.matic®

Technical Catalog

NPT.02

assofluid

Sistema di management certificato SQS ISO 9001:2000

CERTIFIED IQNet MANAGEMENT SYSTEM

NPT FITTINGS INDEX

THE PN LINE

PN is our line of "Automatic push-in fittings" with NPT threads and INCH tube diameters. The fitting enables several quick connections and disconnections with calibrated plastic hoses at any time, at any stage of the pneumatic circuit and by simple hand movement.

The connection and the fitting tightness are made possible by the presence of a stainless steel gripper and by an O-ring inside of the fitting so that once the tube is inserted to the bottom of the fitting, the stainless steel collet grips onto it and prevents it from being released. The tube is released simply by pushing onto the outer metal ring.

All PN fittings are brass nickel-plated.

DATA SHEET

Recommended Tubings: Rilsan PA 11, Nylon 6, Polyurethane (95 durometer or above).

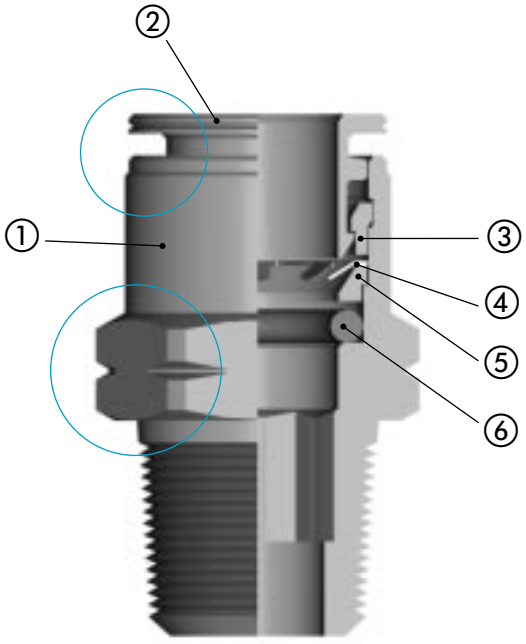
Acceptable Tubing Tolerances:

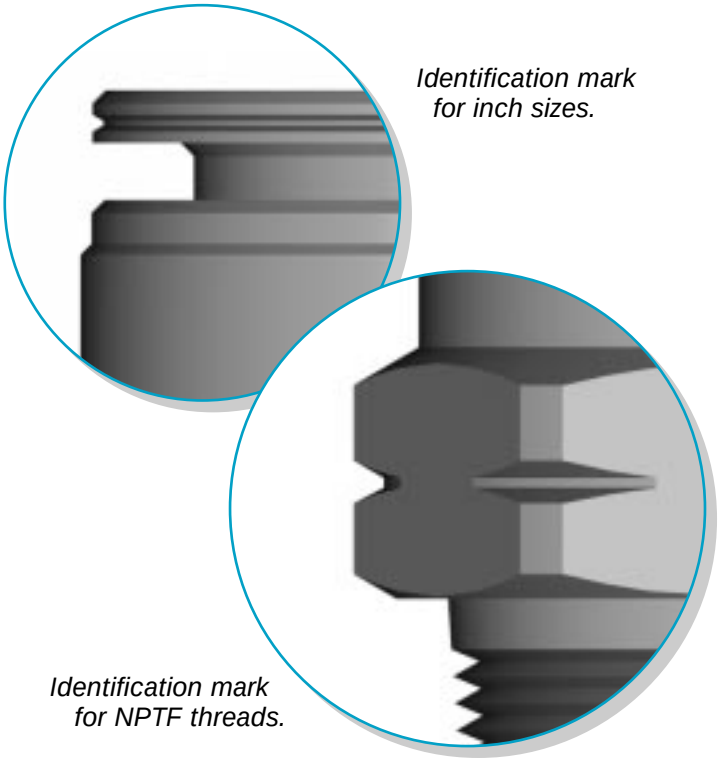
O.D. TUBE	O.D. TUBE TOLERANCES
1/8 to 3/16	+ .002 (+ 0.05 mm) - .003 (- 0.07 mm)
1/4 to 1/2	+ .002 (+ 0.05 mm) - .004 (- 0.1 mm)

Application fields: Pneumatic circuits.

Pressure Range: Depending on tubings used and always within: 0 P.S.I. ÷ 217 P.S.I.
Vacuum Application: up to 750 mmHg.

Working temperature: -4 °F ÷ 160 °F.





Identification mark for inch sizes.

Identification mark for NPTF threads.

① **BODY:** Brass UNI EN 12164-5 Nickel-plated

② **RELEASE RING:** Brass UNI EN 12164-5 Nickel-plated

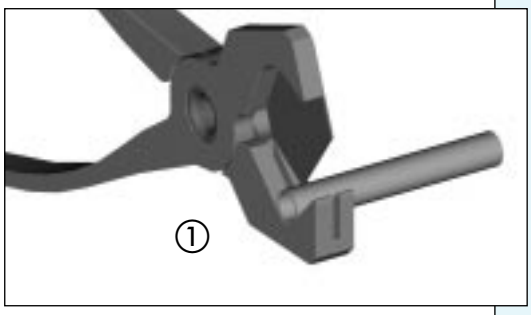
③ **TIGHTNESS RING:** Acetal Resin

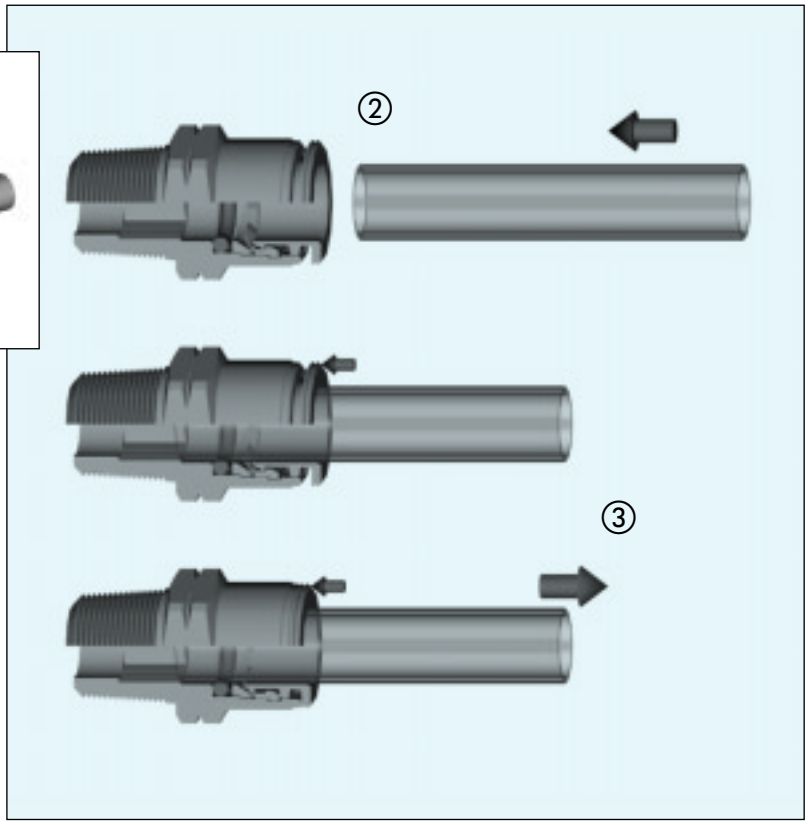
④ **GRIPPING COLLET:** Stainless steel

⑤ **PROTECTION RING:** Acetal Resin

⑥ **O-RING:** NBR

ASSEMBLY INSTRUCTIONS

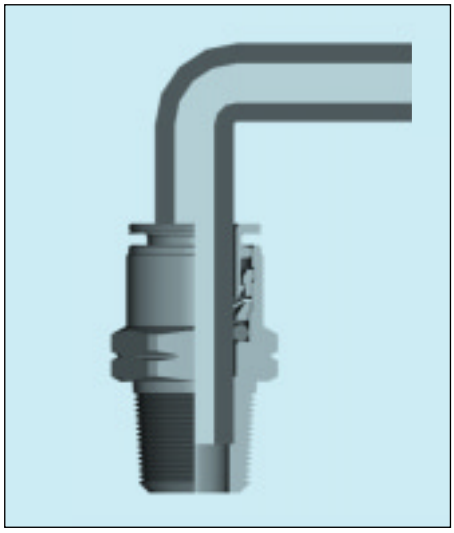




1. Cut the tube square (by means of a tube cutter i.e. our RA 034) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release

3. While pressing on the release ring, pull out the tube from the fitting.

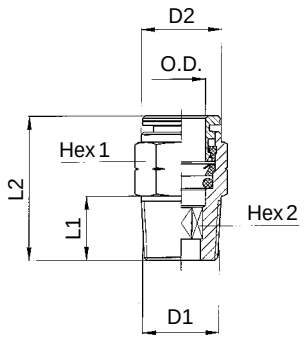


Our tapered male straight connector is provided with an inner hex allowing for easy assembly when no space is available.

