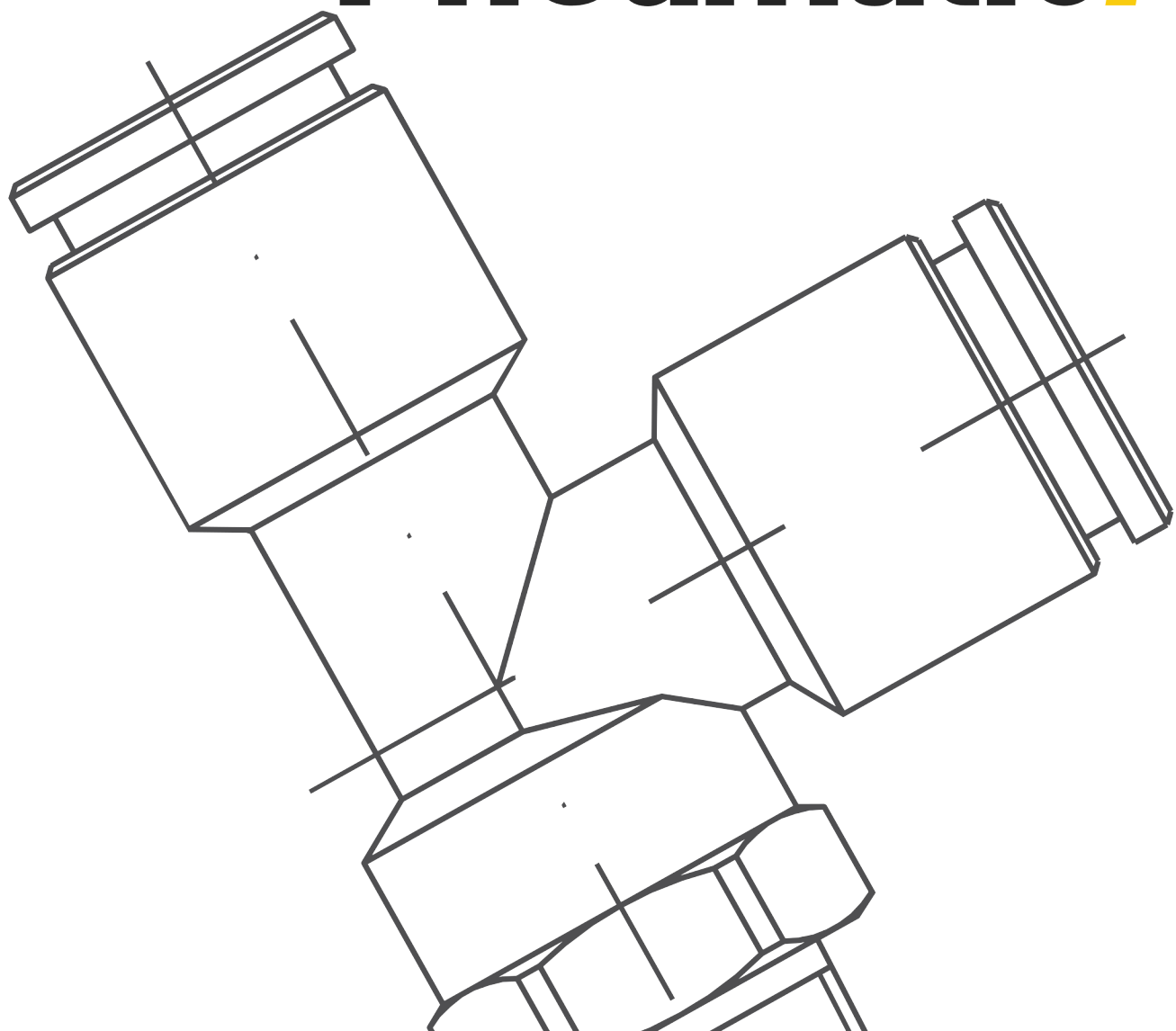




Pneumatic*Plus*





CHEMICAL COMPATIBILITY CHART

SUBSTANCE	FITTINGS			SEALS			TUBINGS			
	BRASS	POM	INOX AISI316L	NBR	FPM	EPDM	PA 11/12	LDPE	PU	P.T.F.E
Acetic Acid (5%)	Red	Yellow	Green	Orange	Orange	Green	Yellow	Yellow	Orange	Yellow
Acetic Acid (20%)	Red	Orange	Yellow	Red	Red	Green	Blue	Blue	Blue	Blue
Acetic Acid (50%)	Red	Red	Yellow	Red	Red	Green	Blue	Blue	Blue	Blue
Acetone	Yellow	Yellow	Yellow	Red	Red	Green	Orange	Orange	Blue	Yellow
Acetylene	Orange	Yellow	Green	Green	Green	Green	Yellow	Blue	Blue	Yellow
Ammonia (10%)	Red	Red	Green	Yellow	Yellow	Green	Orange	Orange	Blue	Blue
Aniline	Orange	Orange	Yellow	Red	Orange	Yellow	Orange	Orange	Blue	Yellow
Benzene	Orange	Yellow	Yellow	Red	Green	Red	Orange	Red	Blue	Yellow
Brake Fluid	Blue	Yellow	Blue	Red	Blue	Green	Yellow	Blue	Blue	Blue
Butane	Green	Yellow	Green	Green	Green	Red	Yellow	Blue	Blue	Yellow
Calcium Chloride (10%)	Orange	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Yellow	Yellow
Carbon Dioxide	Yellow	Yellow	Green	Green	Green	Yellow	Blue	Blue	Blue	Blue
Carbon Monoxide	Green	Yellow	Green	Yellow	Yellow	Yellow	Blue	Blue	Blue	Blue
Chlorine Gas	Yellow	Red	Yellow	Red	Yellow	Red	Red	Red	Blue	Yellow
Chloroform	Yellow	Orange	Blue	Red	Green	Red	Red	Red	Red	Yellow
Chromic Acid (10%)	Red	Red	Orange	Red	Yellow	Red	Red	Red	Blue	Yellow
Citric Acid	Orange	Orange	Yellow	Green	Green	Green	Yellow	Yellow	Red	Yellow
Cyclohexane	Blue	Yellow	Green	Yellow	Green	Red	Yellow	Orange	Red	Blue
D.D.T.	Blue	Yellow	Blue	Blue	Blue	Yellow	Orange	Yellow	Blue	Blue
Detergents	Blue	Yellow	Yellow	Green	Green	Green	Blue	Blue	Blue	Blue
Diesel Fuel	Blue	Yellow	Green	Green	Green	Red	Yellow	Orange	Blue	Yellow
Ethyl Alcohol (Ethanol)	Yellow	Yellow	Green	Green	Orange	Green	Orange	Orange	Yellow	Yellow
Ethyl Ether	Yellow	Yellow	Green	Red	Red	Red	Blue	Blue	Blue	Blue
Ethylene glycol	Yellow	Yellow	Green	Green	Green	Green	Yellow	Yellow	Yellow	Blue
Food Oils (vegetable)	Yellow	Yellow	Green	Green	Green	Blue	Yellow	Yellow	Yellow	Yellow
Formaldehyde (37%)	Orange	Yellow	Green	Orange	Green	Green	Orange	Yellow	Blue	Yellow
Formic Acid	Red	Red	Yellow	Red	Red	Green	Red	Yellow	Red	Yellow
Freon 12	Yellow	Blue	Yellow	Yellow	Yellow	Yellow	Orange	Red	Blue	Orange
Freon 22	Yellow	Blue	Yellow	Red	Red	Green	Orange	Red	Blue	Blue
Fruit Juice	Red	Yellow	Yellow	Yellow	Yellow	Blue	Blue	Yellow	Yellow	Blue
Fuel Oil	Green	Yellow	Green	Green	Green	Red	Orange	Red	Blue	Blue
Gasoline	Yellow	Yellow	Green	Yellow	Green	Red	Orange	Orange	Yellow	Yellow
Glucose	Yellow	Yellow	Green	Green	Green	Green	Yellow	Blue	Blue	Yellow
Heptane	Green	Yellow	Green	Green	Green	Red	Yellow	Orange	Blue	Blue
Hexane	Yellow	Yellow	Green	Green	Green	Red	Yellow	Orange	Blue	Blue
Hydrochloric Acid (10%)	Red	Red	Red	Orange	Yellow	Green	Red	Yellow	Red	Yellow
Hydrofluoric Acid (10%)	Red	Red	Orange	Red	Yellow	Yellow	Red	Yellow	Blue	Yellow
Hydrogen Peroxide (1%)	Red	Yellow	Yellow	Green	Green	Yellow	Orange	Orange	Blue	Blue
Hydrogen Peroxide (30%)	Red	Red	Yellow	Orange	Green	Yellow	Blue	Blue	Blue	Blue
Hydrogen Sulfide	Yellow	Red	Green	Yellow	Yellow	Yellow	Blue	Blue	Blue	Blue
Isocotane	Yellow	Yellow	Green	Green	Yellow	Red	Orange	Red	Blue	Blue
Jet Fuel/Kerosene	Green	Yellow	Green	Green	Green	Red	Yellow	Blue	Blue	Yellow
Lubricating Oil	Yellow	Yellow	Yellow	Green	Green	Red	Yellow	Red	Blue	Blue
Methyl Alcohol (Methanol)	Yellow	Yellow	Yellow	Green	Red	Green	Red	Yellow	Blue	Yellow
Methyl Chloride	Yellow	Orange	Blue	Red	Yellow	Orange	Orange	Red	Blue	Yellow
Methyl Ethyl Ketone	Blue	Orange	Green	Red	Red	Yellow	Orange	Red	Blue	Yellow
Methylene Chloride	Green	Orange	Blue	Green	Orange	Red	Yellow	Red	Red	Yellow
Mineral Oil	Green	Yellow	Green	Green	Green	Red	Yellow	Red	Blue	Yellow
Motor Oil	Yellow	Yellow	Yellow	Green	Green	Red	Blue	Blue	Blue	Yellow
Nitric Acid (10%)	Red	Red	Green	Red	Green	Yellow	Red	Orange	Red	Yellow
Nitrogen	Green	Yellow	Green	Green	Green	Green	Orange	Blue	Blue	Blue
Nitrous Acid	Blue	Red	Yellow	Blue	Yellow	Yellow	Blue	Blue	Blue	Blue
Nitrous Oxide	Yellow	Red	Yellow	Yellow	Red	Yellow	Blue	Blue	Blue	Blue
Oleic Acid	Red	Yellow	Green	Orange	Yellow	Yellow	Yellow	Orange	Blue	Yellow
Oxigen (Cold)	Yellow	Blue	Green	Green	Green	Green	Yellow	Blue	Red	Yellow
Ozone	Yellow	Orange	Green	Red	Green	Green	Red	Red	Yellow	Yellow
Palmitic Acid	Red	Yellow	Green	Yellow	Yellow	Yellow	Blue	Blue	Blue	Blue
Paraffin	Yellow	Yellow	Green	Green	Yellow	Red	Blue	Blue	Blue	Blue
Perchloric Acid (10%)	Blue	Red	Orange	Red	Green	Yellow	Blue	Yellow	Blue	Blue
Phosphoric Acid (30%)	Red	Red	Orange	Red	Green	Green	Orange	Orange	Orange	Blue
Propane (liquefied)	Yellow	Yellow	Yellow	Green	Yellow	Red	Yellow	Blue	Blue	Yellow
Sea Water	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow	Yellow	Blue
Sodium Chloride (10%)	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Blue
Sodium Hydroxide (10%) - Caustic Soda	Orange	Red	Green	Red	Red	Yellow	Orange	Yellow	Blue	Yellow
Sodium Hypochlorite (5%)	Red	Red	Blue	Orange	Yellow	Orange	Red	Red	Blue	Blue
Sulfur Dioxide	Red	Red	Green	Red	Green	Green	Yellow	Yellow	Blue	Blue
Sulfuric Acid (30%)	Red	Red	Red	Red	Yellow	Yellow	Red	Orange	Blue	Yellow
Sulfurous Acid	Blue	Red	Yellow	Orange	Yellow	Orange	Blue	Blue	Blue	Blue
Toluene (Toulol)	Orange	Yellow	Green	Orange	Yellow	Red	Yellow	Blue	Blue	Yellow
Trichloroacetic Acid	Blue	Red	Orange	Red	Red	Yellow	Blue	Red	Blue	Blue
Trichloroethane	Blue	Yellow	Yellow	Red	Yellow	Red	Red	Red	Blue	Blue
Turpentine	Yellow	Yellow	Green	Yellow	Yellow	Red	Red	Red	Blue	Yellow
Urea (5%)	Orange	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Orange	Yellow
Vinegar	Orange	Yellow	Green	Yellow	Green	Green	Orange	Yellow	Blue	Blue
Water (Cold)	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Blue
Wine	Orange	Blue	Green	Green	Red	Green	Orange	Orange	Blue	Yellow

 Very Good	 Good	 Limited resistance	 Not recommended	 Information not available
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The information given on this chart have to be used as a guide only and the actual materials' reaction has to be tested in the real working conditions as temperature, pressure and different concentrations can affect the mentioned chemical compatibility.

