

Accessories

Hardware

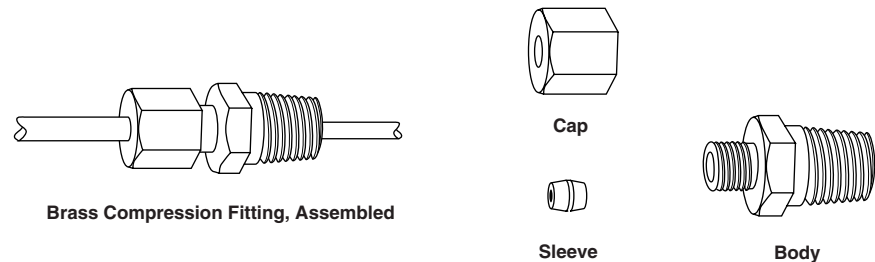
Sensor Mounting Fittings

Non-Adjustable Compression Type

Non-adjustable compression type fittings allow the exact immersion length to be set in the field at the time the sensor is installed. However, because the compression sleeve and sheath are deformed in application,

the fitting cannot be relocated along the sheath after tightening. When ordered as a part of a sensor for mounting the thermocouple, all compression type fittings are shipped finger-tight on the sheath.

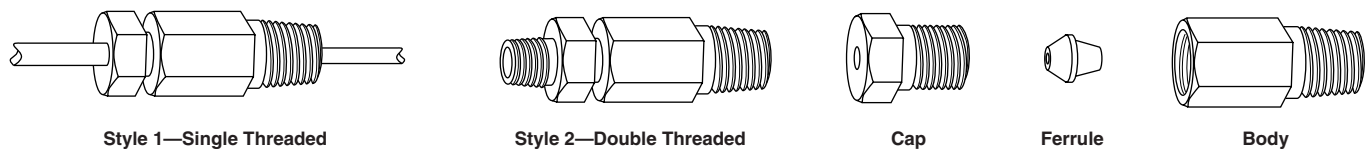
Brass Compression Fitting, Non-Adjustable



Part No.	Sheath O.D. in.	Material	Bore +0.10, -0.000 in.	Male NPT in.	Length in.
TH-185-2	0.125	Brass	0.130	1/8	1
TH-185-3	0.188	Brass	0.192	1/8	1 1/8
TH-185-4	0.250	Brass	0.256	1/8	1 1/8
TH-185-5	0.250	Brass	0.256	1/4	1 1/8
TH-185-6	0.313	Brass	0.318	1/4	1 1/8
TH-185-7	0.375	Brass	0.380	1/4	1 1/8
TH-185-9	0.250	Brass	0.256	1/2	1 1/8

Stainless Steel Compression Fitting, Non-Adjustable

Made entirely of 303 stainless steel.



Style 1—Single Threaded		Style 2—Double Threaded		Sheath O.D. in.	Bore ±0.001 in.	Male NPT in.	Hex Across Flats in.
Part No.	Length in.	Part No.	Length in.				
TH-2745-063	1 1/4	TH-2749-063	1 1/16	0.063	0.067	1/8	1/2
TH-2745-125	1 1/4	TH-2749-125	1 1/16	0.125	0.129	1/8	1/2
TH-2745-188	1 1/8	TH-2749-188	1 1/16	0.188	0.194	1/8	1/2
TH-2745-250	1 1/8	TH-2749-250	1 1/16	0.250	0.257	1/8	1/2

Note: All accessories subject to minimum purchase quantities.

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Sensor Mounting Fittings

Continued

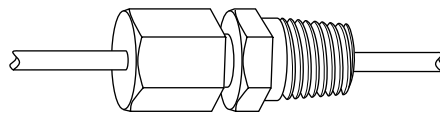
Adjustable Compression Type

Adjustable compression type fittings can be relocated at different positions along the sheath whenever changes in the immersion length are necessary. To relocate an adjustable compression fitting simply loosen the cap, slide the fitting to the new

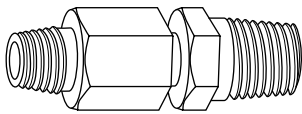
location and retighten the cap. It is recommended that lava sealant glands be replaced after each tightening. Neoprene and TFE sealant glands should withstand several relocations before replacement is necessary.

