

Industrial Thermocouple Assemblies

Thermo-Couple Products company offers thermowell assemblies to in a wide variety of materials, lengths and diameters to meet your particular application conditions including: temperature, mechanical strength, corrosion, atmosphere, dry or liquid immersion; velocity of measured medium and length of service.

Included in our thermowell series are standardized wells of threaded, ANSI flanged, Van Stone and weld-in types.

Threaded wells are made in readily welded or brazed materials for installations requiring seal welding or brazing. The pipe thread provides the mechanical strength, the weld merely seals.

ANSI flanged wells consist of a bar-stock well which is permanently welded to a top quality flange. Standard construction uses primary "J" groove weld and a bevel groove secondary weld. Both welds are machined to produce a clean fillet. This double welded construction eliminates possibility of crevice corrosion since no open joints are exposed from either inside or outside the installation.

Socket weld types of wells can be installed easily by merely welding into place to form a clean and tight connection.

The insertion length "rule of thumb" of ten diameters is not always practical when installing thermowells. Care should be exercised to make certain that the sensitive tip is totally immersed into the medium being measured.

Above all, be sure that the dead

length — i.e. the length required to pass through walls, pipe fittings, etc. — is taken into account when choosing the necessary insertion length.

Our engineering staff is available to help you should you have further application questions.

Our tapered thermowells provide greater rigidity than straight shank styles. They are well-suited to applications of high fluid velocity.

The thermowells shown on the following pages are available in standard bore diameters of .260" for thermocouple elements to 14 gauge wire and .385" for thermocouple elements to 8 gauge wire. Both are suitable for use with metal sheathed elements of compatible diameters.



Explosion-proof gasket screw-cover head in either cast aluminum or cast iron, with a simplex or duplex terminal block as required.

Extension Assembly

Nipples and union in 1/2" standard weight steel.
Standard lengths are 4" and 6", with 3", 5", 7" and 8" also available.

Thermocouple Element Available in all calibrations and

Available in all calibrations and junctions. Choice of insulated metallic sheath or ceramic insulated element.

Thermowell or Protection Tube

Assemblies are available with either Thermowells, Protection Tubes, or Uniwell Designs.

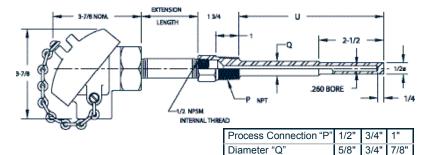


STANDARD THERMOWELL ASSEMBLY

Series 16000

- Thermowell has Step-Down Design
- Complete Thermocouple/ Thermowell Assembly
- Supplied with a Threaded Thermowell (.260" Bore)
- Explosion Proof Head is Standard





16000-	S - A			m, please fax your inquiry W2 - 3/4 -	
16000-	-]		

CODE	ASSEMBLY STYLE	
S	Simplex	
D	Duplex	
CODE HEAD MATERIAL		

Α	Aluminum
F	Cast Iron

CODE	EXTENSION CONFIGURATION
2	Head and Nipple Head and Nipple/Union/Nipple
4	Head and Nipple/Union/Nipple

CODE	EXTENSION LENGTH	
2	2"	
4	4"	
6	6"	
For other lengths consult factory		

CODE	ELEMENT
3	Simplex, with ceramic insulators
6	Simplex magnesium
	oxide insulated cable
7	Duplex, with ceramic insulators
8	Duplex, magnesium
	oxide insulated cable

Type 3 and 7 (non-spring loaded) are standard. Spring loading only available on Type 6 and 8.

CODE	WIRE CALIBRATION		
J	Iron/Constantan		
K	Chromel/Alumel		
Т	Copper/Constantan		
E	Chromel/Constantan		
R	Plat. 13% Rhod./Plat.		
S	Plat. 10% Rhod./Plat.		
В	Plat. 30% Rhod./Plat. 6% Rhod.		
For duplex calibrations please indicate			

double letters, example EE.

