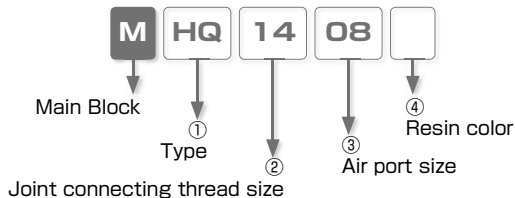




## Concentrated Branching Joint for Assembly **Main Block Series**

- *Assembling Manifold Blocks for Concentrated Branching*
- *Same Flow Rate with Steel Piping. Half Size Body.*
- *Combination with 14 Types of Different Size Blocks*

### Model Designation (Example)



#### ① Type

##### ● Inlet port

Code	Type	Code	Type	Code	Type	Code	Type
BA	Bush A	LB	Elbow	KR	Bulkhead Reducer	ST	Socket
BC	Bush C						

##### ● Outlet port

Code	Type	Code	Type	Code	Type
HQ	Push-in Banjo	HB	Double Push-in Banjo	HT	Taper Banjo

##### ● Extension port for outlet

Code	Type
HS	Straight Banjo

##### ● Plug

Code	Type	Code	Type
PG	Plug	CP	Cap

##### ● Different thread size and adaptor

Code	Type	Code	Type
BB	Bush B	BN	Male Screw Adaptor

#### ② Joint connecting thread size

Code	08	12	14	18
Size (mm)	M8 × 1	M12 × 1	M14 × 1	M18 × 1

#### ③ Air port size

##### ● Fitting type

Code	04	06	08	10	12	16
Size (mm)	ø4	ø6	ø8	ø10	ø12	ø16

##### ● Thread type

Thread size	Metric thread (mm)		Taper pipe thread			
Code	M5	M6	01	02	03	04
Size (mm)	M5 × 0.8	M6 × 1	R1/8	R1/4	R3/8	R1/2

##### ● Joint connecting thread size type

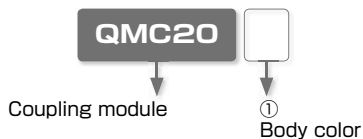
Code	08	12	14	18
Size (mm)	M8 × 1	M12 × 1	M14 × 1	M18 × 1

#### ④ Resin color

Code	No code	W
Color	Standard (Black)	Light-gray

## ■ Model Designation of Coupling Module (Example)

- Coupling module of outlet port



### ① Body color

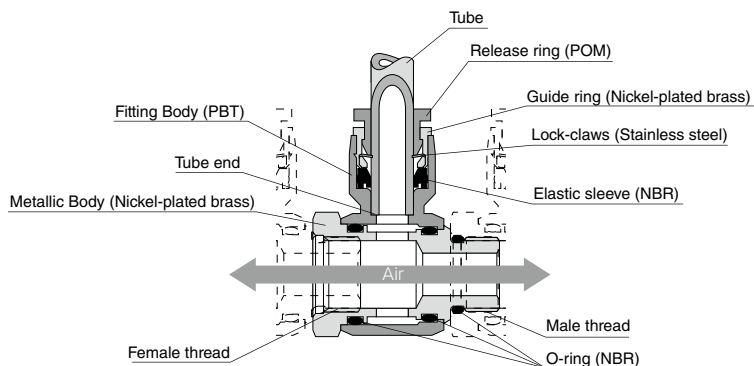
Code	No code	W
Color	Standard (Black)	Light-gray

- ※ Joint connecting thread size of coupling module is M18x1 only
- ※ Use Light Coupling 20 series for the coupling module plug. See page 342.

## ■ 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)

## ■ Construction (MHQ)



**⚠ Detailed Safety Instructions**

Before using PISCO products, be sure to read "Safety Instructions" and "Safety Instruction Manual" on page 23 to 27 and "Common Safety Instructions for Fittings" on page 33 to 35.

**Warning**

1. When many blocks are connected or bending load is applied on them, use Bracket. Connected equipment side or main block can be damaged without Bracket.

**Caution**

1. Use the main block spanners when assembling or disassembling. It may cause a difficulty to assemble or deformation of Main Block without using these spanners.
2. Refer to the following tightening torque for assembly.