Stainless Steel Adjustable Compression Fitting

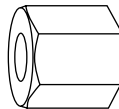
Except for their sealant glands, these fittings are made entirely of 303 stainless steel. Sealant glands are available in neoprene, -40 to 95°C (-40 to 200°F); lava, -184 to 540°C (-300 to 1000°F); TFE, -184 to 260°C (-300 to 500°F). Unless otherwise specified*, neoprene sealant glands will be furnished. Depending on temperature and sheath diameter, the fittings are pressure rated up to 3,000 psi.



Style 1—Single Threaded



Style 2 - Double Threaded



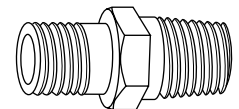
Style 1 Cap Shown



Follower



Sealant Gland

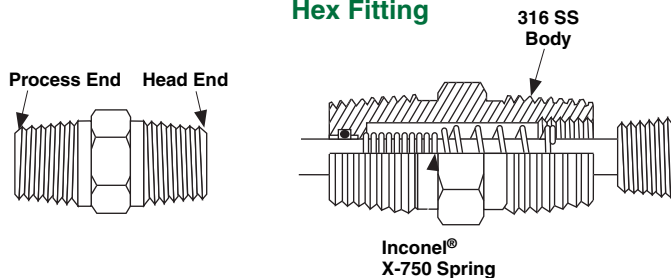


Body

Style 1—Single Threaded		Style 2—Double Threaded		Sheath O.D. in.	Bore +0.002 in.	Male NPT in.	Hex Across Flats in.	Replacement Sealant Glands, Neoprene
Part No.*	Length in.	Part No.*	Length in.					
TH-2747-N-063	1 ¼	TH-2751-N-063	1 ½	0.063	0.067	¼	½	TH-279-N-063
TH-2747-N-125	1 ¼	TH-2751-N-125	1 ½	0.125	0.136	¼	½	TH-279-N-125
TH-2747-N-188	1 ¼	TH-2751-N-188	1 ½	0.188	0.193	¼	½	TH-279-N-188
TH-2748-N-250	2 ⅞	TH-2752-N-250	3 ¼	0.250	0.257	¼	¾	TH-280-N-250
TH-2748-N-313	2 ⅞	TH-2752-N-313	3 ¼	0.313	0.316	¼	¾	TH-280-N-313
TH-2748-N-375	2 ⅞	TH-2752-N-375	3 ¼	0.375	0.386	¼	¾	TH-280-N-375

*If lava or TFE sealant glands are desired, substitute L or T in place of the N in the part number.

Adjustable Spring-Loaded Hex Fitting



The adjustable spring-loaded fitting has a stainless steel body and end cap, an Inconel® X-750 spring. Designed for use with 0.250 inch O.D. sheath thermocouples and RTDs.

Note: All accessories subject to minimum purchase quantities.

Inconel® is a registered trademark of the Special Metals Corporation.

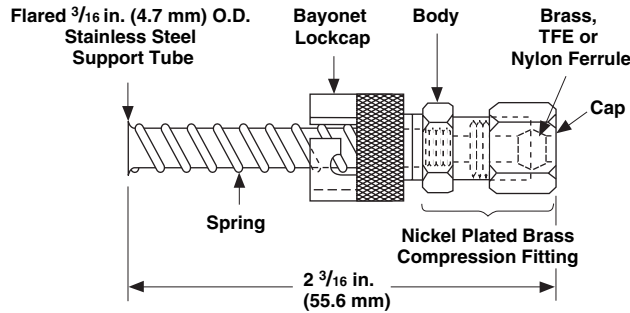
Part No.	Sheath			Male NPT in.	Hex Across Body Flats in.	Hex Across Cap Flats in.
	Length in.	O.D. in.	Material			
6556-250	2	0.250	316 SS	¼	¾	⅞