For more information, Consult the Selection Guide beginning on pg. 175

CODE	OTHER PERTINENT DATA	
0	NONE	
2	Spring Loaded	
999	Special Request	
	Consult Factory	

CODE	THERMOWELL INSERTION LENGTH "U"
2.5	2-1/2"
4.5	4-1/2"
7.5	7-1/2"
10.5	10-1/2"
13.5	13-1/2"
16.5	16-1/2"
22.5	22-1/2"
For other lengths consult factory	

	CODE	THERMOWELL MATERIAL	
	С	304 Stainless Steel	
	Н	316 Stainless Steel	
	M	Monel	
	S	Carbon Steel	
For other material consult fa		r material consult factory	

CODE	PROCESS
CODE	CONNECTION "P"
1/2	1/2" NPT
3/4	3/4" NPT
1	1" NPT

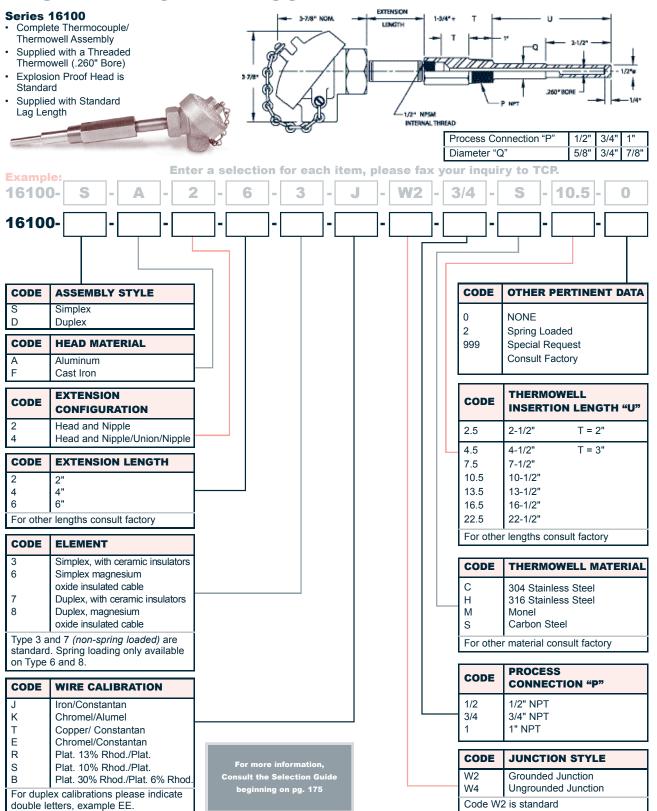
CODE	JUNCTION STYLE
W2	Grounded Junction Ungrounded Junction
W4	Ungrounded Junction
Code W:) is standard

Place appro box:

Metric Ord e rsWelcome
Place an **mm** in the
appropriate selection
box:
100 **mm**



LAG THERMOWELL ASSEMBLY

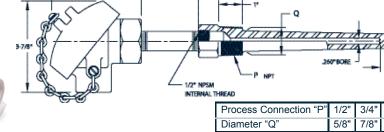


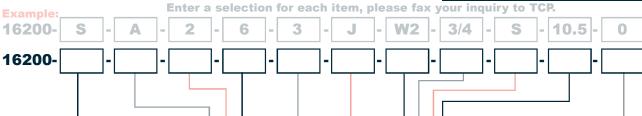


HEAVY DUTY THERMOWELL ASSEMBLY

Series 16200

- Tapered Design Provides Greater Rigidity than Straight Shank Design
- · Explosion Proof Head is Standard
- Supplied with a Threaded Thermowell (.260" Bore)





CODE	ASSEMBLY STYLE
S	Simplex
D	Duplex
CODE HEAD MATERIAL	

CODE	EXTENSION
F	Cast Iron
А	Aluminum

CODE	CONFIGURATION
2	Head and Nipple
4	Head and Nipple/Union/Nipple
· ·	

CODE	EXTENSION LENGTH
2	2"
4	4"
6	6"
For other lengths consult factory	

CODE	ELEMENT
3	Simplex, with ceramic insulators
6	Simplex magnesium
	oxide insulated cable
7	Duplex, with ceramic insulators
8	Duplex, magnesium
	oxide insulated cable
T 0 17/ 1 1 1 0	

Type 3 and 7 (non-spring loaded) are standard. Spring loading only available on Type 6 and 8.

CODE	WIRE CALIBRATION
J	Iron/Constantan
K	Chromel/Alumel
Т	Copper/ Constantan
E	Chromel/Constantan
R	Plat. 13% Rhod./Plat.
S	Plat. 10% Rhod./Plat.
В	Plat. 30% Rhod./Plat. 6% Rhod.
For duplex calibrations please indicate	

double letters, example EE.

