

## PT LINE

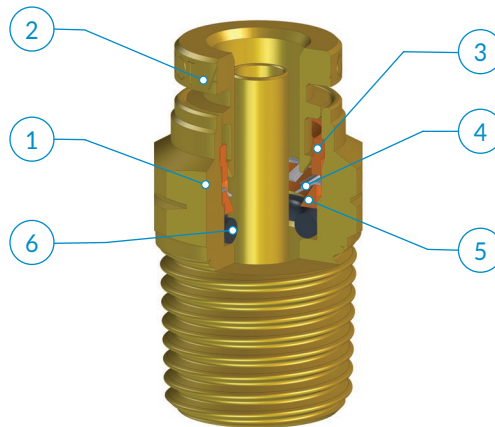
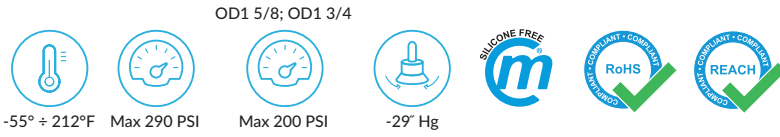
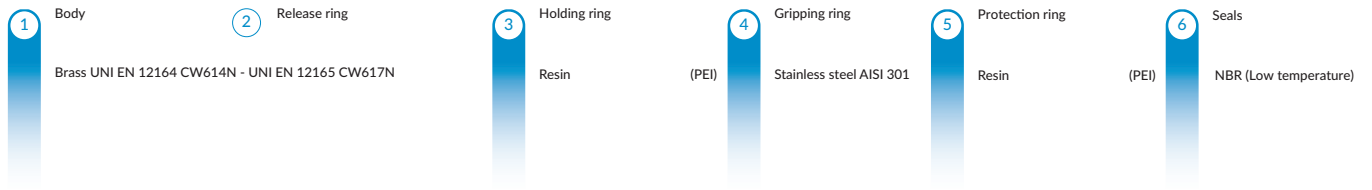


### DOT Push-in Fittings, Inch/NPTF

Push in fittings for Vehicles applications complying with SAE J2494-4 and SAE J1131 specs.

Cmatic PT Line is designed for use on all pneumatic circuits and assemblies except between the frame and axle, or between a towed and towing vehicle. PT also complies with DOT FMVSS \$517.106 standard.

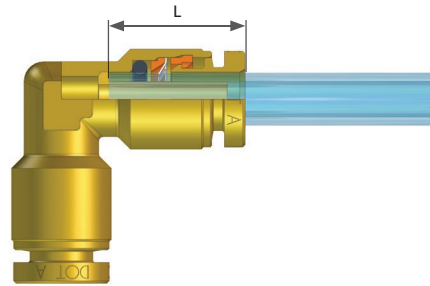
# PT Line



	1/8 NPTF	1/4 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF
5/32	●	●			
1/4	●	●	●		
3/8	●	●	●	●	
1/2		●	●	●	
5/8			●	●	●
3/4			●	●	●

**Recommended tubings:**  
PA Tubings complying with SAE (DOT).

**Application fields:**  
Application Fields: Pneumatic circuits for truck and Trailers: Air Suspension, Braking Systems, Transmissions, locking doors and windows, Seat adjustment, Instrumentation, Air conditioning systems, horn, wiper motors, valves, cylinders and accessories.  
PT line is suitable for all air assisted applications except those designed for use between frame and axle or between towed and towing vehicles.



OD	L
5/32	.547
1/4	.641
3/8	.720
1/2	.775
5/8	.917
3/4	.988

**i** ASSEMBLY INSTRUCTIONS

**1**

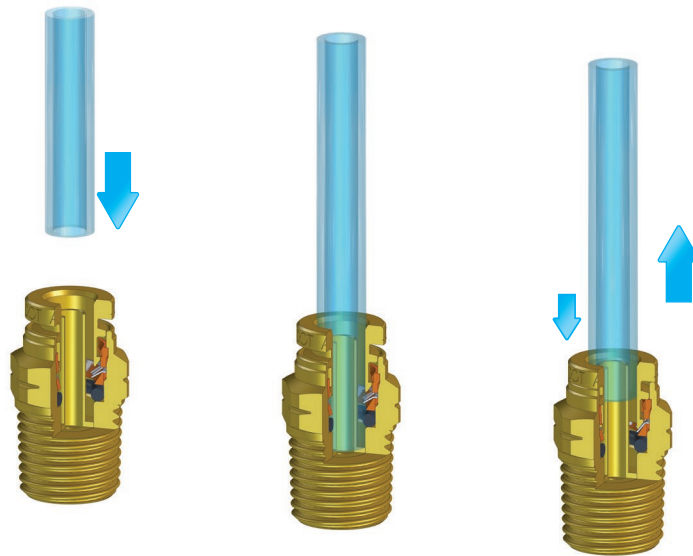
Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.

