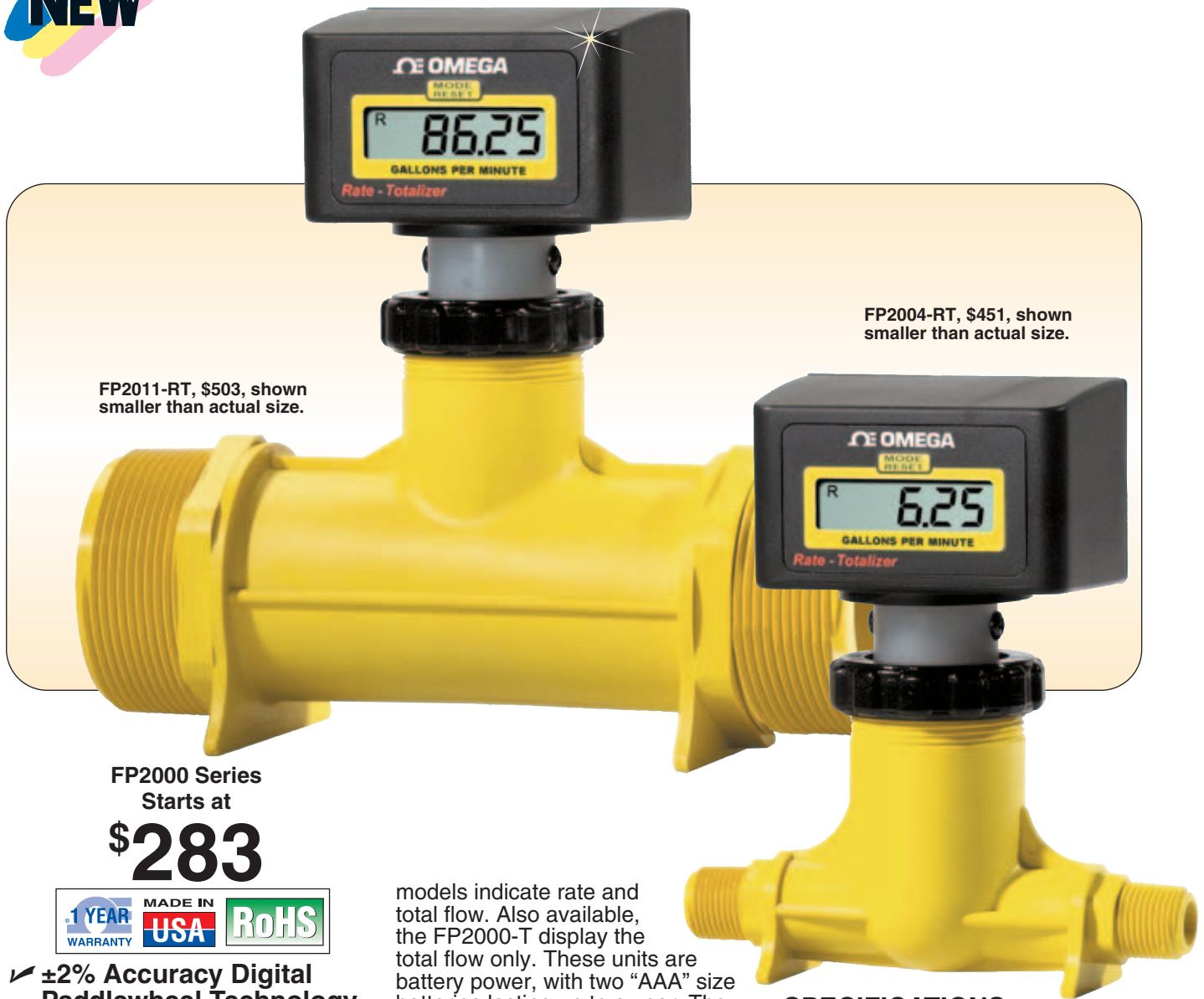




DIGITAL PADDLEWHEEL METERS



FP2011-RT, \$503, shown smaller than actual size.