For more information, Consult the Selection Guide beginning on pg. 175

CODE	OTHER PERTINENT DATA
0	NONE
2	Spring Loaded
999	Special Request
	Consult Factory

1-1/16"

CODE	THERMOWELL INSERTION LENGTH "U"
2.5	2-1/2"
4.5	4-1/2"
7.5	7-1/2"
10.5	10-1/2"
13.5	13-1/2"
16.5	16-1/2"
22.5	22-1/2"
For othe	r lengths consult factory

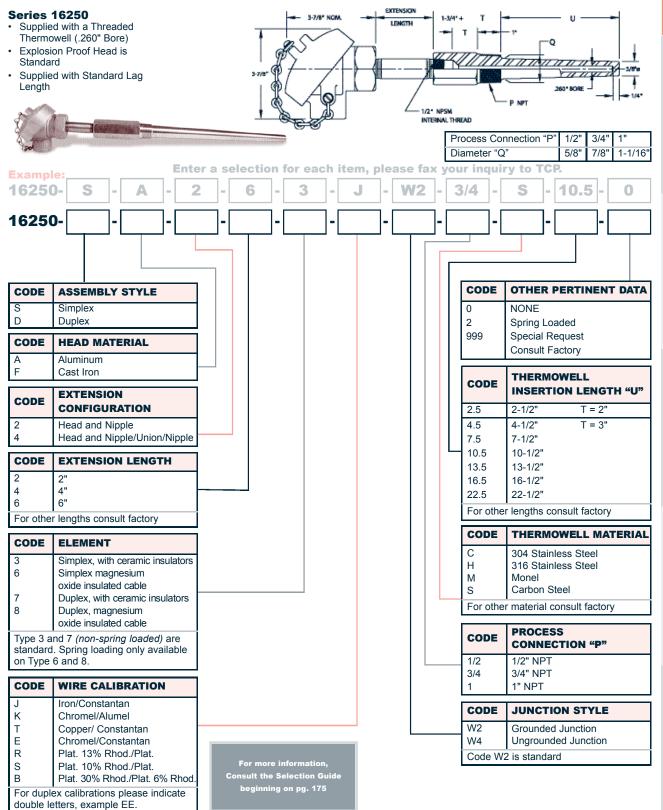
	CODE	THERMOWELL MATERIAL
	ω ⋈ π ∪	304 Stainless Steel 316 Stainless Steel Monel Carbon Steel
İ	For other	r material consult factory

CODE	PROCESS CONNECTION "P"
1/2	1/2" NPT
3/4	3/4" NPT
1	1" NPT
	1/2

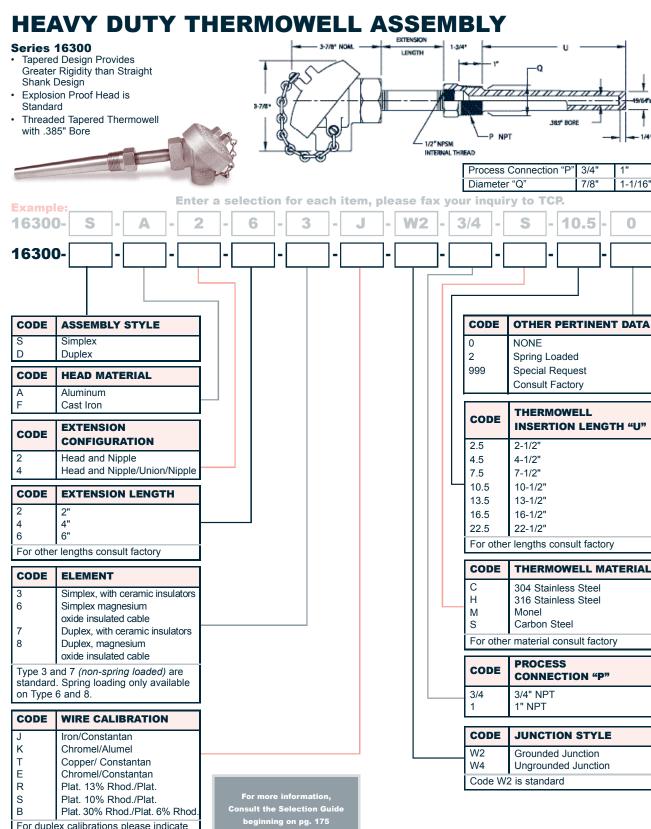
CODE	JUNCTION STYLE
W2	Grounded Junction
W4	Ungrounded Junction
Code W2	2 is standard



