



Tamper-Proof Family
Push-In Fitting Type Fixed Orifice Joint

Orifice Fitting Series

- *Fix Air Flow Rate*



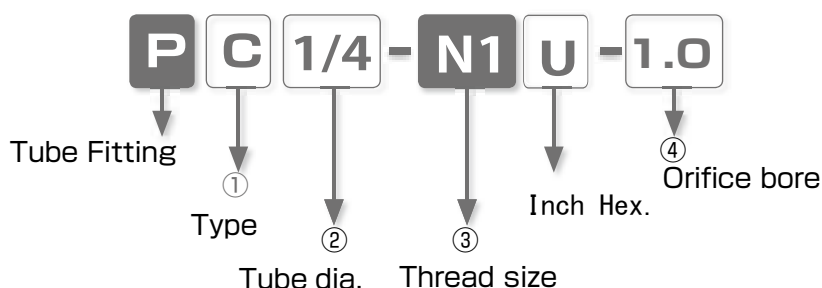
- *Installable in Small Space.*

- *20 Types of Orifice Bore.*

- *10-32UNF thread has been added.*

Tamper Proof Orifice Fitting

■ Model Designation (Example)



① Type

Code	Type	Code	Type
C	Straight	L	Elbow

② Tube dia.

Tube dia.	inch size		mm size		
Code	5/32	1/4	4	6	8
Size O.D.	ø5/32	ø1/4	ø4	ø6	ø8

※ The unit of wrench size is inch (the code suffix is "U"). - only for 1/8NPT thread

※ 10-32UNF and M5 thread come with Mini type of fitting. The tubing O.D. choice : 5/32", 1/4", 4mm, 6mm

③ Thread size

Tube dia.	American size		Metric size	
Code	U10M	N1	M5M	01
Size	10-32UNF	1/8 NPT	M5x0.8	R1/8

※1. Orifice bore for 10-32UNF and M5 thread is available upto 1.0mm

※2. Orifice bore of 0.1 and 0.2 is not available with ø8mm tubing size.

④ Orifice bore

Code(Orifice bore(mm))	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Orifice bore (inch)	0.0039	0.0079	0.0118	0.0157	0.0197	0.0236	0.0276	0.0315	0.0354	0.0394
Eff. A (mm ²)	0.006	0.02	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5
Cv factor	0.00033	0.00108	0.00271	0.00542	0.00813	0.01084	0.01355	0.01897	0.02168	0.0271

Code(Orifice bore(mm))	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Orifice bore (inch)	0.0433	0.0472	0.0512	0.0551	0.0591	0.063	0.0669	0.0709	0.0748	0.0787
Eff. A (mm ²)	0.7	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5
Cv factor	0.03794	0.04607	0.0542	0.06233	0.07859	0.08943	0.10027	0.11382	0.12466	0.1355

※ Cv factor is a reference value converted by multiplying effective cross-sectional area (mm²) by 0.0542.

※ Please figure out what you need from the orifice bore size.

Specifications

Fluid medium	Air
Max. operating pressure	145psi (1.0MPa)
Max. vacuum	-29.5in. Hg (-100kPa)
Operating temp. range	32 ~ 140°F (0 ~ 60°C) (no freezing)

