

# HIGH-ACCURACY MELT PRESSURE TRANSDUCERS



SPECIALTY PRESSURE TRANSDUCERS **B**



PX330-500GV, \$650.

PX360-3KGV, \$705.

PX340-1000GV, \$635.

PX351-3KGV, \$870.

All models shown smaller than actual size.

## PX330 Series

Starts at  
**\$635**

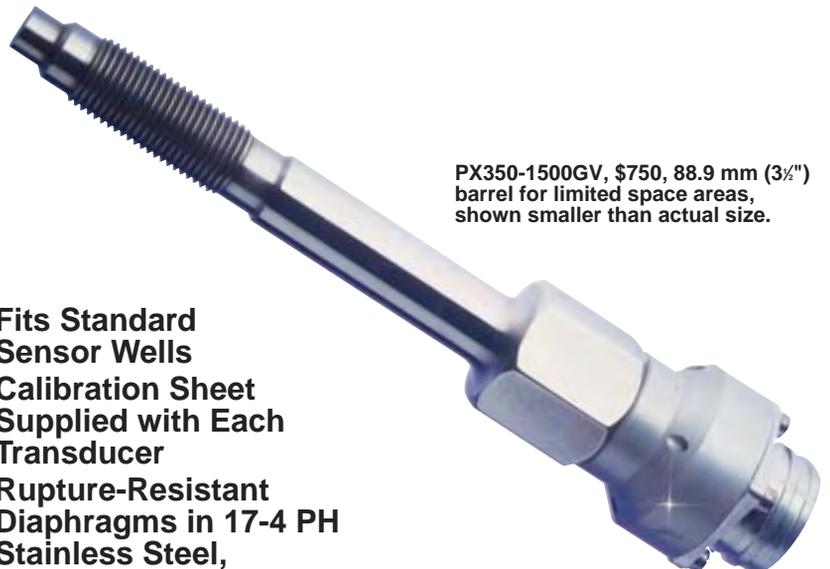


- ✓ 88.9, 152.4, and 304.8 mm (3½, 6, and 12") Barrels; Heavy-Duty Stainless Steel Construction, Adaptable to a Wide Range of Space Requirements
- ✓ 0.5% FS and 1% FS Accuracy Models
- ✓ Force Rod Construction, No Fill Fluid to Contaminate System
- ✓ High-Temperature Design—399°C (750°F) at the Diaphragm to Work with Today's Higher Extrusion Temperatures



PX341-5KGV, \$720, 305 mm (12") barrel, shown smaller than actual size.

PX335-10KGV, \$750, 152.4 mm (6") barrel, shown smaller than actual size.



PX350-1500GV, \$750, 88.9 mm (3½") barrel for limited space areas, shown smaller than actual size.

- ✓ Fits Standard Sensor Wells
- ✓ Calibration Sheet Supplied with Each Transducer
- ✓ Rupture-Resistant Diaphragms in 17-4 PH Stainless Steel, Hastelloy C-276, and Hard Chrome Plate



# MELT TRANSDUCERS FOR ABRASIVE, NON-ABRASIVE, CORROSIVE, AND NON-CORROSIVE MATERIALS

OMEGA is proud to feature state-of-the-art melt pressure transducers for general purpose and precision requirements. We also offer digital indicator/controllers, thermocouples, accessory cables, and connectors for plastic extrusion.

Our transducers have been selected for applications with abrasive, non-abrasive, corrosive, or non-corrosive material. They offer a choice of 1% or 0.5% accuracy, and they feature stainless steel barrels in 3 lengths to meet the space requirements imposed by complex machinery, piping, and insulation.

**Models 330, 335, 340, 341, 370, 371.** Offered in 88.9, 152.4, and 304.8 mm (3½, 6, and 12") barrel lengths, these transducers feature a 17-4 PH stainless steel diaphragm for melt pressure usage with non-corrosive and non-abrasive materials; ±1% FS non-linearity (models 330, 340, 341) for general purpose applications; ±0.5% FS non-linearity (models 335, 370, 371) for high accuracy; and a -17.7 to 399°C (0 to 750°F) operating range.

