1. The high-precision type uses high-precision ball bearing, so the vertical and horizontal position accuracy is increased to 0.01mm.
2. Rotary table type, easy to install workpiece.
3. Rolling bearing design, the load is 3 to 4 times larger than NCRQ series.
4. The swing is smooth and accurate.
5. Hollow shafts can be used to introduce wires or air pipes.
6. Standard with angle adjustment device, wide range of adjustment angle (0~190°).
7. Built in magnetic ring, magnetic switch can be installed.

Specifications

Bore size(mm)		10	20	30	50	70	100	200
Fluid		Air (to be filtered by 40μm filter element)						
Action form		Double acting						
Maximum operating pressure	With adjustment bolt	1MPa						
	With internal shock absorber	0.6MPa Note)						
Minimum operating pressure		0.1MPa(High precision type)10 is 0.2MPa, 20~50 is 0.1MPa						
Ambient and fluid temperature		0 to 60℃ (with no freezing)						
Cushion		Rubber bumper/Shock absorber						
Allowable kinetic energy	With adjustment bolt	0.007J	0.025J	0.048J	0.081J	0.24J	0.32J	0.56J
	With internal shock absorber	0.039J	0.116J		0.294J	1.1J	1.6J	2.9J
Angle adjustment range		0~190°						
Maximum rotation		190°						
Stable swing time range	With adjustment bolt	0.2~1.0s/90°				0.2~1.5s/90°	0.2~2.0s/90°	0.2~2.5s/90°
	With internal shock absorber	0.2~0.7s/90°				0.2~1.0s/90°		
Cylinder bore size		Φ15	Φ18	Φ21	Φ25	Φ28	Φ32	Φ40
Port size		M5×0.8		Rc1/8				

Note: The maximum service pressure is limited by the maximum allowable load of the hydraulic buffer.

Ordering code

High Precision Type: **NMSQ A 10 A M9N □**

Basic Type: **NMSQ B – 10 A M9N □**

Size

10	70
20	100
30	200
50	

Acting type

A	With adjustment bolt
R	With internal shock absorber

Magnetic switch model

Blank	Without magnetic switch (Built-in magnet)

* Refer to the right table for the model of magnetic switch.

Number of magnetic switches

Blank	2 pcs.
S	1 pc.
n	n pcs.

Size

10
20
30
50

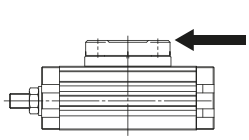
Magnetic switch model

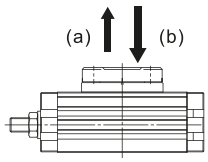
M9N, M9B, M9P

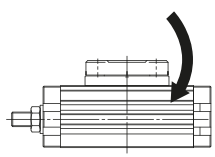
* Behind the magnetic switch model, Wire length representation mark: no mark: -0.5m, L-3m, Z-5m. Example: M9N, M9NL

Allowable load

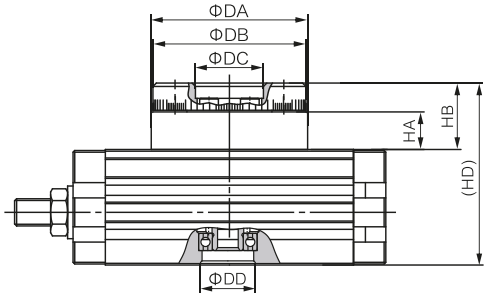
If the negative load or bending moment is too large, it will affect the accuracy or damage the structure







Model	Allowable radial load (N)		Allowable axial load (N)				Allowable bending moment (N • m)		Effective output torque (N • m) (0.5MPa below)
	Basic type	High precision type	(a)		(b)		Basic type	High precision type	
			Basic type	High precision type	Basic type	High precision type			
NMSQ□10□	78	86	74	74	78	107	2.4	2.9	0.89
NMSQ□20□	147	166	137	137	137	197	4.0	4.8	1. 84
NMSQ□30□	196	233	197	197	363	398	5.3	6.4	2.73
NMSQ□50□	314	378	296	296	451	517	9.7	12	4.64
NMSQ□70□	333	-	296	-	476	-	12.0	-	6.79
NMSQ□100□	390	-	493	-	708	-	18.0	-	10.1
NMSQ□200□	543	-	740	-	1009	-	25.0	-	19.8

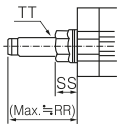


Model	DA(h8)	DB(h8)	DC(H8)	DD(H8)	HA	HB	HD
NMSQA10□	46	45	20	15	10	18.5	52.5
NMSQA20□	61	60	28	17	15.5	26	63
NMSQA30□	67	65	32	22	16.5	27	67
NMSQA50□	77	75	35	26	17.5	30	76

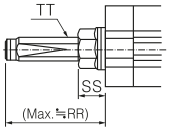
Dimensions

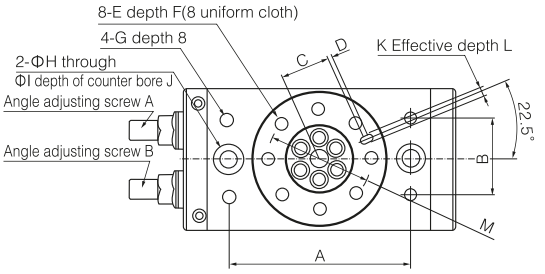
(NMSQB10 · 20 · 30 · 50)

With hydraulic buffer
NMSQB10/20/30R



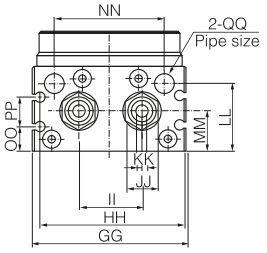
With hydraulic buffer
NMSQB50R

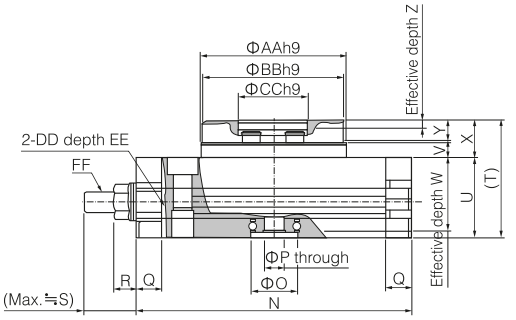




Model	Adjustment angle of 1 turns Note)
NMSQB10□	About 10.2°
NMSQB20□	About 7.2°
NMSQB30□	About 6.5°
NMSQB50□	About 8.2°

Note: It refers to the case that the angle adjusting screw or the hydraulic buffer rotates 1 turn.



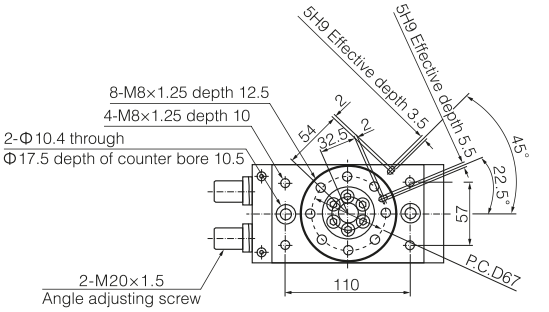


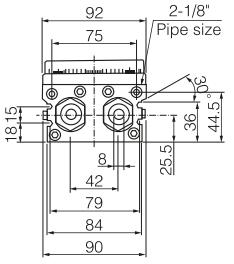
Note: the maximum dimension is at the maximum swing angle (190°).