HEAVY DUTY LAG THERMOWELL ASSEMBLY







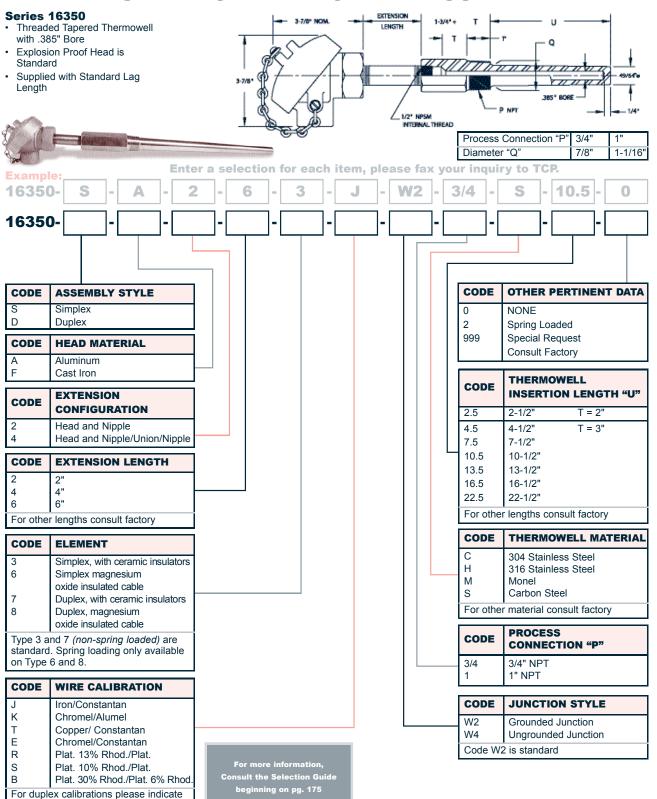
Plat. 30% Rhod./Plat. 6% Rhod.

For duplex calibrations please indicate

double letters, example EE.



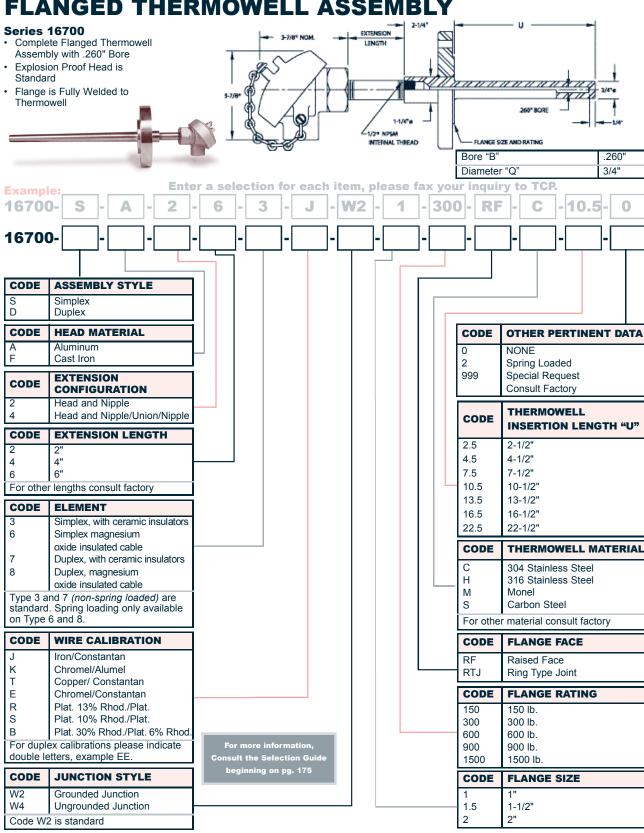
HEAVY DUTY LAG THERMOWELL ASSEMBLY



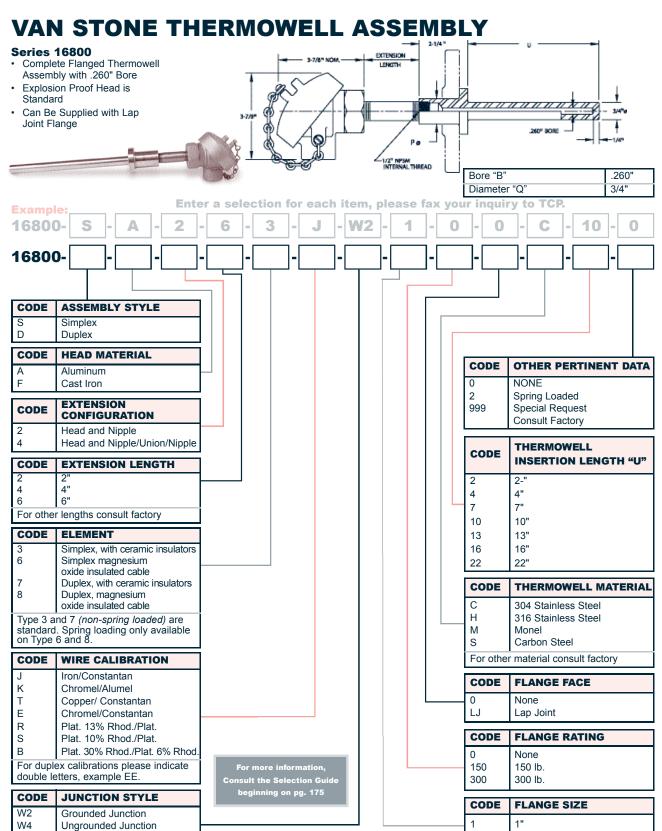
double letters, example EE.