NOTE

PN 11

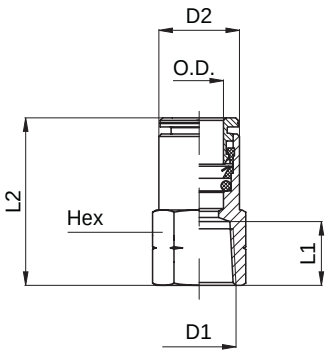
Male connector



Type	Tube OD	D_1 UNF	D_2	L_1	L_2	Hex	Hex_2	oz
11 1/8 10-32	1/8	10-32	.275 (7)	.196 (5)	.649 (16.5)	5/16 (7.93)	3/32 (2.38)	0.088
11 5/32 10-32	5/32	10-32	.354 (9)	.196 (5)	.767 (19.5)	3/8 (9.52)	3/32 (2.38)	0.158
11 1/4 10-32	1/4	10-32	.472 (12)	.196 (5)	.905 (23)	1/2 (12.7)	3/32 (2.38)	0.300
		D_1 NPTF						
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)	0.335
11 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.748 (19)	7/16 (11.1)	1/8 (3.17)	0.317
11 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	.925 (23.5)	9/16 (14.28)	1/8 (3.17)	0.705
11 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.846 (21.5)	1/2 (12.7)	5/32 (4)	
11 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	.944 (24)	9/16 (14.28)	5/32 (4)	0.617
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)	0.529
11 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	.984 (25)	9/16 (14.28)	1/4 (6.35)	0.564
11 5/16 3/8	5/16	3/8	.551 (14)	.511 (13)	.964 (24.5)	11/16 (17.46)	1/4 (6.35)	0.987
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)	0.794
11 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.220 (31)	11/16 (17.46)	1/4 (6.35)	
11 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	.964 (24.5)	11/16 (17.46)	5/16 (8)	0.882
11 3/8 1/2	3/8	1/2	.629 (16)	.669 (17)	1.161 (29.5)	7/8 (22.22)	5/16 (8)	
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
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)	
11 1/2 1/2	1/2	1/2	.748 (19)	.669 (17)	1.161 (29.5)	7/8 (22.22)	13/32 (10.31)	

PN 13

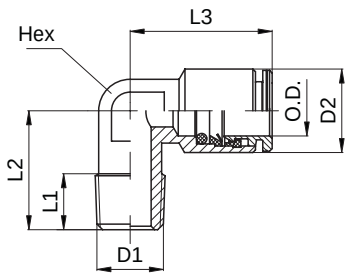
Female connector



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	Hex	oz
13 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.964 (24.5)	9/16 (14.28)	0.406
13 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	1.043 (26.5)	9/16 (14.28)	0.494
13 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.220 (31)	11/16 (17.46)	0.935
13 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	1.039 (26.4)	9/16 (14.28)	0.705
13 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.220 (31)	11/16 (17.46)	1.005
13 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.299 (33)	11/16 (17.46)	1.146
13 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.299 (33)	13/16 (20.63)	1.323

PN 14

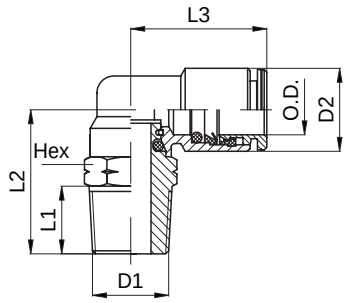
Male Elbow



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	Hex	oz
14 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.610 (15.5)	.669 (17)	.314 (8)	0.317
14 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.629 (16)	.787 (20)	.393 (10)	0.459
14 1/4 1/4	1/4	1/4	.472 (12)	.433 (11)	.787 (20)	.787 (20)	.393 (10)	0.600
14 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.669 (17)	.846 (21.5)	.472 (12)	0.723
14 5/16 1/4	5/16	1/4	.551 (14)	.433 (11)	.826 (21)	.846 (21.5)	.472 (12)	0.794
14 3/8 1/4	3/8	1/4	.629 (16)	.433 (11)	.885 (22.5)	.944 (24)	.551 (14)	1.041
14 3/8 3/8	3/8	3/8	.629 (16)	.433 (11)	.885 (22.5)	.944 (24)	.551 (14)	1.182

PN 15

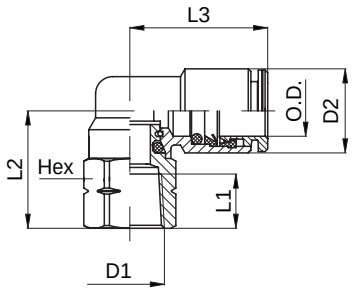
Swivel Male Elbow



Type	Tube OD	D_1 UNF	D_2	L_1	L_2	L_3	Hex	oz
15 1/8 10-32	1/8	10-32	.275 (7)	.196 (5)	.649 (16.5)	.570 (14.5)	3/8 (9.52)	0.282
15 5/32 10-32	5/32	10-32	.354 (9)	.196 (5)	.649 (16.5)	.669 (17)	3/8 (9.52)	0.353
		D_1 NPTF						
15 1/8 1/8	1/8	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	.570 (14.5)	7/16 (11.11)	0.370
15 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.728 (18.5)	.669 (17)	7/16 (11.11)	
15 5/32 1/4	5/32	1/4	.354 (9)	.511 (13)	1.023 (26)	.748 (19)	9/16 (14.28)	0.794
15 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.826 (21)	.846 (21.5)	1/2 (12.7)	0.670
15 1/4 1/4	1/4	1/4	.472 (12)	.511 (13)	1.023 (26)	.846 (21.5)	9/16 (14.28)	0.847
15 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.826 (21)	.866 (22)	1/2 (12.7)	0.811
15 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	1.023 (26)	.866 (22)	9/16 (14.28)	0.970
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
15 3/8 1/8	3/8	1/8	.629 (16)	.334 (8.5)	.944 (24)	.984 (25)	11/16 (17.46)	1.376
15 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.122 (28.5)	.984 (25)	11/16 (17.46)	1.464
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
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
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
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)	2.646

PN 17

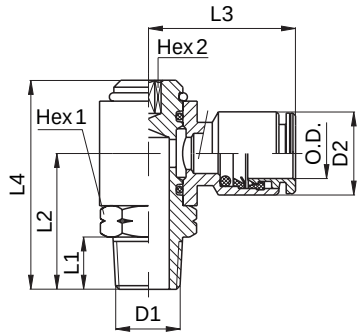
Swivel Famale Elbow



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	Hex	oz
17 5/32 1/8	5/32	1/8	.354 (9)	.334 (8.5)	.767 (19.5)	.748 (19)	9/16 (14.28)	0.741
17 1/4 1/8	1/4	1/8	.472 (12)	.334 (8.5)	.767 (19.5)	.846 (21.5)	9/16 (14.28)	0.794
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
17 5/16 1/8	5/16	1/8	.551 (14)	.334 (8.5)	.767 (19.5)	.866 (22)	9/16 (14.28)	0.935
17 5/16 1/4	5/16	1/4	.551 (14)	.511 (13)	.925 (23.5)	.866 (22)	11/16 (17.46)	1.252
17 3/8 1/4	3/8	1/4	.629 (16)	.511 (13)	1.003 (25.5)	.984 (25)	11/16 (17.46)	1.534
17 3/8 3/8	3/8	3/8	.629 (16)	.511 (13)	1.003 (25.5)	.984 (25)	13/16 (20.63)	1.587

PN 18

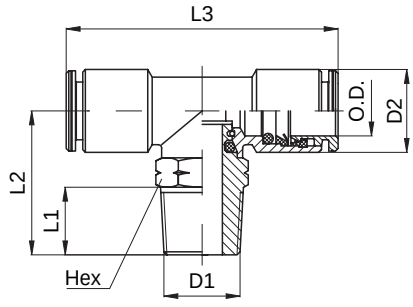
Swivel fitting with banjo ring



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	L_4	Hex 1	Hex 2	oz
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)	
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)	1.023
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)	
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)	
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)	