Connecting thread size	Recommended tightening torque
M8×1	3.0 ~ 5.0N·m
M12×1	5.0 ~ 10.0N·m
M14×1	10.0 ~ 20.0N·m
M18×1	10.0 ~ 20.0N·m

## Standard Size List

### Inlet port

Type	Page	Connecting thread size	Thread size					
			R1/8	R1/4	R3/8	R1/2		
<b>MBA</b> Bush A	P.318	M8 × 1	●					
		M12 × 1	●	●	●			
		M14 × 1		●	●	●		
		M18 × 1			●	●		
<b>MLE</b> Elbow	P.318	M8 × 1	●					
		M12 × 1	●	●				
		M14 × 1		●	●	●		
		M18 × 1			●	●		
Type	Page	Connecting thread size	Tube O.D. (mm)					
<b>MKR</b> Bulkhead Reducer	P.319	M8 × 1	●	4	6	8	10	12
		M12 × 1			●		●	
		M14 × 1				●	●	●
		M18 × 1					●	●

Type	Page	Connecting thread size	Thread size				
			Rc1/8	Rc1/4	Rc3/8	Rc1/2	
<b>MST</b> Socket	P.319	M8 × 1	●				
		M12 × 1		●			
		M14 × 1			●		
		M18 × 1				●	
Type	Page	Connecting thread size	Thread size				
<b>MBC</b> Bush C	P.319	M8 × 1	●	M5 × 0.8		R1/8	R1/4
		M12 × 1			●		
		M14 × 1				●	
		M18 × 1					●

### Outlet port

Type	Page	Connecting thread size	Tube O.D. (mm)					
			4	6	8	10	12	16
<b>MHC</b> Push-in Banjo	P.320	M8 × 1	●	●				
		M12 × 1		●	●			
		M14 × 1			●	●	●	
		M18 × 1				●	●	●
Type	Page	Connecting thread size	Tube O.D. (mm)					
<b>MHE</b> Double Push-in Banjo	P.320	M14 × 1		10				
		M18 × 1					●	

Type	Page	Connecting thread size	Thread size			
			M5 × 0.8	M6 × 1	Rc1/8	Rc3/8
<b>MHT</b> Taper Banjo	P.321	M8 × 1	●		●	
		M12 × 1		●	●	
		M14 × 1			●	●
		M18 × 1				●
Type	Page	Connecting thread size	Applicable Plug			
<b>MMC</b> Module Socket	P.321	M18 × 1	Light Coupling 20 series			

### Extension port for outlet

Type	Page	Connecting thread size	Connecting thread size			
			M8 × 1	M12 × 1	M14 × 1	M18 × 1
<b>MHS</b> Straight Banjo	P.322	M12 × 1	●	●		
		M14 × 1		●	●	
		M18 × 1			●	●