FLANGED THERMOWELL ASSEMBLY







Code W2 is standard

1.5

1-1/2"



METAL PROTECTION TUBE ASSEMBLIES Series 17010 · Plain Protection tube Assembly · Ideal for Application Where Flow and Pressure Are Not a Major Concern 3-7/8 · Explosion Proof Head is Standard · Cost is Generally Lower than **Barstock Thermowells** selection for each item, please fax your inquiry to TCP. **Example:** 17010 -0 0 17010 CODE **ASSEMBLY STYLE** Simplex D Duplex **HEAD MATERIAL** CODE **OTHER PERTINENT DATA** Aluminum NONE Cast Iron Spring Loaded **EXTENSION** 999 Special Request CODE Consult Factory **CONFIGURATION** Head only CODE **INSERTION LENGTH "U"** 3 Head, Nipple and Union CODE **EXTENSION LENGTH** 0 No insertion length Head only (Extension length is zero) **OVERALL PROTECTION** CODE 4" nipple and union **TUBE LENGTH "L"** 6" nipple and union 6 12 CODE **ELEMENT** 18" 18 24 24" 3 Simplex, with ceramic insulators 6 Simplex magnesium 30 30" oxide insulated cable 36 36" Duplex, with ceramic insulators 48" 48 Duplex, magnesium 8 oxide insulated cable **PROTECTION TUBE SIZE** Type 3 and 7 (non-spring loaded) are **DIMENSIONS** CODE **PIPE SIZE** standard. Spring loading only available O.D. I.D. on Type 6 and 8. .840 .546 1/2", SCH 80 2 .840 1/2", SCH 40 .622 CODE **WIRE CALIBRATION** 3 1.050 .742 3/4", SCH 80 Iron/Constantan 1.050 3/4", SCH 40 .824 Κ Chromel/Alumel 5 1.315 .957 1", SCH 80 Copper/ Constantan 1.049 1", SCH 40 6 1.315 Chromel/Constantan Ε For duplex calibrations please indicate CODE **TUBE MATERIAL** double letters, example EE. Α Inconel CODE **JUNCTION STYLE** С 304 Stainless Steel

D

Н

S

446 Stainless Steel

316 Stainless Steel

Carbon Steel

W2

W4

Code W2 is standard

Grounded Junction

Ungrounded Junction



METAL PROTECTION TUBE ASSEMBLIES

Series 17020 3-7/8" NOM. Adjustable Flange Mounting Assembly ADJUSTABLE · Ideal for Application Where Flow and Pressure Are Not a Major 3-7/8 · Explosion Proof Head is Standard Cost is Generally Lower than **Barstock Thermowells** Enter a selection for each item, please fax your inquiry to TCP. **Example:** 17020-0 17020-CODE **ASSEMBLY STYLE** Simplex D Duplex **OTHER PERTINENT DATA** CODE CODE **HEAD MATERIAL** NONE Aluminum 0 Spring Loaded F Cast Iron Special Request 999 **EXTENSION** Consult Factory CODE CONFIGURATION Head only CODE **INSERTION LENGTH "U"** Head, Nipple and Union 3 0 No insertion length CODE **EXTENSION LENGTH OVERALL PROTECTION** CODE 0 Head only **TUBE LENGTH "L"** (Extension length is zero) 12 12" 4" nipple and union 18 18" 6 6" nipple and union 24" 24 ELEMENT 30" CODE 30 36 36" 3 Simplex, with ceramic insulators 48 48" 6 Simplex magnesium oxide insulated cable **PROTECTION TUBE SIZE** Duplex, with ceramic insulators **DIMENSIONS** 8 Duplex, magnesium CODE **PIPE SIZE** O.D. oxide insulated cable I.D. 1/2", SCH 80 .840 .546 Type 3 and 7 (non-spring loaded) are 1/2", SCH 40 2 .840 .622 standard. Spring loading only available 3 1.050 .742 3/4", SCH 80 on Type 6 and 8. 1 050 3/4", SCH 40 824 4 5 1.315 .957 1", SCH 80 CODE **WIRE CALIBRATION** 1.315 1.049 1", SCH 40 6 Iron/Constantan J CODE **TUBE MATERIAL** Chromel/Alumel Copper/ Constantan Т Inconel Е Chromel/Constantan С 304 Stainless Steel For duplex calibrations please indicate D 446 Stainless Steel double letters, example EE. Н 316 Stainless Steel S Carbon Steel