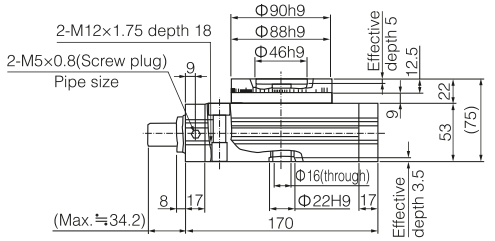
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
NMSQB10□	60	27	15	2	M5×0.8	8	M5×0.8	6.8	11	6.5	3H9	3.5	32	92	15H9	5	9.5	8.6	17.7	47	34	4.5	3	13	8	4
NMSQB20□	76	34	20.5	2	M6×1	10	M6×1	8.6	14	8.5	4H9	4.5	43	117	17H9	9	12	10.6	25	54	37	6.5	2.5	17	10	6
NMSQB30□	84	37	23	2	M6×1	10	M6×1	8.6	14	8.5	4H9	4.5	48	127	22H9	9	12	10.6	25	57	40	6.5	3	17	10	4.5
NMSQB50□	100	50	26.5	2	M8×1.25	12	M8×1.25	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

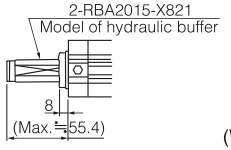
Model	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	Buffer model
NMSQB10□	46	45	20	M8×1.25	12	M8×1	50	45	20	12	4	27.8	15.5	34.5	9	13	M5×0.8	31.5	8.6	M8×1	RBA0805-X692
NMSQB20□	61	60	28	M10×1.5	15	M10×1	65	60	27.5	14	5	28.5	16	51	10	12	M5×0.8	34.7	10.6	M10×1	RBA1006-X692
NMSQB30□	67	65	32	M10×1.5	15	M10×1	70	65	29	14	5	32	18.5	50	11.5	14	1/8	34.7	10.6	M10×1	RBA1006-X692
NMSQB50□	77	75	35	M12×1.75	18	M14×1.5	80	75	38	19	6	37.5	22	63	14.5	15	1/8	51.7	14	M14×1.5	RBA1411-X692

NMSQB70

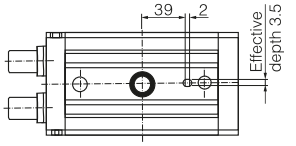






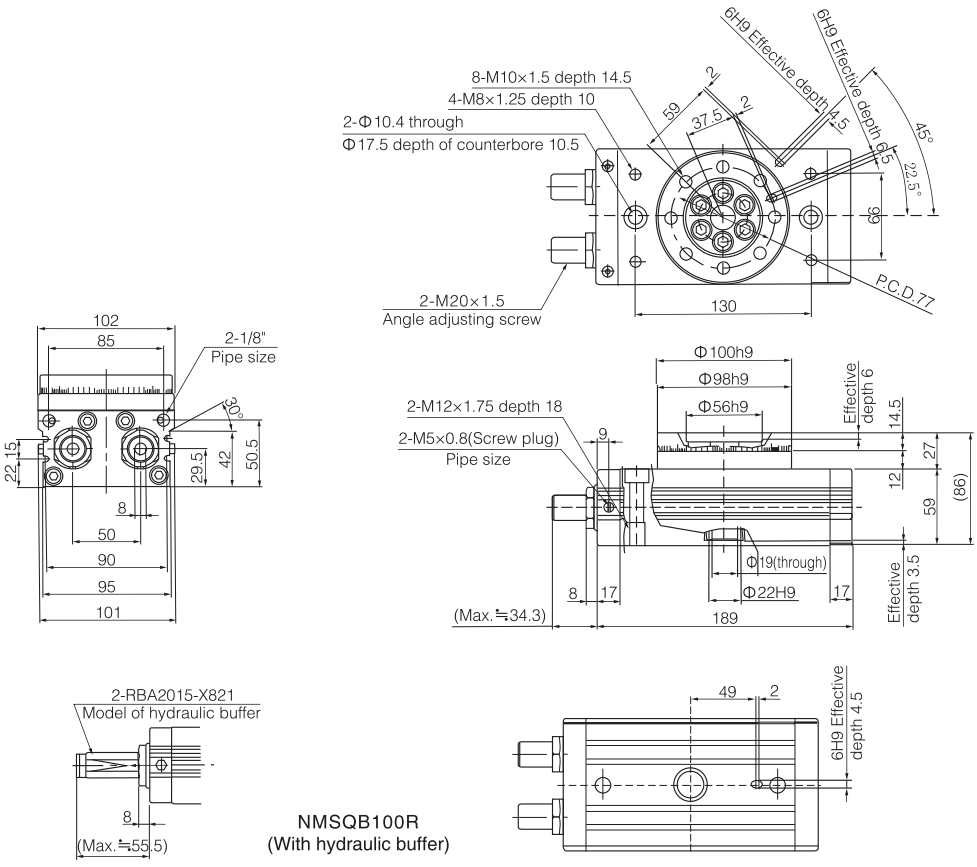


NMSQB70R
(With hydraulic buffer)



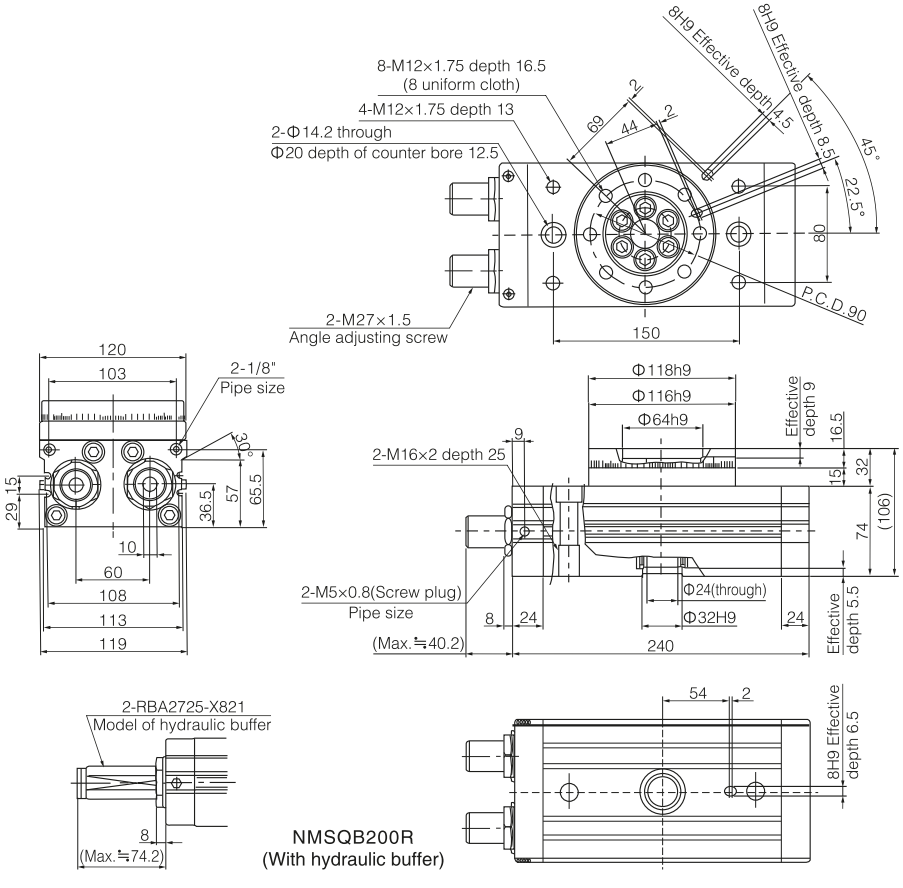
Note: the maximum dimension is at the maximum swing angle (190°).

NMSQB100



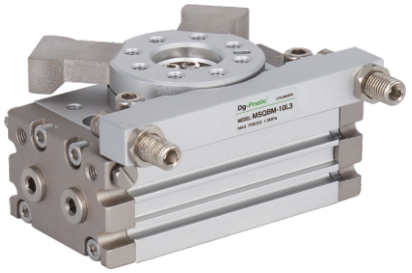
NMSQB100R
(With hydraulic buffer)

NMSQB200



NMSQB200R
(With hydraulic buffer)

NMSQ Series
Rotary Table/Rack & Pinion Type (With External Shock Absorber)

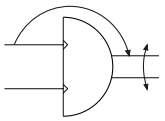


Specifications

Bore size(mm)		10	20	30	50
Fluid		Air (to be filtered by 40μm filter element)			
Maximum operating pressure		1 MPa			
Minimum operating pressure		0.2 MPa			
Ambient and fluid temperature		0 to 60℃ (With no freezing)			
Cushion		Shock absorber			
Shock absorber model	For low energy	RB0805	RB1006		RB1411
	For high energy	RB0806	RB1007		RB1412
Rotating		90°, 180°			
Angle adjustment range		Each rotation end ±3°			
Bore size		Φ15	Φ18	Φ21	Φ25
Port size	End ports	M5×0.8		Rc1/8, G1/8, NPT1/8	
	Side ports	M5×0.8			

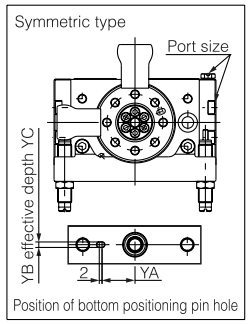
The service life of the shock absorber may be different from the rotary table body depending on the operating conditions. Refer to specific product precautions for the suitable replacement period.