PN 20

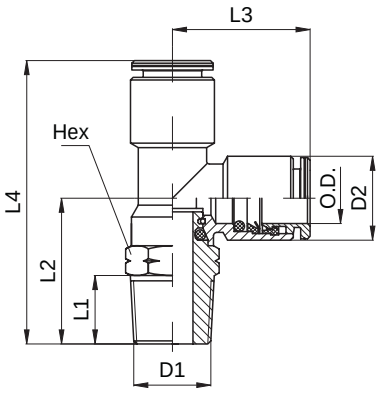
Swivel Male Tee



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	Hex	oz
20 1/8 1/8	1/8”	1/8	.275 (7)	.334 (8.5)	.728 (18.5)	1.141 (29)	7/16 (11.11)	0.670
20 5/32 1/8	5/32”	1/8	.354 (9)	.334 (8.5)	.826 (21)	1.496 (38)	1/2 (12.7)	0.776
20 5/32 1/4	5/32”	1/4	.354 (9)	.511 (13)	1.023 (26)	1.496 (38)	9/16 (14.28)	0.952
20 1/4 1/8	1/4”	1/8	.472 (12)	.334 (8.5)	.826 (21)	1.692 (43)	1/2 (12.7)	0.899
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
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
20 5/16 1/4	5/16”	1/4	.551 (14)	.511 (13)	1.023 (26)	1.732 (44)	9/16 (14.28)	1.287
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
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
20 1/2 3/8	1/2”	3/8	.748 (19)	.511 (13)	1.259 (32)	2.165 (55)	13/16 (20.63)	2.734
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

PN 23

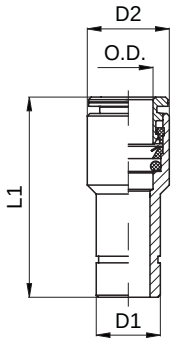
Swivel Male Run Tee



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	L_4	Hex	oz
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)	0.776
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)	0.952
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)	0.899
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)	1.076
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)	1.111
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)	1.287
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
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
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
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)	3.175

PN 25

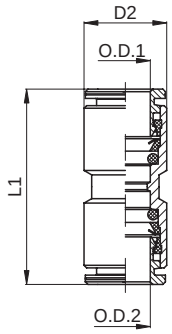
Reducer



Type	Tube OD	D_1	D_2	L_1	oz
25 1/8 5/32	1/8	5/32	.275 (7)	1.141 (29)	0.088
25 5/32 1/4	5/32	1/4	.354 (9)	1.220 (31)	0.265
25 1/4 5/16	1/4	5/16	.472 (12)	1.299 (33)	0.406
25 1/4 3/8	1/4	3/8	.472 (12)	1.377 (35)	
25 1/4 1/2	1/4	1/2	.472 (12)	1.377 (35)	
25 5/16 3/8	5/16	3/8	.551 (14)	1.377 (35)	0.547
25 3/8 1/2	3/8	1/2	.629 (16)	1.417 (36)	

PN 26

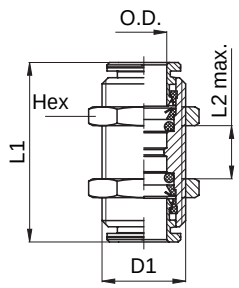
Union



Type	Tube OD 1	Tube OD 2	D_2	L_1	oz
26 1/8 1/8	1/8	1/8	.275 (7)	.866 (22)	0.106
26 5/32 5/32	5/32	5/32	.354 (9)	1.062 (27)	0.265
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)	0.635
26 3/8 3/8	3/8	3/8	.629 (16)	1.456 (37)	0.882
26 1/2 1/2	1/2	1/2	.748 (19)	1.535 (39)	1.111

PN 27

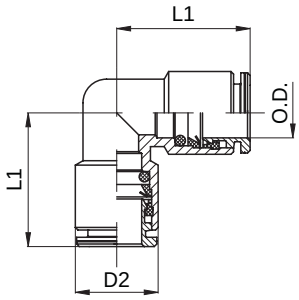
Bulkhead union



Type	Tube OD	D_1	L_1	L_2	Hex	oz
27 1/8 1/8	1/8	M10x1	.866 (22)	.314 (8)	.551 (14)	0.476
27 5/32 5/32	5/32	M12x1	1.062 (27)	.433 (11)	.629 (16)	0.811
27 1/4 1/4	1/4	M14x1	1.299 (33)	.629 (16)	.708 (18)	1.129
27 5/16 5/16	5/16	M16x1	1.299 (33)	.669 (17)	.787 (20)	1.376
27 3/8 3/8	3/8	M18x1	1.456 (37)	.748 (19)	.866 (22)	1.870
27 1/2 1/2	1/2	M20x1	1.535 (39)	.787 (20)	.944 (24)	1.940

PN 28

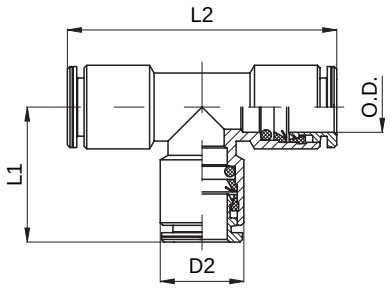
Union Elbow



Type	Tube OD	D_2	L_1	oz
28 1/8 1/8	1/8	.275 (7)	.590 (15)	0.159
28 5/32 5/32	5/32	.354 (9)	.669 (17)	0.335
28 1/4 1/4	1/4	.472 (12)	.787 (20)	0.547
28 5/16 5/16	5/16	.551 (14)	.846 (21.5)	0.829
28 3/8 3/8	3/8	.629 (16)	.964 (24.5)	
28 1/2 1/2	1/2	.748 (19)	1.0 (25.5)	1.570

PN 29

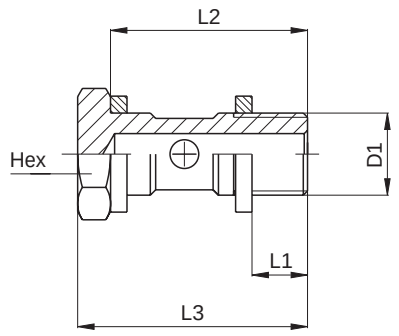
Union Tee



Type	Tube OD	D_2	L_1	L_2	oz
29 1/8 1/8	1/8	.275 (7)	.590 (15)	1.181 (30)	0.194
29 5/32 5/32	5/32	.354 (9)	.669 (17)	1.338 (34)	0.441
29 1/4 1/4	1/4	.472 (12)	.787 (20)	1.574 (40)	0.723
29 5/16 5/16	5/16	.551 (14)	.846 (21.5)	1.692 (43)	0.988
29 3/8 3/8	3/8	.629 (16)	.964 (24.5)	1.929 (49)	1.499
29 1/2 1/2	1/2	.748 (19)	1.0 (25.5)	2.00 (51)	2.081

PN 31

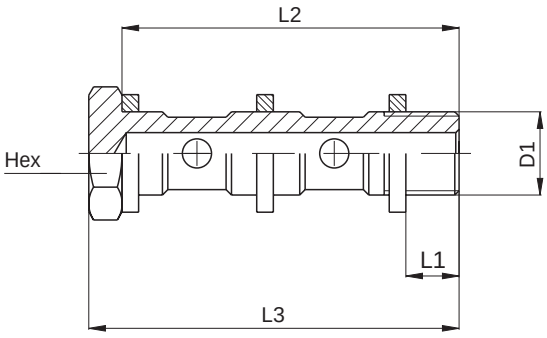
Simple Screw



Type	D_1 GAS CIL.	L_1	L_2	L_3	Hex	oz
31 00 18	1/8	.196 (5)	.905 (23)	1.062 (27)	.551 (14)	0.494
31 00 14	1/4	.255 (6.5)	1.043 (26.5)	1.240 (31.5)	.669 (17)	0.935
31 00 38	3/8	.275 (7)	1.181 (30)	1.417 (36)	.787 (20)	1.587

