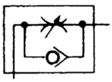
Speed Control Joint

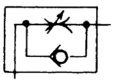
MB□R	Minature Universal Type
B□R	Standard Universal Type
M□R	Miniature Elbow Type
□R	Standard Elbow Type

- Adjustable speed fitting can control acuating speed of an acuator.
- Support direct piping which is both time saving and cost saving.
- Claws on the pipe are designed with prolonged durability and can be used for a long period of time. It is difficult to become elastic fatigue causing potential hazards.
- Simply by turning the body, piping angles of the universal type can be variously changed even after installation completion.
- Polyurethane tube and nylon tube are both available for use.
- Seal tape are already applied onto the threaded area, thus there is no need to spend time twining them on.

JIS Symbol



Air outlet specifications



Air inlet specifications

Representation

MB4R – M5 – 0   B6R – 01SC – 0

①②③ ④ ⑤   ①②③ ④ ⑤

① Type

No lable : Elbow type
B : Universal type

② Bore

4 : ∅ 4
6 : ∅ 6
8 : ∅ 8
10: ∅ 10
12: ∅ 12

③ Body material

B: Synthetic resin

④ Threaded size

M3 : M3×0.5
M5 : M5×0.8
01 : R⅛
02 : R¼
03 : R⅜
04 : R½

⑤ Control method

O : Air outlet
I : Air inlet

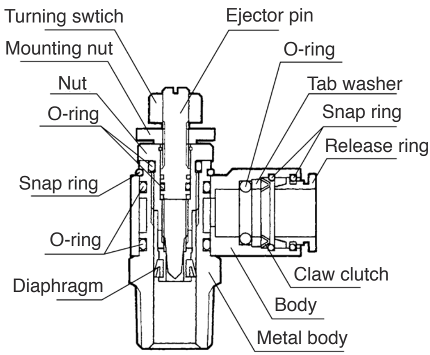
(Note)

- On the flat area of the turning swtich, air outlet specification of the miniature type is labeled with "O," and air inlet specfication is labeled with "I."
- Turning swtich of the air inlet and air outlet is each labeled with Yellow and Black, respectively (i.e. Yellow as air inlet, and Black as air outlet)

Specifications

Fluid	Air
Operating pressure range	0.05~0.7MPa
Ambient temperature	-5~60°C
Recommended air tube	Nylon and polyurethane tube
Threaded seal	Seal tape (M5: Gasket)

Structure



Main Components

Name	Material
Body	Synthetic resin
Metal Body	Stainless steel
Ejector pin	Stainless steel
Nut	Copper alloy
Mounting nut	Copper alloy
Turning switch	Synthetic resin
Diaphragm	NBR
O-ring	NBR

ADD

Specifications

Universal Type

Model No.		Threaded size	Effective area (mm^2)	Recommended air tube No.
Air outlet specifications	Air inlet specifications			
MB4R-M3-O	MB4R-M3-I	M3	0.6	100U04 (O.D.∅4)
MB4R-M5-O	MB4R-M5-I	M5	0.6	
MB4R-01-O	MB4R-01-I	R⅛	0.6	
MB6R-M5-O	MB4R-M5-I	M5	0.64	100U06 (O.D.∅6)
MB6R-01-O	MB6R-01-I	R⅛	0.68	
B6R-M5SC-O	B6R-M5SC-I	M5	2.3	
B6R-01SC-O	B6R-01SC-I	R⅛	2.3	
B6R-02SC-O	B6R-02SC-I	R¼	2.3	
B8R-01SC-O	B8R-01SC-I	R⅛	4.8	100U08 (O.D.∅8)
B8R-02SC-O	B8R-02SC-I	R¼	5	
B8R-03SC-O	B8R-03SC-I	R⅜	5	
B10R-02SC-O	B10R-02SC-I	R¼	8.5	100U10 (O.D.∅10)
B10R-03SC-O	B10R-03SC-I	R⅜	8.5	
B10R-04SC-O	B10R-04SC-I	R½	8.5	
B12R-03SC-O	B12R-03SC-I	R⅜	14	100U12 (O.D.∅12)
B12R-04SC-O	B12R-04SC-I	R½	14	