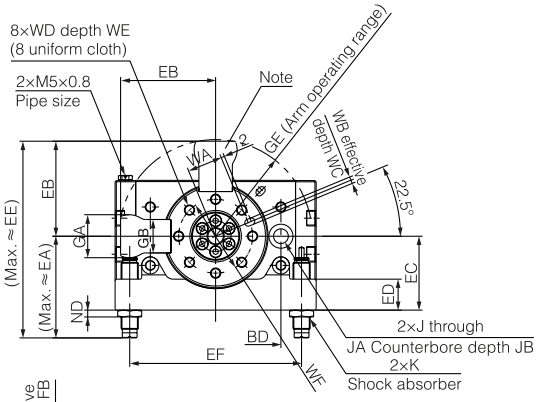
Symbol

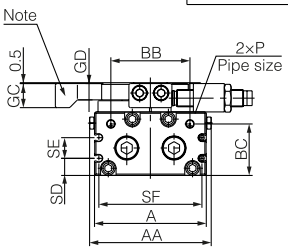


Dimensions

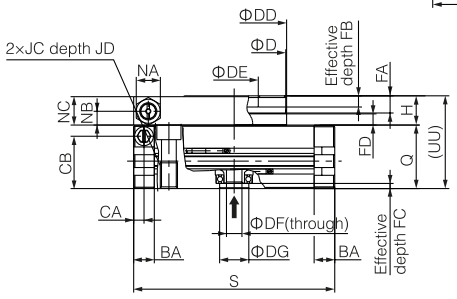
Basic type/NMSQB□L/H□

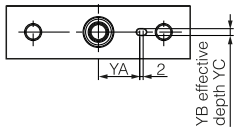




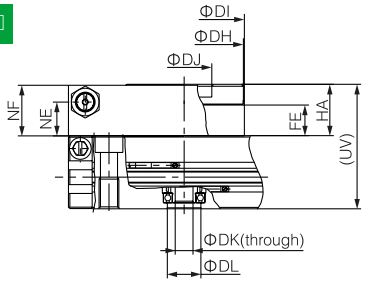


Note: This part is not available with 180° specification.





High precision type/NMSQA□L/H□



Size	DH	DI	DJ	DK	DL	FE	HA	NE	NF	UV
10	45	46	20H8	5	15H8	10	18.5	11	18	52.5
20	60	61	28H8	9	17H8	15.5	26	17	25.5	63
30	65	67	32H8	9	22H8	16.5	27	18	26.5	67
50	75	77	35H8	10	26H8	17.5	30	18.5	29.5	76

Size	AA	A	BA	BB	BC	BD	CA	CB	D	DD	DE	DF	DG	EA	EB	EC	ED	EE	FA	EF	FB	FC	FD	GA	GB	GC	GD	GE	H
10	55.4	50	9.5	34.5	27.8	60	4.5	28.5	45	46	20H9	5	15H9	52.9	44.3	33.5	14	97.2	80	8	4	3	4.5	20	15.6	11	7.5	45.2	13
20	70.8	65	12	46	29	76	6	30.5	60	61	28H9	9	17H9	61.8	55.3	43	18	117.1	100	10	6	2.5	6.5	25	19.5	14	9.5	56.4	17
30	75.4	70	12	50	32	84	6.5	33.5	65	67	32H9	9	22H9	63.1	60.3	46	19.5	123.4	110	10	4.5	3	6.5	27	21.5	14	9.5	61.5	17
50	85.4	80	15.5	63	37.5	100	10	37.5	75	77	35H9	10	26H9	86.8	71.4	56	22	158.2	130	12	5	3	7.5	32	28	18	11.5	72.9	20

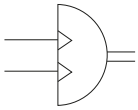
Size	J	JA	JB	JC	JD	K	NA	NB	NC	ND	P	Q	SD	S	SE	SF	UU	WA	WB	WC	WD	WE	WF	YA	YB	YC
10	6.8	11	6.5	M8×1.25	12	M8×1	10	5.5	12.5	4	M5×0.8	34	92	9	13	45	47	15	3H9	3.5	M5×0.8	8	32	19	3H9	3.5
20	8.6	14	8.5	M10×1.5	15	M10×1	14	8	16.5	4	M5×0.8	37	117	10	12	60	54	20.5	4H9	4.5	M6×1	10	43	24	4H9	4.5
30	8.6	14	8.5	M10×1.5	15	M10×1	14	8	16.5	4	1/8"	40	127	11.5	14	65	57	23	4H9	4.5	M6×1	10	48	28	4H9	4.5
50	10.5	18	10.5	M12×1.75	18	M14×1.5	19	8.5	19.5	6	1/8"	46	15	14.5	15	75	66	26.5	5H9	5.5	M8×1.25	12	55	33	5H9	5.5

Specifications

Bore size(mm)		30	50	63	80	100
Fluid		Air (to be filtered by 40μm filter element)				
Action form		Double acting				
Maximum operating pressure		1 MPa				
Minimum operating pressure		0.1 MPa				
Ambient and fluid temperature		0 to 60℃ (with no freezing)				
Backlash		None*	Within 1°			
Tolerance in rotating angle		$^{+4°}_{0}$				
Lubrication		Don't need				
Output torque		1.9	9.3	17	32	74
Allowable kinetic energy (J)	Without cushion	0.01	0.05	0.12	0.16	0.54
	With air cushion	-	0.98	1.5	2.0	2.9
Swing time range (seconds/90°)		0.2~1	0.2~2	0.2~3	0.2~4	0.2~5
Port size		M5×0.8	1/8"	1/8"	1/4"	3/8"

Note: If lubrication is required, please use turbine No.1 oil ISO VG32.

Symbol



Ordering code

NC D RA1 B W U 50 – 90 □ – A73 □

Built-in magnet

Blank	Without magnetic ring
D	Built-in magnet

Mounting

B	Basic type
L	Foot type
*F	Flange type

* Φ30 Without flange type

Shaft type

S	Single shaft
*W	Double shaft

* Φ30 Only biaxial
* In addition, single axis tetrahedron (x), double axis keyed (y) and double axis tetrahedron (z) are available.

Angle adjusting unit

Blank	Without angle adjusting unit
U	With angle adjusting unit

* Φ30 Without Angle adjusting unit. Maximum angle adjustment range is 90°.
Example: 90° type - 0~90°
180° type - 90°~180°

Bore size

30	30mm
50	50mm
63	63mm
80	80mm
100	100mm

Rotating angle

90	90°
180	180°

* In addition, 100° and 190° are available.

Air cushion

Blank	None
*C	With air cushion

* Except air-hydro type

Magnetic switch model

Blank	Without magnetic switch (Built-in magnet)

* Refer to the right table for the model of magnetic switch.
* No built-in magnetic ring no such item.

Number of magnetic switches

Blank	2 pcs.
S	1 pc.

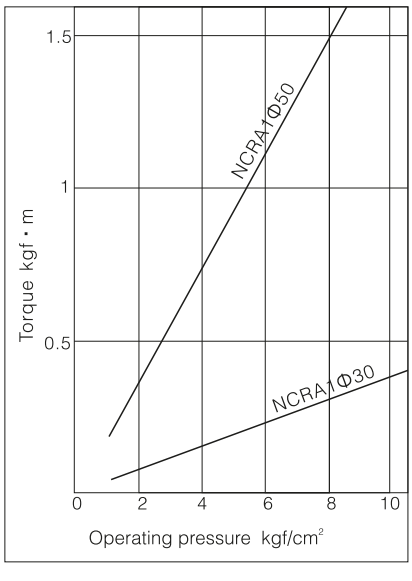
Angle/Magnetic switch model

Bore size (mm)	Rotating angle	Track installation	
		Magnetic switch model	Mount model
30	90°, 180°	A73	P294010-24
50		A54	P294020-24
63			
80			
100			

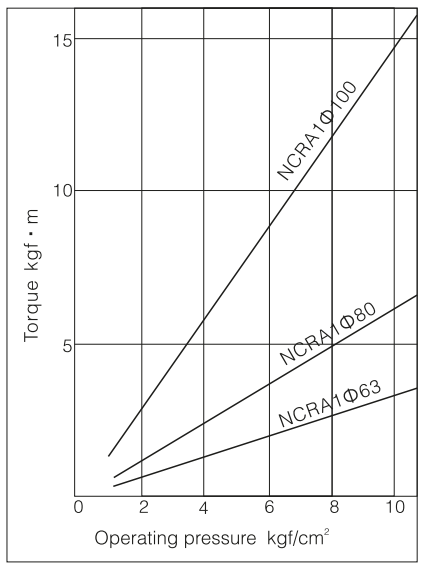
* Refer to magnetic switch series for magnetic switch specifications and characteristics.
Wire length representation mark:
no mark: -0.5m, L-3m, Z-5m.
Example: M9N, M9NL

