

# Compression Fittings

## 34 Series Inch

- Wide range of types and sizes
- Rugged and durable
- Suitable for use under extreme conditions of pressure and temperature
- Leakage free tube sealing
- Suitable for metallic and nylon tubing
- Ideal for most general industrial applications



### Technical features

**Medium:**  
Compressed air or any fluids compatible with the materials/tubing listed

**Operating pressure:**  
The maximum working pressure is limited by the type of tubing being used.  
Tube material – standard duty half hard Copper (typical values):  
4mm dia. up to 193 bar  
28mm dia. up to 62 bar

Tube material – Nylon  
4mm up to 28 bar  
28mm up to 15 bar

**Ambient temperature:**  
The maximum working temperature is limited by the type of tubing being used.

Tube material – standard duty half hard Copper (typical values):  
-200 ... +200°C  
Note: safe working temperature -200 ... +50°C (above +50°C the max. pressure begins to reduce, check specification with copper tube supplier)

Tube material – Nylon  
-40 ... 20°C  
Note: temperatures up to +80°C are possible with reduced max. pressure (consult tube data sheet).

**Tube sizes:**  
3/16", 1/4", 5/16", 3/8", 1/2", 5/8" O/D

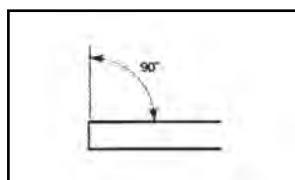
**Thread types:**  
Parallel BSP - ISO 228  
Taper BSP - ISO 7  
Taper NPTF - ASME B1.20.1

**Thread sizes:**  
1/8" ... 1/2"

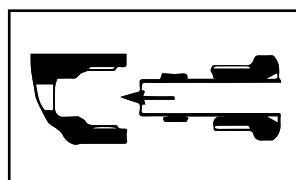
**Tube types:**  
Nylon 11 or 12 and other plasticised or unplasticised tubing which conforms to the tolerances specified in BS5409: Part 1 1976 Copper, annealed and half-hard to BS EN 12449:2016.  
Double wall brazed steel.

**Materials:**  
Tubing nut, sleeve & body manufactured from bar: brass to BS EN 12164:2011  
Body manufactured from stamping: brass to BS EN 12165:2016

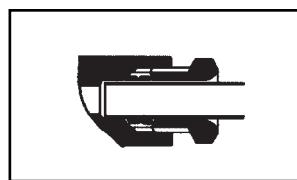
### Method of Assembly



1. Ensure that the tube is cut square and is free from fraze.



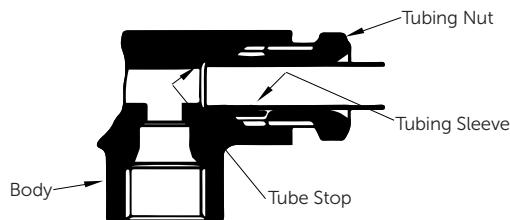
2. Place the tubing nut and sleeve on the tube and push the tube into the fitting until it bottoms on the tube stop.



3. Holding the tube firmly in contact with the tube stop screw the tubing nut down finger tight and then tighten a further 1 to 1 3/4 full turns. Slacken off the assembly and then pinch down again.

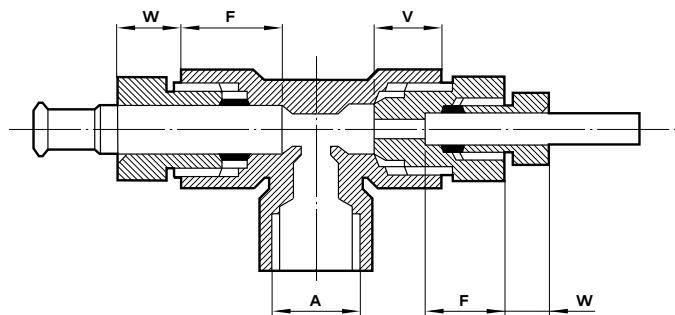
The method of preparation and assembly described will ensure leak-proof joints over a wide pressure range, depending upon the size and type of tubing being used. Failure to follow this guide, or over-tightening at any joint, will only lead to damage of the fittings or an unsatisfactory seal.

