



Customer Service and Product  
Quality Are Our No.1 Priority

## Terwin 2000 Series “Environmentally Friendly” Extrusion Pressure / Temperature Transducers



### Advantages:

- ✓ Accuracy  $\pm 0.5\%$   
(typically  $\pm 0.25\%$ ).
- ✓ 4 x thicker Di-Hard™  
abrasion / corrosion  
resistant diaphragm.
- ✓ Stainless steel  
construction  
throughout.
- ✓ Compatible with food,  
film and  
pharmaceutical  
applications.
- ✓ DOES NOT contain  
Mercury, NaK (sodium  
Potassium or any  
other toxic product to  
contaminate the  
extrudate.
- ✓ Compliant with  
EN50082 part 1 and  
EN55022-1987 class A.
- ✓ Protected by UK  
patent No. 2,153,538  
USA patent No.  
4,625,559 and  
European patent No.  
0156081.
- ✓ Suitable for extrudate  
temperatures up to  
450°C / 842°F.
- ✓ Interchangeable with  
most other brands.

### Description:

The Terwin 2000 series transducers have been designed to meet the most exacting requirements in modern day extrusion technology. Fitted with the unique Di-Hard™ diaphragm, these transducers are suitable for extrudate temperatures up to 450°C / 842°F and are resilient against attack from most abrasive or corrosive products.

The 2000 series incorporates unequalled mechanical and electrical design features to overcome the problems of large zero and span shifts caused by changes in process temperatures. This has only been obtainable in the past with transducers that utilise a liquid filled system incorporating substances such as Mercury or Sodium Potassium. All Terwin 2000 series transducers are constructed throughout from stainless steel and do not employ any toxic substances, thus allowing them to be used on machines involved in the process of food, film or pharmaceutical products.

When it is required to measure temperature as well as pressure, the 2000 series is available with type “J” or “K” integral thermocouples. Standard thermocouples have grounded junctions.

The 2000 series is also available with a variety of head and connection / calibration types.



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### Specifications:

Standard Pressure Ranges:	psi:	0-1,500	0-3,000	0-5,000	0-7,500	0-10,000	0-15,000
	bar:	0-100	0-200	0-350	0-500	0-700	0-1,000

Available Pressure Ranges:	psi:	0-500 to 0-30,000
	bar:	0-35 to 0-2,000

Combined Error: Repeatability: Resolution:	<u>Standard ranges:</u>	<u>Non-standard ranges:</u>
	Within $\pm 0.5\%$ F.R.O. (Typically $\pm 0.25\%$ )	Within $\pm 1\%$ F.R.O. (Typically $\pm 0.5\%$ )
	Within $\pm 0.1\%$ F.R.O.	
Infinite.		

Maximum Pressure:	2 x full range or 25,000psi (1,700 bar) whichever is less.
	On 30,000psi (2,000bar) sensors, the maximum pressure is 35,000psi (2,400 bar).

Body Material:	17-4PH Stainless steel.
Diaphragm Material:	Terwin Di-Hard™ Extra Thick, Abrasion & Corrosion Resistant Long-Life Diaphragm

Optional Diaphragm Coatings:	(DCN) Double Chromium Nitride	(TN) Titanium Nitride
	Outperforms TN and Hastelloy coatings in most applications.	Additional anti-abrasion resistance which also helps prevent thread galling.

Standard Thread Size:	1/2"-20UNF-2A
Mounting Torque:	20ft lbs (27Nm) (240 inch/lbs)
Available Metric Thread Adaptor:	M18 x 1.5mm

#### Electrical Specifications:

Excitation: 5-12V D.C.

Configuration: Four-arm bonded foil Wheatstone bridge strain gauge

Bridge Resistance: 350 $\Omega$   $\pm 10\%$

Output: 3.0mV/V D.C.  $\pm 10\%$  on ranges 0-1,500 psi (0-100 bar) and above.  
2.0mV/V D.C.  $\pm 10\%$  on ranges of 0-1,000 psi (0-70 bar) and below.

Zero Balance:  $\pm 7.5\%$  F.R.O.

Internal Negative Shunt Calibration: 6-wire 80% F.S.O.  $\pm 0.1\%$  - Other calibration types are available.

Electrical Connectors:	6-Pin	8-Pin	9-Pin	12-Pin	Cannon	Cannon	½"-NPT direct cable outlet
	(D6)	(D8)			6-Pin	6-Pin	
	PT02A-10- 6P	PT02E-12- 8P			(G) (Gentran)	(BC) (Barber Coleman)	

Integral Temperature Sensors:	"J" I/C grounded junction.	Un-grounded (insulated) junctions are optional.
	"K" C/A grounded junction.	

