

- > Port size: Ø 1/8" ... 1/2", Ø 4 ... 12 mm tube size, BSP and NPT threads
- > Very compact units
- > Easy tube insertion for rapid assembly of pneumatic circuits
- > Positive tube anchorage
- > All taper threads pre-coated with non-PTFE based sealant
- > Straight Adaptors feature internal hexagon for Allen key
- > VMQ free 'O'-ring



**OBSOLETE DOCUMENT**  
Technical Reference Only

**Technical features**

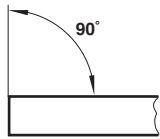
**Medium:**  
Compressed air  
(for other media please consult Technical Department)  
**Operating pressure:**  
Vacuum; 18 bar (261 psi)  
dependent upon operating specification of tubing  
Vacuum: -750 mm of Hg i.e. 98%

**Operating temperature:**  
-20 ... +80°C (-4 ... +176°F)  
"Special" low temperature options contact Norgren Technical service  
**Tube sizes:**  
1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 1/2" O/D

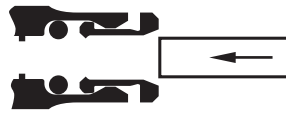
**Tubing types:**  
PA11 or 12, PU and other plasticised or unplasticised tubing which conforms to the tolerances specified in BS 5409, Part 1, 1976, light and normal duty, DIN 73378, DIN 74234, NFE 49-100

**Materials:**  
Body: nickel plated brass or glass filled nylon  
Collet: nickel plated brass  
'O'- ring: VMQ free NBR (FPM optional)  
Washer: plastic sealing (parallel threads)  
Thread sealant: Non-PTFE

**Method of assembly**



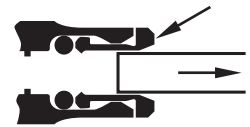
1. Ensure that the end of the tube is cut square and is free from burrs.



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

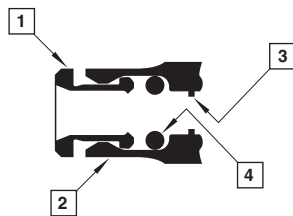


3. Continue pushing the tube through the 'O'-ring until it bottoms on the tube stop then pull back.



4. To disconnect push the tube into the fitting, hold down the collet and withdraw the tube.

**Components**











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










**Option selector**

12 ★★★★★★






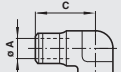


### Straight adaptors, connectors and plugs

<p><b>Straight adaptor</b> MM O/D tube to NPTF (male) thread 10425/12425</p>  <p>Page 3</p>	<p><b>Straight adaptor</b> Inch O/D tube to BSPT thread 10125/12125</p>  <p>Page 3</p>	<p><b>Straight adaptor</b> O/D tube to male NPTF taper 12425</p>  <p>Page 4</p>	<p><b>Straight adaptor</b> O/D tube to male metric thread 12225/10225</p>  <p>Page 4</p>	<p><b>Straight adaptor</b> O/D tube to female NPTF thread 12426</p>  <p>Page 4</p>	<p><b>Stem adaptor</b> MM O/D stem to NPTF (male) thread 10415/12415</p>  <p>Page 4</p>	<p><b>Stem adaptor</b> Inch O/D stem to BSPT thread 10115/12115</p>  <p>Page 4</p>	<p><b>Straight stem adaptor</b> O/D tube stem to taper NPTF thread 12415</p>  <p>Page 5</p>
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<p><b>Straight connector</b> Inch tube to MM tube 10020/12037</p>  <p>Page 5</p>	<p><b>Straight connector</b> O/D tube to O/D tube 12020</p>  <p>Page 5</p>	<p><b>Bulkhead connector</b> O/D tube to O/D tube 12029</p>  <p>Page 5</p>	<p><b>Expanding</b> 12023</p>  <p>Page 5</p>	<p><b>Tube end expander/ reducer, tube stem to O/D tube 12023</b></p>  <p>Page 5</p>	<p><b>Straight stem connector</b> 12022</p>  <p>Page 6</p>	<p><b>Plug</b> 12004</p>  <p>Page 6</p>	<p><b>Plug</b> 13004</p>  <p>Page 6</p>	<p><b>Stem tailpiece adaptor, O/D tube stem to hose bore 12019</b></p>  <p>Page 6</p>
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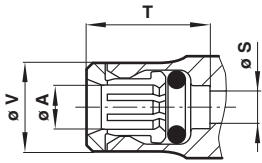
### Elbow adaptors, connectors and banjos

<p><b>Fixed elbow adaptor</b> O/D tube to male BSPT thread 12145</p>  <p>Page 6</p>	<p><b>Fixed elbow adaptor</b> O/D tube to male NPTF thread 12445</p>  <p>Page 7</p>	<p><b>Swivel male elbow</b> O/D tube to male NPTF thread 12447</p>  <p>Page 7</p>	<p><b>Swivel elbow adaptor</b> O/D tube to male BSPT thread 12147/10147</p>  <p>Page 7</p>	<p><b>Extended swivel elbow adaptor, O/D tube to male NPTF thread 12454</b></p>  <p>Page 8</p>	<p><b>Elbow connector</b> O/D tube to O/D tube 12040</p>  <p>Page 8</p>
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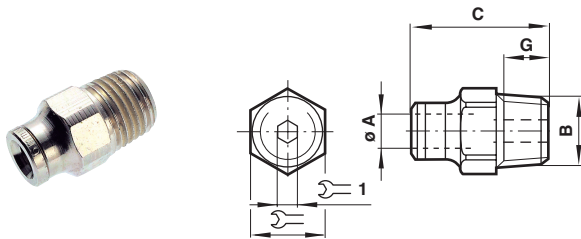
### Tee adaptors, connectors and banjos



