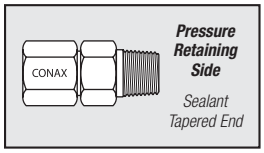
5001C
TG SERIES ■ BARE WIRE SEALING

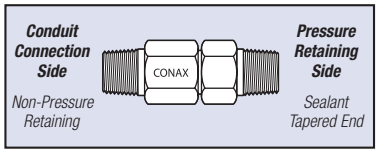
Conax Technologies Model TG (Transducer) Glands provide pressure/vacuum sealing of solid bare wire transducers, including thermocouples, strain gauges, thermistors and RTD leads; or bare solid conductors supplying current **at low voltage (millivolts)** through a pressure vessel to instrumentation within the vessel. Bare wire may be replaced with insulated solid wire with an equivalent outer diameter to provide a higher voltage capability (see TG24T on page 46).

In addition to electrical isolation, the TG gland seals against gases and liquids and resists element movements under pressure.

TG gland bodies with NPT threads or SAE threads are constructed from 303SST standard. Weld-neck style glands are constructed from 316LSST standard. Caps and followers on all styles are constructed from 303SST standard. Many optional materials are also available, including 316LSST, Inconel and more. For information on alterative materials, see page 9. Cap Style A offers a mounting thread only. Cap Style B provides threading on both ends for attachment to conduit or terminal heads. Alternative sealant materials are available. Please consult a Conax Technologies sales engineer for custom needs.



Type A has mounting thread only.



Type B has cap end threaded. B Cap NPT matches the standard mounting NPT.

- Temperature Range: -300˚ F to +1600˚ F (-185˚ C to +870˚ C)
- Pressure Range: Vacuum to 10,000 PSIG (690 bar) – see Pressure Ratings in Specifications Chart.
- Seals 1 to 16 Elements

Accessories

The replaceable sealant permits repeated use of the same fitting. Wires can be easily assembled or replaced in the field. Simply insert the element and torque the cap. To replace the sealant or wires, simply loosen the cap, replace the necessary items, relubricate and retorque the cap.

Glands are supplied factory lubricated. When reused, the glands should be relubricated to maintain published torque and pressure ratings. If glands are cleaned prior to assembly, they should be relubricated. On weld mount models, the heat from the welding process will destroy the lubricant. These models must also be relubricated prior to use. See page 103 for information on our lubrication kit.

Replacement Packing Sets are available. These consist of a sealant and four ceramic insulators. Replacement sealants may also be ordered separately (without insulators).

To order a Replacement Packing Set, order
RPS – (Gland) – (Wire Gauge) – (Number of Holes) – (Sealant)

Example: ***RPS-TG-20-2-V***

To order a Replacement Sealant only, order
RS – (Gland) – (Wire Gauge) – (Number of Holes) – (Sealant)

Example: ***RS-TG-20-2-V***

Catalog Numbering System

TG Gland
- **MTG**
- **TG**

Modifiers are added in parentheses to indicate optional mounting methods. See specifications chart for the proper modifiers.

Wire Gauge
- **24**
- **20**
- **18**
- **14**
- **8**

Cap Style
- **A – has mounting thread only**
- **B – has cap end threaded**

Number of Wires Sealed
- **1**
- **2**
- **3**
- **4**
- **6**
- **8**
- **16**
- **24**

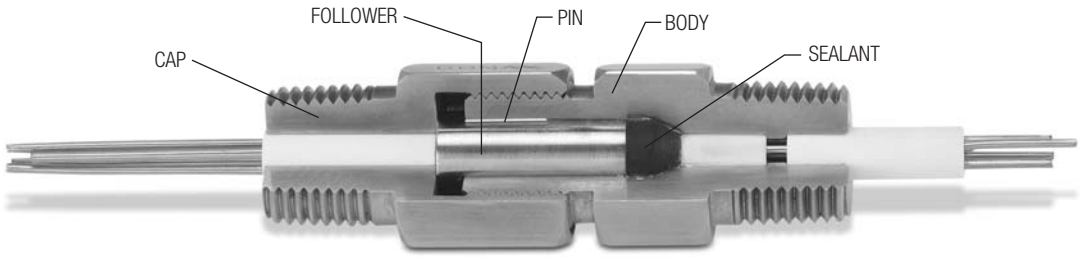
See the TG Selection Guide to determine the number of elements offered with each model.