Maximum Diaphragm Temperature: 450°C (842°F)

Maximum Strain Gauge Temperature: 200°C (392°F)

Zero Drift:  $< 0.02\%$  F.S.O./°C ( $< 0.01\%$  F.S.O./°F)

Sensitivity (span) Drift:  $< 0.02\%$  F.S.O./°C ( $< 0.01\%$  F.S.O./°F)



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## Terwin 2000 Series “Environmentally Friendly” Extrusion Pressure / Temperature Transducers

Complete Part Number = Model Number + Specification Code:

Transducer with standard specifications / options.

Format: 207AB-CD-EF-G

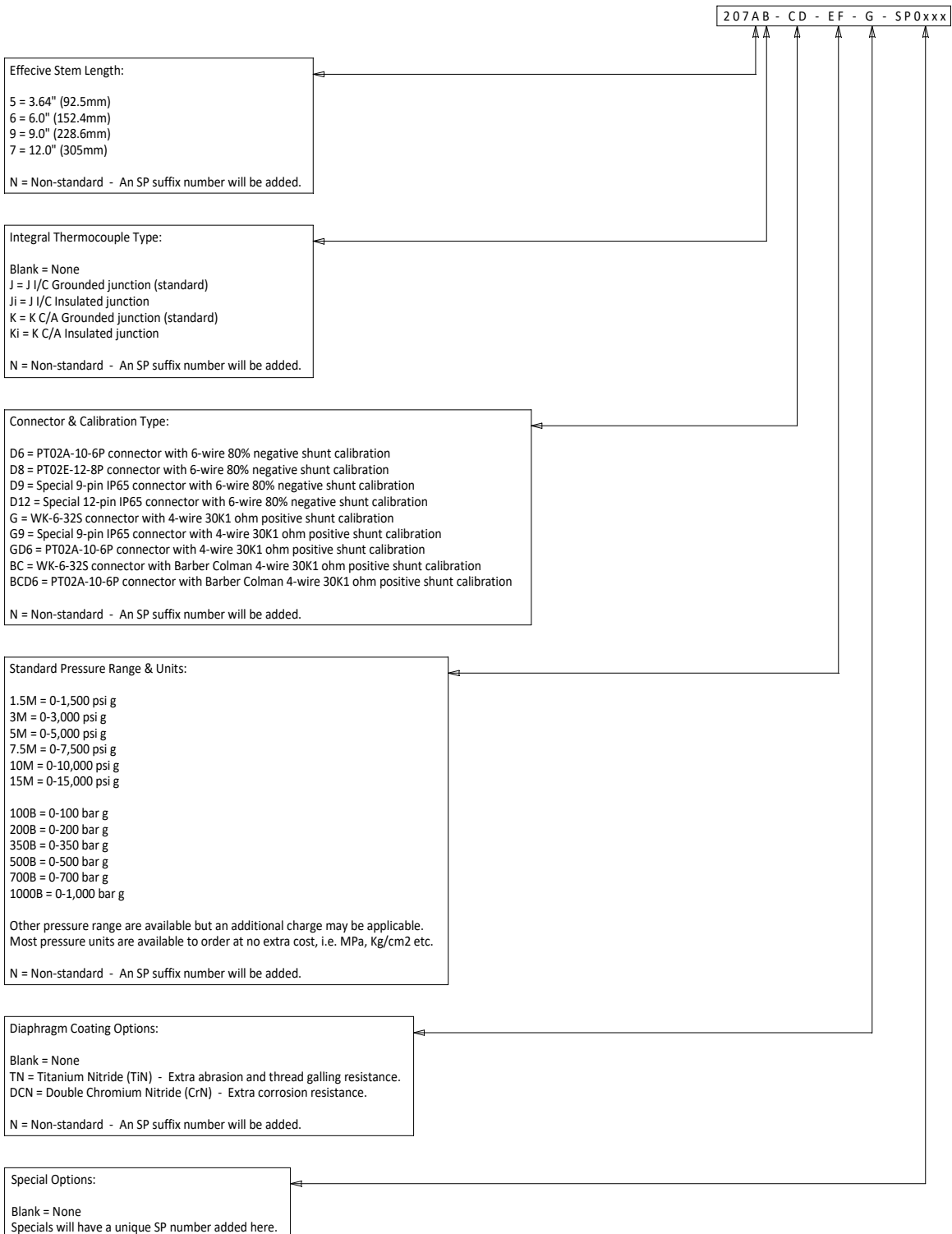
Example: 2076J-D8-10M-DCN

Transducer with non-standard options.