### Plug

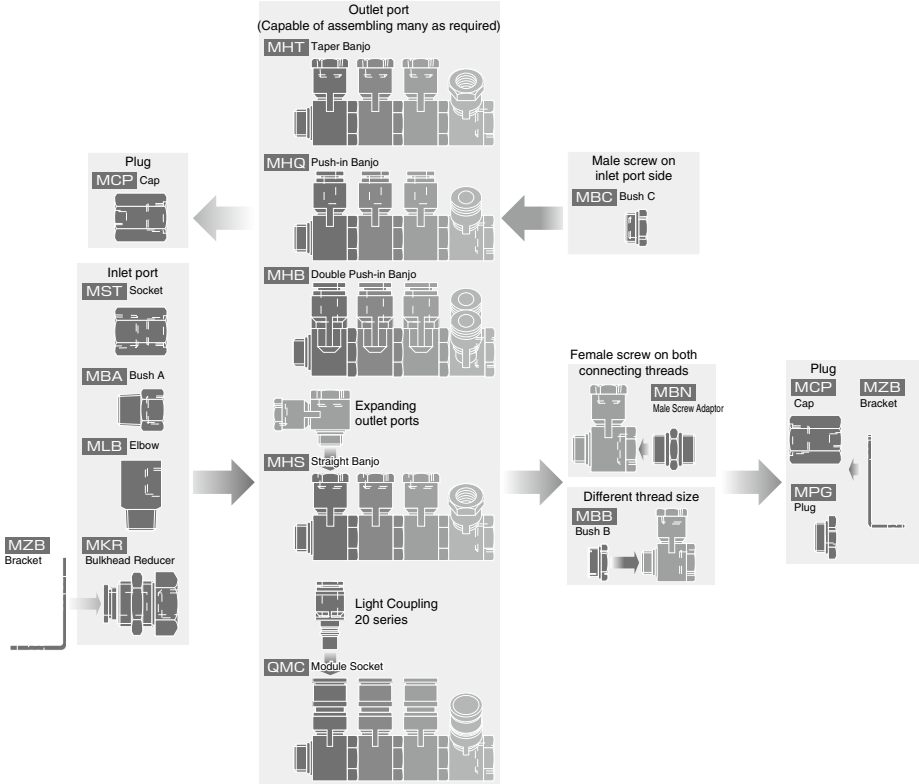
Type	Page	Connecting thread size			
		M8 × 1	M12 × 1	M14 × 1	M18 × 1
<b>MPG</b> Plug	P.322	●	●	●	●
<b>MCP</b> Cap	P.322	●	●	●	●

### Different thread size and adaptor

Type	Page	Connecting thread size	Connecting thread size		
			M8 × 1	M12 × 1	M14 × 1
<b>MBB</b> Bush B	P.323	M12 × 1	●		
		M14 × 1		●	
		M18 × 1			●

Type	Page	Connecting thread size	Thread size		
			M8 × 1	M12 × 1	M18 × 1
<b>MEN</b> Male Screw Adaptor	P.323	M8 × 1	●		
		M12 × 1		●	
		M14 × 1			●
		M18 × 1			●

### How to assemble



Main blocks can be connected, as long as each metric thread size is the same.

- Outlet port (4 types) ..... Push-in Banjo (MHQ), Double Push-in Banjo (MHB), Taper Banjo (MHT), Module Socket (QMC).  
(Capable of assembling as many as required)
- Inlet port (5 types) ..... Bush A (MBA), Elbow (MLB), Bush C (MBC), Socket (MST), Bulkhead Reducer (MKR)
- Plug (2 types) ..... Plug (MPG), Cap (MCP)
- Different thread size ..... Bush B (MBB)
- Female screw on both connecting threads ..... Male Screw Adaptor (MBN)
- Fixing Bracket ..... Bracket (MZB)

## ■ Piping example

Compressor

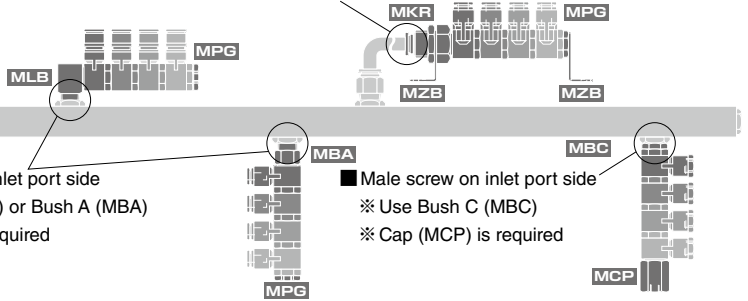
■ Fitting joint on inlet port side

※ Use bulkhead reducer (MKR)

※ Bracket (MZB) is required

※ Plug (MPG) is required

(In order to fix Plug and bracket, M6x1 screw with effective length 7mm is necessary)



■ Female screw on inlet port side

※ Use elbow (MLB) or Bush A (MBA)

※ Plug (MPG) is required

■ Male screw on inlet port side

※ Use Bush C (MBC)

※ Cap (MCP) is required

## ■ Assembly example

		Outlet port		
		Taper Banjo type	Push-in Banjo type	Double Push-in Banjo type
Inlet port	Bush A straight type			
	Elbow type			
	Bulkhead reducer type			

※ .When using Bulkhead Reducer on inlet port side and fix it, make sure to use Bracket (MZB).