**2**

Insert the tube into the fitting until it bottoms.

**Tube release**

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



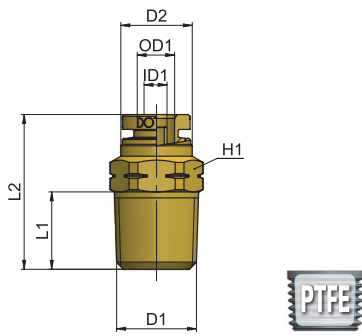
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 136).

To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.

To tighten threads, please check out our tightening torque chart illustrated at page 6.

## PT 11

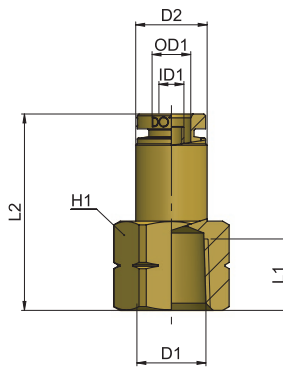
Taper straight, male



Type	OD1	ID1	D1	D2	L1	L2	H1	oz $\Delta$
11 5/32 1/8	5/32	.087	1/8 NPTF	.374	.335	.827	7/16	.347
11 5/32 1/4	5/32	.087	1/4 NPTF	.374	.512	1.004	9/16	.745
11 1/4 1/8	1/4	.165	1/8 NPTF	.472	.335	.925	1/2	.415
11 1/4 1/4	1/4	.165	1/4 NPTF	.472	.512	1.024	9/16	.700
11 1/4 3/8	1/4	.165	3/8 NPTF	.472	.512	1.063	11/16	1.179
11 3/8 1/8	3/8	.244	1/8 NPTF	.630	.335	1.161	11/16	.847
11 3/8 1/4	3/8	.244	1/4 NPTF	.630	.512	1.299	11/16	1.076
11 3/8 3/8	3/8	.244	3/8 NPTF	.630	.512	1.043	11/16	1.003
11 3/8 1/2	3/8	.244	1/2 NPTF	.630	.669	1.240	7/8	2.128
11 1/2 1/4	1/2	.362	1/4 NPTF	.787	.512	1.406	13/16	1.424
11 1/2 3/8	1/2	.362	3/8 NPTF	.787	.512	1.209	13/16	1.229
11 1/2 1/2	1/2	.362	1/2 NPTF	.787	.669	1.248	7/8	1.794
11 5/8 3/8	5/8	.433	3/8 NPTF	.925	.512	1.555	1	2.417
11 5/8 1/2	5/8	.433	1/2 NPTF	.925	.669	1.496	1	2.223
11 3/4 3/8	3/4	.559	3/8 NPTF	1.043	.512	1.713	1 1/16	2.577
11 3/4 1/2	3/4	.559	1/2 NPTF	1.043	.669	1.791	1 1/16	3.029
11 3/4 3/4	3/4	.559	3/4 NPTF	1.043	.669	1.535	1 1/16	3.112

## PT 13

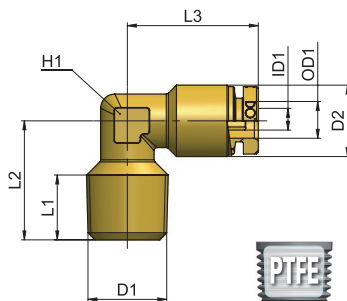
Female straight



Type	OD1	ID1	D1	D2	L1	L2	H1	oz $\Delta$
13 5/32 1/8	5/32	.087	1/8 NPTF	.374	.335	1.043	1/2	.425
13 1/4 1/8	1/4	.165	1/8 NPTF	.472	.335	1.122	1/2	.565
13 1/4 1/4	1/4	.165	1/4 NPTF	.472	.472	1.299	11/16	1.006
13 3/8 1/4	3/8	.165	1/4 NPTF	.630	.472	1.378	11/16	.775
13 3/8 3/8	3/8	.244	3/8 NPTF	.630	.492	1.378	13/16	1.422
13 3/8 1/2	3/8	.244	1/2 NPTF	.630	.531	1.516	1	2.191
13 1/2 1/4	1/2	.362	1/4 NPTF	.787	.472	1.386	13/16	1.998
13 1/2 3/8	1/2	.362	3/8 NPTF	.787	.492	1.445	13/16	1.826
13 1/2 1/2	1/2	.362	1/2 NPTF	.787	.531	1.543	1	2.435

