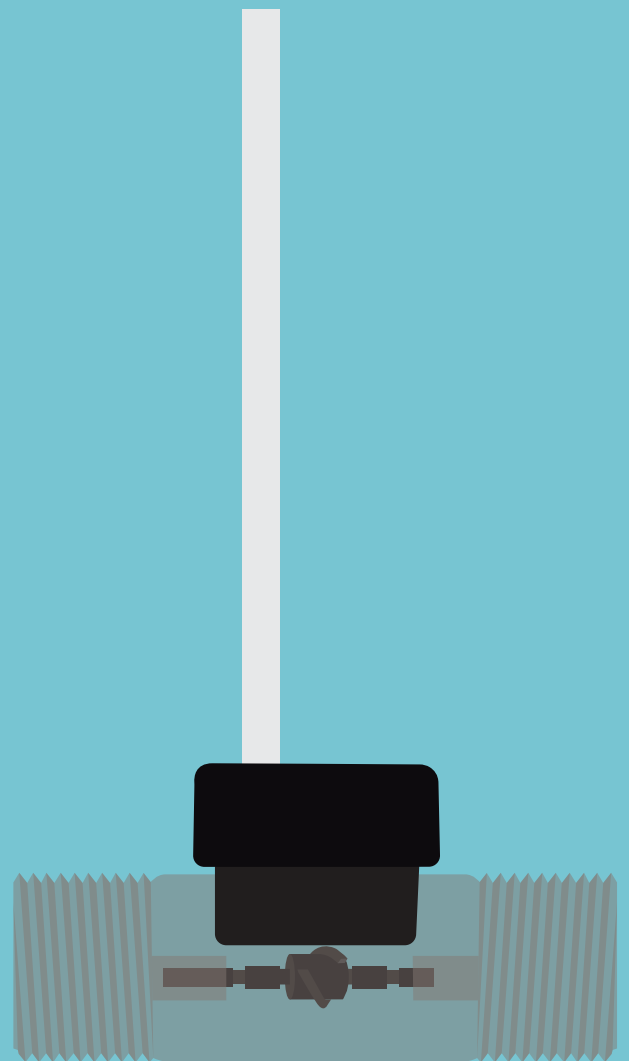
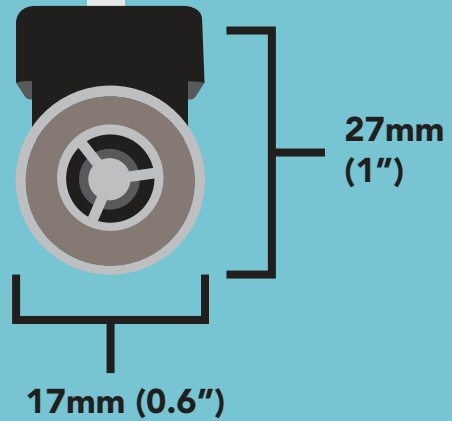
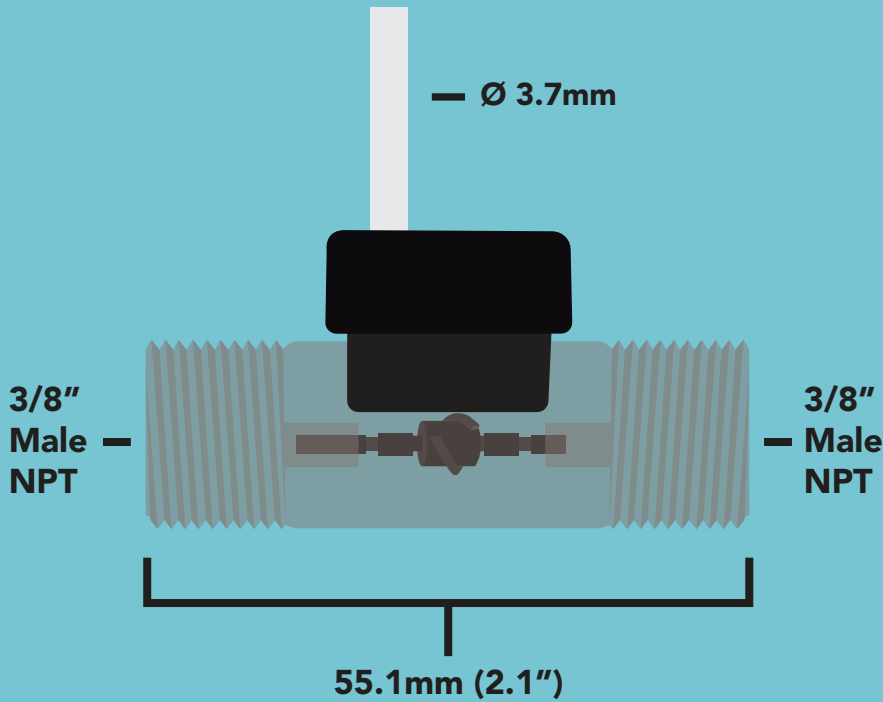
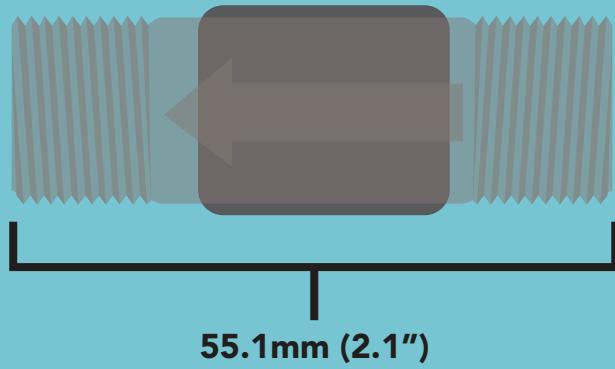