Torque chart

Φ30, Φ50mm

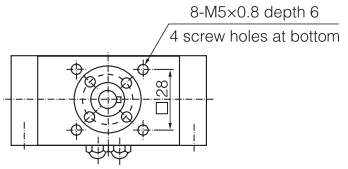


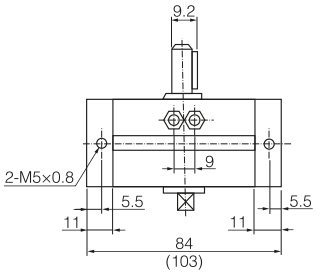
Φ63, Φ80, Φ100

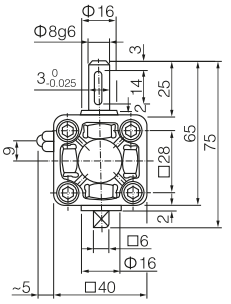


Dimensions

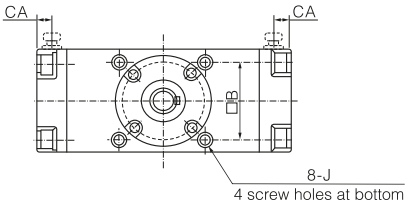
Φ30

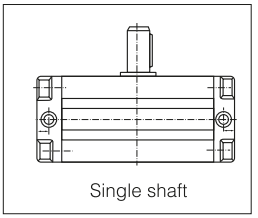


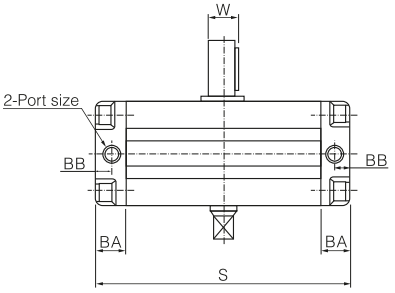


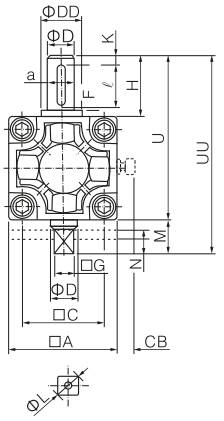


Φ50-Φ100





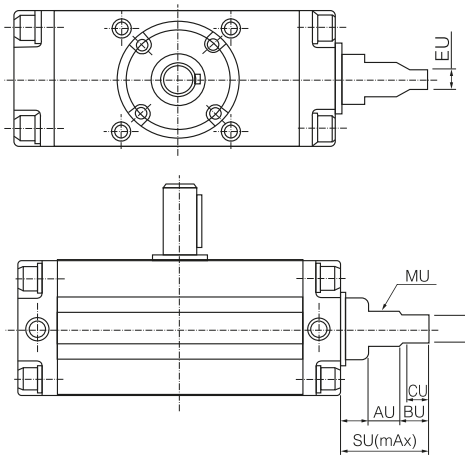




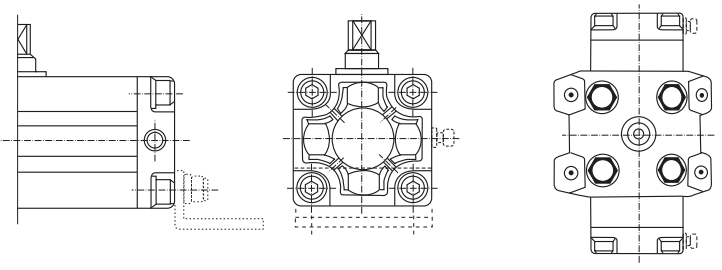
( ): are the dimensions of 180°

Size	Port size (mm)	Basic Type: Single shaft															Flat key		Double shaft					Built-in magnet	
		□A	□B	□C	ΦD	ΦDD	F	H	J	K	S	U	W	BA	BB	CA	CB	a	I	ΦD	□G	ΦL	M	UU	S(90°)	S(180°)
50	1/8"	62	48	46	15	25	2.5	36	M8×1.25 depth 8	5	144 (177)	98	17	17	8.5	8.5	13	$5^{0}_{-0.030}$	25	15	11	14	20	118	156	189
63	1/8"	76	60	57	17	30	2.5	41	M10×1.5 depth 12	5	136 (201.5)	117	19.5	20	10	10	14	$6^{0}_{-0.030}$	30	17	13	16	22	139	175	213.5
80	1/4"	92	72	70	20	35	3	50	M12×1.75 depth 13	5	186 (230)	142	22.5	23.5	12	12	18	$6^{0}_{-0.030}$	40	20	15	19	25	167	199	243
100	3/8"	112	85	85	25	40	4	60	M12×1.75 depth 14	5	245 (311)	172	28	25	12.5	12.5	18	$8^{0}_{-0.036}$	45	25	19	24	30	202	259	325

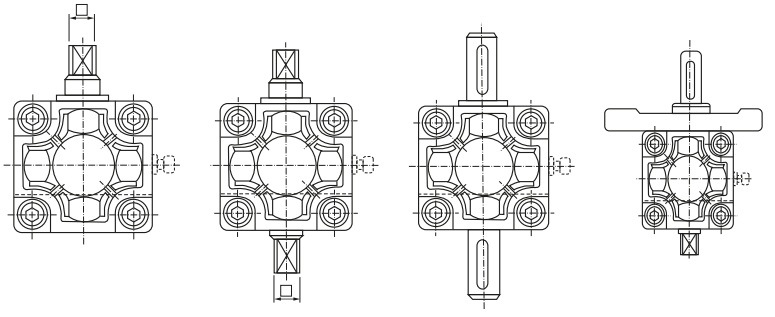
Angle adjustment type



Other forms only (Φ50~Φ100)



Foot type (NC□RA1L□)



Single shaft with four chamfers (NC□RA1BX□)

Double shaft with four chamfers (NC□RA1BZ□)

Double shaft with key (NC□RA1BY□)

Flange type (NC□RA1F□)

* Please refer to the basic type for other dimensions

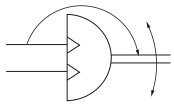
Model	AU	BU	CU	ΦDU	EU	SU	MU
NCRA1B□U50	15	11	9	14	12	45	M16×1.5
NCRA1B□U63	19	13	11	18	14	54.5	M20×1.5
NCRA1B□U80	22	16	13	22	19	62.5	M24×1.5
NCRA1B□U100	22	16	13	22	19	73.5	M24×1.5

Specifications

Bore size(mm)		10	15	20	30	40
Fluid		Air (to be filtered by 40μm filter element)				
Action form		Double acting				
Maximum operating pressure		0.7 MPa		1.0 MPa		
Minimum operating pressure		0.15 MPa		0.1 MPa		
Ambient and fluid temperature		0 to 60℃ (no freezing)				
Cushion		Rubber bumper		Not attached, Air cushion		
Swing angle		90°, 180°				
Angle adjustment range		Rotation end ±5°				
Output (N·m) Note)		3	7.5	18	30	53
Allowable kinetic energy (kgf/cm)	Without cushion	0.0025	0.004	0.25	0.49	0.83
	With air cushion	-	-	1.2	2.5	4.1
Swing time range (seconds/90°)		0.2~0.7		0.2~1		
Port size		M5×0.8		1/8"		

Note: Output under the operating pressure at 0.5 MPa.

Symbol



Ordering code

Basic type: NCRQ2B S 20 □ 90 □

Built-in magnet type: NCDRQ2B S 20 □ – 90 □ – M9B □

Built-in magnet

Shaft type

S	Single shaft
W	Double shaft

Bore size

10	10mm
15	15mm
20	20mm
30	30mm
40	40mm

Port type

Size	Port type	
10, 15	Blank	M5
20, 30, 40	Blank	Rc1/8
	TF	G1/8
	TN	NPT1/8
	TT	NPTF1/8

Rotating angle

90	80° to 100°
180	170° to 190°

Suffix symbol

Size	Cushion	
	Blank	Air cushion
10, 15	Blank	-*
20,30,40		C

* Bore size 10, 15 has no air cushion.

