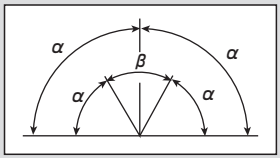
Rotor Table

RT02 Series

What is multiposition stop type?

It stops at 3 or 4 points as shown in the figure on the right. Angles α and β are designated.



Through-Hole

◆Used for wiring, etc.

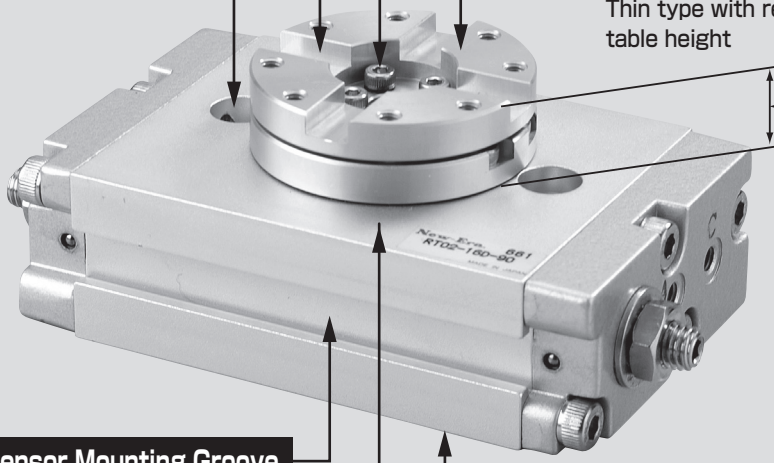
High Accuracy Table

◆High accuracy/high rigidity bearing
◆Load directly attachable

Air Pipe/Lead Wire Takeout Groove

Body Mountable from Up or Down

Thin type with reduced table height



Sensor Mounting Groove

◆2 types of sensors mountable

Centering Reference Hole on the back face

Rotor

Multiposition Stop Type (Stop at 3 or 4 Positions)
Built-in Air Cushion (Stop at 2 Positions)

RT02 Series (D)

Model Code No.

RT02 – 18 D – α+β ※ ZC230 A 2

Series Name

Nominal Diameter
10:10mm
14:14mm
16:16mm
18:18mm
22:22mm

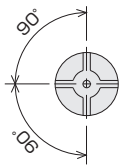
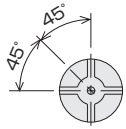
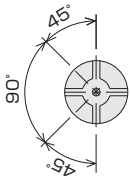
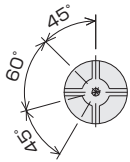
Basic Structure
D: Multiposition Stop Type
(3-position or 4-position Stop Type)

Rocking Angle
α: 3-position Stop Type
$2\alpha \leqq 180°$
α+β: 4-position Stop Type
$2\alpha+\beta \leqq 180°$

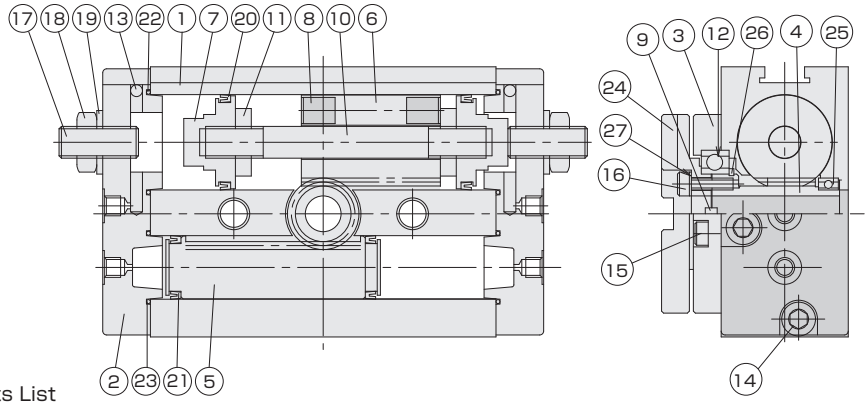
Switch Type	Switch Lead Wire Length	Number of Switches
No Code: No Switch	—	—
ZC230: 2 Wire System Solid State ZC253: 3 Wire System Solid State EC22: 2 Wire System Solid State EC23: 3 Wire System Solid State	A:1m B:3m	1:1 Switch 2:2 Switches 3:3 Switches 4:4 Switches

●Switch details→P.521～528
●Switch mounting→P.538～539

Type Indication Examples

3-position Stop Type		4-position Stop Type	
RT02-18D-90	RT02-18D-45	RT02-18D-45+90	RT02-18D-45+60
			

Internal Structure Diagram



Parts List

NO	Name	Material	NO	Name	Material	NO	Name	Material
1	Main Body	Aluminum Alloy	10	Piston Rod	Soft Steel	19	Fastener Seal	Soft Steel + NBR
2	Head Cover	Aluminum Alloy	11	Tightening Nut	Brass	20	Piston Packing	NBR
3	Case	Aluminum Alloy	12	Bearing	Bearing Steel	21	Piston Packing	NBR
4	Pinion Rod	Carbon Steel	13	Steel Ball	Bearing Steel	22	O Ring	NBR
5	Rack Piston	Carbon Steel	14	Hexagon Socket Head Bolt	Carbon Tool Steel	23	O Ring	NBR
6	Rack	Stainless Steel	15	Hexagon Socket Head Bolt	Carbon Tool Steel	24	Table	Aluminum Alloy
7	Piston	Stainless Steel	16	Hexagon Socket Head Bolt	Carbon Tool Steel	25	Bearing	Bearing Steel
8	Magnet	Magnetic Body	17	Hexagon Socket Head Setscrew	Carbon Tool Steel	26	Locating Snap Ring	Carbon Steel
9	Key	Carbon Steel	18	Hexagon Nut	Soft Steel	27	Conical Spring Washer	Carbon Steel