Sealant
- **V – Viton**
- **N – Neoprene**
- **T – Teflon**
- **L – Lava**

Other sealant materials also available.

TG Gland / Wire Gauge / Cap Style / Number of Wires Sealed / Sealant

Example: ***TG-20-B2-N***



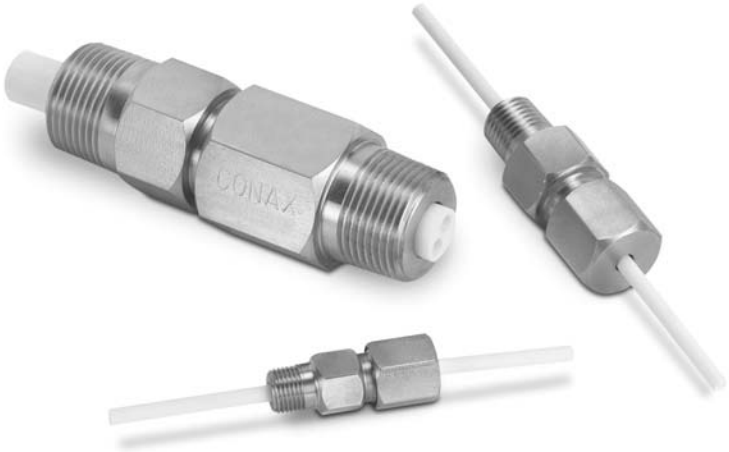
TG Selection Guide

Model	Wire Gauge	Number of Elements Offered							
		1	2	3	4	6	8	16	24
MTG	24		X		X				
	20		X		X				
	14	X							
TG	24		X		X				
	20		X		X	X	X	X	X
	18					X	X		
	14	X	X	X	X	X	X		
	8		X						

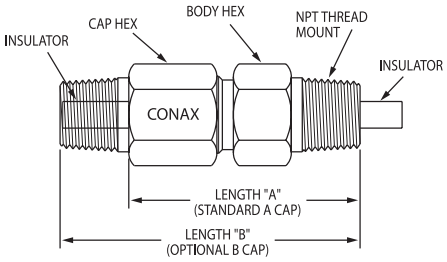
Note: The number of elements offered depends on the mounting port size. See the Specifications Charts on the subsequent pages for details.

Sealant Selection Guide

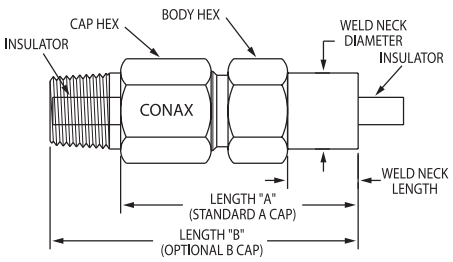
Material	Temperature Range
Lava (L)	-300˚ F to +1600˚ F (-185˚ C to +870˚ C)
Teflon (T)	-300˚ F to +450˚ F (-185˚ C to +232˚ C)
Neoprene (N)	-40˚ F to +200˚ F (-40˚ C to +93˚ C)
Viton (V)	-10˚ F to +450˚ F (-23˚ C to +232˚ C)