JUNCTION STYLE

Ungrounded Junction

Grounded Junction

CODE

Code W2 is standard

W2

W4

CODE

None

0

15

ADJUSTABLE FLANGE

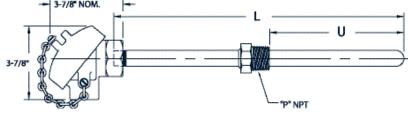
Adjustable Flange



METAL PROTECTION TUBE ASSEMBLIES

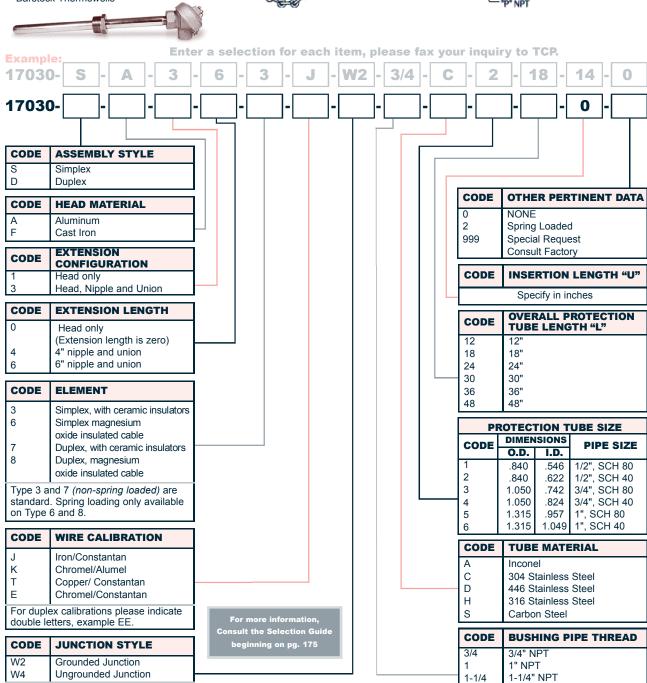
Series 17030

- Fixed Bushing Protection Tube Assembly
- Ideal for Application Where Flow and Pressure Are Not a Major Concern
- · Explosion Proof Head is Standard
- Cost is Generally Lower than Barstock Thermowells