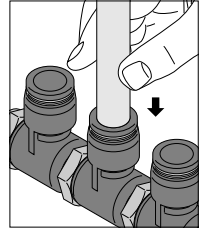
### How to insert and disconnect

#### 1. How to insert and disconnect tubes

##### ① Tube insertion

Insert a tube into Push-In Fitting up to the tube end. Lock-claws bite the tube and fix it automatically, then the elastic sleeve seals around the tube.

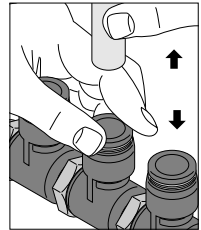
Refer to "2. Instructions for Tube Insertion" under "Common Safety Instructions for Fittings" .



##### ② Tube disconnection

The tube is disconnected by pushing release-ring to release Lock-claws.

Make sure to stop air supply before the tube disconnection.

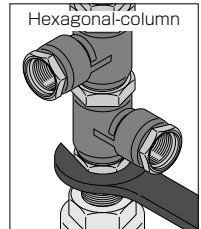


#### 2. How to tighten thread

##### ① Tightening thread

Use a spanner to tighten a hexagonal-column.

Refer to "Table 2: Recommended tightening torque / Sealock color / Gasket materials" under "4. Instructions for Installing a fitting" in "Common Safety Instructions for Fittings".

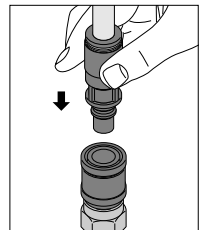


#### 3. How to couple and uncouple coupling module

##### ① Coupling

To couple, push the plug into the socket. No need to push down plug sleeve.

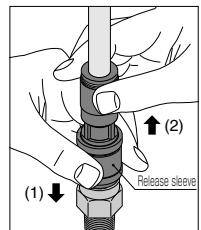
Refer to "Detailed Safety Instructions" of Light Coupling.



##### ②. Uncoupling

To uncouple, push down the release sleeve to release Lock ball.

Refer to "Detailed Safety Instructions" of Light Coupling.



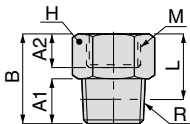


**Inlet port**

**MBA Bush A**

CAD

RoHS compliant



Unit : mm

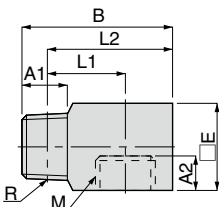
Model code	R	M	A1	A2	B	L	H	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MBA0801	R1/8	M8 × 1	8	8	20	16	12	24.5	11	TFMB-001
MBA1201	R1/8	M12 × 1	8	8.5	20	16	17	24.7	18	
MBA1202	R1/4		11		23	17		20		
MBA1203	R3/8		12		24	17.7		27		
MBA1402	R1/4	M14 × 1	11	8.5	23	17	19	42.7	23	
MBA1403	R3/8		12	8	24	17.7			25	
MBA1404	R1/2		13		25	16.8			22	
MBA1803	R3/8	M18 × 1	12	8.5	25	18.7	22	56.1	29	
MBA1804	R1/2		13			16.8			24	

※. "L" is a reference value for height dimension after tightening thread.

**MLB Elbow**

CAD

RoHS compliant



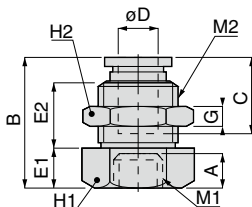
Unit : mm

Model code	R	M	A1	A2	B	L1	L2	□E	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MLB0801	R1/8	M8 × 1	8	7	28	16	24	17	21.4	42	TFMB-002
MLB1201	R1/8	M12 × 1	8	8.5	29	15	25	19	24.5	48	
MLB1202	R1/4		11		32	16	26		40	50	
MLB1402	R1/4		11		37	19	31		42.7	80	
MLB1403	R3/8	M14 × 1	12	8.5	38	19.7	31.7	22	46	82	
MLB1404	R1/2		13		39	18.8	30.8			93	
MLB1803	R3/8	M18 × 1	12	9	44	23.7	37.7	27	49	141	
MLB1804	R1/2		13		45	22.8	36.8			157	

※. "L1" and "L2" are reference values for height dimensions after tightening thread.

