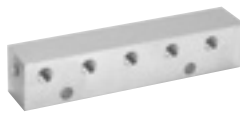


F Miniature fitting

Port size M3 to 1/8 (Rc or R)



- 44 miniature fittings are available with port size M3, M5, bore size $\varnothing 3.2$, $\varnothing 4$, $\varnothing 6$

■ Barbed fitting				■ Clamp fitting
Straight/FTS	Elbow/FTL	Tee/FTT	Barbed nipple/FTS-0	Straight/FCS
				
· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 818	· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 818	· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 818	· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 818	· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 819
■ Double screw nipple		■ Socket		
Elbow/FCL	Straight/FNS	Straight/FSS	Elbow/FSL	Tee/FST
				
· Compatible tube O.D.: $\varnothing 3.2$ to $\varnothing 6$ · Refer to page: 819	· Refer to page: 819	· Refer to page: 819	· Refer to page: 820	· Refer to page: 820
■ Adjustable socket				■ Bush
Elbow/FAL	Tee/FAT	Cross/FAX	Modified tee/FAY	FBS
				
· Refer to page: 820	· Refer to page: 820	· Refer to page: 821	· Refer to page: 821	· Refer to page: 821
■ Bulkhead	■ Plug	■ Extension	■ Manifold	
FWS Sales unit: 5	FPL	FLS	FMB Sales unit: 1	FMH Sales unit: 1
				
· Refer to page: 821	· Refer to page: 822	· Refer to page: 822	· Refer to page: 822	· Refer to page: 822
■ Gasket				
FGS Sales unit: 100				
				
· Refer to page: 822				

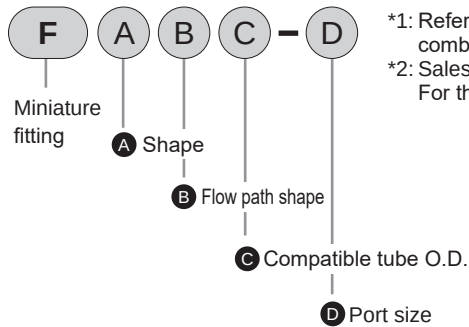
- If the quantity of units is not specified in the chart, the product is packed as 10 pcs/bag.

Specifications

Item	F
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈100 psi, 7 bar) or less
Ambient/fluid temperature °C	-5 (23°F) to 60 (140°F) (no freezing)
Tube used	Soft nylon tube (model No. FH-3224, F-1504, F-1506) Urethane tube (model No. U-9504, U-9506) Note

Note: Use urethane tube within 0 to 60°C.
(Refer to page 902 for tube dimensions and working pressure.)

How to order



*1: Refer to the model No. on the dimensions page (pages 818 to 822) for details on model combinations.
*2: Sales unit is 10 pcs./bag.
For the sales unit of each model, refer to the series variation on page 816.

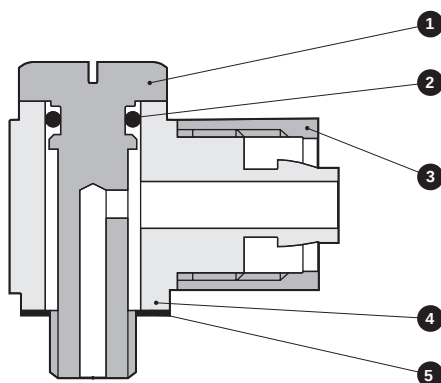
Ozone-proof specifications (Ending Page 9)

F - **P11**

Clean-room specifications (Catalog No. CB-033SA)

F - **P80**

Internal structure and parts list



The figure shows FCL type.

No.	Part name	Material	Treatment
1	Bolt	Copper alloy	Electroless nickel plating
2	O-ring	Nitrile rubber	—
3	Clamp ring	Copper alloy	Electroless nickel plating
4	Body	Copper alloy	Electroless nickel plating
5	Gasket	Nitrile rubber/steel	—

⚠ Safety precautions

- (1) If urethane tube is used with 40°C or more, use a clamp fitting.
- (2) For compatible tube O.D. tolerance, use an item within ± 0.1 for nylon, or $^{+0.1}_{-0.15}$ for urethane.
- (3) Type with slit on clamp ring of clamp fitting is for tube O.D. 3.2 mm.
- (4) If elbows, tees, crosses, irregular tees or barbed fittings are used at frequently moving tube sections, trouble may occur. Avoid this kind of usage.
- (5) Bending radius of tube is to be the right value or more near a fitting.