## PT 14

Taper elbow fitting, male



Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz $\Delta$
14 5/32 1/8	5/32	.087	1/8 NPTF	.374	.331	.630	.748	10	.425
14 1/4 1/8	1/4	.165	1/8 NPTF	.472	.331	.630	.866	10	.517
14 1/4 1/4	1/4	.165	1/4 NPTF	.472	.433	.787	.866	10	.658
14 3/8 1/4	3/8	.244	1/4 NPTF	.630	.472	.886	1.024	14	1.147
14 3/8 3/8	3/8	.244	3/8 NPTF	.630	.433	.886	1.024	14	1.259

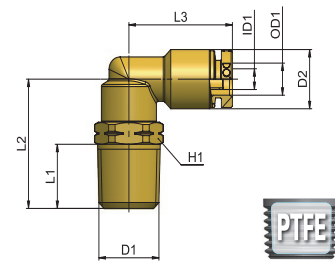
COMING SOON

- 14 5/8 3/8
- 14 5/8 1/2
- 14 3/8 1/2
- 14 1/2 1/4
- 14 1/2 1/2
- 14 1/2 3/8

**PT 15**

Taper swivelling elbow fitting, male

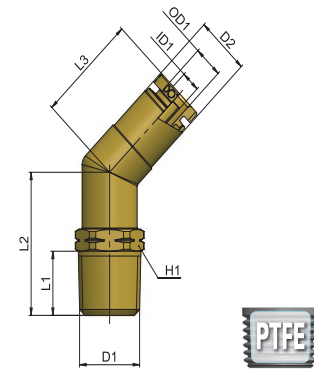
Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz $\Delta$
15 5/32 1/8	5/32	.087	1/8 NPTF	.354	.335	.728	.748	7/16	.653
15 5/32 1/4	5/32	.087	1/4 NPTF	.354	.512	1.031	.827	9/16	.854
15 1/4 1/8	1/4	.165	1/8 NPTF	.472	.335	.835	.925	1/2	.741
15 1/4 1/4	1/4	.165	1/4 NPTF	.472	.512	1.031	.925	9/16	.918
15 1/4 3/8	1/4	.165	3/8 NPTF	.472	.512	1.051	.925	11/16	1.142
15 3/8 1/8	3/8	.244	1/8 NPTF	.630	.335	.945	1.063	11/16	1.462
15 3/8 1/4	3/8	.244	1/4 NPTF	.630	.512	1.122	1.063	11/16	1.562
15 3/8 3/8	3/8	.244	3/8 NPTF	.630	.512	1.122	1.063	11/16	1.614
15 3/8 1/2	3/8	.244	1/2 NPTF	.630	.669	1.339	1.063	7/8	2.257
15 1/2 1/4	1/2	.362	1/4 NPTF	.787	.512	1.260	1.169	13/16	2.593
15 1/2 3/8	1/2	.362	3/8 NPTF	.787	.512	1.260	1.169	13/16	2.410
15 1/2 1/2	1/2	.362	1/2 NPTF	.787	.669	1.437	1.169	7/8	2.880
15 5/8 3/8	5/8	.433	3/8 NPTF	.945	.512	1.398	1.417	7/8	3.626
15 5/8 1/2	5/8	.433	1/2 NPTF	.945	.669	1.555	1.417	7/8	3.824
15 5/8 3/4	5/8	.433	3/4 NPTF	.945	.669	1.555	1.417	1 1/16	4.406
15 3/4 3/8	3/4	.559	3/8 NPTF	1.063	.512	1.398	1.496	7/8	4.384
15 3/4 1/2	3/4	.559	1/2 NPTF	1.063	.669	1.555	1.496	7/8	4.585
15 3/4 3/4	3/4	.559	3/4 NPTF	1.063	.669	1.555	1.496	1 1/16	5.181



