

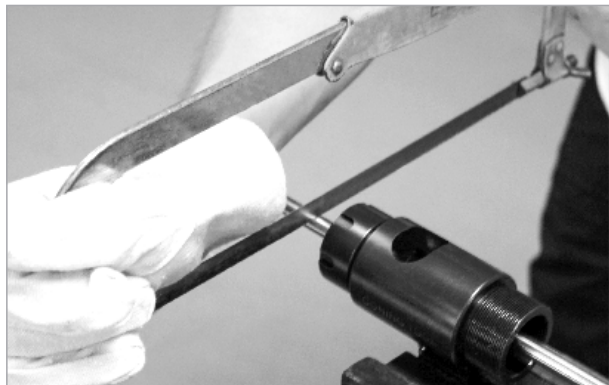
Installation of Medium & High Pressure Coned and Threaded Connections

1. Cut off tubing to desired length and deburr ends.

Note: When cutting tubing with abrasive cutting off wheel, tubing should not be over heated effecting material properties.

Tips: The housing assemblies of manual coning tool can be used to clamp the tubing.

Suitable manual reseating tool can help to deburr ends.



The length L can calculate by this way:

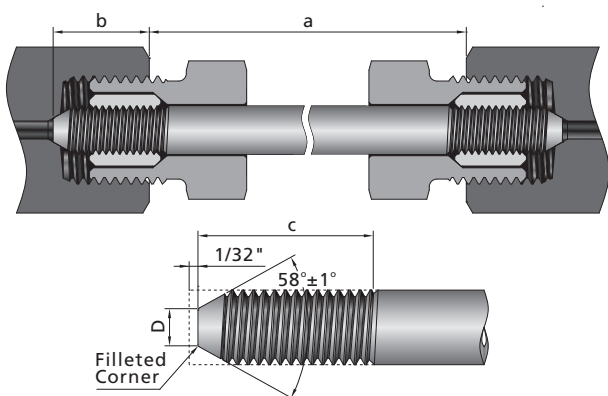


Fig.1

$$L = a + 2b + 2 \times 1/32''$$

L: Tubing length

a: Component distance

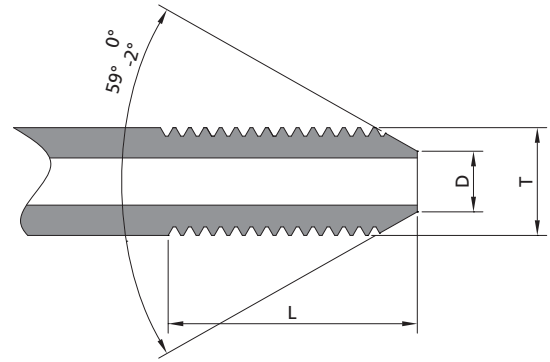
b: Tubing engagement (please see the table below)

1/32": Standard face distance per tubing

Rated Pressure psig (bar)	Connection Type	Tube O.D. x I.D. in.	b in.(mm)
20000 (1379)	MF4	1/4 x 0.109	0.55(13.97)
	MF6	3/8 x 0.203	0.69(17.53)
	MF9	9/16 x 0.312	0.84(21.34)
60000 (4137)	HF4	1/4 x 0.083	0.50(12.70)
	HF6	3/8 x 0.125	0.69(17.53)
	HF9	9/16 x 0.188	0.84(21.34)

2. Process the tube end into the structure as shown on the right. For dimensions please see the table below.

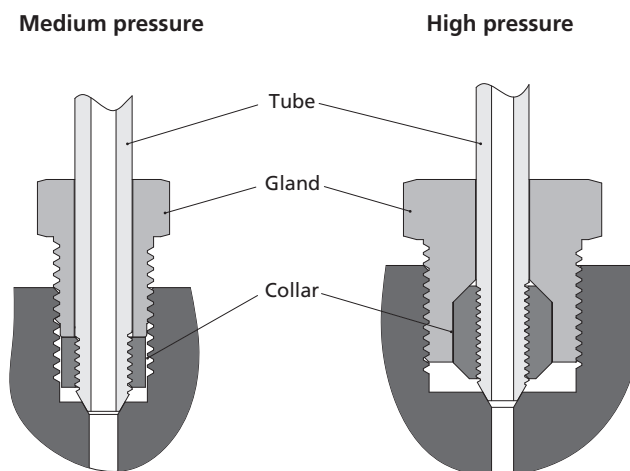
Tips: For 1/4", 3/8" and 9/16" O.D. tubing, manual coning and threading tools can be used to make coned and threaded nipples.