Format: 207AB-CD-EF-G-SP0xxx

Example: 2076J-NN-10M-TN-SP0348

### Part Numbers:

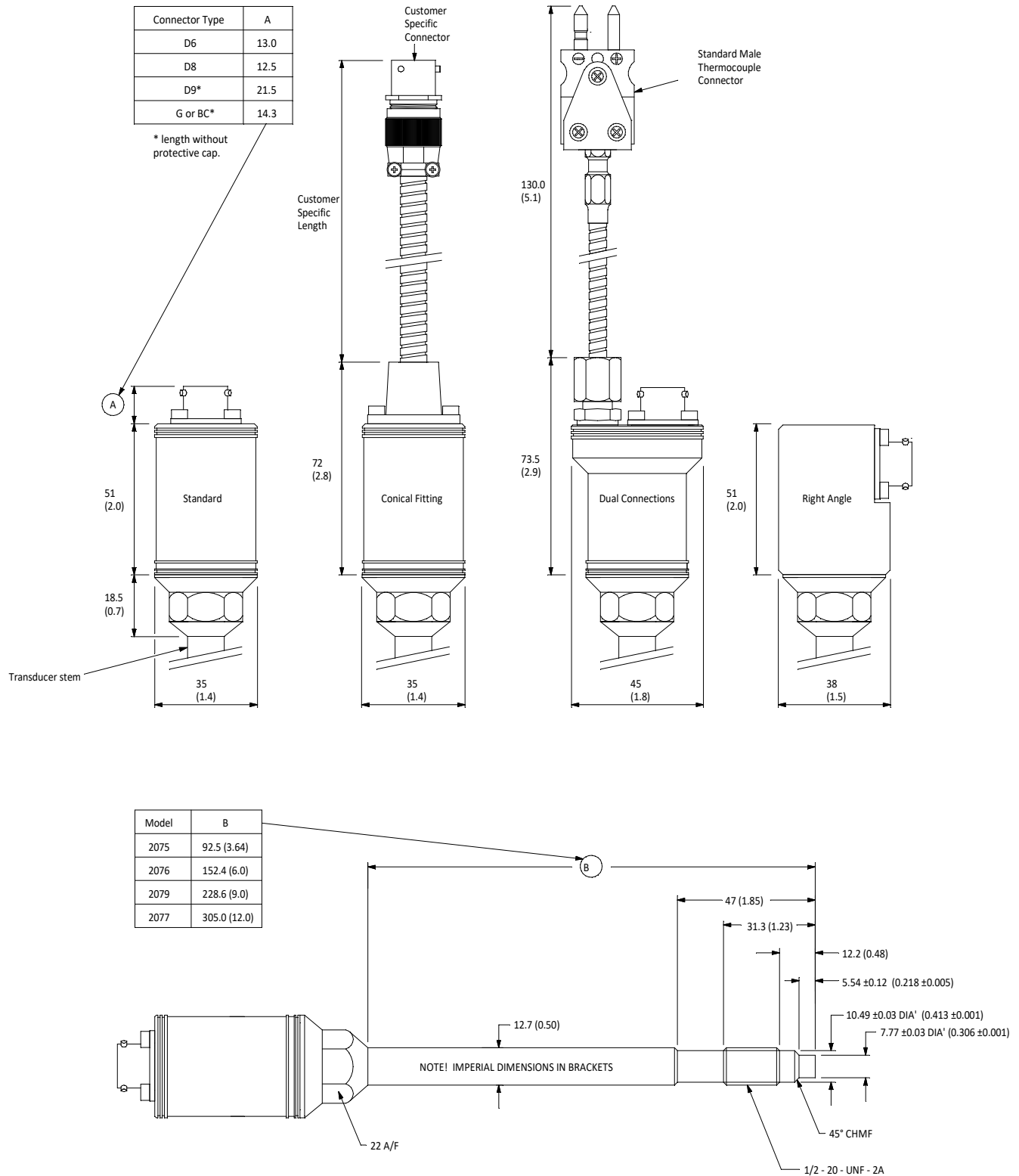




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## Terwin 2000 Series “Environmentally Friendly” Extrusion Pressure / Temperature Transducers