FP2004-RT, \$451, shown smaller than actual size.

FP2000 Series Starts at

\$283



- ✓ ±2% Accuracy Digital Paddlewheel Technology
- ✓ Integral 6 Digit Display
- ✓ Models Available for Rate, Total or Rate and Total Flow
- ✓ For Pipe Sizes from 10 to 51 mm (3/8 to 2"), 0.4 to 200 GPM
- ✓ Long Life Battery Operation
- ✓ Low Pressure Drop Design
- ✓ Available with Polypropylene or PVDF Construction

The FP2000 Series is a family of economical paddlewheel sensors with integral 6-digit display. The FP2000-R models are rate indicators, while the FP2000-RT

models indicate rate and total flow. Also available, the FP2000-T display the total flow only. These units are battery power, with two "AAA" size batteries lasting up to a year. The FP2000 units feature a PVDF paddlewheel, with either polypropylene or PVDF piping.

Measuring accuracy requires a fully developed turbulent flow profile. Pulsating, swirling and other disruptions in the flow stream will affect accuracy. Flow conditions with a Reynolds Number greater than 4000 will result in a fully developed turbulent flow. A Reynolds Number less than 2000 is laminar flow and may result in inaccurate readings.

Reynolds Number Equation:

$$\text{Reynolds Number} = (3160 \times Q \times G) / (D \times V)$$

Where:

- Q=Flow rate of the fluid in GPM
- G=Specific gravity of the fluid
- D=Pipe inside diameter in inches
- V=Fluid viscosity in centipoise

SPECIFICATIONS

Max Working Pressure: 20 bar (300 psi) at 21°C (70°F)

Max Fluid Temperature: 93°C (200°F) at 0 psi

Max Ambient Temperature: -10 to 43°C (14 to 110°F)

Full Scale Accuracy: ±2%

Power Requirement: 2 "AAA" batteries (included)

Enclosure: NEMA 4X (IP56)

Maximum Pressure Drop: 0.6 bar (8 psi) (varies per model)

Approximate Shipping Wt: 0.91 kg (2 lb)

Materials of Construction

Pipe Fitting:

Polypropylene, FP2000 series; PVDF, FP2100 series

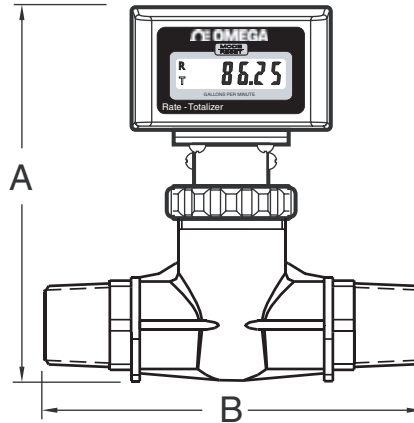
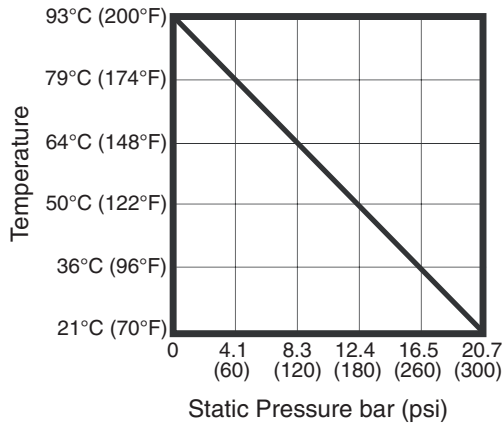
Sensor, Paddlewheel, Axle: PVDF

Sensor O-ring seals: FKM (optional EP)

Enclosure: ABS



Max Temperature vs. Pressure



Dimensions: mm (in)