Min. bending radius mm	Barbed fitting	Clamp fitting
ø3.2	Soft nylon	20
ø4	Soft nylon	20
	Urethane	20
ø6	Soft nylon	40
	Urethane	40

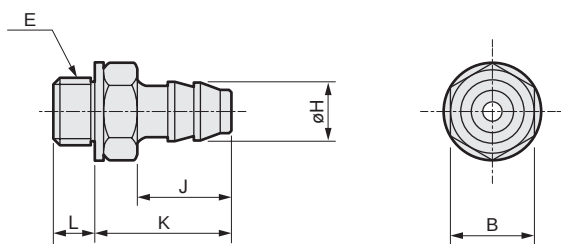


Dimensions: Barbed fitting (straight, elbow, tee, barbed nipple)

Barbed fitting

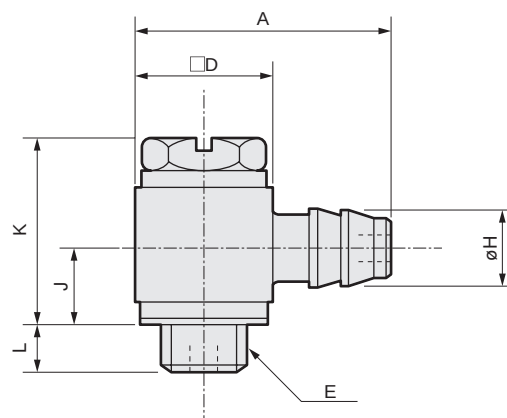
[Sales unit is 10 pcs./bag]

● Straight/FTS



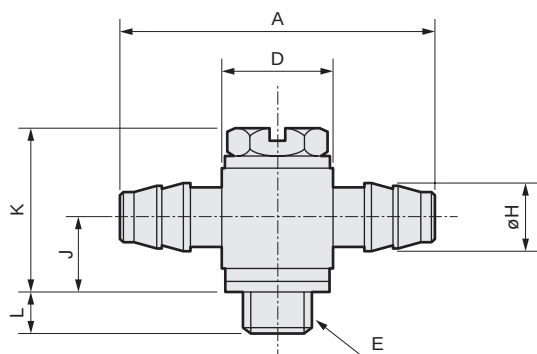
Model No.	Compatible tube O.D. Ø	B	E	Min. bore size	H	J	K	L	Eff. X-sectional area (mm ²)	Weight g
FTS4-M3	Ø3.2, Ø4	4.5	M3x0.5	0.8	2.9	5.5	7.9	2.6	0.4	0.8
FTS4-M5	Ø3.2, Ø4	7	M5x0.8	1.8	2.9	5.5	8.6	2.9	2.1	1.5
FTS4-6	Ø3.2, Ø4	10	R1/8	1.8	2.9	5.5	9.5	8	2.1	5.9
FTS6-M5	Ø6	7	M5x0.8	2.5	4.7	7	10.1	2.9	4.1	1.8
FTS6-6	Ø6	10	R1/8	2.5	4.7	7	11	8	4.1	6.2

● Elbow/FTL



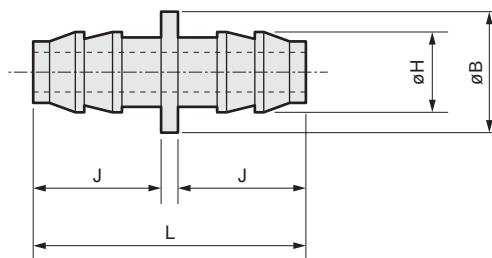
Model No.	Compatible tube O.D. Ø	A	D	E	Min. bore size	H	J	K	L	Eff. X-sectional area (mm ²)	Weight g
FTL4-M3	Ø3.2, Ø4	10.5	5	M3x0.5	1	2.9	2.9	6.8	2.6	0.4	1.5
FTL4-M5	Ø3.2, Ø4	13.5	8	M5x0.8	1.8	2.9	5.1	11.6	2.9	1.3	5.3
FTL6-M5	Ø6	15	8	M5x0.8	1.8	4.7	5.1	11.6	2.9	1.5	5.6