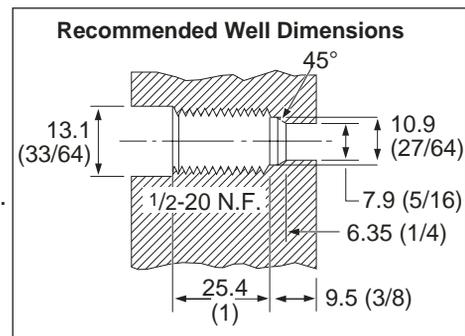
**Models 350, 351, 380, 381** are offered in 6" and 12" units with Hastelloy C-276 diaphragm for melt

pressure usage with corrosive materials such as PTFE, Kynar®, and fluorocarbon polymers. These transducers also feature ±1% FS non-linearity (models 350, 351) for general purpose applications; ±0.5% FS non-linearity (models 380, 381) for high accuracy; and a -17.7 to 399°C (0 to 750°F) operating range.

**Models 360, 361, 390, 391** are offered in 152.4 and 304.8 mm (6 and 12") units with hard chrome plate diaphragm for melt pressure usage with abrasive materials such as fiberglass, aluminum, and cereal. These transducers also feature ±1% FS non-linearity (models 360, 361) for general purpose applications; ±0.5% FS non-linearity (models 390, 391) for high accuracy; and a -17.7 to 399°C (0 to 750°F) operating range.

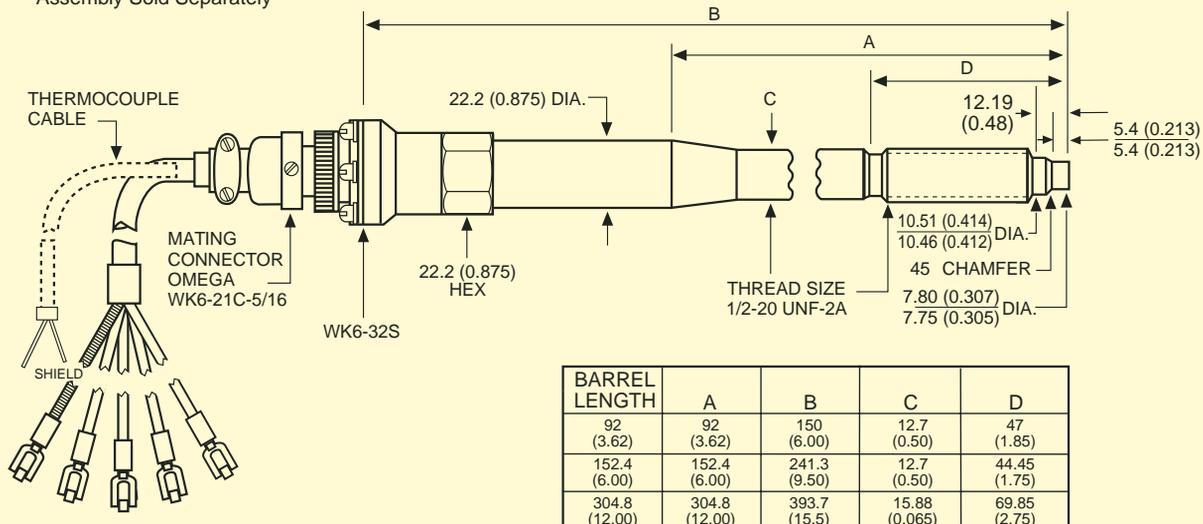
**Built-In Thermocouples.** Models with OMEGA's Type J (Iron-Constantan) or K (CHROMEPA®-ALOMEGA®) high-accuracy thermocouples enable simultaneous temperature/pressure measurements up to 399°C (750°F). These transducers are designed for applications in which precision control is critical and where space for only one sensor is available.

**Standard Melt Barrel Tip Fits Most Extruders**



24-Gage 4-Conductor Cable  
PTFE Insulated & Shielded  
3 m (10') Long  
Assembly Sold Separately

