- ※ Centering Boss and Locating Hole for Accurate Positioning.
- ※ Operating Range of table is 0°~190° by Angle Adjusting Screw.
- ※ Compact Design Using Double Rack and Single Pinion.
- ※ Hollow Shaft Standard for Wiring and Piping.
- ※ Possible to fit Shock Absorbers as Stops.
- ※ Ease of Mounting With Integral Table.

How to order

MRB -10 R -RT -1

- MRB: Type
- -10: Bore size

Bore size
10
30
50
100
200

- R:

A	With adjusting bolt
R	With shock absorber

- -RT: Auto switch type

Perpendicular	In-line	Style
RTV	RT	Reed switch
RTNV	RTN	NPN
RTPV	RTP	PNP

(Refer to P.79 for detailed auto switch specifications)

- -1: Number of auto switch

Specifications

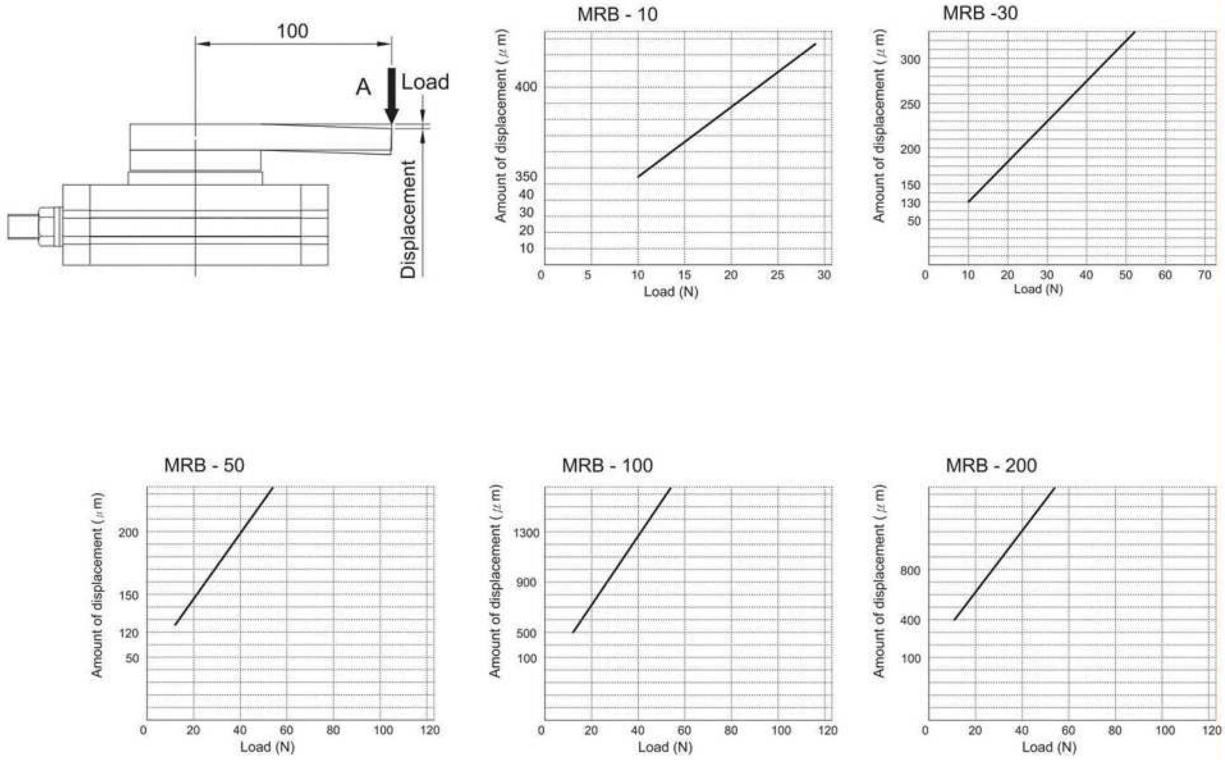
Model		MRB-10	MRB-30	MRB-50	MRB-100	MRB-200
Cylinder bore (mm)		15	20	25	32	40
Fluid		Air (non-lube)				
Maximum operating pressure (MPa)	With adjustment bolt	1				
	With internal shock absorber	0.6 Note1)				
Minimum operating pressure (MPa)		0.1~0.3				
Ambient and fluid temperature (°C)		0°C~60°C (No freezing)				
Allowable surge pressure (MPa)		1.5				
Cushion	With adjustment bolt	Rubber bumper				
	With internal shock absorber	Shock absorber				
Angle adjustment range		0° to 90° (max.) Note2)				

