

Sealing Gland Assembly Instructions Electrode Teflon/Peek Series

Models: **EGT/HEGPK Series, EGT-1000**

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.

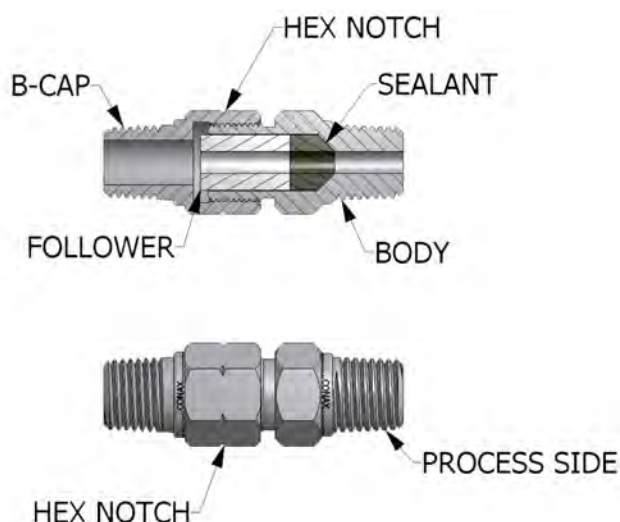
Conax Technologies recommends the use of thread sealant tape or dopant on NPT threads during installation of the gland to the vessel.

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.

For Hex-Style EGT/HEGPK Series:

EGT and HEGPK series sealing glands are shipped from the factory already torqued to the correct value and ready for installation. These instructions are provided in the event you choose to disassemble and need to reassemble the gland or if you provide your own electrode. When using a weld mount, the gland must be disassembled prior to welding to protect the Teflon sealant.

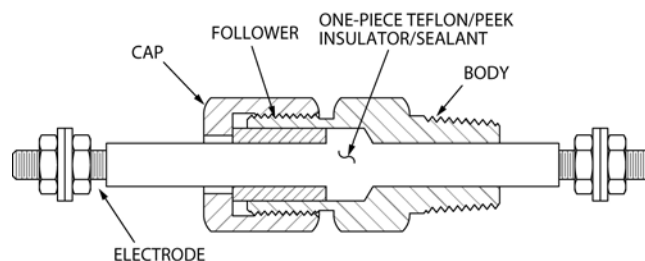
For assembly separate from the vessel:

1. Thread the Teflon/PEEK sealant/insulator over the electrode.
The tapered end must face the process (see diagram).
2. Insert the sealant/insulator and electrode as assembled into the gland body until the sealant/insulator is stopped by the shoulder in the gland. Hold the electrode to prevent it from dropping through the body.
3. Insert the follower.
4. Thread the cap onto the body until finger tight.
5. Secure the gland body into a vice.
6. Adjust the electrode to the correct position ensuring that the sealant/insulator is firmly seated.
7. Using a torque wrench, tighten the cap to the specified torque (see chart).
8. Install the nuts and washers on the non-process side of the assembly.
9. Mount the assembly to the vessel. Apply a wrench to the gland body flats – not the cap – when mounting to the vessel.
10. Install the nuts and washers on the process side of the assembly.
11. Make the appropriate electrical connections to the electrode using ring-tongue, lug-type or spade terminals. These are positioned between the washers. The nuts should be tightened securely.
12. The assembly is now ready for use.

For assembly directly into a vessel:

1. Mount the gland body into the vessel wall. This may be done by threading or welding, depending on the mounting style. When using a weld mount, the gland must be disassembled prior to welding to protect the sealant.
2. Thread the Teflon/PEEK sealant/insulator over the electrode. The tapered end must face the process (see diagram).
3. Insert the sealant/insulator and electrode as assembled into the cap thread end of the gland body until the sealant/insulator is stopped by the shoulder in the gland. Hold the electrode to prevent it from dropping through the body.
4. Insert the follower.
5. Thread the cap onto the body until finger tight.
6. Adjust the electrode to the correct position ensuring that the sealant/insulator is firmly seated and aligned.

7. Apply a backer wrench to the gland body flats to prevent rotation during torquing.
8. Adjust the electrode to the correct position ensuring that the sealant/insulator is firmly seated and aligned.
9. Apply a backer wrench to the gland body flats to prevent rotation during torquing.
10. While holding the backer wrench firmly in place, use a torque wrench to tighten the cap to the specified torque (see chart).
11. Install the nuts and washers on the non-process side of the assembly.
12. Install the nuts and washers on the process side of the assembly.
13. Make the appropriate electrical connections to the electrode using ring-tongue, lug-type or spade terminals. These are positioned between the washers. The nuts should be tightened securely.
14. The assembly is now ready for use.



EGT/HEGPK Series Torque Requirements

	Teflon		PEEK	
	(ft-lbs)	(N-m)	(ft-lbs)	(N-m)
EGT-093	5-6	6-8	—	—
EGT/HEGPK-125	10-15	13-20	30	40
EGT/HEGPK-187	25-30	34-40	70	95
EGT/HEGPK-250	25-30	34-41	70	95
EGT/HEGPK-375	35-40	47-54	180	244
EGT/HEGPK-500	35-40	47-54	180	244
EGT-750	75-80	102-108	—	—

For EGT-1000 (Flange-Cap)

EGT series sealing glands are shipped from the factory already torqued to the correct value and ready for installation. These instructions are provided in the event you choose to disassemble and need to reassemble the gland or if you provide your own electrode. When using a weld mount, the gland must be disassembled prior to welding to protect the Teflon sealant.