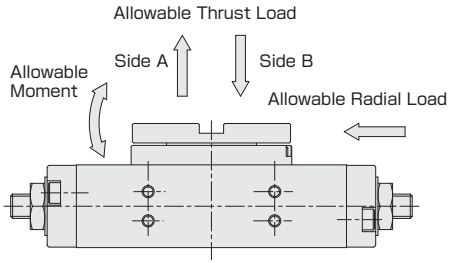
Specifications

●Multiposition Stop Type

Model		RT02-10D-※	RT02-14D-※	RT02-16D-※	RT02-18D-※	RT02-22D-※
Bore Size [mm]		ϕ10+ϕ14	ϕ14+ϕ20	ϕ16+ϕ24	ϕ18+ϕ26	ϕ22+ϕ30
Fluid		Air				
Action Type		Double Acting Type				
Operating Pressure [MPa]		0.3~0.7		0.2~0.7		
Proof Pressure [MPa]		1.05				
Operating Temperature [℃]		0~60 (No Freezing)				
Rocking Angle [°]	MIN	α=30	α=20	α=15	α=10	α=7
	MAX	3-Position Stop Type :$2\alpha \leqq 180°$ 4-Position Stop Type :$2\alpha+\beta \leqq 180°$				
Angle Adjustment 180° specification($2\alpha+\beta$) [°]		5~−60 (Rocking is enabled between 120° and 185°.)				
Minimum Switch Detection Angle [°]		30	25	20	18	15
Theoretical Torque [N·m]		0.26P	0.9P	1.6P	2.8P	4.2P
Allowable Energy [J]		0.2×10^{-2}	1×10^{-2}	3.5×10^{-2}	7×10^{-2}	0.11
Pipe Bore		M5×0.8				
Cushion Structure		None				
Fueling		Not Required				
Product Mass [g]		175	475	820	1230	1985

Theoretical torque P: Indicates the working pressure.(MPa)
Minimum switch detection angle:The minimum angle (α and β) that enables the sensor to sense the intermediate stop part correctly.
Note) When each swing end is detected by the sensor at multiple stops, check if "$\alpha + \beta$" is equal or larger than 90 for ϕ10 only.

Allowable Load and Allowable Moment

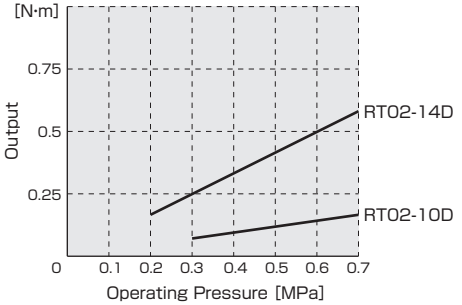


Model	Allowable Radial Load [N]	Allowable Thrust Load [N]		Allowable Moment [N·m]
		Side A	Side B	
RT02-10D	50	35	50	1.5
RT02-14D	70	50	70	2.0
RT02-16D	120	120	160	4.0
RT02-18D	245	245	340	6.5
RT02-22D	355	355	500	9.0

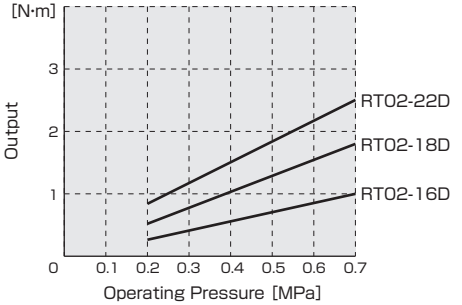
RT02 Series (D)

