

# PURE PVDF FLOW MONITORING SYSTEMS

## PVDF FLOW SENSOR

### FP-5100 Series



For maintaining critical product purity or for safe transport of highly corrosive acids, you can depend on OMEGA's all-PVDF flow monitoring systems. Known for its superior heat-resistance and thermal stability, PVDF is quickly becoming the preferred piping material in many ultra-pure water and acid transport applications. Using no dyes or stabilizers, OMEGA offers the only "pure" PVDF flow-monitoring system. Available for installation in pipe sizes ranging from 1/2 to 8", this system is easy both to install and maintain.

#### FOR ULTRA-PURE CONFIDENCE

Combine OMEGA's PVDF flow monitoring system with your existing PVDF pipe—including SYGEF, PVDF, and SUPER PROLINE. This all-PVDF system completely eliminates the possibility of contaminated fluid product, making it perfect for measuring D.I. water in cosmetic, food, and pharmaceutical production. In addition, processes utilizing D.I. water in the semiconductor industry can be monitored with total confidence.

#### FOR SAFE ACID TRANSPORT

When pumping hydrofluoric acid to wafer etching tanks...processing sulfuric acid through water treatment skid for regeneration... or transporting harsh solvents, OMEGA's PVDF flow monitoring systems provide rugged, corrosion-resistant construction.

#### EASY INSTALLATION

PVDF Sensor installation Tee fittings allow direct compatibility with SYGEF piping, joined by the fusion using special electro heating elements. The socket fusion process combines simple handling with high operational safety and reliability. When used in PVDF or SUPER PROLINE piping systems, a flange connection is recommended.

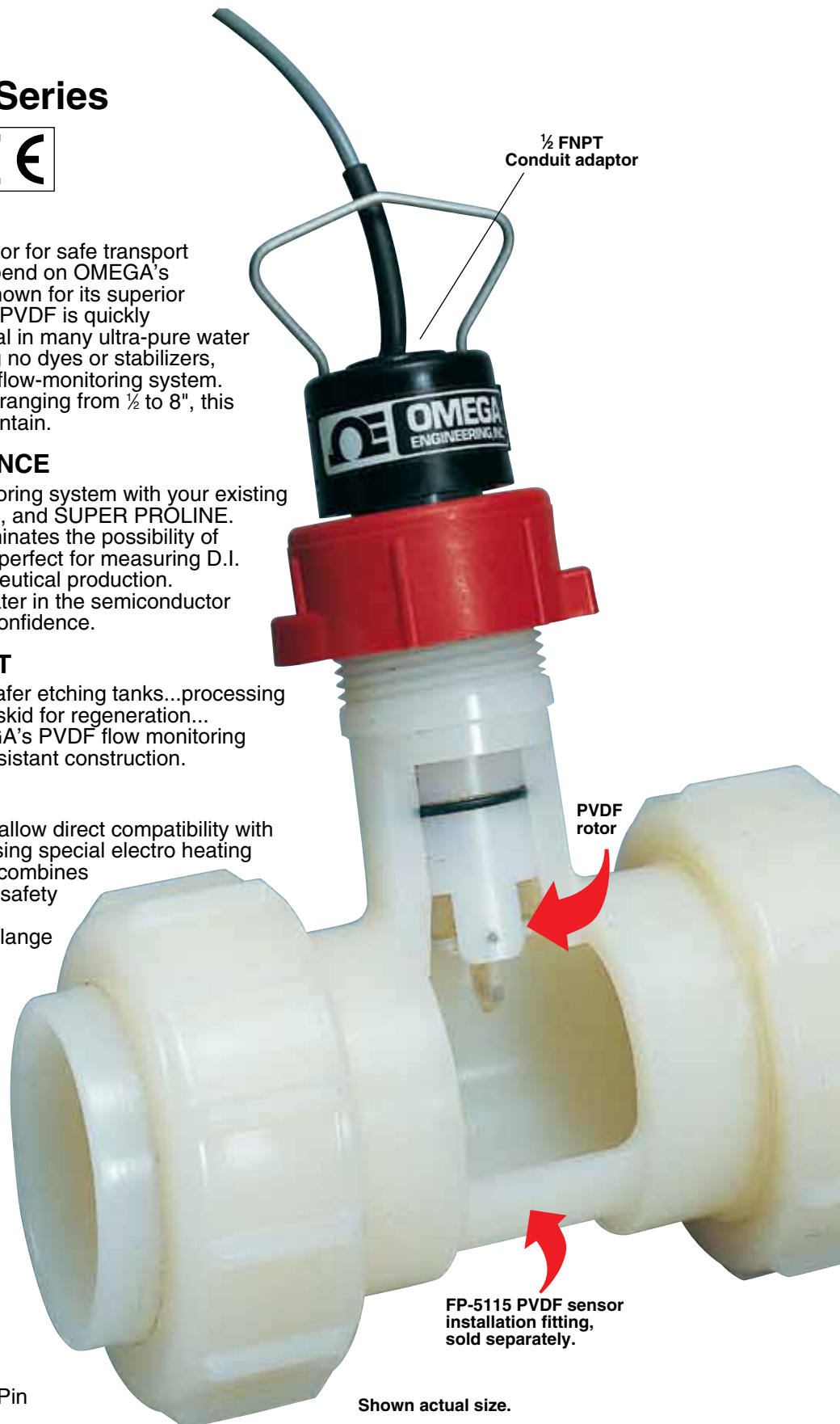
#### ALSO AVAILABLE: DURABLE POLYPROPYLENE (SEE FP-5300 SERIES)