<p><b>Swivel tee adaptor</b> O/D tube to male taper BSP thread 12167/10167</p>  <p>Page 8</p>	<p><b>Swivel male centre tee</b> O/D tube to male NPTF thread 12467</p>  <p>Page 8</p>	<p><b>Tee connector</b> O/D tube to O/D tube 12060</p>  <p>Page 8</p>	<p><b>Swivel side tee adaptor</b> O/D tube to male taper BSP thread 12168/10168</p>  <p>Page 9</p>	<p><b>Swivel male side tee</b> O/D tube to male taper NPTF thread 12468</p>  <p>Page 9</p>
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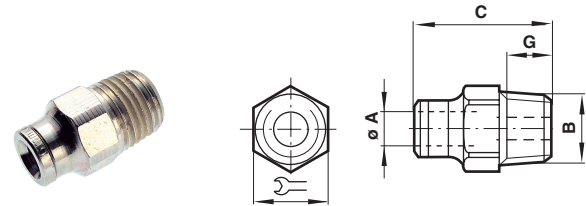
**Typical dimensions**


 Dimensions in inch  
Projection/First angle


A O/D tube	S	T tubing stop	V
1/8"	0.09	0.53	0.26
5/32"(4)	0.11	0.55	0.3
3/16"	0.13	0.59	0.38
1/4"	0.17	0.61	0.42
5/16"(8)	0.24	0.65	0.51
3/8"	0.3	0.83	0.59
1/2"	0.38	0.96	0.71

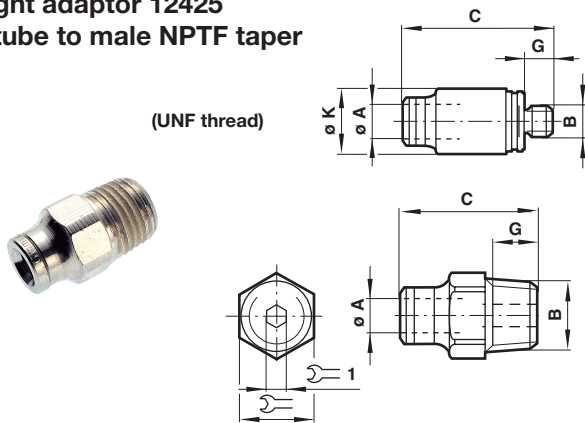
**Dimensions**
**Straight adaptor 10425/12425  
MM O/D Tube to NPTF (male) thread**



O/D Tube A mm	Thread B	C	G			Model
4	10/32 UNF	0.85	0.2	0.35	3/32"	124250210
4	1/8 NPT	0.89	0.37	7/16"	1/8"	124250218
4	1/4 NPT	1.04	0.56	9/16"	1/8"	124250228
5	1/8 NPT	0.96	0.37	7/16"	5/32"	104250518
5	1/4 NPT	1.04	0.56	9/16"	5/32"	104250528
6	10/32 UNF	0.94	0.2	0.430	3/32"	104250610
6	1/8 NPT	0.98	0.37	7/16"	5/32"	104250618
6	1/4 NPT	1.11	0.56	9/16"	5/32"	104250628
6	3/8 NPT	1.07	0.56	11/16"	5/32"	104250638
8	1/8 NPT	1.12	0.37	1/2"	3/16"	124250518
8	1/4 NPT	1.23	0.56	9/16"	1/4"	124250528
8	3/8 NPT	1.13	0.56	11/16"	1/4"	124250538
10	1/8 NPT	1.32	0.37	11/16"	3/16"	104251018
10	1/4 NPT	1.47	0.56	11/16"	9/32"	104251028
10	3/8 NPT	1.41	0.56	11/16"	5/16"	104251038
10	1/2 NPT	1.45	0.75	7/8"	5/16"	104251048
12	1/4 NPT	1.67	0.56	7/8"	9/32"	104251228
12	3/8 NPT	1.63	0.56	7/8"	13/32"	104251238
12	1/2 NPT	1.7	0.75	7/8"	13/32"	104251248

