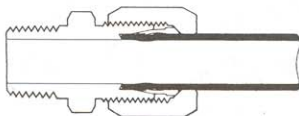


Steel Flareless Ermeto® Fittings



Typical Application: Hydraulic, instrumentation and chemical processing. Highly recommended for high pressure and high vibration applications.

Pressure: See chart above.

Sealing Method: 3-piece bite-type.

Vibration Rating: Excellent resistance

Material: Carbon steel – AISI/SAE 12L14
Stainless steel – Bodies and nuts type 316,
sleeves 17-4PH

Plating: WEATHERCOTE™

Used With: Aluminum, hard or half-hard copper, steel, stainless steel, monel, titanium and heavy wall tubing that cannot be flared.

Advantages: No tube flaring. Used with extra heavy wall tubing. Broad selection of styles and sizes.

Conformance: Meets ASA, ASME, SAE, and MS specifications and standards.

Ordering Information: Fittings are ordered as complete assemblies. To order bodies only (less nut and sleeve), prefix catalog number with the letter "B." Example: B7205x4. Order nuts and sleeves separately by catalog number.

Label Set: FS-1600

TUBE O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Thread	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14

TUBE O.D.	3/4	7/8	1	1-1/4	1-1/2	2
Thread	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

Forged Fittings and Adaptors Ermeto® Fittings 7000 Series Pressure Rating Chart

CONNECTION TYPE	END HOSE												
	1/8	3/16	1/4	5/16	3/8	1/2	3/4	5/8	7/8	1	1-1/4	1-1/2	2
Ermeto® Fittings	5000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male Pipe	5000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000	5000			4000	3000		2500		2000	1500	1500	1000

Steel Flareless Ermeto® Fittings

PRESET WITH PRESET TOOL:
(Preset Tools are listed on page 389.)

- Slide nut and then sleeve on tube. Shoulder of sleeve 'A' must be toward nut.
- Insert tube into presetting tool. Be sure that tube is bottomed on fitting tube stop at point 'B'. Lubricate threads, seat of fitting and shoulder of sleeve with good grade of lubricant.
- Turn nut slowly with wrench while turning tube with other hand. When the sleeve grips the tube, that is, when the tube can no longer be turned by hand - STOP - and note the position of the wrench. This is the "Ring Grip" point.

Tighten nut an additional number of turns past the ring grip point as shown in Table 1, page 298.

CAUTION: All stainless steel sleeves should be preset in tool prior to installation.

PRESET IN FITTING BODY:

- Follow same procedure as when presetting with preset tool. Once the fitting nut has been turned the proper number of turns past ring grip, the fitting assembly is complete and ready for use.

NOTE: Only carbon steel sleeves can be preset directly into the fitting body. Due to possible thread galling, the use of presetting tools is required when stainless steel fittings are to be assembled.

WARNING: Follow the installation procedures below with care to ensure proper installation of Ermeto® fittings.

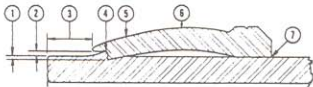
Installation:

- After sleeve and nut have been preset on the tubing and checked as described, the assembly is ready for installation into the Ermeto® fitting seat.
- Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant compatible with system fluid.
- Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
- Starting at the position of sharp torque rise, tighten nut 1/4 turn to complete the assembly.

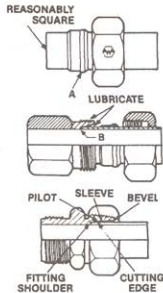
When the assembly procedure for Ermeto® fittings is followed correctly, these points will be evident:

- Cutting edge of sleeve will be imbedded in tubing to its full depth.
- Pilot edge of sleeve should be close to or touching O.D. of tubing.
- Distance between end of tube and leading or pilot edge of sleeve will be at least 1/8".
- Metal will be piled ahead of cutting edge of sleeve under pilot.
- Contact area of sleeve will show evidence of being in perfect contact with tapered seat of fitting.
- Sleeve will show evidence of being bowed within its elastic limits.
- Back of sleeve will be in contact with tube.

NOTE: Performance of fitting will not be affected if sleeve rotates on tube after disassembly.