### MKR Bulkhead Reducer

RoHS compliant



CAD

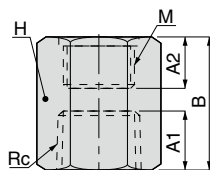
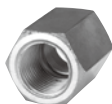
Unit : mm

Model code	Tube O.D. øD	M1	M2	A	B	E1	E2	Tube end C	G	H1	H2	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MKR0804	4	M8 × 1	M12 × 1	8.5	26	8	13.4	14.9	4	14	14	5.6	19	TFMB-003
MKR0806	6		M14 × 1		28.1		14.9	17		17	17	11.5	29	
MKR1206	6	M12 × 1	M14 × 1	8.5	28.1	10	10.9	17	4	17	17	13.2	28	
MKR1208	8		M16 × 1		28.9		13.4	18.2		19	19	27.4	34	
MKR1210	10	M12 × 1	M20 × 1	8.5	32.3	12	16.4	20.7	5	22	24	34.8	60	
MKR1408	8		M16 × 1		28.9		11.4	18.2		4	19	19	27.7	
MKR1410	10	M14 × 1	M20 × 1	8.5	32.3	10	16.4	20.7	5	24	24	41.7	64	
MKR1412	12		M22 × 1		34.9		17.4	23.3				6	27	
MKR1812	12	M18 × 1	M22 × 1	8.5	34.9	12	17.4	23.3	6	27	27	66.7	83	

※ . □ in Model code / Replaced with "W" for Light-gray color.

### MST Socket

RoHS compliant



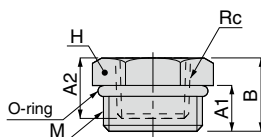
CAD

Unit : mm

Model code	Rc	M	A1	A2	B	H	Weight (g)	CAD file name
MST0801	Rc1/8	M8 × 1	8	9	20	12	12	TFMB-004
MST1202	Rc1/4	M12 × 1	11	9	24	17	29	
MST1403	Rc3/8	M14 × 1	12	10	27	22	57	
MST1804	Rc1/2	M18 × 1	15	10	28	27	84	

### MBC Bush C

RoHS compliant



CAD

Unit : mm

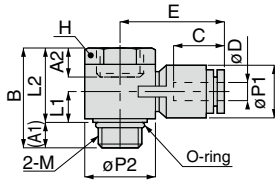
Model code	Rc	M	A1	A2	B	H	Weight (g)	CAD file name
MBC08M5	M5 × 0.8	M8 × 1	7	5	11	10	3.8	TFMB-009
MBC12M6	M6 × 1	M12 × 1	7.5	6	11.5	14	9.6	
MBC1401	Rc1/8	M14 × 1	8	8	12	17	12	
MBC1802	Rc1/4	M18 × 1	8	11	13	19	17	

**Outlet port**

**MHQ Push-in Banjo**

**CAD**

RoHS compliant



Unit : mm

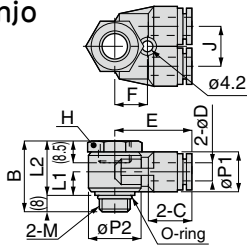
Model code	Tube O.D. øD	M	A1	A2	B	L1	L2	øP1	øP2	Tube end C	E	H	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MHQ0804 □	4	M8×1	6.5	7.5	25.7	8.2	19.2	10	15.4	14.9	22.2	14	4.7	16	TFMB-006
MHQ0806 □	6							12.5		17	24.2		7	17	
MHQ1206 □	6	M12×1	7	7.5	27.2	8.7	20.2	12.5	19.6	17	26.8	17	8.7	23	
MHQ1208 □	8							14.5		18.1	28.2		11	25	
MHQ1408 □	8	M14×1	8	8.5	31.2	10.2	23.2	14.5	24.4	18.1	30.2	22	16.7	39	
MHQ1410 □	10							18		20.2	32.5		19.5	42	
MHQ1412 □	12					11.7	21	23.4		35.2	21.1		45		
MHQ1812 □	12	M18×1	8	8.5	35.2	11.7	27.2	21	30	23.4	38.2	24	40.4	61	
MHQ1816 □	16			8	41.1	14.6	33.1	25	28	23.6	36.6	27	50.4	71	

※ □ in Model code / Replaced with "W" for Light-gray color.

