97400 (Fleetfit)
Commercial vehicle push-in fittings

- Tube size: Ø 6 ... 18 mm
- 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
- 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 to 10 bar (0 ... 145 psi)

Ambient/Media temperature:
-40 ... +100°C (-40 ... +212°F)

Tubing:
Tube should be to DIN 74324

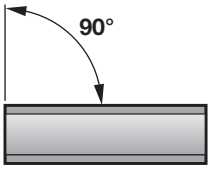
Standards & Legislation:
Fittings and tubing comply to department of transport Federal motor vehicle safety standard, (DOT FMVSS 106)
(Mandatory requirements for Inch tube fittings in U.S.A.)
Society for automotive engineers SAE J1131 (inch tube and fittings)
German TUV approval and DIN 74324 (metric tube and fittings)

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

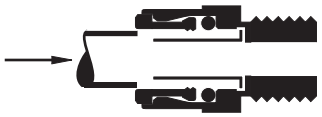
Additional ranges:
The selection of metric fittings listed in this catalogue form part of a wider range of vehicle push-in fittings for further details consult Norgren Technical service.

Materials:
Body (straights), tube support, collet: brass BS 2874 CZ 121
Body (elbows, tees): brass BS 2874 CZ 122
'O'-ring: buna N (low NBR)
Thread sealant: precoat 5

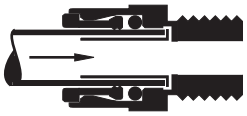
Method of assembly



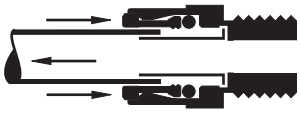
1. Ensure that the end of the tube is cut square and is free from burrs.



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

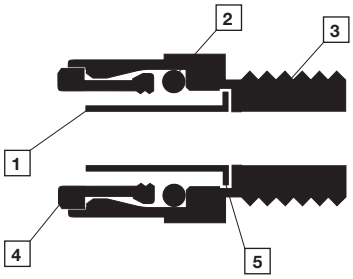


3. Continue pushing the tube through the 'O'-ring until it bottoms on the tube stop. Then pull back on the tube to reinforce the collet teeth gripping action.



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.

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

'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.

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Straight adaptors and connectors

Straight adaptor (metric)
974666



Page 3

Straight adaptor (BSP taper)
974530



Page 3

Straight connector (equal)
974503



Page 5

Reducing straight connector
974504



Page 5

Elbow adaptors and connector

Swivel elbow adaptor (metric)
974521



Page 3

Universal hobbs elbow adaptor (metric)
974138



Page 3

Swivel elbow adaptor (BSP parallel)
974104



Page 4

Elbow adaptor (BSP taper)
974330



Page 4

Swivel elbow adaptor (BSP Taper)
974110



Page 4

Elbow connector
974511



Page 4

Tee connectors

Tee connector (equal)
974514



Page 5

Reducing tee connector
974588



Page 5

Thread	Recommended torque	Thread	Recommended torque
M10	14 Nm	R1/8 / NPTF	12 Nm
M12	20 Nm	R1/4 / NPTF	30 Nm
M14	24 Nm	R3/8 / NPTF	38 Nm
M16	27 Nm	R1/2 / NPTF	68 Nm
M22	34 Nm		

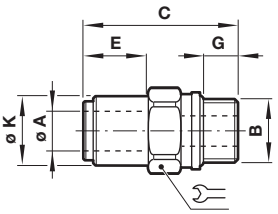
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Dimensions