Elbow Type

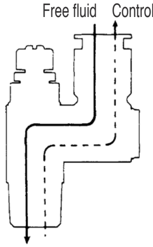
Model No.		Threaded size	Effective area (mm^2)	Recommended air tube No.
Air outlet specifications	Air inlet specifications			
M4R-M3-O	M4R-M3-I	M3	0.6	100U04 (O.D.∅4)
M4R-M5-O	M4R-M5-I	M5	0.6	
M4R-01-O	M4R-01-I	R⅛	0.6	
M6R-M5-O	M6R-M5-I	M5	0.64	100U06 (O.D.∅6)
M6R-01-O	M6R-01-I	R⅛	0.68	
6R-M5SC-O	6R-M5SC-I	M5	2.3	
6R-01SC-O	6R-01SC-I	R⅛	2.3	
6R-02SC-O	6R-02SC-I	R¼	2.3	
8R-01SC-O	8R-01SC-I	R⅛	4.8	100U08 (O.D.∅8)
8R-02SC-O	8R-02SC-I	R¼	5	
8R-03SC-O	8R-03SC-I	R⅜	5	
10R-02SC-O	10R-02SC-I	R¼	8.5	100U10 (O.D.∅10)
10R-03SC-O	10R-03SC-I	R⅜	8.5	
10R-04SC-O	10R-04SC-I	R½	8.5	
12R-03SC-O	12R-03SC-I	R⅜	14	100U12 (O.D.∅12)
12R-04SC-O	12R-04SC-I	R½	14	

(Note)
Effective area is the value of control fluid when the ejector pin is completely open.

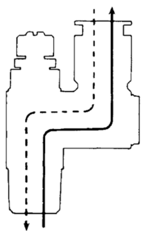
Control Method

Universal Type

Air outlet

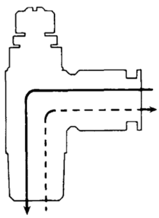


Air inlet

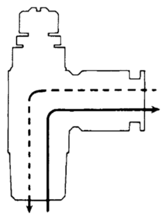


Elbow Type

Air outlet



Air outlet



⚠ Caution

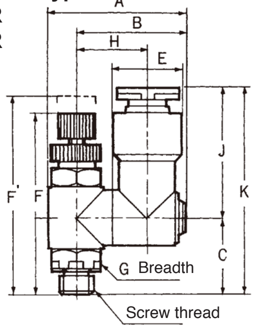
- Check the air flow direction of the fluid before mounting
- Manually tightening adjustable speed fitting first, then apply proper tool and force to tightening the rest. If it is too loose, air leakage may occur, yet if it is too tight (exceeding the torque shown in the following), the fitting may be damaged.

Threaded size	Torque
M3	Approximate 1/6 to 1/4 turn
M5	Approximate 1/12 to 1/6 turn
Rc⅛	4~6
Rc¼	7~9
Rc⅜	10~13
Rc½	20~23

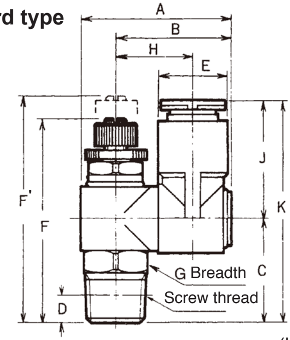
Universal type

(Unit: mm)

Miniature type
MB4R
MB6R



Standard type
B6R
B8R
B10R
B12R

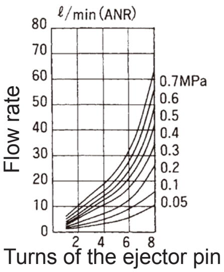


(Unit: mm)