**Straight adaptor 10125/12125  
Inch O/D tube to BSPT thread**


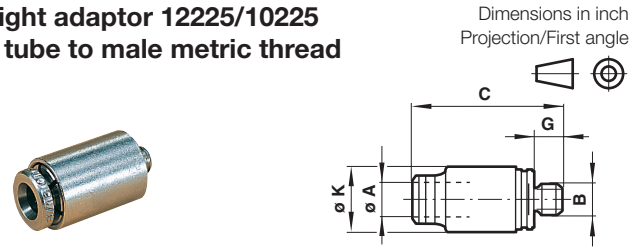
O/D Tube A	Thread B	C	G		Model
1/8"	R1/8	0.79	0.3	0.39	121250118
1/8"	R1/4	0.89	0.44	0.55	121250128
5/32"	R1/8	0.81	0.3	0.39	101250418
5/32"	R1/4	0.91	0.44	0.55	101250428
1/4"	R1/8	0.91	0.3	0.43	121250418
1/4"	R1/4	0.99	0.44	0.55	121250428
1/4"	R3/8	1.01	0.5	0.67	121250438
5/16"	R1/8	1.05	0.3	0.51	101250818
5/16"	R1/4	1.11	0.44	0.55	101250828
5/16"	R3/8	1.07	0.5	0.67	101250838
3/8"	R1/8	1.25	0.3	0.67	121250618
3/8"	R1/4	1.35	0.44	0.67	121250628
3/8"	R3/8	1.35	0.5	0.67	121250638
3/8"	R1/2	1.33	0.63	0.87	121250648
1/2"	R1/4	1.54	0.44	0.87	121250728
1/2"	R3/8	1.56	0.5	0.87	121250738
1/2"	R1/2	1.58	0.63	0.87	121250748

**Straight adaptor 12425**  
O/D tube to male NPTF taper



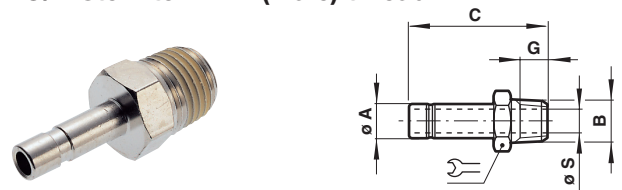
O/D Tube A	Thread B	C	G	Ø K		Model
1/8"	10-32 UNF	0.79	0.2	0.31	3/32"	124250110
1/8"	1/16 NPT	0.8	0.37	3/8"	3/32"	124250116
1/8"	1/8 NPT	0.67	0.37	7/16"	3/32"	124250118
1/8"	1/4 NPT	0.95	0.56	9/16"	3/32"	124250128
5/32"	10-32 UNF	0.85	0.2	0.35	3/32"	124250210
5/32"	1/8 NPT	0.89	0.37	7/16"	1/8"	124250218
5/32"	1/4 NPT	1.04	0.56	9/16"	1/8"	124250228
3/16"	1/8 NPT	0.96	0.37	7/16"	5/32"	124250318
3/16"	1/4 NPT	1.04	0.56	9/16"	5/32"	124250328
1/4"	10-32 UNF	0.94	0.2	0.43	3/32"	124250410
1/4"	1/8 NPT	0.98	0.37	7/16"	5/32"	124250418
1/4"	1/4 NPT	1.11	0.56	9/16"	5/32"	124250428
1/4"	3/8 NPT	1.07	0.56	11/16"	5/32"	124250438
5/16"	1/8 NPT	1.12	0.37	1/2"	3/16"	124250518
5/16"	1/4 NPT	1.23	0.56	9/16"	1/4"	124250528
5/16"	3/8 NPT	1.13	0.56	11/16"	1/4"	124250538
3/8"	1/8 NPT	1.32	0.37	11/16"	3/16"	124250618
3/8"	1/4 NPT	1.47	0.56	11/16"	1/4"	124250628
3/8"	3/8 NPT	1.41	0.56	11/16"	5/16"	124250638
3/8"	1/2 NPT	1.45	0.75	7/8"	5/16"	124250648
1/2"	1/4 NPT	1.67	0.56	7/8"	1/4"	124250728
1/2"	3/8 NPT	1.63	0.56	7/8"	3/8"	124250738
1/2"	1/2 NPT	1.7	0.75	7/8"	3/8"	124250748


**Straight adaptor 12225/10225**  
O/D tube to male metric thread



O/D Tube A	Thread B	C	G	Ø K	Model
1/8"	M5 x 0.8	0.78	0.2	0.31	122250105
5/32"	M5 x 0.8	0.84	0.2	0.35	102250405
3/16"	M5 x 0.8	0.9	0.2	0.39	122250305
1/4"	M5 x 0.8	0.94	0.2	0.43	122250405


**Stem adaptor 10415/12415**  
MM O/D stem to NPTF (male) thread



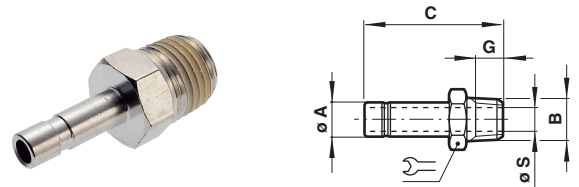
O/D Tube A mm	Thread B	C	G	Ø S		Model
4	1/8 NPT	1.25	0.37	0.08	7/16"	124150218
4	1/4 NPT	1.44	0.56	0.08	9/16"	124150228
5	1/8 NPT	1.31	0.37	0.13	7/16"	104150518
5	1/4 NPT	1.5	0.56	0.13	9/16"	104150528
6	1/8 NPT	1.33	0.37	0.16	7/16"	104150618
6	1/4 NPT	1.52	0.56	0.16	9/16"	104150628
8	1/8 NPT	1.37	0.37	0.2	7/16"	124150518
8	1/4 NPT	1.56	0.56	0.2	9/16"	124150528
10	1/4 NPT	1.74	0.56	0.3	9/16"	104151028
10	3/8 NPT	1.81	0.56	0.3	11/16"	104151038
12	3/8 NPT	1.95	0.56	0.36	11/16"	104151238
12	1/2 NPT	2.15	0.75	0.36	7/8"	104151248