PN 32

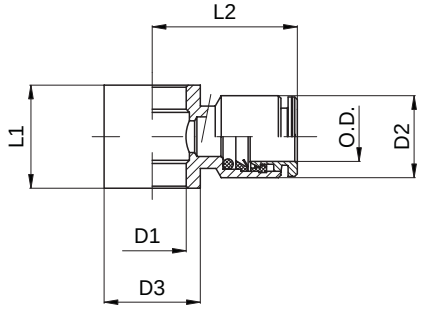
Double Screw



Type	D_1 GAS CIL.	L_1	L_2	L_3	Hex	oz
32 00 18	1/8	.196 (5)	1.555 (39,5)	1.673 (42,5)	.551 (14)	0.705
32 00 14	1/4	.255 (6.5)	1.771 (45)	1.968 (50)	.669 (17)	1.393
32 00 38	3/8	.275 (7)	2.027 (51.5)	2.263 (57.5)	.787 (20)	2.169

PN 35

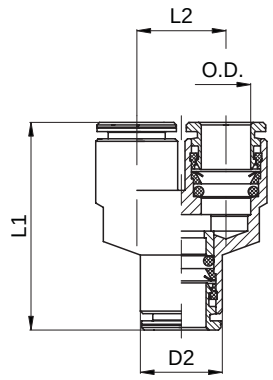
Banjo Ring



Type	Tube OD	D_1	D_2	D_3	L_1	L_2	oz
35 5/32 1/8	5/32	.393 (10)	.354 (9)	.551 (14)	.590 (15)	.787 (20)	
35 1/4 1/8	1/4	.393 (10)	.472 (12)	.551 (14)	.590 (15)	.885 (22.5)	
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)	
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)	

PN 37

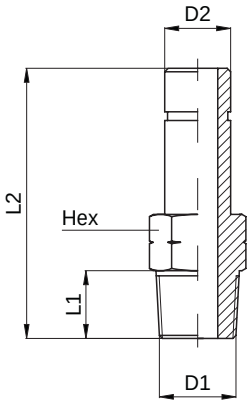
Union Y Connector



Type	Tube OD	D_2	L_1	L_2	oz
37 1/8 1/8	1/8	.275 (7)	.866 (22)	.275 (7)	0.670
37 5/32 5/32	5/32	.354 (9)	1.122 (28.5)	.374 (9.5)	0.476
37 1/4 1/4	1/4	.472 (12)	1.377 (35)	.492 (12.5)	1.076
37 5/16 5/16	5/16	.551 (14)	1.476 (37.5)	.570 (14.5)	1.482

PN 38

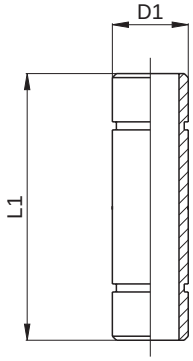
Stem adaptor



Type	D_1 UNF	D_2	L_1	L_2	Hex	oz
38 5/32 10-32	10-32	5/32	.196 (5)	.984 (25)	5/16 (7.93)	0.088
	D_1 NPTF					
38 5/32 1/8	1/8	5/32	.334 (8.5)	1.122 (28.5)	7/16 (11.11)	0.247
38 5/32 1/4	1/4	5/32	.511 (13)	1.318 (33.5)	9/16 (14.28)	0.494
38 1/4 1/8	1/8	1/4	.334 (8.5)	1.200 (30.5)	7/16 (11.11)	
38 1/4 1/4	1/4	1/4	.511 (13)	1.397 (35.5)	9/16 (14.28)	
38 5/16 1/8	1/8	5/16	.334 (8.5)	1.279 (32.5)	7/16 (11.11)	0.317
38 5/16 1/4	14	5/16	.511 (13)	1.476 (37.5)	9/16 (14.28)	0.547
38 3/8 1/4	1/4	3/8	.511 (13)	1.555 (39.5)	9/16 (14.28)	
38 3/8 3/8	3/8	3/8	.511 (13)	1.574 (40)	11/16 (17.46)	
38 1/2 3/8	3/8	1/2	.511 (13)	1.692 (43)	11/16 (17.46)	
38 1/2 1/2	1/2	1/2	.669 (17)	1.889 (48)	7/8 (22.22)	

PN 39

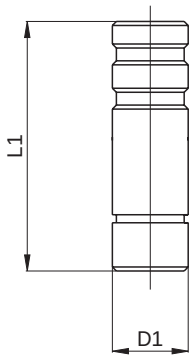
Extention Piece



Type	D_1	L_1	oz
39 5/32 5/32	5/32	1.181 (30)	0.099
39 1/4 1/4	1/4	1.377 (35)	
39 5/16 5/16	5/16	1.377 (35)	0.265
39 3/8 3/8	3/8	1.574 (40)	0.300
39 1/2 1/2	1/2	1.653 (42)	0.494

PN 40

Plug



Type	D_1	L_1	oz
40 1/8 00	1/8	.787 (20)	0.046
40 5/32 00	5/32	.984 (25)	0.088
40 1/4 00	1/4	1.181 (30)	0.229
40 5/16 00	5/16	1.181 (30)	0.441
40 3/8 00	3/8	1.377 (35)	0.723
40 1/2 00	1/2	1.496 (38)	1.482

NOTES

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 and chemical industries.

PX is standardly equipped with FPM seals that will assure endurance at the highest temperatures.

DATA SHEET

Recommended hoses: PVDF, PTFE.

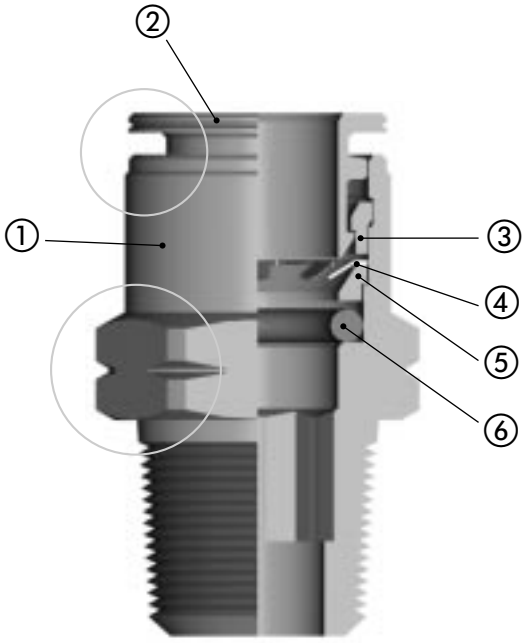
Acceptable Tubing Tolerances:

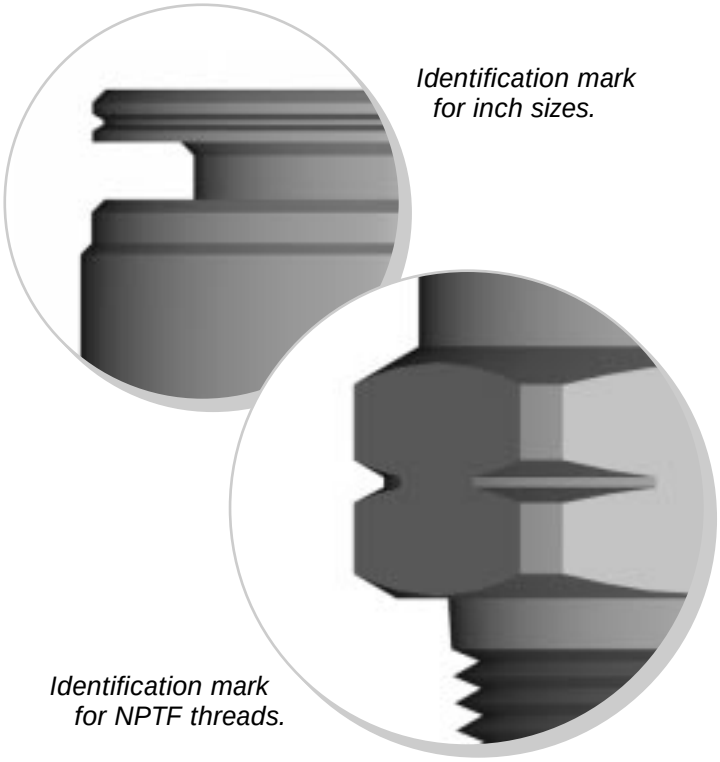
O.D. TUBE	O.D. TUBE TOLERANCES
1/8 to 3/16	+ .002 (+ 0.05 mm) - .003 (- 0.07 mm)
1/4 to 1/2	+ .002 (+ 0.05 mm) - .004 (- 0.1 mm)

Allowed pressure range: Pressure varies depending on the kind of tubing used and in any case it never has to exceed 217 P.S.I. In case of application with fluids, pls follow instructions below:

Constant Pressure: Max Pressure: 217 P.S.I.
Pulse Pressure: Max Pressure: 145 P.S.I.
Vacuum: up to 750 mmHg

Acceptable working temperature range: -4°F ÷ 302°F depending on the materials and the tube diameters used.