### Connection Head Options & Dimensions:



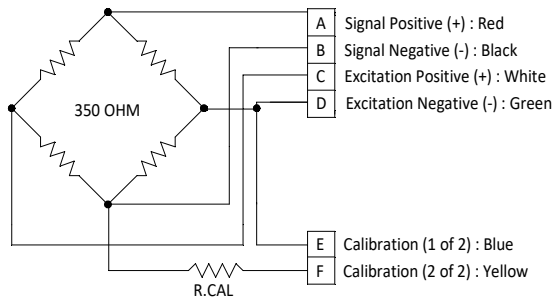


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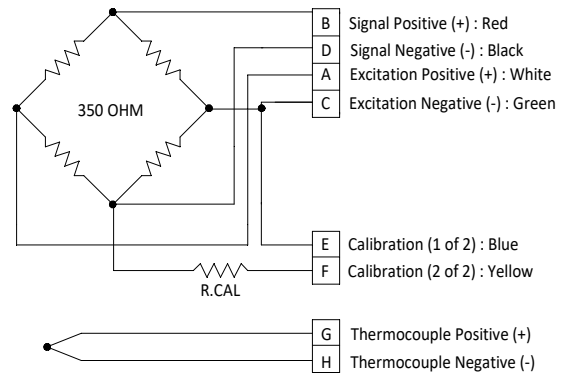
## Terwin 2000 Series “Environmentally Friendly” Extrusion Pressure / Temperature Transducers