● Tee/FTT



Model No.	Compatible tube O.D. Ø	A	D	E	Min. bore size	H	J	K	L	Eff. X-sectional area (mm ²)	Weight g
FTT4-M3	Ø3.2, Ø4	16	5	M3x0.5	1	2.9	2.9	6.8	2.6	0.4	1.6
FTT4-M5	Ø3.2, Ø4	19	8	M5x0.8	1.8	2.9	5.1	11.6	2.9	1.3	5.3
FTT6-M5	Ø6	22	8	M5x0.8	1.8	4.7	5.1	11.6	2.9	1.5	6.0

● Barbed nipple/FTS*-0



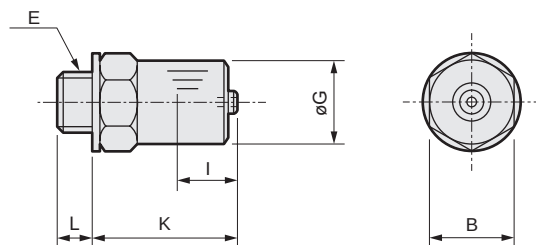
Model No.	Compatible tube O.D. Ø	B	Min. Hole diameter	H	J	L	Eff. X-sectional area (mm ²)	Weight g
FTS4-0	Ø3.2, Ø4	5	1.8	2.9	5.5	12	2.1	0.5
FTS6-0	Ø6	7	2.5	4.7	7	15	4.1	1.5

Dimensions: Clamp fitting (straight, elbow)/double screw nipple (straight)/socket (straight)

Clamp fitting

[Sales unit is 10 pcs./bag]

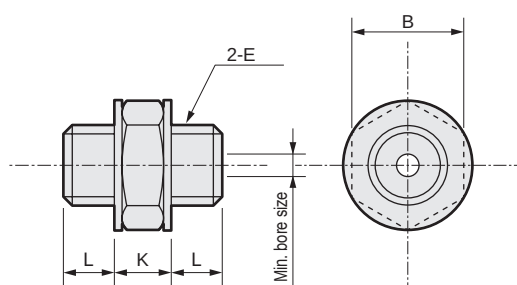
● Straight/FCS



Model No.	Tube O.D. ø	B	E	Min. bore size	G	I	K	L	Eff. X-sectional area (mm ²)	Weight g
FCS3-M5	ø3.2	7	M5x0.8	1.8	7	4.3	11.7	2.9	2.1	3.2
FCS3-6	ø3.2	10	R1/8	1.8	7	4.3	12.1	8	2.1	7.2
FCS4-M5	ø4	7	M5x0.8	1.8	7	4.3	11.7	2.9	2.1	3.1
FCS4-6	ø4	10	R1/8	1.8	7	4.3	12.1	8	2.1	7.2
FCS6-M5	ø6	8	M5x0.8	2.5	9	5	12.4	2.9	4.1	4.4
FCS6-6	ø6	10	R1/8	2.5	9	5	12.8	8	4.1	8.3

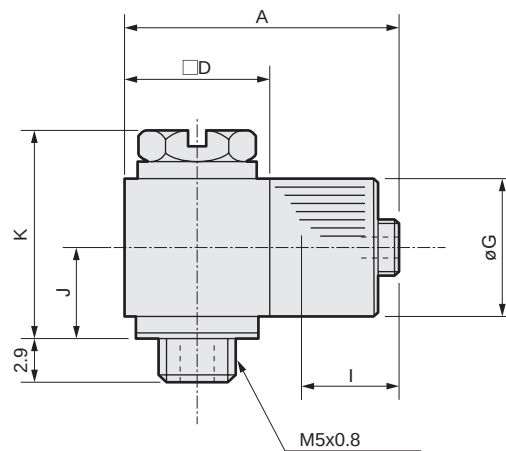
Double screw nipple

● Straight/FNS



Model No.	B	E	Min. bore size	K	L	Eff. X-sectional area (mm ²)	Weight g
FNS-M3	4.5	M3x0.5	0.8	2.8	2.6	0.4	0.6
FNS-M5	7	M5x0.8	1.8	3.7	2.9	2.1	1.9

