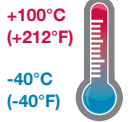


- > Tube size: Ø 1/4" ... 3/4"
- > Simple tube connection and disconnection – no tools required
- > Fewer component parts – internally machined form in body to secure collet reduces number of potential leak paths
- > Internal tube support as standard for greater safety
- > Corrosion resistant
- > Easy identification – all collets marked with tube size
- > Total fittings system solution
- > Reduced assembly & maintenance times provide time/labour savings
- > Greater reliability and reduced testing
- > Ease of tube insertion in areas of restricted access



Technical features

Medium:

Compressed air

Maximum working pressure:

0 ... 10 bar (0 ... 145 psi)

Working temperature:

-40°C .. 100°C (-40°F ... 212°F)

Standards & Legislation:

Fittings and Tubing Comply to Department Of Transport Federal Motor Vehicle Safety Standard, (DOT FMVSS 106) (Mandatory requirements for inch tube fittings in U.S.A.)

Society for Automotive Engineers SAE J1131 (Inch tube and fittings) German TÜV approval and DIN 74324 (Metric Tube and Fittings)

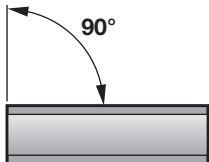
Swivel fittings:

The swivel feature should be used for positioning purposes only and should not be used as a rotating joint.

Materials:

Body (straights), Tube support, Collet: brass BS 2874 CZ 121
Body (elbows, tees): brass BS 2874 CZ 122
'O'-Ring: Buna N (low nitrile)
Thread sealant: Precoat 5
Tubing:
Tube should be to SAE J844

Method of assembly



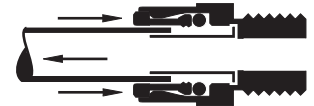
1. Ensure that the end of the tube is cut square and is free from burrs.



2. Push the tube through the collet into the fitting.

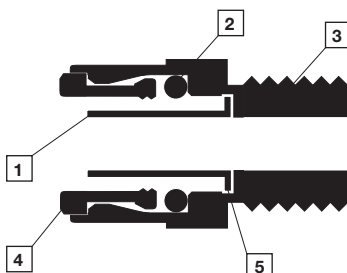


3. Continue pushing the tube through the 'O'-ring until it bottoms on the tube stop. Then pull back on the tube to reinforce the collet teeth gripping action.



4. To disconnect - first ensure there is no air present. Push the tube into the fitting until it bottoms on the tube stop. Then hold down the collet and withdraw the tube.

Component functions



- 1 Tube support
- 2 'O'-ring
- 3 Body
- 4 Collet
- 5 Tube stop

Body

The body has an internally machined form to secure the collet(s), 'O'-Ring(s) and Tube support(s). It also has internal & externally machined thread form(s) for connection to ports where applicable.

'O'-ring

The 'O'-Ring is to ensure adequate interference between the tube & fitting body therefore providing a pneumatic seal at all times.

Tube support

The tube support prevents the tube collapsing during extreme tensile loading conditions. Such conditions are only encountered during performance testing and far exceed those experienced during normal use.

Collet

The purpose of the collet is to grip the tube and ensure it is retained by the fitting at all times.



Straight adaptors and connectors

Straight adaptor (NPTF) 95453  Page 2	Straight adaptor (metric) 944666  Page 2	Straight adaptor (BSP taper) 944530  Page 3	Equal straight connector 944503  Page 3	Reducing straight connector 944504  Page 3
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Elbow adaptors and connector

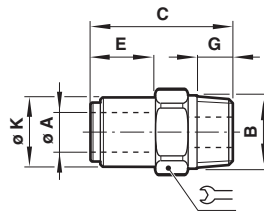
Elbow adaptor (NPTF) 954331  Page 3	Universal hobbs elbow adaptor (metric) 944138  Page 4	Elbow adaptor (BSP taper) 944330  Page 3	Elbow connector 944514  Page 4
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Tee connectors

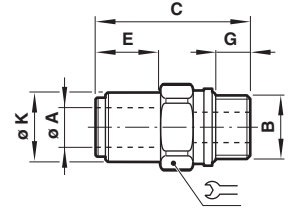
Equal tee connector 944514  Page 4	Reducing tee connector 944588  Page 4
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Dimensions