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Bayonet Fittings

Adjustable Bayonet Compression Fitting



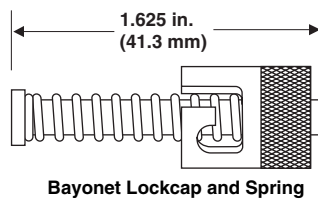
This fitting combines the features of the fixed bayonet fitting in a compact unit which does not require brazing to assemble.

The fitting is designed for 0.125 in. (3 mm) O.D. sensor and is available with either brass, TFE or nylon ferrules.

With either the TFE or nylon ferrules, this fitting may be relocated at different positions along the sheath whenever changes in the immersion length are necessary. Brass ferrules cannot be relocated once they are set.

Part No.	Description
TH-2762-BR	Adjustable bayonet fitting with brass ferrule
TH-2762-NY	Adjustable bayonet fitting with nylon ferrule
TH-2762-T	Adjustable bayonet fitting with TFE ferrule

Fixed Bayonet Fitting



Bayonet Lockcap and Spring

Part No.	Description
TH-2760	Lockcap, spring and spring stop

When used together, a bayonet fitting and bayonet adapter act as a spring-loading device for bottoming a thermocouple hot junction in a hole. The fitting is designed for use on 0.188 inch O.D. sensor. The TH-2760 includes the lockcap, spring and spring stop, which require brazing for assembly.

The adapter requires a tapped 1/8 inch NPT or 3/8 24 hole for mounting. All components are nickel plated steel.

Note: All accessories subject to minimum purchase quantities.

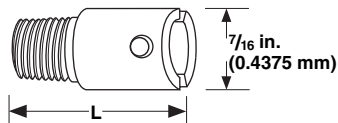
Accessories

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Bayonet Fittings

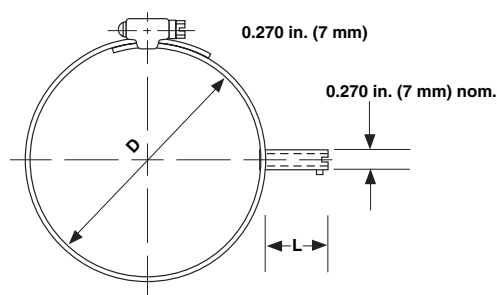
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Bayonet Adapter



Part No.	Description	L Length in.	Thread in.
TH-295-1	Bayonet Adapter	7/8	1/8
TH-295-2		1	1/8
TH-295-3		1 1/2	1/8
TH-295-4		2	1/8
TH-295-5		2 1/2	1/8
TH-298-1		7/8	3/8-24
TH-298-2		1 1/2	3/8-24

Pipe Clamp with Bayonet Adapter



The pipe clamp band with bayonet adapter is designed for use in conjunction with a bayonet style thermocouple. It allows temperature measurement without drilling or tapping. Thermocouple replacement is extremely fast and simple and is accomplished without disturbing the surroundings, such as pipe insulation.

1-2. Construction Code

90 = Pipe clamp band with bayonet adapter

3. "D" Clamp Band Diameter Range (inch)

- A = 1/8 to 1 1/4
- B = 1 1/4 to 2 1/4
- C = 2 1/4 to 3 1/4
- D = 3 1/4 to 4 1/4
- E = 4 1/4 to 5
- F = 5 to 6
- G = 6 to 7

4. "L" Bayonet Adapter Length inches

- 1 = 1 (use with thermocouple that has "B" dimension = 2 inch)
- 2 = 2 (use with thermocouple that has "B" dimension = 3 inch)

1 2 3 4
9 0

All combinations are available for next day shipment.