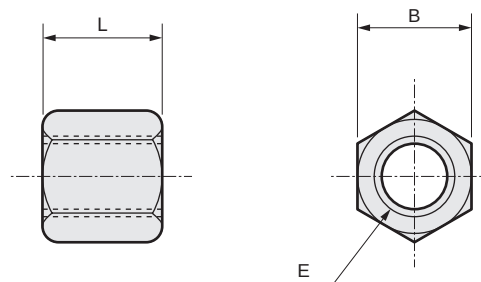
● Elbow/FCL



Model No.	Compatible tube O.D. ø	A	D	Min. bore size	G	I	J	K	Eff. X-sectional area (mm ²)	Weight g
FCL3-M5	ø3.2	16.1	8	1.8	7	4.3	5.1	11.6	1.3	6.7
FCL4-M5	ø4	16.1	8	1.8	7	4.3	5.1	11.6	1.3	6.7
FCL6-M5	ø6	17.8	9	1.8	9	5	6.1	13.6	1.5	10

Socket

● Straight/FSS



Model No.	B	E	L	Effective cross-sectional area (mm ²)	Weight g
FSS-M3	4.5	M3x0.5	7	4	0.7
FSS-M5	7	M5x0.8	8	9	1.8

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending



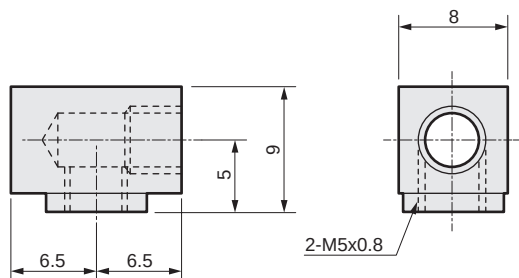
Dimensions: Socket (elbow, tee)/adjustable socket (elbow, tee)

[Sales unit is 10 pcs./bag]

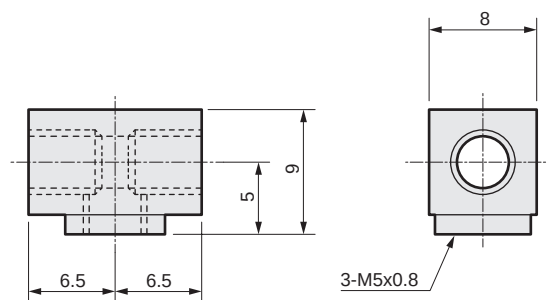
Socket

● Elbow/FSL-M5

● Tee/FST-M5



Effective cross-sectional area 8 mm²
Weight: 5.9g

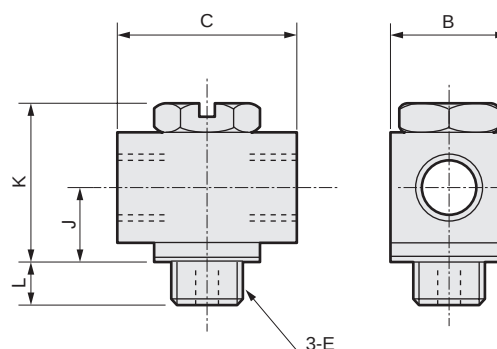
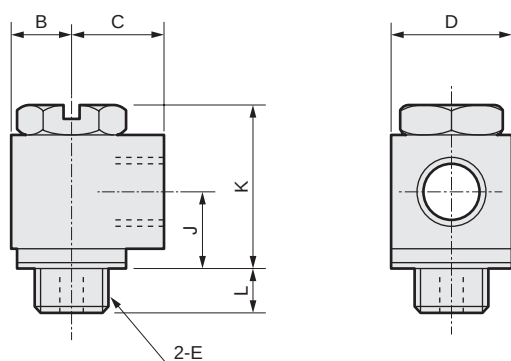