Pipe Size	A	B
3/8"	137 (5 3/8)	121 (4 3/4)
1/2"	137 (5 3/8)	130 (5 1/8)
3/4"	143 (5 5/8)	133 (5 1/4)
1"	143 (5 5/8)	143 (5 5/8)
1 1/2"	156 (6 1/8)	165 (6 1/2)
2"	162 (5 3/8)	171 (6 3/4)

Minimum Straight Pipe Length Requirements

The meter's accuracy is affected by disturbances such as pumps, elbows, tees, valves, etc., in the flow stream. Install the meter in a straight run of pipe as far as possible from any disturbances. The distance required for accuracy will depend on the type of disturbance.

Type of Disturbance	Minimum Inlet Pipe Length	Minimum Outlet Pipe Length
Flange	10 x pipe ID	5 x pipe ID
Reducer	15 x pipe ID	5 x pipe ID
90° Elbow	20 x pipe ID	5 x pipe ID
Two Elbows-1 Direction	25 x pipe ID	5 x pipe ID
Two Elbows-2 Directions	40 x pipe ID	5 x pipe ID
Pump or Gate Valves	50 x pipe ID	5 x pipe ID

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)									
Rate only-PP		Rate only-PVDF		Rate/Total-PP		Rate/Total-PVDF		Range GPM	Connection MNPT
Model No.	Price	Model No.	Price	Model No.	Price	Model No.	Price		
FP2001-R	\$283	FP2101-R	\$374	FP2001-RT	\$451	FP2101-RT	\$543	0.4 to 4	3/8
FP2002-R	283	FP2102-R	374	FP2002-RT	451	FP2102-RT	543	0.8 to 8	3/8
FP2003-R	283	FP2103-R	374	FP2003-RT	451	FP2103-RT	543	0.5 to 5	1/2
FP2004-R	283	FP2104-R	374	FP2004-RT	451	FP2104-RT	543	2 to 20	1/2
FP2005-R	283	FP2105-R	374	FP2005-RT	451	FP2105-RT	543	0.8 to 8	3/4
FP2006-R	283	FP2106-R	374	FP2006-RT	451	FP2106-RT	543	3 to 30	3/4
FP2007-R	283	FP2107-R	374	FP2007-RT	451	FP2107-RT	543	2 to 20	1
FP2008-R	283	FP2108-R	374	FP2008-RT	451	FP2108-RT	543	5 to 50	1
FP2009-R	335	FP2109-R	526	FP2009-RT	503	FP2109-RT	694	4 to 40	1 1/2
FP2010-R	335	FP2110-R	526	FP2010-RT	503	FP2110-RT	694	6 to 60	1 1/2
FP2011-R	335	FP2111-R	526	FP2011-RT	503	FP2111-RT	694	10 to 100	1 1/2
FP2012-R	348	FP2112-R	559	FP2012-RT	516	FP2112-RT	727	4 to 40	2
FP2013-R	348	FP2113-R	559	FP2013-RT	516	FP2113-RT	727	6 to 60	2
FP2014-R	348	FP2114-R	559	FP2014-RT	516	FP2114-RT	727	10 to 100	2
FP2015-R	348	FP2115-R	559	FP2015-RT	516	FP2115-RT	727	20 to 200	2

Accessories

Model No.	Price	Description
MN2400-12	\$8	12-pack "AAA" replacement batteries

Comes complete with operator's manual and 2 "AAA" batteries.

For units with a total display only change the "-R" in the rate only model number to a "-T" and add \$20 to the price of the rate only model.

Ordering Examples: FP2003-R, polypropylene paddlewheel, 0.5 to 5 GPM with integral rate display, \$283.

FP2005-RT, polypropylene paddlewheel, 0.8 to 8 GPM with integral rate and total display, \$451.

Recommended Reference Book: Engineering Fluid Mechanics, FW-0112, \$103. See Section Y for Additional Books





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• Flow and Level

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