* Note 1) The maximum operating pressure of the actuator is restricted by the maximum allowable thrust of the shock absorber.
Note 2) Be careful if the rotation angle of a type with internal shock absorber is set below the value in the table below, the piston stroke will be smaller than the shock absorber's effective stroke, resulting in decreased energy absorption ability.

Model	MRB-10	MRB-30	MRB-50	MRB-100	MRB-200
Minimum rotation that will not allow decrease of energy absorption ability	52°	40°	60°	62°	82°

Table Displacement (Reference Values)

Displacement at point A when the load is applied to point A,
which is 100mm from the center of rotation.



Effective Torque

(N.m)

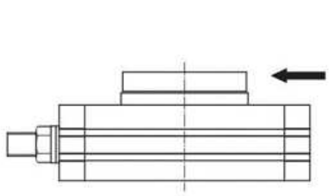
Model	Operating pressure (Mpa)									
	0.1	**0.2**	**0.3**	**0.4**	**0.5**	**0.6**	**0.7**	**0.8**	**0.9**	**1.0**
MRB-10	0.18	0.36	0.53	0.71	0.89	1.07	1.25	1.42	1.60	1.78
MRB-30	0.55	1.09	1.64	2.18	2.73	3.19	3.82	4.37	4.91	5.45
MRB-50	0.93	1.85	2.78	3.71	4.64	5.57	6.50	7.43	8.35	9.28
MRB-100	2.03	4.05	6.08	8.11	10.1	12.2	14.2	16.2	18.2	20.3
MRB-200	3.96	7.92	11.9	15.8	19.8	23.8	27.7	31.7	35.6	39.6

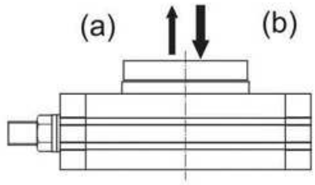
Weights

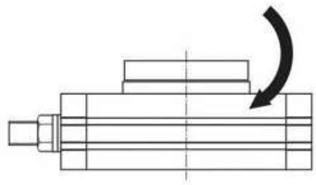
(g)

Model		**MRB-10**	**MRB-30**	**MRB-50**	**MRB-100**	**MRB-200**
Basic type	With adjustment bolt	600	1310	2100	4180	7670
	With internal shock absorber	610	1310	2120	4190	7720

Allowable Load







Model	Allowable radial load (N)	Allowable radial load (N)		Allowable moment (N.m)
		(a)	(b)	
	Basic type	Basic type	Basic type	Basic type
MRB-10	78	74	78	2.4
MRB-30	196	197	363	5.3
MRB-50	314	296	451	9.7
MRB-100	390	493	708	18.0
MRB-200	543	740	1009	25.0

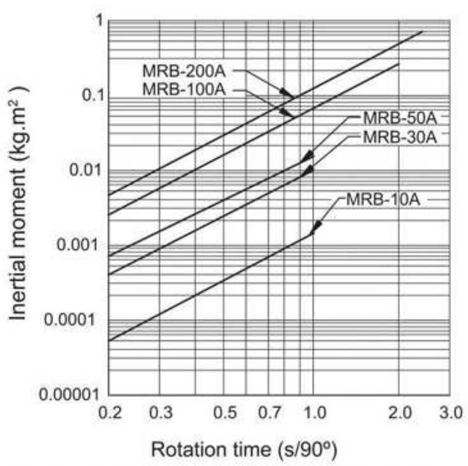
* Do not permit the load and moment applied to the table to exceed the allowable values shown in the table below.
(Operation above the allowable values can cause adverse effects on service life, such as play in the table and loss of accuracy)