1-1/2

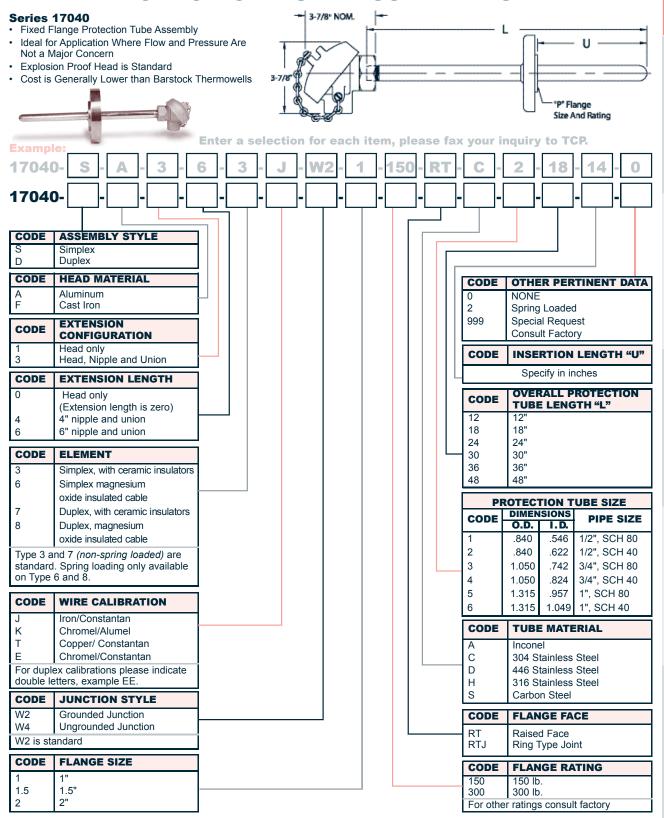
1-1/2" NPT



Code W2 is standard



METAL PROTECTION TUBE ASSEMBLIES

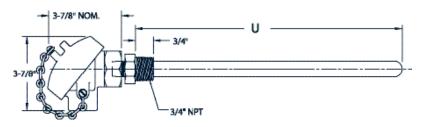




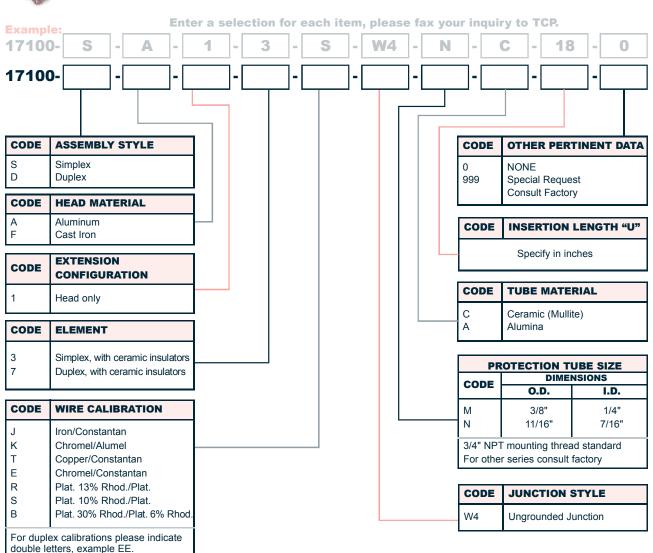
CERAMIC PROTECTION TUBE ASSEMBLIES

Series 17100

- Provides Better Protection in Hostile Environments than Metal Tubes
- Ceramic (2400°F) or Alumina (3000°F) Tubes are Offered
- For Use in Reducing and Oxidizing Atmospheres





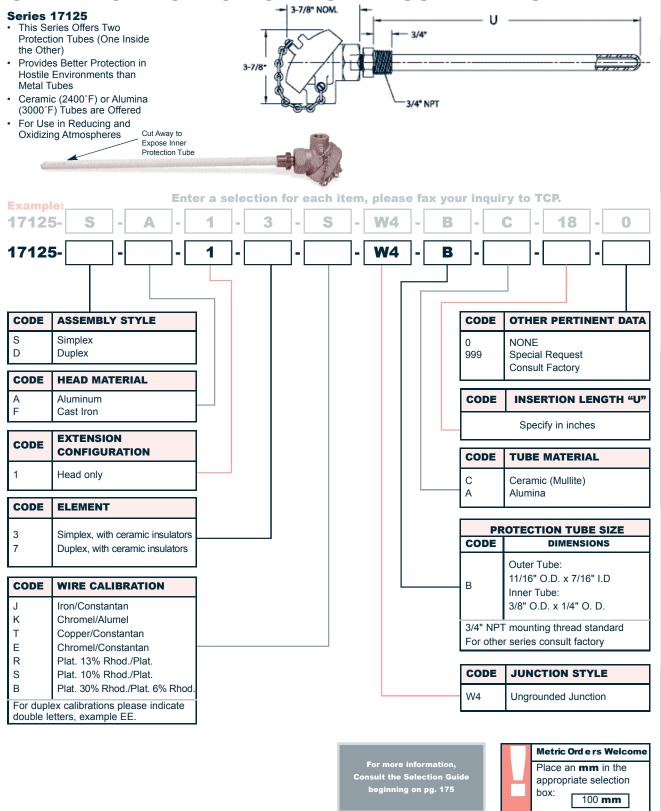


For more information, Consult the Selection Guide beginning on pg. 175





CERAMIC PROTECTION TUBE ASSEMBLIES



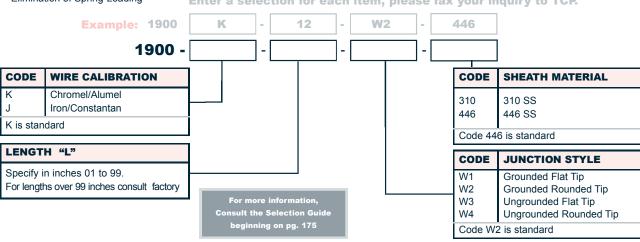


UNIWELL

- · Low Cost Alternative to Thermowell Assemblies
- Conductors Protected from Environment by Dense - Pack MgO and 446 SS Heavy Wall Sheath
- · Simplicity of Installation
- · Lower Conduction Losses
- · Long-Life, 14 Gauge Nominal Size Conductors
- · Elimination of Spring-Loading



Enter a selection for each item, please fax your inquiry to TCP.