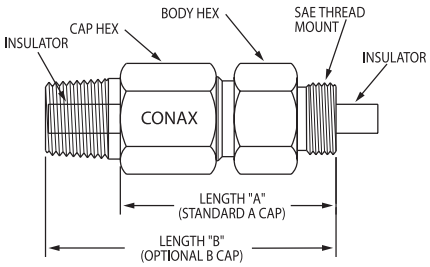
TG SERIES ■ BARE WIRE SEALING



Standard NPT



Weld Neck Mount



SAE Thread Mount

Catalog Number	Wire Gauge	Number of Wires	Length 'A' IN	Length 'A' MM	Length 'B' IN	Length 'B' MM	Hex Size Body IN	Hex Size Cap IN	Hex Size Body MM	Hex Size Cap MM	Pressure Rating Neoprene PSIG	Neoprene BAR	Viton PSIG	Viton BAR	Teflon PSIG	Teflon BAR	Lava PSIG	Lava BAR
MODEL MTG																		
Standard 1/8 NPT																		
MTG-24-2	24	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG-24-4	24	4	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG-20-2	20	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG-20-4	20	4	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG-14-1	14	1	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	8,000	551	8,000	551	8,000	551	8,000	551
Weld Neck Mount (Weld Mount Length 0.39", Diameter 0.405")																		
MTG(SWM1/S316L)-24-2	24	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG(SWM1/S316L)-24-4	24	4	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG(SWM1/S316L)-20-2	20	2	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG(SWM1/S316L)-20-4	20	4	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	10,000	689	10,000	689	10,000	689	10,000	689
MTG(SWM1/S316L)-14-1	14	1	1.38	34.9	1.75	44.5	0.500	0.563	12.7	14.3	8,000	551	8,000	551	8,000	551	8,000	551
SAE 7/16 -20 Thread Mount (formerly MS)																		
MTG(MSE4/)-24-2	24	2	1.70	43.2	2.06	52.3	0.688	0.563	17.5	14.3	9,138	630	9,138	630	9,138	630	9,138	630
MTG(MSE4/)-24-4	24	4	1.70	43.2	2.06	52.3	0.688	0.563	17.5	14.3	9,138	630	9,138	630	9,138	630	9,138	630
MTG(MSE4/)-20-2	20	2	1.70	43.2	2.06	52.3	0.688	0.563	17.5	14.3	9,138	630	9,138	630	9,138	630	9,138	630
MTG(MSE4/)-20-4	20	4	1.70	43.2	2.06	52.3	0.688	0.563	17.5	14.3	9,138	630	9,138	630	9,138	630	9,138	630
MTG(MSE4/)-14-1	14	1	1.70	43.2	2.06	52.3	0.688	0.563	17.5	14.3	8,000	551	8,000	551	8,000	551	8,000	551
MODEL TG																		
Standard 1/4 NPT																		
TG-24-2	24	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG-24-4	24	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG-20-2	20	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG-20-4	20	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG-14-1	14	1	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG with Optional 1/8 NPT																		
TG(PTM1/)-24-2	24	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM1/)-24-4	24	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM1/)-20-2	20	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM1/)-20-4	20	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM1/)-14-1	14	1	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
Weld Neck Mount (Weld Mount Length 0.59", Diameter 0.540")																		
TG(SWM2/S316L)-24-2	24	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM2/S316L)-24-4	24	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM2/S316L)-20-2	20	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM2/S316L)-20-4	20	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM2/S316L)-14-1	14	1	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	10,000	689	10,000	689	10,000	689	10,000	689
SAE 7/16 -20 Thread Mount (formerly MS)																		
TG(MSE4/)-24-2	24	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE4/)-24-4	24	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE4/)-20-2	20	2	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE4/)-20-4	20	4	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE4/)-14-1	14	1	2.00	50.8	2.63	66.7	0.750	0.750	19.1	19.1	9,138	630	9,138	630	9,138	630	9,138	630

** Hex size for the body and cap are the same unless a cap size is provided in parentheses.*
*** Weld neck models require lubrication prior to use.*