Allowable kinetic energy and rotation time adjustment range

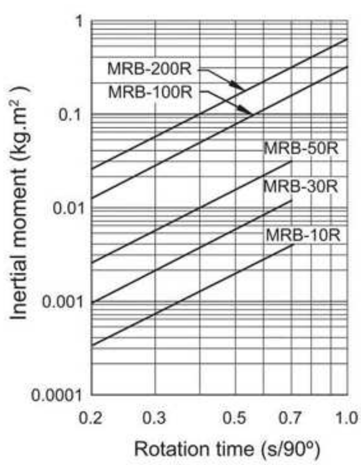
Model		MRB-10	MRB-30	MRB-50	MRB-100	MRB-200
Allowable kinetic energy (J)	With adjustment bolt	0.007	0.048	0.081	0.32	0.56
	With internal shock absorber	0.039	0.116	0.294	1.6	2.9
Rotation time adjustment range for stable operation (s/90°)	With adjustment bolt	0.2 to 1.0			0.2 to 2.0	0.2 to 2.5
	With internal shock absorber	0.2 to 0.7			0.2 to 1.0	

* Note) Be careful if a type with internal absorber is used below the minimum speed, the energy absorption ability will decrease drastically.

With adjustment bolt

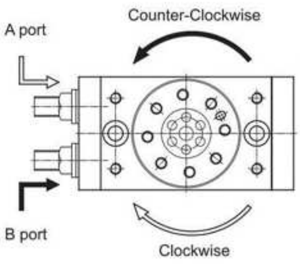


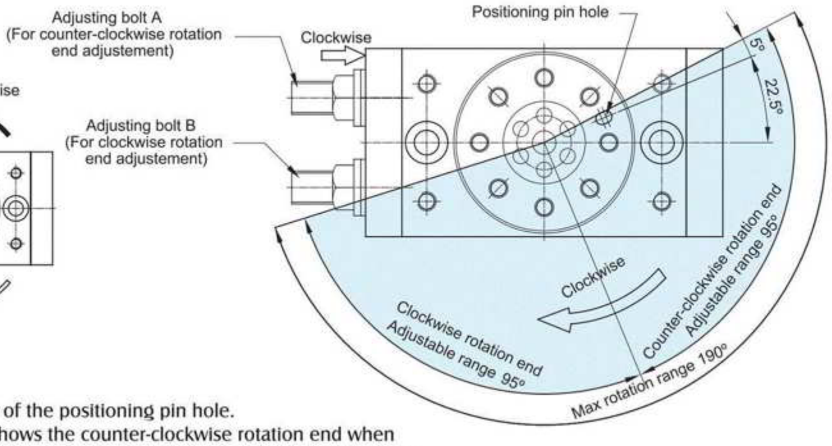
With internal shock absorber



Rotating Direction and Rotation

1.The rotation of the rotary table with internal shock absorber can be set in the same manner.
2.The rotary table turns in the clockwise direction when the A port is pressurized, and in the counter-clockwise direction when the B port is pressurized.
3.By adjusting the adjustment bolt, the rotation end can be set within the range shown in the drawing for the desired rotation.

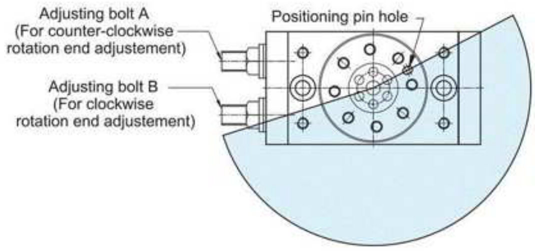




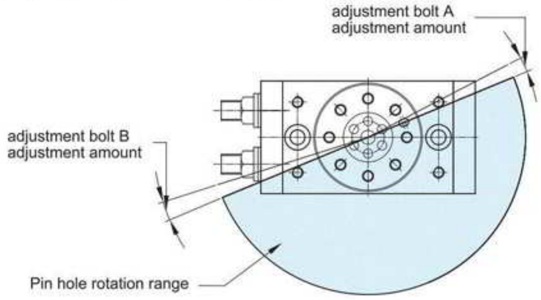
Note)
1.The drawing shows the rotation range of the positioning pin hole.
2.The pin hole position in the drawing shows the counter-clockwise rotation end when the adjustment bolts A and B are tightened equally and the rotation is adjusted to 180°

Rotation Range Examples

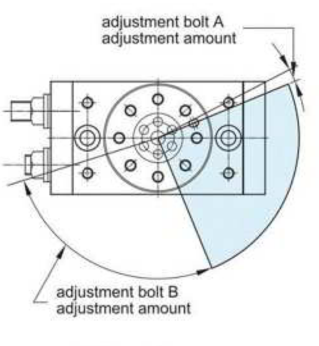
1.Various rotation ranges are possible as shown in the drawings below using adjustment bolts A and B.
(The drawings also show the rotation ranges of the positioning pin hole.)
2.The rotation of the rotary table with internal shock absorber can be set in the same manner.