# 3/8" Flow Meter

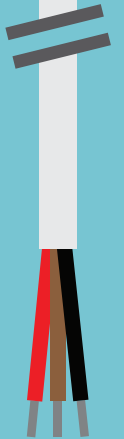
Reads	<b>Total flow and flow rate</b>
Range	<b>1 – 15 LPM</b>
Accuracy	<b>+/- 2%</b>
Connector	<b>Tinned leads</b>
Thread	<b>3/8" Male NPT</b>
Max pressure	<b>200 PSI</b>
Temperature range °C	<b>-20 – 80 °C</b>
Max viscosity	<b>81 SSU</b>
Cable length	<b>~1meter (3 ft)</b>
Voltage	<b>3.3V – 24 VDC</b>
Life expectancy	<b>~10 years</b>



# Measurements

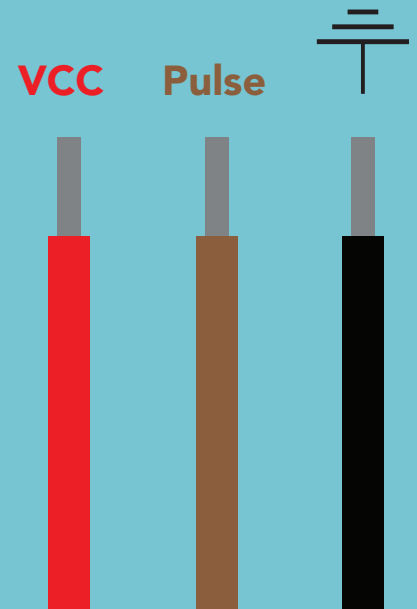


Cable Length  
86cm (33.8")