**Straight adaptor 12426**  
O/D tube to female NPTF thread



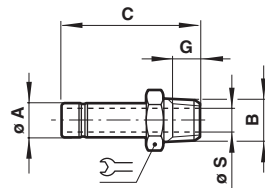
O/D Tube A	Thread B	C		Model
1/8"	1/8 NPT	1.14	9/16"	124260118
1/8"	1/4 NPT	1.38	11/16"	124260128
5/32"	1/8 NPT	1.14	9/16"	124260218
5/32"	1/4 NPT	1.42	11/16"	124260228
1/4"	1/8 NPT	1.19	9/16"	124260418
1/4"	1/4 NPT	1.46	11/16"	124260428
5/16"	1/8 NPT	1.23	9/16"	124260518
5/16"	1/4 NPT	1.5	11/16"	124260528
3/8"	1/4 NPT	1.66	11/16"	124260628
3/8"	3/8 NPT	1.7	7/8"	124260638

**Stem adaptor 10115/12115**  
Inch O/D stem to BSPT thread



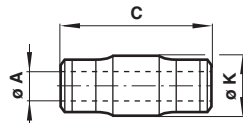
O/D Tube A	Thread B	C	G	Ø S		Model
5/32"	1/8 NPT	1.18	0.3	0.08	0.39	101150418
5/32"	1/4 NPT	1.32	0.44	0.08	0.55	101150428
1/4"	1/8 NPT	1.26	0.3	0.16	0.47	121150418
1/4"	1/4 NPT	1.4	0.44	0.16	0.55	121150428
5/16"	1/8 NPT	1.3	0.3	0.2	0.55	101150818
5/16"	1/4 NPT	1.44	0.44	0.2	0.55	101150828
3/8"	1/4 NPT	1.57	0.44	0.3	0.59	121150628
3/8"	3/8 NPT	1.77	0.5	0.3	0.75	121150638
1/2"	3/8 NPT	1.89	0.5	0.39	0.75	121150738
1/2"	1/2 NPT	2.03	0.63	0.39	0.87	121150748

**Straight stem adaptor 12415**  
O/D tube stem to taper NPTF thread



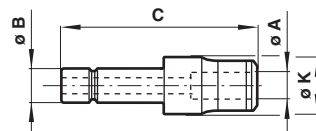
O/D Tube A	Thread B	C	G	Ø S		Model
5/32"	10-32 UNF	1.14	0.2	0.08	5/16"	124150210
5/32"	1/8 NPT	1.25	0.37	0.08	7/16"	124150218
5/32"	1/4 NPT	1.45	0.56	0.08	9/16"	124150228
1/4"	1/8 NPT	1.33	0.37	0.16	7/16"	124150418
1/4"	1/4 NPT	1.52	0.56	0.16	9/16"	124150428
5/16"	1/8 NPT	1.37	0.37	0.19	7/16"	124150518
5/16"	1/4 NPT	1.56	0.56	0.19	9/16"	124150528
3/8"	1/4 NPT	1.74	0.56	0.3	9/16"	124150628
3/8"	3/8 NPT	1.82	0.56	0.3	11/16"	124150638
1/2"	3/8 NPT	1.95	0.56	0.35	11/16"	124150738
1/2"	1/2 NPT	2.15	0.75	0.35	7/8"	124150748

**Straight connector 12020**  
O/D tube to O/D tube



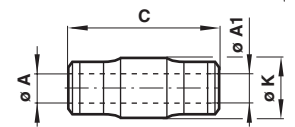
O/D Tube A	C	Ø K	Model
1/8"	1.15	0.35	120200100
5/32"	1.17	0.39	120200200
3/16"	1.26	0.43	120200300
1/4"	1.28	0.47	120200400
5/16"	1.35	0.55	120200500
3/8"	1.71	0.67	120200600
1/2"	1.98	0.81	120200700

**Tube end expander 12023**  
tube stem to O/D tube



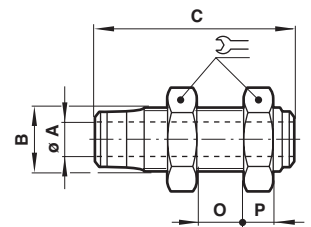
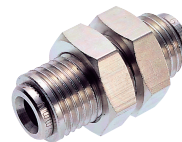
O/D Tube A	Stem O/D B	C	Ø K	Model
1/4"	1/8"	1.34	0.47	120230104
1/4"	5/32"	1.38	0.47	120230204
1/4"	3/16"	1.4	0.47	120230304