Straight adaptor NPTF thread





Straight adaptor Metric thread



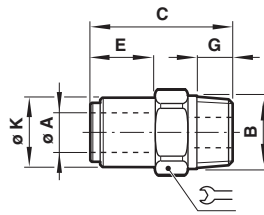
Dimensions in mm
Projection/First angle



O/D Tube A	NPTF B	C	E	G	ØK		Model
3/16"	1/8"	25,8	10,8	9,5	11,7	1/2"	95453003
1/4"	1/8"	26,3	10,8	9,5	12,7	1/2"	95453004
1/4"	1/4"	29,8	9,3	14,3	12,7	9/16"	95453010
1/4"	3/8"	30,5	8,0	14,3	12,7	1 1/16"	95453018
3/8"	1/8"	33,6	17,1	9,5	16,5	1 1/16"	95453006
3/8"	1/4"	37,6	16,1	14,3	16,5	1 1/16"	95453012
3/8"	3/8"	36,1	13,6	14,3	16,5	1 1/16"	95453020
3/8"	1/2"	37,1	9,1	19,0	16,5	7/8"	95453029
1/2"	1/4"	42,6	19,1	14,3	20,0	7/8"	95453013
1/2"	3/8"	41,6	18,1	14,3	20,0	7/8"	95453021
1/2"	1/2"	43,6	15,6	19,0	20,0	7/8"	95453030
5/8"	3/8"	47,5	22,5	14,3	25,0	1 1/16"	95453022
5/8"	1/2"	53,5	23,5	19,0	25,0	1 1/16"	95453031
3/4"	1/2"	53,5	22,5	19,0	29,5	1 3/16"	95453049

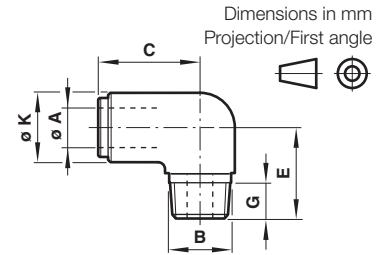
O/D Tube A	Thread B	C	E	G	ØK		Model
1/4"	M10 x 1.0	28,5	13,5	6,5	13,0	14	94466631
1/4"	M12 x 1.5	30,5	11,5	7,5	13,0	17	94466633
1/4"	M16 x 1.5	27,5	7,5	7,5	13,0	22	94466635
3/8"	M12 x 1.5	35,0	16,0	7,5	16,8	17	94466653
3/8"	M14 x 1.5	35,0	15,0	7,5	17,0	19	94466654
3/8"	M16 x 1.5	35,0	15,0	7,5	17,0	22	94466655
3/8"	M22 x 1.5	31,0	5,5	9,5	17,0	27	94466658
1/2"	M16 x 1.5	39,0	19,0	7,5	20,5	22	94466665
1/2"	M20 x 1.5	38,0	13,0	10,0	20,5	27	94466667
1/2"	M22 x 1.5	35,0	9,5	9,5	20,5	27	94466668
5/8"	M16 x 1.5	42,5	19,5	7,5	26,0	27	94466679
5/8"	M22 x 1.5	44,5	19,5	9,5	26,0	27	94466675

**Straight adaptor
BSP taper thread**



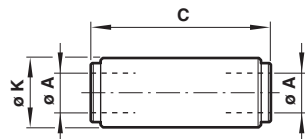
O/D Tube A	B	C	E	G	Ø K		Model
1/4"	1/8"	26,5	10,5	9,5	12,5	13	94453004
1/4"	1/4"	27,0	9,5	11,0	12,5	14	94453010
3/8"	1/8"	33,5	17,0	9,5	16,5	17	94453006
3/8"	1/4"	39,5	19,0	11,0	20,0	22	94453012
3/8"	3/8"	34,5	13,5	12,5	16,5	17	94453020
3/8"	1/2"	34,0	9,0	16,0	16,5	22	94453029
1/2"	1/4"	39,5	19,0	11,0	20,0	22	94453013
1/2"	3/8"	40,0	18,0	12,5	20,0	22	94453021
1/2"	1/2"	40,5	15,5	16,0	20,0	22	94453030

**Elbow adaptor
NPTF thread**



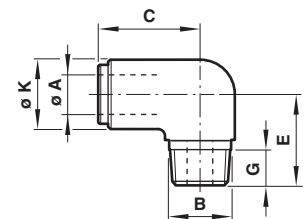
O/D Tube A	NPTF B	C	E	G	Ø K	Model
3/16"	1/8"	20,5	19,0	9,5	12,0	95433103
1/4"	1/8"	20,5	20,0	9,5	14,0	95433104
1/4"	1/4"	22,0	26,0	14,5	17,5	95433110
1/4"	3/8"	24,0	28,0	14,5	21,0	95433118
1/4"	1/2"	24,5	35,0	19,0	24,0	95433127
5/16"	1/8"	22,5	24,0	9,5	17,5	95433105
3/8"	1/8"	27,5	22,0	9,5	17,5	95433106
3/8"	1/4"	27,0	26,0	14,5	17,5	95433112
3/8"	3/8"	29,0	28,0	14,5	21,0	95433120
3/8"	1/2"	29,0	35,0	19,0	24,0	95433129
1/2"	1/4"	31,0	29,0	14,5	22,0	95433113
1/2"	3/8"	32,0	29,0	14,5	22,0	95433121
1/2"	1/2"	32,5	35,0	19,0	24,0	95433130
1/2"	3/4"	37,0	38,0	19,0	29,5	95433144
5/8"	3/8"	36,5	31,0	14,5	27,0	95433198
5/8"	1/2"	39,0	36,0	19,0	29,5	95433131
3/4"	1/2"	38,5	37,5	19,0	33,0	95433149