Conversion chart for Pressure Unit

	psi	Pa	kPa	MPa	bar	mbar	atm	mmHg
1 psi =	1	6894.75729	6.89476	.00689	.06895	68.9476	.06805	51.71492
1 Pa =	.000145	1	.001	.000001	.00001	.01	.0000099	.0075
1 kPa =	.14504	1000	1	.001	.01	10	.00987	7.50062
1 Mpa =	145.03774	1000000	1000	1	10	10000	9.86923	7500.61505
1 bar =	14.50377	100000	100	.1	1	1000	.98692	750.06151
1 mbar =	.0145	100	.1	.0001	.001	1	.0009869	.75006
1 atm =	14.69595	101325	101.325	.10133	1.01325	1013.25	1	759.99982
1 mmHg =	.01934	133.3224	.13332	.00013	.00133	1.3332	.00132	1

Conversion chart for Length Unit

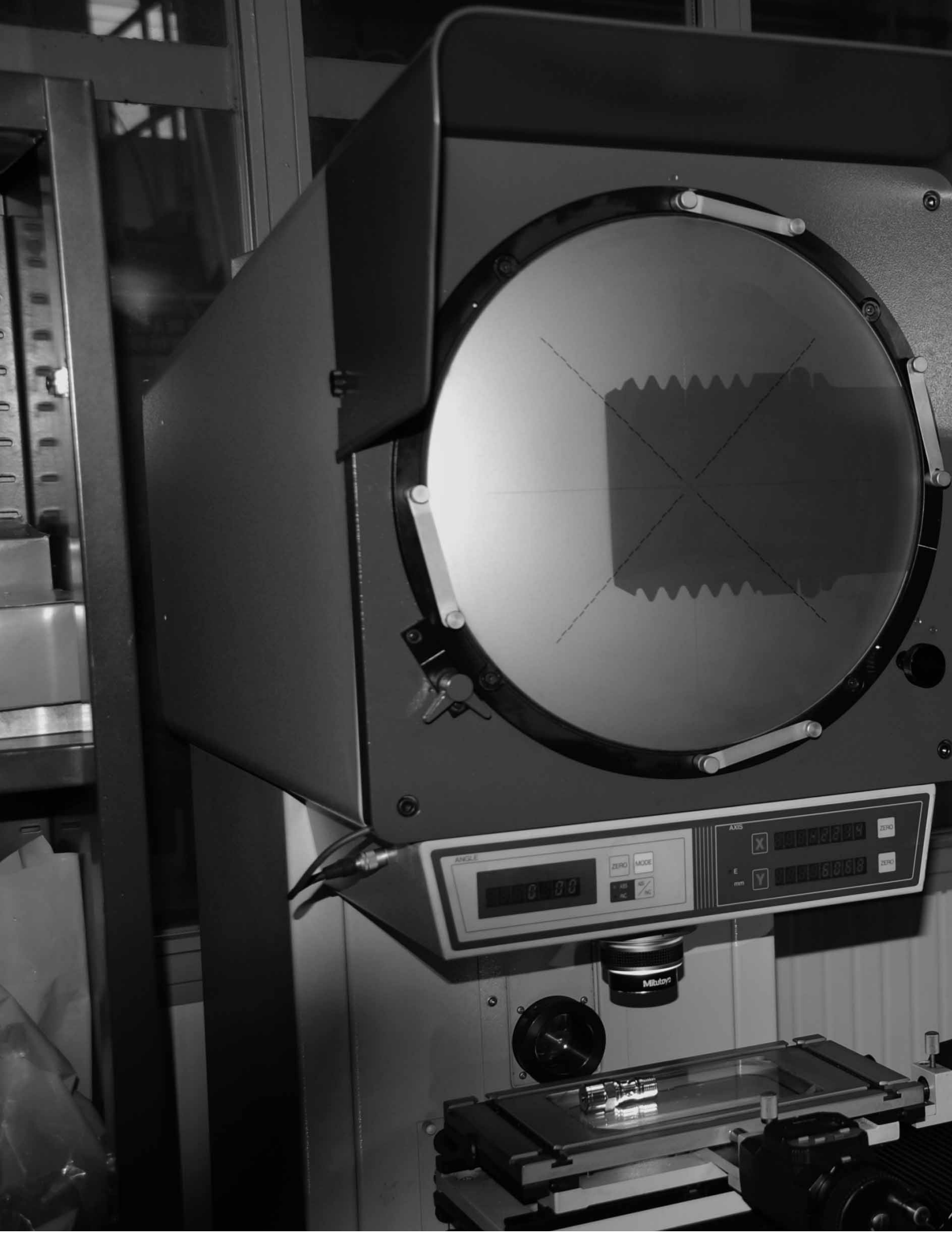
	in	ft	m	mm
1 in =	1	.08333	.0254	25.4
1 ft =	12	1	.3048	304.8
1 m =	39.37008	3.28084	1	1000
1 mm =	.03937	.00328	.001	1

Conversion of temperature units

$$K = ^\circ C + 273.15$$

$$^\circ F = (^\circ C \cdot 9/5) + 32$$

$$^\circ C = (^\circ F - 32) \cdot 5/9$$



ANGLE

0.00

ZERO MODE

AXIS

X 000.22319 ZERO

E Y 000.16068 ZERO

mm

Mitutoyo

INDEX

Brass Push-in fittings	PN Line	7_18
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PN LINE

PX LINE

PA LINE & TUBINGS

PU LINE

PV LINE

PN LINE



FN 11 FN 13 FN 14 FN 15 FN 17 FN 18 FN 20 FN 23

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- FN 27
- FN 28
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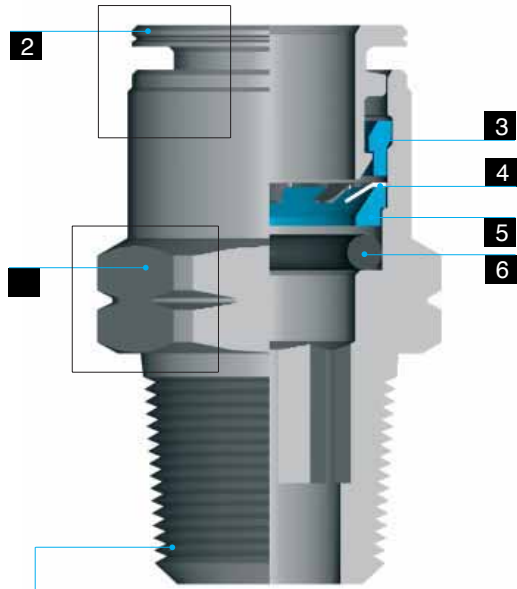
FN 37 FN 38 FN 39 FN 40 FN 43 FN 48

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- FN 37
- FN 38
- FN 39
- FN 40
- FN 43
- FN 48

PN LINE

1 - 2	3	4	5	6
Body and Release Ring	Tightness Ring	Gripping collet	Protection Ring	O-Ring
Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated	Acetal Resin (FCM)	Stainless steel AISI 301	Acetal Resin (FCM)	NBR (FFM on request)

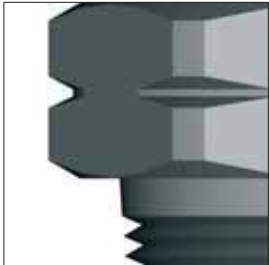


All our NPT threads are PTFE pre-applied.

ZOOM IN

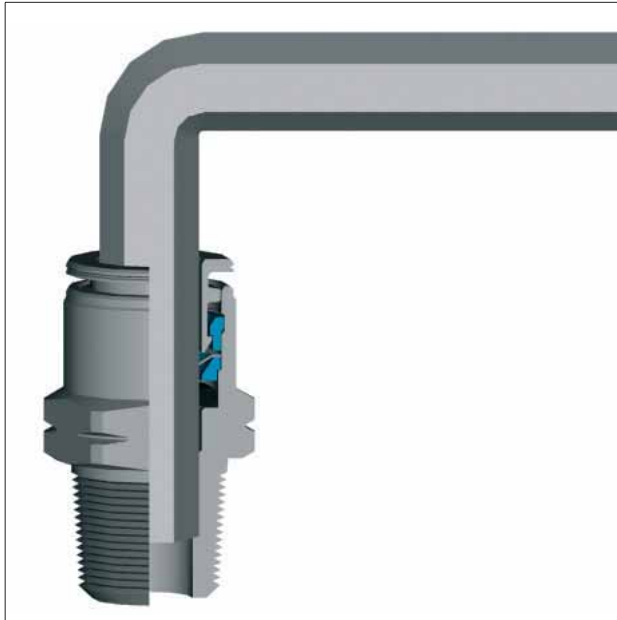


Identification mark for inch sizes.

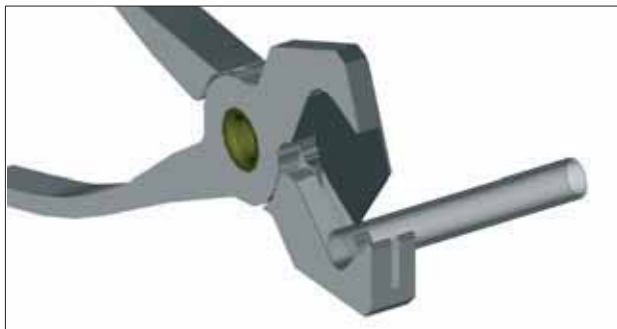


Identification mark for NPTF threads.

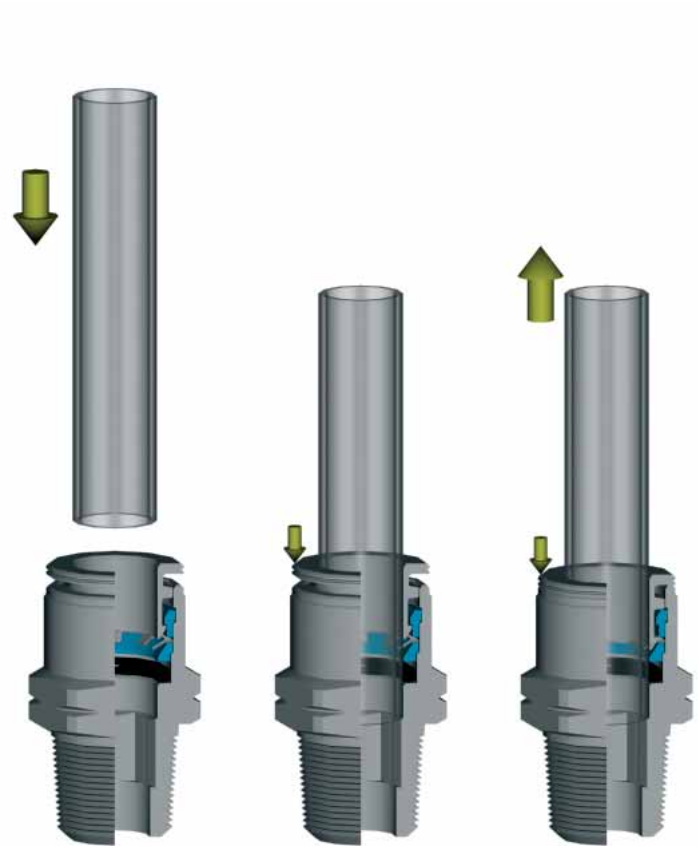
Threads	Threads Specifications	Tightening Torque (lb-ft)				
		10-32	1/8"	1/4"	3/8"	1/2"
NPTF threads	ANSI/ASME B1.20.3		7.376 ÷ 8.851	10.326 ÷ 11.801	11.801 ÷ 13.276	13.276 ÷ 14.751
NPTF pre-coated threads	ANSI/ASME B1.20.3		3.688 ÷ 4.425	5.901 ÷ 7.376	7.376 ÷ 8.851	11.801 ÷ 13.276
UNF parallel threads with seal	ANSI/ASME B1.1	0.738 ÷ 1.106				



Our tapered male straight connector is provided with an inner hex allowing for easy assembly when no space is available.



1



2

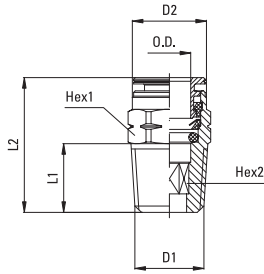
3

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a tube cutter i.e. our PA 34) making sure that no burrs are left and that the tube is not oval.
2. Push the tubing until it bottoms.
Tube release
3. While pressing on the release ring, pull out the tube from the fitting.

PN 11

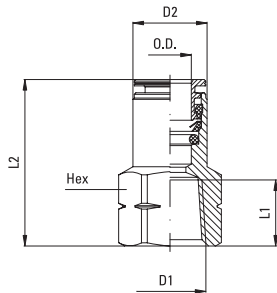
Male Connector



Part Number	Tube OD	D1 UNF	D2	L1	L2	HEX ₁	HEX ₂	oz Δ
11 1/8 10-32	1/8	10-32	.275 (7)	.196 (5)	.649 (16.5)	5/16 (7.93)	3/32 (2.38)	.088 (2.5)
11 5/32 10-32	5/32	10-32	.354 (9)	.196 (5)	.767 (19.5)	3/8 (9.52)	3/32 (2.38)	.176 (5)
11 1/4 10-32	1/4	10-32	.472 (12)	.196 (5)	.905 (23)	1/2 (12.7)	3/32 (2.38)	.300 (8.5)
Part Number	Tube OD	D1 NPTF	D2	L1	L2	HEX ₁	HEX ₂	oz Δ
11 1/8 1/8	1/8	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	7/16 (11.1)	3/32 (2.38)	.335 (9.5)
11 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.748 (19)	7/16 (11.11)	1/8 (3.17)	.317 (9)
11 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	.925 (23.5)	9/16 (14.28)	1/8 (3.17)	.705 (20)
11 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.846 (21.5)	1/2 (12.7)	5/32 (4)	.353 (10)
11 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	.944 (24)	9/16 (14.28)	5/32 (4)	.617 (18)
11 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	1.023 (26)	9/16 (14.28)	1/4 (6.35)	.529 (15)
11 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	.984 (25)	9/16 (14.28)	1/4 (6.35)	.564 (16)
11 5/16 3/8	5/16	3/8	.551 (14)	.511 (13)	.964 (24.5)	11/16 (17.46)	1/4 (6.35)	.987 (28)
11 3/8 1/8	3/8	1/8	.629 (16)	.334 (8.5)	1.082 (27.5)	11/16 (17.46)	1/4 (6.35)	.794 (22.5)
11 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.220 (31)	11/16 (17.46)	5/16 (8)	.952 (27)
11 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	.964 (24.5)	11/16 (17.46)	5/16 (8)	.882 (25)
11 3/8 1/2	3/8	1/2	.629 (16)	.669 (17)	1.161 (29.5)	7/8 (22.22)	5/16 (8)	1.975 (56)
11 1/2 1/4	1/2	1/4	.748 (19)	.511 (13)	1.299 (33)	13/16 (20.63)	5/16 (8)	1.129 (35)
11 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.122 (28.5)	13/16 (20.63)	13/32 (10.31)	.970 (27.5)
11 1/2 1/2	1/2	1/2	.748 (19)	0.669 (17)	1.161 (29.5)	7/8 (22.22)	13/32 (10.31)	1.587 (46)

PN 13

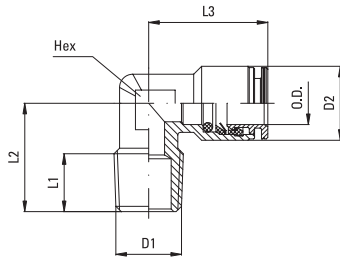
Female Connector



Part Number	Tube OD	D1 NPTF	D2	L1	L2	HEX	oz Δ
13 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.964 (24.5)	9/16 (14.28)	.423 (12)
13 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	1.043 (26.5)	9/16 (14.28)	.494 (14)
13 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.220 (31)	11/16 (17.46)	.935 (26.5)
13 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	1.039 (26.4)	9/16 (14.28)	.705 (20)
13 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.220 (31)	11/16 (17.46)	1.005 (28.5)
13 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.299 (33)	11/16 (17.46)	1.164 (33)
13 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.299 (33)	13/16 (20.63)	1.340 (38)

PN 14

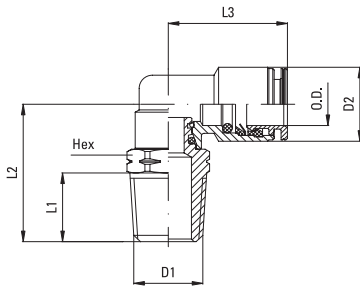
Male Elbow



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	oz Δ
14 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.610 (15.5)	.669 (17)	.314 (8)	.317 (9)
14 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.629 (16)	.787 (20)	.393 (10)	.459 (13)
14 1/4 1/4	1/4	1/4	.472 (12)	.433 (11)	.787 (20)	.787 (20)	.393 (10)	.600 (17)
14 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.669 (17)	.846 (21.5)	.472 (12)	.723 (20.5)
14 5/16 1/4	5/16	1/4	.551 (14)	.433 (11)	.826 (21)	.846 (21.5)	.472 (12)	.794 (22.5)
14 3/8 1/4	3/8	1/4	.629 (16)	.433 (11)	.885 (22.5)	.944 (24)	.551 (14)	1.041 (29.5)
14 3/8 3/8	3/8	3/8	.629 (16)	.433 (11)	.885 (22.5)	.944 (24)	.551 (14)	1.182 (33.5)

