

Tools and Installation Instructions



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FK-IC-HO-01-EN-151014

FITOK
Valves and Fittings

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Manual Tools

Manual Coning Tools

Apply in medium & high pressure tubing for concentric cone processing. All the manual coning tools use the same basic tool on which the cutter heads and the collets of different sizes can be replaced. A complete ordering number shall include basic tool, collet and cutter head. The collet and the cutter head can be ordered separately. For detailed information, please refer to the instruction manual or consult FITOK Group corporation.



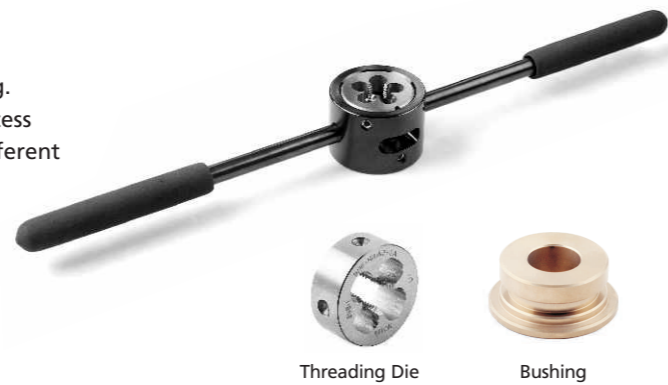
Cutter Head

Collet

Connection Type	Tube O.D. x I.D. in.	Complete Ordering Number	Ordering Number of Collet	Ordering Number of Cutter Head
2FH4	1/4 x 0.109	HCT-M4	HCT-4-CO	HCT-M4-DT
2FH6	3/8 x 0.203	HCT-M6	HCT-6-CO	HCT-M6-DT
2FH9	9/16 x 0.312	HCT-M9	HCT-9-CO	HCT-M9-DT
6FH4	1/4 x 0.083	HCT-H4	HCT-4-CO	HCT-H4-DT
6FH6	3/8 x 0.125	HCT-H6	HCT-6-CO	HCT-H6-DT
6FH9	9/16 x 0.188	HCT-H9	HCT-9-CO	HCT-H9-DT

Manual Threading Tools

Apply in medium & high pressure tubing for thread processing. All the manual threading tool use the same basic tools to process threads by replacing threading dies and guide bushings of different sizes. A complete ordering number shall include basic tool, threading die and guide bushing. The threading die and the guide bushing can be ordered separately. For detailed information please refer to the instruction manual or consult FITOK Group corporation.



Threading Die

Bushing

Connection Type	Tube O.D. x I.D. in.	Thread Size (Left Hand)	Complete Ordering Number	Ordering Number of Threading Die	Ordering Number of Bushing
2FH4	1/4 x 0.109	1/4-28 UNF	HTT-4	HTT-4-D	HTT-4-GS
2FH6	3/8 x 0.203	3/8-24 UNF	HTT-6	HTT-6-D	HTT-6-GS
2FH9	9/16 x 0.312	9/16-18 UNF	HTT-9	HTT-9-D	HTT-9-GS
6FH4	1/4 x 0.083	1/4-28 UNF	HTT-4	HTT-4-D	HTT-4-GS
6FH6	3/8 x 0.125	3/8-24 UNF	HTT-6	HTT-6-D	HTT-6-GS
6FH9	9/16 x 0.188	9/16-18 UNF	HTT-9	HTT-9-D	HTT-9-GS

Manual Reseating Tools

The tool is used for repairing the wearing cone seat of medium & high pressure fitting or valve. A complete ordering number shall include cutter, antifriction gasket, orientation nut and handle. Cutter, antifriction gasket, orientation nut and handle can be ordered separately. For detailed information, please refer to the instruction manual or consult FITOK Group corporation.

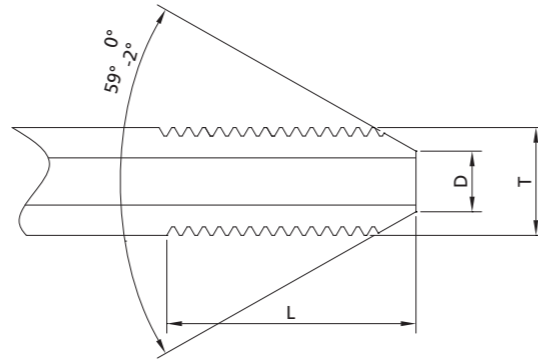


Connection Type	Complete Ordering Number	Ordering Number of Cutter	Ordering Number of Antifriction Gasket	Ordering Number of Orientation Nut	Ordering Number of Handle
2FH4	HRT-M4	HRT-4-C	HRT-4-G	HRT-M4-G	HRT-H-1
2FH6	HRT-M6	HRT-6-C	HRT-6-G	HRT-M6-G	HRT-H-2
2FH9	HRT-M9	HRT-9-C	HRT-9-G	HRT-M9-G	HRT-H-3
2FH12	HRT-M12	HRT-12-C	HRT-12-G	HRT-M12-G	HRT-H-4
2FH16	HRT-M16	HRT-16-C	HRT-16-G	HRT-M16-G	HRT-H-4
6FH4	HRT-H4	HRT-4-C	HRT-4-G	HRT-H4-G	HRT-H-1
6FH6	HRT-H6	HRT-4-C	HRT-4-G	HRT-H6-G	HRT-H-1
6FH9	HRT-H9	HRT-9-C	HRT-9-G	HRT-H9-G	HRT-H-3

