

### Features

1. High precision balls used in bearing, vertical and horizontal precision are up to  $\pm 0.01$  mm.
2. Rotational type is easy for installation.
3. Rolling bearing design, load is 3 to 4 times larger than CRQ series.
4. Rotation is smooth and accurate.
5. Hollowed center rods for wire or tube to go through.
6. Standard angle adjusting device for wider angle adjustment ( $0^\circ \sim 190^\circ$ ).
7. Build in sensor for sensor switch application.

### Ordering Code

<b>MSQB</b>	<b>10</b>	<b>A</b>	<b>MT</b>
Model	Bore	Type	Sensor
	10 70 20 100 30 200 50	A: With angle adjusting screw R: With hydraulic cushioning device	Blank: Without sensor * To choose proper sensor switch, please refer to stroke/ sensor switch chart.

### Stroke / Sensor Switch Model

Model	*Sensor Switch Model ( For Slide Installation )
10	
20	
30	D-A90L
50	D-A93L
70	D-A96L
100	D-F9NL
200	D-F9BL

### Specification

Bore (mm)		10	20	30	50	70	100	200
Operation Fluid		Air ( Non-lub )						
Operation		Double Acting						
Max. Operation Pressure	With angle adjusting screw	1 MPa						
	With hydraulic Cushioning device	0.6 MPa						
Min. Operation Pressure		0.1 MPa						
Ambient and fluid temperature		0~60 °C						
Cushion		Rubber Buffer (Standard)/ Hydraulic cushioning device (Optional)						
Function	With angle adjusting screw	0.007J	0.025J	0.048 J	0.081J	0.24J	0.32J	0.56J
	With hydraulic Cushioning device	0.039J	0.116J		0.294J	1.1J	1.6J	2.9J
Angle adjusting range		0~190°						
Max. rotating angle		190°						
Steady rotating Time range	With angle adjusting screw	0.2~1.0s/90°			0.2~1.5s/90°		0.2~2.0s/90°	0.2~2.5s/90°
	With hydraulic Cushioning device	0.2~0.7s/90°			0.2~1.0s/90°			
Bore		Φ15	Φ18	Φ21	Φ25	Φ28	Φ32	Φ40
Port Size		M5 x 0.8			Rc1/8			

Max. operation pressure is subject to the Max. load of hydraulic cushioning device.

# MSQ Series

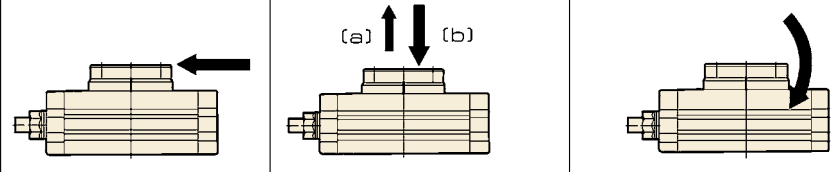
## Rotational Platform (Gear Type)



The way to automation

- Cylinder
- Sizing
- SI
- SI A.
- SC / SU
- SCT
- SC A.
- DSN
- DSN A.
- MA
- MAL
- MA/MAL A.
- SDA
- CQ2
- CJ2
- CDU
- TN
- CXS
- MGP
- MSQ**

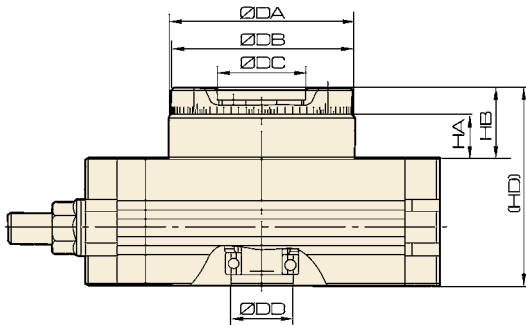
### Max. Load



Model	Max.honjontal load (N)	Max. vertical load (N)		Max. bending (N.m)
		(a)	(b)	
MSQ□10□	78	74	78	2.4
MSQ□20□	147	137	137	4.0
MSQ□30□	196	197	363	5.3
MSQ□50□	314	296	451	9.7
MSQ□70□	333	296	476	12.0
MSQ□100□	390	493	708	18.0
MSQ□200□	543	740	1009	25.0