Equal straight connector

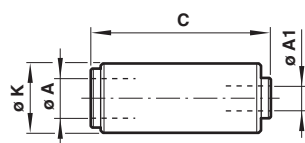


O/D Tube A	C	Ø K	Model
1/4"	35,6	13,0	94450304
3/8"	44,1	17,0	94450306
1/2"	51,1	20,5	94450307
5/8"	61,5	25,5	94450308
3/4"	63,0	30,0	94450309

**Elbow adaptor
BSP taper thread**



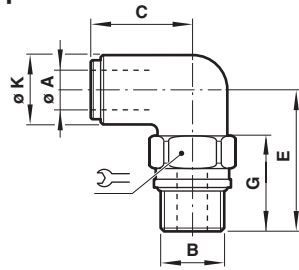
Reducing straight connector




O/D Tube A	O/D Tube Ø A1	C	Ø K	Model
1/4"	3/16"	36,0	13,0	94450437
3/8"	3/16"	43,0	17,0	94450439
3/8"	1/4"	43,5	17,0	94450448
1/2"	3/8"	48,5	20,5	94450464

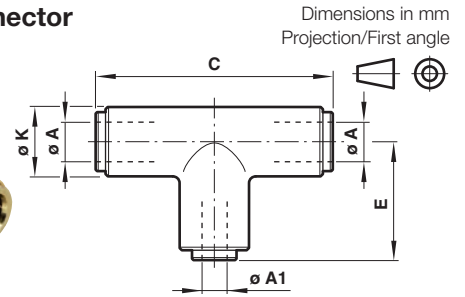
O/D Tube A	BSP taper B	C	E	G	Ø K	Model
1/4"	1/8"	20,5	20,0	9,5	14,3	94433004
1/4"	1/4"	21,8	22,0	11,1	15,9	94433010
3/8"	1/4"	25,1	24,0	11,1	17,5	94433012
3/8"	3/8"	26,1	27,5	12,7	20,0	94433020
3/8"	1/2"	30,1	31,0	15,9	23,8	94433029
1/2"	1/4"	30,1	27,0	11,1	23,8	94433013
1/2"	3/8"	30,1	28,5	12,7	23,8	94433021
1/2"	1/2"	30,6	31,0	15,9	23,8	94433030

**Universal hobbs elbow adaptor
Metric thread**



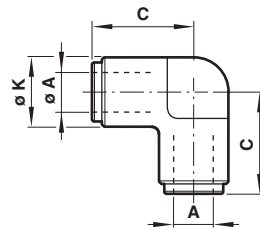
O/D Tube A	Thread B	C	E	G	Ø K		Model
1/4"	M12 x 1.5	23,5	29,0	19,0	14,0	17	94413833
1/4"	M16 x 1.5	24,5	34,0	21,5	17,5	24	94413835
1/4"	M22 x 1.5	28,5	41,5	25,0	26,0	30	94413838
3/8"	M12 x 1.5	29,0	31,0	19,0	18,5	17	94413853
3/8"	M16 x 1.5	29,0	33,5	21,5	18,5	24	94413855
3/8"	M22 x 1.5	32,0	40,5	25,0	26,0	30	94413858
1/2"	M14 x 1.5	32,5	33,5	19,5	22,0	19	94413864
1/2"	M16 x 1.5	32,5	35,5	21,5	22,0	24	94413865
1/2"	M22 x 1.5	34,5	40,5	25,0	26,0	30	94413868
5/8"	M22 x 1.5	38,0	40,5	25,0	26,0	30	94413875

Reducing tee connector



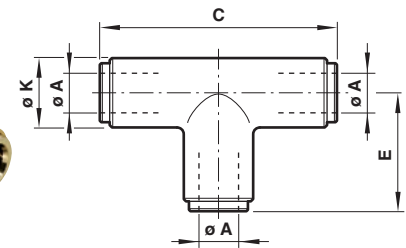
O/D Tube A	O/D Tube A1	O/D Tube A2	C	E	Ø K	Model
3/8"	1/4"	1/4"	51,0	23,5	17,0	94458816
3/8"	3/8"	1/4"	55,0	23,5	17,0	94458801
3/8"	3/8"	1/2"	60,0	32,5	20,5	94458802
1/2"	3/8"	3/8"	62,5	30,0	20,5	94458804
1/2"	1/2"	3/16"	64,0	24,5	20,5	94458803
1/2"	1/2"	1/4"	64,0	25,0	20,5	94458810
1/2"	1/2"	3/8"	62,0	31,0	20,5	94458811
5/8"	1/2"	5/8"	76,5	39,5	27,0	94458814

Equal elbow connector



O/D Tube A	C	Ø K	Model
1/4"	21	11	94451104
3/8"	27	14,5	94451106
1/2"	32	18	94451107

Equal tee connector



O/D Tube A	C	E	Ø K	Model
1/4"	42,0	21,0	13,0	94451404
3/8"	54,0	27,0	17,0	94451406
1/2"	64,0	32,0	20,5	94451407
5/8"	78,0	39,0	27,0	94451408

Warning

These products are intended for use in industrial compressed air and rail transport 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 NORGREN.

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.