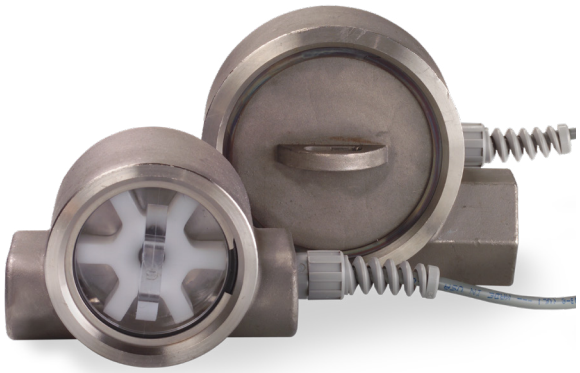
FLOWSTAT TURBINE FLOW SENSOR

Ideal for monitoring various fluids in applications such as chillers/cooling circuits, HVAC, medical equipment, batching and industrial process control applications.



TECHNICAL SPECIFICATIONS

Measuring Accuracy
±2% of full scale

Repeatability
±0.5% of full scale

Flow Measuring Range
1/2" porting: 0.5-15 GPM (2-60 LPM)
1/2 " porting low flow option: 0.25-4.5 (1-17 LPM)
3/4" - 1" porting: 1.5-50 GPM (60-200 LPM)

Turn Down Ratio
10:1

Fluid Temperature Range
20-225°F (-7° to 107°)

Maximum Operating Pressure
Stainless steel cover: 500 PSIG (34 Bar)
Clear polycarbonate cover: 200 PSIG (14 Bar)

Filtration Requirements
150 Micron filter recommended

Standard Calibration Fluid
Water @ 70°F Temperature (21°C), 1.0 sg

BENEFITS

Choice of Three Port Sizes
Select from 1/2" , 3/4" or 1" NPT porting to meet system requirements.

NOTE: Using reduced ID fittings will affect calibrated range.

Encapsulated Circuitry
Withstands the harshest environments.

Several Outputs Available
The standard interface is a 2-wire, 4-20mA current loop. Sensor signal may be transmitted on a low cost wire without degradation. Pulse, relay and 0-5 VDC (regulated) are also available.

Connects Directly to your Flow Monitoring Instruments
Can be connected directly to analog acquisition cards, chart recorders or other monitoring instruments, without external signal conditioning.

Simply Plumb and Apply Power
Comes factory calibrated to your flow range specifications.

Twenty-Four Different Ports Available
Standard selection of NPT, SAE and BSP ports reduces the amount of adapters required for installation.

Low Cost Accuracy
Mid-scale measuring accuracy within ±2.5%. Full-scale accuracy within ±4%.

MATERIALS OF CONSTRUCTION

Wetted Components	
Component	Materials
Casing	Stainless Steel 316
Cover	Clear polycarbonate (Optional Stainless Steel 316)
Seal	Buna-N® (other options available)
Impeller	Acetal Copolymer
Bearing	PEEK (Polyetheretherketone)
Shaft	316 Stainless Steel

Non-Wetted Components	
Component	Materials
Encapsulant	Epoxy
Strain Relief	Nylon
Lock Ring	Stainless Steel
Wire Insulation	High-Temperature PVC

Buna-N is a registered trademark of Chemische Werke Huls.

AW-LAKE
PROCESS FLOW MEASUREMENT

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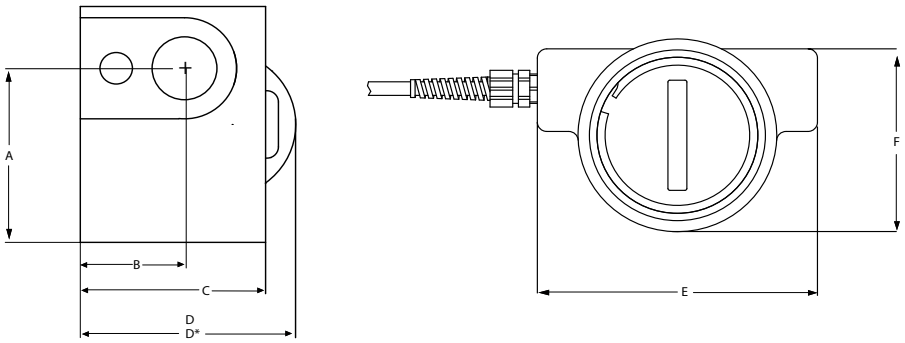

MECHANICAL DIMENSIONS

DIM	1/2" NPTF	3/4" NPTF - 1" NPTF
A	1.94" (49mm)	3.06" (78mm)
B	1.13" (29mm)	1.33" (34mm)
C	2.00" (51mm)	2.46" (62mm)
D	2.45" (62mm)	2.78" (71mm)
D*	2.45" (62mm)	2.88" (73mm)
E	3.70" (94mm)	5.25" (133mm)
F	2.63" (67mm)	3.80" (97mm)