Magnetic switch model

Blank	Without magnetic switch (Built-in magnet)

* Refer to the right table for the model of magnetic switch.

Number of magnetic switches

Blank	2 pcs.
S	1 pc.
n	n pcs.

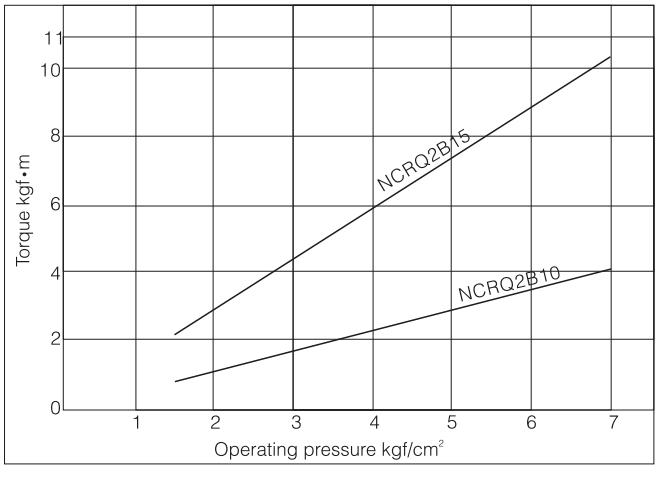
Magnetic switch model

M9N, M9P, M9B

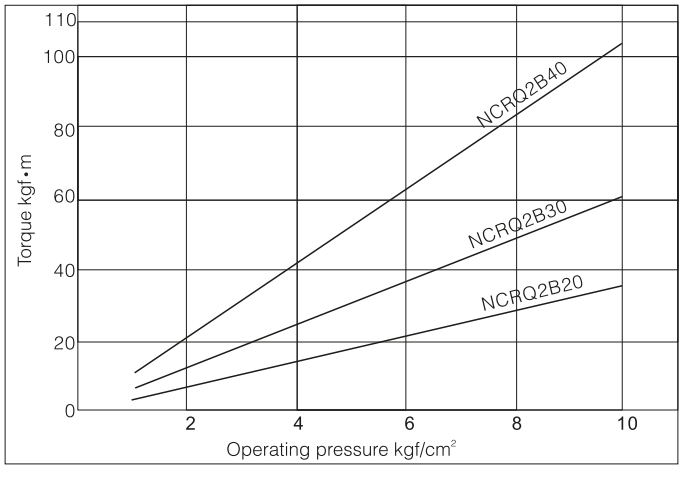
* Behind the magnetic switch model, Wire length representation mark: no mark: -0.5m, L-3m, Z-5m. Example: M9N, M9NL

Torque chart

NCRQ2BW10 • 15

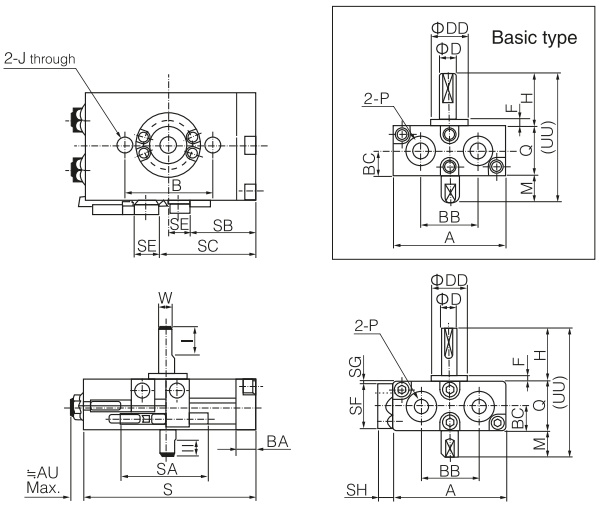


NCRQ2BW20 • 30 • 40

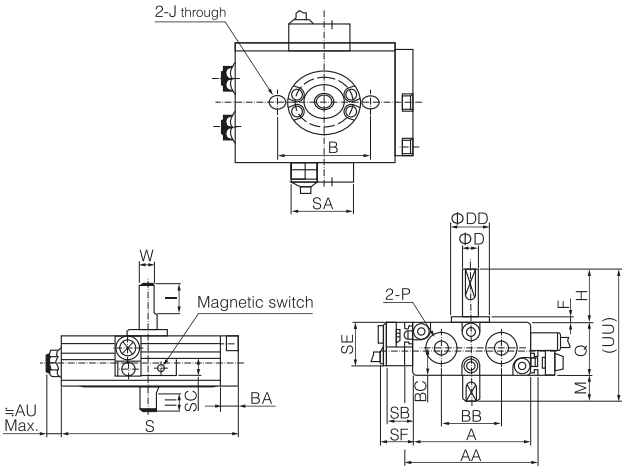


Dimensions

Built in magnetic ring series D-90A·93A type



Built in magnetic ring series D-A7·A8·F7·F8 type



Model	A	B	BB	ΦD(g6)	ΦDD	F	H	J	I	II	M	P	Q	S	(UU)	W	≒AU	BA	BC
NCRQ2BW10-90	37	29	19	5	12	2	18	M5×0.8	10	6	9	M5×0.8	17	56	44	4.5	5	6	8.5
NCRQ2BW10-180	37	29	19	5	12	2	18	M5×0.8	10	6	9	M5×0.8	17	69	44	4.5	5	6	8.5
NCRQ2BW15-90	48	31	27	6	14	2	20	M5×0.8	10	7	10	M5×0.8	20	65	50	5.5	5	7	10
NCRQ2BW15-180	48	31	27	6	14	2	20	M5×0.8	10	7	10	M5×0.8	20	82	50	5.5	5	7	10

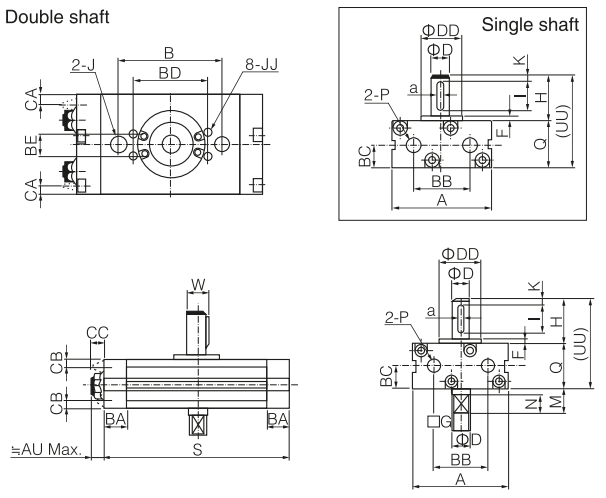
Built in magnetic ring with switch (D-90A·93A type)

Model	SA	SB	SC	SE	SF	SG	SH
NCDRQBW10-90	29	21	32	8	16	0.5	5
NCDRQBW10-180	29	24	42	8	16	0.5	5
NCDRQBW15-90	29	24	37	8	16	0.5	4
NCDRQBW15-180	29	28	50	8	16	0.5	4

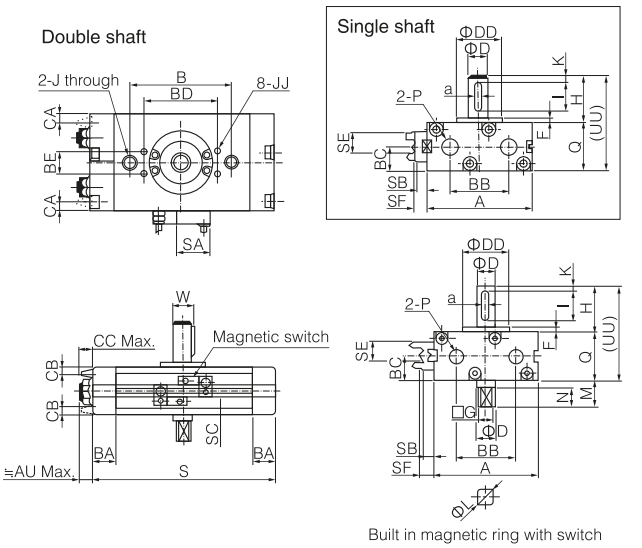
Built in magnetic ring with switch (D-A7·A8·F7·F8 type)