## Components



## Typical Dimensions

Hose stem to tube with reducing connector



O/D Tube	A thread details	F	V	W
3/16"	3/8" x 24 TPI	0.44	0.35	0.26
1/4"	7/16" x 24 TPI	0.50	0.38	0.26
5/16"	1/2" x 24 TPI	0.56	0.42	0.26
3/8"	9/16" x 24 TPI	0.60	0.42	0.28
1/2"	3/4" x 24 TPI	0.66	0.50	0.26
5/8"	7/8" x 20 TPI	0.72	0.58	0.34
3/4"	1.025" x 18 TPI	0.78	0.64	0.40

A = outside diameter tube size and thread details.\*

F = tube or stem length inside fitting.

V = nippled connector length inside fitting.

W = projection of tubing nut from compression joint.

All these dimensions are common to a particular tubing outside diameter size.

Refer to later pages in this section for details of individual coupling dimensions.

Dimensions V & W will vary with the torque applied so these dimensions are guidance only.

\*Note: The 'O/D tube' sizes in the following tables refer to the Enots compression threads listed above.

## Torque Figures

O/D Tube	Half hard copper	Nylon 11 & 12	Double wall brazed steel
3/16"	50 lbf in	60 lbf in	60 lbf in
1/4"	80 lbf in	60 lbf in	60 lbf in
5/16"	80 lbf in	60 lbf in	80 lbf in
3/8"	115 lbf in	70 lbf in	110 lbf in
1/2"	35 lbf ft	20 lbf ft	25 lbf ft
5/8"	35 lbf ft	35 lbf ft	-
3/4"	60 lbf ft	35 lbf ft	-

Inch - Recommended torque using 340278\*\* series tubing sleeves

## Tubing nuts and tubing sleeves

Tubing nut  
340279



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Universal tubing sleeve  
340278



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Metallic tubing sleeve  
340003



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## Straight Connectors and Adaptors

Straight adaptor male ISO R -  
female tube  
340346



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Straight adaptor male ISO G -  
female tube  
340348



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Straight adaptor female ISO  
G - female tube  
340344



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Straight connector  
female tube  
340007



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Bulkhead connector  
female tube  
340021



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Bulkhead locknut  
340223



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Nippled adaptor female ISO  
G - male tube  
340351



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Stem tailpiece adaptor tube  
stem - hose  
340056



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Tubing plug - male tube  
thread  
340038



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Straight adaptor male NPTF -  
female tube  
340347



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## Elbow Connectors and Adaptors

Elbow adaptor male ISO R -  
female tube  
340330



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Elbow stem connector  
female tube - tube stem  
340057



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## Accessories

Folded copper washer  
480213



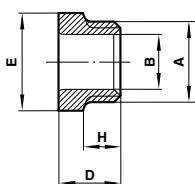
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Bonded washer  
480215

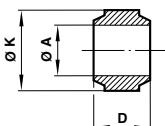


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**Tubing Nut**  
**340279\*\***



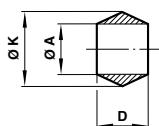
**Universal Tubing Sleeve**  
**Suitable for nylon and metallic tubing**  
**340278\*\***



B O/D tube	A thread	D	E A/F	H	Model
3/16"	3/8" x 24 TPI	0.40	0.45	0.26	34027903
1/4"	7/16" x 24 TPI	0.43	0.45	0.27	34027904
5/16"	1/2" x 24 TPI	0.45	0.53	0.27	34027905
3/8"	9/16" x 24 TPI	0.48	0.60	0.28	34027906
1/2"	3/4" x 24 TPI	0.57	0.82	0.33	34027907
5/8"	7/8" x 20 TPI	0.66	0.92	0.38	34027908

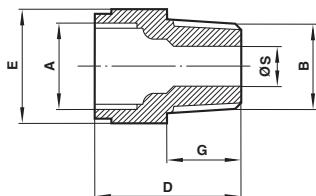
A O/D tube	D	K	Model
3/16"	0.19	0.31	34027803
1/4"	0.24	0.38	34027804
5/16"	0.28	0.44	34027805
3/8"	0.27	0.50	34027806
1/2"	0.32	0.67	34027807
5/8"	0.35	0.80	34027808