Dimensions in mm
Projection/First angle

Straight adaptor metric thread

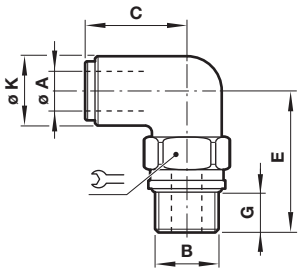




O/D Tube A	B	C	E	G	Ø K		Model
6	M10 x 1,0	28,5	13,5	8,0	13,0	14	97466631
6	M12 x 1,5	30,5	11,5	10,0	13,0	17	97466633
6	M14 x 1,5	31,5	13,5	10,0	13,0	19	97466634
6	M16 x 1,5	27,5	7,5	10,0	13,0	22	97466635
6	M22 x 1,5	30,5	5,0	12,0	13,0	27	97466638
8	M10 x 1,0	29,5	12,5	8,0	15,0	17	97466641
8	M12 x 1,5	31,5	12,5	10,0	15,0	17	97466643
8	M14 x 1,5	31,5	13,5	10,0	15,0	19	97466644
8	M16 x 1,5	31,5	11,5	10,0	15,0	22	97466645
8	M22 x 1,5	30,5	15,0	12,0	15,0	27	97466648
10	M10 x 1,0	33,0	16,0	8,0	17,0	17	97466651
10	M12 x 1,5	35,0	16,0	10,0	17,0	17	97466653
10	M14 x 1,5	5,0	15,0	10,0	17,0	19	97466654
10	M16 x 1,5	35,0	15,0	10,0	17,0	22	97466655
10	M22 x 1,5	31,0	5,5	12,0	17,0	27	97466658
12	M12 x 1,5	38,5	18,5	10,0	20,5	22	97466663
12	M14 x 1,5	38,5	18,5	10,0	20,5	22	97466664
12	M16 x 1,5	39,0	19,0	10,0	20,5	22	97466665
12	M22 x 1,5	35,0	9,5	12,0	20,5	27	97466668
15	M22 x 1,5	45,0	19,5	12,0	26,0	27	97466670
16	M16 x 1,5	42,5	19,5	10,0	26,0	27	97466679
16	M22 x 1,5	44,5	19,5	12,0	26,0	27	97466675
18	M22 x 1,5	44,5	18,5	12,0	29,0	30	97466680

Swivel elbow adaptor metric thread

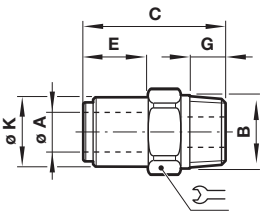




O/D Tube A	B	C	E	G	Ø K		Model
6	M16 x 1,5	21,5	30,0	10,0	17,5	22	97452135
8	M12 x 1,5	23,0	27,0	10,0	17,5	17	97452143
8	M16 x 1,5	27,0	26,0	12,5	17,5	26	97452145
8	M22 x 1,5	25,0	35,5	12,0	26,0	27	97452148
10	M12 x 1,5	27,5	29,0	10,0	18,5	17	97452153
10	M16 x 1,5	27,5	30,0	10,0	18,5	22	97452155
10	M22 x 1,5	27,5	35,5	12,0	26,0	27	97452158
12	M16 x 1,5	32,5	34,0	10,0	22,0	22	97452165
12	M22 x 1,5	32,5	40,0	12,0	26,0	27	97452168

Straight adaptor BSP taper thread

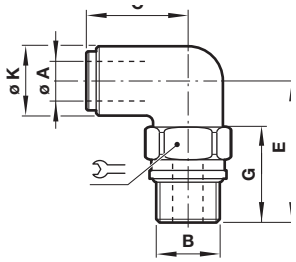




O/D Tube A	Taper B	C	E	G	Ø K		Model
6	R1/8	26,5	11,0	9,5	12,5	13	97453004
6	R1/4	27,0	9,5	11,1	12,5	14	97453010
8	R1/8	30,0	13,5	9,5	14,5	15	97453005
8	R1/4	30,0	11,5	11,1	14,5	15	97453011
10	R1/4	34,5	16,0	11,1	16,5	17	97453012
10	R3/8	34,5	13,5	12,5	16,5	17	97453020
12	R1/4	39,5	19,0	11,1	20,0	22	97453013

Universal hobbs elbow adaptor metric thread



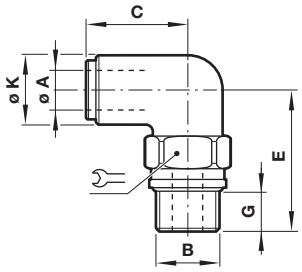


O/D Tube A	B	C	E	G	Ø K		Model
6	M10 x 1,0	23,5	26,0	16,0	14,0	15	97413831
6	M12 x 1,5	23,5	29,0	19,0	14,0	17	97413833
6	M16 x 1,5	24,5	34,0	21,5	17,5	24	97413835
6	M22 x 1,5	28,5	41,5	25,0	26,0	30	97413838
8	M12 x 1,5	25,5	31,5	19,0	17,5	17	97413843
8	M16 x 1,5	25,5	34,0	21,5	17,5	24	97413845
8	M22 x 1,5	28,5	41,5	25,0	26,0	30	97413848
10	M10 x 1,0	27,0	28,0	16,0	18,5	15	97413851
10	M12 x 1,5	29,0	31,0	19,0	18,5	17	97413853
10	M14 x 1,5	28,0	31,5	19,5	18,5	19	97413854
10	M16 x 1,5	29,0	33,5	21,5	18,5	24	97413855
10	M22 x 1,5	32,0	40,5	25,0	26,0	30	97413858
12	M16 x 1,5	32,0	35,5	21,5	22,0	24	97413865
12	M22 x 1,5	34,5	40,5	25,0	26,0	30	97413868
16	M16 x 1,5	38,0	38,5	25,0	26,0	24	97413879
16	M22 x 1,5	38,0	40,5	21,5	26,0	30	97413875
18	M22 x 1,5	39,5	43,0	25,0	23,0	30	97413880

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Swivel elbow adaptor BSP parallel thread