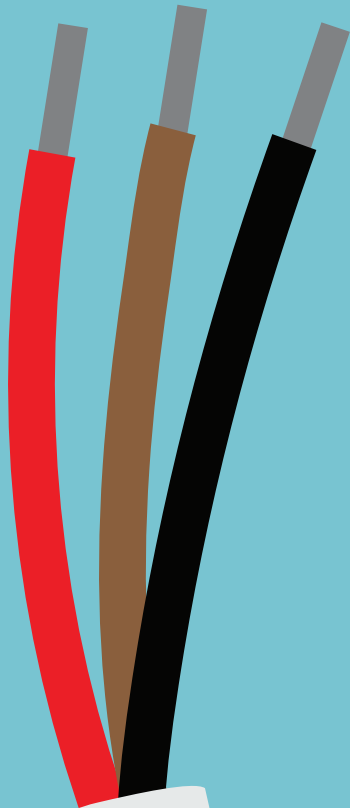


**! WARNING !**

**REVERSING THE POLARITY  
WILL DESTROY FLOW METER.**



# Wiring



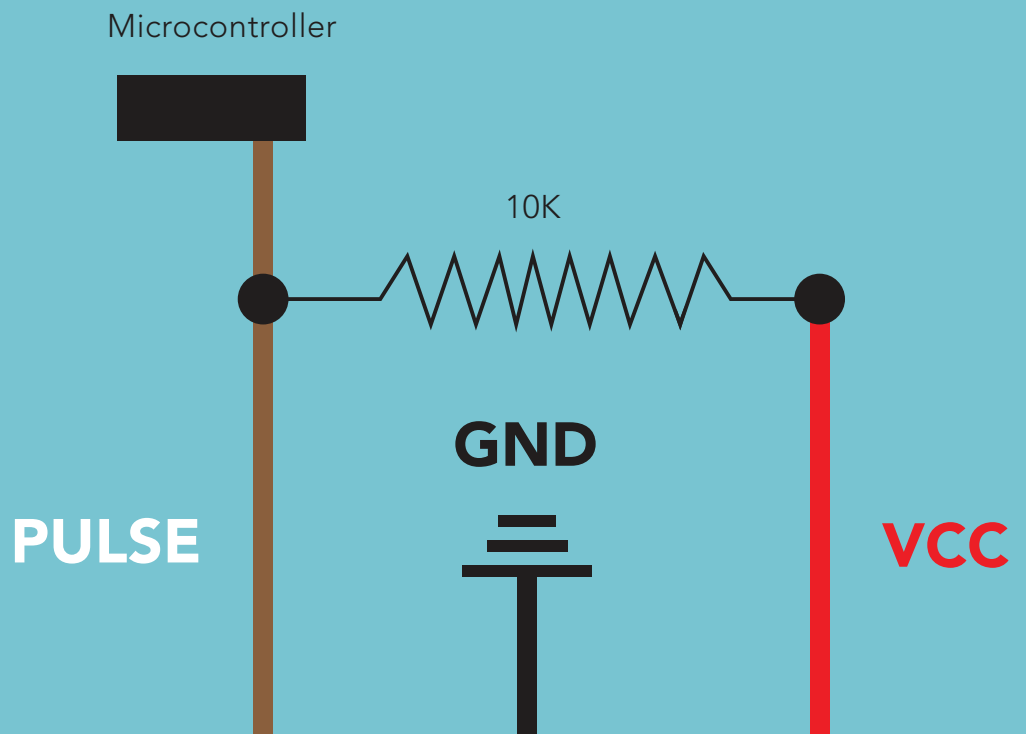
## ⚠ WARNING ⚠

**REVERSING THE POLARITY  
WILL DESTROY FLOW METER.**

Lead Color	Function
<b>RED</b>	VCC 3.3V – 24V
<b>Brown</b>	PULSE
<b>BLACK</b>	GND

Current consumption no load 8mA  
Max current consumption 25mA

VCC and PULSE must be connected  
together with a 10K Pull up resistor.