Note: All accessories subject to minimum purchase quantities.

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Transition Fittings and Accessories

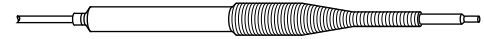
Watlow's complete line of stainless steel transition fittings offers durable, potted connections between XACTPAK® type sheathed thermocouple material and insulated wire. When the distance between the thermocouple and the instrument is known in advance, this type of assembly can be connected directly to your instrument, minimizing field installation time.

When making a sensor with a transition fitting, the thermocouple and connecting wires are first securely brazed together. The appropriate transition body is then positioned over the splice and either crimped or brazed to the sheath material. The transition body is then filled with a potting compound which effectively insulates and strengthens the splice.

A coiled spring strain relief on the 700 and 701 protects the connecting wire against sharp bends at the transition area.



702 Transition Fitting



700 or 701 Transition Fitting, Assembled
U.S. Patent Number 3,811,958



703 Heavy Duty Transition

Part No.	Sheath O.D. in.	Max. Dia. Extension Wire	Transition Body inches		Spring Strain Relief	Length Including Spring in.	Method of Attachment to Sheath
			O.D.	Length Less Spring (if any)			
702-020*	0.020	0.100	$\frac{5}{32}$	1	no	—	Braze
702-032	0.032	0.100	$\frac{5}{32}$	1	no	—	Braze
700-040*	0.040	0.136	$\frac{1}{4}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{4}$	Crimp or braze
702-040	0.040	0.100	$\frac{5}{32}$	1	no	—	Braze
700-063	0.063	0.136	$\frac{1}{4}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{4}$	Crimp or braze
701-063	0.063	0.210	$\frac{3}{8}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{2}$	Crimp or braze
702-063	0.063	0.100	$\frac{5}{32}$	1	no	—	Braze
700-125	0.125	0.136	$\frac{1}{4}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{4}$	Crimp or braze
701-125	0.125	0.210	$\frac{3}{8}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{2}$	Crimp or braze
701-188	0.188	0.210	$\frac{3}{8}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{2}$	Crimp or braze
701-250	0.250	0.210	$\frac{3}{8}$	$1 \frac{3}{16}$	yes	$2 \frac{1}{2}$	Crimp or braze
703-250	0.250	0.320	$\frac{1}{2}$	2	no	—	Braze

*Sleeved down from larger size to accept smaller O.D. sheath material.

Note: All accessories subject to minimum purchase quantities.

Accessories

Hardware

Transition Fittings and Accessories

Continued



TH-195 Stainless Steel Flexible Tubing



TH-213 or TH-249 Screw on Adapter Ferrule



TH-524 Crimp on Adapter Ferrule

Flexible Tubing and Adapter Ferrule

When it is desirable to protect the connection wire, either for a short distance at a connector or transition fitting, or for the full length, this stainless steel flexible tubing may be used. It can be used with either 700

or 701 SERIES transition fittings. An adapter ferrule is used in place of the coiled spring strain relief to firmly secure the flexible tubing to the transition body.

Part No.	Description
TH-195	Stainless steel flexible tubing, 0.188 inch I.D. x 0.265 inch O.D. (0.175 inch maximum wire size)
TH-195-PVC	Same as the TH-195 with extruded PVC overall
TH-213	Screw on adapter ferrule for code no. 701 transition
TH-249	Screw on adapter ferrule for code no. 700 transition
TH-524	Crimp on adapter ferrule for code no. 700 transition (may be used as a combination transition fitting and adapter ferrule on 0.250 inch O.D. XACTPAK)

Thermocouple Insulators and Accessories



Thermocouple insulators are usually selected for their ability to withstand elevated temperatures or to resist thermal shock. This listing groups SERV-RITE® thermocouple insulators in these classifications for convenient selection. Some sizes and lengths are available in more than one classification. The thermocouple insulators listed below are generally carried in stock for quick delivery. Other sizes can be made to suit individual requirements. Prices and delivery quoted upon request.