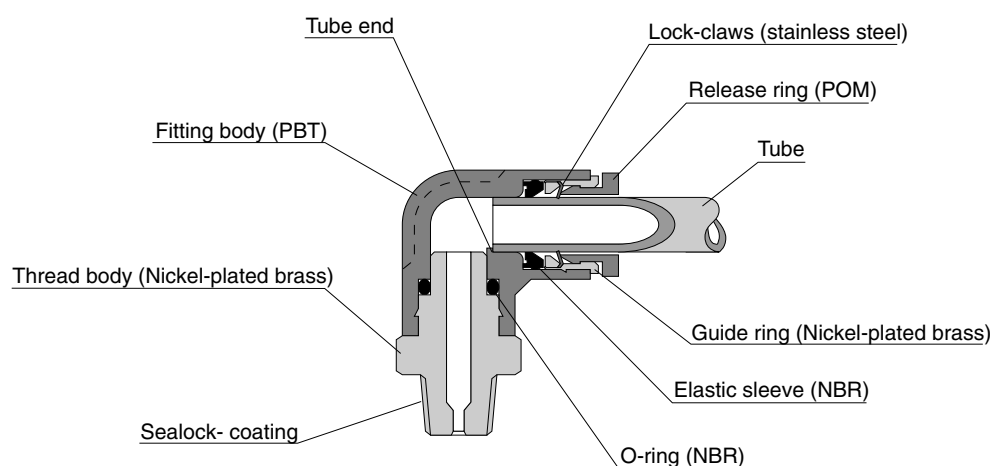
Standard Size

Connection: Thread ⇄ Tube

Type	Thread size	Tube O.D. (mm)	
		5/32	1/4
 Straight	10-32UNF 1/8NPT	●	●
 Elbow	10-32UNF 1/8NPT	●	●

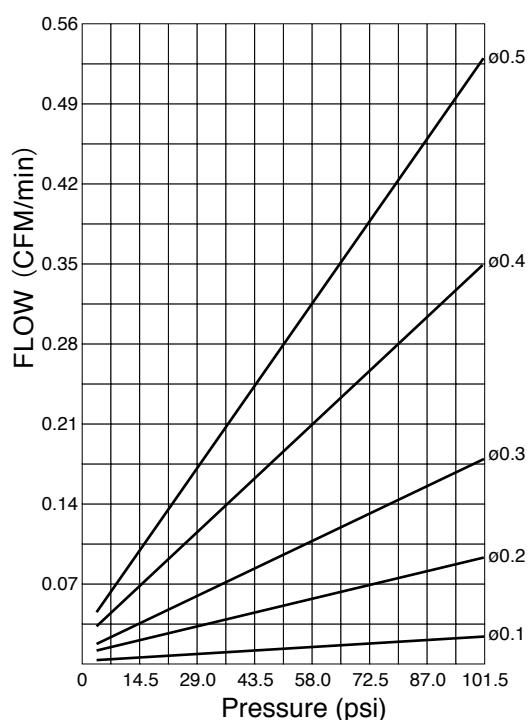
Type	Thread size	Tube O.D. (mm)		
		4	6	8
 Straight	M5×0.8 R1/8	●	●	●
 Elbow	M5×0.8 R1/8	●	●	●

Construction (Elbow: PL)