Effective Torque

RT02-10～14D



RT02-16～22D



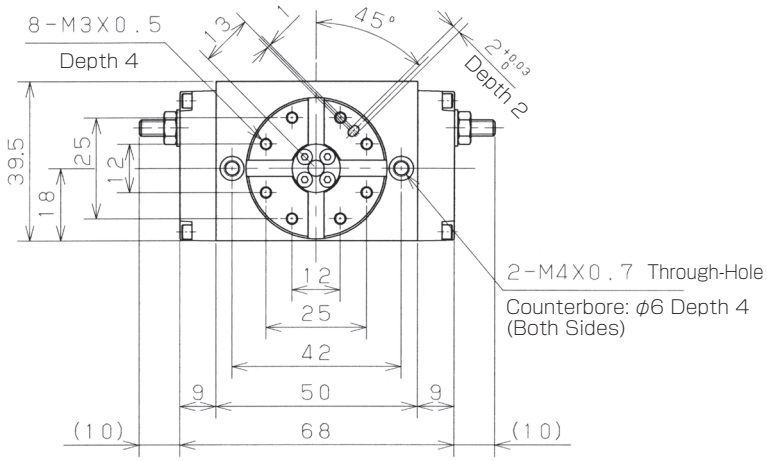
Stop Position Adjustment Method

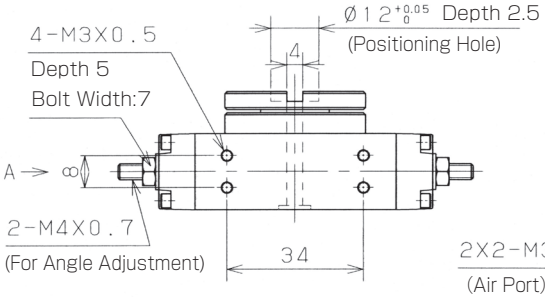
☞ See P.540～541

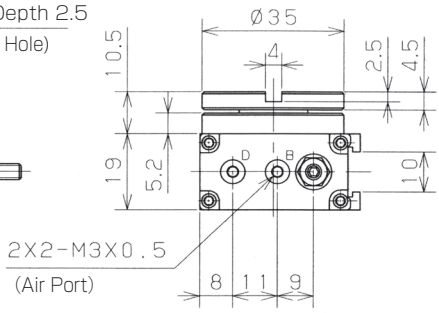
Stop Position Control Method

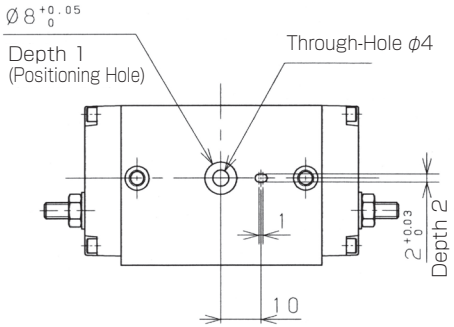
☞ See P.542～543

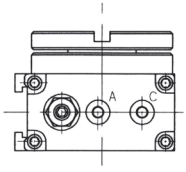
■Dimensions RT02-10D-□









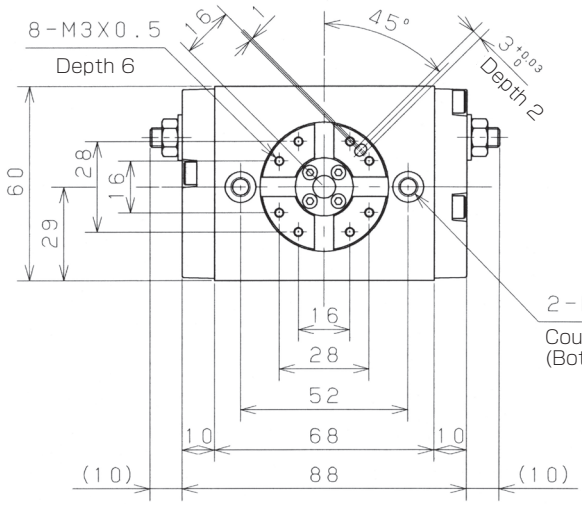


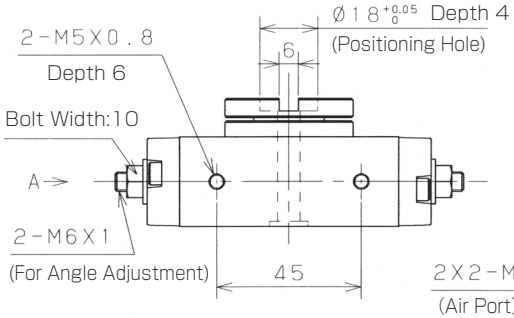
View on Arrow A

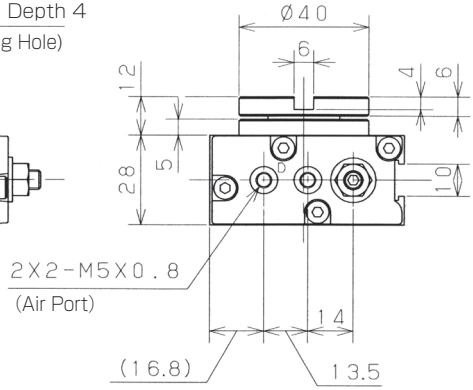
RT02 Series (D)

