

Sealing Gland Assembly Instructions

High Temperature Transducer Seals Series

Models: TGF, TG24T

CAUTION: Conax Technologies sealing glands should be installed by suitably qualified personnel in accordance with relevant safety rules and with proper regard to safe working practices.

Conax Technologies sealing glands have lubricant applied at the factory. Substitution of factory-supplied lubricant will affect seal integrity. Lubrication prevents thread galling and minimizes friction between mating metallic components to maximize sealing gland performance when a catalog-specified torque is applied. Weld mount models should be relubricated after the body is welded in place. If the gland has been cleaned before assembly, it should also be relubricated prior to assembly.

Lubricant should be used any time a sealing gland assembly is opened for replacement or adjustment of the probe(s), wires or sealant. By re-lubricating the gland body threads and load bearing surface of the cap, proper load transfer (sealant compression) can be achieved. See page 16 for lubrication instructions.

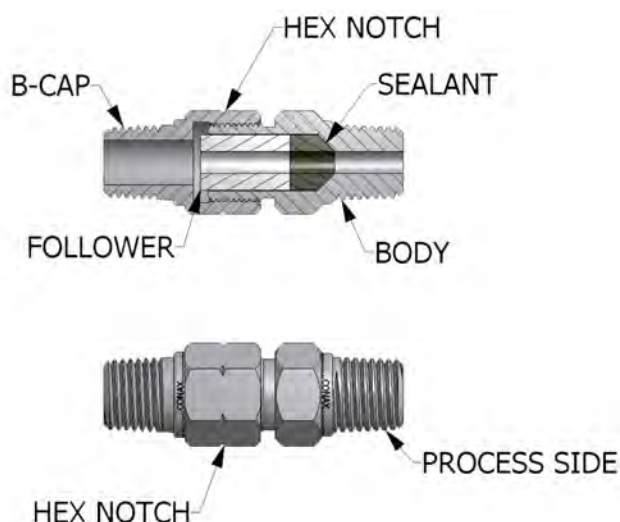
Conax Technologies recommends the use of thread sealant tape or dopant on NPT threads during installation of the gland to the vessel.

Flange mounted glands should be assembled prior to mounting to the vessel.

A Note on B Caps:

When using a sealing gland assembly with a B Cap, it is sometimes easy to confuse which NPT thread screws into the process side. If installed backwards, leakage will occur between the cap and body straight thread.

A hex notch (as shown below) has been added to the cap to simplify identification. When properly installed, the hex notch will appear on the non-process side of the assembly.



Please Note: Glands previously purchased may have "Conax" engraved on a cap hex surface in lieu of the hex notch. When properly installed the lettering will appear on the non-process side of the assembly (the cap). Please consult the factory with any questions before installing.

Guidelines for Sealant Replacement

Conax Technologies recommends the following procedures to facilitate sealant replacement:

1. Ensure that all system pressurization has been removed before beginning sealant replacement.
2. Untorque and remove the sealing gland cap.
3. Remove the follower and sealant. Depending on the application, the element may also need to be removed.

Follower Removal: Tight manufacturing tolerances are used between the follower OD and the bore of the sealing gland body. As the follower is extracted, a vacuum can be created between the follower and sealant, making it difficult to remove the follower by hand. It may be necessary to clamp the exposed portion of the follower with pliers or a similar tool to gain the additional clamping force needed to remove the follower. If this is necessary, take care to avoid damage to the follower.

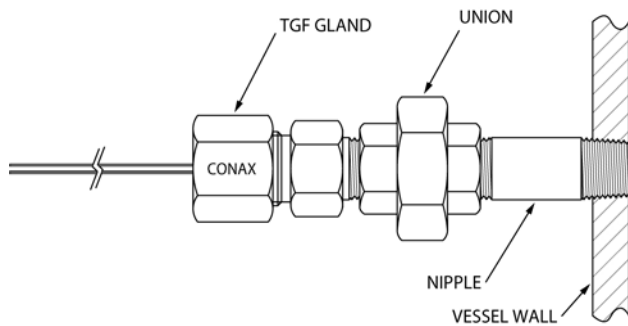
Sealant Removal: Teflon, Neoprene, and Viton sealants can generally be removed in one piece. Grafoil and Lava Sealants must be removed in multiple pieces, using a rigid "picking" instrument to break apart the sealant. During this process, be careful to avoid damage to the sealing gland body. Deep scratches or gouges may result in potential leak paths during future use of the gland assembly.