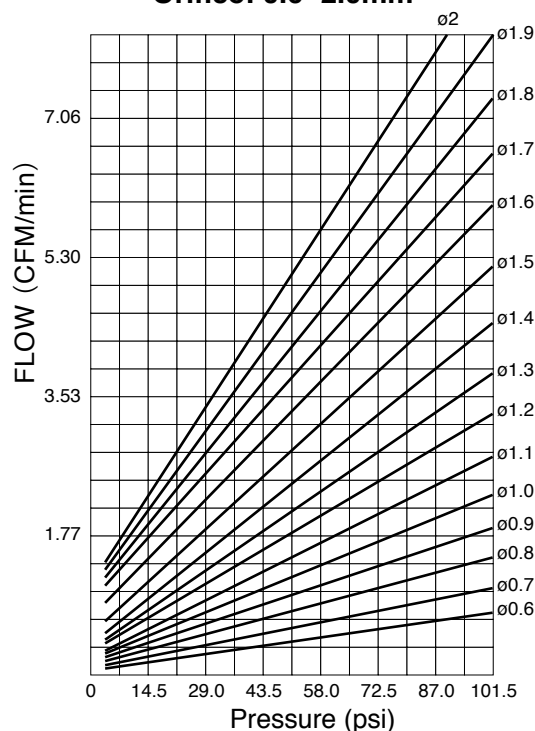


Flow characteristic

Orifice: 0.1~0.5mm

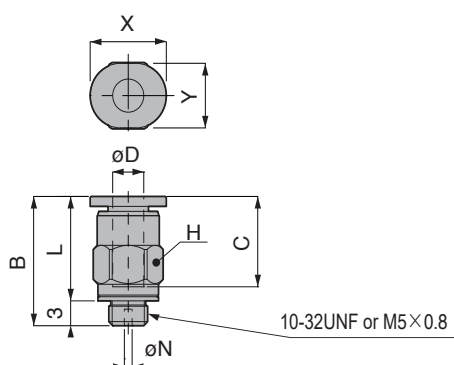


Orifice: 0.6~2.0mm





Straight Mini



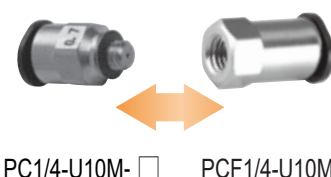
Unit : mm

Model code	Tube O.D. øD	B	L	Tube end C	H	X	Y	Weight (g)	CAD file name
PC5/32-U10M-□	5/32"	15.6	12.6	10.9	8	9.8	7.8	3.5	New
PC1/4-U10M-□	1/4"	16.8	13.8	11.4	10	11.8	9.8	4.2	New
PC4-M5M-□	4	15.6	12.6	10.9	8	9.8	7.8	3.3	PC4-M5M-□
PC6-M5M-□	6	17	14	11.7	10	11.8	9.8	4.4	PC6-M5M-□

Orifice bore ϕN (mm)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Orifice bore (inch)	0.0039	0.0079	0.0118	0.0157	0.0197	0.0236	0.0276	0.0315	0.0354	0.0394
I.D. tolerance (mm)	+0.05 0									
Affective area (mm ²)	0.006	0.02	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5

※ The value of affective area is just for reference.

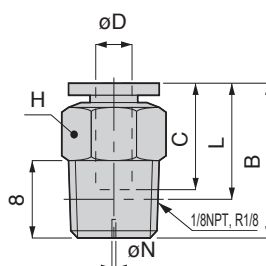
If you combine a PC1/4-U10M-□ with the female straight fitting PCF1/4-U10MU, it can be used 1/4" O.D. in-line orifice union fitting.



PC1/4-U10M-□ PCF1/4-U10MU



Straight



Unit : mm

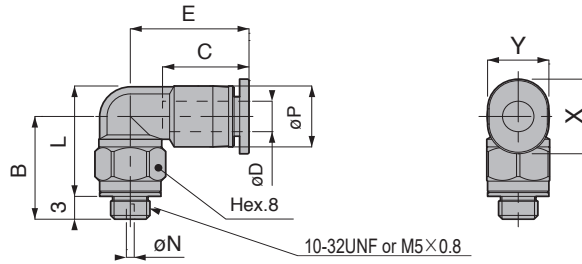
Model code	Tube O.D. øD	B	L	Tube end C	H	Weight (g)	CAD file name
PC5/32-N1U-□	5/32"	21	16.9	14.9	7/16	9.8	PC5_32-N1U-□
PC1/4-N1U-□	1/4"	22.6	18.4	17	1/2	11	PC1_4-N1U-□
PC4-01-□	4	21	17	14.9	10	8.3	PC4-01-□
PC6-01-□	6	22.6	18.6	17	12	9.5	PC6-01-□
PC8-01-□	8	27.9	23.9	18.2	14	17	PC8-01-□

Orifice bore ϕN (mm)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Orifice bore (inch)	0.0039	0.0079	0.0118	0.0157	0.0197	0.0236	0.0276	0.0315	0.0354	0.0394	0.0433	0.0472	0.0512	0.0551	0.0591	0.063	0.0669	0.0709	0.0748	0.0787
I.D. tolerance (mm)	+0.05 0																			
Affective area (mm ²)	0.006	0.02	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5	0.7	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5

※ The value of affective area is just for reference.