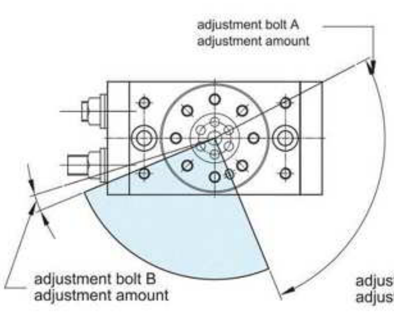
190° (Max) rotation



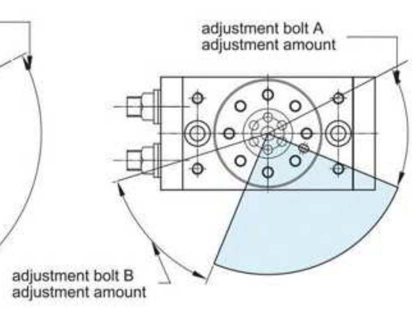
180° rotation



90° rotation



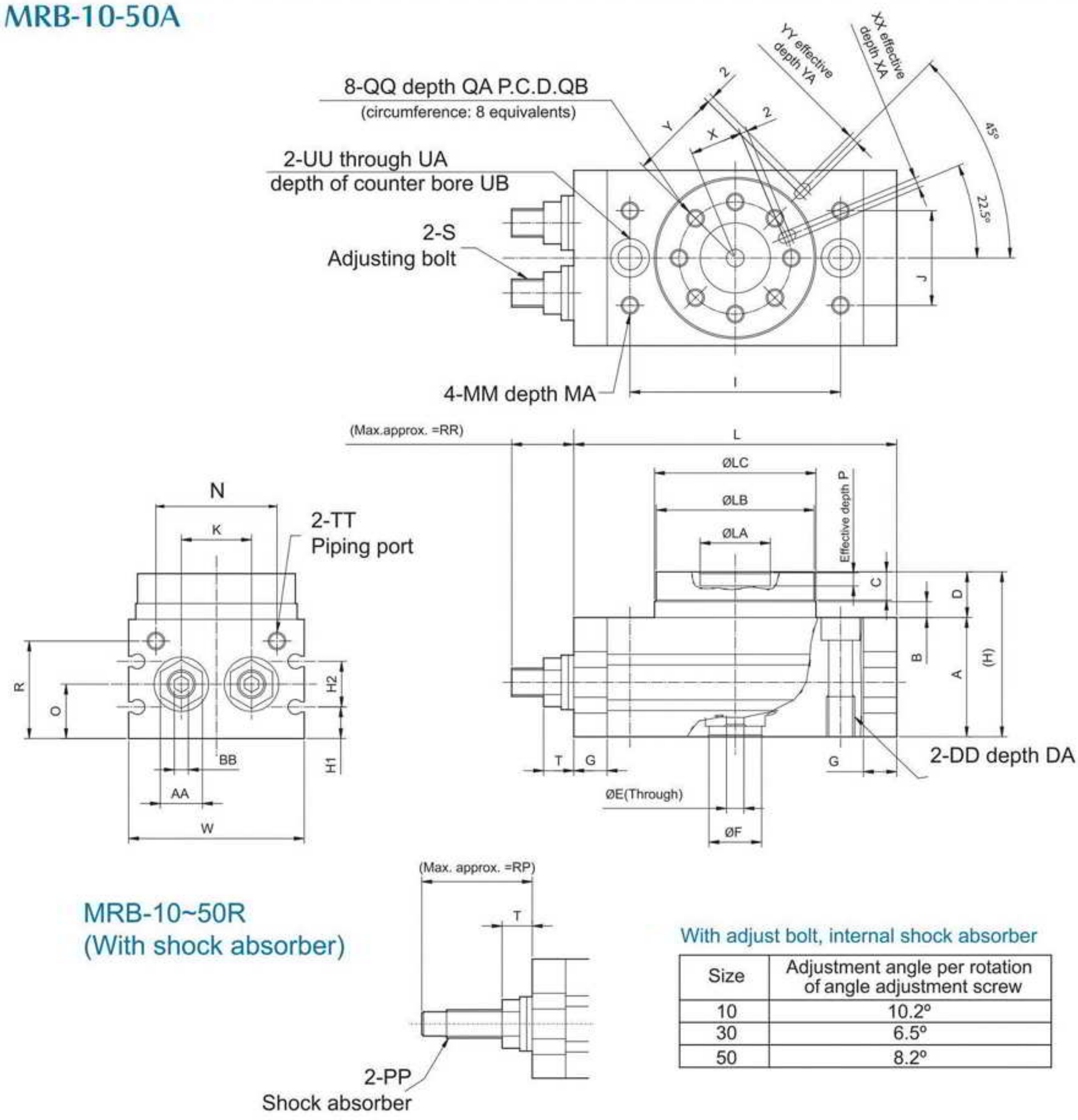
90° rotation



90° rotation

Dimensions

MRB-10-50A



MRB-10~50R
(With shock absorber)

With adjust bolt, internal shock absorber

Size	Adjustment angle per rotation of angle adjustment screw
10	10.2°
30	6.5°
50	8.2°

(mm)

Model	A	AA	B	BB	C	D	DA	DD	E	F	G	H	H1	H2	I	J	K	L	LA	LB	LC
MRB-10	34	12	4.5	4	8	13	12	M8x1.25	5	15H9	9.5	47	9	13	60	27	20	92	20H9	45h9	46h9
MRB-30	40	14	6.5	5	10	17	15	M10x1.5	9	22H9	12	57	11.5	14	84	37	29	127	32H9	65h9	67h9
MRB-50	46	19	7.5	6	12	20	18	M12x1.75	10	26H9	15.5	66	14.5	15	100	50	38	152	35H9	75h9	77h9

(mm)