PN 15

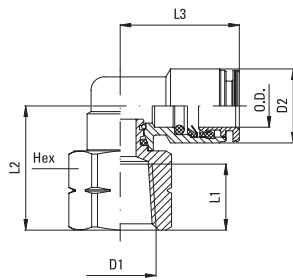
Swivel Male Elbow



Part Number	Tube OD	D1 UNF	D2	L1	L2	L3	HEX	oz Δ
15 1/8 10-32	1/8	10-32	.275 (7)	.196 (5)	.649 (16.5)	.570 (14.5)	3/8 (9.52)	.282 (8)
15 5/32 10-32	5/32	10-32	.354 (9)	.196 (5)	.649 (16.5)	.669 (17)	3/8 (9.52)	.353 (10)
Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	oz Δ
15 1/8 1/8	1/8	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	.570 (14.5)	7/16 (11.11)	.370 (10.5)
15 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.728 (18.5)	.669 (17)	7/16 (11.11)	.441 (12.5)
15 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	1.023 (26)	.748 (19)	9/16 (14.28)	.794 (22.5)
15 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.826 (21)	.846 (21.5)	1/2 (12.7)	.688 (19.5)
15 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	.846 (21.5)	9/16 (14.28)	.882 (25)
15 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.826 (21)	.866 (22)	1/2 (12.7)	.811 (23)
15 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	.866 (22)	9/16 (14.28)	1.005 (28.5)
15 5/16 3/8	5/16	3/8	.551 (14)	.511 (13)	1.122 (28.5)	.885 (22.5)	11/16 (17.46)	1.411 (40)
15 3/8 1/8	3/8	1/8	.629 (16)	.334 (8.5)	.944 (24)	.984 (25)	11/16 (17.46)	1.376 (39)
15 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	11/16 (17.46)	1.482 (42)
15 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	11/16 (17.46)	1.517 (43)
15 3/8 1/2	3/8	1/2	.629 (16)	.669 (17)	1.338 (34)	.984 (25)	7/8 (22.22)	2.187 (62)
15 1/2 1/4	1/2	1/4	.748 (19)	.511 (13)	1.259 (32)	1.082 (27.5)	13/16 (20.63)	2.346 (66.5)
15 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.259 (32)	1.082 (27.5)	13/16 (20.63)	2.222 (63)
15 1/2 1/2	1/2	1/2	.748 (19)	.669 (17)	1.437 (36.5)	1.082 (27.5)	7/8 (22.22)	2.663 (75.5)

PN 17

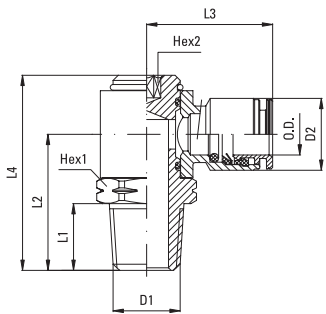
Swivel Female Elbow



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	oz Δ
17 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.767 (19.5)	.748 (19)	9/16 (14.28)	.741 (21)
17 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.767 (19.5)	.846 (21.5)	9/16 (14.28)	.811 (23)
17 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	.925 (23.5)	.846 (21.5)	11/16 (17.46)	1.129 (32)
17 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.767 (19.5)	.866 (22)	9/16 (14.28)	.935 (26.5)
17 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	.925 (23.5)	.866 (22)	11/16 (17.46)	1.252 (35.5)
17 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.003 (25.5)	.984 (25)	11/16 (17.46)	1.570 (44.5)
17 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.003 (25.5)	.984 (25)	13/16 (20.63)	1.728 (49)

PN 18

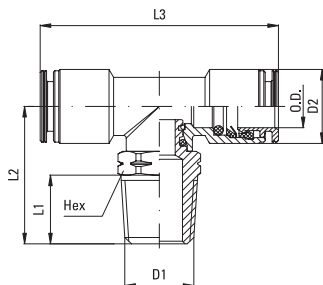
Swivel fitting with banjo ring



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	L4	HEX1	HEX2	oz Δ
18 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.787 (20)	.787 (20)	1.200 (30.5)	9/16 (14.28)	1/8 (3.17)	1.005 (28.5)
18 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.787 (20)	.885 (22.5)	1.200 (30.5)	9/16 (14.28)	1/8 (3.17)	1.058 (30)
18 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	.925 (23.5)	1.476 (37.5)	11/16 (17.46)	3/16 (4.76)	1.728 (49)
18 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.787 (20)	.885 (22.5)	1.200 (30.5)	9/16 (14.28)	1/8 (3.17)	
18 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	.944 (24)	1.476 (37.5)	11/16 (17.46)	3/16 (4.76)	
18 5/16 3/8	5/16	3/8	.551 (14)	.511 (13)	1.102 (28)	1.023 (26)	1.614 (41)	13/16 (20.63)	1/4 (6.35)	
18 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.023 (26)	1.023 (26)	1.476 (37.5)	11/16 (17.46)	3/16 (4.76)	1.834 (52)
18 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.102 (28)	1.102 (28)	1.614 (41)	13/16 (20.63)	1/4 (6.35)	2.963 (84)

PN 20

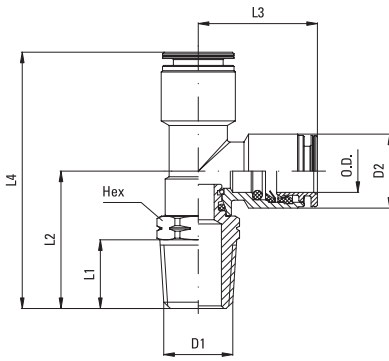
Swivel Tee



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	oz Δ
20 1/8 1/8	1/8	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	1.141 (29)	7/16 (11.11)	.670 (19)
20 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.826 (21)	1.496 (38)	1/2 (12.7)	.776 (22)
20 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	1.023 (26)	1.496 (38)	9/16 (14.28)	.970 (27.5)
20 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.826 (21)	1.692 (43)	1/2 (12.7)	.917 (26)
20 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	1.692 (43)	9/16 (14.28)	1.076 (30.5)
20 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.826 (21)	1.732 (44)	1/2 (12.7)	1.111 (31.5)
20 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	1.732 (44)	9/16 (14.28)	1.305 (37)
20 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.122 (28.5)	1.968 (50)	11/16 (17.46)	1.905 (54)
20 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.122 (28.5)	1.968 (50)	11/16 (17.46)	1.940 (55)
20 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.259 (32)	2.165 (55)	13/16 (20.63)	2.751 (78)
20 1/2 1/2	1/2	1/2	.748 (19)	.669 (17)	1.437 (36.5)	2.165 (55)	7/8 (22.22)	3.175 (90)

PN 23

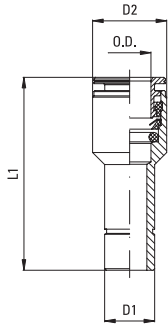
Swivel Male Run Tee



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	L4	HEX	oz Δ
23 1/8 1/8	1/8	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	.649 (16.5)	1.476 (37.5)	7/16 (11.11)	.688 (19.5)
23 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.826 (21)	.748 (19)	1.574 (40)	1/2 (12.7)	.811 (23)
23 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	1.023 (26)	.748 (19)	1.771 (45)	9/16 (14.28)	.988 (28)
23 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.826 (21)	.846 (21.5)	1.673 (42.5)	1/2 (12.7)	.935 (26.5)
23 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	.846 (21.5)	1.870 (47.5)	9/16 (14.28)	1.093 (31)
23 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.826 (21)	.866 (22)	1.692 (43)	1/2 (12.7)	1.129 (32)
23 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	.866 (22)	1.889 (48)	9/16 (14.28)	1.305 (37)
23 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	2.106 (53.5)	11/16 (17.46)	1.905 (54)
23 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	2.106 (53.5)	11/16 (17.46)	1.940 (55)
23 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.259 (32)	1.082 (27.5)	2.342 (59.5)	13/16 (20.63)	2.734 (77.5)
23 1/2 1/2	1/2	1/2	.748 (19)	.669 (17)	1.437 (36.5)	1.082 (27.5)	2.519 (64)	7/8 (22.22)	3.139 (89)

PN 25

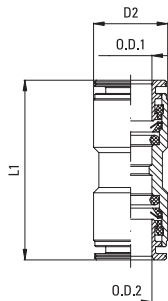
Reducer



Part Number	Tube OD	D1	D2	L1	oz Δ
25 1/8 5/32	1/8	5/32	.275 (7)	1.141 (29)	.088 (2.5)
25 5/32 1/4	5/32	1/4	.354 (9)	1.220 (31)	.265 (7.5)
25 1/4 5/16	1/4	5/16	.472 (12)	1.299 (33)	.406 (11.5)
25 1/4 3/8	1/4	3/8	.472 (12)	1.377 (35)	.476 (13.5)
25 1/4 1/2	1/4	1/2	.472 (12)	1.377 (35)	.882 (25)
25 5/16 3/8	5/16	3/8	.551 (14)	1.377 (35)	.547 (15.5)
25 3/8 1/2	3/8	1/2	.629 (16)	1.417 (36)	.864 (24.5)

PN 26

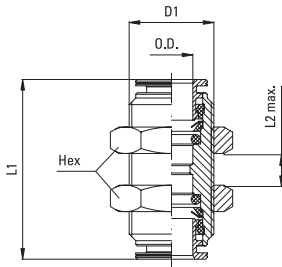
Union



Part Number	Tube OD ₁	Tube OD ₂	D2	L1	oz Δ
26 1/8 1/8	1/8	1/8	.275 (7)	.866 (22)	.106 (3)
26 5/32 5/32	5/32	5/32	.354 (9)	1.062 (27)	.265 (7.5)
26 1/4 1/4	1/4	1/4	.472 (12)	1.299 (33)	.476 (13.5)
26 5/16 5/16	5/16	5/16	.551 (14)	1.299 (33)	.635 (18)
26 3/8 3/8	3/8	3/8	.629 (16)	1.456 (37)	.882 (25)
26 1/2 1/2	1/2	1/2	.748 (19)	1.535 (39)	1.411 (40)

PN 27

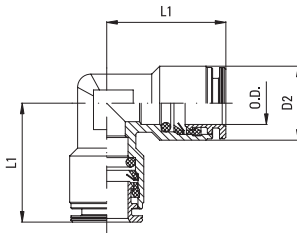
Bulkhead union



Part Number	Tube OD	D1	L1	L2	HEX	oz
27 1/8 1/8	1/8	M10x1	.866 (22)	.314 (8)	.551 (14)	.476 (13.5)
27 5/32 5/32	5/32	M12x1	1.062 (27)	.433 (11)	.629 (16)	.811 (23)
27 1/4 1/4	1/4	M14x1	1.299 (33)	.629 (16)	.708 (18)	1.146 (32.5)
27 5/16 5/16	5/16	M16x1	1.299 (33)	.669 (17)	.787 (20)	1.376 (39)
27 3/8 3/8	3/8	M18x1	1.456 (37)	.748 (19)	.866 (22)	1.870 (53)
27 1/2 1/2	1/2	M20x1	1.535 (39)	.787 (20)	.944 (24)	1.940 (55)

PN 28

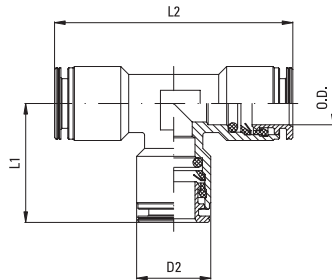
Union Elbow



Part Number	Tube OD	D2	L1	oz
28 1/8 1/8	1/8	.275 (7)	.590 (15)	.159 (4.5)
28 5/32 5/32	5/32	.354 (9)	.669 (17)	.335 (9.5)
28 1/4 1/4	1/4	.472 (12)	.787 (20)	.547 (15.5)
28 5/16 5/16	5/16	.551 (14)	.846 (21.5)	.829 (23.5)
28 3/8 3/8	3/8	.629 (16)	.964 (24.5)	1.129 (32)
28 1/2 1/2	1/2	.748 (19)	1.0 (25.5)	1.817 (51.5)

PN 29

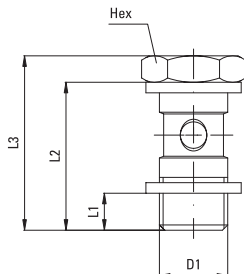
Union Tee



Part Number	Tube OD	D2	L1	L2	oz
29 1/8 1/8	1/8	.275 (7)	.590 (15)	1.181 (30)	.194 (5.5)
29 5/32 5/32	5/32	.354 (9)	.669 (17)	1.338 (34)	.441 (12.5)
29 1/4 1/4	1/4	.472 (12)	.787 (20)	1.574 (40)	.723 (20.5)
29 5/16 5/16	5/16	.551 (14)	.846 (21.5)	1.692 (43)	.988 (28)
29 3/8 3/8	3/8	.629 (16)	.964 (24.5)	1.929 (49)	1.482 (42)
29 1/2 1/2	1/2	.748 (19)	1.0 (25.5)	2.00 (51)	2.081 (59)

PN 31

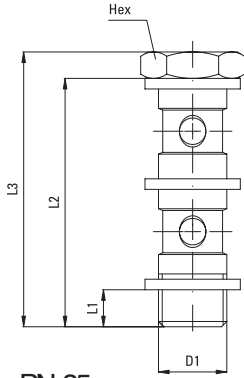
Simple Screw



Part Number	D1 BSP	L1	L2	L3	HEX	oz
31 00 18	G1/8	.196 (5)	.905 (23)	1.062 (27)	.551 (14)	.494 (14)
31 00 14	G1/4	.255 (6.5)	1.043 (26.5)	1.240 (31.5)	.669 (17)	.935 (26.5)
31 00 38	G3/8	.275 (7)	1.181 (30)	1.417 (36)	.787 (20)	1.587 (45)

PN 32

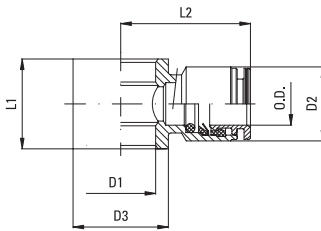
Double Screw



Part Number	D1 BSP	L1	L2	L3	HEX	oz Δ
32 00 18	G1/8	.196 (5)	1.555 (39.5)	1.673 (42.5)	.551 (14)	.705 (20)
32 00 14	G1/4	.255 (6.5)	1.771 (45)	1.968 (50)	.669 (17)	1.393 (39.5)
32 00 38	G3/8	.275 (7)	2.027 (51.5)	2.263 (57.5)	.787 (20)	2.169 (61.5)