Assembly Instructions



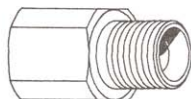
Steel Flareless Ermeto® Fittings

TABLE 1

Number of Additional Turns from "Ring Grip" for Hand Presetting Operation – Ermeto® Sleeve

Tube Size	**Tube Material	.018	.022	.028	.035	.049	.065	.083	.095	.109	.120
2	C1010 MILT 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6						
3	C1010 MILT 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1 1						
4	C1010 MILT 8504			1-1/6 1-1/6	1-1/6 1	1-1/6 1	1 5/6				
5	C1010 MILT 8504			1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1	1 1				
6	C1010 MILT 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6			
8	C1010 MILT 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6	1 5/6		
10	C1010 MILT 8504					1-1/6 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6	5/6
12	C1010 MILT 8504					1 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
16	C1010 MILT 8504					1-1/6 1-1/6	1-1/6 1-1/6	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
20	C1010 MILT 8504					1-1/6 1	1 1	1 1	1 1	5/6 5/6	5/6 5/6
24	C1010 MILT 8504								1	1	1
32	C1010 MILT 8504								1	1	1

**C1010 – Carbon Steel Tubing; MILT 8504 – Annealed Stainless Steel



Presetting tools provide a more accurate and positive leakproof method of coupling flareless fittings. Presetting steel Ermeto® sleeves on tubing prior to the fitting assembly will permit the maximum high performance obtainable with

flareless fittings. Due to possible thread galling the use of presetting tools is required when stainless steel fittings are to be assembled. See page 390 for T-F570-1 hydraulic preset machine.

Ermeto® Hand-Presetting Tools 7000 Series

Catalog Number	Seat Size	Tube O.D. (Inches)	Thread Size
T-7002	2	1/8	5/16-24
T-7003	3	3/16	3/8-24
T-7004	4	1/4	7/16-20
T-7005	5	5/16	1/2-20
T-7006	6	3/8	9/16-18
T-7008	8	1/2	3/4-16
T-7010	10	5/8	7/8-14
T-7012	12	3/4	1-1/16-12
T-7016	16	1	1-5/16-12
T-7020	20	1-1/4	1-5/8-12
T-7024	24	1-1/2	1-7/8-12
T-7032	32	2	2-1/2-12

Steel Flareless Ermeto® Fittings

Sleeve
(Ref. SAE No. 080115B)



Tube O.D.	Catalog Number
1/8	7165x2□
3/16	7165x3□
1/4	7165x4□
5/16	7165x5□
3/8	7165x6□
1/2	7165x8□
5/8	7165x10□
3/4	7165x12□
7/8	7165x14□
1	7165x16□
1-1/4	7165x20□
1-1/2	7165x24□
2	7165x32□

*7176x

Sleeve



Tube O.D.	Catalog Number
1/4	8165x4
5/16	8165x5
3/8	8165x6

For use with diesel nuts **ONLY**.

Nut
(Ref. SAE No. 080110)



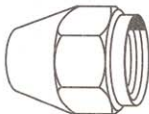
Tube O.D.	Catalog Number
1/8	7105x2□
3/16	7105x3□
1/4	7105x4□
5/16	7105x5□
3/8	7105x6□
1/2	7105x8□
5/8	7105x10□
3/4	7105x12□
7/8	7105x14□
1	7105x16□
1-1/4	7105x20□
1-1/2	7105x24□
2	7105x32□

*7117x

*Stainless Steel Catalog number.

□ Available in Stainless Steel. * Available in Stainless Steel Only.

Diesel Nut



Tube O.D.	Thread Size	Catalog Number
1/4	9/16-18	8112x4
5/16	5/8-18	8112x5
3/8	3/4-16	8112x6

Bulkhead Nut
(Ref. SAE No. 080118)



Tube O.D.	Catalog Number
1/4	7924x4□
3/8	7924x6□
1/2	7924x8□
5/8	7924x10
3/4	7924x12□
7/8	7924x14
1	7924x16□
1-1/4	7924x20

*7936x

Seal-Nut For
Male Pipe Thread



Pipe Thread	Catalog Number
1/8	C3059x2
1/4	C3059x4
3/8	C3059x6
1/2	C3059x8
3/4	C3059x12
1	C3059x16