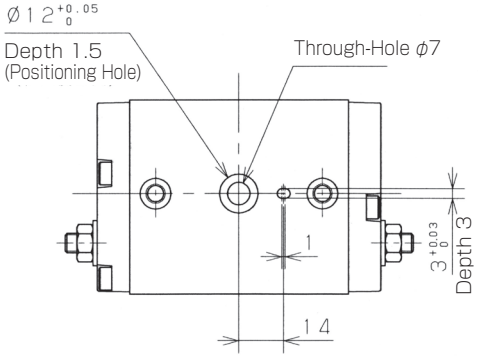
CAD data provided

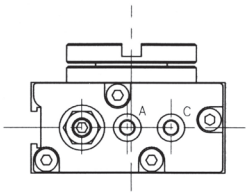
Dimensions RT02-14D-□





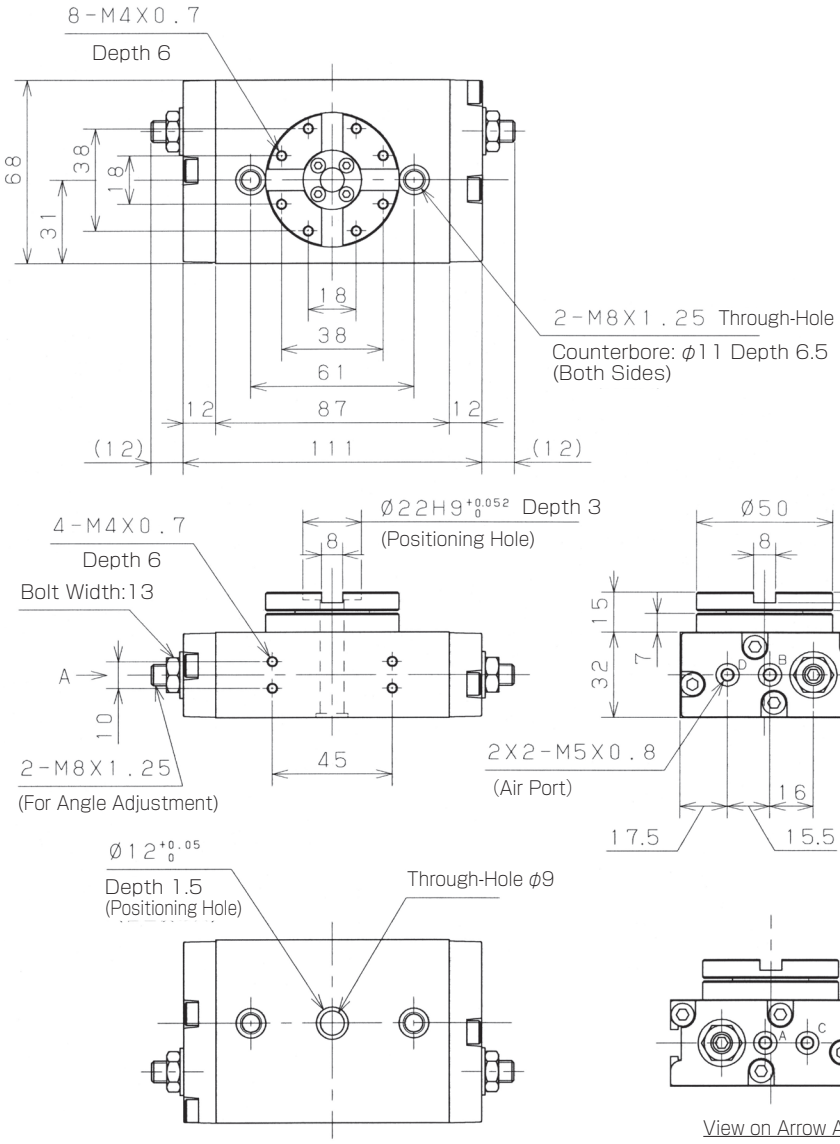






View on Arrow A

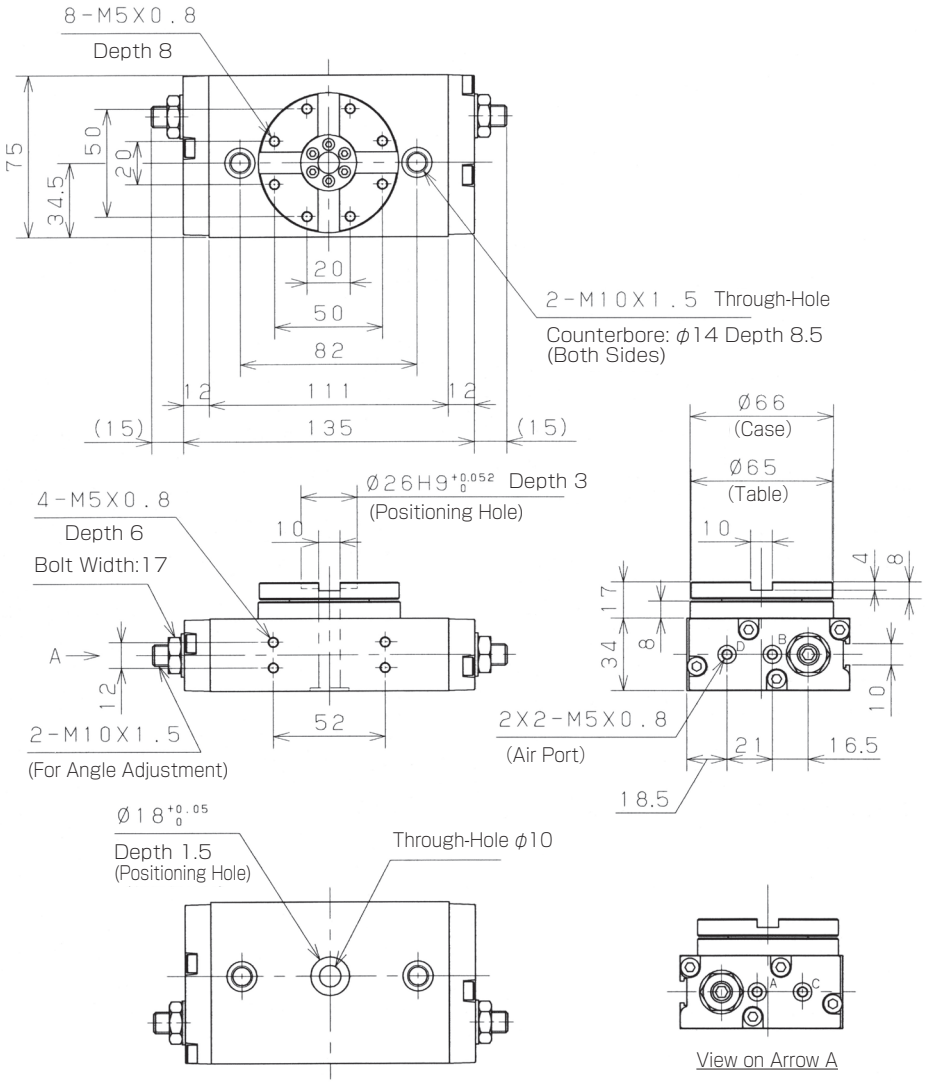
Dimensions RT02-16D-□



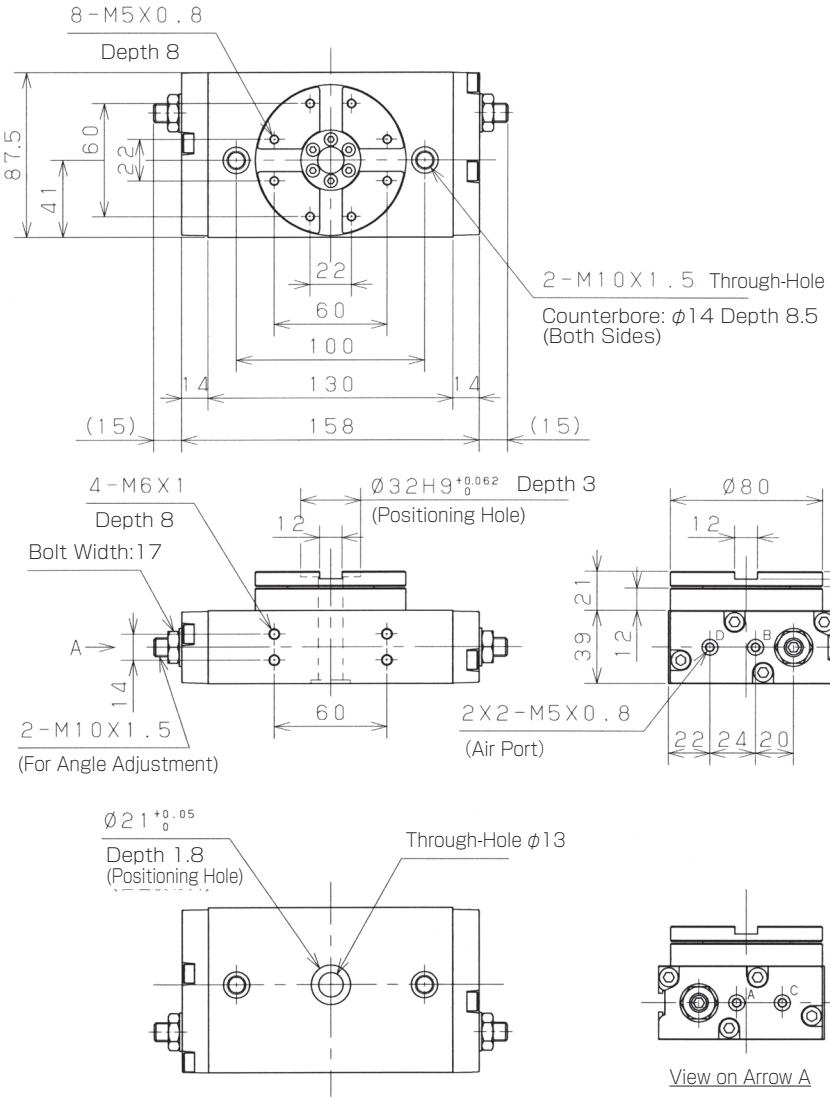
RT02 Series (D)

CAD data provided

■Dimensions RT02-18D-□



■Dimensions RT02-22D-□



RT02 Series (B)

Model Code No.

RT02 – 18 B – 180 ※ ZC230 A 2

Series Name

Nominal Diameter
10:10mm
14:14mm
16:16mm
18:18mm
22:22mm

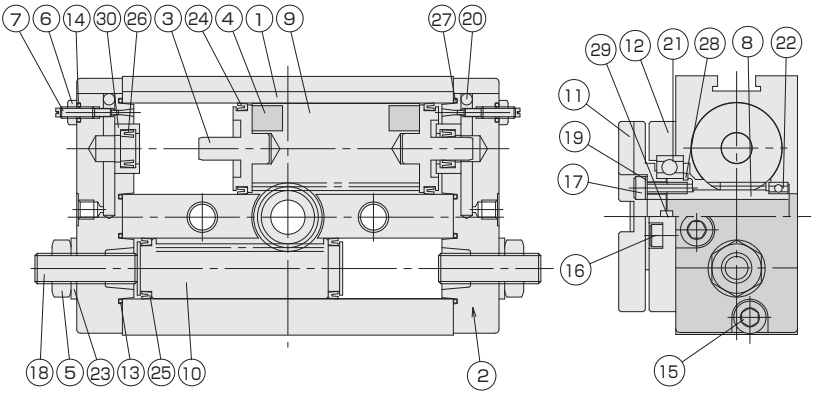
Basic Structure
B: 2-position Stop Type
(Built-in Air Cushion)

Rocking Angle
90:90°
180:180°

Switch Type	Switch Lead Wire Length	Number of Switches
ZC230: 2 Wire System Solid State ZC253: 3 Wire System Solid State EC22: 2 Wire System Solid State EC23: 3 Wire System Solid State	A:1m B:3m	1:1 Switch 2:2 Switches
Switch Type	**Number of Switches**	**Switch Lead Wire Length**
No Code: No Switch	—	—
RCA: 2 Wire System Contact RCB: 2 Wire System Contact RCM: 2 Wire System Solid State	1:1 Switch 2:2 Switches	No Code:1.5m LA: 5m