# Specifications

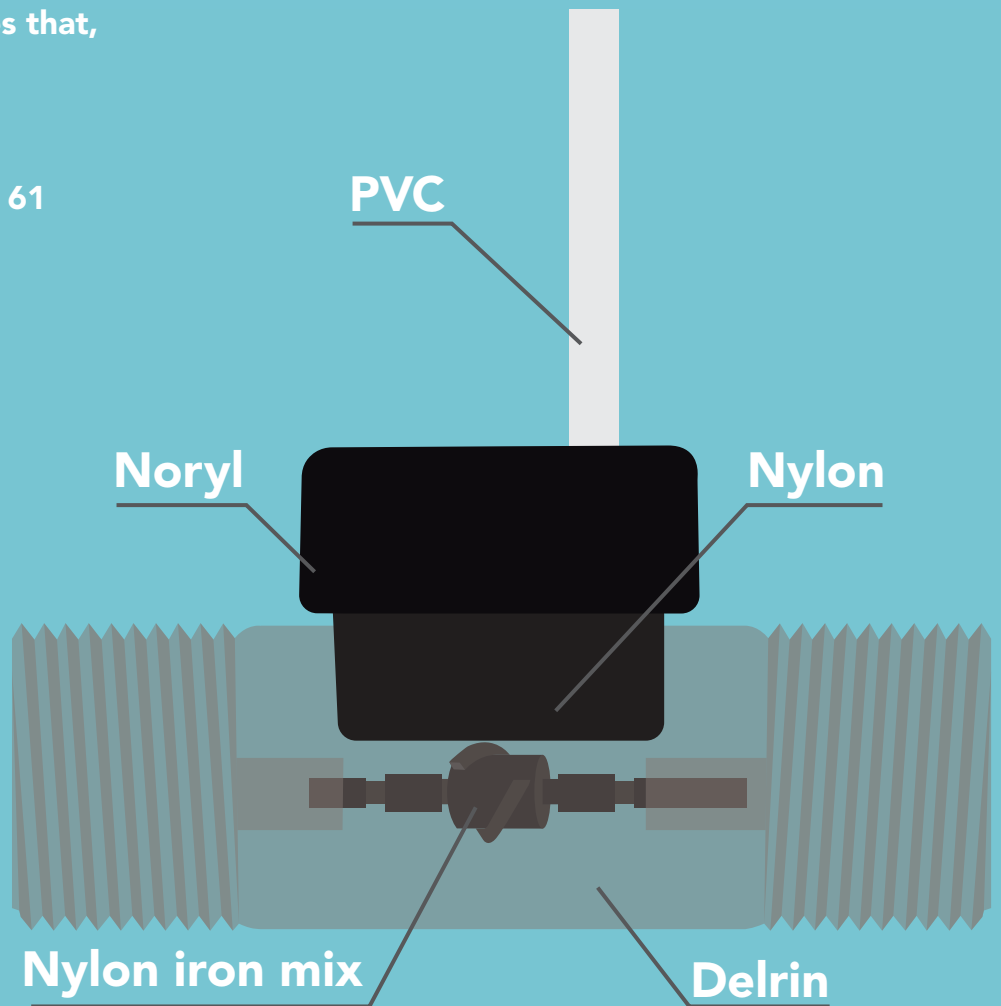
Each rotation	454 $\mu$ L
Max pressure	200 PSI
Max viscosity	81 SSU
Cable length	86 cm
Weight	101.5 grams
Food Safe	Yes
Gasoline Safe	Yes
Diesel Safe	Yes
Kerosene Safe	Yes