Model	AA	SB	SC	SE	D-A7·A8 type		D-F7·F8 type	
					SA	SF	SA	SF
NCDRQBW10-90	42	8	7	15	22	10	24	9
NCDRQBW10-180	42	8	7	15	22	10	24	9
NCDRQBW15-90	53	7	7	15	22	9	24	8
NCDRQBW15-180	53	7	7	15	22	9	24	5

Basic type Φ20·Φ30·Φ40



Built in magnetic ring series Φ20·Φ30·Φ40



Built in magnetic ring with switch

Model	A	B	BB	ΦD (g6)	ΦDD	F	□G	H	J	K	ΦL	M	N	P	Q	S	(UU)	W	≒AU	BA	BC	BD	BE	CA	CB	CC	JJ	Flat key a	Flat key l	SB	SC	SE	D-A7·A8 SA	D-A7·A8 SF	D-F7·J8 SA	D-F7·J8 SF
NCRQ2BW20-90 NCRQ2BW20-180	63	50	34	10	25	2.5	8	30	M8×1.25	3	9.6	15	11	1/8"	29	104 130	59	11.5	9	15	14.5	-	-	6.4	4.8	9.5	-	$4^{0}_{-0.03}$	20	6.5	7	15	22	8	24	7
NCRQ2BW30-90 NCRQ2BW30-180	69	68	39	12	30	3	10	32	M10×1.25	4	11.4	18	13	1/8"	33	122 153	65	13.5	9	15	16.5	49	16	6.6	5.4	9.5	M5×0.8 depth 8	$4^{0}_{-0.03}$	20	6.5	7	15	22	8	24	7
NCRQ2BW40-90 NCRQ2BW40-180	78	76	47	15	32	3	11	36	M10×1.25	5	14	20	15	1/8"	37	139 177	73	17	10	18	18.5	55	16	6.6	5.5	9.5	M6×1 depth 7	$5^{0}_{-0.03}$	25	6.5	7	15	22	8	24	7

Specifications

Bore size(mm)			10	15	20	30	40
Fluid			Air (to be filtered by 40μm filter element)				
Maximum operating pressure			0.7 MPa			1.0 MPa	
Minimum operating pressure			0.2 MPa	0.15 MPa			
Ambient and fluid temperature			5 to 60℃				
Rotation time adjustment range s/90°			0.03~0.3			0.04~0.3	0.07~0.5
Allowable kinetic energy [J]	Single vane	Without cushion	0.00015	0.00025	0.0004	0.015	0.03
		With cushion		0.001	0.003	0.02	0.04
	Double Vane		0.0003	0.0012	0.0033	0.02	0.04
Shaft load [N]	Radial load		15	15	25	30	60
	Thrust load		10	10	20	25	40
Connection size	Side ported		M3×0.5		M5×0.8		
	Axial ported						
Angle adjustable range	Single vane		0~230°	0~240°			0~230°
	Double vane		0~90°				

Ordering code

Basic type: NCRB2 B S 20 – 180 S E – □ L □

Built-in magnet type: NCDRB2 B W 20 – 180 S □ – M9B L □

Built-in magnet

Mounting

B	Basic type
*F	Flange type

* F: Except size 40

Suffix symbol

Symbol	Shaft type	Shaft-end shape	
		Long shaft	Short shaft
S	Single shaft	Single flat*	-
W	Double shaft	Single flat*	Single flat

* A key is used for size 40.

Bore size

10	10mm
15	15mm
20	20mm
30	30mm
40	40mm

Rotating angle

Single vane	90	90°
	180	180°
	270	270°
Double vane	90	90°
	100	100°

Vane type

S	Single vane
D	Double vane

Connecting port location

Blank	Side ported
E	Axial ported

Magnetic switch model

Blank	Without magnetic switch (Built-in magnet)

* Refer to the right table for the model of magnetic switch.

Electrical entry/Lead wire length

Blank	0.5m	Grommet
L	3m	
C	0.5m	Connector
CL	3m	
CN	Without lead wire	

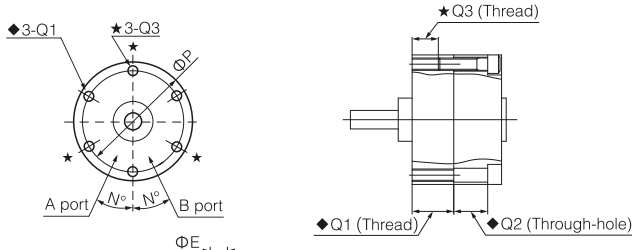
Number of magnetic switches

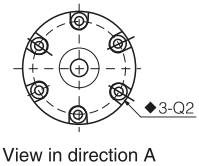
Blank	2 pcs.
S	1 pc.

Dimensions

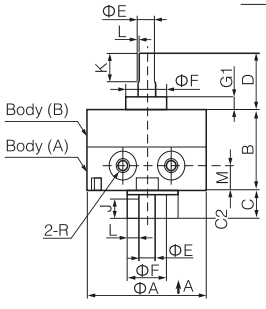
Standard Type

Single shaft / Φ10~Φ30
NCRB2BW□-□S
(Port location: Side ported)

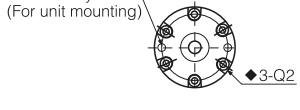




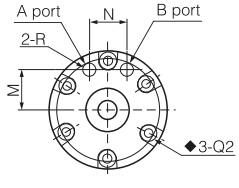
View in direction A



NCRB2BW10-□S
(Port location: Side ported)



NCRB2BW□-□SE
(Port location: Axial ported)

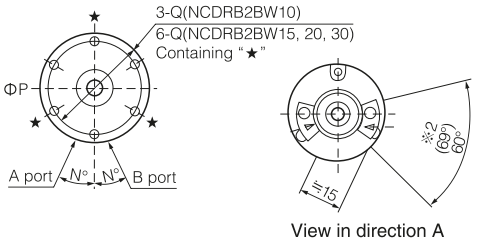


Model	A	B	C	D	E(g6)	F(h9)	G1	G2	J	K	L	M	N	P	◆Q1	◆Q2	★Q3	R		
																		90°	180°	270°
NCRB2BW10-□S	29	15	8	14	$4^{-0.004}_{-0.012}$	$9^{0}_{-0.036}$	3	1	5	9	0.5	5	25	24	M3(6)	3.4(5.5)	-	M5		M3
NCRB2BW10-□SE												8.5	9.5					M3		
NCRB2BW15-□S	34	20	9	18	$5^{-0.004}_{-0.012}$	$12^{0}_{-0.043}$	4	1.5	6	10	0.5	5	25	29	M3(10)	3.4(6)	M3(5)	M5		M3
NCRB2BW15-□SE												11	10					M3		
NCRB2BW20-□S	42	29	10	20	$6^{-0.004}_{-0.012}$	$14^{0}_{-0.043}$	4.5	1.5	7	10	0.5	9	25	36	M4(13.5)	4.5(11)	M4(7.5)	M5		
NCRB2BW20-□SE												14	13							
NCRB2BW30-□S	50	40	13	22	$8^{-0.005}_{-0.014}$	$16^{0}_{-0.043}$	5	2	8	12	1.0	10	25	43	M5(18)	5.5(16.5)	M5(10)	M5		
NCRB2BW30-□SE												15.5	14							

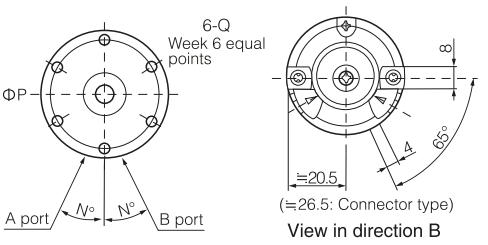
With magnetic switch

For single vane type, the figures below show actuators for 90° and 180° when B port is pressurized.