**Straight connector 10020/12037**  
inch tube to mm tube



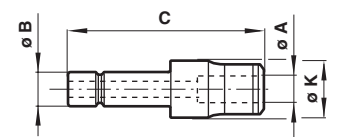
O/D Tube A	O/D Tube A1	C	Ø K	Model
5/32"	4 mm	1.17	0.35	100200400
3/16"	5 mm	1.26	0.43	120370305
1/4"	6 mm	1.28	0.47	120370406
5/16"	8 mm	1.35	0.55	100200800
3/8"	10 mm	1.71	0.66	120370610
1/2"	12 mm	1.98	0.81	120370712

**Bulkhead connector 12029**  
O/D tube to O/D tube



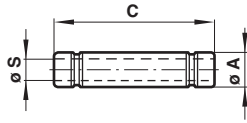
O/D Tube A	Thread B	C	O	P		Model
1/8"	M10 x 1.0	1.15	0.47	0.20	0.55	120290100
5/32"	M10 x 1.0	1.18	0.47	0.20	0.55	120290200
3/16"	M12 x 1.0	1.26	0.55	0.20	0.67	120290300
1/4"	M14 x 1.5	1.38	0.59	0.24	0.75	120290400
5/16"	M16 x 1.5	1.42	0.63	0.24	0.87	120290500
3/8"	M20 x 1.5	1.69	0.55	0.28	1.06	120290600
1/2"	M24 x 1.5	1.97	0.59	0.28	1.18	120290700

**Tube end reducer 12023**  
tube stem to O/D tube



O/D Tube A	Stem O/D B	C	Ø K	Model
1/8"	5/32"	1.22	0.35	120230201
1/8"	1/4"	1.3	0.35	120230401
5/32"	1/4"	1.34	0.39	120230402
5/32"	5/16"	1.22	0.39	120230502
5/32"	3/8"	1.22	0.47	120230602
3/16"	1/4"	1.38	0.43	120230403
3/16"	5/16"	1.3	0.43	120230503
1/4"	5/16"	1.46	0.47	120230504
1/4"	3/8"	1.5	0.47	120230604
1/4"	1/2"	1.38	0.55	120230704
5/16"	3/8"	1.69	0.55	120230605
5/16"	1/2"	1.65	0.55	120230705
3/8"	1/2"	1.97	0.67	120230706

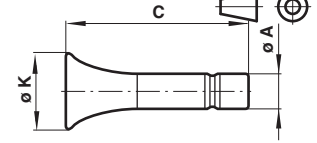
**Straight stem connector 12022**



O/D Tube A	C	Ø S	Model
1/8"	1.18	0.09	120220100
5/32"	1.19	0.13	120220200
3/16"	1.31	0.16	120220300
1/4"	1.34	0.24	120220400
5/16"	1.42	0.3	120220500
3/8"	1.77	0.38	120220600
1/2"	2.05	0.45	120220700

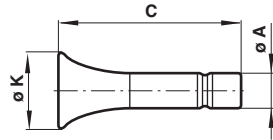
**Plug 12004 (Nickel plated brass)**

Dimensions in inch  
Projection/First angle



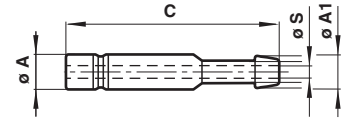
O/D Tube A	C	Ø K	Model
1/8"	1.02	0.34	120040100
5/32"	1.04	0.38	120040200
3/16"	1.1	0.42	120040300
1/4"	1.12	0.46	120040400
5/16"	1.16	0.5	120040500
3/8"	1.34	0.61	120040600
1/2"	1.48	0.66	120040700

**Plug 13004 (Plastic)**



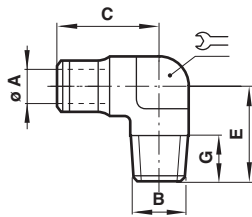
O/D Tube A	C	Ø K	Model
5/32"	1.04	0.38	130040200
3/16"	1.1	0.41	130040300
1/4"	1.12	0.46	130040400
5/16"	1.16	0.5	130040500
3/8"	1.34	0.61	130040600
1/2"	1.48	0.65	130040700


**Stem tailpiece adaptor 12019  
O/D tube stem to hose bore**

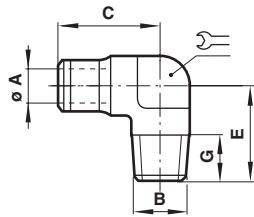



Nominal sizes Stem O/D tube Ø A	Hose bore Ø A1	C	Ø S	Model
1/8"	1/8"	1.34	0.07	120190101
5/32"	1/8"	1.35	0.07	120190201
1/4"	3/16"	1.43	0.11	120190403
5/16"	1/4"	1.47	0.17	120190504
3/8"	5/16"	1.70	0.22	120190605
1/2"	3/8"	1.84	0.29	120190706

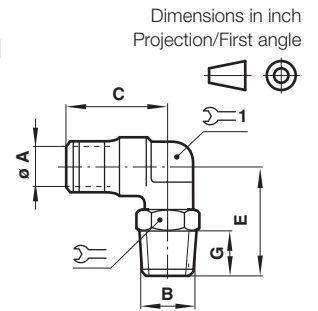
**Fixed elbow adaptor 12145  
O/D tube to male BSPT thread**