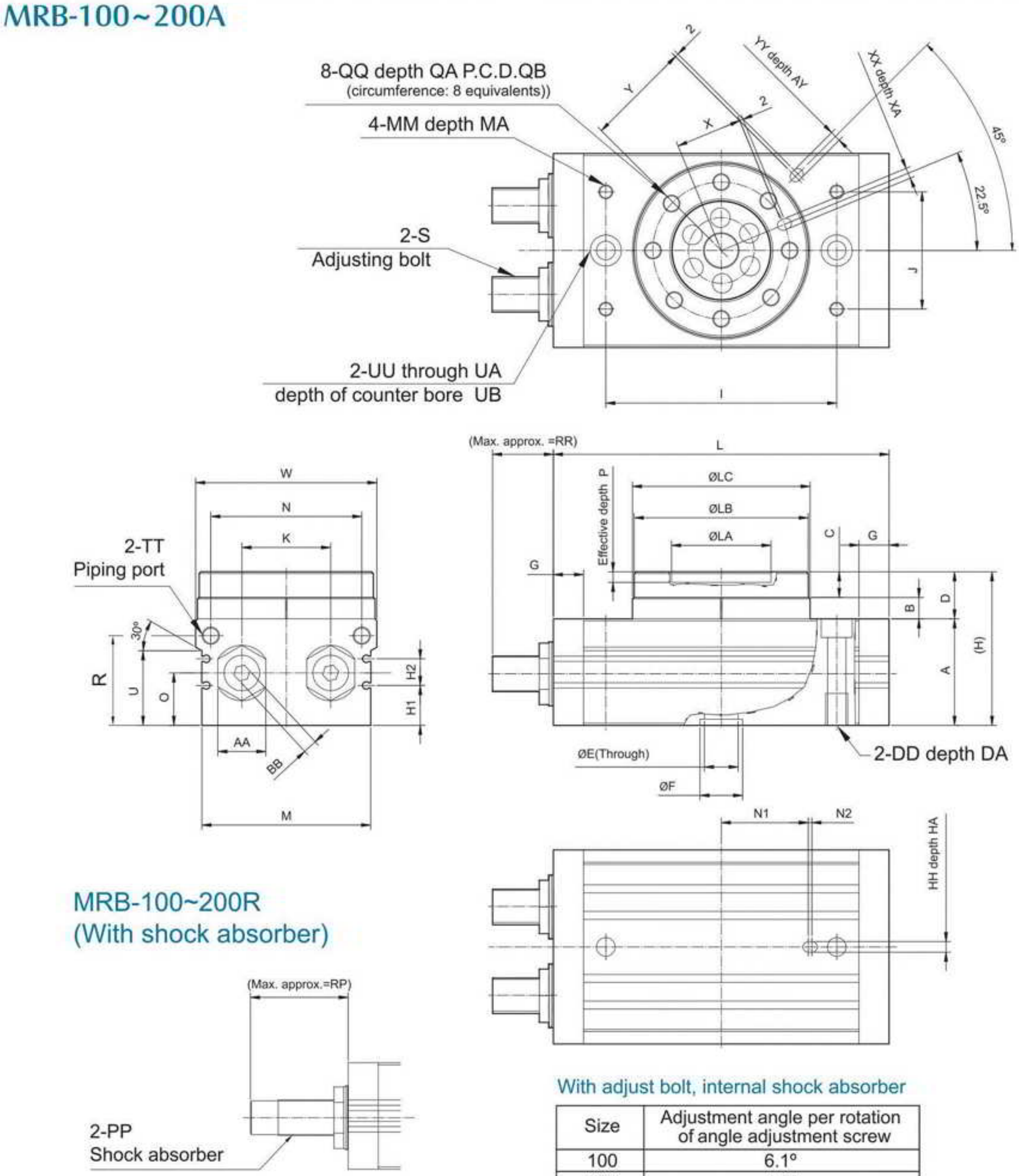
Model	MA	MM	N	O	P	PP	QA	QB	QQ	R	RP	RR	S	T	TT	UA
MRB-10	8	M5x0.8	34.5	15.5	4	PN-0806	8	32	M5x0.8	27.8	31.5	17.7	M8x1	8.6	M5x0.8	11
MRB-30	8	M6x1	50	18.5	4.5	PN-1007	10	48	M6x1	32	34.7	25	M10x1	10.6	Rc 1/8	14
MRB-50	8	M8x1.25	63	22	5	PN-1412	12	55	M8x1.25	37.5	51.7	31.4	M14x1.5	14	Rc 1/8	18

(mm)

Model	UB	UU	W	X	XA	XX	Y	YA	YY
MRB-10	6.5	6.8	50	15	3.5	3H9	27	3.5	3H9
MRB-30	8.5	8.6	70	23	4.5	4H9	39	4.5	4H9
MRB-50	10.5	10.5	80	26.5	5.5	5H9	45	5.5	5H9

Dimensions

MRB-100~200A



With adjust bolt, internal shock absorber

Size	Adjustment angle per rotation of angle adjustment screw
100	6.1°
200	4.9°