**PT 15-45**

Swivelling elbow fitting, male 45°

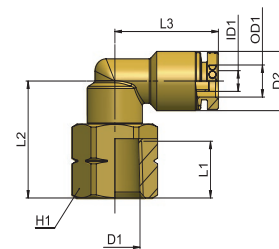
Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz $\Delta$
15 1/4 1/8 45°	1/4	.165	1/8 NPTF	.472	.335	.906	.886	1/2	.943
15 1/4 1/4 45°	1/4	.165	1/4 NPTF	.472	.512	1.102	.886	9/16	1.132
15 3/8 1/4 45°	3/8	.244	1/4 NPTF	.630	.512	1.142	1.024	11/16	1.881
15 3/8 3/8 45°	3/8	.244	3/8 NPTF	.630	.512	1.161	1.024	11/16	1.869
15 3/8 1/2 45°	3/8	.244	1/2 NPTF	.630	.669	1.378	1.024	7/8	2.545
15 1/2 3/8 45°	1/2	.362	3/8 NPTF	.787	.512	1.260	1.130	13/16	2.749
15 1/2 1/2 45°	1/2	.362	1/2 NPTF	.787	.669	1.437	1.130	7/8	3.202



**PT 17**

Swivelling elbow fitting, female

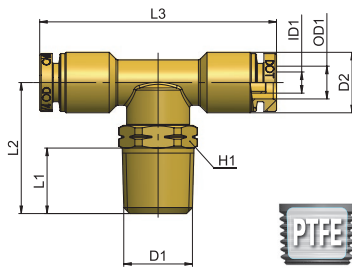
Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz $\Delta$
17 5/32 1/8	5/32	.087	1/8 NPTF	.354	.295	.776	.748	9/16	.795
17 5/32 1/4	5/32	.087	1/4 NPTF	.354	.453	.933	.827	11/16	1.112
17 1/4 1/8	1/4	.165	1/8 NPTF	.472	.295	.776	.925	9/16	.882
17 1/4 1/4	1/4	.165	1/4 NPTF	.472	.453	.933	.925	11/16	1.202
17 3/8 1/4	3/8	.244	1/4 NPTF	.630	.453	1.004	1.063	11/16	1.673
17 3/8 3/8	3/8	.244	3/8 NPTF	.630	.453	1.004	1.063	13/16	1.804
17 1/2 3/8	1/2	.362	3/8 NPTF	.787	.453	1.102	1.169	13/16	2.437
17 1/2 1/2	1/2	.362	1/2 NPTF	.787	.531	1.220	1.169	1	3.113



- CO 67
- MA 31
- MM 115
- PA 49
- PE 45
- PM 111
- PN 19
- PT 121
- PU 55
- PU Safety 59
- PUX 101
- PV 81
- PVX 105
- PX 95
- Tool 129
- Tubings 135

## PT 20

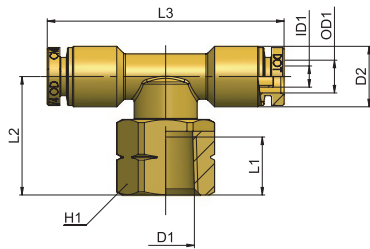
Swivelling T fitting, taper



Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz
20 5/32 1/8	5/32	.087	1/8 NPTF	.354	.335	.835	1.654	1/2	.836
20 5/32 1/4	5/32	.087	1/4 NPTF	.354	.512	1.031	1.654	9/16	1.025
20 1/4 1/8	1/4	.165	1/8 NPTF	.472	.335	.835	1.850	1/2	1.015
20 1/4 1/4	1/4	.165	1/4 NPTF	.472	.512	1.031	1.850	9/16	1.185
20 1/4 3/8	1/4	.165	3/8 NPTF	.472	.512	1.051	1.850	11/16	1.420
20 3/8 1/8	3/8	.244	1/8 NPTF	.630	.335	.945	2.126	11/16	2.024
20 3/8 1/4	3/8	.244	1/4 NPTF	.630	.512	1.122	2.126	11/16	2.111
20 3/8 3/8	3/8	.244	3/8 NPTF	.630	.512	1.122	2.126	11/16	2.159
20 3/8 1/2	3/8	.244	1/2 NPTF	.630	.669	1.339	2.126	7/8	2.159
20 1/2 1/4	1/2	.362	1/4 NPTF	.787	.512	1.260	2.339	13/16	3.372
20 1/2 3/8	1/2	.362	3/8 NPTF	.787	.512	1.260	2.339	13/16	3.184
20 1/2 1/2	1/2	.362	1/2 NPTF	.787	.669	1.437	2.339	7/8	3.635