OMEGA also offers sensors and fittings constructed of durable polypropylene. This lightweight material is strong enough for a wide range of fluid applications, and polypro is rugged for longer wear, which saves you money by reducing replacement and servicing costs.

Replacement Rotor/Paddlewheel  
Model **FMK-1538-2**

Replacement Hastelloy-C Rotor Pin  
Model **FMK-1546-2**

Replacement PVDF Rotor and Rotor Pin  
Model **FMK-51545-1**



## RELIABILITY

OMEGA's PVDF Flow Sensor includes the same design features as our standard FP-5300 Sensor, with a  $\pm 0.2$  fps accuracy and  $\pm 0.5$  fps repeatability.

## SPECIFICATIONS

**Electrical:** Same as Model FP-5300

**Maximum Viscosity:** 1 centipoise (water); up to 5 cp above 5 fps velocity

**Materials:**

**Transducer Housing:** PVDF

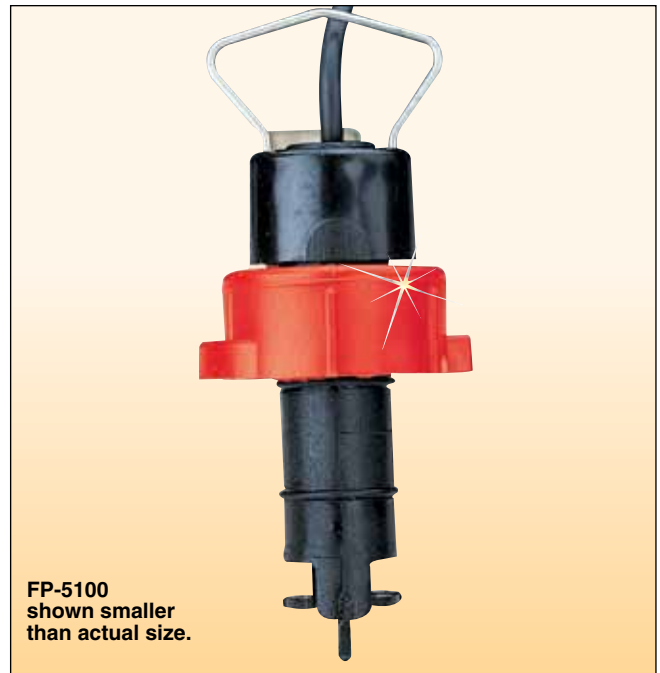