PN 35

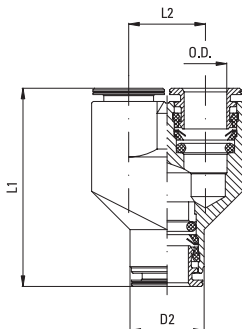
Banjo Ring



Part Number	Tube OD	D1	D2	D3	L1	L2	oz Δ
35 5/32 1/8	5/32	.393 (10)	.354 (9)	.551 (14)	.590 (15)	.787 (20)	.494 (14)
35 1/4 1/8	1/4	.393 (10)	.472 (12)	.551 (14)	.590 (15)	.885 (22.5)	.547 (15.5)
35 1/4 1/4	1/4	.519 (13.2)	.472 (12)	.669 (17)	.669 (17)	.925 (23.5)	
35 5/16 1/8	5/16	.393 (10)	.551 (14)	.551 (14)	.590 (15)	.885 (22.5)	.670 (19)
35 5/16 1/4	5/16	.519 (13.2)	.551 (14)	.669 (17)	.669 (17)	.944 (24)	
35 5/16 3/8	5/16	.669 (17)	.551 (14)	.826 (21)	.787 (20)	1.023 (26)	
35 3/8 1/4	3/8	.519 (13.2)	.629 (16)	.669 (17)	.669 (17)	1.023 (26)	
35 3/8 3/8	3/8	.669 (17)	.629 (16)	.826 (21)	.787 (20)	1.102 (28)	1.270 (36)

PN 37

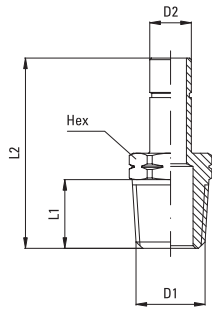
Union Y Connector



Part Number	Tube OD	D2	L1	L2	oz Δ
37 1/8 1/8	1/8	.275 (7)	.866 (22)	.275 (7)	.635 (18)
37 5/32 5/32	5/32	.354 (9)	1.122 (28.5)	.374 (9.5)	.476 (13.5)
37 1/4 1/4	1/4	.472 (12)	1.377 (35)	.492 (12.5)	1.093 (31)
37 5/16 5/16	5/16	.551 (14)	1.476 (37.5)	.570 (14.5)	1.482 (42)

PN 38

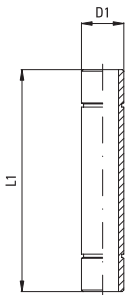
Stem adaptor



Part Number	D1 UNF	D2	L1	L2	HEX	oz \triangle
38 5/32 10-32	10-32	5/32	.196 (5)	.984 (25)	5/16 (7.93)	.088 (2.5)
Part Number	D1 NPTF	D2	L1	L2	HEX	oz \triangle
38 5/32 1/8	1/8	5/32	.334 (8.5)	1.122 (28.5)	7/16 (11.11)	.247 (7)
38 5/32 1/4	1/4	5/32	.511 (13)	1.318 (33.5)	9/16 (14.28)	.494 (14)
38 1/4 1/8	1/8	1/4	.334 (8.5)	1.200 (30.5)	7/16 (11.11)	.300 (8.5)
38 1/4 1/4	1/4	1/4	.511 (13)	1.397 (35.5)	9/16 (14.28)	.529 (15)
38 5/16 1/8	1/8	5/16	.334 (8.5)	1.279 (32.5)	7/16 (11.11)	.317 (9)
38 5/16 1/4	1/4	5/16	.511 (13)	1.476 (37.5)	9/16 (14.28)	.547 (15.5)
38 3/8 1/4	1/4	3/8	.511 (13)	1.555 (39.5)	9/16 (14.28)	.582 (16.5)
38 3/8 3/8	3/8	3/8	.511 (13)	1.574 (40)	11/16 (17.46)	.811 (23)
38 1/2 3/8	3/8	1/2	.511 (13)	1.692 (43)	11/16 (17.46)	.899 (25.5)
38 1/2 1/2	1/2	1/2	.669 (17)	1.899 (48)	7/8 (22.22)	1.517 (43)

PN 39

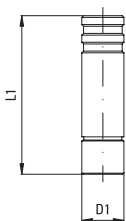
Extention Piece



Part Number	D1	L1	oz \triangle
39 5/32 5/32	5/32	1.181 (30)	.088 (2.5)
39 1/4 1/4	1/4	1.377 (35)	.176 (5)
39 5/16 5/16	5/16	1.377 (35)	.265 (7.5)
39 3/8 3/8	3/8	1.574 (40)	.300 (8.5)
39 1/2 1/2	1/2	1.653 (42)	.494 (14)

PN 40

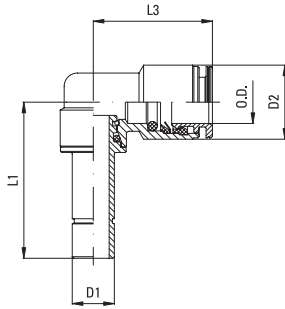
Plug



Part Number	D1	L1	oz \triangle
40 1/8 00	1/8	.787 (20)	.046 (1.3)
40 5/32 00	5/32	.984 (25)	.088 (2.5)
40 1/4 00	1/4	1.181 (30)	.229 (6.5)
40 5/16 00	5/16	1.181 (30)	.441 (12.5)
40 3/8 00	3/8	1.377 (35)	.723 (20.5)
40 1/2 00	1/2	1.496 (38)	1.482 (42)

PN 43

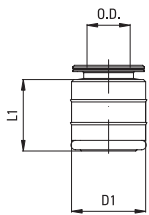
Plug-in Elbow



Part Number	Tube OD	D ₁	L ₁	L ₂	oz
43 5/32 00	5/32	5/32	1.003 (25.5)	.669 (17)	
43 1/4 00	1/4	1/4	1.161 (29.5)	.846 (21.5)	
43 5/16 00	5/16	5/16	1.161 (29.5)	.866 (22)	
43 3/8 00	3/8	3/8	1.319 (33.5)	.984 (25)	

PN 48

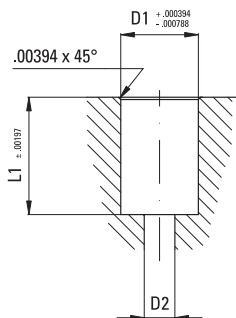
Press-in Cartridge



Part Number	Tube OD	D ₁	L ₁	oz
48 5/32 00	5/32	.354 (9)	.453 (11.5)	
48 1/4 00	1/4	.472 (12)	.512 (13)	
48 5/16 00	5/16	.551 (14)	.532 (13.5)	
48 3/8 00	3/8	.63 (16)	.602 (15.3)	
48 1/2 00	1/2	.787 (20)	.65 (16.5)	

As always specify if body's material housing cartridges differs from plastics.

Cartridges seat drilling plan



Tube OD	D ₁	D ₂	L ₁
5/32	.354 (9)	.118 (3)	.453 (11.5)
1/4	.472 (12)	.197 (5)	.512 (13)
5/16	.551 (14)	.276 (7)	.532 (13.5)
3/8	.63 (16)	.354 (9)	.602 (15.3)
1/2	.787 (20)	.433 (11)	.65 (16.5)



PX LINE



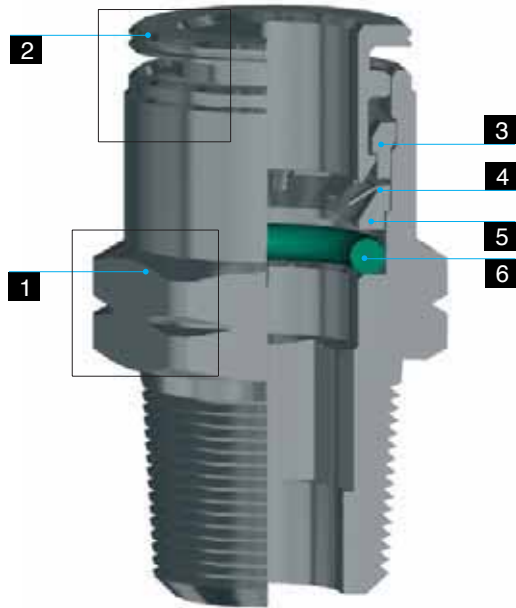
PX 11 PX 15 PX 20 PX 25 PX 26 PX 28 PX 29

Technical remarks [20_21](#)
[22_23](#)

- PX 11
- PX 15
- PX 20
- PX 25
- PX 26
- PX 28
- PX 29

PX LINE

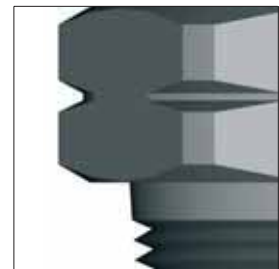
1	2	3	4	5	6
Body	Release ring	Tightness ring	Gripping collet	Protection ring	O-Ring
Stainless steel AISI 316L	Stainless steel AISI 316L	Stainless steel AISI 316L	Stainless steel AISI 301	Stainless steel AISI 316L	FFM/FFM



ZOOM IN



Identification mark for inch sizes.



Identification mark for NPTF threads.

THE PX LINE

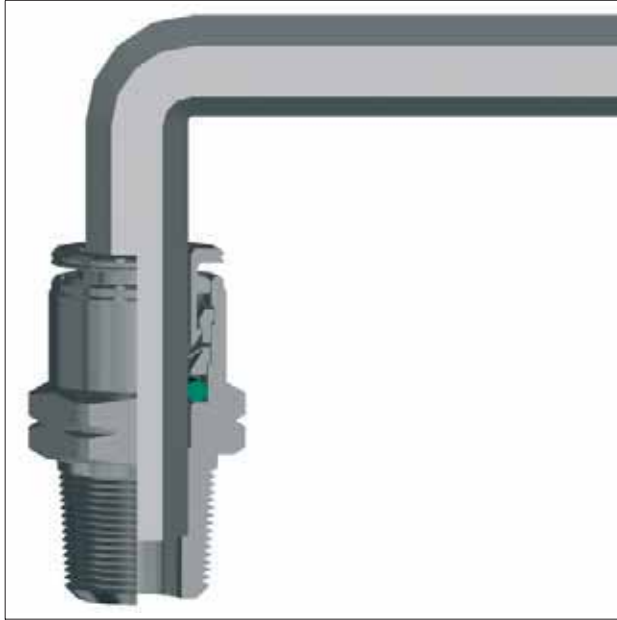
PX is our new stainless steel fittings line. Suitable for all those applications where brass nickel-plated and acetal fittings are banned, the new AISI 316L fitting is conceived to withstand corrosive environments (substances), to channel aggressive fluids and to be used in the food, pharmaceutical and chemical industries. PX comes with FFM seals to guarantee the best performance at the highest temperatures.

DATA SHEET

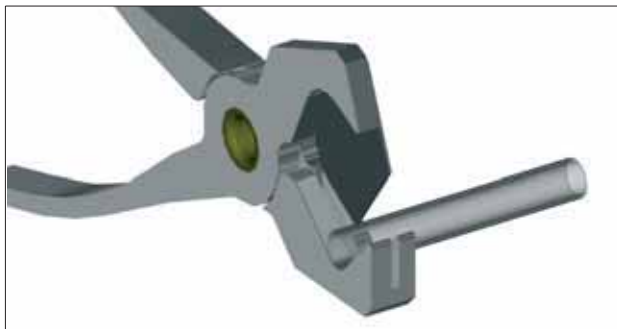
Recommended tubings:
PVDF, PTFE
Acceptable tubing tolerances:
+/- .003"

Application fields:
Food, chemical, pharmaceutical, oil and packaging industry.
Working pressure:
Pressure varies depending on the tubing used and in any case it never has to exceed 217 psi.
In case of application with fluids, pls follow instructions below:
Constant pressure:
Max pressure 217 psi
Pulse pressure:
Max pressure 145 psi
Vacuum rating:
to 28" Hg
Working temperature:
- 4°F ÷ 302 °F depending on the materials and tube diameters used.

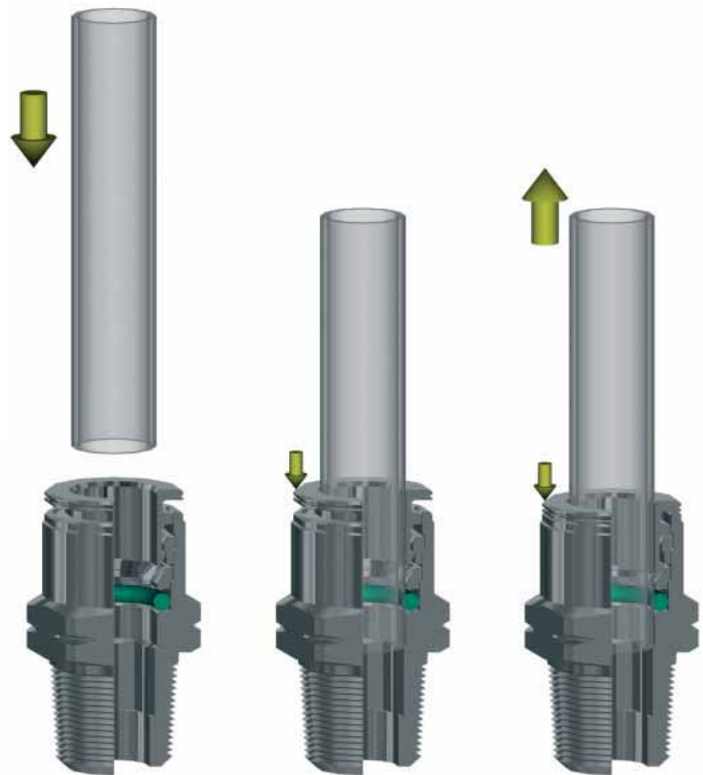
Threads	Threads Specifications	Tightening Torque (lb-ft)				
		10-32	1/8"	1/4"	3/8"	1/2"
NPTF threads	ANSI/ASME B1.20.3		7.376 ÷ 8.851	10.326 ÷ 11.801	11.801 ÷ 13.276	13.276 ÷ 14.751
NPTF pre-coated threads	ANSI/ASME B1.20.3		3.688 ÷ 4.425	5.901 ÷ 7.376	7.376 ÷ 8.851	11.801 ÷ 13.276
UNF parallel threads with seal	ANSI/ASME B1.1	0.738 ÷ 1.106				



Our tapered male straight connector is provided with an inner hex allowing for easy assembly when no space is available.



1



2

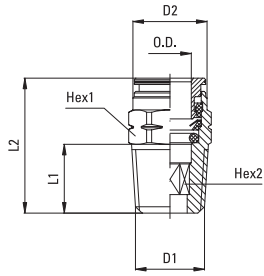
3

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a tube cutter i.e. our PA 34) making sure that no burrs are left and that the tube is not oval.
2. Push the tubing until it bottoms.
Tube release
3. While pressing on the release ring, pull out the tube from the fitting.