**Metalic Tubing Sleeve**  
**Suitable for metallic tubing only**  
**340003\*\***



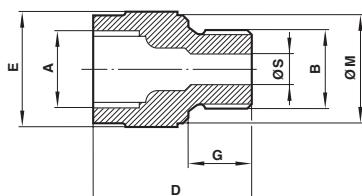
A O/D tube	D	K	Model
3/16"	0.23	0.27	34000303
1/4"	0.28	0.35	34000304
5/16"	0.29	0.41	34000305
3/8"	0.28	0.47	34000306
1/2"	0.37	0.62	34000307

**Straight Male Adaptor**  
**Female O/D tube to male taper ISO R thread**  
**340346\*\***



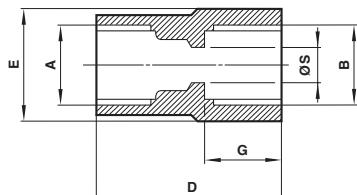
A thread for O/D tube	B thread	D	E A/F	G	S	Model
3/16"	R1/8	0.78	0.53	0.38	0.16	34034608
1/4"	R1/8	0.97	0.53	0.38	0.19	34034609
5/16"	R1/8	1.09	0.60	0.38	0.19	34034610
3/16"	R1/4	0.84	0.60	0.44	0.16	34034615
1/4"	R1/4	0.88	0.60	0.44	0.19	34034616
5/16"	R1/4	0.88	0.60	0.44	0.25	34034617
3/8"	R1/4	1.19	0.71	0.44	0.25	34034618
1/2"	R1/4	1.31	0.92	0.44	0.31	34034619
5/16"	R3/8	0.94	0.71	0.50	0.25	34034625
3/8"	R3/8	1.00	0.71	0.50	0.31	34034626
1/2"	R3/8	1.31	0.92	0.50	0.41	34034627
5/16"	R1/2	0.88	0.92	0.63	0.25	34034634
3/8"	R1/2	1.00	0.92	0.63	0.31	34034635
1/2"	R1/2	1.25	0.92	0.63	0.44	34034636
5/8"	R1/2	1.50	1.01	0.63	0.50	34034637

**Straight Male Adaptor**  
**Female O/D tube to male parallel ISO G thread**  
**340348\*\***

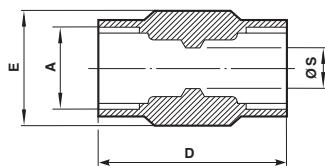


A thread for O/D tube	B thread	D	E A/F	G	M	S	Model
1/4"	G1/8	0.84	0.60	0.29		0.19	34034809

**Straight Adaptor**  
**Female O/D tube to female parallel ISO G thread**  
**340344\*\***



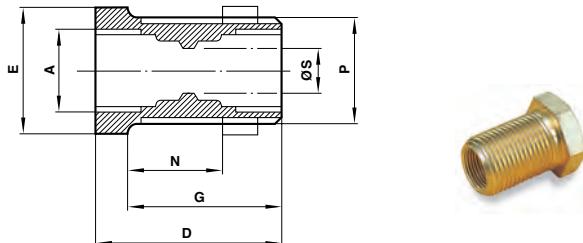
**Straight Connector**  
**Female O/D tube**  
**340007\*\***



A thread for O/D tube	B thread	D	E A/F	G	S	Model
3/16"	G1/8	0.81	0.53	0.25	0.16	34034408
1/4"	G1/4	1.00	0.60	0.38	0.19	34034416
3/8"	G1/4	1.06	0.71	0.38	0.31	34034418
1/2"	G1/2	1.19	1.01	0.44	0.44	34034436

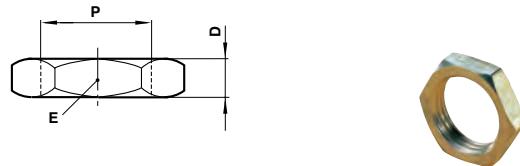
A thread for O/D tube	D	E A/F	S	Model
3/16"	1.00	0.53	0.16	34000703
1/4"	1.13	0.53	0.19	34000704
5/16"	1.25	0.60	0.25	34000705
3/8"	1.31	0.71	0.31	34000706
1/2"	1.56	0.92	0.44	34000707