Conax TECHNOLOGIES

Rev. 02/09

Catalog Number	Wire Gauge	Number of Wires	Length 'A' IN	Length 'A' MM	Length 'B' IN	Length 'B' MM	Hex Size Body IN	Hex Size Cap IN	Hex Size Body MM	Hex Size Cap MM	Pressure Rating Neoprene PSIG	Neoprene BAR	Viton PSIG	Viton BAR	Teflon PSIG	Teflon BAR	Lava PSIG	Lava BAR
Standard 1/2 NPT																		
TG-20-6	20	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG-20-8	20	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG-18-6	18	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG-18-8	18	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG-14-2	14	2	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG-14-3	14	3	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG-14-4	14	4	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG with Optional 1/4 NPT																		
TG(PTM2/)-20-6	20	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM2/)-20-8	20	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM2/)-18-6	18	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM2/)-18-8	18	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(PTM2/)-14-2	14	2	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG(PTM2/)-14-3	14	3	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG(PTM2/)-14-4	14	4	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
Weld Neck Mount (Weld Mount Length 0.78", Diameter 0.840")																		
TG(SWM4/S316L)-20-6	20	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM4/S316L)-20-8	20	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM4/S316L)-18-6	18	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM4/S316L)-18-8	18	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	10,000	689	10,000	689	10,000	689	10,000	689
TG(SWM4/S316L)-14-2	14	2	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG(SWM4/S316L)-14-3	14	3	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
TG(SWM4/S316L)-14-4	14	4	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	10,000	689	8,000	551	10,000	689
SAE 3/4-16 Thread Mount (formerly MS)																		
TG(MSE8/)-20-6	20	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE8/)-20-8	20	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE8/)-18-6	18	6	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE8/)-18-8	18	8	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	9,138	630	9,138	630	9,138	630	9,138	630
TG(MSE8/)-14-2	14	2	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	9,138	630	8,000	551	9,138	630
TG(MSE8/)-14-3	14	3	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	9,138	630	8,000	551	9,138	630
TG(MSE8/)-14-4	14	4	2.63	66.7	3.38	85.7	1.000	1.000	25.4	25.4	8,000	551	9,138	630	8,000	551	9,138	630
Standard 3/4 NPT																		
TG-20-16	20	16	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	10,000	689	8,000	551	8,000	551	10,000	689
TG-20-24	20	24	2.88	73.0	3.63	92.1	1.250	1.500	31.8	38.1	NA	NA	7,200	496	2,800	193	10,000	689
TG-14-6	14	6	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	8,000	551	10,000	689
TG-14-8	14	8	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	10,000	689	10,000	689
TG-8-2	8	2	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	3,000	207	4,000	276	6,000	413	10,000	689
TG with Optional 1/2 NPT																		
TG(PTM4/)-20-16	20	16	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	10,000	689	8,000	551	8,000	551	10,000	689
TG(PTM4/)-14-6	14	6	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	8,000	551	10,000	689
TG(PTM4/)-14-8	14	8	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	10,000	689	10,000	689
TG(PTM4/)-8-2	8	2	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	3,000	207	4,000	276	6,000	413	10,000	689
Weld Neck Mount (Weld Mount Length 0.79", Diameter 1.050")																		
TG(SWM5/S316L)-20-16	20	16	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	10,000	689	8,000	551	8,000	551	10,000	689
TG(SWM5/S316L)-14-6	14	6	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	8,000	551	10,000	689
TG(SWM5/S316L)-14-8	14	8	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	8,000	551	10,000	689	10,000	689	10,000	689
TG(SWM5/S316L)-8-2	8	2	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	3,000	207	4,000	276	6,000	413	10,000	689
SAE 7/8-14 Thread Mount (formerly MS)																		
TG(MSE10/)-20-16	20	16	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	7,600	524	7,600	524	7,600	524	7,600	524
TG(MSE10/)-14-6	14	6	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	7,600	524	7,600	524	7,600	524	7,600	524
TG(MSE10/)-14-8	14	8	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	7,600	524	7,600	524	7,600	524	7,600	524
TG(MSE10/)-8-2	8	2	2.88	73.0	3.63	92.1	1.125	1.250	28.6	31.8	3,000	207	4,000	276	6,000	413	7,600	524

All pressure and torque ratings were determined at 68˚ F (20˚ C) using stainless steel rod as the element.
Pressure ratings may degrade at higher temperatures. Pressure rating guide values are provided for glands with elements restrained by the compressed sealant.
Higher pressure may be attained with additional element restraints. NA = Not Applicable

CAUTION: *When sealing on soft, fragile or crushable elements, catalog torques may not apply.*
When catalog torques are applied, compressed sealants generate considerable forces on the element to be sealed.
These forces could result in damaging soft or fragile elements such as coax cables or thin-wall materials.
Consult factory for these types of applications.

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