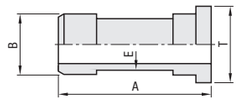
Fluororesin Couplings

Tube Insert / 2-Way Valve / Needle Valve

Fluororesin Couplings – Tube Insert

FETBS

RoHS10



Part Number		T	A	B	E
Type	Applicable Tube Outer Dia. (mm)				
FETBS	4	4	10	3	2
	6	6	12	4	2.5
	8	8	16	6	4.3
	10	10	20	8	6.8

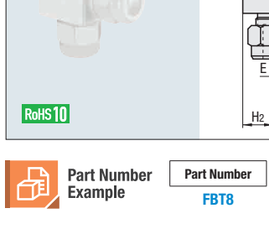
! It is not required for PTFE and PFA Type.

Tightening Torque of Nuts (Reference Values)

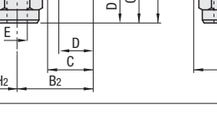
Tube Size mm		Tightening Torque N.m	Tightening Torque kgf-cm	No. of Revolution
4 x 3	—	0.12	1.2	1
6 x 4	6.35 x 4.3	0.23	2.3	1-1/4
8 x 6	—	0.45	4.6	1-1/4
10 x 8	9.53 x 6.3	0.8	8.2	1-1/2

Note

1. PFA tube is used in the measurement.
2. General tolerance of tube is absorbed if secured by the above torque value.
3. No. of revolution is from when tightening becomes fixed suddenly after lightly tightened by hand.



Structure Diagram



Specifications

Applicable Fluid	Super Pure Water, Acid, Alkali, Organic Solvent
Operating Temperature Range	0–100°C
Max. Operating Pressure	Nominal Diameter 4–8: 0.8 MPa Nominal Diameter 10: 0.6 MPa

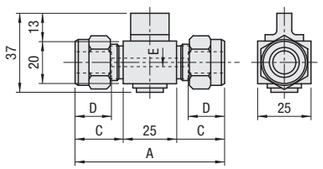
Features

– Excels in chemical resistance.
– Possible to tighten the nut with a spanner without using special tools.

Fluororesin Couplings – 2-Way Valve

FBT

RoHS10



Part Number		A	C	D	E
Type	Applicable Tube Outer Dia. (mm)				
FBT	4	47	11	7	4
	6	53	14	10	4
	8	61	18	12	4
	10	67	21	16	4

Specifications

Applicable Fluid	Super Pure Water, Acid, Alkali, Organic Solvent
Operating Temperature Range	Ambient Temperature
Max. Operating Pressure	0.2 MPa
Applicable Material	PTFE / ECTFE / Fluoro Rubber

Features

– Excels in chemical and corrosion resistance.
– Can be used in limited space because of its compact size.

Fluororesin Couplings – Needle Valve

FBNB

RoHS10

Part Number		A		B1	B2	C	D	E	F	G	H1	H2
Type	Applicable Tube Outer Dia. (mm)	Max.	Min.									
FBNB	4	76	67	23	22.5	11	7	3	30	23	12	11.5
	6	76	67	26	25.5	14	10	4	30	23	12	11.5
	8	76	67	30	29.5	18	12	6	30	23	12	11.5
	10	87	77	38	36	21	16	8	35	30	17	15

Specifications

Applicable Fluid	Super Pure Water, Acid, Alkali, Organic Solvent
Operating Temperature Range	0–100°C
Max. Operating Pressure	0.5 MPa
Applicable Material	PTFE / PCTFE / ECTFE / PP

Features

– Excels in chemical and corrosion resistance.
– Possible to finely adjust flow rate by turning the handle.

Part Number Example

Part Number
FBT8

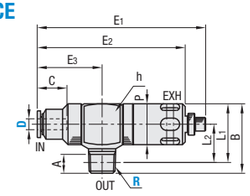
Quick Exhaust Valves / Pressure Gauges

Standard Open Air / Union Open Air / Straight / Union Straight

Quick Exhaust Valves – Standard Open Air (With Exhaust Throttle)

RoHS10

EQXCE

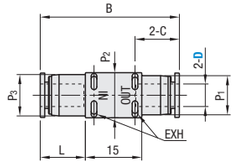


Material: Body: Aluminum
Needle: Brass (Electroless Nickel Plating)
Element: Polyvinyl Formal

Quick Exhaust Valves – Straight Open Air

RoHS10

EQUS

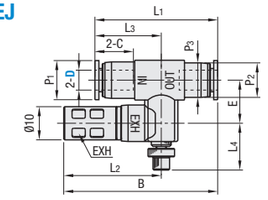


Material: Polybutylene Terephthalate

Quick Exhaust Valves – Union Open Air (With Exhaust Throttle)