**Dimensions: mm (in)**



# PLASTIC MELT PRESSURE MEASUREMENT

## SPECIFICATIONS

### PERFORMANCE CHARACTERISTICS

**Accuracy:**  $\pm 0.5\%$  or  $\pm 1.0\%$  FS

**Repeatability:** Within  $\pm 0.1\%$  FS maximum

**Resolution:** Infinite

**Overload Pressure:** 150% of rated range, no damage

### ELECTRICAL CHARACTERISTICS

**Sensor Type:** Bonded strain gage, 4-leg Wheatstone bridge

**Bridge Resistance:**  $350\ \Omega \pm 5.0\%$

**Sensitivity:** 3.0 mV/V nominal

**Zero Balance:**  $\pm 10.0\%$

**Excitation:** 5 to 12 Vdc or Vac (rms), maximum 15 V

**External Shunt Calibration Resistor:** Standard feature (also available to be Dynisco compatible)

**Insulation Resistance:**

100 M $\Omega$  @ 50 Vdc

**Thermocouple:** Types J and K available as indicated

### TEMPERATURE CHARACTERISTICS

**Diaphragm:** -18 to 400°C (0 to 750°F)

**Electrical Connector:** -18 to 121°C (0 to 250°F)

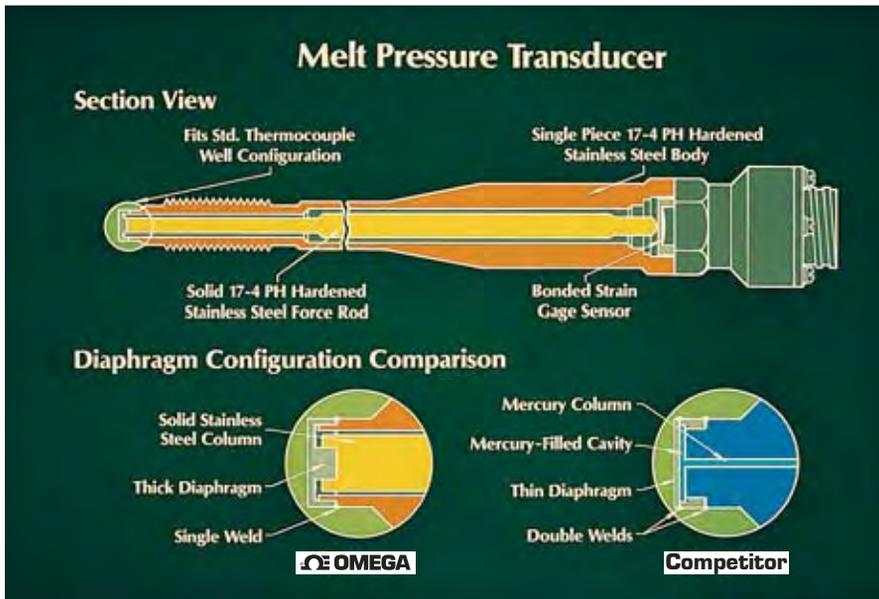
**Zero Drift:**  $\pm 0.01\%$  FS/°F  
 $\pm 0.02\%$  FS/°C

**Sensitivity-Drift:**  $\pm 0.01\%$  FS/°F  
 $\pm 0.02\%$  FS/°C

### MECHANICAL CHARACTERISTICS

**Diaphragm Material:**

Standard 17-4 PH stainless steel. Other choices include hard chrome plate, Hastelloy C-276.



**Pressure Fitting:**

$\frac{1}{2}$ -20 UNF-2A

**Mounting Torque:**

10 foot-pounds min  
20 foot-pounds max

**Electrical Connector:**

WK6-325

**Mating Connector:**

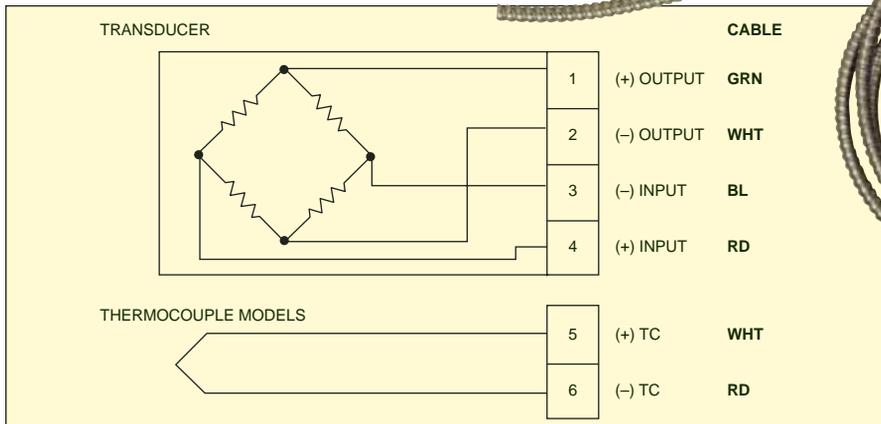
WK6-21C- $\frac{1}{4}$  (not included)

**Weight:**

$3\frac{1}{2}$ " = 145 g (0.32 lb)

6" = 309 g (0.68 lb)

12" = 560 g (1.23 lb)



**ACCESSORY CABLES AND CONNECTORS AVAILABLE!**

See next page.