PX 11

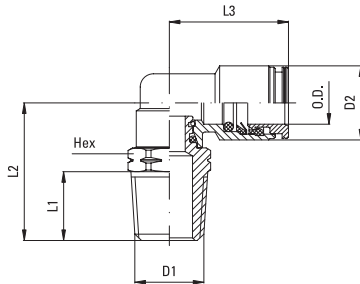
Male Connector



Part Number	Tube OD	D1 NPTF	D2	L1	L2	HEX ₁ (mm)	HEX ₂	oz
11 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.748 (19)	11	1/8 (3.17)	
11 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.846 (21.5)	13	5/32 (4)	
11 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	.944 (24)	14	5/32 (4)	
11 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	.984 (25)	14	1/4 (6.35)	
11 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.220 (31)	17	5/16 (8)	
11 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	.964 (24.5)	18	5/16 (8)	
11 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.122 (28.5)	20	13/32 (10.31)	
11 1/2 1/2	1/2	1/2	.748 (19)	0.669 (17)	1.161 (29.5)	22	13/32 (10.31)	

PX 15

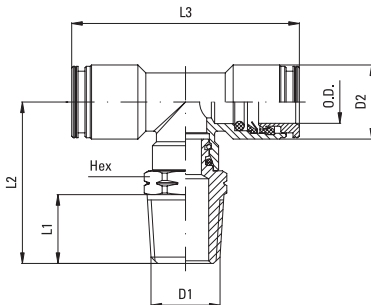
Swivel Male Elbow



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX (mm)	oz
15 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.728 (18.5)	.669 (17)	11	
15 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.826 (21)	.846 (21.5)	13	
15 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	.846 (21.5)	14	
15 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	.866 (22)	14	
15 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	17	
15 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	18	
15 1/2 3/8	1/2	3/8	.748 (19)	.511 (13)	1.259 (32)	1.082 (27.5)	20	
15 1/2 1/2	1/2	1/2	.748 (19)	.669 (17)	1.437 (36.5)	1.082 (27.5)	22	

PX 20

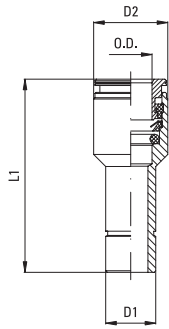
Swivel Tee



Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX (mm)	oz
20 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.905 (23)	1.337 (34)	11	
20 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.905 (23)	1.614 (41)	13	
20 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.2 (30.5)	1.614 (41)	14	
20 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.2 (30.5)	1.653 (42)	14	
20 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.259 (32)	1.811 (46)	17	
20 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.259 (32)	1.811 (46)	18	

PX 25

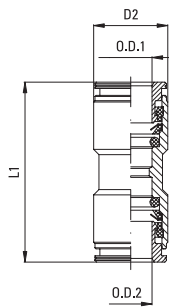
Reducer



Part Number	Tube OD	D ₁	D ₂	L ₁	oz
25 5/32 1/4	5/32	1/4	.354 (9)	1.220 (31)	
25 1/4 5/16	1/4	5/16	.472 (12)	1.377 (34)	
25 1/4 3/8	1/4	3/8	.472 (12)	1.377 (34)	
25 5/16 3/8	5/16	3/8	.551 (14)	1.417 (36)	

PX 26

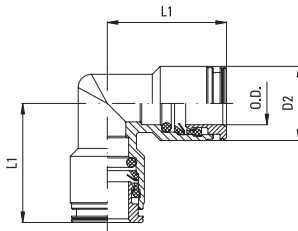
Union



Part Number	Tube OD ₁	Tube OD ₂	D ₂	L ₁	oz
26 5/32 5/32	5/32	5/32	.354 (9)	1.062 (27)	
26 1/4 1/4	1/4	1/4	.472 (12)	1.299 (33)	
26 5/16 5/16	5/16	5/16	.551 (14)	1.299 (33)	
26 3/8 3/8	3/8	3/8	.629 (16)	1.456 (37)	
26 1/2 1/2	1/2	1/2	.748 (19)	1.535 (39)	

PX 28

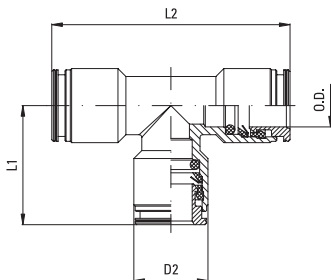
Union Elbow



Part Number	Tube OD	D ₂	L ₁	oz
28 5/32 5/32	5/32	.354 (9)	.669 (17)	
28 1/4 1/4	1/4	.472 (12)	.787 (20)	
28 5/16 5/16	5/16	.551 (14)	.846 (21.5)	
28 3/8 3/8	3/8	.629 (16)	.964 (24.5)	
28 1/2 1/2	1/2	.748 (19)	1.023 (26)	

PX 29

Union Tee



Part Number	Tube OD	D ₂	L ₁	L ₂	oz
29 5/32 5/32	5/32	.354 (9)	.669 (17)	1.338 (34)	
29 1/4 1/4	1/4	.472 (12)	.787 (20)	1.574 (40)	
29 5/16 5/16	5/16	.551 (14)	.846 (21.5)	1.692 (43)	
29 3/8 3/8	3/8	.629 (16)	.964 (24.5)	1.929 (49)	
29 1/2 1/2	1/2	.748 (19)	1.023 (26)	2.046 (52)	



PA LINE



FA 14

FA 16

FA 17

FA 19

PA 34

PA 37

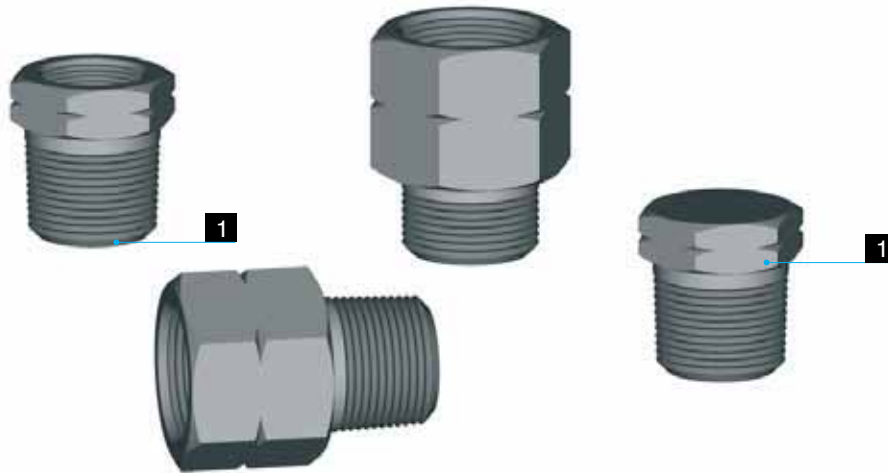
TUBING

Technical remarks [26_26](#)
[27_28](#)

- PA 14
- PA 16
- PA 17
- PA 19
- PA 34
- PA 37
- TUBING

Body

Brass UNI EN 12164 CW614N Nickel Plated



Threads	Threads Specifications	Tightening Torque (lb-ft)				
		10-32	1/8"	1/4"	3/8"	1/2"
NPTF threads	ANSI/ASME B1.20.3		7.376 ÷ 8.851	10.326 ÷ 11.801	11.801 ÷ 13.276	13.276 ÷ 14.751
NPTF pre-coated threads	ANSI/ASME B1.20.3		3.688 ÷ 4.425	5.901 ÷ 7.376	7.376 ÷ 8.851	11.801 ÷ 13.276
UNF parallel threads with seal	ANSI/ASME B1.1	0.738 ÷ 1.106				

THE PA LINE

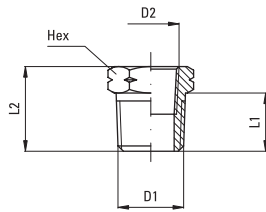
PA is our range of accessories, a complement line to the Push-in and the flow control fittings.
All components are brass nickel-plated.

DATA SHEET

Max working pressure:
870 psi
Application fields:
Pneumatic, hydraulic, oleodynamic and
hydropneumatic installations.

PA 14

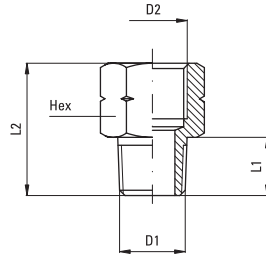
Taper female-male reducing connector



Part Number	D1 NPTF	D2 NPTF	L1	L2	HEX	oz
14 18 10-32	1/8	10-32 UNF	.334 (8.5)	.590 (15)	.472 (12)	
14 1/4 1/8	1/4	1/8	.511 (13)	.748 (19)	.551 (14)	.441 (12.5)
14 3/8 1/8	3/8	1/8	.511 (13)	.748 (19)	.708 (18)	
14 3/8 1/4	3/8	1/4	.511 (13)	.748 (19)	.708 (18)	.635 (18)
14 1/2 1/4	1/2	1/4	.669 (17)	.944 (24)	.866 (22)	
14 1/2 3/8	1/2	3/8	.669 (17)	.944 (24)	.866 (22)	

PA 16

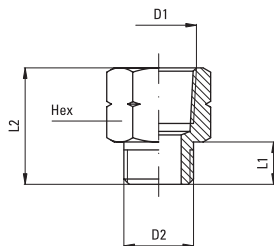
Adaptor male-female, taper



Part Number	D1 NPTF	D2 BSP	L1	L2	HEX	oz
16 10-32 M5	10-32 UNF	M5x0.8	.196 (5)	.472 (12)	.315 (8)	
16 1/8 1/8	1/8	G1/8	.334 (8.5)	.748 (19)	.708 (18)	0.423 (12)
16 1/4 1/4	1/4	G1/4	.511 (13)	1.063 (27)	.708 (18)	0.952 (27)
16 3/8 3/8	3/8	G3/8	.511 (13)	1.063 (27)	.866 (22)	1.376 (39)
16 1/2 1/2	1/2	G1/2	.669 (17)	1.338 (34)	1.063 (27)	2.310 (65.5)

PA 17

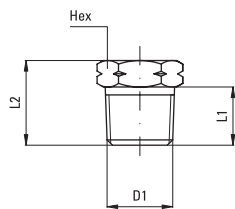
Adaptor male-female, parallel



Part Number	D1 NPTF	D2 BSP	L1	L2	HEX	oz
17 1/8 1/8	1/8	G1/8	.236 (6)	.708 (18)	.551 (14)	.688 (12.5)
17 1/4 1/4	1/4	G1/4	.315 (8)	.944 (24)	.669 (17)	.952 (27)
17 3/8 3/8	3/8	G3/8	.354 (9)	.984 (25)	.822 (22)	1.376 (39)
17 1/2 1/2	1/2	G1/2	.393 (10)	1.181 (30)	.944 (24)	1.746 (49.5)

PA 19

Male plug



Part Number	D1 NPTF	L1	L2	HEX	oz
1900 1/8	1/8	.334 (8.5)	.492 (12.5)	.472 (12)	.211 (6)
1900 1/4	1/4	.511 (13)	.708 (18)	.551 (14)	.493 (14)
1900 3/8	3/8	.511 (13)	.708 (18)	.708 (18)	.846 (24)
1900 1/2	1/2	.669 (17)	.905 (23)	.866 (22)	

PA 34

Hose Cutter



Part Number	Tube OD	L	oz Δ
34 12	from 1/8" to 1/2"	5.120 (130)	3.510 (99.5)
34 25	from 1/2" to 1"	7.283 (185)	10.335 (283)

PA 37

Spare Blades



Part Number	Tube OD
37 12	from 1/8" to 1/2"
37 25	from 1/2" to 1"

POLYAMIDE 12

FLEXIBLE TUBING

Limited humidity absorption, great dimensional stability at high temperatures and good chemical resistance are the major features of the CIMATIC Polyamide 12, highly recommended for all standard industrial applications.

Working temperature: -40°F to +212°F
 Vacuum rating: To 28" Hg
 Hardness: 64 Shore D
 Working Pressure: 4 to 1 Safety Factor
 Water absorption: 1%
 Diameter Tolerances: +/- .002

Pressure variation (%) in relation with temperature change		Part Number	Diameter			Pressure at 75°F	
			OD (in)	ID (in)	Bend Radius (in)	Working pressure (psi)	Bursting point (psi)
68°F	100%	28010000-colour	1/8	.093	.375	264	1058
104°F	85%	28010010-colour	5/32	.106	.500	348	1392
140°F	60%	28010030-colour	1/4	.180	.875	293	1174
176°F	40%	28010040-colour	5/16	.232	1.250	268	1073
212°F	35%	28010050-colour	3/8	.275	1.500	279	1116
		28010060-colour	1/2	.375	2.000	257	1029



PULINE



FU 10-11

FU 10-12

FU 10-20

FU 10-21

P113

P213

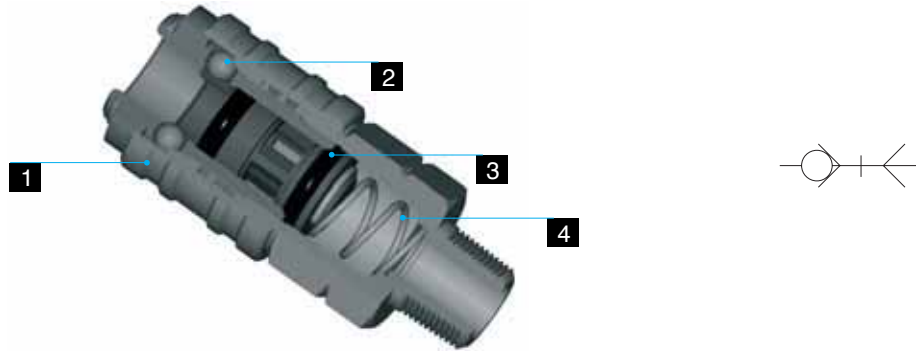
MULTIPLE CONNECTOR

Technical remarks [30_30](#)
[31_33](#)

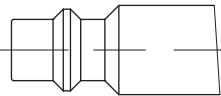
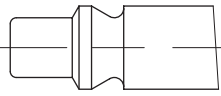
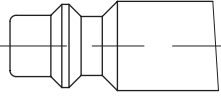
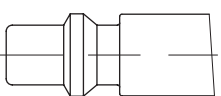

FU 10-11
FU 10-12
FU 10-20
FU 10-21
P113
P213

MULTI PROFILE QUICK COUPLER INDUSTRIAL INTERCHANGE

1	2	3	4	
Body	Balls	O-Ring	Spring	Plug
Brass UNI EN 12164 CW614N Nickel Plated	Stainless steel AISI420	NBR	Stainless steel AISI302	Hardened zinc plated steel

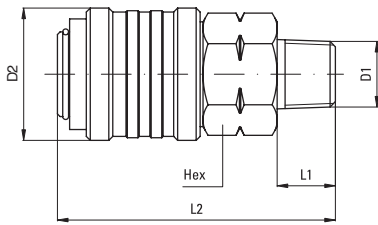


Suitable with following plugs profiles	Flow rate at 87 psi
--	---------------------

actual size		
	MIL C4109 Profile	46 SCFM
	ARO210 Profile	41 SCFM
	German Profile	56.5 SCFM
	ISO 6150 B Profile	45 SCFM
	Standard Swedisch Profile	45 SCFM
	Standard Italian Profile	38 SCFM