## NSF/ANSI 61 Compliant

Atlas Scientific LLC, hereby certifies that,

**3/8" Flow Meter**  
**Part # Sen-206F**

Complies with NSF/ANSI Standard 61



✓ **PVC**  
NSF-61 Compliant

✓ **Delrin**  
NSF-61 Compliant

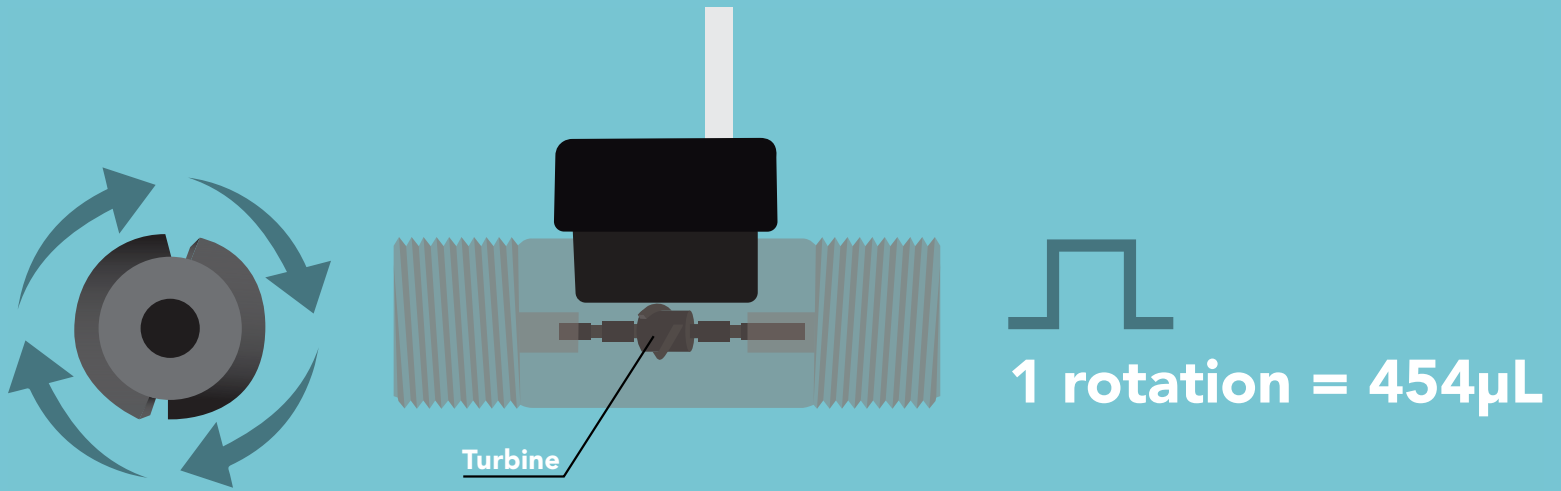
✓ **Noryl**  
NSF-61 Compliant

✓ **Nylon**  
NSF-61 Compliant

✓ **Nylon iron mix**  
NSF-61 Compliant

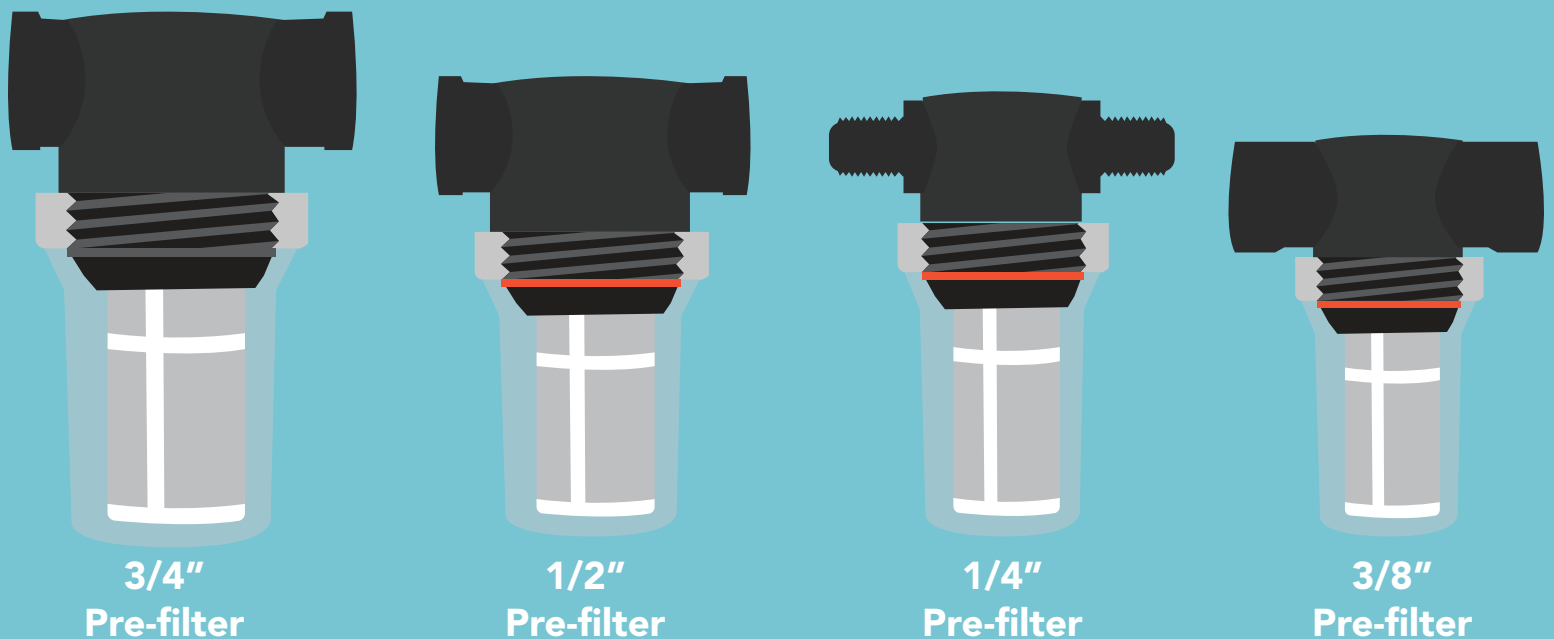
# Operating principle

Generally speaking, turbine flow meters are the simplest to work with and offer the highest accuracy. With this type of flow meter, each rotation of the turbine represents a volume of liquid passing through the 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. Without the use of a pre-filter, the turbine blades can 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.