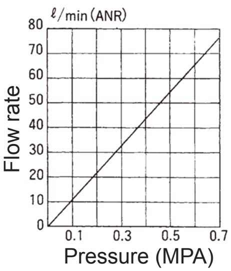
Model No.		Threaded size	Recommended air tube No.	Dimension											Weight (g)
Air outlet specifications	Air inlet specifications			A	B	C	D	E	F	F'	G	H	J	K	
MB4R-M3-O	MB4R-M3-I	M3x0.5	100U04 (O.D. ∅4)	21.9	17.9	12.5	–	∅ 11	30.1	32.5	8	11.3	19.2	32.2	10.5
MB4R-M5-O	MB4R-M5-I	M5x0.8				13.5			31.1	33.5				34.7	11.5
MB4R-01-O	MB4R-01-I	R⅛		22.4		16	4		33.6	36	10			36.7	14.5
MB6R-M5-O	MB6R-M5-I	M5x0.8	100U06 (O.D. ∅6)	23.3	17.9	13.5	–	∅ 13	31.1	33.5	8	12.3	21.7	36.7	12.5
MB6R-01-O	MB6R-01-I	R⅛		23.8		16	4		33.6	36	10			39.2	15.5
B6R-M5SC-O	B6R-M5SC-I	M5x0.8	100U06 (O.D. ∅6)	28.5	22	15.9	–	∅ 13	36.2	39.3	12	14.5	21.7	37.6	22.5
B6R-01SC-O	B6R-01SC-I	R⅛				19	4		39.3	42.4				40.7	25
B6R-02SC-O	B6R-02SC-I	R¼				22	6		42.3	45.4	14			43.7	30.5
B8R-01SC-O	B8R-01SC-I	R⅛	100U08 (O.D. ∅8)	33	25.5	20	4	∅ 15	41.9	46.9	14	17	24.2	44.2	34.5
B8R-02SC-O	B8R-02SC-I	R¼				23	6		44.9	49.9				47.2	39.5
B8R-03SC-O	B8R-03SC-I	R⅜				24	6.5		45.9	50.9	17			48.2	47.5
B10R-02SC-O	B10R-02SC-I	R¼	100U10 (O.D. ∅10)	39.9	30.9	24.5	6	∅ 17	48.3	54.3	17	20.2	26.6	51.1	58.5
B10R-03SC-O	B10R-03SC-I	R⅜				25.1	6.5		49.3	55.3				51.7	65
B10R-04SC-O	B10R-04SC-I	R½				29.5	8		53.3	59.3	21			56.1	83.5
B12R-03SC-O	B12R-03SC-I	R⅜	100U12 (O.D. ∅12)	43.4	32.9	26.5	6.5	∅ 20	52	61	19	21.7	29.1	55.6	85.5
B12R-04SC-O	B12R-04SC-I	R½				30.5	8		56	65	21			59.6	103.5