Identification mark for inch sizes.

Identification mark for NPTF threads.

① **BODY:** Stainless steel AISI 316L

② **RELEASE RING:** Stainless steel AISI 316L

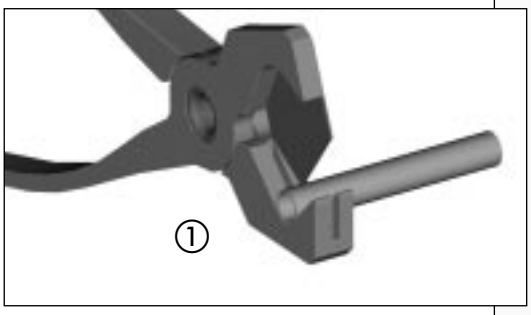
③ **TIGHTNESS RING:** Stainless steel AISI 316L

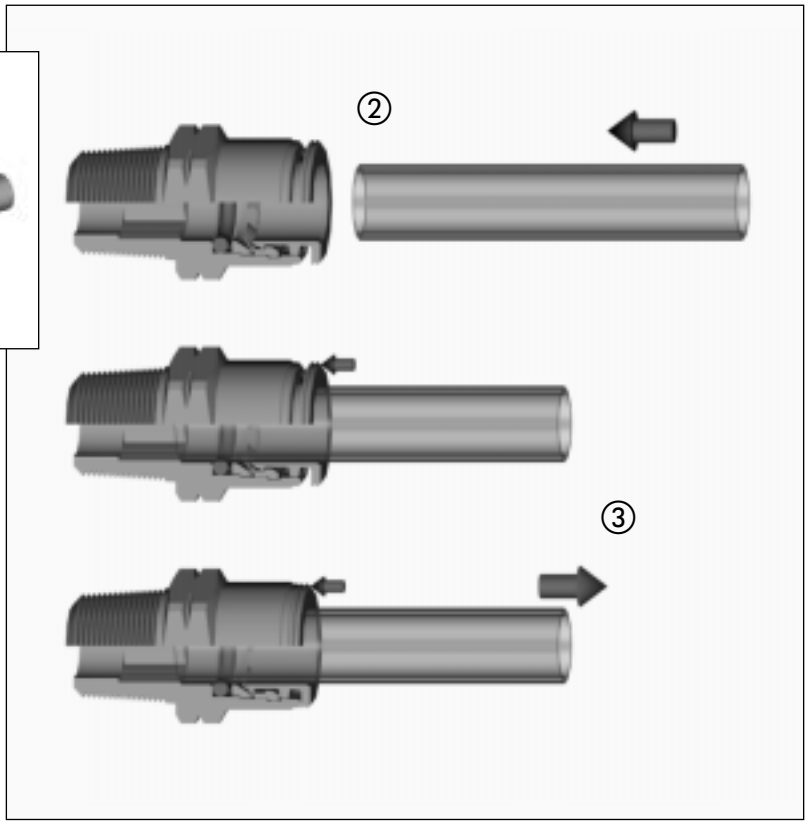
④ **GRIPPING COLLET:** Stainless steel AISI 301

⑤ **PROTECTION RING:** Stainless steel AISI 316L

⑥ **O-RING:** FPM/FKM

ASSEMBLY INSTRUCTIONS

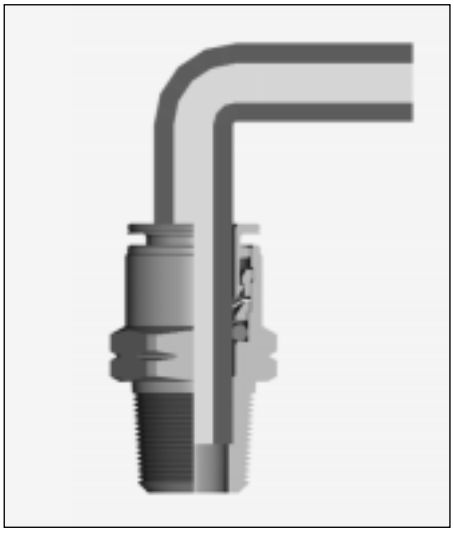




1. Cut the tube square (by means of a hose cutter i.e. our RA 034) making sure that no burrs are thereafter left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release

3. While pressing on the release ring, pull out the tube from the fitting.

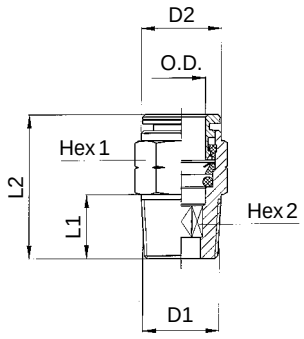


Our tapered male straight connector is provided with an inner hex allowing for easy assembly when no space is available.

NOTE

PX 11

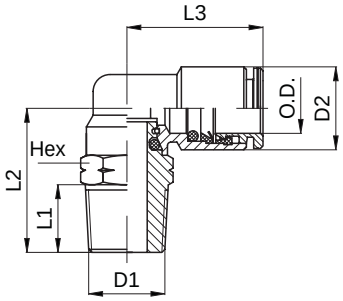
Male Connector



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	$Hex_{1(mm)}$	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)	.669 (17)	1.161 (29.5)	22	13/32 (10.31)	

PX 15

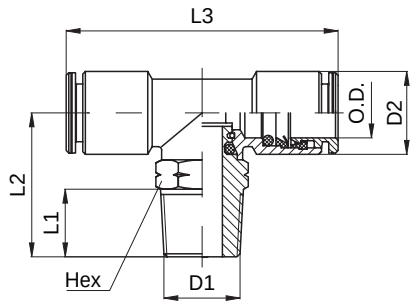
Swivel Male Elbow



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	$Hex_{(mm)}$	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

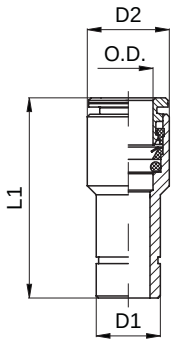
Swivel Male Tee



Type	Tube OD	D_1 NPTF	D_2	L_1	L_2	L_3	$Hex_{(mm)}$	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

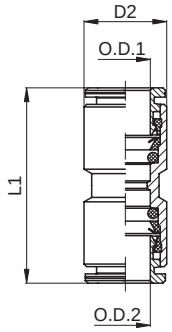
Reducer



Type	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

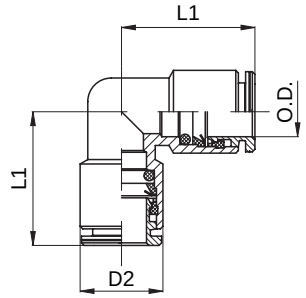
Union



Type	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

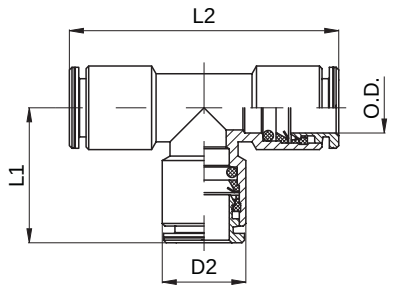
Union Elbow



Type	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



Type	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)	

NOTES

THE PA LINE

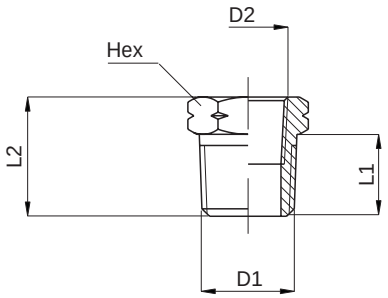
PA is our range of accessories, a complement line to the Push-in and the flow control fittings.

All components are brass nickel-plated.

DATA SHEET
Max working pressure: 870 p.s.i.
Application field: Pneumatic, hydraulic, oleodynamic and hydropneumatic installations.