Steel Fittings

Steel Flareless Ermeto® Fittings

Cap



TUBE O.D.	CATALOG NUMBER
1/4	7129x4□
3/8	7129x6□
1/2	7129x8□
5/8	7129x10□
3/4	7129x12□
1	7129x16
1-1/4	7129x20

*7141x

•7141x2

Straight Thread O-Ring Hex Head Plug

(Ref. SAE No. 090109A)



Note: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER
1/8	7237x2#
3/16	7237x3#
1/4	7237x4#
5/16	7237x5#
3/8	7237x6#
1/2	7237x8#
5/8	7237x10#
3/4	7237x12#
7/8	7237x14#
1	7237x16
1-1/4	7237x20
1-1/2	7237x24
2	7237x32

#Not counterbored.

Plug

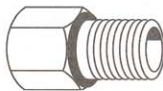
(Ref. SAE No. 080109)



TUBE O.D.	CATALOG NUMBER
1/8	7229x2
1/4	7229x4*
5/16	7229x5
3/8	7229x6*
1/2	7229x8*
5/8	7229x10
3/4	7229x12*
1	7229x16

*7241x

Male Straight Thread/ Female Straight Thread O-Ring Boss



MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER
3/8	1/2	7033x8x6
1/2	5/8	7033x10x8
1/2	3/4	7033x12x8
3/4	7/8	7033x14x12
1/2	1	7033x16x8
3/4	1	7033x16x12
3/4	1-1/4	7033x20x12
1-1/4	1-1/2	7033x24x20
1-1/2	2	7033x32x24

Straight Thread O-Ring Hex Socket Plug

(Ref. SAE No. 090109B)



PORT SIZE	CATALOG NUMBER
1/8	7238x2
3/16	7238x3
1/4	7238x4
5/16	7238x5
3/8	7238x6
1/2	7238x8
5/8	7238x10
3/4	7238x12
7/8	7238x14
1	7238x16
1-1/4	7238x20

- * Stainless Steel Catalog number.
- Available in Stainless Steel.
- Available in Stainless Steel Only.

Reducer

(Ref. SAE No. 080123)



BODY SIZE T	TUBE SIZE E	CATALOG NUMBER
3/8	1/4	7015x6x4□
1/2	1/4	7015x8x4□
1/2	3/8	7015x8x6□
5/8	1/2	7015x10x8□
3/4	3/8	7015x12x6□
3/4	1/2	7015x12x8□
1	3/4	7015x16x12□
1-1/4	1	7015x20x16□

*7027x

•7027x16□

Note: Parts furnished with zinc plate.

Steel Fittings

Steel Flareless Ermeto® Fittings

Small Hex Union

(Ref. SAE No. 080101)



TUBE O.D.	CATALOG NUMBER
1/8	7305x2
3/16	7305x3
1/4	7305x4
5/16	7305x5
3/8 x 1/4	7305x6x4
3/8	7305x6
1/2 x 3/8	7305x8x6
1/2	7305x8
5/8	7305x10
3/4	7305x12
7/8	7305x14
1	7305x16
1-1/4	7305x20
1-1/2	7305x24
2	7305x32

*7317x

Large Hex Union

(Ref. SAE No. 080119)



TUBE O.D.	CATALOG NUMBER
1/4	7306x4
3/8	7306x6
1/2x3/8	7306x8x6
1/2	7306x8
3/4	7306x12
1	7306x16

*7318x

*7318x6x4

Bulkhead Union

(Ref. SAE No. 080601)



TUBE O.D.	CATALOG NUMBER
1/4	7325x4
3/8	7325x6
1/2	7325x8
3/4	7325x12
1	7325x16

*7337x

For bulkhead nuts see page 230-231.

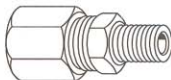
* Stainless Steel Catalog number.

□ Available in Stainless Steel.

• Available in Stainless Steel Only.