Characteristic of the flow rate

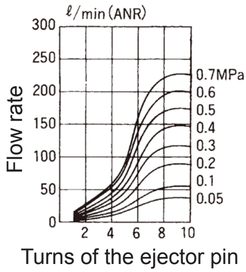
MB4R、M4R Control fluid



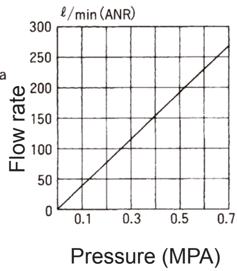
MB4R、M4R Free fluid



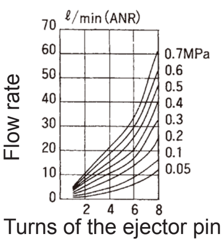
B6R、6R Control fluid



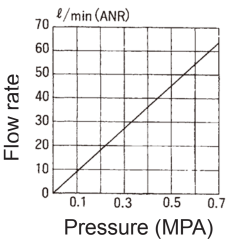
B6R、6R Free fluid



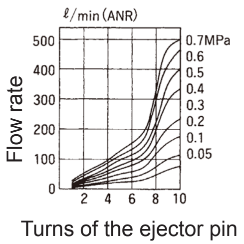
MB6R、M6R Control fluid



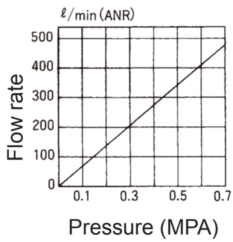
MB6R、M6R Free fluid



B8R、8R Control fluid



B8R、8R Free fluid

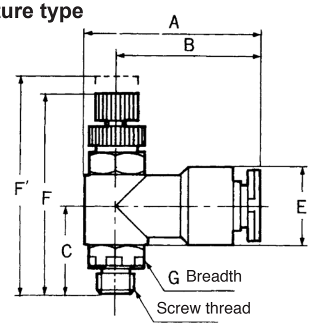


ADD

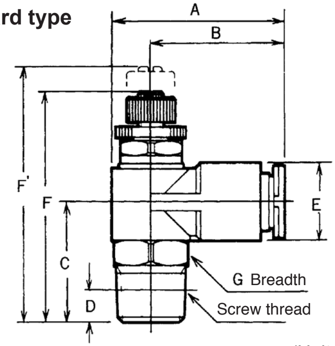
Elbow type

(Unit: mm)

Miniature type
M4R
M6R



Standard type
6R
8R
10R
12R

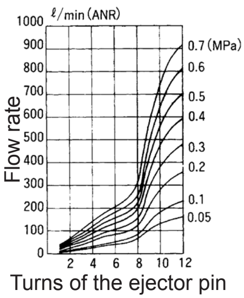


(Unit: mm)

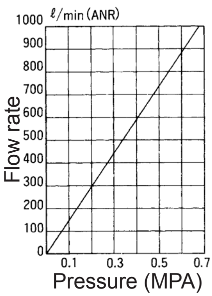
Model No.		Threaded size	Recommended air tube No.	Shapes and dimensions								Weight (g)
Air outlet specifications	Air inlet specifications			A	B	C	D	E	F	F'	G	
M4R-M3-O	M4R-M3-I	M3x0.5	100U04 (O.D. ∅4)	24.7	19.2	13	–	∅ 11	30.1	32.5	8	9.0
M4R-M5-O	M4R-M5-I	M5x0.8				14			31.1	33.5		10.0
M4R-01-O	M4R-01-I	R⅛		25.2		16.5	4		33.6	36	10	13.0
M6R-M5-O	M6R-M5-I	M5x0.8	100U06 (O.D. ∅6)	27.2	21.7	15	–	∅ 13	31.1	33.5	8	11.5
M6R-01-O	M6R-01-I	R⅛		27.7		17.5	4		33.6	36	10	14.0
6R-M5SC-O	6R-M5SC-I	M5x0.8	100U06 (O.D. ∅6)	28.2	21.7	16.4	–	∅ 13	36.2	39.3	12	20.0
6R-01SC-O	6R-01SC-I	R⅛				19.5	4		39.3	42.4		22.0
6R-02SC-O	6R-02SC-I	R¼				22.5	6		42.3	45.4	14	27.5
8R-01SC-O	8R-01SC-I	R⅛	100U08 (O.D. ∅8)	31.7	24.2	20.5	4	∅ 15	41.9	46.9	14	30.5
8R-02SC-O	8R-02SC-I	R¼				23.5	6		44.9	49.9		35.5
8R-03SC-O	8R-03SC-I	R⅜				24.5	6.5		45.9	50.9	17	43.0
10R-02SC-O	10R-02SC-I	R¼	100U10 (O.D. ∅10)	35.6	26.6	24.5	6	∅ 17	48.3	54.3	17	51.0
10R-03SC-O	10R-03SC-I	R⅜				25.1	6.5		49.3	55.3		58.0
10R-04SC-O	10R-04SC-I	R½				29.5	8		53.3	59.3	21	76.0
12R-03SC-O	12R-03SC-I	R⅜	100U12 (O.D. ∅12)	39.1	29.1	27	6.5	∅ 20	52	61	19	75.0
12R-04SC-O	12R-04SC-I	R½				31	8		56	65	21	93.0

Characteristic of the flow rate

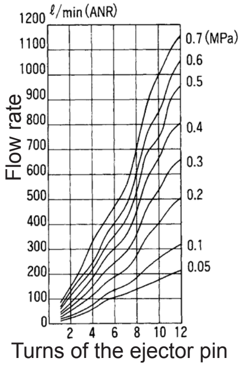
B10R ,10R Control fluid



B10R ,10R Free fluid



B12R ,12R Control fluid



B12R ,12R Free fluid