**MHB Double Push-in Banjo**

**CAD**

RoHS compliant



Unit : mm

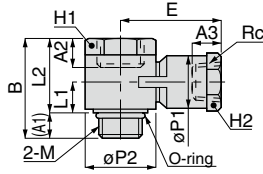
Model code	Tube O.D. øD	M	B	L1	L2	øP1	øP2	Tube end C	E	J	F	H	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MHB1410 □	10	M14×1	31.2	10.2	23.2	17.6	23	20.7	33.5	17	15	22	17.8	49	TFMB-007
MHB1812 □	12	M18×1	35.2	11.7	27.2	21	27	23.4	37.4	20	17	24	35.6	70	

※ □ in Model code / Replaced with "W" for Light-gray color.

### Outlet port

## MHT Taper Banjo

RoHS compliant



CAD

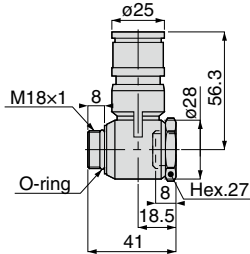
Unit : mm

Model code	Rc	M	A1	A2	A3	B	L1	L2	øP1	øP2	E	H1	H2	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name	
MHT08M5	M5×0.8	M8 × 1	6.5	7.5	6	25.7	8.2	19.2	12.5	15.4	23.4	14	12	7.3	22	TFMB-006	
MHT08M6	M6 × 1				8				14.5				25.5	14	7.8		23
MHT0801	Rc1/8													14	7.8		23
MHT12M6	M6 × 1	M12 × 1	7	7.5	6	27.2	8.7	20.2	12.5	19.6	26	17	12	9.7	28		
MHT1201	Rc1/8				8				14.5				27.5	14	12.4		29
MHT1401	Rc1/8	M14 × 1	8	8.5	8	31.2	10.2	23.2	14.5	24.4	29.5	22	14	16.1	44		
MHT1402	Rc1/4				11				21				34	19	21.4		59
MHT1802	Rc1/4	M18 × 1	8	8.5	11	35.2	11.7	27.2	21	30	37	24	19	36.9	75		
MHT1803	Rc3/8				8				12				41.1	14.6	33.1		25

※ . □ in Model code / Replaced with "W" for Light-gray color.

## QMC Module Socket

RoHS compliant



CAD

Model code	Weight (g)	CAD file name
QMC20	84	TFMC-004

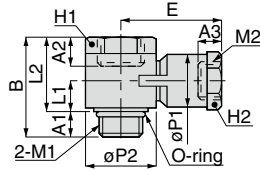
※ . □ in Model code / Replaced with "W" for Light-gray color.

※ . Select the plug for the Coupling Module from Light Coupling 20 series. See page 342.

■ Expanding outlet port

**MHS** Straight Banjo

RoHS compliant



CAD

Unit : mm

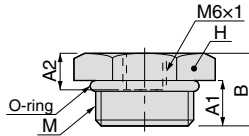
Model code	M1	M2	A1	A2	A3	B	L1	L2	øP1	øP2	E	H1	H2	Effective area (mm <sup>2</sup> )	Weight (g)	CAD file name
MHS1208	M12 × 1	M8 × 1	7	7.5	7	27.2	8.7	20.2	12.5	19.6	26	17	12	8.4	26	TFMB-007
MHS1212		M12 × 1			7.5		10.2							18	29.5	
MHS1412	M14 × 1	M12 × 1	8	8.5	7.5	31.2	10.2	23.2	18	24.4	31.5	22	17	20.8	49	TFMB-007
MHS1414		M14 × 1			8.5		11.7							21	34	
MHS1814	M18 × 1	M14 × 1	8	8.5	8.5	35.2	11.7	27.2	21	30	37	24	19	40.1	71	TFMB-007
MHS1818		M18 × 1			8.5		14.6							33.1	25	

※ □ in Model code / Replaced with "W" for Light-gray color.