### Overall Dimension

#### MSQA



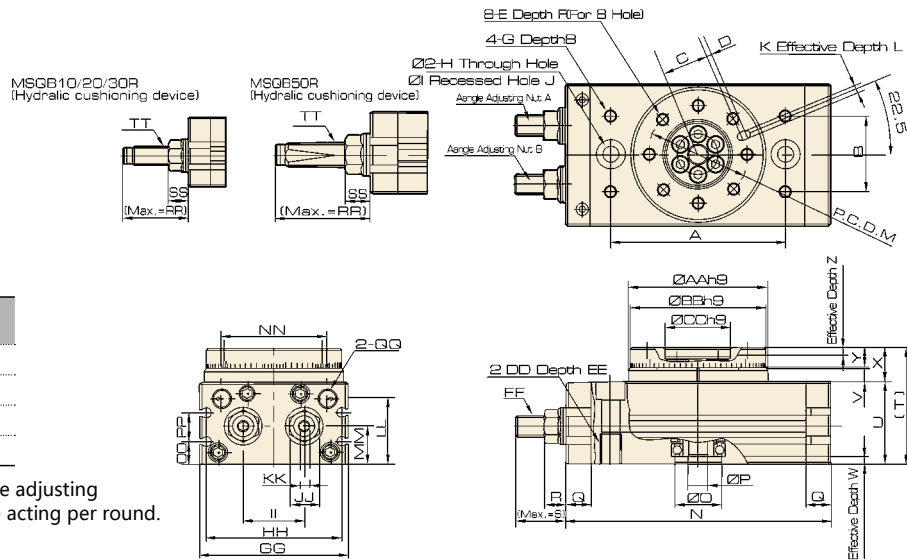
Model	DA	DB	DC	DD	HA	HB	BD
MSQA10□	46h8	45h8	20H8	15H8	10	18.5	52.5
MSQA20□	61h8	60h8	28H8	17H8	15.5	26	63
MSQA30□	67h8	65h8	32H8	22H8	16.5	27	67
MSQA50□	77h8	75h8	35H8	26H8	17.5	30	76

# MSQ Series Rotational Platform (Gear Type)

## Overall Dimension

### MSQB

∅10, 20, 30, 50



Model	Adjusting angle reached per round*
MSQB10□	Above 10.2°
MSQB20□	Above 7.2°
MSQB30□	Above 6.5°
MSQB50□	Above 8.2°

Above indicate the condition of angle adjusting screw or hydraulic cushioning device acting per round.

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- MSQ**

## Dimension

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
MSQB10□	60	27	15	2	M5 x 0.8	8	M5x0.8	6.8	11	6.5	3H9	3.5	32	92	15H9	5	9.5	8.6	17.7	47	34	4.5	3	13	8	4
MSQB20□	76	34	20.5	2	M6 x 1	10	M6x1	8.6	14	8.5	4H9	4.5	43	117	17H9	9	12	10.6	25	54	37	6.5	2.5	17	10	6
MSQB30□	84	37	23	2	M6 x 1	10	M6x1	8.6	14	8.5	4H9	4.5	48	127	22H9	9	12	10.6	25	57	40	6.5	3	17	10	4.5
MSQB50□	100	50	26.5	2	M8 x 1.25	12	M8x1.25	10.5	18	10.5	5H9	5.5	55	152	26H9	10	15.5	14	31.4	66	46	7.5	3	20	12	5

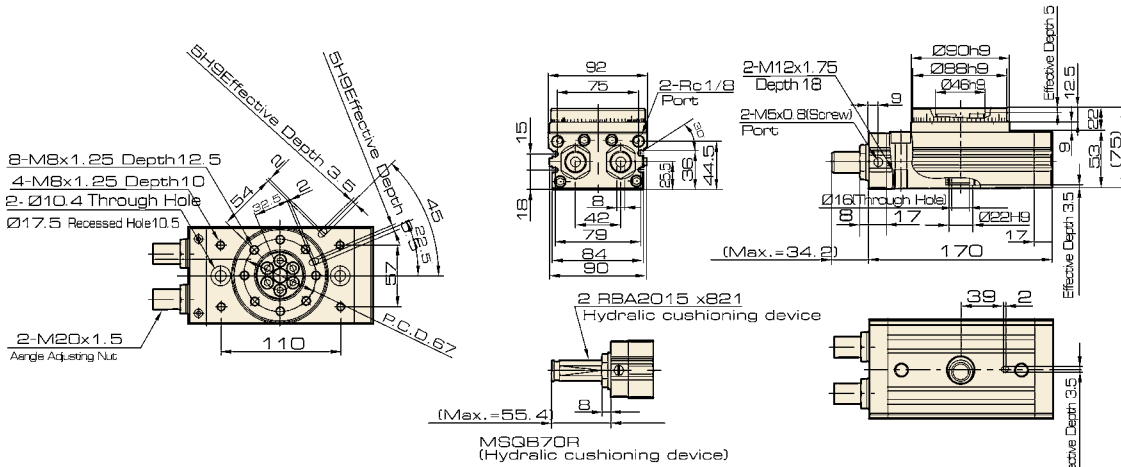
Model	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	Code of Hydraulic cushioning device
MSQB10□	46	45	20	M8 x 1.25	12	M8 x 1	50	45	20	12	4	27.8	15.5	34.5	9	13	M5 x 0.8	31.5	8.6	M8 x 1	RBA0805-X692
MSQB20□	61	60	28	M10 x 1.5	15	M10 x 1	65	60	27.5	14	5	28.8	16	51	10	12	M5 x 0.8	34.7	10.6	M10 x 1	RBA1006-X692
MSQB30□	67	65	32	M10 x 1.5	15	M10 x 1	70	65	29	14	5	32	18.5	50	11.5	14	1/8	34.7	10.6	M10 x 1	RBA1006-X692
MSQB50□	77	75	35	M12 x 1.75	18	M14 x 1.5	80	75	38	19	6	37.5	22	63	14.5	15	1/8	51.7	14	M14 x 1.5	RBA1411-X692