## PT 20-F

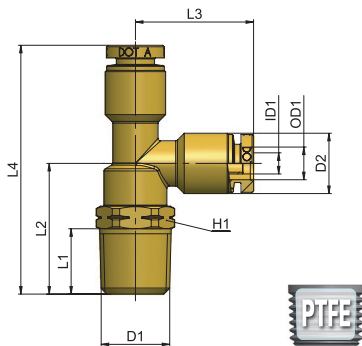
Swivelling T fitting, female



Type	OD1	ID1	D1	D2	L1	L2	L3	H1	oz
20 1/4 1/4 F	1/4	.165	1/4 NPTF	.472	.453	.933	1.850	11/16	1.475
20 3/8 1/4 F	3/8	.244	1/4 NPTF	.630	.453	1.004	2.126	11/16	2.218
20 3/8 3/8 F	3/8	.244	3/8 NPTF	.630	.453	1.004	2.126	13/16	2.352
20 1/2 3/8 F	1/2	.362	3/8 NPTF	.787	.453	1.102	2.339	13/16	3.240
20 1/2 1/2 F	1/2	.362	1/2 NPTF	.787	.531	1.220	2.339	1	3.899

## PT 23

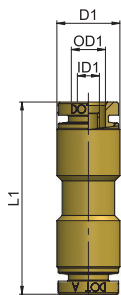
Lateral run T fitting, taper



Type	OD1	ID1	D1	D2	L1	L2	L3	L4	H1	oz
23 5/32 1/8	5/32	.087	1/8 NPTF	.354	.335	.835	.827	1.654	1/2	.851
23 5/32 1/4	5/32	.087	1/4 NPTF	.354	.512	1.031	.827	1.850	9/16	1.041
23 1/4 1/8	1/4	.165	1/8 NPTF	.472	.335	.835	.925	1.752	1/2	1.027
23 1/4 1/4	1/4	.165	1/4 NPTF	.472	.512	1.031	.925	1.949	9/16	1.192
23 1/4 3/8	1/4	.165	3/8 NPTF	.472	.512	1.051	.925	1.969	11/16	1.434
23 3/8 1/4	3/8	.244	1/4 NPTF	.630	.512	1.122	1.063	2.185	11/16	1.923
23 3/8 3/8	3/8	.244	3/8 NPTF	.630	.512	1.122	1.063	2.185	11/16	2.152
23 3/8 1/2	3/8	.244	1/2 NPTF	.630	.669	1.339	1.063	2.402	7/8	2.841
23 1/2 1/4	1/2	.362	1/4 NPTF	.787	.512	1.260	1.169	2.429	13/16	3.366
23 1/2 3/8	1/2	.362	3/8 NPTF	.787	.512	1.260	1.169	2.429	13/16	3.215
23 1/2 1/2	1/2	.362	1/2 NPTF	.787	.669	1.437	1.169	2.606	7/8	3.651

## PT 26


Union

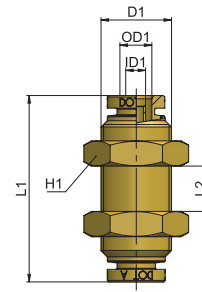


Type	OD1	ID1	D1	L1	oz
26 5/32 5/32	5/32	.087	.354	1.220	.299
26 1/4 1/4	1/4	.165	.472	1.323	.561
26 3/8 3/8	3/8	.244	.630	1.520	1.112
26 1/2 1/2	1/2	.362	.787	1.709	3.215
26 5/8 5/8	5/8	.433	.945	2.047	2.731
26 3/4 3/4	3/4	.559	1.102	2.244	3.562

PT 27


Bulkhead union

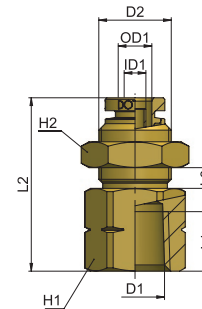
Type	OD1	ID1	D1	L1	L2	H1	oz 
27 5/32 5/32	5/32	.087	M12x1	1.220	.571	18	.882
27 1/4 1/4	1/4	.165	M14x1	1.457	.571	18	1.217
27 3/8 3/8	3/8	.244	M18x1	1.614	.689	22	2.120
27 1/2 1/2	1/2	.362	M22x1,5	1.709	.728	26	2.970
27 5/8 5/8	5/8	.433	M26x1,5	2.047	.866	32	5.344