(mm)

Model	A	AA	B	BB	C	D	DA	DD	E	F	G	H	H1	H2	HA	HH	I	J	K	L	LA	LB
MRB-100	59	27	12	8	14.5	27	18	M12x1.75	19	24H9	17	86	22	15	4.5	6H9	130	66	50	189	56H9	98h9
MRB-200	74	36	15	10	16.5	32	25	M16X2	24	32H9	24	106	29	15	6.5	8H9	150	80	60	240	64H9	116h9

(mm)

Model	LC	M	MA	MM	N	N1	N2	O	P	PP	QA	QB	QQ	R	RP	RR	S	TT	U	UA
MRB-100	100h9	95	10	M8x1.25	85	49	2	29.5	6	PN-2015	14.5	77	M10x1.5	50.5	55.5	34.3	M20x1.5	Rc1/8	42	17.5
MRB-200	118h9	113	13	M12x1.75	103	54	2	36.5	9	PN-2725	16.5	90	M12x1.75	65.5	74.7	40.2	M27x1.5	Rc1/8	57	20

(mm)

Model	UB	UU	W	X	XA	XX	Y	YA	YY
MRB-100	10.5	10.4	102	37.5	6.5	6H9	59	4.5	6H9
MRB-200	12.5	14.2	120	44	8.5	8H9	69	4.5	8H9