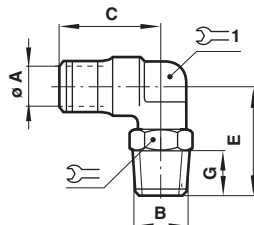
O/D Tube A	Thread B	C	E	G		Model
1/8"	R1/8	0.66	0.63	0.34	0.27	121450118
3/16"	R1/8	0.72	0.65	0.34	0.27	121450318
1/4"	R1/8	0.77	0.67	0.34	0.42	121450418
3/16"	R1/4	0.78	0.8	0.44	0.38	121450328


**Fixed elbow adaptor 12445**  
**O/D tube to male NPTF thread**


O/D Tube A	Thread B	C	E	G		Model
1/8"	1/8 NPT	0.67	0.66	0.37	0.28	124450118
5/32"	1/8 NPT	0.67	0.66	0.37	0.28	124450218
5/32"	1/4 NPT	0.72	0.92	0.56	0.43	124450228
3/16"	1/8 NPT	0.72	0.67	0.37	0.28	124450318
3/16"	1/4 NPT	0.79	0.92	0.56	0.43	124450328
1/4"	1/8 NPT	0.77	0.7	0.37	0.31	124450418
1/4"	1/4 NPT	0.79	0.92	0.56	0.43	124450428
1/4"	3/8 NPT	0.84	1.1	0.56	0.63	124450438
5/16"	1/8 NPT	0.84	0.74	0.37	0.43	124450518
5/16"	1/4 NPT	0.84	0.92	0.56	0.43	124450528
3/8"	1/8 NPT	1.05	0.8	0.37	0.52	124450618
3/8"	1/4 NPT	1.05	0.98	0.56	0.52	124450628
3/8"	3/8 NPT	1.05	1.1	0.56	0.63	124450638
3/8"	1/2 NPT	1.13	1.36	0.75	0.94	124450648
1/2"	1/4 NPT	1.25	1.03	0.56	0.63	124450728
1/2"	3/8 NPT	1.25	1.1	0.56	0.63	124450738
1/2"	1/2 NPT	1.25	1.36	0.75	0.94	124450748

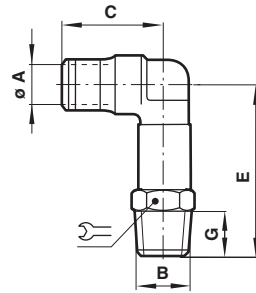
**Swivel male elbow 12447**  
**O/D tube to male NPTF thread**


O/D Tube A	Thread B	C	E	G		Model
1/8"	10-32 UNF	0.63	0.73	0.2	5/16"	124470110
1/8"	1/8 NPT	0.63	0.82	0.37	7/16"	124470118
1/8"	1/4 NPT	0.68	1.07	0.37	9/16"	124470128
5/32"	10-32 UNF	0.67	0.77	0.2	5/16"	124470210
5/32"	1/8 NPT	0.67	0.86	0.37	7/16"	124470218
5/32"	1/4 NPT	0.67	1.07	0.56	9/16"	124470228
3/16"	1/8 NPT	0.72	0.88	0.37	7/16"	124470318
3/16"	1/4 NPT	0.72	1.09	0.56	9/16"	124470328
1/4"	1/8 NPT	0.77	0.9	0.37	7/16"	124470418
1/4"	1/4 NPT	0.77	1.11	0.56	9/16"	124470428
1/4"	3/8 NPT	0.8	1.15	0.56	3/4"	124470438
5/16"	1/8 NPT	0.84	0.96	0.37	9/16"	124470518
5/16"	1/4 NPT	0.84	1.15	0.56	9/16"	124470528
3/8"	1/8 NPT	1.05	1.05	0.37	9/16"	124470618
3/8"	1/4 NPT	1.05	1.26	0.56	11/16"	124470628
3/8"	3/8 NPT	1.05	1.26	0.56	3/4"	124470638
3/8"	1/2 NPT	1.05	1.48	0.75	7/8"	124470648
1/2"	1/4 NPT	1.25	1.37	0.56	3/4"	124470728
1/2"	3/8 NPT	1.25	1.41	0.56	3/4"	124470738
1/2"	1/2 NPT	1.25	1.62	0.75	7/8"	124470748