PU 10

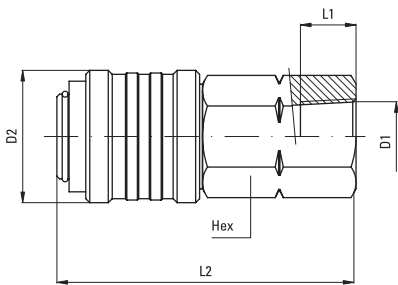
Male couplig



Part Number	D1 NPTF	D2	L1	L2	HEX	oz
11 00 14	1/4	.925 (23.5)	.511 (13)	2.165 (55)	.787 (20)	
11 00 38	3/8	.925 (23.5)	.511 (13)	2.165 (55)	.787 (20)	
11 00 12	1/2	.925 (23.5)	.669 (17)	2.283 (58)	.945 (24)	

PU 10

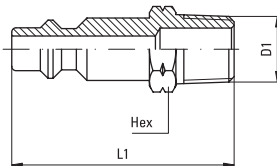
Female couplig



Part Number	D1 NPTF	D2	L1	L2	HEX	oz
12 00 14	1/4	.925 (23.5)	.511 (13)	2.165 (59)	.787 (20)	
12 00 38	3/8	.925 (23.5)	.511 (13)	2.362 (60)	.787 (20)	
12 00 12	1/2	.925 (23.5)	.551 (14)	2.48 (63)	.945 (24)	

PU 10

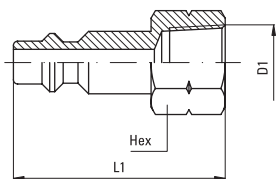
Male plug



Part Number	D1 NPTF	L1	HEX	oz
20 00 14	1/4	1.654 (42)	.551 (14)	
20 00 38	3/8	1.654 (42)	.708 (18)	
20 00 12	1/2	1.85 (47)	.866 (22)	

PU 10

Female plug



Part Number	D1 NPTF	L1	HEX	oz
21 00 14	1/4	1.575 (40)	.669 (17)	
21 00 38	3/8	1.575 (40)	.822 (22)	
21 00 12	1/2	1.732 (44)	.944 (24)	

MULTIPLE CONNECTOR

Multiple connector sheath

Couplings support

O-Ring

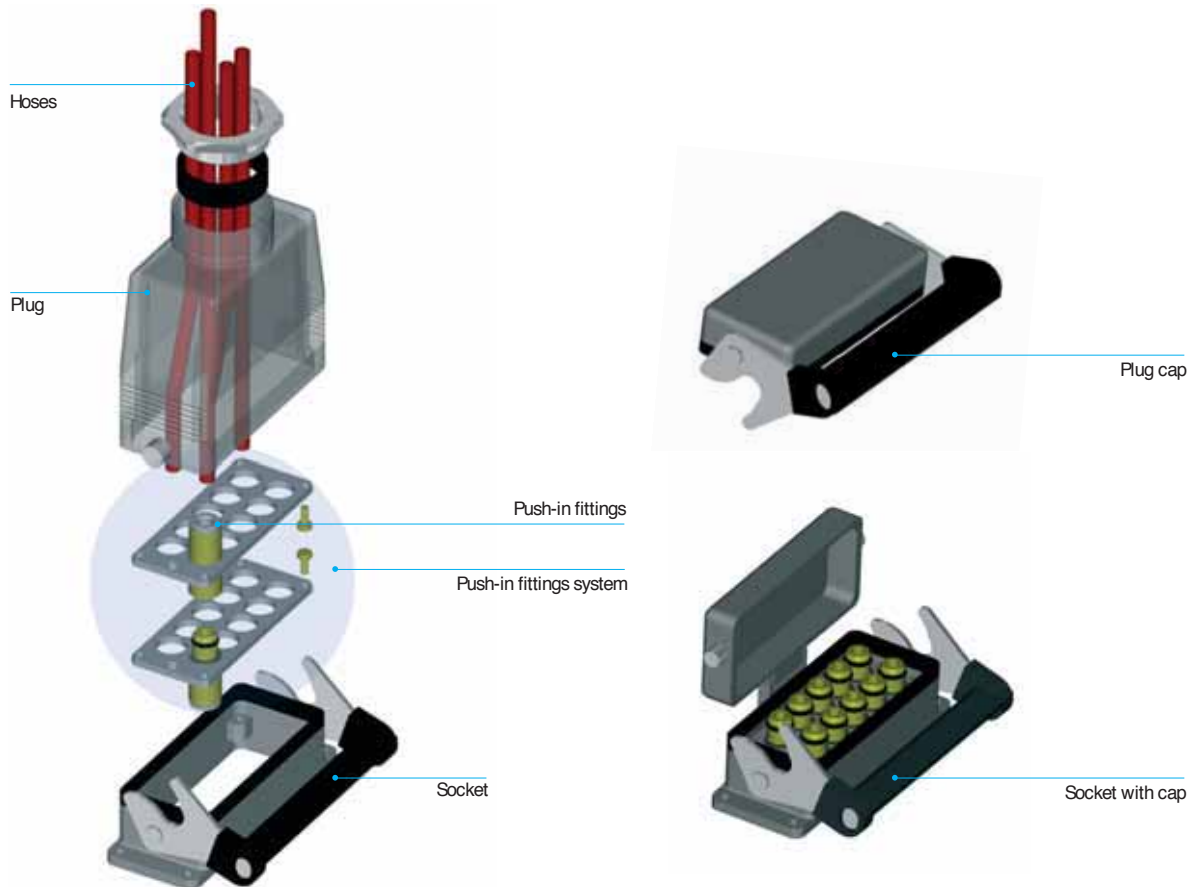
Push-in fittings

Light die cast alloy

Aluminium

NBR

FN Push-In fittings



MULTIPLE CONNECTOR

DATA SHEET

The multiple connector is made of a fixed part to be connected to the control device of pneumatic powered machines and a mobile part to be assembled to the air distribution equipment. The big advantage offered by it, is that a bundle of hoses, varying from min 10 to max 20 tubings, can be rapidly and safely connected and disconnected.

Our multiple connector is manufactured in such a way that the reverse assembly of the two parts is not possible.

Application fields:

Pneumatic installations

Recommended tubing:

PA 6, PA 11, PA 12

Polyethylene, Polyurethane (95 durometer or above).

Working pressure:

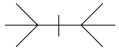
0 ÷ 218 psi

Working temperature:

-4°F ÷ 158°F

P 113

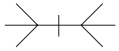
Equipped with push-in fittings



Part Number	Tube OD	Couplings n°	oz Δ
113 5/32 12	5/32	12	24.868
113 1/4 10	1/4	10	29.877

P 213

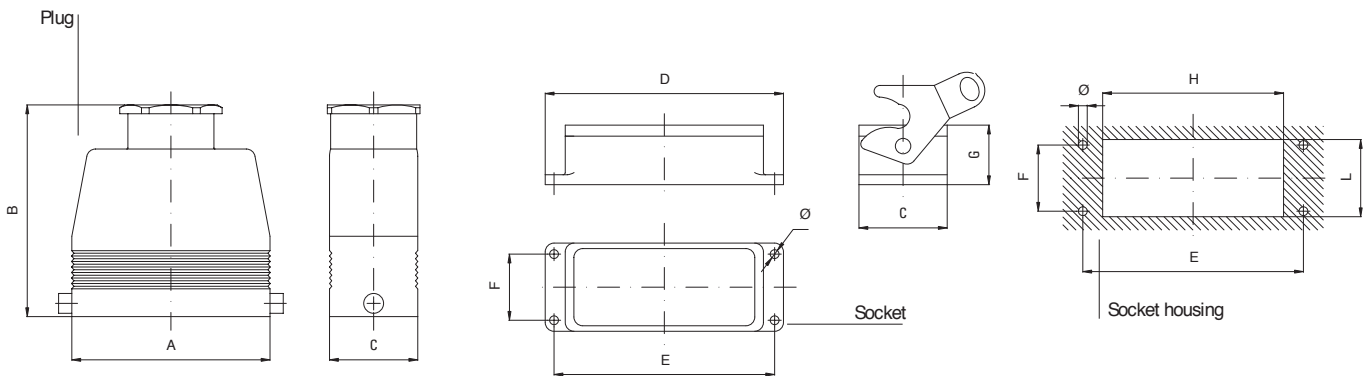
Equipped with push-in fittings



Part Number	Tube OD	Couplings n°	oz Δ
213 5/32 20	5/32	20	32.946
213 1/4 14	1/4	14	37.884



Type	A	B	C	D	E	F	G	H	L	Ø
P113	3.661 (93)	3.937 (100)	1.772 (45)	4.449 (113)	4.055 (103)	1.260 (32)	1.102 (28)	3.386 (86)	1.417 (36)	.177 (4.5)
P213	4.724 (120)	3.937 (100)	1.772 (45)	5.512 (140)	5.118 (130)	1.260 (32)	1.102 (28)	4.449 (113)	1.417 (36)	.177 (4.5)





PV LINE



PV 18

PV 41

PV 21

PV 23

PV 33

PV 26

PV 22

PV 27

Technical remarks [36_36](#)

[37_41](#)

- PV 18
- PV 41
- PV 21
- PV 23
- PV 33
- PV 26
- PV 22
- PV 27



PV 45

PV 46

PV 11-FE

PV 11-BE

[42_45](#)

- PV 45
- PV 46
- PV 11-FE
- PV 11-BE

FLOW CONTROLS

Working pressure

from 0 up to 145 psi

Working temperature

from 32 °F up to 158 °F

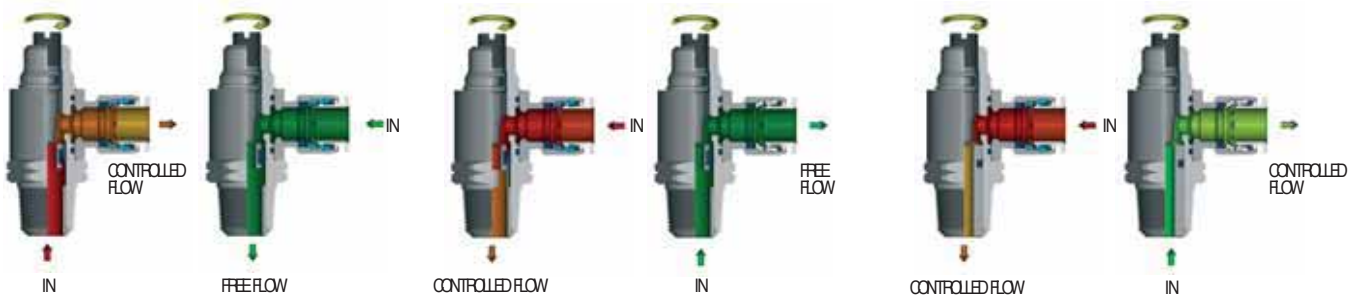
.../C= Meter Out



.../V= Meter In



.../B= Bidirectional

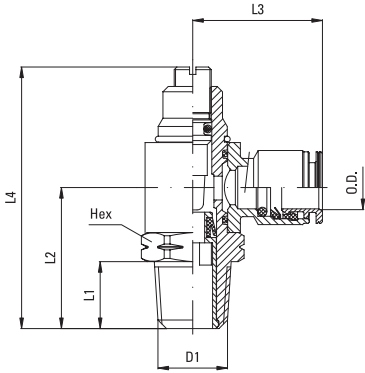


Threads	Threads Specifications	Tightening Torque (lb-ft)				
		10-32	1/8"	1/4"	3/8"	1/2"
NPTF threads	ANSI/ASME B1.20.3		7.376 ÷ 8.851	10.326 ÷ 11.801	11.801 ÷ 13.276	13.276 ÷ 14.751
NPTF pre-coated threads	ANSI/ASME B1.20.3		3.688 ÷ 4.425	5.901 ÷ 7.376	7.376 ÷ 8.851	11.801 ÷ 13.276
UNF parallel threads with seal	ANSI/ASME B1.1	0.738 ÷ 1.106				

PV18 PV41	Body	Barjo ring	O-Ring
	Brass UNI EN 12164 CW614N Nickel plated	Brass UNI EN 12165 CW617N Nickel plated	NBR
PV21	Body	Adjusting screw, nut and knob	O-Ring
	Anodized aluminium	Brass UNI EN 12164 CW614N Nickel plated	NBR

PV 18

Flow control with swivel push-in fitting



Part Number	Tube OD	D1 UNF	L1	L2	L3	L4	HEX	oz
18 5/32 10-32	5/32	10-32	.196 (5)	.590 (15)	.708 (18)	1.259 (32)	3/8 (9.52)	
Part Number	Tube OD	D1 NPTF	L1	L2	L3	L4	HEX	oz
18 5/32 1/8	5/32	1/8	.334 (8.5)	.866 (22)	.787 (20)	1.692 (43)	9/16 (14.28)	1.164 (33)
18 1/4 1/8	1/4	1/8	.334 (8.5)	.866 (22)	.866 (22)	1.692 (43)	9/16 (14.28)	1.235 (35)
18 1/4 1/4	1/4	1/4	.511 (13)	1.063 (27)	.944 (24)	2.007 (51)	11/16 (17.46)	2.116 (60)
18 5/16 1/8	5/16	1/8	.334 (8.5)	.866 (22)	.905 (23)	1.692 (43)	9/16 (14.28)	
18 5/16 1/4	5/16	1/4	.511 (13)	1.063 (27)	.944 (24)	2.007 (51)	11/16 (17.46)	2.152 (61)
18 3/8 1/4	3/8	1/4	.511 (13)	1.063 (27)	1.023 (26)	2.007 (51)	11/16 (17.46)	2.310 (65.5)

Available as:

.../C= Meter Out



.../V= Meter In

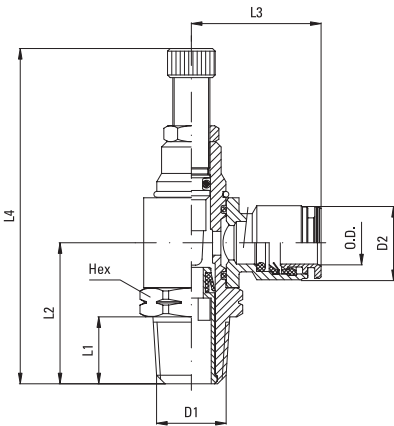


.../B= Bidirectional



PV 41

Flow control with swivel push-in fitting and handwheel adjustment



Part Number	Tube OD	D1 UNF	L1	L2	L3	L4	HEX	oz
41 5/32 10-32	5/32	10-32	.196 (5)	.590 (15)	.708 (18)	1.692 (43)	3/8 (9.52)	
Part Number	Tube OD	D1 NPTF	L1	L2	L3	L4	HEX	oz
41 5/32 1/8	5/32	1/8	.334 (8.5)	.866 (22)	.787 (20)	2.126 (54)	9/16 (14.28)	
41 1/4 1/8	1/4	1/8	.334 (8.5)	.866 (22)	.866 (22)	2.126 (54)	9/16 (14.28)	1.340 (38)
41 1/4 1/4	1/4	1/4	.511 (13)	1.063 (27)	.944 (24)	2.519 (64)	11/16 (17.46)	2.346 (66.5)
41 5/16 1/8	5/16	1/8	.334 (8.5)	.866 (22)	.905 (23)	2.126 (54)	9/16 (14.28)	
41 5/16 1/4	5/16	1/4	.511 (13)	1.063 (27)	.944 (24)	2.519 (64)	11/16 (17.46)	2.363 (67)
41 3/8 1/4	3/8	1/4	.511 (13)	1.063 (27)	1.023 (26)	2.519 (64)	11/16 (17.46)	2.469 (70)