PT 27-F


Bulkhead union female

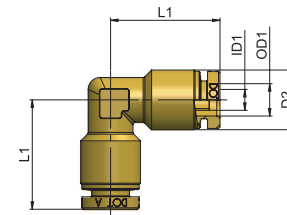
Type	OD1	ID1	D1	D2	L1	L2	L3	H1	H2	oz 
27 5/32 1/4 F 5/32	.087	1/4 NPTF	M12x1	.453	1.220	.276	11/16	16	1.135	
27 1/4 1/8 F 1/4	.165	1/8 NPTF	M14x1	.295	1.122	.315	11/16	18	1.226	
27 1/4 1/4 F 1/4	.165	1/4 NPTF	M14x1	.453	1.319	.315	11/16	18	1.330	
27 3/8 1/4 F 3/8	.244	1/4 NPTF	M18x1	.453	1.378	.394	7/8	22	2.397	
27 3/8 3/8 F 3/8	.244	3/8 NPTF	M18x1	.453	1.417	.394	7/8	22	2.180	
27 3/8 1/2 F 3/8	.244	1/2 NPTF	M18x1	.531	1.535	.394	1	22	2.650	
27 1/2 3/8 F 1/2	.362	3/8 NPTF	M22x1,5	.453	1.465	.472	1	24	3.138	
27 1/2 1/2 F 1/2	.362	1/2 NPTF	M22x1,5	.531	1.583	.472	1	24	3.006	



PT 28


Union elbow

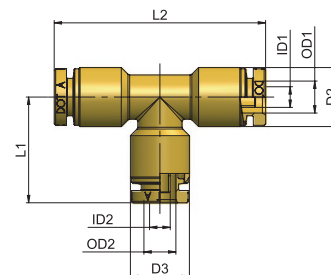
Type	OD1	ID1	D2	L1	oz 
28 5/32 5/32	5/32	.087	.354	.748	.366
28 1/4 1/4	1/4	.165	.472	.866	.640
28 3/8 3/8	3/8	.244	.630	1.024	1.348
28 1/2 1/2	1/2	.362	.787	1.110	2.162
28 5/8 5/8	5/8	.433	.945	1.398	3.642



PT 29

Union T

Type	OD1	ID1	OD2	ID2	D2	D3	L1	L2	oz 
29 5/32 5/32 5/32	5/32	.087	5/32	.087	.354	.354	.748	1.496	.527
29 1/4 1/4 1/4	1/4	.165	1/4	.165	.472	.472	.846	1.693	.883
29 3/8 3/8 3/8	3/8	.244	3/8	.244	.630	.630	1.004	2.008	1.852
29 3/8 1/4 3/8	3/8	.244	1/4	.165	.630	.472	.945	2.008	1.661
29 1/2 1/2 1/2	1/2	.362	1/2	.362	.787	.787	1.063	2.220	2.948
29 1/2 1/4 1/2	1/2	.362	1/4	.165	.787	.472	1.024	2.220	2.625
29 1/2 3/8 1/2	1/2	.362	3/8	.244	.787	.630	1.102	2.220	2.823
29 5/8 5/8 5/8	5/8	.433	5/8	.433	.945	.945	1.398	2.795	5.113



CO 67

MA 31

MM 115

PA 49

PE 45

PM 111

PN 19

PT 121

PU 55

PU Safety 59

PUX 101

PV 81

PVX 105

PX 95

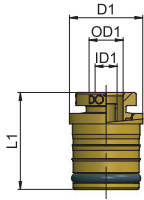
Tool 129

Tubings 135

# PT 10

## Press-in cartridge

PT10 is Cmatic push in cartridge solution developed for applications where compactness is required and designed to be installed into Aluminum T6061 cavities according to SAE J2494-4 Standard. Cavities made from materials other than T6061 T6 SHALL be adjusted dimensionally so that when installed the tube/cartridge/cavity assembly will pass the applicable tests in SAE J1131 and SAE J2494-3.



Type	OD1	ID1	D1	L1	oz
10 5/32 00	5/32	.087	.394	.677	.175
10 1/4 00	1/4	.165	.551	.728	.392
10 3/8 00	3/8	.244	.701	.878	.772

### Cartridge cavity size according to SAE J2494-4

- 1 Drill the cartridge seat, following the instructions given.
- 2 Before insert the cartridge into the cavity please apply some lubricant on the external cartridge O-ring.
- 3 Manually press the cartridge into the seat and by means of the Assembly tool push it all the way down until it bottoms; this will guarantee the proper cartridge assembly.

Drilling and Assembly Tool available upon request.

Tube OD	D1	L1	W	R
5/32	.346	.449	.079	.020
1/4	.504	.500	.079	.020
3/8	.650	.650	.079	.020