**O-Rings:** FKM

**Shaft:** Hastelloy C (PVDF optional)

**Rotor:** PVDF

**Tee Fitting:** PVDF

**Cable:** 7.5 m (25') twisted pair, foil shielded with drain wire



## PVDF Flow Sensors

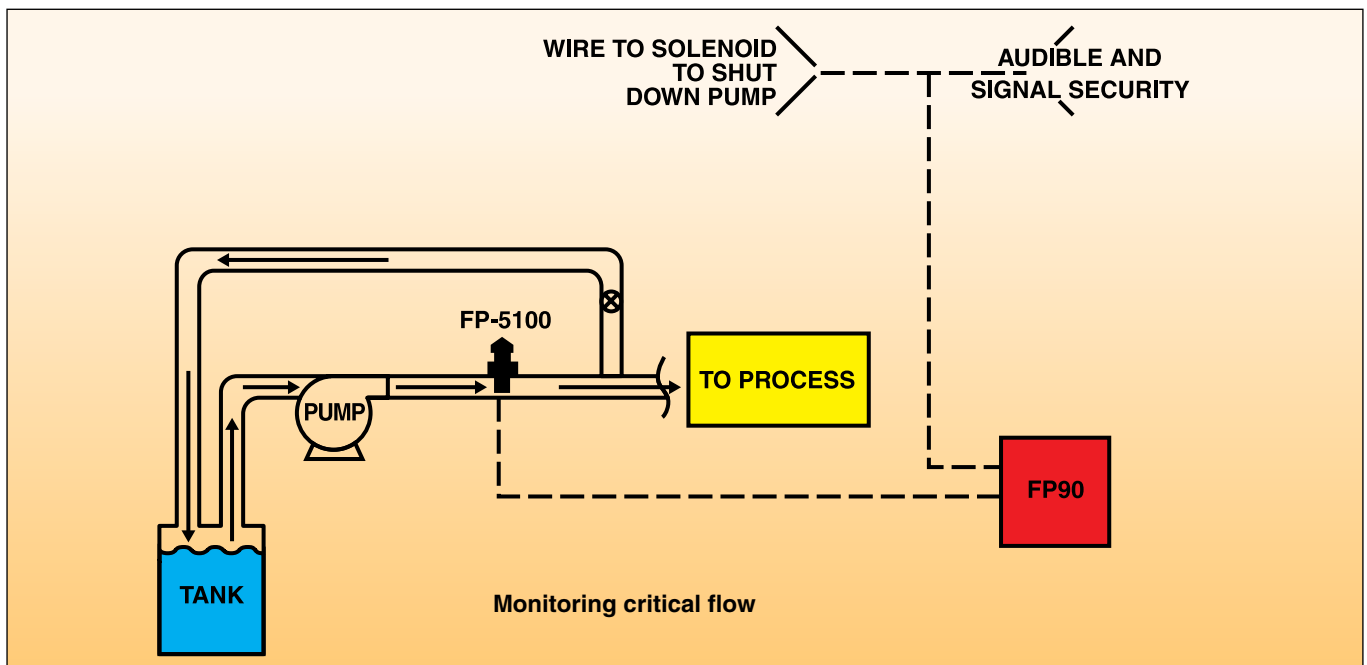
To Order						
Description	Model No.	Housing Material	Shaft Material	Pipe Size (in)	Weight g (oz)	Sensor Length mm (inch)
Paddlewheel Sensor	FP-5100	PVDF	Hastelloy C	1/2 to 4	341 (12)	89 (3.5)
	FP-5101	PVDF	Hastelloy C	5 to 8	341 (12)	127 (5.0)

*Comes complete with operator's manual.*

**Ordering Example:** FP-5100, PVDF/Hastelloy C paddlewheel sensor.

## PVDF Sensor Installation Fittings (available in mm size only)

Pipe Size	Model No.	Pipe Size	Model No.
15 mm	FP-5105	32 mm	FP-5112
20 mm	FP-5107	40 mm	FP-5115
25 mm	FP-5110	50 mm	FP-5120