RoHS10

EQEJ



Material: Polybutylene Terephthalate
Needle portion: Brass (Electroless Nickel Plating)
Element: Polyvinyl Formal

Quick Exhaust Valves - Standard

Part Number		R (PT)	Nominal	A	B	L_1	L_2	P	C	E_1		E_2	E_3	Opposite Side H	Effective Sectional Area (mm^2)		Mass (g)
Type	Tube Outer Dia. (mm) D									Max	Min				IN → OUT	OUT → EX	
EQXCE	4	1 (R1/8)	1	8	25.5	21.5	14	15	10.9	66.7	61.8	54.3	23.8	15	4	8	23
	6	1 (R1/8)	1	8	25.5	21.5	14	15	11.7	67	62.1	54.6	24.1	15	6	8	23
			2		29	25	16	18		77.4	71.6	63.1	28.1	18	9	15	35
		2 (R1/4)	1	11	31												37
	8	1 (R1/8)	1	8	29	25	16	18	18.2	82.7	76.9	68.4	33.4	18	12	15	39
		2 (R1/4)	1	11	31												41

Quick Exhaust Valves - Straight

Part Number		B	L	P_1	P_2	P_3	C	Effective Sectional Area (mm^2)		Mass (g)
Type	Tube Outer Dia. (mm) D							IN → OUT	OUT → EX	
EQUS	4	34.6	11	8.4	10	9	11	1.8	1.8	3.3
	6	37	12	10.4	12	11	11.6	4	4	4.9

Union Open Air (With Exhaust Throttle)

Part Number		B	L_1	L_2	L_3	L_4		P_1	P_2	P_3	P_4	C_1	C_2	E	Effective Sectional Area (mm^2)		Mass (g)
Type	Tube Outer Dia. (mm) D					Max	Min								IN → OUT	OUT → EX	
EQEJ	4	27.3	34.6	11.2	18.5	19.5	14.5	9.8	9	8.4	9	11	8.6	11	1.8	1.7	7.2
	6	29	37	12	20	19	14	11.8	11	10.4	11	12	10	13	4	2.8	9.2

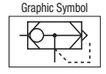
Part Number Example

Part Number	-	R (PT)	-	Nominal
EQXCE4	-	1	-	1

Specifications

Applicable Fluid	Air
Operating Pressure Range	0.1–0.7 MPa
Max. Pressure	1.35 MPa
Operating Temp. Range	5–60°C (Non-freezing)
Min. Operating Pressure	0.05 MPa

Graphic Symbol



Feature:

– Applicable to high-speed driving cylinder since air is quickly exhausted. For exhaust throttle type, the driving speed of cylinder can be adjusted.

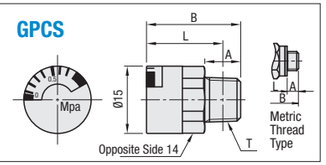
Precautions:

– For exhaust throttle type, due to clogging of elements, exhaust resistance may increase and cause deterioration in general system function. In such case, discontinue the use and replace the main body.
– Not applicable as shuttle valve.

Pressure Guages – Straight

RoHS10

GPCS



Part Number		T	A	B	L	Mass (g)
Type	No.					
GPCS	1	R1/8	8	21	17	8
	2	R1/4	11	24	18	16.5
	5	M5x0.8	3	16.5	13.5	6

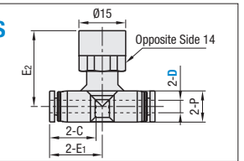
Part Number Example

Part Number
GPCS2

Pressure Guages – Union Straight

RoHS10

GPUS



Part Number		P	C	E_1	E_2	Mass (g)
Type	Tube Outer Diameter D					
GPUS	4	10	15	17	24.5	12.5
	6	13	17	20	26	15.5
	8	15	18.5	22	28	20

Specifications

Applicable Fluid		Air
Indicated Pressure Range		0–0.8 MPa
Accuracy		±5% (Full Scale*)
Operating Temperature Range		0–60°C
Scale Angle		150°
Material	Cap	Acrylic
	Metal Body	Brass (Nickel Plating)
	Resin Body	PBT Polybutylene Terephthalate

Feature:

– GPUS can be changed in direction using the hexagonal part of its body.

*Displayed position differences when the displayed pressure has suddenly changed from 0 to Max. value of 0.8 MPa.