PL Mini Elbow Mini

RoHS compliant



Unit : mm

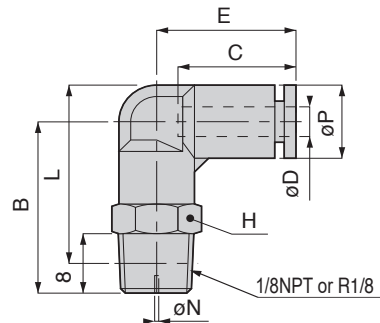
Model code	Tube O.D. øD	B	L	øP	Tube end C	E	X	Y	Weight (g)	CAD file name
PL5/32-U10M-□	5/32"	13.5	14.5	8	11	15.1	9.8	7.8	4	New
PL1/4-U10M-□	1/4"	14.5	16.8	10.5	11.4	16.2	11.8	9.8	4	New
PL4-M5M-□	4	13.5	14.5	8	11	15.1	9.8	7.8	3.4	PL4-M5M-□
PL6-M5M-□	6	14.5	16.8	10.5	11.6	16	11.8	9.8	4.1	PL6-M5M-□

Orifice bore ϕN (mm)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Orifice bore (inch)	0.0039	0.0079	0.0118	0.0157	0.0197	0.0236	0.0276	0.0315	0.0354	0.0394
I.D. tolerance (mm)	+0.05 0									
Affective area (mm ²)	0.006	0.02	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5

※ The value of affective area is just for reference.

PL Elbow

RoHS compliant



Unit : mm

Model code	Tube O.D. øD	B	L	øP	Tube end C	E	H	Weight (g)	CAD file name
PL5/32-N1U-□	5/32"	23.3	24.2	10	14.9	18	7/16	12	PL5/32-N1U-□
PL1/4-N1U-□	1/4"	25	27.1	12.5	16.8	19.8	1/2	15	PL1/4-N1U-□
PL4-01-□	4	23.3	24.3	10	14.9	18	10	12	PL4-01-□
PL6-01-□	6	25	27.3	12.5	16.8	19.8	12	15	PL6-01-□
PL8-01-□	8	28	31.3	14.5	18.1	22.7	14	19	PL8-01-□

Orifice bore ϕN (mm)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Orifice bore (inch)	0.0039	0.0079	0.0118	0.0157	0.0197	0.0236	0.0276	0.0315	0.0354	0.0394	0.0433	0.0472	0.0512	0.0551	0.0591	0.063	0.0669	0.0709	0.0748	0.0787
I.D. tolerance (mm)	+0.05 0																			
Affective area (mm ²)	0.006	0.02	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5	0.7	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5

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⚠ Detailed Safety Instructions

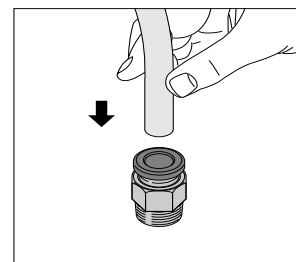
1. Before using the product, be sure to check the orifice bore marked on the hexagonal-column. The use of the product with wrong orifice bore will change the speed of actuator.
2. In case an accuracy of flow rate is required, select the best fit Orifice Joint by actual measurements because the flow rate may vary according to the tolerance of the orifice bore by piece-to-piece or other factors.
3. Orifice bore of 0.1mm and 0.2mm do not have inner nickel-plating treatment.

■ How to connect and disconnect

1. How to connect and disconnect tubings

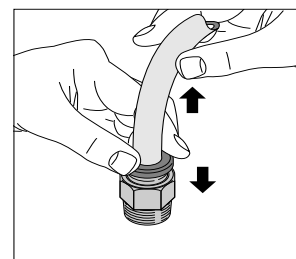
① Tubing insertion

Insert a tubing into Push-In Fitting up to the tube end. Lock-claws bite the tubing and fix it automatically, then the elastic sleeve seals around the tubing. Refer to "2. Instructions for Tube Insertion" under "Common Safety Instructions for Fittings" .



② Tube disconnection

The tubing is disconnected by pushing release-ring to release Lock-claws. Make sure to stop air supply before the tubing disconnection.



2. How to tighten thread

① Tightening thread

Use a spanner to tighten a hexagonal-column.

Refer to "Table: Recommended tightening torque" under "2. Instructions for Installing Controllers" in "Common Safety Instructions for Controllers".