Effective cross-sectional area 8 mm²
Weight: 5.1g

Adjustable socket

● Elbow/FAL

● Tee/FAT



Model No.	B	C	D	E	Min. bore size	J	K	L	Eff. X-sectional area (mm ²)	Weight g
FAL-M3	2.5	4.5	5	M3x0.5	1	2.9	6.8	2.6	0.5	1.7
FAL-M5	4	6.5	8	M5x0.8	1.8	5.6	11.6	2.9	1.7	6.0

Model No.	B	C	E	Min. bore size	J	K	L	Eff. X-sectional area (mm ²)	Weight g
FAT-M3	5	9	M3x0.5	1	2.9	6.8	2.6	0.5	1.9
FAT-M5	8	12	M5x0.8	1.8	5.6	11.6	2.9	1.7	6.4

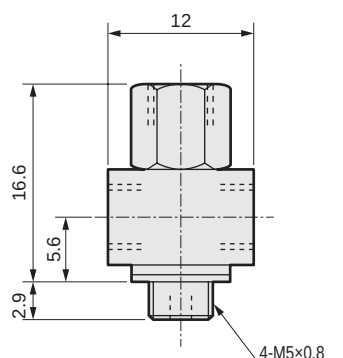
Dimensions: Adjustable socket (cross, modified tee)/bush/bulkhead



Adjustable socket

● Crossover/FAX-M5

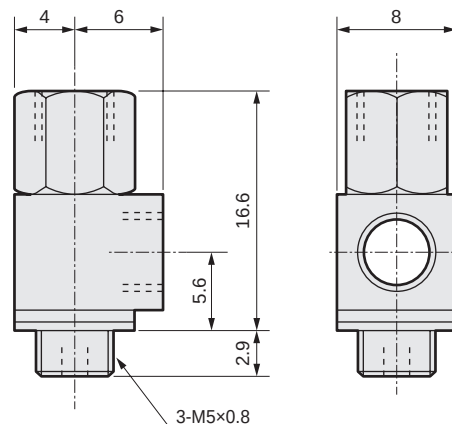
• Sales unit is 10 pcs./bag



Min. bore size 1.8 mm
Effective cross-sectional area 1.7 mm²
Weight: 7.4 g

● Modified tee/FAY-M5

• Sales unit is 10 pcs./bag

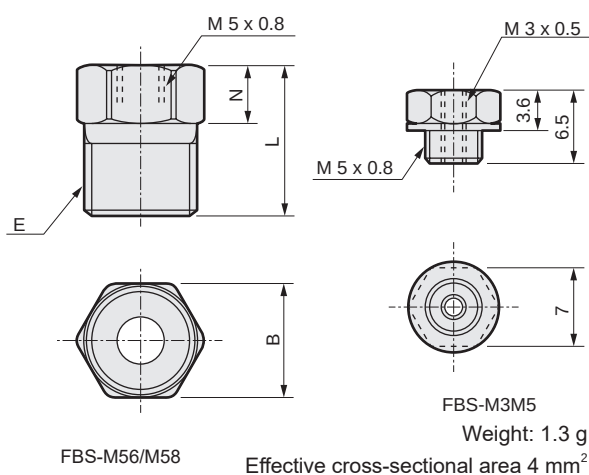


Min. bore size 1.8 mm
Effective cross-sectional area 1.7 mm²
Weight: 7.0 g

Bush

● FBS

• Sales unit is 10 pcs./bag



FBS-M56/M58

FBS-M3M5

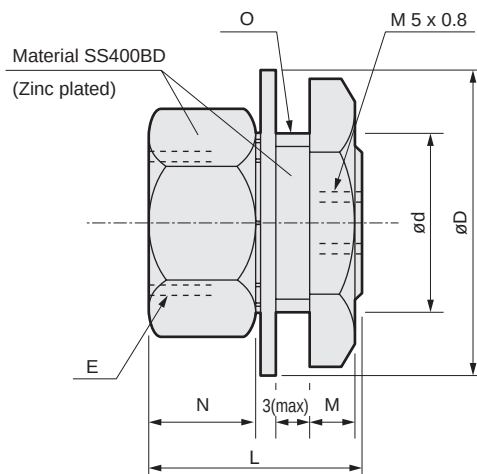
Weight: 1.3 g

Effective cross-sectional area 4 mm²

Bulkhead

● FWS

• Sales unit is 5 pcs./bag



Model No.	B	E	L	N	Effective cross-sectional area (mm ²)	Weight g
FBS-M56	10	R 1/8	12	4	9	6.0
FBS-M58	14	R 1/4	16	5	9	16