Available as:

.../C= Meter Out



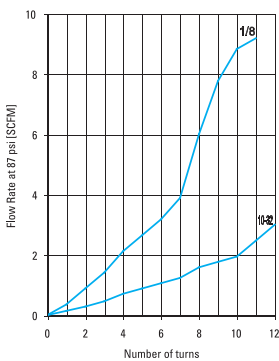
.../V= Meter In



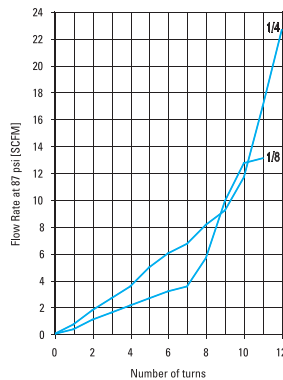
.../B= Bidirectional



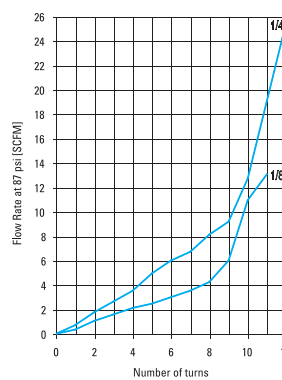
PV 18 5/32 - PV 41 5/32



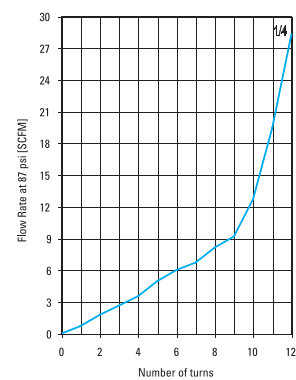
PV 18 1/4 - PV 41 1/4



PV 18 5/16 - PV 41 5/16

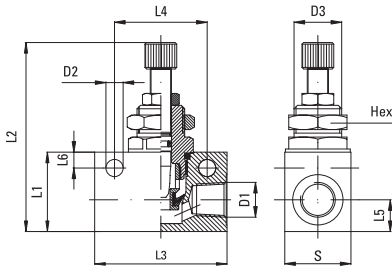


PV 18 3/8 - PV 41 3/8



PV 21

In Line Flow Control - Needle Valve

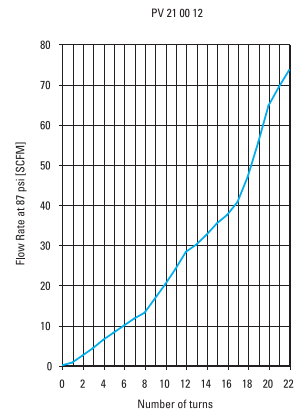
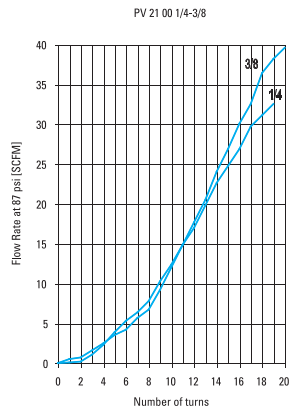
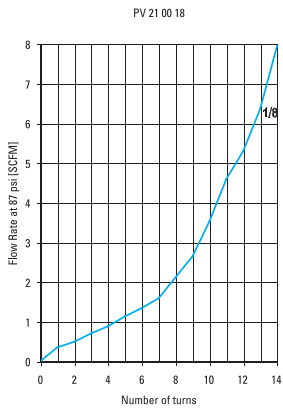


Part Number	D1 NPTF	D2	D3	L1	L2	L3	L4	L5	S	HEX	oz
21 00 18	1/8	.177 (4.5)	.472 (12)	.826 (21)	2.204 (56)	1.338 (34)	.944 (24)	.315 (8)	.629 (16)	.590 (15.9)	1.728 (49)
21 00 14	1/4	.255 (6.5)	.708 (18)	1.181 (30)	2.952 (75)	1.968 (50)	1.378 (35)	.472 (12)	.984 (25)	.866 (22.9)	5.785 (164)
21 00 38	3/8	.255 (6.5)	.708 (18)	1.181 (30)	2.952 (75)	2.283 (58)	1.578 (40)	.472 (12)	.984 (25)	.866 (22)	
21 00 12	1/2	.255 (6.5)	.866 (22)	1.574 (40)	3.622 (92)	2.559 (65)	1.968 (50)	.669 (17)	1.181 (30)	1.023 (26)	10.617 (301)

Available as:

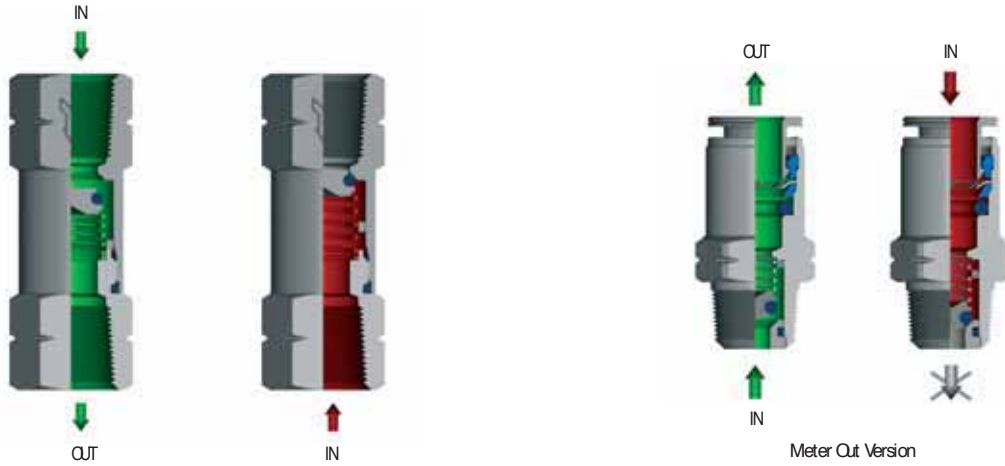
.../U=One way

.../B=Bidirectional



CHECK VALVE

Body	Spring	O-Ring	Working temperature	Cracking pressure	Working pressure
Brass UNI EN 12164 CW614N Nickel plated	Stainless Steel AISI 302	NBR	from 14°F up to 158°F	2.9 psi	from 29 psi up to 145 psi



CHECK VALVE

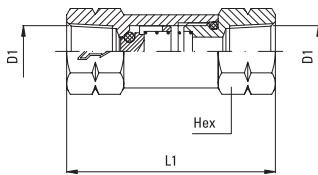
DATA SHEET

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Recommended tubing according to the fitting connected to the valve.
Application field:
Pneumatic installation fed with filtered, lubricated air.

PV 23

Check Valve

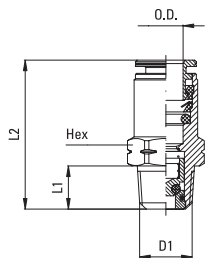


Part Number	D1 NPTF	L1	HEX	oz
23 00 18	1/8	1.496 (38)	.511 (13)	
23 00 14	1/4	1.653 (42)	.629 (16)	
23 00 38	3/8	2.047 (52)	.787 (20)	
23 00 12	1/2	2.440 (62)	.944 (24)	

Flow at 87 psi: PV 23 00 18: 33 SCFM
 PV 23 00 14: 57 SCFM
 PV 23 00 38: 86 SCFM
 PV 23 00 12: 124 SCFM

PV 33

Straight connection with check valve

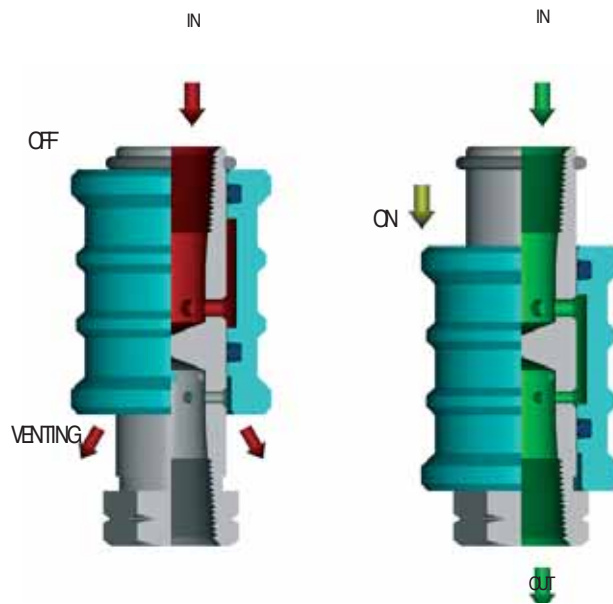


Part Number	Tube OD	D1 NPTF	L1	L2	HEX	oz
33 1/4 1/8	1/4	1/8	.334 (8.5)	1.122 (28.5)	.511 (13)	
33 1/4 1/4	1/4	1/4	.511 (13)	1.26 (32)	.551 (14)	

Meter Out Version

SLIDE VALVE

Body	Sleeve	O-Ring	Working pressure	Working temperature
Brass UNI EN 12164 CW614N Chrome plated	Anodized aluminium	NBR	From 0 up to 217 psi	From 14°F up to 158°F



SLIDE VALVE

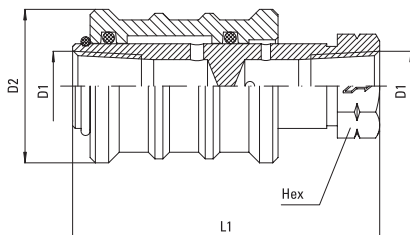
DATA SHEET

The valve is used to section a pneumatic installation. Sliding the sleeve on the rod, both ON and OFF positions can be achieved. When the sleeve is against the rod hexagon, the flow goes in the arrow direction (ON); pushing it backwards the air supply is cut off and the installation is vented (OFF).

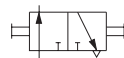
Recommended tubing: according to the fitting connected to the valve.
Application field: pneumatic installation fed with filtered, lubricated air.

PV 26

Slide valve

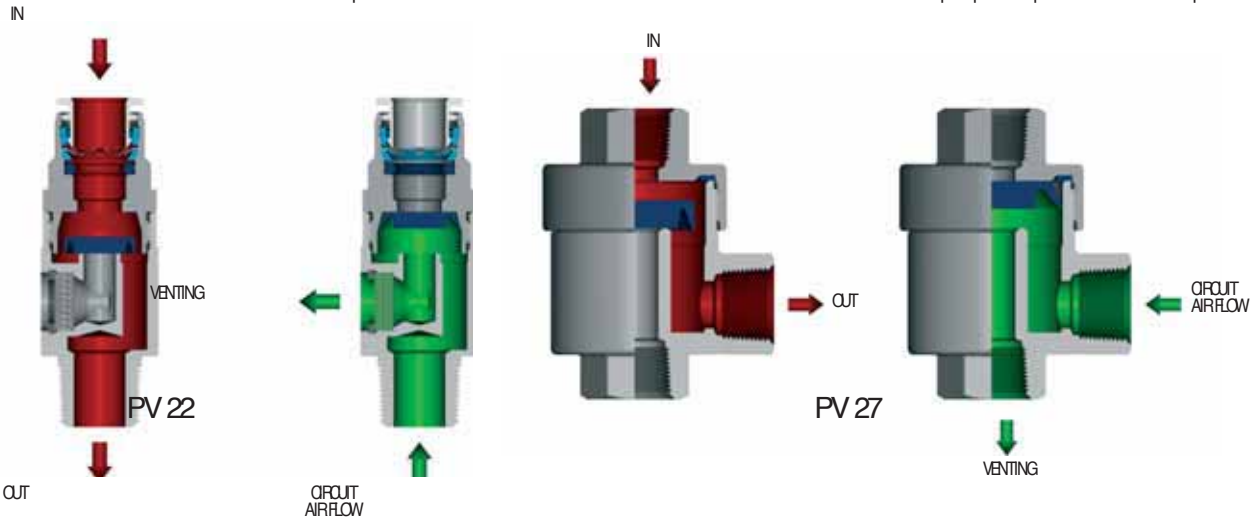


Part Number	D1 NPTF	D2	L1	HEX	oz
26 1/8 1/8	1/8	.984 (25)	1.889 (48)	.551 (14)	1.764 (50)
26 1/4 1/4	1/4	1.181 (30)	2.283 (58)	.669 (17)	2.998 (85)
26 3/8 3/8	3/8	1.378 (35)	2.677 (68)	.866 (22)	
26 1/2 1/2	1/2	1.574 (40)	3.149 (80)	1.063 (27)	



QUICK EXHAUST VALVE

PV22	Body	Lip ring	Muffler	Working pressure	Working temperature
	Brass UNI EN 12164 CW614N Nickel plated	PU	Stainless Steel AIS316	from 29 psi up to 145 psi	from 14°F up to 158°F
PV27	Body	Lip ring	Gasket	Working pressure	Working temperature
	Brass UNI EN 12165 CW617N Nickel plated	PU	PA66	from 29 psi up to 145 psi	from 14°F up to 158°F



QUICK EXHAUST VALVE

DATA SHEET

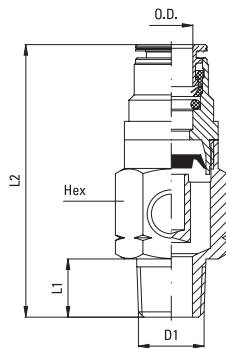
This valve can easily vent the air flowing in the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Recommended tubing: according to the fitting connected to the valve.

Application field: pneumatic installation fed with filtered, lubricated air.