●Switch details→P.521～528
●Switch mounting→P.538～539

Internal Structure Diagram



Parts List

NO	Name	Material	NO	Name	Material	NO	Name	Material
1	Main Body	Aluminum Alloy	11	Table	Aluminum Alloy	21	Bearing	Bearing Steel
2	Head Cover	Aluminum Alloy	12	Case	Aluminum Alloy	22	Bearing	Bearing Steel
3	Piston	Brass	13	O Ring	NBR	23	Fastener Seal	Soft Steel + NBR
4	Magnet	Magnetic Body	14	O Ring	NBR	24	Packing	NBR
5	Hexagon Nut	Soft Steel	15	Hexagon Socket Head Bolt	Carbon Tool Steel	25	Packing	NBR
6	Hexagon Nut	Brass	16	Hexagon Socket Head Bolt	Carbon Tool Steel	26	Packing	NBR
7	Needle	Stainless Steel	17	Hexagon Socket Head Bolt	Carbon Tool Steel	27	Gasket	NBR
8	Pinion Rod	Carbon Steel	18	Hexagon Socket Head Setscrew	Carbon Tool Steel	28	Locating Snap Ring	Carbon Steel
9	Rack	Stainless Steel	19	Conical Spring Washer	Carbon Steel	29	Key	Carbon Steel
10	Rack Piston	Carbon Steel	20	Steel Ball	Bearing Steel	30	Packing Housing	Brass

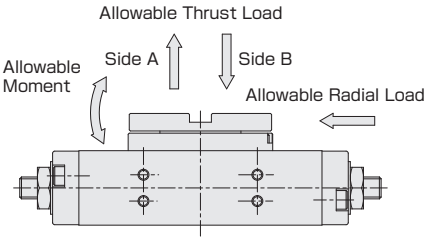
Specifications

●Air Cushion Type

Model		RT02-10B	RT02-14B	RT02-16B	RT02-18B	RT02-22B
Bore Size [mm]		φ10+φ14	φ14+φ20	φ16+φ24	φ18+φ26	φ22+φ30
Fluid		Air				
Action Type		Double Acting Type				
Operating Pressure [MPa]		0.1～0.7				
Proof Pressure [MPa]		1.05				
Operating Temperature [℃]		0～60 (No Freezing)				
Rocking Angle [°]		90·180				
Angle Adjustment [°]	90° Specification	70～95				
	180° Specification	160～185				
Theoretical Torque [N·m]		0.8P	2.8P	5.2P	8.6P	14P
Allowable Energy [J]		0.02	0.075	0.14	0.28	0.42
Pipe Bore		M5×0.8				
Cushion Structure		Air Cushion				
Fueling		Not Required				
Product Mass [g]		172	465	830	1250	1995

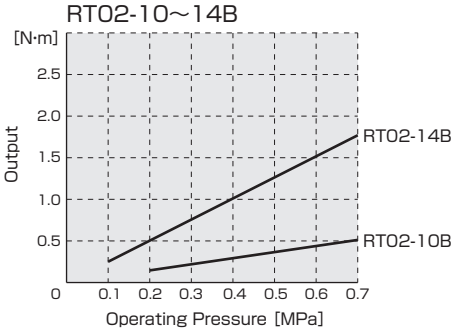
Theoretical torque P: Indicates the working pressure.(MPa)
Note) For φ10, use the whole angle of 60° or more when the RCA switch or the RCB switch is used.

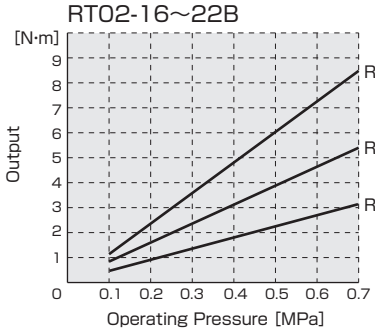
Allowable Load and Allowable Moment



Model	Allowable Radial Load [N]	Allowable Thrust Load [N]		Allowable Moment [N·m]
		Side A	Side B	
RT02-10B	50	35	50	1.5
RT02-14B	70	50	70	2.0
RT02-16B	120	120	160	4.0
RT02-18B	245	245	340	6.5
RT02-22B	355	355	500	9.0