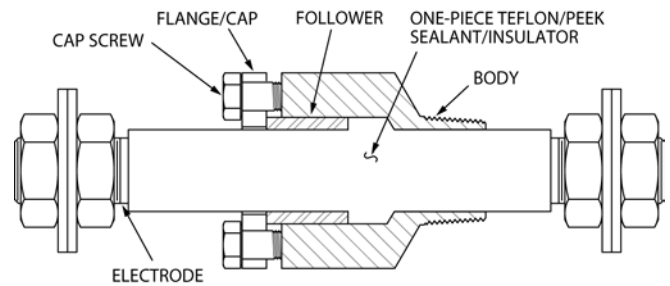
For assembly separate from the vessel:

1. Thread the Teflon sealant/insulator over the electrode. The tapered end must face the process (see diagram).
2. Insert the sealant/insulator and electrode as assembled into the gland body until the sealant/insulator is stopped by the shoulder in the gland. Hold the electrode to prevent it from dropping through the body.
3. Insert the follower.
4. Slide the flange/cap into place after the follower.
5. Thread the 6 cap screws in place and finger tighten.
6. Secure the gland body into a vice.
7. Adjust the electrode to the correct position ensuring that the sealant/insulator is firmly seated.
8. Use a torque wrench to tighten the cap screws to 54-60 in-lbs (6-7 N-m) per bolt. The cap screws should be progressively tightened in the order 1-4-2-5-3-6.
9. Install the nuts and washers on the non-process side of the assembly.
10. Mount the assembly to the vessel. Apply a wrench to the gland body flats when mounting to the vessel.
11. Install the nuts and washers on the process side of the assembly.
12. Make the appropriate electrical connections to the electrode using ring-tongue, lug-type or spade terminals. These are positioned between the washers. The nuts should be tightened securely.
13. The assembly is now ready for use.

For assembly directly into a vessel:

1. Mount the gland body into the vessel wall. This may be done by threading or welding, depending on the mounting style. When using a weld mount, the gland must be disassembled prior to welding to protect the sealant.
2. Thread the Teflon sealant/insulator over the electrode. The tapered end must face the process (see diagram).
3. Insert the sealant/insulator and electrode as assembled into the gland body until the sealant/insulator is stopped by the shoulder in the gland. Hold the electrode to prevent it from dropping through the body.
4. Insert the follower.
5. Slide the flange/cap into place after the follower.
6. Insert the 6 cap screws in place and finger tighten.
7. Adjust the electrode to the correct position ensuring that the sealant/insulator is firmly seated and aligned.

8. Use a torque wrench to tighten the cap screws to 54-60 in-lbs (6-7 N-m) per bolt. The cap screws should be progressively tightened in the order 1-4-2-5-3-6.
9. Install the nuts and washers on the non-process side of the assembly.
10. Install the nuts and washers on the process side of the assembly.
11. Make the appropriate electrical connections to the electrode using ring-tongue, lug-type or spade terminals. These are positioned between the washers. The nuts should be tightened securely.
12. The assembly is now ready for use.



*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.

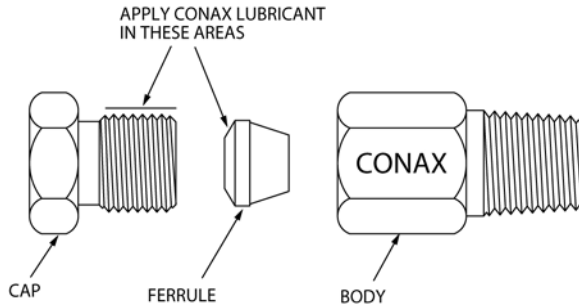


Figure 1

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.

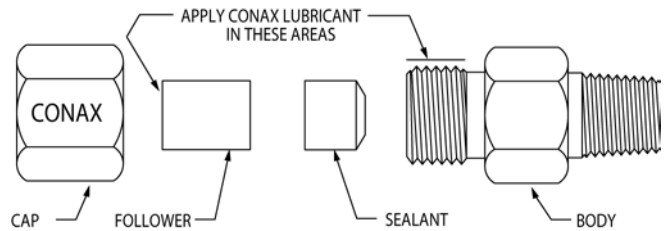


Figure 2

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.

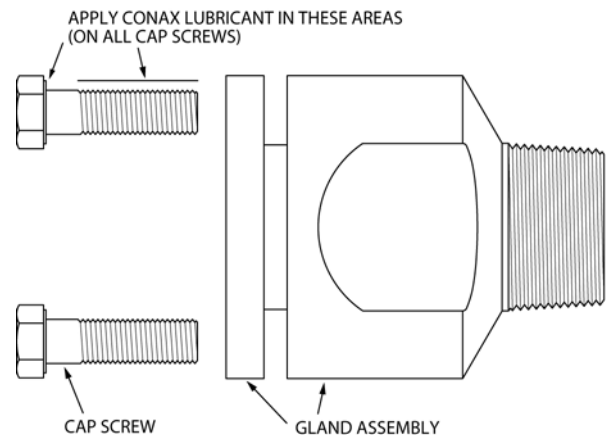


Figure 3

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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