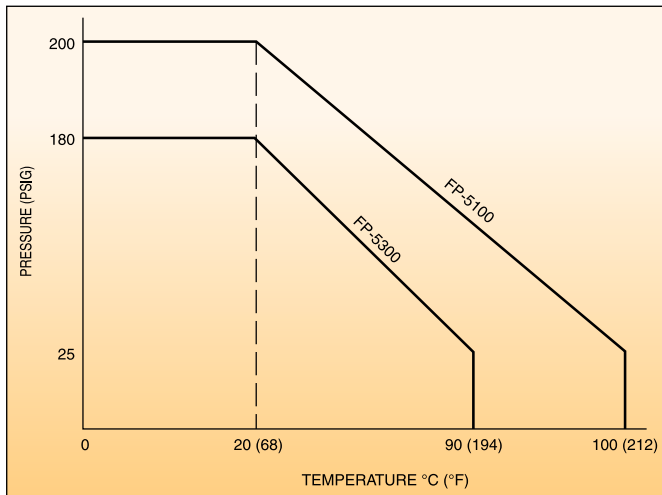


# PRESSURE/TEMPERATURE CHARTS

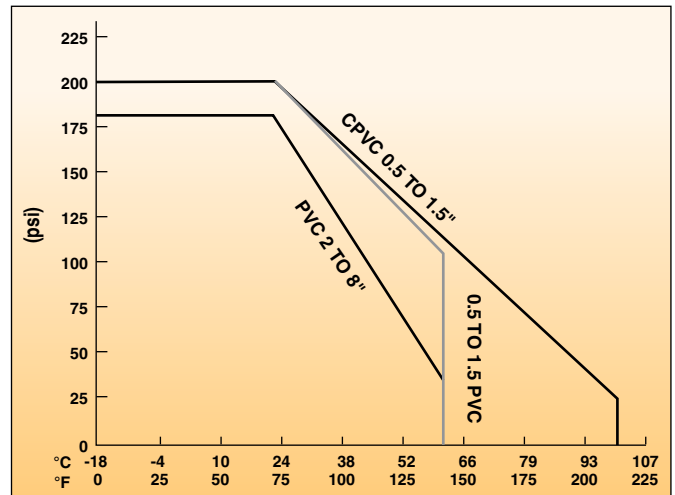
## For FP-5100, FP-5300 and FP-8500 Series Sensors and Associated Fittings

**NOTE:** All pressure/temperature ratings listed are for water under non-shock conditions with no pressure cycling. Various chemicals and cycling pressures up and down can weaken plastics. Fittings must be installed so that the fitting does not carry the weight of the piping and does not suffer from thermal expansion stresses. Water hammer, fluid surges, and cavitation must always be avoided. If the end user elects to thread the plastic fittings with socket ends, the pressure rating will be substantially decreased.

### FP-5100, FP-5300 and FP-8500 Series Sensors Pressure/Temperature Ratings

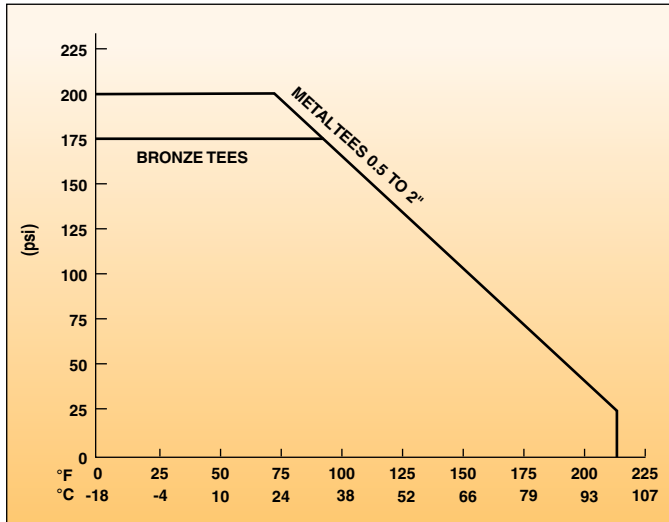


### PVC and CPVC Tees and Saddles

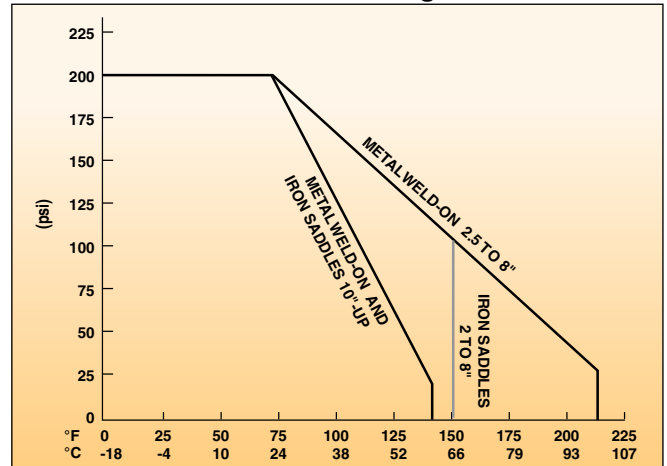


**WARNING:** THE ABOVE PRESSURE/TEMPERATURE CURVES ARE SPECIFICALLY FOR THE FP-5100, FP-5300, AND FP-8500 SENSORS. DURING SYSTEM DESIGN, THE SPECIFICATIONS OF ALL COMPONENTS MUST BE CONSIDERED. IN A METAL PIPING SYSTEM, A PLASTIC SENSOR WILL REDUCE THE SYSTEM SPEC. ON THE OTHER HAND, IF USING A PVDF SENSOR IN A PVC PIPING SYSTEM, THE FITTING WILL REDUCE THE SYSTEM SPEC.

### Metal Tees



### Metal Weld-On and Saddle Fittings



These ratings are for PVC and PVDF fittings. For all metal fittings 10" and larger, a PVC insert is used; for 8" and below, a PVDF insert is used. Use the appropriate curve to determine the maximum pressure rating of these fittings.