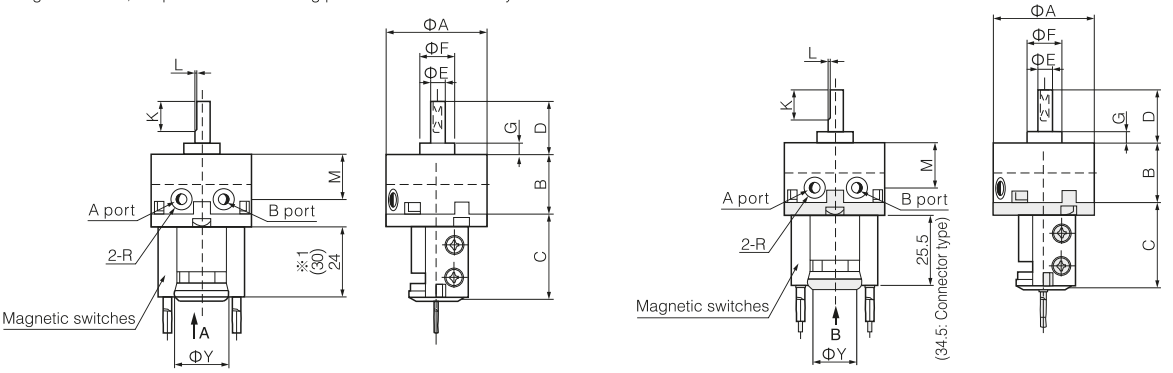
NCDRB2BW10・15-□S



NCDRB2BW20・30-□S



※1. The length is 24 when any of the following are used: D-90, 90A, S99(V), T99(V), S9P(V); The length is 30 when any of the following are used: D-97, 93A
※2. The angle is 60° when any of the following are used: D-90, 90A, 97, 93A; The angle is 69° when any of the following are used: D-S99(V), T99(V), S9P(V)
Note: In the case of magnetic switch, the position of connecting port is all on the side of cylinder block.

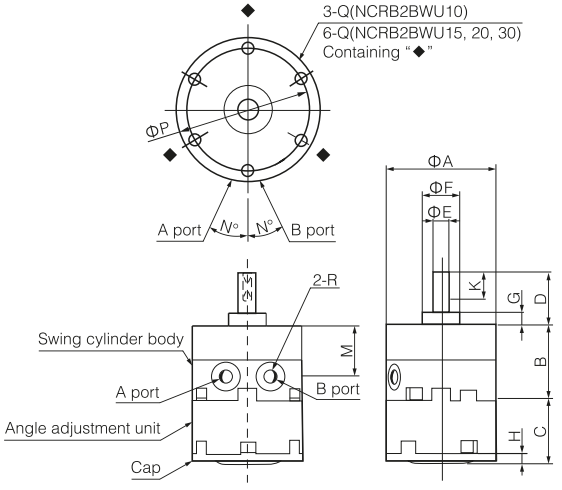


Model	A	B	C	D	E (g6)	F (h9)	G	K	L	M	N	P	Q	R			Y
														90°	180°	270°	
NCDRB2BW10-□S	29	15	29	14	4	9	3	9	0.5	10	25	24	M3×0.5 depth 5	M5×0.8		M3×0.5	18.5
NCDRB2BW15-□S	34	20	29	18	5	12	4	10	0.5	15	25	29	M3×0.5 depth 5	M5×0.8		M3×0.5	18.5
NCDRB2BW20-□S	42	29	30	20	6	14	4.5	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8			25
NCDRB2BW30-□S	50	40	31	22	8	16	5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8			25

With angle adjuster

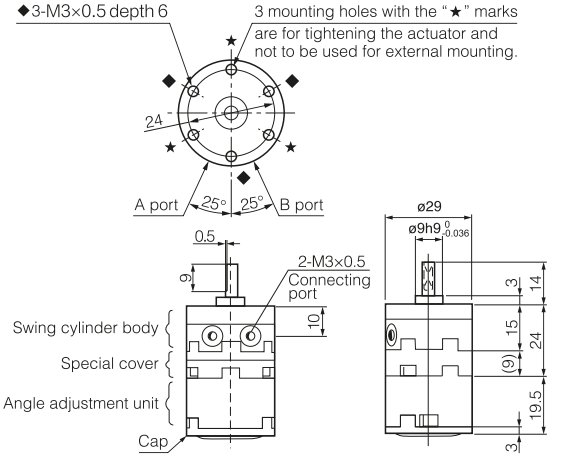
Single blade: when the drawing is used at 90° A-port is pressurized

NCRB2BWU10・15・20・30-□S



Double blade: this figure shows the swing middle position when the A or B port is pressurized

NCRB2BWU10-□D

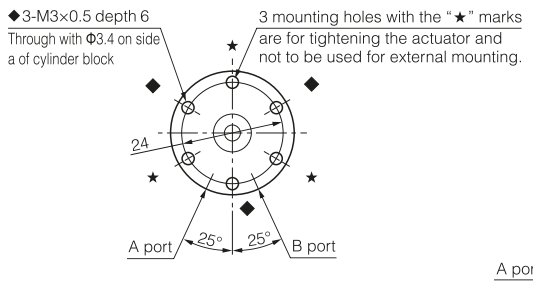


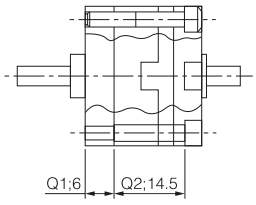
NCRB2BWU15・20・30-□D: It is the same as the outline dimension drawing and dimension table of single blade.

Model	A	B	C	D	E (g6)	F (h9)	G	H	K	L	M	N	P	Q	R			
															90°	100°	180°	270°
NCRB2BWU10-□S	29	15	19.5	14	4	9	3	3	9	0.5	10	25	24	M3×0.5 depth 6	M5×0.8	-	M5×0.8	M3×0.5
															* See drawing		-	
NCRB2BWU15-□S	34	20	21.2	18	5	12	4	3.2	10	0.5	15	25	29	M3×0.5 depth 5	M5×0.8	-	M5×0.8	M3×0.5
NCRB2BWU15-□D															M3×0.5		-	
NCRB2BWU20-□S	42	29	25	20	6	14	4.5	4	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8	-	M5×0.8	
NCRB2BWU20-□D															M5×0.8		-	
NCRB2BWU30-□S	50	40	29	22	8	16	5	4.5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8	-	M5×0.8	
NCRB2BWU30-□D															M5×0.8		-	

Standard type Double blade: this figure shows the middle position of swing when A port or B port is pressurized.

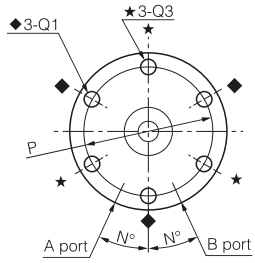
NCRB2BW10-□D
The port is on the side of the cylinder block