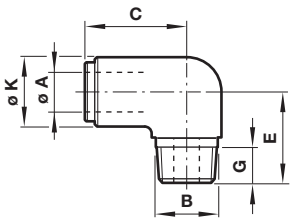




O/D Tube A	BSP parallel B	C	E	G	Ø K		Model
6	G1/8	21,0	23,0	7,0	12,0	15,0	97410404
10	G1/4	27,5	31,0	10,0	15,0	19,0	97410412

Elbow adaptor BSP taper thread



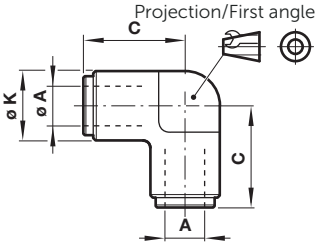


O/D Tube A	BSP Taper B	C	E	G	Ø K	Model
6	R1/8	20,5	20,0	9,5	14,0	97433004
6	R1/4	22,0	22,0	11,0	16,0	97433010
8	R1/4	23,0	22,0	11,0	16,0	97433011
10	R1/4	25,0	24,0	11,0	17,5	97433012
12	R1/4	30,0	27,0	11,0	24,0	97433013
12	R1/2	30,5	31,0	16,0	24,0	97433030

Elbow connector

Dimensions in mm
Projection/First angle

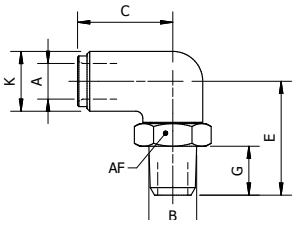




O/D Tube A	C	Ø K		Model
6	21,0	13,0	10	97451104
8	23,0	15,0	11	97451105
9	27,0	17,0	14	97451113
10	27,0	17,0	14	97451106
12	32,0	20,5	16	97451107
15	38,5	27,0	27	97451115
16	39,0	27,0	27	97451108

Swivel elbow adaptor BSP taper thread



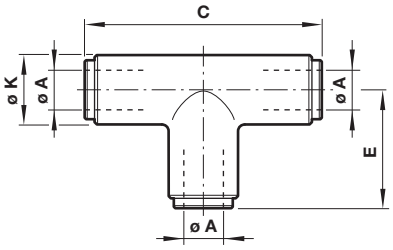


O/D Tube A	BSP parallel B	C	E	G	Ø K	AF	Model
6	R1/4	22	30,1	14	15,2	19	97411410
8	R 1/4	23,0	31,6	14,0	15,2	19	97411411
10	R 1/4	27,5	32,6	14,0	17,2	19	97411412PS
12	R 1/4	32,5	34,6	14,0	20,8	19	97411413
12	R 3/8	32,5	36,0	14,0	20,8	22	97411421
12	R 1/2	32,5	38,1	15,9	20,8	22	97411430

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Equal tee connector

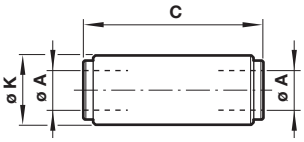




O/D Tube A	C	E	Ø K	Model
6	42,0	21,0	13,0	97451404
8	45,5	23,0	15,0	97451405
9	54,0	27,0	14,0	97451413
10	54,0	27,0	17,0	97451406
12	64,0	32,0	20,5	97451407
15	77,0	38,5	27,0	97451415
16	78,0	39,0	27,0	97451408

Equal straight connector



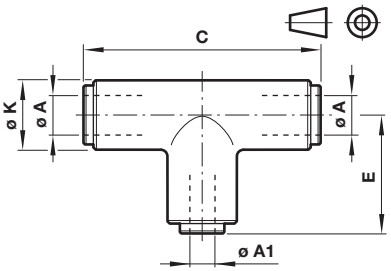


O/D Tube A	C	Ø K	Model
6	35,6	13,0	97450304
8	37,6	15,0	97450305
9	44,1	17,0	97450313
10	44,1	17,0	97450306
11	46,1	19,0	97450336
12	51,1	20,5	97450307
14	50,2	22,0	97450392
15	61,5	25,4	97450315
16	61,5	25,4	97450308

Reducing tee connector

Dimensions in mm
Projection/First angle

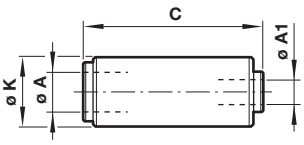




O/D Tube A	Tube A	Tube Ø A1	C	E	Ø K	Model
10	10	6	55,0	23,5	17,0	97458801
12	12	6	64,0	25,5	21,0	97458810
12	12	8	64,0	27,5	21,0	97458822

Reducing straight connector





O/D Tube A	O/D Tube Ø A1	C	Ø K	Model
8	6	38,5	15,0	97450447
10	6	43,5	17,0	97450448

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.

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