**Dimensions with clear polycarbonate cover installed.*

ELECTRONIC SPECIFICATIONS

4-20 mA version	
Power Requirements	12-24 VDC, Regulated, Loop powered
Load driving capacity	Use the following equation to calculate maximum load resistance: Max Loop Load (Ω) = 50 (Power supply volts – 12).
Maximum Transmission Distance	Limited only by wire resistance & supply voltage
Response time	2 seconds to 90% (step change)
Resolution	Infinite
Over-current limit	Self limiting at 35 mA
Other protection	Reverse polarity

0-5 VDC (regulated) version	
Power Requirements	12-24 VDC, Regulated
Maximum Current	25 mA DC, Regulated
Minimum Load resistance	1000 Ohms
Maximum Transmission Distance	200 feet recommended
Resolution	Infinite
Response time	< 5 seconds to 90% (step change)

Relay Output	
Power Requirements	12-24 VDC, Regulated
Maximum Transmission Distance	200 feet recommended
Switch Contact	Form C, 5A max 120 or 240 VAC
Set Point Repeatability	1% of full scale

Pulse Output Version	
Power Requirements	12-24 VDC, Regulated
Response Time	<100 mS
Maximum Current	25 mA DC, Regulated
Maximum Transmission Distance	200 feet recommended
Minimum Load Resistance	1000 Ohms
Protection	Short circuit & reverse polarity
K-Factor	1/2" port ≈ 200 pulses/gallon 3/4" & 1" ports ≈ 60 pulses/gallon

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PART NUMBER GUIDE

☐☐☐ — ☐☐ — ☐☐☐

OUTPUT

Current	=	C
Pulse	=	P
Relay	=	R
Voltage	=	V

ROTOR COVER

Clear Polycarbonate to 200 psi	=	C
316 Stainless Steel to 500 psi	=	S

PORT SIZE RANGE

1/2" NPT	=	B
3/4 NPT	=	C
1" NPT	=	D

MAX. FLOW RATE: GPM

1/2" NPT*:

0.5 GPM up to 15 GPM Max. flow rates available = ☐☐

3/4" & 1" NPT*:

15 GPM up to 50 GPM Max. flow rates available = ☐☐

**Important: Choose a maximum flow rate. For 1/2" NPT: 5-15 maximum GPM. For 3/4" and 1" NPT: 15-50 maximum GPM. Minimum flow rate will be 10% of maximum flow rate. Example: If your maximum flow rate is 8 GPM, the minimum flow rate would be .8 (8 x .1 = .8) Thus, the correct flow range would be .8-8.0 GPM.*

OPTIONS

Control Cover	=	C
Electronic Disconnect	=	D
Low Flow Option**	=	L F

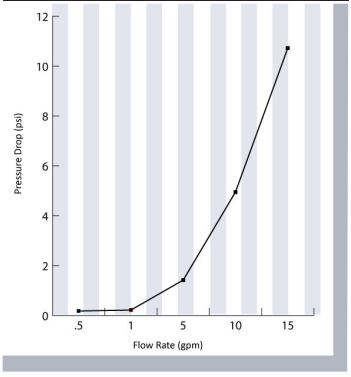
*** The low flow option will accommodate full-scale flow rates from 2.5 - 4.5 GPM for 1/2" only.*

COVER SEAL

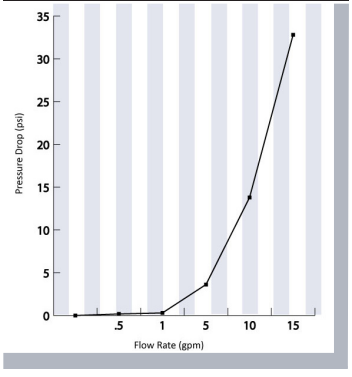
Buna-N (Standard)	=	B
EPR (Optional)	=	E
FKM (Optional)	=	V

TYPICAL PRESSURE DIFFERENTIALS

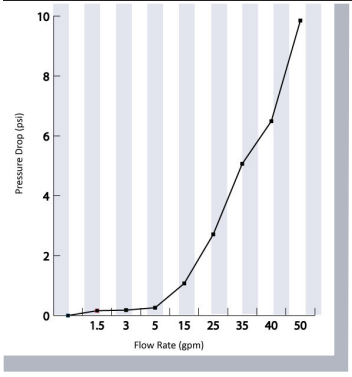
1/2" NPT



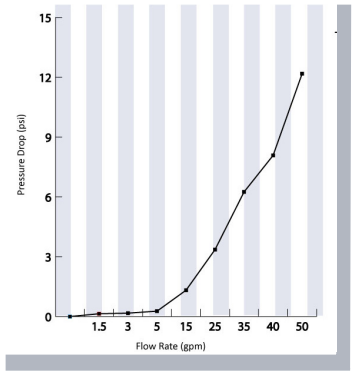
1/2" NPT LOW FLOW OPTION



3/4" NPT



1" NPT



Products may be subject to change without notice - Contact factory for the most up-to-date product information.

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