4. Thoroughly clean the internal configuration of the sealing gland body with de-ionized water or cleaning alcohol (depending on the application) to remove any sealant residue.
5. Reassemble per applicable assembly instructions.

Model TGF – TG Assembly with High Temperature Wire
Model TG24T – TG Assembly with 24AWG Teflon
Insulated Wire

Model TGF and TG24T series sealing glands are shipped from the factory already torqued to the correct value and ready for installation. These instructions are provided for installation of the assembled gland. In the event you choose to disassemble and need to reassemble the gland, see the instructions for the MHC Series.

When using a weld mount, the gland must be disassembled prior to welding to protect the sealant.



Recommended Method Using a Nipple-Union

Required Materials: Pipe Nipple, Schedule 40, Carbon Steel or Stainless Steel Union, 150 lb., Carbon Steel or Stainless Steel

For longer length lead wires, this mounting method eliminates additional stress and potential wire entanglement caused by the rotation of the wires during the mounting operation.

1. Install the nipple and half union assembly into the vessel wall.
2. Uncoil and straighten the leads on the pressure side of the gland.
3. Thread the mating half of the union over the leads.
4. Assemble the union onto the mounting thread of the sealing gland. Use the gland body flats to hold/secure the gland while mating the gland with the union.
5. Pass the leads through the nipple-union assembly mounted on the vessel wall.
6. Position the two parts of the union and assemble the nipple-union assembly.
7. Remove wire markers on the process side after installation, as the adhesive-backed material could contaminate the process (depending on the application).

TGF Series Torque Requirements

Catalog Number	Number of Holes	Viton-Teflon	
		(ft-lbs)	(N-m)
MTG-F	2,4	72-78 in-lbs	8-9
TG-24F	2,4	10-12	13-16
TG-20F	2,4	10-12	13-16
TG-20F-14	2,4	25-30	34-40
TG-20F	6,8	25-30	34-40
TG-20F	16	60-65	81-88
TG-20F	24	70-75	95-102

TG24T Series Torque Requirements

Catalog Number	Number of Holes	Torque for Teflon Sealant w/ T/C Wire Except Type T		Torque for Grafoil Sealant and Teflon w/ Copper or Type T Wire	
		(ft-lbs)	(N-m)	(ft-lbs)	(N-m)
MTG-24T	2,4	20-25	24-34	72-78 in-lbs	8-9
TTG-24T	2,4	30-35	40-47	10-12	13-16
TG-24T	6,8	50-55	67-74	25-30	34-40
TG-24T	12,16	75-85	102-115	60-65	81-88
TG-24T	24	95-100	129-136	70-75	95-102

Optional Method for TG24T

1. Uncoil and straighten the leads on the pressure side.
2. Pass the leads through the mounting thread port on the vessel.
3. Screw/tighten the gland into the vessel. Apply the wrench to the gland body flats, not the cap.
4. Remove wire markers on the process side after installation, as the adhesive-backed material could contaminate the process (depending on the application).

***See next page for lubricant application instructions.**

Lubricant Application Instructions

Conax Technologies sealing glands have lubricant applied at the factory. Substitution of factory-supplied lubricant will affect seal integrity. Lubrication prevents thread galling and minimizes friction between mating metallic components to maximize sealing gland performance when a catalog-specified torque is applied. Lubrication should be used any time a sealing gland assembly is opened for replacement or adjustment of the probe(s), wires or sealant. By re-lubricating the gland body threads and load bearing surface of the cap, proper load transfer (sealant compression) can be achieved.