PA 014

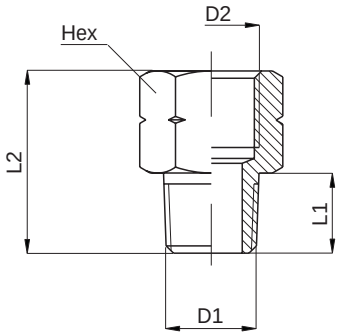
Taper female-male reducing connector



Type	D_1 NPTF	D_2 NPTF	L_1	L_2	Hex	oz
14 1/8 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)	
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)	
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 016

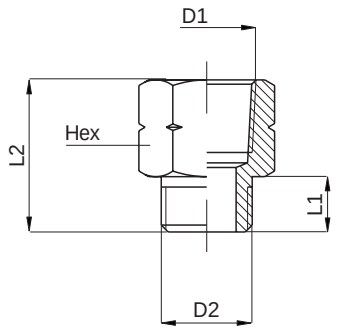
Adaptor male-female, taper



Type	D_1 NPTF	D_2 GAS CIL	L_1	L_2	Hex	oz
16 10-32 M5	10-32 UNF	M5	.196 (5)	.472 (12)	.315 (8)	
16 1/8 1/8	1/8	1/8	.334 (8,5)	.748 (19)	.708 (18)	
16 1/4 1/4	1/4	1/4	.511 (13)	1.063 (27)	.708 (18)	
16 3/8 3/8	3/8	3/8	.511 (13)	1.063 (27)	.866 (22)	
16 1/2 1/2	1/2	1/2	.669 (17)	1.338 (34)	1.063 (27)	

PA 017

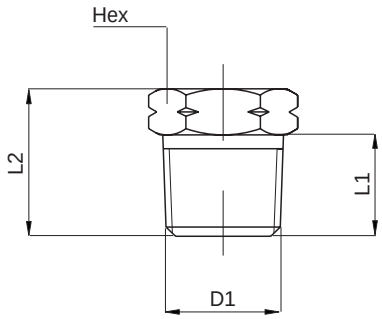
Adaptor male-female, parallel



Type	D_1 NPTF	D_2 GAS CIL	L_1	L_2	Hex	oz
17 1/8 1/8	1/8	1/8	.236 (6)	.708 (18)	.551 (14)	
17 1/4 1/4	1/4	1/4	.315 (8)	.944 (24)	.669 (17)	
17 3/8 3/8	3/8	3/8	.354 (9)	.984 (25)	.822 (22)	
17 1/2 1/2	1/2	1/2	.393 (10)	1.181 (30)	.944 (24)	

PA 019

Male plug



Type	D_1 NPTF	L_1	L_2	Hex	oz
19 00 1/8	1/8	.334 (8,5)	.492 (12,5)	.472 (12)	
19 00 1/4	1/4	.511 (13)	.708 (18)	.551 (14)	
19 00 3/8	3/8	.511 (13)	.708 (18)	.708 (18)	
19 00 1/2	1/2	.669 (17)	.905 (23)	.866 (22)	

PA 034

Hose Cutter

Type	Tube OD	L_1	oz
12	from 1/8 to 1/2	5.120 (130)	3.63 (12)
25	from 1/2 to 1	7.283 (185)	10.17 (13)

PA 037

Spare Blades

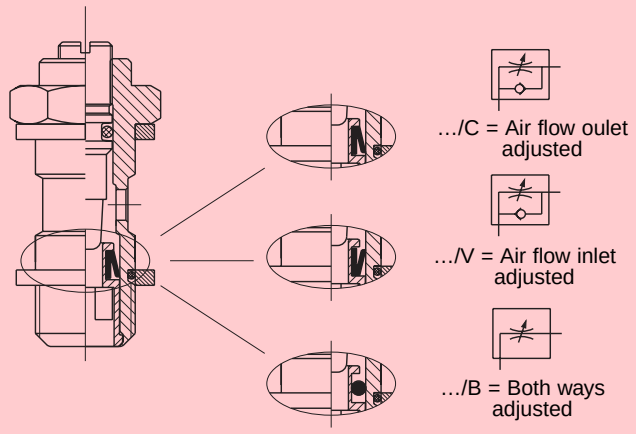
Type	Tube OD
12	from 1/8 to 1/2
25	from 1/2 to 1

THE PV LINE

*PV Line components can **adjust**, **check**, **exhaust** and **change** flow direction in an installation. We always recommend using them with filtered and oiled air to ensure maximum life.*

FLOW CONTROLS

Flow controls can adjust the air flow in a pneumatic circuit. Depending on the flow control used, the setting can be made both ways (Bidirectional Flow Control), or just one way (Unidirectional Flow Control). The Unidirectional Flow Control is used to adjust the speed of pneumatic cylinders (i.e. our C type if assembled directly on the cylinder port, and our V type if assembled in the valve port).



DATA SHEET

Working Pressure:
from 0 up to 145 p.s.i.

Nominal Pressure: 87 p.s.i.

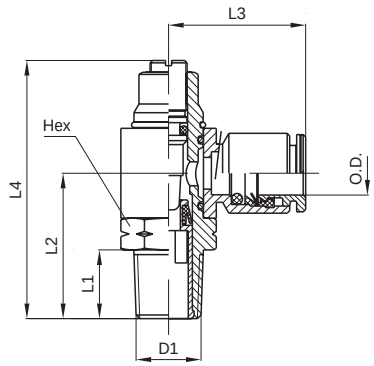
Working Temperature:
from 32 °F up to 158 °F

Recommended tubing: according to the fitting connected to the flow control.

Application Field: Pneumatic installation fed with filtered, lubricated air.

PV 18

Flow control with swivel push-in fitting



Type	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)	
		NPTF						
18 5/32 1/8	5/32	1/8	.334 (8.5)	.866 (22)	.787 (20)	1.692 (43)	9/16 (14.28)	
18 1/4 1/8	1/4	1/8	.334 (8.5)	.866 (22)	.866 (22)	1.692 (43)	9/16 (14.28)	
18 1/4 1/4	1/4	1/4	.511 (13)	1.063 (27)	.944 (24)	2.007 (51)	11/16 (17.46)	
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)	
18 3/8 1/4	3/8	1/4	.511 (13)	1.063 (27)	1.023 (26)	2.007 (51)	11/16 (17.46)	

Available as:

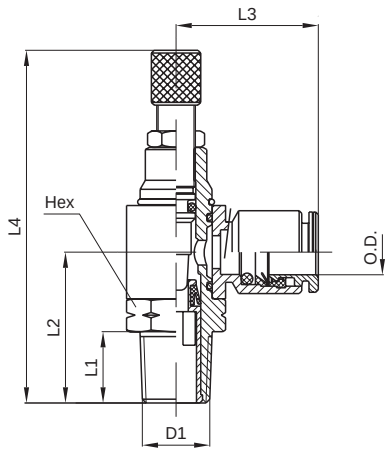
…/C = Air flow oulet adjusted

…/V = Air flow inlet adjusted

…/B = Both ways adjusted

PV 41

Flow control with swivel push-in fitting and handwheel adjustement



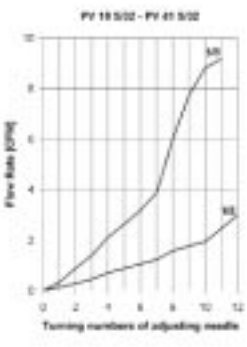
Type	Tube OD	D1 UNF	L1	L2	L3	L4	Hex	oz
41 5/32 10-32	5/32	10-32	.196 (5)	.590 (15)	.708 (18)	1.692 (43)	3/8 (9,52)	
		NPTF						
41 5/32 1/8	5/32	1/8	.334 (8.5)	.866 (22)	.787 (20)	2.126 (54)	9/16 (14.28)	
41 1/4 1/8	1/4	1/8	.334 (8.5)	.866 (22)	.866 (22)	2.126 (54)	9/16 (14.28)	
41 1/4 1/4	1/4	1/4	.511 (13)	1.063 (27)	.944 (24)	2.519 (64)	11/16 (17.46)	
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)	
41 3/8 1/4	3/8	1/4	.511 (13)	1.063 (27)	1.023 (26)	2.519 (64)	11/16 (17.46)	

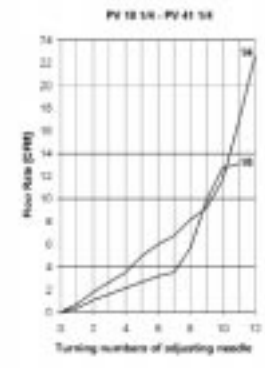
Available as:

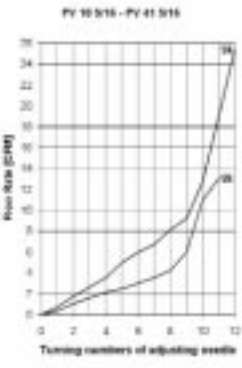
…/C = Air flow oulet adjusted

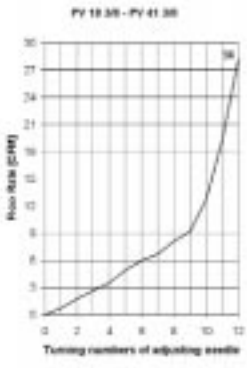
…/V = Air flow inlet adjusted

…/B = Both ways adjusted





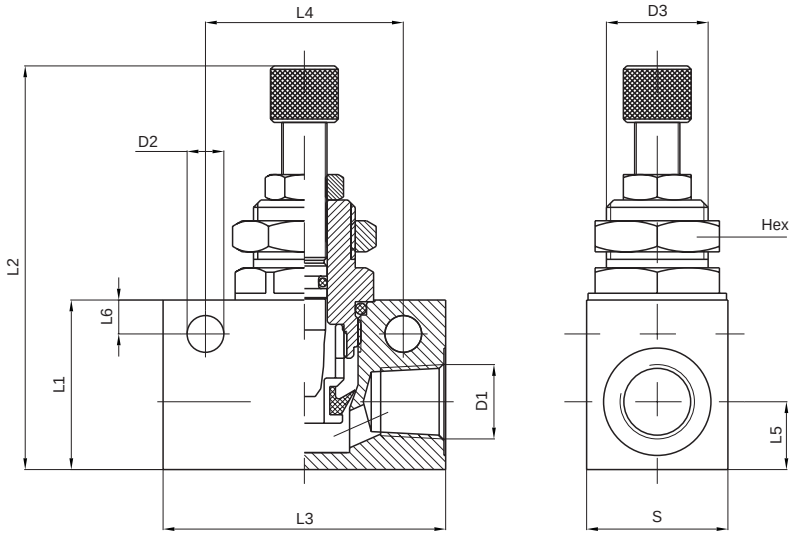




PV 21

Line Flow Control

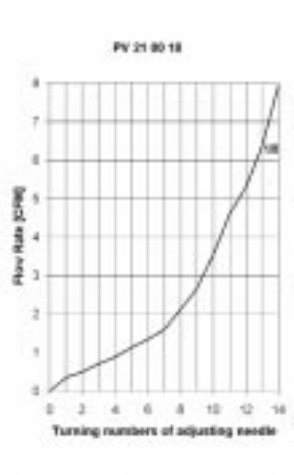
Type	D_1 NPTF	D_2	D_3	L_1	L_2	L_3	L_4	L_5	S	Hex	oz
21 00 18	1/8	.177 (4.5)	.472 (12)	.826 (21)	2.204 (56)	1.338 (34)	.944 (24)	.315 (8)	.629 (16)	.590 (15)	
21 00 14	1/4	.255 (6,5)	.708 (18)	1.181 (30)	2.952 (75)	1.968 (50)	1.378 (35)	.472 (12)	.984 (25)	.866 (22)	
21 00 38	3/8	.255 (6,5)	.708 (18)	1.181 (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)	

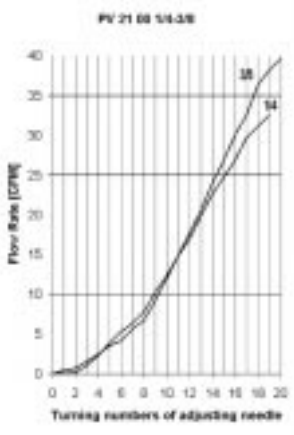


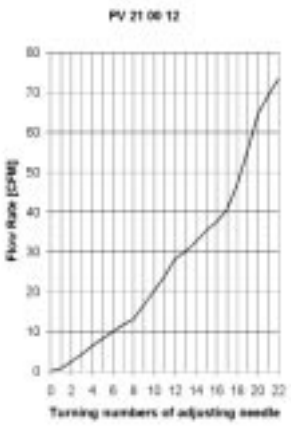
Available as:

…/U = One Way

…/B = Both ways adjusted







NON RETURN VALVE

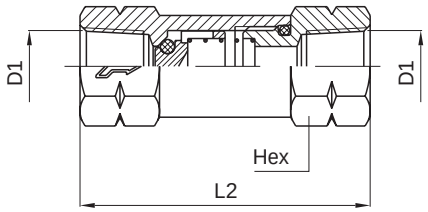
The flow is allowed only in one direction (the arrow direction engraved on the body) and checked in the reverse way.

DATA SHEET

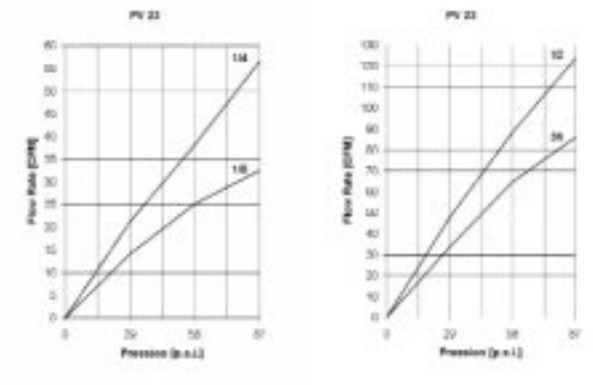
Working Pressure: from 29 p.s.i. up to 145 p.s.i.
Opening Pressure: 2.9 p.s.i.
Working Temperature: from 14 °F up to 158 °F
Recommended Tubing: according to the fitting connected to the valve.
Application Field: Pneumatic Installation fed with filtered, lubricated air.

PV 23

Non-return valve



Type	D_1 NPTF	L_1	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)	



SLIDE VALVE

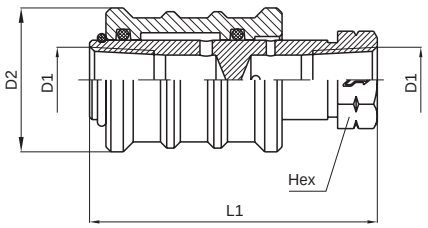
The valve is used to section a pneumatic installation. Sliding the ring nut on the rod, both ON and OFF positions can be achieved. When the ring nut is against the rod hexagon, the flow goes in the arrow direction (ON); pushing it back the air supply is cut off and the installation flow is exhausted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

DATA SHEET

Working Pressure: from 0 p.s.i. up to 145 p.s.i.
Working Temperature: from 32 °F up to 158 °F
Recommended hoses: according to the fitting connected to the valve.
Application Field: Pneumatic installation fed with filtered, lubricated air.

PV 26

Slide valve



Type	D_1 NPTF	D_2	L_1	Hex	oz
26 1/8 1/8	1/8	.984 (25)	1.889 (48)	.551 (14)	
26 1/4 1/4	1/4	1.181 (30)	2.283 (58)	.669 (17)	
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

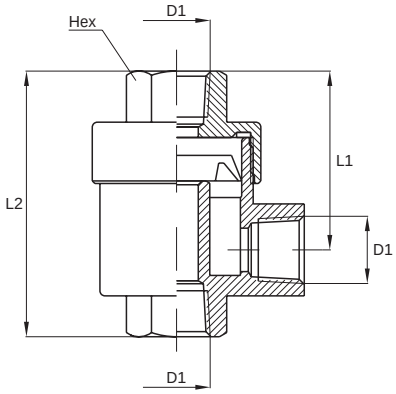
This valve can easily vent the air flowing in the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

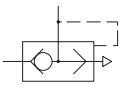
DATA SHEET

Working Pressure: from 29 p.s.i. up to 145 p.s.i.
Working Temperature: from 14 °F up to 158 °F
Recommended hoses: according to the fitting connected to the valve.
Application Field: Pneumatic installation fed with filtered, lubricated air.