Complete your transducer installation with OMEGA® accessory hookup cables, PTFE insulated for good abrasion and water resistance. Or choose armored 0.275" diameter BX cable for extra heavy duty. OMEGA also offers standard cable connector in order to make our transducers compatible with your existing wiring. See order chart.

### ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
CH-5657	\$71.50	Reference Book: Practical Strategies for Experimenting

# MELT PRESSURE TRANSDUCERS, CABLES, AND CONNECTORS

**1. Select the barrel length:** 88.9, 152.4, or 304.8 mm (3½", 6", or 12"), diaphragm material (stainless steel, Hastelloy, hard chrome), and accuracy (1%, 0.5%) as shown below.

**2. Thermocouple option:** Add "J" (iron-constantan) or "K" (CHROMEGA®-ALOMEGA®) to the transducer model number. Add \$125 to price (see Ordering Examples below).

**3. Add range suffix** to transducer model number as follows:

RANGE	ORDERING SUFFIX
0 to 500 psi	-500GV*
0 to 1000 psi	-1000GV*
0 to 1500 psi	-1500GV
0 to 3000 psi	-3KGV
0 to 5000 psi	-5KGV
0 to 10,000 psi	-10KGV
0 to 15,000 psi	-15KGV

\* Add \$125 to price for these ranges.

**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order (Specify Model Number)

BARREL LENGTH	DIAPHRAGM MATERIAL	ACCURACY FS (NON-LINEARITY BFSL)	MODEL NO.	PRICE
88.9 mm (3½")	Stainless Steel	1%	PX330-(* )	\$650
88.9 mm (3½")	Stainless Steel	0.5%	PX335-(* )	750
152.4 mm (6")	Stainless Steel	1%	PX340-(* )	635
304.8 mm (12")	Stainless Steel	1%	PX341-(* )	720
152.4 mm (6")	Hastelloy	1%	PX350-(* )	785
304.8 mm (12")	Hastelloy	1%	PX351-(* )	870
152.4 mm (6")	Hard Chrome	1%	PX360-(* )	705
304.8 mm (12")	Hard Chrome	1%	PX361-(* )	790
152.4 mm (6")	Stainless Steel	0.5%	PX370-(* )	780
304.8 mm (12")	Stainless Steel	0.5%	PX371-(* )	845
152.4 mm (6")	Hard Chrome	0.5%	PX390-(* )	850
304.8 mm (12")	Hard Chrome	0.5%	PX391-(* )	915

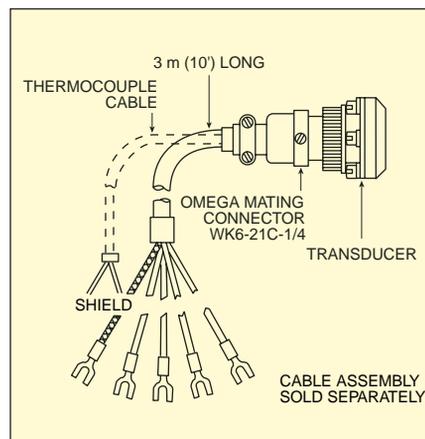
\* Specify range; see item 3 above.

For 5-point NIST calibration, add suffix "-CAL3" to model number and \$150.

## 4. Ordering Examples:

**PX351-10KGV**, Hastelloy diaphragm, 12" barrel and 1% accuracy with a range of 0 to 10,000 psi, \$870.

**PX351J-10KGV**, same as above with optional J thermocouple, \$870 + 125 = \$995.



## Series CX340 Extension Cables

### SPECIFICATIONS

**Wire:** 24-gage shielded

**Number of Conductors:** 4 plus shield

**Insulation:** PTFE

**Thermocouple:** 24-gage with fiberglass insulation (standard limits of error)

**Armored:** 6.96 mm (0.275") Dia. BX covering

## To Order (Specify Model Number)

MODEL NO.	LENGTH	THERMOCOUPLE	PRICE
<b>PTFE CABLE-MATING CONNECTOR/SPADE LUGS</b>			
CX340-10	3.05 m (10')	NONE	\$60
CX340-10J	3.05 m (10')	TYPE J	90
CX340-10K	3.05 m (10')	TYPE K	90
<b>ARMORED CABLE-MATING CONNECTOR/SPADE LUGS</b>			
CX340A-10	3.05 m (10')	NONE	\$90
CX340A-10J	3.05 m (10')	TYPE J	130
CX340A-10K	3.05 m (10')	TYPE K	130
WK6-21C-1/4	Mating Connector		45



WK6-21C-1/4 mating connector, \$45, sold separately.

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