Model No.	D	d	E	L	M	N	O	Eff. X-sectional area (mm ²)	Weight g
FWS-M5	15	8	M 5 x 0.8	11	3	4	M 8 x 1	9	5.5
FWS-M56	15.2	12	Rc1/8	14	5	7	M 12 x 1	9	15

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRiSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filt
Film Resist FR
Oil-Prohr
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

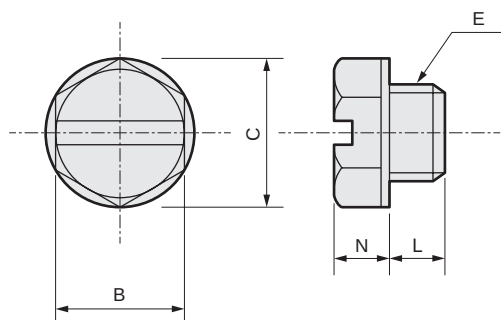
Dimensions: Plug/extension/manifold/gasket



Plug

● FPL

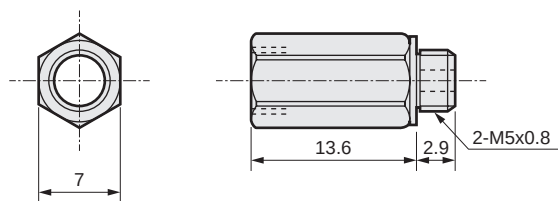
· Sales unit is 10 pcs./bag



Extension

● FLS-M5

· Sales unit is 10 pcs./bag



Effective cross-sectional area 2.1mm²

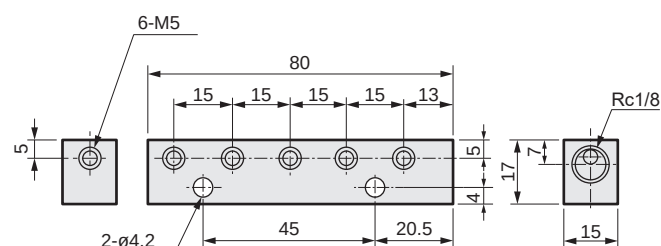
Weight: 3.7g

Model No.	B	C	E	N	L	Weight g
FPL-M3	4.5	4.9	M3x0.5	2.4	2.6	0.5
FPL-M5	7	7.8	M5x0.8	3.1	2.9	1.5

Manifold

● FMB-M56

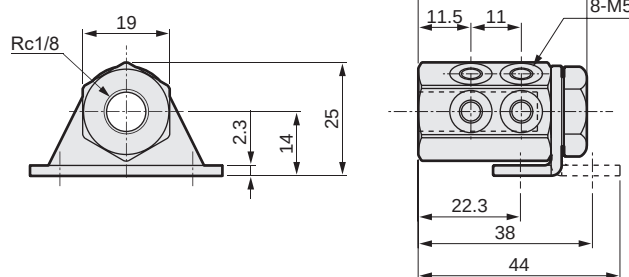
· Sales unit is 1 pcs./bag



Weight: 50g

● FMH-M56

· Sales unit is 1 pcs./bag

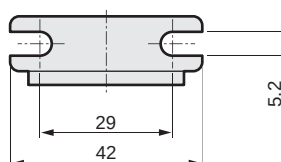
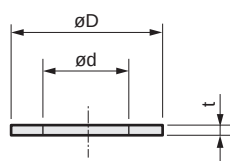


Weight: 82g

Gasket

● FGS

· Sales unit is 100 pcs./bag



Model No.	D	d	t	Weight g
FGS-M3	4.8	2.8	0.4	0.02
FGS-M5	7.8	4.8	0.6	0.1