Max. measurement is at Max. rotation angle (190°)

## Overall Dimension

### MSQB

∅70



# MSQ Series

## Rotational Platform (Gear Type)

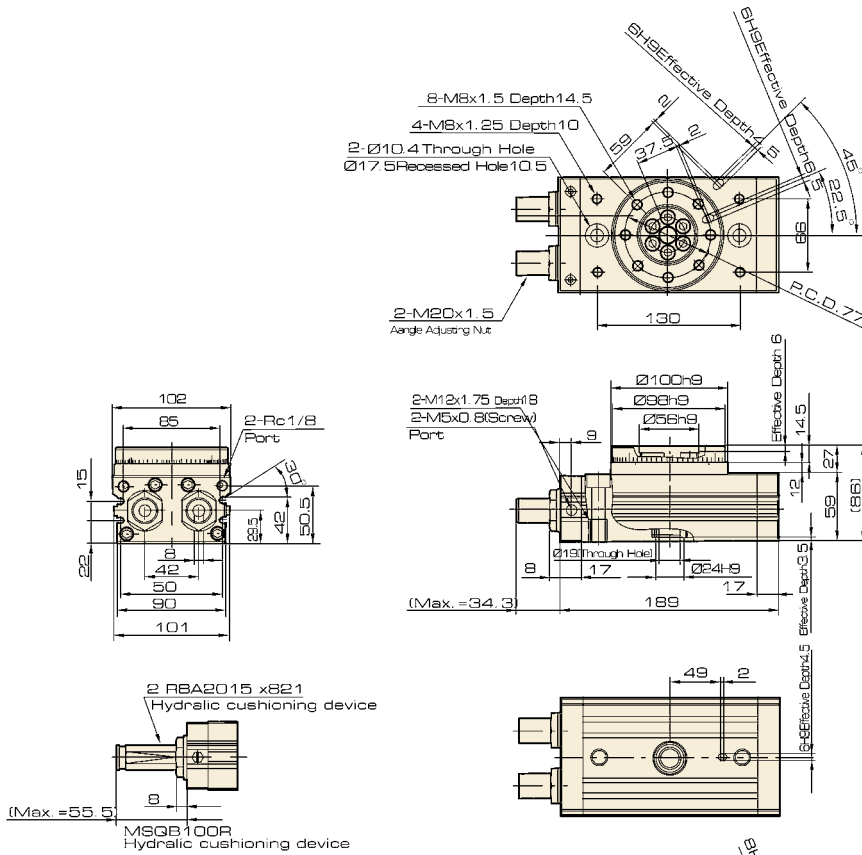


The way to automation

### Overall Dimension

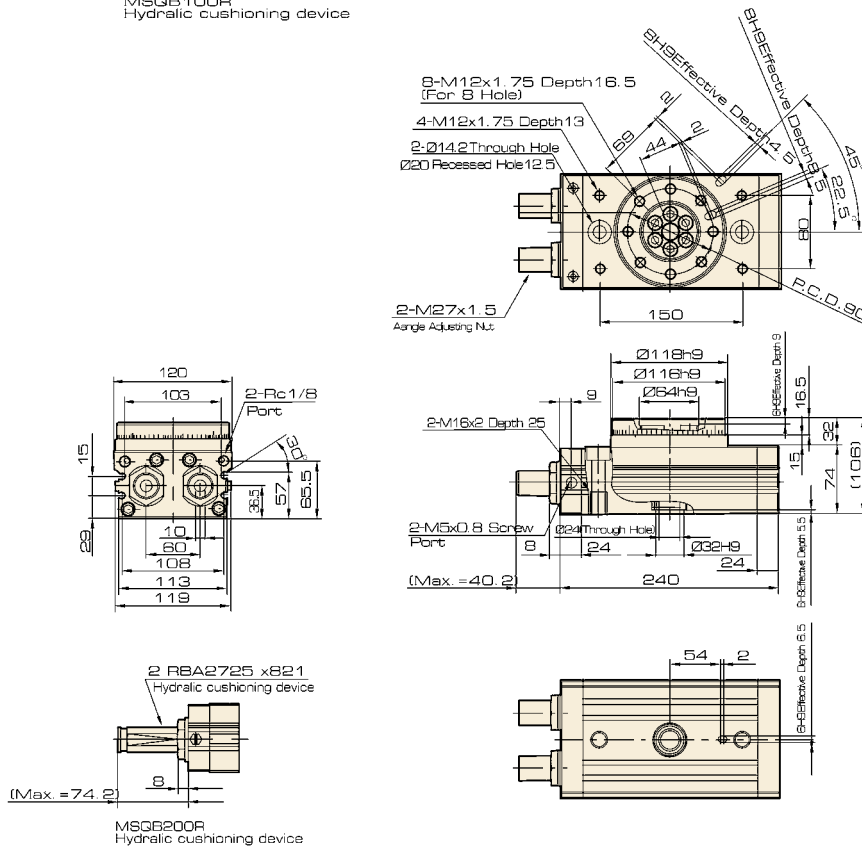
#### MSQB

Ø100



#### MSQB

Ø200



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