■ Plug

**MPG** Plug

RoHS compliant



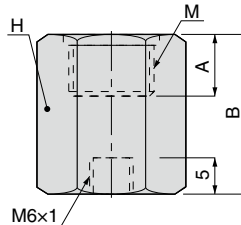
CAD

Unit : mm

Model code	M	A1	A2	B	H	Weight (g)	CAD file name
MPG08	M8 × 1	6	5	14	12	9	TFMB-008
MPG12	M12 × 1	6	5	9	14	7.9	
MPG14	M14 × 1	6	5	10	17	14	
MPG18	M18 × 1	7	6	12	19	25	

**MCP** Cap

RoHS compliant



CAD

Unit : mm

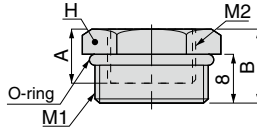
Model code	M	A	B	H	Weight (g)	CAD file name
MCP08	M8 × 1	6.5	20	12	17	TFMB-008
MCP12	M12 × 1	7	22	14	22	
MCP14	M14 × 1	8	23	17	34	
MCP18	M18 × 1	8	25	22	64	

## Main Block

### Adapter

#### MBB Bush B

RoHS compliant



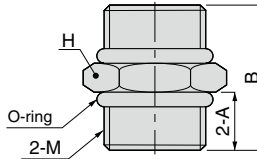
CAD

Unit : mm

Model code	M1	M2	A	B	H	Weight (g)	CAD file name
MBB1208	M12 × 1	M8 × 1	8	12	14	7.4	TFMB-009
MBB1412	M14 × 1	M12 × 1	7.5	20	17	21	
MBB1814	M18 × 1	M14 × 1	12	12	19	11	

#### MBN Male Screw Adaptor

RoHS compliant



CAD

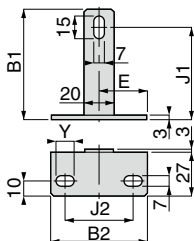
Unit : mm

Model code	M	A	B	H	Weight (g)	CAD file name
MBN0808	M8 × 1	7	18	10	5.6	TFMB-009
MBN1212	M12 × 1	8	20	14	13	
MBN1414	M14 × 1	8	20	17	16	
MBN1818	M18 × 1	8	20	19	19	

**Bracket**

**MZB Bracket**

RoHS compliant



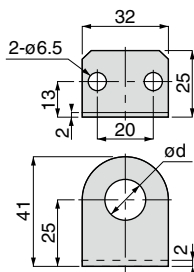
CAD

Unit : mm

Model code	B1	B2	J1	E	J2	Y	Weight (g)	Attachable Model	CAD file name
MZB061B	75	65	62.5	32.5	46	12	73	MPG, MCP	TFMB-011
MZB062B		80		40	63	13	84		
MZB161B	55	65	42.5	32.5	46	12	64	MPG, MCP	
MZB162B		80		40	63	13	73		

**MZB Bracket**

RoHS compliant



CAD

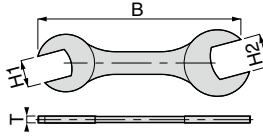
Unit : mm

Model code	ød	Weight (g)	Attachable Model	CAD file name
MZB06	7	28	MPG, MCP	TFMB-010
MZB12	13	26	MKR0804	
MZB14	15	26	MKR0806, MKR1206	
MZB16	17	25	MKR1208, MKR1408	
MZB20	21	23	MKR1210, MKR1410, MKR1810	
MZB22	23	22	MKR1412, MKR1812	

■ Assembly tool

**SPANNER**

Spanners for main block



Unit : mm

Spanner	B	Hex. H1	Hex. H2	T	CAD file name
①	125	10	12	3.4	-
②	130	14	17	3.4	
③	140	19	22	4	
④	150	24	27	4	