Effective Torque





Stop Position Adjustment Method

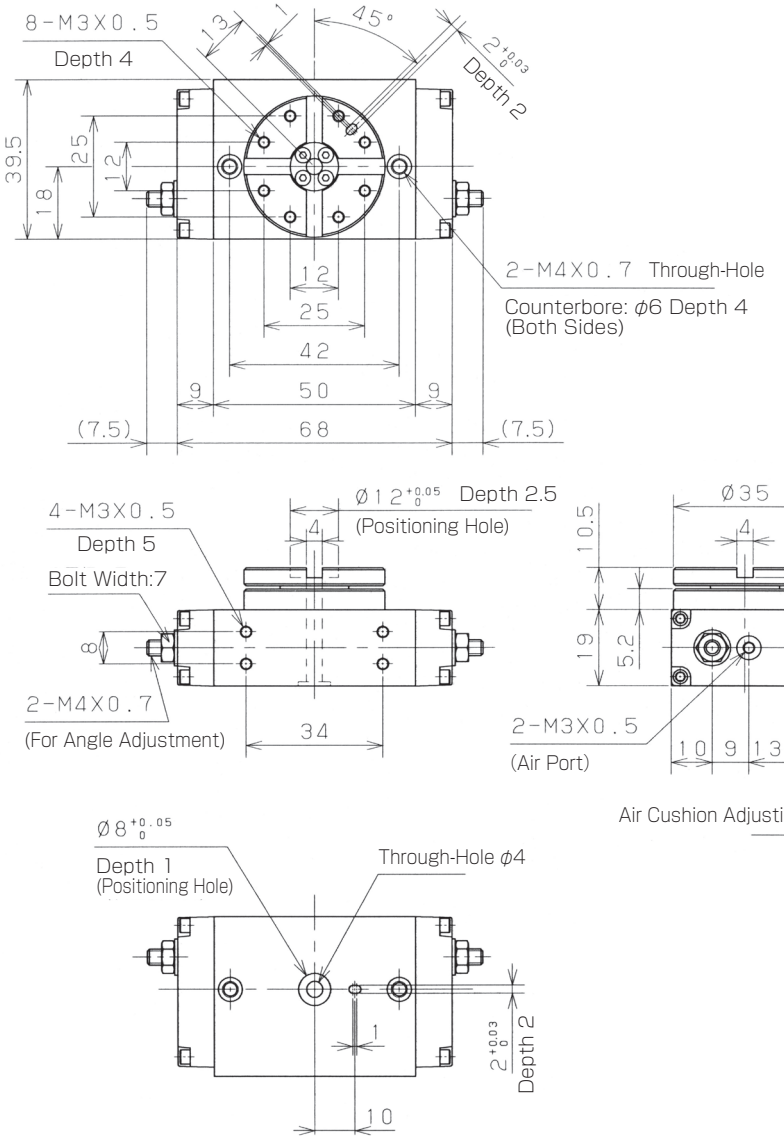
☞ See P.540～541

Stop Position Control Method

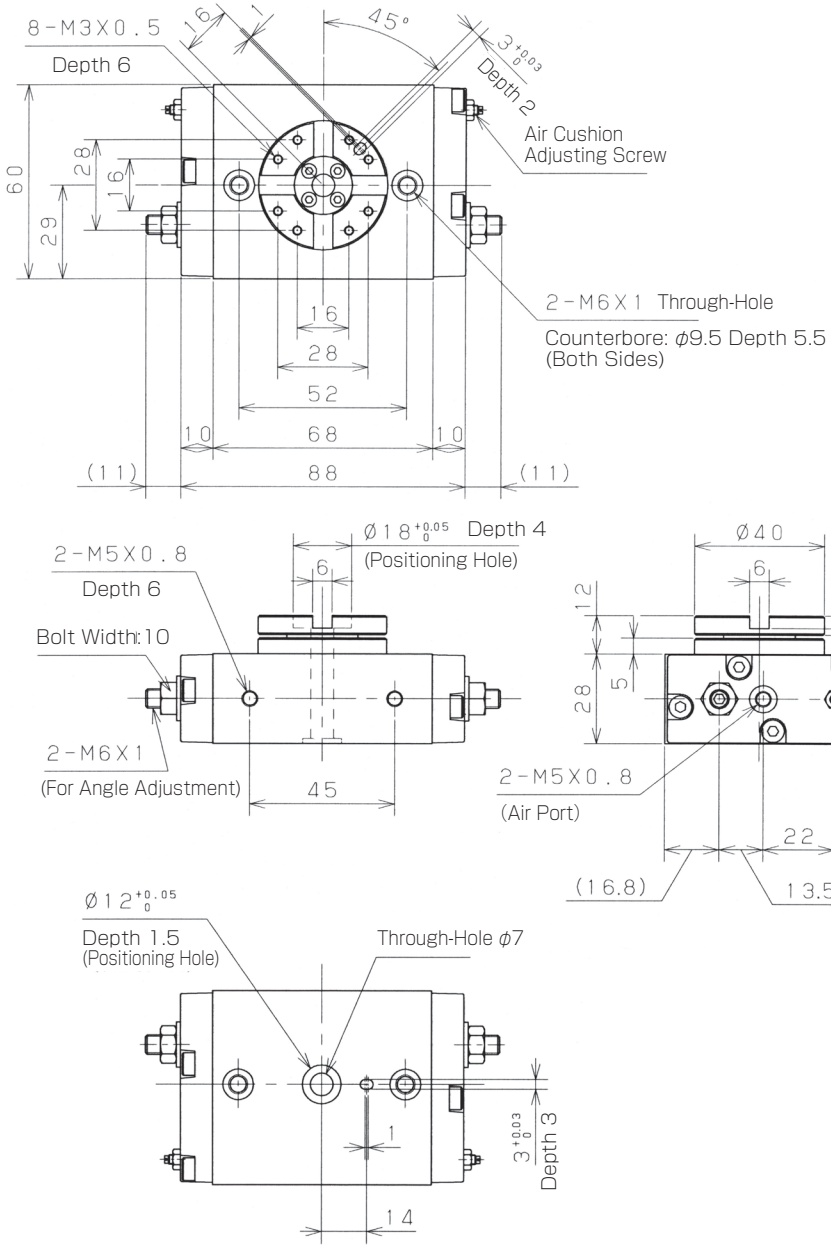
☞ See P.542～543

CAD data provided

■Dimensions RT02-10B-□



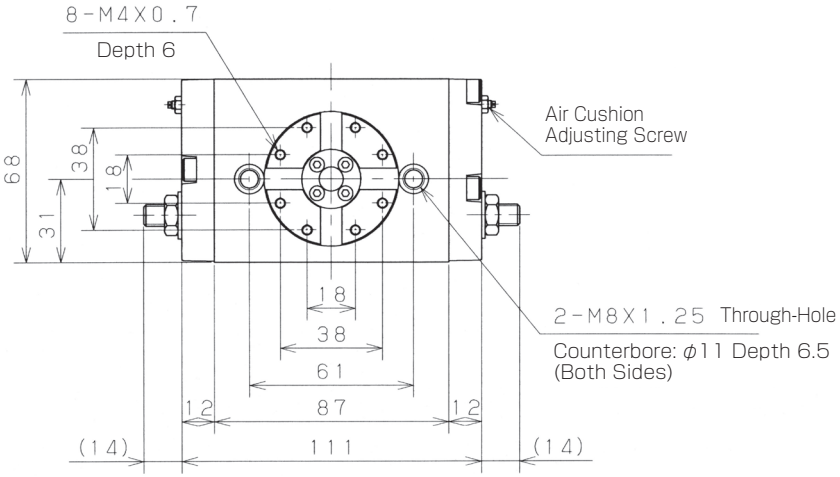
■Dimensions RT02-14B-□