**Swivel elbow adaptor 12147/10147**  
**O/D tube to male BSPT thread**


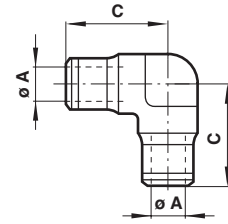
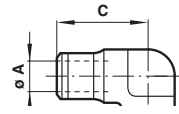
O/D Tube A	Thread B	C	E	G		Model
1/8"	R1/8	0.63	0.86	0.34	0.39	121470118
5/32"	R1/8	0.66	0.81	0.3	0.39	101400418
3/16"	R1/8	0.73	0.86	0.34	0.43	121470318
1/4"	R1/8	0.77	0.88	0.34	0.43	121470418
5/16"	R1/8	0.84	0.91	0.34	0.55	101470818
5/32"	R1/4	0.66	0.95	0.44	0.55	101470428
3/16"	R1/4	0.72	1.04	0.44	0.55	121470328
1/4"	R1/4	0.77	0.99	0.44	0.55	121470428
5/16"	R1/4	0.84	1.03	0.44	0.55	101470828
3/8"	R1/4	1.05	1.13	0.44	0.67	121470628
1/2"	R1/4	1.25	1.25	0.44	0.75	121470728
3/8"	R3/8	1.05	1.2	0.5	0.67	121470638
3/8"	R1/2	1.25	1.36	0.63	0.87	121470648
1/2"	R3/8	1.05	1.35	0.5	0.87	121470738
1/2"	R1/2	1.25	1.5	0.63	0.87	121470748


**Extended swivel elbow adaptor 12454**  
O/D tube to male NPTF thread



**Elbow connector 12040**  
O/D tube to O/D tube

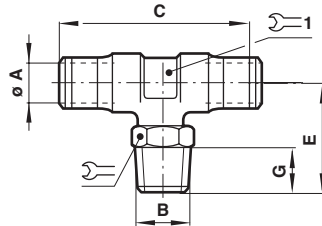
Dimensions in inch  
Projection/First angle



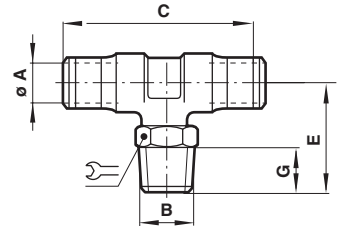
O/D Tube A	Thread B	C	E	G		Model
5/32"	1/8 NPT	0.67	1.39	0.37	7/16"	124540218
5/32"	1/4 NPT	0.77	1.49	0.37	7/16"	124540228
1/4"	1/8 NPT	0.67	1.71	0.56	9/16"	124540418
1/4"	1/4 NPT	0.77	1.75	0.56	9/16"	124540428
3/8"	1/4 NPT	1.05	2.1	0.56	11/16"	124540628
3/8"	3/8 NPT	1.05	2.1	0.56	3/4"	124540638



O/D Tube A	C	Model
1/8"	0.65	120400100
5/32"	0.67	120400200
3/16"	0.72	120400300
1/4"	0.77	120400400
5/16"	0.84	120400500
3/8"	1.05	120400600
1/2"	1.25	120400700


**Swivel tee adaptor 12167/10167**  
O/D tube to male taper BSP thread



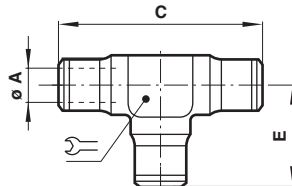
**Swivel male centre tee 12467**  
O/D tube to male NPTF thread




O/D Tube A	Thread B	C	E	G			Model
5/32"	R1/8	1.33	0.81	0.34	0.39	0.28	101670418
1/4"	R1/8	1.54	0.88	0.34	0.34	0.35	121670418
5/32"	R1/4	1.33	0.95	0.44	0.55	0.28	101670428
1/4"	R1/4	1.54	0.99	0.44	0.43	0.35	121670428
3/8"	R1/4	2.1	1.13	0.44	0.43	0.52	121670618
1/2"	R1/4	2.5	1.25	0.44	0.43	0.63	121670728
3/8"	R3/8	2.1	1.2	0.5	0.5	0.52	121670638
1/2"	R3/8	2.5	1.34	0.5	0.5	0.63	121670738

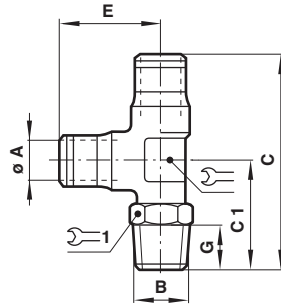
O/D Tube A	Thread B	C	E	G		Model
1/8"	10-32 UNF	1.25	0.73	0.2	5/16"	124670110
1/8"	1/8 NPT	1.26	0.81	0.37	7/16"	124670118
1/8"	1/4 NPT	1.34	1.07	0.56	9/16"	124670128
5/32"	10-32 UNF	1.34	0.77	0.2	5/16"	124670210
5/32"	1/8 NPT	1.33	0.86	0.37	7/16"	124670218
5/32"	1/4 NPT	1.33	1.07	0.56	9/16"	124670228
3/16"	1/8 NPT	1.45	0.88	0.37	7/16"	124670318
3/16"	1/4 NPT	1.45	1.09	0.56	9/16"	124670328
1/4"	1/8 NPT	1.54	0.9	0.37	7/16"	124670418
1/4"	1/4 NPT	1.54	1.12	0.56	9/16"	124670428
1/4"	3/8 NPT	1.57	1.2	0.56	3/4"	124670438
5/16"	1/8 NPT	1.68	0.96	0.37	9/16"	124670518
5/16"	1/4 NPT	1.68	1.15	0.56	9/16"	124670528
3/8"	1/8 NPT	2.1	0.66	0.37	9/16"	124670618
3/8"	1/4 NPT	2.1	1.26	0.56	11/16"	124670628
3/8"	3/8 NPT	2.1	1.26	0.56	3/4"	124670638
3/8"	1/2 NPT	2.1	1.48	0.75	7/8"	124670648
1/2"	1/4 NPT	2.5	1.37	0.56	3/4"	124670728
1/2"	3/8 NPT	2.5	1.41	0.56	3/4"	124670738
1/2"	1/2 NPT	2.5	1.62	0.75	7/8"	124670748