Mullite Insulators

- High temperature
- Low thermal expansion
- Good mechanical strength
- Maximum continuous temperature 1450°C (2640°F)
- Maximum intermittent temperature 1650°C (3000°F)

Oval—Double Hole

Part No.	AWG	Dimensions inches*			
		Width	Thickness	Bore	Length
372	8	0.468	0.281	0.156	3

Round—Double Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
376-1	18	0.156	0.046	1
376-3	18	0.156	0.046	3
377-12	16	0.250	0.062	12
333-12	22	0.125	0.031	12
333-24	22	0.125	0.031	24

*Nominal

Note: All accessories subject to minimum purchase quantities.

Accessories

Hardware

Thermocouple Insulators and Accessories

Mullite Insulators

Continued

Round—Four Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
360	12	0.312	0.093	1
378	18	0.187	0.046	1

Accessories

Code No.	Description	Dimensions inches*	
		I.D.	O.D.
339	Mullite hot junction cup	0.375	0.687

Steatite Insulators

- Excellent physical strength
- Poor heat shock resistance
- Good electrical properties
- Maximum continuous temperature 1000°C (1830°F)
- Maximum intermittent temperature 13000°C (2370°F)

Oval—Double Hole

Part No.	AWG	Dimensions inches*			
		Width	Thickness	Bore	Length
380	8	0.500	0.284	0.156	1
381-¼	14	0.313	0.187	0.080	¼
381-1	14	0.313	0.187	0.080	1
382-1	20	0.172	0.118	0.042	1
383-1	24	0.144	0.091	0.028	1

Round—Double Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
385-1	14	0.245	0.073	1
385-2	14	0.245	0.073	2
385-3	14	0.245	0.073	3
386	18	0.150	0.046	2

Ball and Socket Insulators—Fish Spine

Part No.	AWG	Dimensions inches*			No. Per lbs
		Width	Bore	Length	
349	4	0.54	0.240	0.54	160
344	8	0.26	0.156	0.26	1720
342	14	0.20	0.092	0.20	3100
341	16	0.17	0.068	0.17	5200
340-1	17	0.11	0.056	0.11	18160

*Nominal

Note: All accessories subject to minimum purchase quantities.

Accessories

Hardware

Thermocouple Insulators and Accessories

Continued

Cordierite Insulators

- Excellent thermal shock resistance
- Fair physical strength and electrical properties
- Maximum continuous temperature 1250°C (2280°F)
- Maximum intermittent temperature 1300°C (2370°F)

Round—Single Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
316	8	0.250	0.156	3

Round—Double Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
321	6	0.505	0.188	1
327	8	0.375	0.140	3
384		0.490	0.156	1
323	14	0.281	0.080	1
326		0.250	0.080	2 ½
328	16	0.187	0.062	1

Oval—Double Hole

Part No.	AWG	Dimensions inches*			
		Width	Thickness	Bore	Length
300	4	0.718	0.412	0.218	1
306	6	0.531	0.281	0.170	3
301		0.531	0.281	0.170	1
302		0.531	0.281	0.170	¾
303		8	0.437	0.250	0.156
311	0.437		0.250	0.156	¾
304	11	0.375	0.217	0.110	1
305		0.375	0.217	0.110	5
309	12	0.313	0.187	0.090	3

*Nominal

Alumina Insulators

- Excellent high temperature insulation
- Good electrical and mechanical properties
- Maximum continuous temperature 1650°C (3000°F)
- Maximum intermittent temperature 1815°C (3300°F)

Round—Double Hole

Part No.	AWG	Dimensions inches*		
		Diameter	Bore	Length
391-24	22	0.125	0.031	24

*Nominal

Note: All accessories subject to minimum purchase quantities.