Male Connector

(Ref. SAE No. 080102)

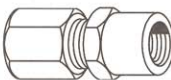


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7205x2
1/8	1/4	7205x2x4
3/16	1/8	7205x3
1/4	1/8	7205x4
1/4	1/4	7205x4x4
1/4	3/8	7205x4x6
1/4	1/2	7205x4x8
5/16	1/8	7205x5
5/16	1/4	7205x5x4
3/8	1/8	7205x6x2
3/8	1/4	7205x6
3/8	3/8	7205x6x6
3/8	1/2	7205x6x8
1/2	1/4	7205x8x4
1/2	3/8	7205x8
1/2	1/2	7205x8x8
1/2	3/4	7205x8x12
5/8	3/8	7205x10x6
5/8	1/2	7205x10
3/4	1/2	7205x12x8
3/4	3/4	7205x12
7/8	3/4	7205x14
1	3/4	7205x16x12
1	1	7205x16
1-1/4	1-1/4	7205x20
1-1/2	1-1/2	7205x24
2	2	7205x32

*7217x

Female Connector

(Ref. SAE No. 080103)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7255x2
3/16	1/8	7255x3
1/4	1/8	7255x4
1/4	1/4	7255x4x4
5/16	1/8	7255x5
3/8	1/4	7255x6
3/8	3/8	7255x6x6
1/2	1/4	7255x8x4
1/2	3/8	7255x8
1/2	1/2	7255x8x8
5/8	1/2	7255x10
3/4	3/4	7255x12
7/8	3/4	7255x14
1	1	7255x16
1-1/4	1-1/4	7255x20

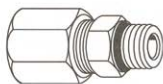
*7267x •7267x6x8

Steel Fittings

Steel Flareless Ermeto® Fittings

Straight Thread O-Ring Connector

(Ref. SAE No. 080120)

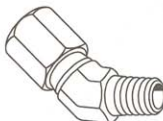


TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/16	3/16	7315x3
1/4	1/4	7315x4□
1/4	5/16	7315x4x5□
1/4	3/8	7315x4x6□
5/16	5/16	7315x5
3/8	3/8	7315x6□
3/8	1/2	7315x6x8
1/2	1/2	7315x8□
1/2	5/8	7315x8x10
1/2	3/4	7315x8x12□
5/8	5/8	7315x10□
3/4	3/4	7315x12□
3/4	1	7315x12x16
7/8	7/8	7315x14
1	3/4	7315x16x12
1	1	7315x16□
1-1/4	1-1/4	7315x20
1-1/2	1-1/2	7315x24
2	2	7315x32

*7327x

45° Male Elbow

(Ref. SAE No. 080302)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7355x4□
1/4	1/4	7355x4x4□
5/16	1/8	7355x5
3/8	1/4	7355x6□
1/2	3/8	7355x8□
5/8	1/2	7355x10
3/4	3/4	7355x12
1	1	7355x16

90° Union Elbow

(Ref. SAE No. 080201)



TUBE O.D.	CATALOG NUMBER
1/4	7505x4□
5/16	7505x5
3/8	7505x6□
1/2	7505x8□
5/8	7505x10□
3/4	7505x12□
7/8	7505x14□
1	7505x16□
1-1/4	7505x20
1-1/2	7505x24

*7517x

90° Male Elbow

(Ref. SAE No. 080202)



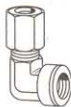
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7405x2□
3/16	1/8	7405x3
1/4	1/8	7405x4□
1/4	1/4	7405x4x4□
5/16	1/8	7405x5□
5/16	1/4	7405x5x4□
3/8	1/8	7405x6x2□
3/8	1/4	7405x6□
3/8	3/8	7405x6x6□
3/8	1/2	7405x6x8□
1/2	1/4	7405x8x4□
1/2	3/8	7405x8□
1/2	1/2	7405x8x8□
5/8	3/8	7405x10x6□
5/8	1/2	7405x10□
3/4	1/2	7405x12x8
3/4	3/4	7405x12□
7/8	3/4	7405x14
1	3/4	7405x16x12
1	1	7405x16□
1-1/4	1-1/4	7405x20
1-1/2	1-1/2	7405x24
2	2	7405x32

*7417x

90° Female Elbow

(Ref. SAE No. 080203)

(Ref. MSS1813)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7455x4□
1/4	1/4	7455x4x4□
3/8	1/4	7455x6□
3/8	3/8	7455x6x6□
1/2	3/8	7455x8□
1/2	1/2	7455x8x8□
5/8	1/2	7455x10□
3/4	3/4	7455x12□
7/8	3/4	7455x14
1	1	7455x16

*7467x

* Stainless Steel Catalog number.