**Bulkhead Connector  
Female O/D tube  
340021\*\***



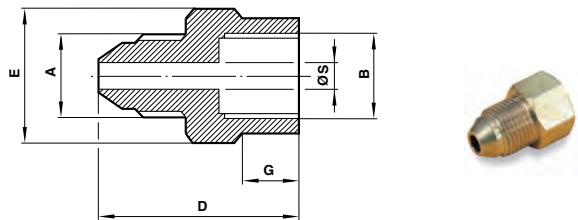
A thread for O/D tube	D	E	G	N max. bulkhead	P thread ISO G parallel	S	Bulkhead drilling	Locknut number	Model
3/16"	1.13	0.71	0.88	0.63	G1/4	0.16	0.53	34022302	34002103
1/4"	1.13	0.82	0.88	0.63	G3/8	0.19	0.69	34022303	34002104

**Bulkhead locknut  
340223\*\***

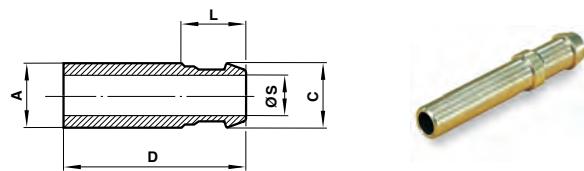


P thread ISO G parallel	D	E A/F	Model
G1/8	0.19	0.53	34022301
G1/4	0.25	0.71	34022302
G3/8	0.25	0.82	34022303
G1/2	0.25	1.01	34022304

**Nipped Adaptor  
Male O/D tube to female parallel ISO G thread  
340351\*\***



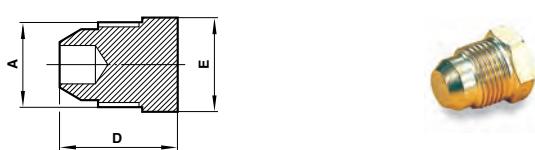
**Stem Tailpiece Adaptor  
O/D tube stem to hose  
340056\*\***



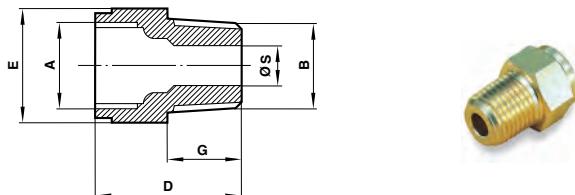
A thread for O/D tube	B thread	D	E A/F	G	S	Model
5/16"	G1/4	1.22	0.71	0.38	0.19	34035117

A O/D stem	C hose bore	D	L	S	Model
5/16"	5/16"	2.00	0.75	0.22	34005605
1/2"	1/2"	2.28	0.78	0.41	34005607

**Tubing Plug  
Male O/D tube thread  
340036\*\***



**Straight Male Adaptor (NPTF)  
Female O/D tube to male NPTF thread  
340347\*\***

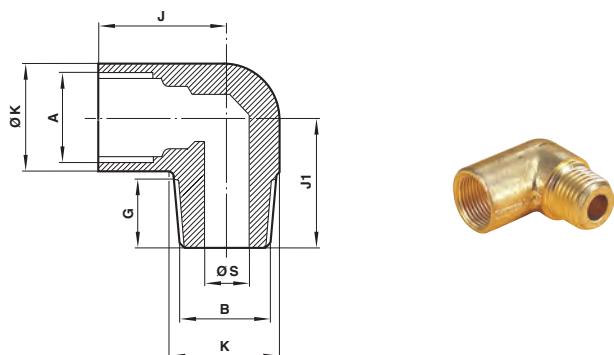


A thread for O/D tube	D	E A/F	Model
1/4"	0.73	0.45	34003604
5/16"	0.72	0.53	34003605

A thread for O/D tube	B thread NPTF	D	E A/F	G	S	Model
1/4"	1/8"	0.97	0.56	0.38	0.19	34034709