**Tee connector 12060**  
O/D tube to O/D tube



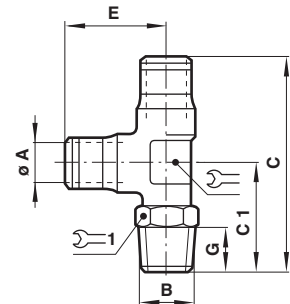
O/D Tube A	C	E	Ø K		Model
1/8"	1.26	0.63	0.32	0.2	120600100
5/32"	1.34	0.67	0.4	0.28	120600200
3/16"	1.44	0.72	0.44	0.28	120600300
1/4"	1.54	0.77	0.48	0.31	120600400
5/16"	1.68	0.84	0.56	0.43	120600500
3/8"	2.1	1.05	0.67	0.52	120600600
1/2"	2.5	1.25	0.81	0.63	120600700



**Swivel side tee adaptor,  
O/D tube to male taper BSP thread  
12168/10168**


O/D Tube A	Thread B	C	C1	E	G			Model
5/32"	R1/8	1.47	0.81	0.66	0.34	0.28	0.39	101680418
3/16"	R1/8	1.59	0.86	0.72	0.34	0.35	0.34	121680318
1/4"	R1/8	1.65	0.88	0.77	0.34	0.35	0.34	121680418
5/16"	R1/8	1.74	0.91	0.84	0.34	0.43	0.55	101680818
5/32"	R1/4	1.61	0.95	0.72	0.44	0.28	0.55	101680428
3/16"	R1/4	1.69	0.97	0.72	0.44	0.34	0.43	121680328
1/4"	R1/4	1.76	1	0.77	0.44	0.35	0.43	121680428
5/16"	R1/4	1.87	1.03	0.84	0.44	0.43	0.55	101680828
3/8"	R1/4	2.19	1.13	1.05	0.44	0.52	0.43	121680628
1/2"	R1/4	2.5	1.25	1.24	0.44	0.63	0.43	121680728
3/8"	R3/8	2.25	1.2	1.05	0.5	0.52	0.5	121680638
1/2"	R3/8	2.59	1.34	1.25	0.5	0.63	0.5	121680738
1/2"	R1/2	2.75	1.5	1.25	0.63	0.63	0.87	121680748

**Swivel male side tee adaptor,  
O/D tube to male taper NPTF thread  
12468**

 Dimensions in inch  
Projection/First angle


O/D Tube A	Thread B	C	C1	E	G			Model
1/8"	10-32 UNF	1.36	0.63	1.36	0.63	-	5/16"	124680110
1/8"	1/8 NPT	1.36	0.73	0.63	0.63	0.20	7/16"	124680118
1/8"	1/4 NPT	1.44	0.77	0.67	0.67	0.27	9/16"	124680128
5/32"	10-32 UNF	1.44	0.67	1.44	0.67	-	5/16"	124680210
5/32"	1/8 NPT	1.52	0.86	0.67	0.67	0.27	7/16"	124680218
5/32"	1/4 NPT	1.73	1.07	0.67	0.67	0.27	9/16"	124680228
3/16"	1/8 NPT	1.6	0.88	0.72	0.72	0.35	7/16"	124680318
3/16"	1/4 NPT	1.81	1.09	0.72	0.72	0.35	9/16"	124680328
1/4"	1/8 NPT	1.67	0.9	0.77	0.77	0.35	7/16"	124680418
1/4"	1/4 NPT	1.88	1.11	0.77	0.77	0.35	9/16"	124680428
1/4"	3/8 NPT	1.59	0.81	0.79	0.79	0.31	3/4"	124680438
5/16"	1/8 NPT	1.8	0.96	0.84	0.84	0.43	9/16"	124680518
5/16"	1/4 NPT	1.98	1.15	1.98	0.84	0.43	9/16"	124680528
3/8"	1/8 NPT	2	0.94	1.05	1.05	0.52	9/16"	124680618
3/8"	1/4 NPT	2.31	1.26	1.05	1.05	0.52	11/16"	124680628
3/8"	3/8 NPT	2.31	1.26	1.05	1.05	0.52	3/4"	124680638
3/8"	1/2 NPT	2.53	1.48	1.05	1.05	0.52	7/8"	124680648
1/2"	1/4 NPT	2.62	1.37	1.25	1.25	0.63	3/4"	124680728
1/2"	3/8 NPT	2.65	1.41	1.25	1.25	0.63	3/4"	124680738
1/2"	1/2 NPT	2.87	1.62	1.25	1.25	0.63	7/8"	124680748

**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, 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.