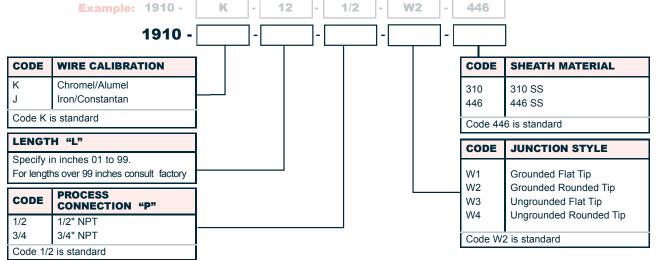


Series 1910

- Compression Fitting is Provided on this Series
- Conductors Protected from Environment by Dense - Pack MgO and 446 SS Heavy Wall Sheath
- · Simplicity of Installation
- · Lower Conduction Losses
- Long-Life, 14 Gauge Nominal Size Conductors
- · Elimination of Spring-Loading
- Low Cost Alternative to Thermowell Assemblies



Enter a selection for each item, please fax your inquiry to TCP.



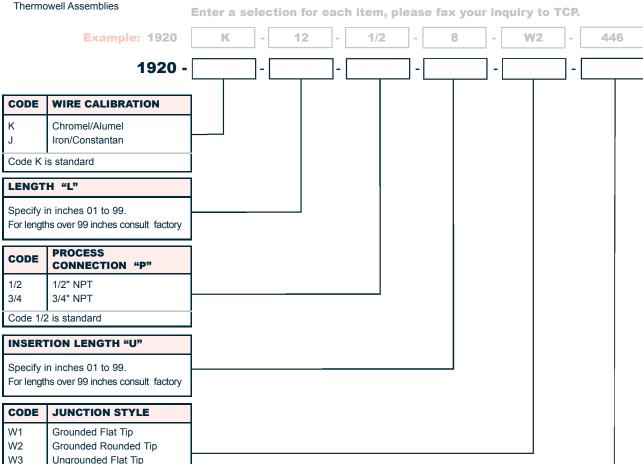


UNIWELL

Series 1920

- Fixed Fitting is Provided on this Series
- Conductors Protected from Environment by Dense - Pack MgO and 446 SS Heavy Wall
- Simplicity of Installation
- Lower Conduction Losses
- Long-Life, 14 Gauge Nominal Size Conductors
- · Elimination of Spring-Loading
- Low Cost Alternative to





CODE	JONCTION STILE
W1	Grounded Flat Tip
W2	Grounded Rounded Tip
W3	Ungrounded Flat Tip
W4	Ungrounded Rounded Tip
Code W2 is standard	

CODE	SHEATH MATERIAL
310 446	310 SS 446 SS
Code 446 is standard	

beginning on pg. 175



Metric Ord e rs Welcome

Place an **mm** in the appropriate selection box:

100 **mm**



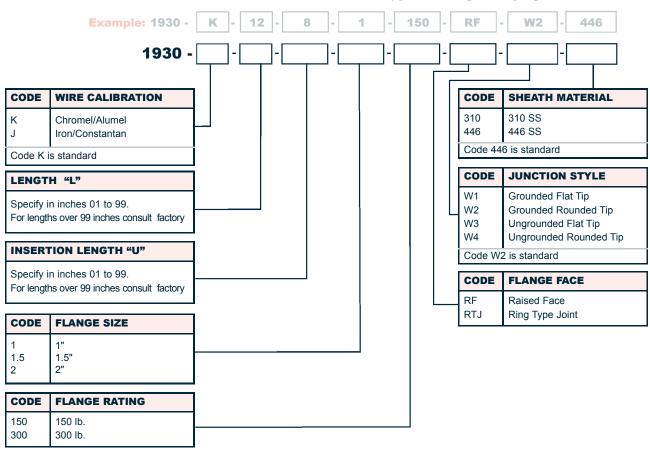
UNIWELL

Series 1930

- · Welded Flange Provided
- Conductors Protected from Environment by Dense - Pack MgO and 446 SS Heavy Wall Sheath
- · Simplicity of Installation
- · Lower Conduction Losses
- Long-Life, 14 Gauge Nominal Size Conductors
- · Elimination of Spring-Loading
- Low Cost Alternative to Thermowell Assemblies



Enter a selection for each item, please fax your inquiry to TCP.



For more information, Consult the Selection Guide beginning on pg. 175