PV 22

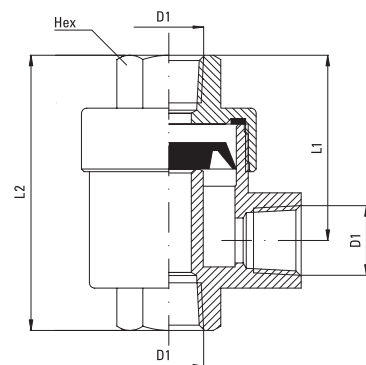
In Line Quick Exhaust valve



Part Number	Tube OD	D1 NPTF	L1	L2	HEX	oz Δ
22 1/4 1/4	1/4	1/4	.511 (13)	2.087 (53)	.708 (18)	
22 3/8 3/8	3/8	3/8	.511 (13)	2.539 (64.5)	1.063 (27)	
22 1/2 1/2	1/2	1/2	.669 (17)	2.992 (76)	1.338 (34)	

PV 27

Quick Exhaust valve

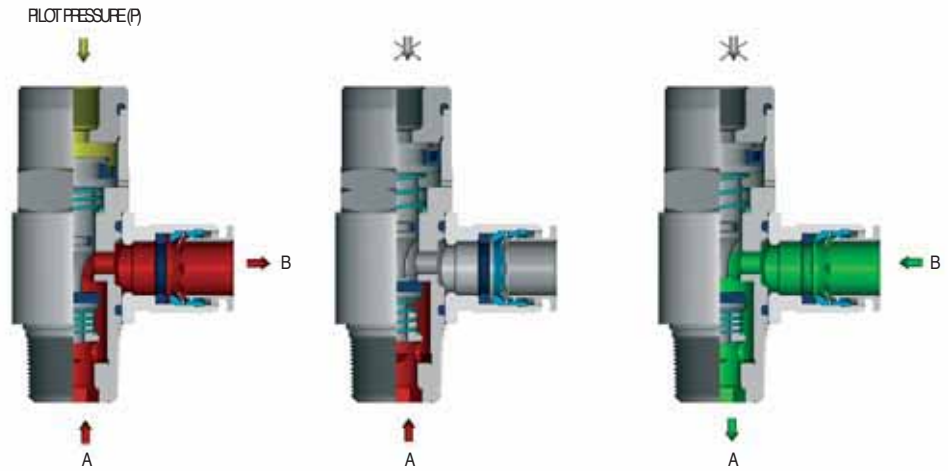
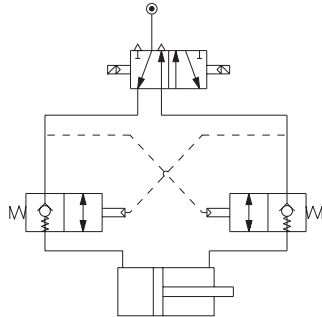


Part Number	D1 NPTF	L1	L2	HEX	oz Δ
27 1/8 1/8	1/8	1.062 (27)	1.653 (42)	.590 (15)	3.351 (95)
27 1/4 1/4	1/4	1.377 (35)	2.125 (54)	.748 (19)	5.573 (158)
27 3/8 3/8	3/8	1.377 (35)	2.165 (55)	.826 (21)	5.644 (160)
27 1/2 1/2	1/2	1.771 (45)	2.834 (72)	1.023 (26)	11.464 (325)

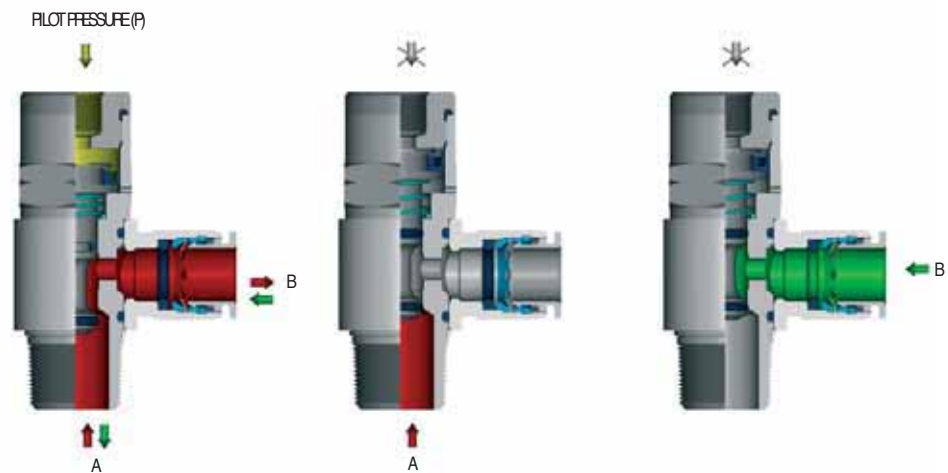
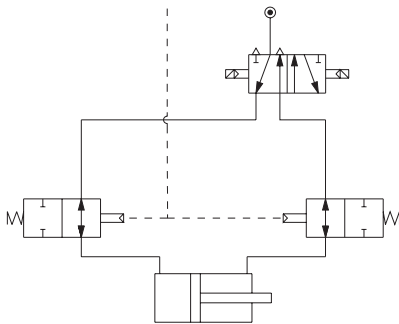
PILOT OPERATED CHECK VALVE

Body	Piston	Spring	O-Ring	Working pressure	Working temperature
Brass UNI EN 12164 CW614N Nickel plated	Stainless Steel AISI 304	Stainless Steel AISI 302	NBR-FU	29 psi to 145 psi	23°F to 158°F

/U = One Way



/B = Bidirectional



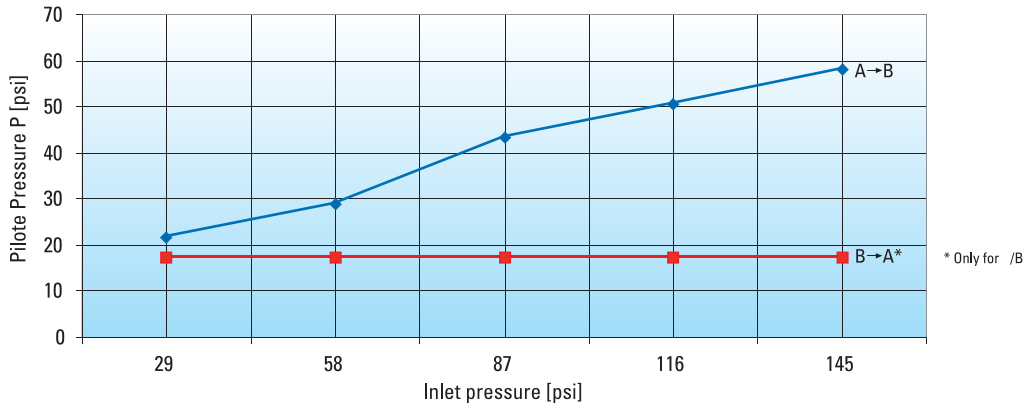
PILOT OPERATED CHECK VALVE DATA SHEET

The Pilot Operated check valve allows the flow only when a pilot signal is applied to the pilot port; if assembled in pair on the cylinder ports, in case of sudden pressure drops the pilot Operated Check Valve immediately stops the cylinder piston stroke.

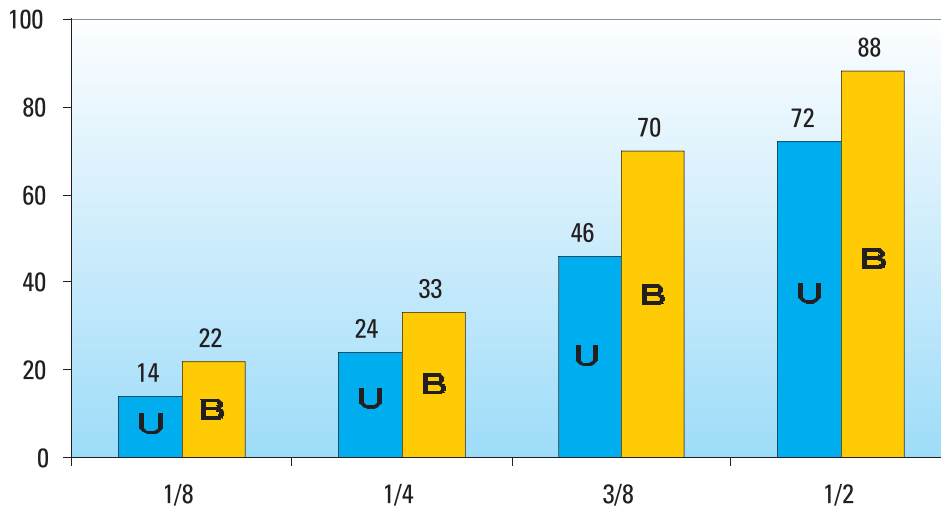
Recommended tubing: according to the fitting connected to the pilot operated check valve.

Application field: pneumatic circuits fed with filtered, lubricated air.

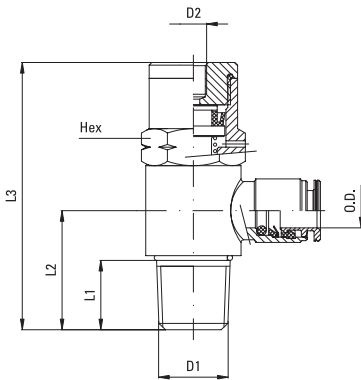
Cracking Pressure



Flow at 78 psi [SCFM]



Piloted Operated Check valve

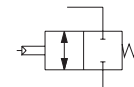
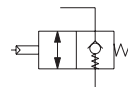


Part Number	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	oz
45 1/4 1/8	1/4	1/8	10-32	.334 (8.5)	.689 (17.5)	1.692 (43)	.511 (13)	
45 1/4 1/4	1/4	1/4	10-32	.511 (13)	.918 (23.5)	1.969 (50)	.669 (17)	
45 3/8 3/8	3/8	3/8	1/8	.511 (13)	.984 (25)	2.224 (56.5)	.787 (20)	
45 1/2 1/2	1/2	1/2	1/8	.669 (17)	1.22 (31)	2.657 (67.5)	.984 (25)	

Available as:

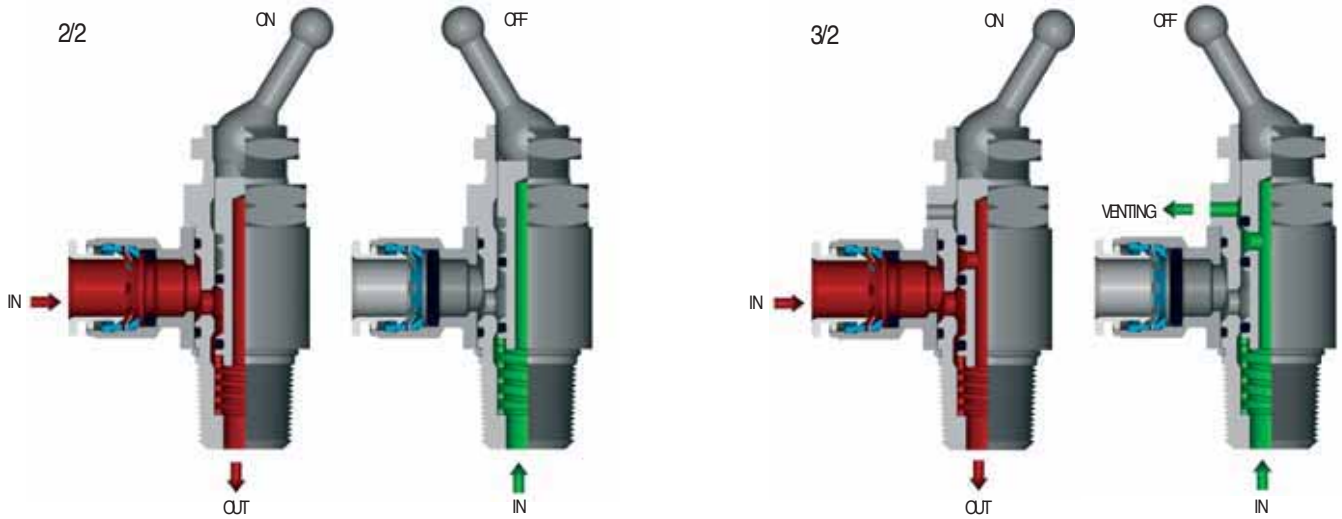
.../U=One way

.../B=Bidirectional



PNEUMATIC SWITCH

Pneumatic switch	Spring	O-Ring	Working pressure	Working temperature	Flow rate at 87 psi
Brass UNI EN 12164 CW614N Nickel plated	Stainless Steel AISI 302	NBR	0 psi to 217 psi	14°F to 158°F	PV 46 1/4 1/8: 21.5 SCFM PV 46 1/4 1/4: 30 SCFM



PNEUMATIC SWITCH

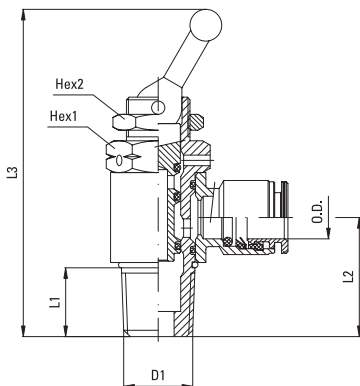
DATA SHEET

The PV 46 is a pneumatic switch. It is available in a 2/2 and 3/2-way version. The goal of the 2/2 way switch is to cut off the flow in the circuit whenever needed by simply operating the lever. The 3/2 way valve cuts off the flow and vents to atmosphere the terminal part of the circuit.

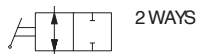
Recommended tubing: according to the fitting connected to the pressure control.
Application field: pneumatic circuits fed with filtered, lubricated air.

PV 46

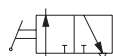
Pneumatic switch



Part Number	Tube OD	D1 NPTF	L1	L2	L3	HEX1	HEX2	oz
46 1/4 1/8	1/4	1/8	.335 (8.5)	.669 (17)	2.165 (55)	.551 (14)	.59 (15)	
46 1/4 1/4	1/4	1/4	.511 (13)	.886 (22.5)	2.441 (62)	.669 (17)	.59 (15)	



2 WAYS



3 WAYS

MUFFLER

	Body	Muffler	Working pressure	Working temperature
PV11-FE	Brass UNI EN 12164 CW614N Nickel plated	Stainless Steel AISI 304	0 psi to 174 psi	14°F to 158°F
PV11-BE	Brass UNI EN 12164 CW614N	Sintered bronze	0 psi to 174 psi	14°F to 158°F

Noise level at 87 psi

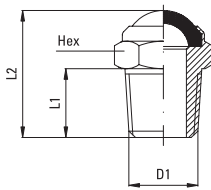
Type	1/8	1/4	3/8	1/2
PV11 -FE	74 dB	72 dB	88 dB	90 dB
PV11 -BE	75 dB	81 dB	82 dB	85 dB

Filtration threshold

Type	
PV11 -FE	100-200 μm
PV11 -BE	35 μm

PV 11-FE

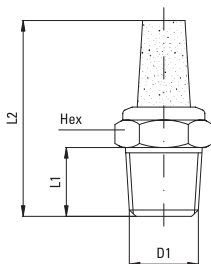
Air muffler with stainless steel wire



Part Number	D1 NPTF	L1	L2	HEX	oz
11 00 18-FE	1/8	.236 (6)	.59 (15)	.511 (13)	
11 00 14-FE	1/4	.433 (11)	.866 (22)	.63 (16)	
11 00 38-FE	3/8	.433 (11)	.905 (23)	.748 (19)	
11 00 12-FE	1/2	.511 (13)	.984 (25)	.945 (24)	

PV 11-BE

Sintered bronze air muffler



Part Number	D1 NPTF	L1	L2	HEX	oz
11 00 18-BE	1/8	.236 (6)	1.142 (29)	.511 (13)	
11 00 14-BE	1/4	.433 (11)	1.417 (36)	.63 (16)	
11 00 38-BE	3/8	.433 (11)	1.693 (43)	.748 (19)	
11 00 12-BE	1/2	.511 (13)	1.929 (49)	.945 (24)	

Pneumatic*Plus*

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