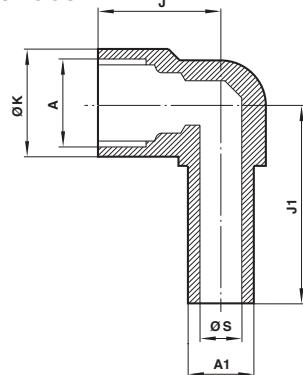
### Male Elbow Adaptor

Female O/D tube to male taper ISO R thread  
340330\*\*



### Stem Elbow Connector

Female O/D tube to O/D tube stem  
340057\*\*

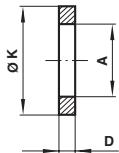


A thread for O/D tube	B thread	G	J	J1	K	S	Model
3/16"	R1/8	0.38	0.69	0.69	0.50	0.19	34033008
1/4"	R1/8	0.38	0.69	0.69	0.56	0.19	34033009
5/16"	R1/8	0.38	0.81	0.81	0.63	0.19	34033010
1/4"	R1/4	0.44	0.69	0.8	0.56	0.25	34033016
5/16"	R1/4	0.44	0.81	0.83	0.63	0.25	34033017
3/8"	R1/4	0.44	0.88	0.88	0.69	0.25	34033018
1/2"	R1/4	0.44	1.00	1.03	0.97	0.25	34033019
3/8"	R3/8	0.50	0.88	0.94	0.69	0.38	34033026
1/2"	R3/8	0.50	1.00	1.13	0.97	0.38	34033027
1/2"	R1/2	0.63	1.00	1.15	0.97	0.50	34033036

A thread for O/D tube	A1 O/D stem	J	J1	K	S	Model
1/4"	1/4"	0.75	1.21	0.56	0.17	34005704
3/8"	3/8"	0.91	1.38	0.69	0.28	34005706
1/2"	1/2"	1.03	1.78	0.91	0.38	34005707

### Folded Copper Washer

480213\*\*



Dimensions shown in mm

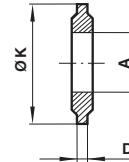
A for ISO G thread	D	K	Model
G1/8	1.8	13.5	48021301
G1/4	1.8	17.6	48021302
G3/8	1.8	20.9	48021303
G1/2	1.8	26.4	48021304
G3/4	1.8	32.4	48021306
G1	1.8	38.9	48021308

Operating Pressure: 20 Bar (max)

Temperature: -10°C to +80°C

### Bonded Washer

480215\*\*



Dimensions shown in mm

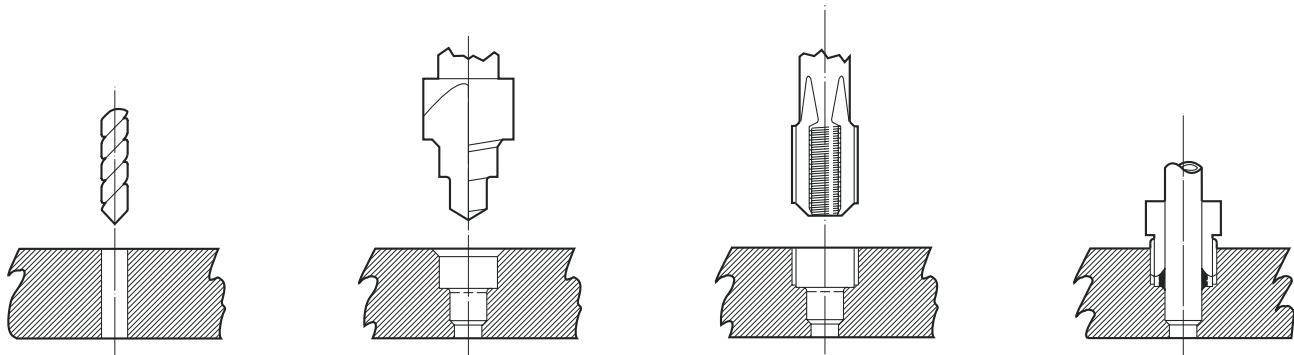
A for ISO G thread	D	K	Model
G1/8	2	15.9	48021501
G1/4	2	20.6	48021502
G3/8	2	23.8	48021503
G1/2	2	28.6	48021504
G3/4	2	34.9	48021506
G1	2.5	42.8	48021508

Operating Pressure: 128 Bar (max)

Temperature: -30°C to +110°C

## Instructions For Machining

Where for some reason, such as saving overall space, it is desired to dispense with the male adaptor and fit a tube, complete with its associated nut and sleeve, direct into a casting, this may be done as illustrated below, by machining the correct form and thread thread.



1. Drill

2. Machine form

3. Tap thread

4. Assemble

**Note: Machining details are available on request please contact IMI Norgren technical service for more information**

We can advise on individual application issues but we cannot be held responsible for failures due to non-observance of the dimensions and tolerances which we lay down for these compression unions.

### Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under

#### »Technical features/data«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, IMI Norgren GmbH.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all

component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.