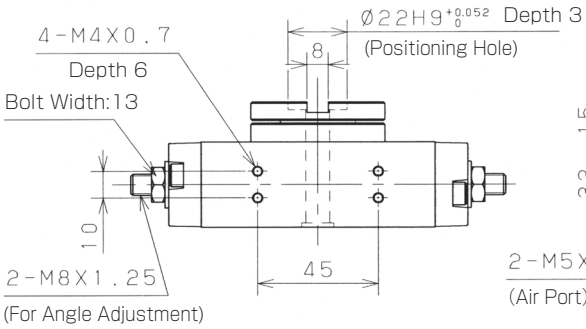


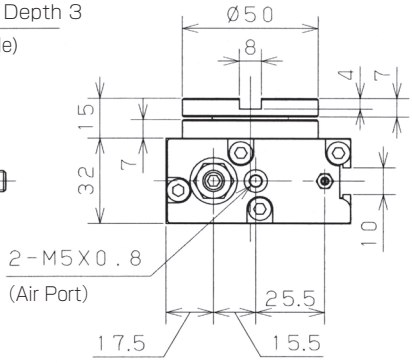
RT02 Series (B)

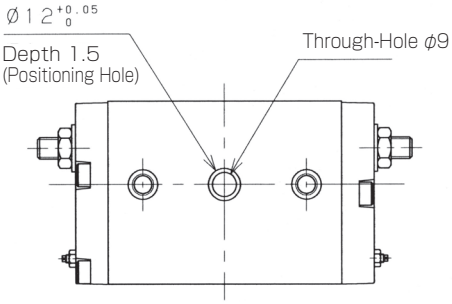
CAD data provided

Dimensions RT02-16B-□

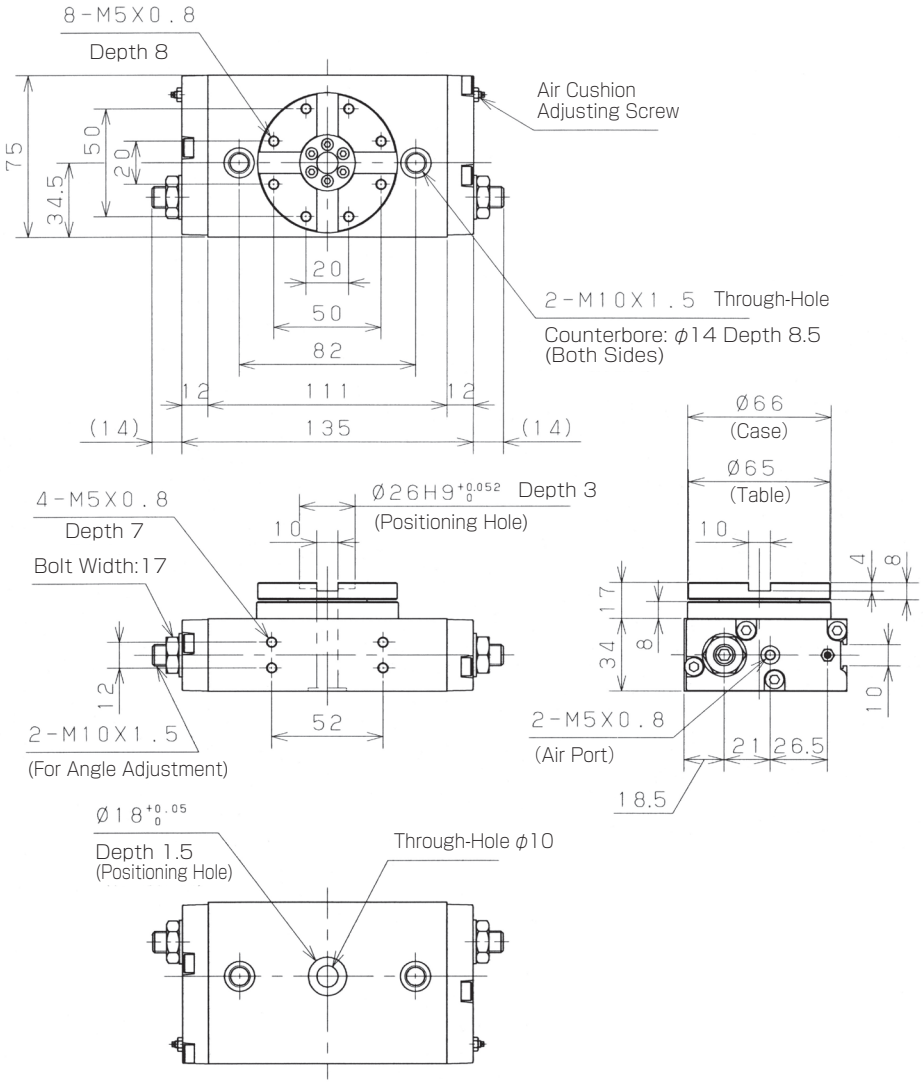








■Dimensions RT02-18B-□



RT02 Series (B)

CAD data provided

Dimensions RT02-22B-□