### Wiring Information:

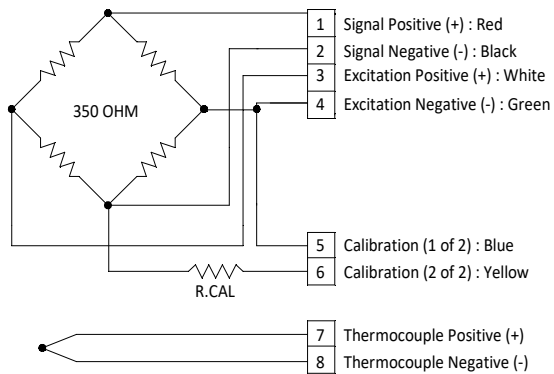
"D6" PRESSURE TRANSDUCER



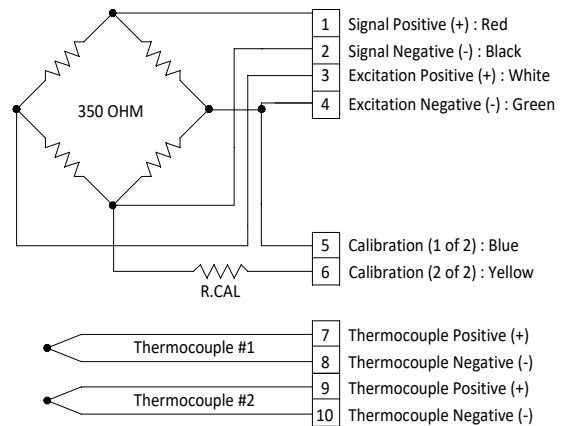
"D8" PRESSURE / TEMPERATURE TRANSDUCER



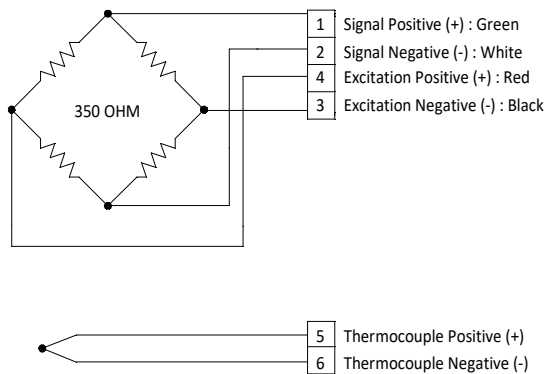
"D9" PRESSURE / TEMPERATURE TRANSDUCER



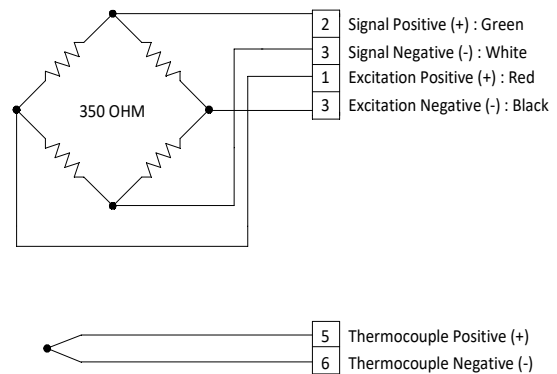
"D12" PRESSURE / TEMPERATURE TRANSDUCER



"G" PRESSURE / TEMPERATURE TRANSDUCER



"BC" PRESSURE / TEMPERATURE TRANSDUCER

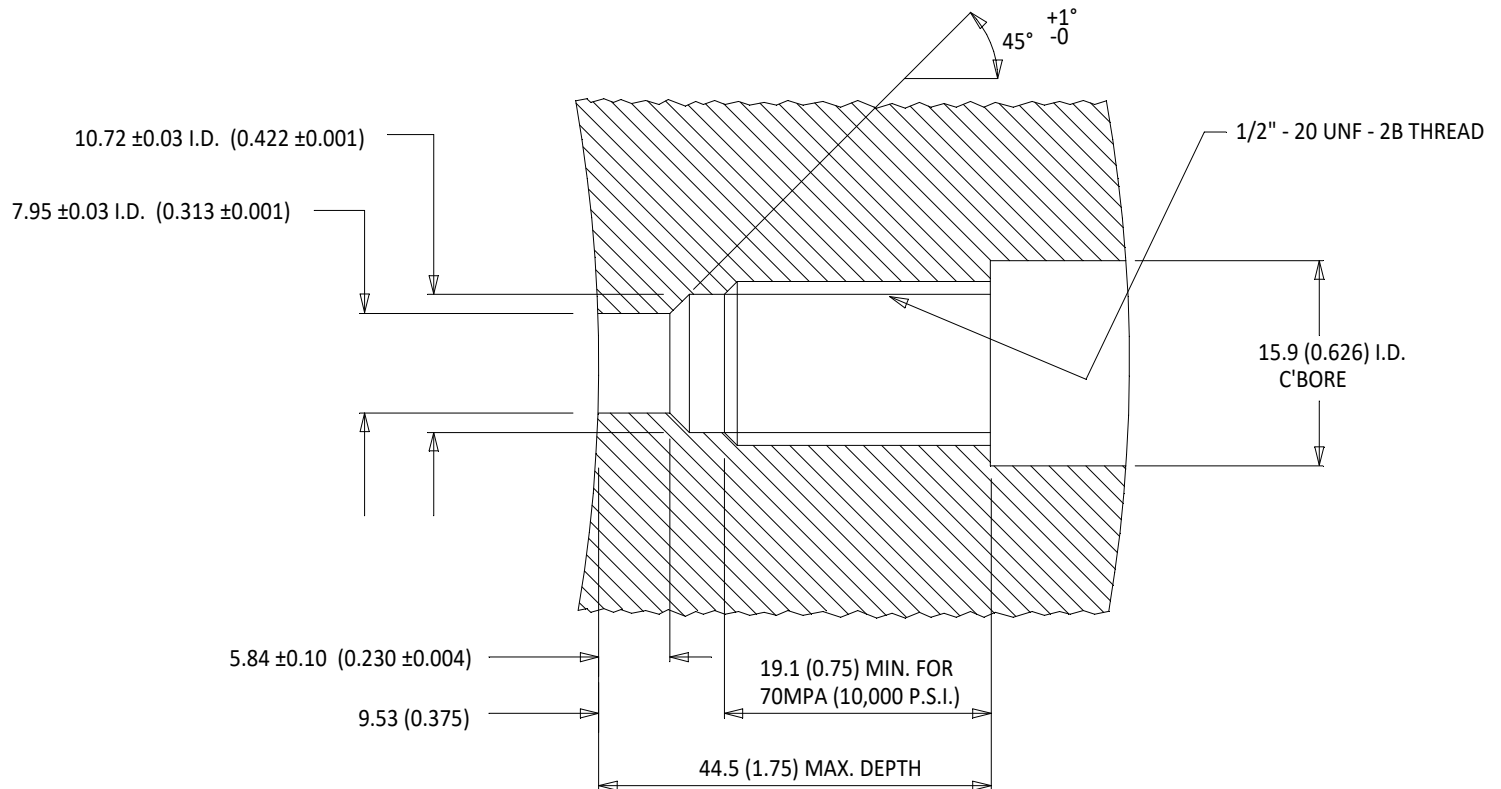




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### Recommended Port Dimensions:



NOTE! IMPERIAL DIMENSIONS IN BRACKETS

All diameters to be concentric to within 0.05 (0.002) T.I.R.