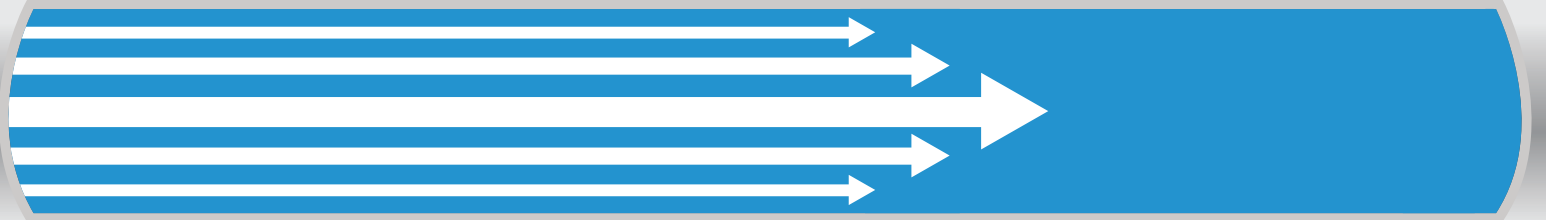
# Laminar flow

Laminar flow can be thought of as the opposite of turbulent flow. In order for the flow meter to work properly, the 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.

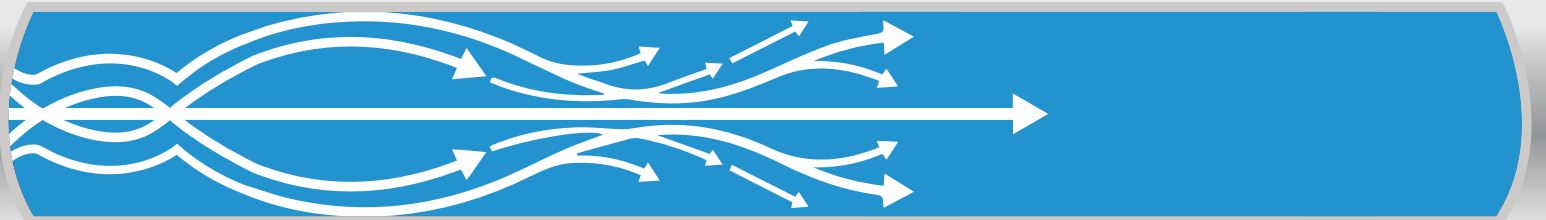
Turbulent fluid entering the flow meter can cause inaccuracies in flow rate monitoring.



## 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 flow meter and lead to inaccurate readings.

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

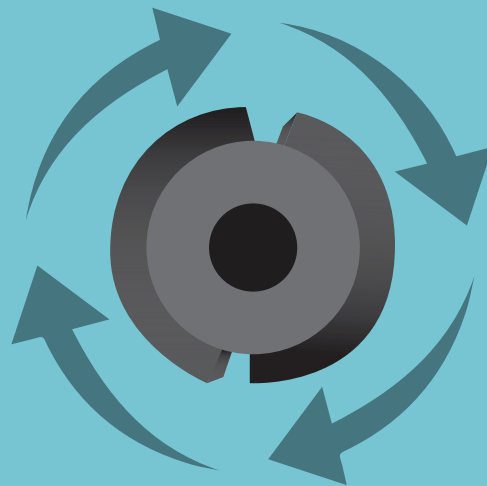
Air

**X INCORRECT**

**✓ CORRECT**

# K-factor

Each rotation of the turbine within this flow meter represents a volume of liquid passing through the meter.



**1 rotation = 454 $\mu$ L**

**3 rotations = 1.3mL**

**2,200 = 1Liter**

**83,000 = 1 Gallon**