□ Available in Stainless Steel.

* Available in Stainless Steel Only.

Steel Fittings

Steel Flareless Ermeto® Fittings

Straight Thread O- Ring 90° Elbow

(Ref. SAE No. 080220)

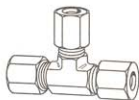


TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7515x4□
5/16	5/16	7515x5
3/8	3/8	7515x6□
1/2	1/2	7515x8□
5/8	5/8	7515x10□
3/4	3/4	7515x12□
1	1	7515x16□
1	3/4	7515x16x12
1-1/4	1-1/4	7515x20

*7527x

Union Tee

(Ref. SAE No. 080401)

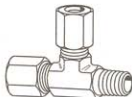


TUBE O.D.	CATALOG NUMBER
3/16	7705x3
1/4	7705x4□
5/16	7705x5□
3/8	7705x6□
1/2	7705x8□
5/8	7705x10□
3/4	7705x12□
7/8	7705x14
1	7705x16□

*7717x

Male Run Tee

(Ref. SAE No. 080424)



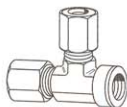
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7755x4□
1/4	1/4	7755x4x4x4□
3/8	1/4	7755x6□
1/2	3/8	7755x8
1/2	1/2	7755x8x8x8□
5/8	1/2	7755x10
3/4	3/4	7755x12
1	1	7755x16
1-1/4	1-1/4	7755x201

*7767x

1Special order only

Female Run Tee

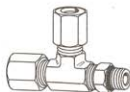
(Ref. SAE No. 080426)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7805x4
1/4	1/4	7805x4x4x4
3/8	1/4	7805x6
1/2	3/8	7805x8
5/8	1/2	7805x10
3/4	3/4	7805x12

Straight Thread O-Ring Run Tee

(Ref. SAE No. 080428)

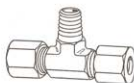


TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7716x4□
3/8	3/8	7716x6□
1/2	1/2	7716x8□

*7726x

Male Branch Tee

(Ref. SAE No. 080425)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7605x4□
1/4	1/4	7605x4x4x4□
5/16	1/8	7605x5
3/8	1/4	7605x6□
1/2	3/8	7605x8□
1/2	1/2	7605x8x8x8□
5/8	1/2	7605x10
3/4	3/4	7605x12
1	1	7605x16

7617x

*Stainless Steel Catalog number.

□ Available in Stainless Steel.

Steel Fittings

Steel Flareless Ermeto® Fittings

Female Branch Tee

(Ref. SAE No. 080427)

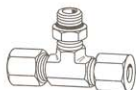


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7655x40
1/4	1/4	7655x4x4x40
3/8	1/4	7655x60
1/2	3/8	7655x80
5/8	1/2	7655x10
3/4	3/4	7655x12
7/8	3/4	7655x14
1	1	7655x16
1-1/4	1-1/4	7655x20

*7667

Straight Thread O-Ring Branch Tee

(Ref. SAE No. 080429)



TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7715x40
3/8	3/8	7715x60
1/2	1/2	7715x8

*7727x

Straight Thread O-Ring



Material: Buna-N 90
Durometer

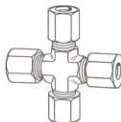
Temperature Range:

-40°F to +250°F
(-40°C to + 121°C)

Standard O-ring complies with SAE specification SAE J515 Type CH. (See page 244 for O-ring compound and application chart)

Cross

(Ref. SAE No. 080501)



TUBE O.D.

CATALOG NUMBER

1/4	7955x40
3/8	7955x60
1/2	7955x8
5/8	7955x101
3/4	7955x121

†Special order only

*7967x

PORT SIZE

CATALOG NUMBER

1/16	7629x1
1/8	7629x2
3/16	7629x3
1/4	7629x4
5/16	7629x5
3/8	7629x6
7/16	7629x7
1/2	7629x8
5/8	7629x10
3/4	7629x12
7/8	7629x14
1	7629x16
1-1/4	7629x20
1-1/2	7629x24
2	7629x32

*Stainless Steel Catalog number.

□ Available in Stainless Steel.