Tube O.D. x I.D. in.	Connection	T - Thread Size (Left Hand)	D in. (mm)	L in. (mm)
1/4 × 0.109	MF4	1/4-28 UNF	0.14 (3.6)	0.34 (8.7)
3/8 × 0.203	MF6	3/8-24 UNF	0.25 (6.4)	0.44 (11.1)
9/16 × 0.312	MF9	9/16-18 UNF	0.41 (10.3)	0.50 (12.7)
3/4 × 0.438	MF12	3/4-16 UNF	0.56 (14.3)	0.63 (15.9)
1 × 0.562	MF16	1-14 UNS	0.72 (18.3)	0.78 (19.8)
1/4 × 0.083	HF4	1/4-28 UNF	0.13 (3.2)	0.56 (14.3)
3/8 × 0.125	HF6	3/8-24 UNF	0.22 (5.6)	0.75 (19.1)
9/16 × 0.188	HF9	9/16-18 UNF	0.28 (7.1)	0.94 (23.8)

3. First, insert the tube through the gland, and then screw in the collar until the conical end of the tube showing 1-2 full threads.

4. If possible, coat the cone tip with a small amount of lubricant which is compatible with the system media.



5. Insert the tubing into the connecting port and finger tighten the gland.

6. Use a torque wrench to tighten the gland with the required torque shown in the table below while holding fitting body or valve steady.

Tube O.D. x I.D. in.	Connection	Required Torque for Standard Service Products ft.-lbs. (N.m) ^①	Required Torque for Sour Service Products ft.-lbs. (N.m) ^①
1/4 x 0.109	MF4	20 (27.1)	10 (13.6)
3/8 x 0.203	MF6	30 (40.6)	15 (20.3)
9/16 x 0.312	MF9	55 (74.5)	30 (40.7)
3/4 x 0.438	MF12	90 (122)	45 (61.0)
1 x 0.562	MF16	125 (170)	100 (135.6)
1/4 x 0.083	HF4	25 (33.9)	15 (20.3)
3/8 x 0.125	HF6	50 (67.8)	25 (33.9)
9/16 x 0.188	HF9	110 (149.1)	55 (74.6)

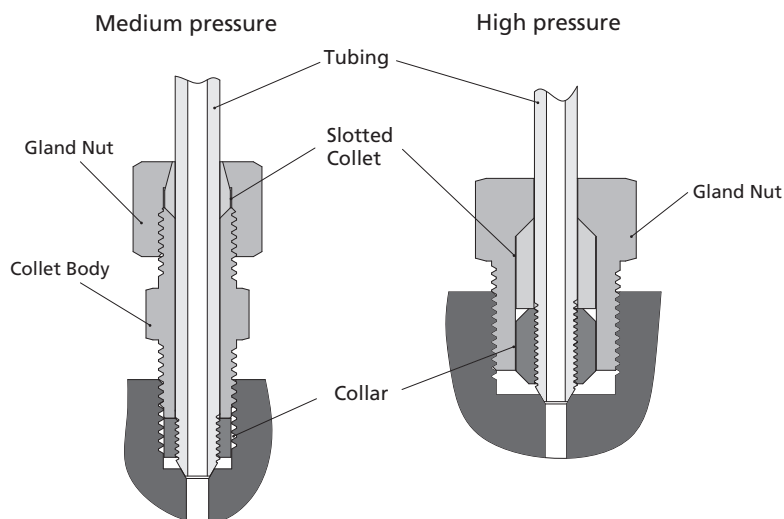
① Required torque shown is for glands without lubricant. If glands are lubricated, required torque may reduce as appropriate depending on the luricant.

Installation of Medium & High Pressure Anti-vibration Gland Assembly

Anti-vibration Gland Assembly replaces the standard gland.

1. Insert coned and threaded tubing through the Anti-vibration Gland Assembly in the correct order as shown in the following figure, and then screw in the collar until the conical end of the tube showing 1-2 full threads.
2. For medium pressure Anti-vibration Gland Assembly, tighten collet body to required torque for standard fittings while holding fitting body or valve steady. Then finger tighten the gland nut, and tighten the gland nut 1-1/4 turns for initial installation with a wrench while holding the collet body steady. For reinstallation, tighten the gland nut with a wrench from finger tight to 3/4 turn.
3. For high pressure Anti-vibration Gland Assembly, use a torque wrench to tighten the gland nut with the required torque shown in the table below while holding fitting body or valve steady.

Tube O.D. x I.D. in.	Connection	Required Torque ft.-lbs. (N.m)
1/4 x 0.083	HF4	10 (13.6)
3/8 x 0.125	HF6	28 (38.0)
9/16 x 0.188	HF9	75 (101.7)



NOTE: When installing, please follow the given method and required torque; otherwise it will affect the performance of the product.