Installation Instructions

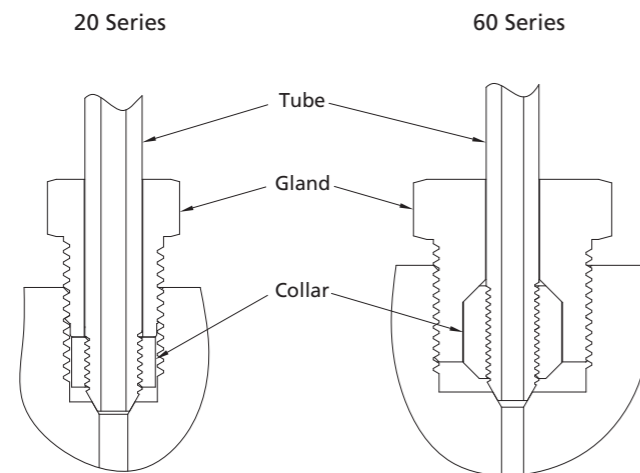
Assembly of Coning and Threading Connections

1. Processed the tube end into the structure as shown on the right, for dimensions please see the table below.



Tube O.D. x I.D. in.	Connection Type	T - Thread Size (Left Hand)	D in. (mm)	L in. (mm)
1/4 x 0.109	2FH4	1/4-28 UNF	0.14 (3.6)	0.34 (8.7)
3/8 x 0.203	2FH6	3/8-24 UNF	0.25 (6.35)	0.44 (11.1)
9/16 x 0.312	2FH9	9/16-18 UNF	0.41 (10.3)	0.5 (12.7)
3/4 x 0.438	2FH12	3/4-16 UNF	0.56 (14.3)	0.63 (15.9)
1 x 0.562	2FH16	1-14 UNS	0.72 (18.3)	0.78 (19.8)
1/4 x 0.083	6FH4	1/4-28 UNF	0.125 (3.2)	0.56 (14.3)
3/8 x 0.125	6FH6	3/8-24 UNF	0.22 (5.6)	0.75 (19.1)
9/16 x 0.188	6FH9	9/16-18 UNF	0.28 (7.15)	0.94 (23.8)

2. First, insert the tube through the gland, then screw in the collar until the conical end of the tube showing 1-2 threads.
3. If permitted, coating the cone tip with a small quantity of lubricant which is compatible with the system media.



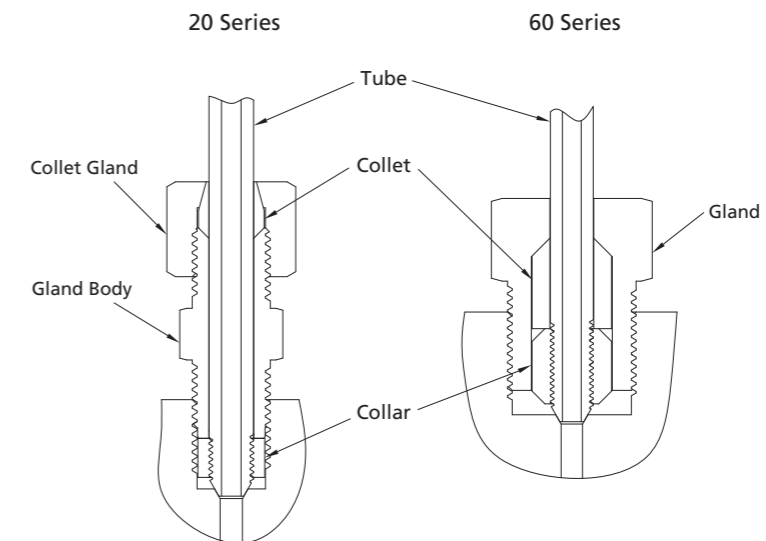
4. Insert the tubing into the connecting port and finger tighten the gland.
5. Using a torque wrench to tighten the gland with the torque ratings shown in the table below while holding fitting body or valve body steady.

Tube O.D. x I.D. in.	Connection Type	Torque Ratings for Standard Tube Fittings ft.-lbs. (N.m)	Torque Ratings for Sour Tube Fittings ft.-lbs. (N.m)
1/4 x 0.109	2FH4	20 (27.1)	10 (13.6)
3/8 x 0.203	2FH6	30 (40.6)	15 (20.3)
9/16 x 0.312	2FH9	55 (74.5)	30 (40.7)
3/4 x 0.438	2FH12	90 (122)	45 (61.0)
1 x 0.562	2FH16	125 (170)	100 (135.6)
1/4 x 0.083	6FH4	25 (33.9)	15 (20.3)
3/8 x 0.125	6FH6	50 (67.8)	25 (33.9)
9/16 x 0.188	6FH9	110 (149.1)	55 (74.6)

Assembly of Anti-Vibration Gland Connections

1. The assembly of 20 series Anti-Vibration gland is the same as that of coning and threading connections, but plus one more step as follow:
For initial assembling, finger tighten the collet gland and holding the gland body steady, tighten the collet gland 1-1/4 turns with a wrench. For reassembling, tighten the collet gland with a wrench from finger tight to 3/4 turn.
2. The assembly of 60 series Anti-Vibration gland is the same as that of coning and threading connections except different torque ratings. Please using a torque wrench to tighten the gland with the torque ratings shown in the table below while holding fitting body or valve body steady.

Tube O.D. x I.D. in.	Connection Type	Torque Ratings ft.-lbs. (N.m)
1/4 x 0.083	6FH4	10 (13.6)
3/8 x 0.125	6FH6	28 (38)
9/16 x 0.188	6FH9	75 (101.7)



Note:
When installing, please follow the given method and torque rating , otherwise it will affect the performance of the product.