Lubricant kits are available from Conax Technologies in convenient, single application, disposable packages with the applicator included. Conax Technologies recommends use of this lubricant to ensure gland performance.

Hex-Style Sealing Glands MK Series

1. Apply a small amount of lubricant, a tear drop equivalent, in two to three places, equally spaced, to the ferrule top. Refer to Figure 1.
2. Apply a single line of lubricant to the full length of the straight thread on the cap. Refer to Figure 1.
3. Assemble the sealing gland per MK sealing gland instructions.

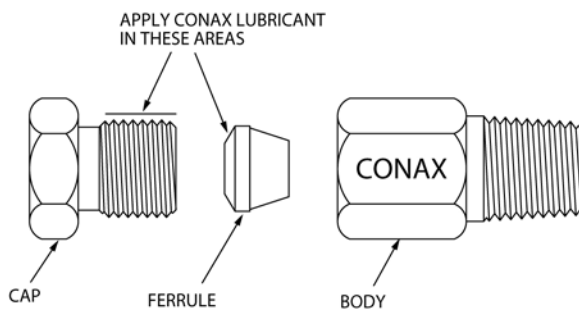


Figure 1

PG, MHM, MHC, TG, PL, EG, EGT, SPG, DSPG, PGS and BSWS Series

1. Apply a small amount of lubricant, tear drop equivalent, in two to three places, equally spaced, to the top of the follower. Do not allow the lubricant to directly contact the sealant or the elements you are sealing. Refer to Figure 2.

2. Apply a single line of lubricant to the full length of the straight thread on the gland body. Refer to Figure 2.
3. Assemble the sealing gland per applicable sealing gland instructions.

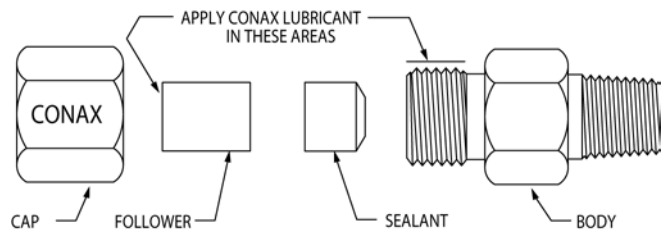


Figure 2

Flange-Cap Style Sealing Glands PG, MHM, EG and EGT Series

1. Apply a small amount of lubricant, tear drop equivalent, in two to three places, equally spaced, to the underside of the hex cap screw on each of the six (6) hex cap screws. Do not allow the lubricant to directly contact the sealant or the elements you are sealing. Refer to Figure 3.
2. Apply a single line of lubricant to the full thread length on each of the six (6) hex head screws. Refer to Figure 3.
3. Assemble the sealing gland. Apply torque per applicable gland chart.

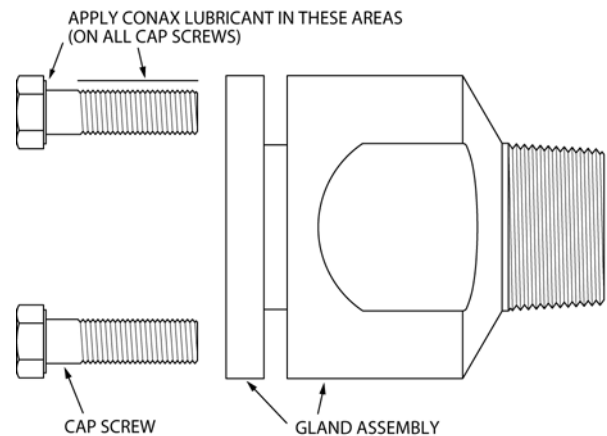


Figure 3

CAUTION: Lubricant may cause mild eye irritation. Do not use for lubrication of aluminum or magnesium parts.

This product is not an OSHA hazardous material, as defined in 29 CFR 1910.120. This product contains CAS #9002839, Ethene, chlorotrifluoro-homopolymer. 24-Hour Emergency Phone 1-800-733-3665. HMIS Rating System: Health 0, Flammability 0, Reactivity 1. For industrial use only.



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