PV 27

Quick Exhaust valve





Type	D_1 NPTF	L_1	L_2	Hex	oz
27 1/8 1/8	1/8	1.062 (27)	1.653 (42)	.590 (15)	3.351
27 1/4 1/4	1/4	1.377 (35)	2.125 (54)	.748 (19)	5.573
27 3/8 3/8	3/8	1.377 (35)	2.165 (55)	.826 (21)	5.644
27 1/2 1/2	1/2	1.771 (45)	2.834 (72)	1.023 (26)	11.464

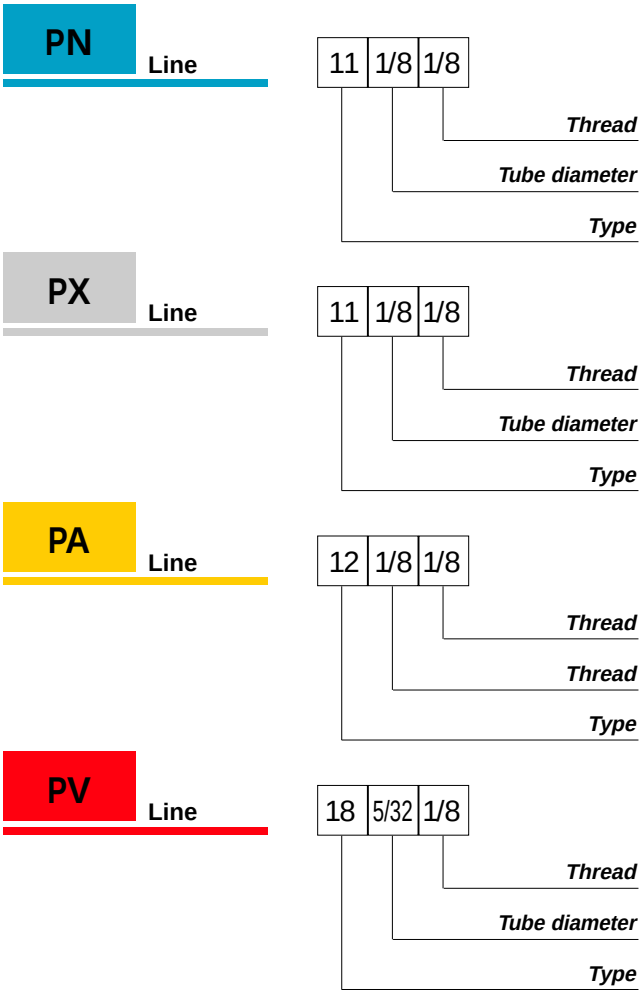
USEFUL ADVICE FOR ORDERING

With a view to improving our quality and services offered, we wish to handle the incoming orders in the best possible way. In order to assist us, we would ask all our valued customers to follow the procedures laid out below, when preparing and passing orders to us.

All orders should therefore be in writing, by mail, e-mail or by fax. In urgent cases only, verbal orders can be taken, providing they are confirmed by fax. They should state correct reference numbers, the exact quantity required and the diameter sizes. The min. order quantity can not be smaller than the min. unit per bag.

When specials are ordered, we suggest that You send us a copy of a drawing or a sketch, stating the special requirement. Should C.Matic ever consider it necessary, we reserve the right to amend without notice any size or technical information, contained in this catalogue.
Our technical department and technicians will be very happy to answer any question You may have.

ORDER EXAMPLE



GENERAL CONDITIONS OF SALE

The following General Conditions shall apply to Sale Transactions between the Seller and the Buyer, unless differently stated. The following General Conditions represent the sole and complete agreement between the Seller and the Buyer and, therefore, modifications of or deviation from them must be agreed in writing. Wherever these General Conditions use the term "in writing", this shall mean by document signed by the parties or by letter, fax or e-mail.

1. ORDERS AND ORDERS CONFIRMATION

1.1 Any order from the Buyer shall be in writing and shall be binding for the Seller, only when accepted in writing by the Seller with the Order Confirmation. Verbal or telephoned orders and any oral modification of orders must be confirmed in writing by the Buyer within 2 days from the transmission of the order.

2. LITERATURE

2.1 Catalogues or other advertising materials are only an indication of the type of products. Any information therein should be considered as a recommendation only and not a guarantee.

2.2 All designs, dimensions and performances of C.MATIC products as described in the Company's catalogues may be subject to modifications and/or improvements due to C.MATIC policy of upgrading products on an ongoing basis.

GENERAL CONDITIONS OF SALE

3. DELIVERY AND TRANSFER OF RISKS

3.1 The time of the delivery stated in our Order Confirmation is not to be considered as binding.

3.2 The Seller shall, however, to the best of his ability, observe the time of delivery indicated in the Order Confirmation. If the Seller expects that He will be unable to deliver the products at the date indicated in the Order Confirmation, He must inform the Buyer in writing within the shortest delay stating, as far as possible, the estimated date of delivery. However, the delays shall not entitle the Buyer to claim compensation for damages, to delay payments or to cancel orders.

3.3 In particular, any delay caused by force majeure or by acts or omissions of the Buyer shall not be considered as a delay for which the Seller is responsible.

3.4 Unless otherwise stated by the parties, the delivery of the products shall be EX WORKS (***ICC Incoterms 2000 EXW***). In this case the Seller will have fulfilled his obligations to deliver when he shall have made the goods available at the premises to the Buyer. In particular, he is not responsible for loading the goods on the vehicle provided by the Buyer or for clearing the goods for export, unless otherwise agreed. The Buyer bears all costs and risks involved in taking the goods from the Seller's premises to the chosen destination, included the insurance costs.

4. PACKAGING

4.1 C.MATIC's components are packed in cardboard boxes, suitable for transit and free of cost. No other alternative package is available. Special packaging requests must be agreed with C.MATIC in writing.

5. DESPATCH EXACTNESS

5.1 If Seller is responsible for any mistake in interpretation of orders and packaging, it shall undertake to correct His mistakes as soon as possible.

5.2 Seller is not supposed to accept back components ordered by mistake by the customers and only when agreed, credit will be raised to correspond to 60% off the price paid by the customer.

6. PAYMENT

6.1 All amounts owed by the Buyer should be settled on the stated invoice expiration day. If no payment is received by the invoice expiration date, interest charges are automatically applied. The interest rate is based on the European Central Bank interest rate, valid at the time, and increased by 7%.

6.2 Seller reserves the right to stop any order or consignment if the payment of the Products is delayed by the Buyer. These conditions are to be understood valid to all intents and purposes, if no agreement is entered into between the Seller and the Buyer.

7. COSTS

7.1 Any and all taxes, levies, testing costs [*at the entrance*], transportation costs of the products from the Seller's warehouse to destination, currency fluctuation and in general any and all present and/or future costs in connection with the contract are to be borne by the Buyer.

8. COMPLAINTS

8.1 The Buyer shall inform the Seller of any complaints related to packing, quantity, number or exterior features of the Products, in writing, within 10 days from receipt of the Products. Failing such notification the Buyer's right to claim the above defects shall be forfeited.

8.2 Complaints regarding hidden defects which cannot be discovered on the basis of a careful inspection upon receipt of the Products, shall be notified in writing to the Seller, within 10 working days from the discovery of the defects. Failing such notification the Buyer's right to claim the above defects shall be forfeited.

8.3 In case the Buyer will timely make its complaints, the Seller may alternatively (i) repair or (ii) substitute the defective products. On receipt of the complaint, C.MATIC reserve the right to request samples for evaluation.

8.4 Pending a complaint, the Buyer will have no right to suspend or delay the payments of the defective Products, nor of different supplies. Any right of termination of the agreement by the Buyer is also excluded.

9. WARRANTY – LIMITATION OF LIABILITY

9.1 The Seller represents and warrants to the Buyer that the Products shall meet the Product specification for a period of 12 months from the date of the delivery to the Buyer.

9.2 The Buyer will loose his right to enforce the warranty if he does not notify to the Seller the defects of the products within the terms indicated in article 8.

9.3 The warranty is excluded in case of (i) use of the products inconsistent with their technical specifications, (ii) damages caused to the products for reasons not attributable to the Seller.

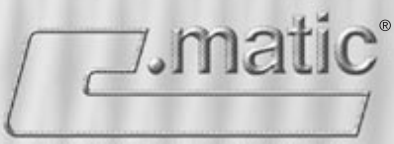
9.4 In case the Buyer incurs in a loss or damage due to defective products, except in case of fraud or gross negligence of the Seller, the Seller's liability and, consequently, the compensation of the due damages shall not exceed the value of the defective products.

9.5 For any loss or damage suffered by the Buyer for (but not limited to) lack of fulfillment of his obligations, penalties for delayed deliveries to customers, and for any other damage, penalty or reimbursement due in connection with the commercial relationship between the Buyer and His customers, the liability of the Seller shall be limited to the value of the defective products.

10. GOVERNING LAW AND JURISDICTION

10.1 These General Conditions shall be governed by the Laws of Italy, excluding the application of the Vienna Convention on the International Sales of Goods.

10.2 All disputes arising out of the present contract, including those concerning its validity, interpretation, performance and termination, shall be referred to an arbitrator, according to the International Arbitration rules of the Chamber of National and International Arbitration of Milan which the parties declare to accept in their entirety. The seat of the arbitration shall be Milan. The language of the arbitration shall be English.



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