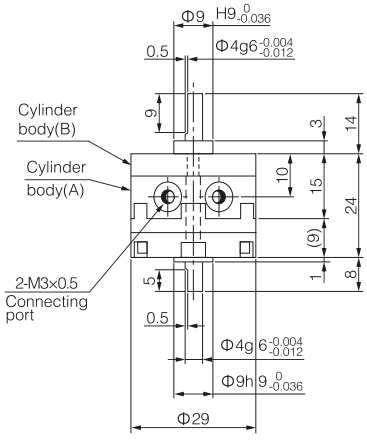


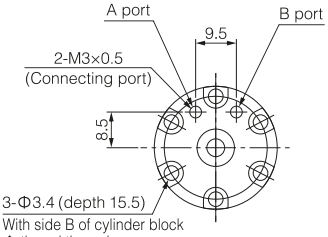


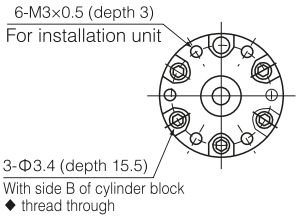
NCRB2BW10-□DE
Port in axial direction

NCRB2BW15・20・30-□D
The port is on the side of the cylinder block

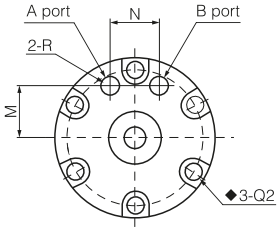


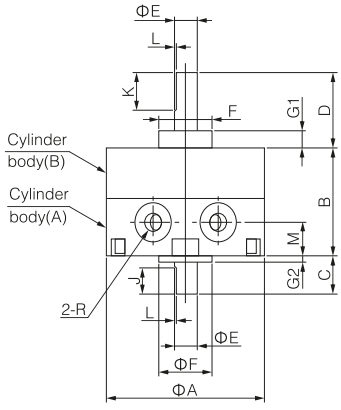






NCRB2BW15・20・30-□DE
Port in axial direction

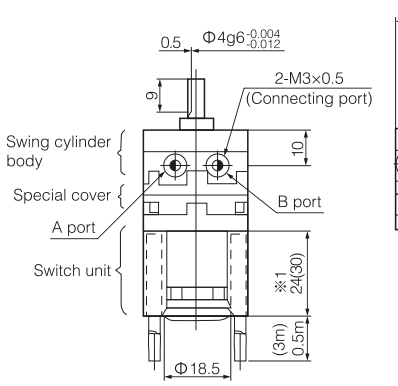


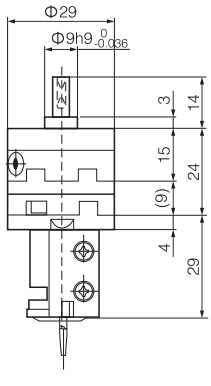


Model	A	B	C	D	E(g6)	F(h9)	G1	G2	J	K	L	M	N	P	Q(depth)			R	
															◆Q1	◆Q2	★Q3	90°	100°
NCRB2BWU15-□S	34	20	9	18	5 -0.004 -0.012	12 0 -0.043	4	1.5	6	10	0.5	5	25	29	M3 (10)	3.4 (6)	M3 (5)	M3	
NCRB2BWU15-□D												11	10						
NCRB2BWU20-□S	42	29	10	20	6 -0.004 -0.012	14 0 -0.043	4.5	1.5	7	10	0.5	9	25	36	M3 (13.5)	4.5 (11)	M4 (7.5)	M5	
NCRB2BWU20-□D												14	13						
NCRB2BWU30-□S	50	40	13	22	8 -0.005 -0.014	16 0 -0.043	5	2	8	12	1.0	10	25	43	M5 (18)	5.5 (16.5)	M5 (10)	M5	
NCRB2BWU30-□D												15.5	14						

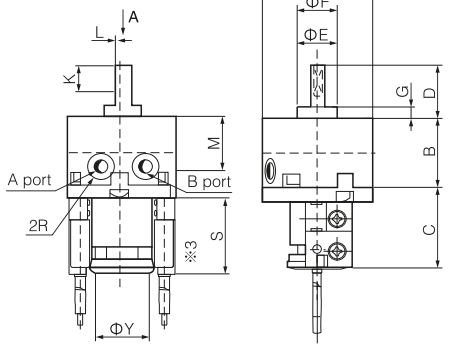
With magnetic switch

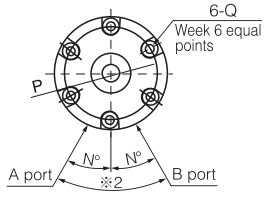
NCDRB2BW10-□D





NCDRB2BW15・20・30-□D (Same size as single blade)



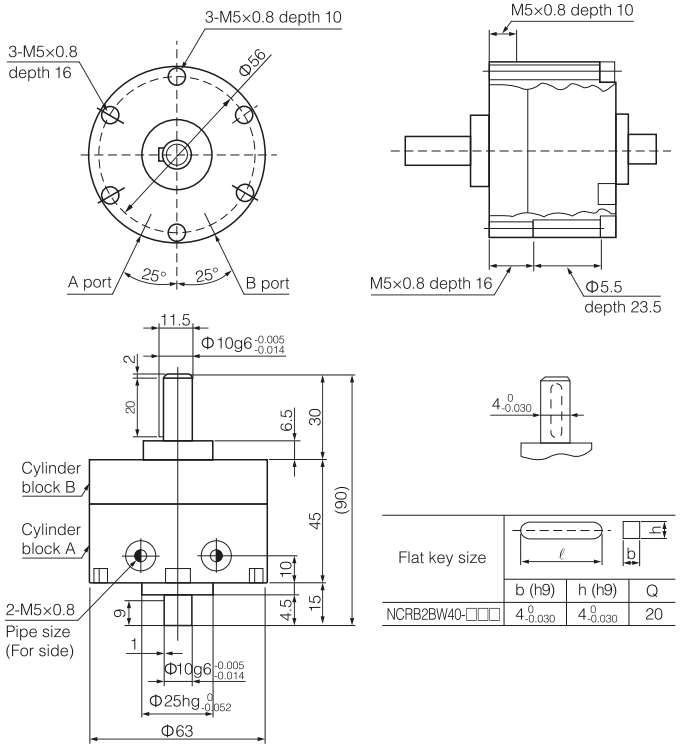


View in direction A

※1. 24: When using D-90, 90A, S99 (V), T99 (V), S9P (V) magnetic switch; 30: When D-97, 93A is used.
※2. 60°: When D90, 90A, 97, 93A are used; 69°: When using D-S99(V), T99(V), S9P(V).
※3. 25.5: When D-R73, R80, S79, T79, S7P magnetic switch and linear outgoing type are used; 34.5: When D-R73, R80, T79 magnetic switch and socket type are used.

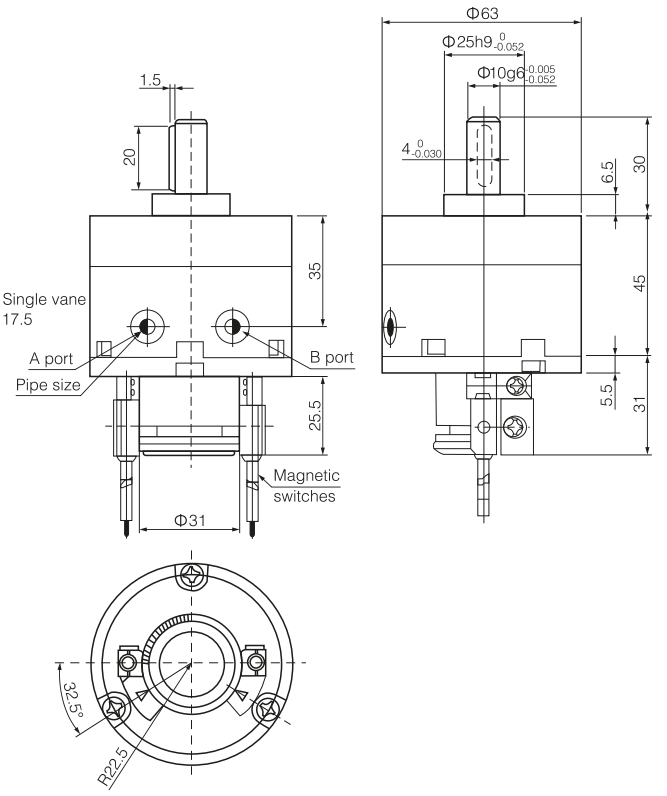
Model	A	B	C	D	E(g6)	F(h9)	G	K	L	M	N	P	Q	R		S		Y
														90°	100°			
NCDRB2BW15-□D	34	20	29	18	5	12	4	10	0.5	15	25	29	M3×0.5 depth 5	M3×0.5		24※1	30※1	18.5
NCDRB2BW20-□D	42	29	30	20	6	14	4.5	10	0.5	20	25	36	M4×0.7 depth 7	M5×0.8		25.5※1	34.5※1	25
NCDRB2BW30-□D	50	40	31	22	8	16	5	12	1	30	25	43	M5×0.8 depth 10	M5×0.8				25

Standard type (NCRB2BW40-□S/D)

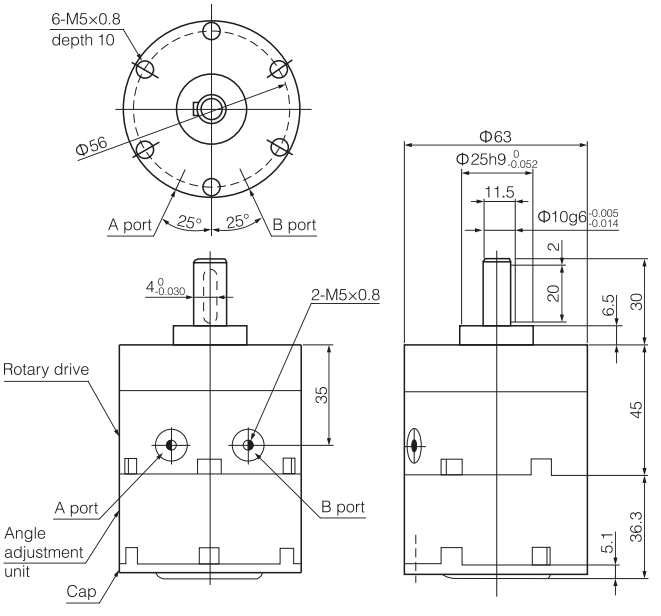


Flat key size	b (h9)	h (h9)	Q
NCRB2BW40-□□□	4 0 -0.030	4 0 -0.030	20

Built in magnetic ring (with switch) (NCDRB2BW40-□S/D)



With angle adjuster (NCRB2BWU40-□S/D)



With angle adjuster (Built in magnetic ring) (NCDRB2BWU40-□S/D)