

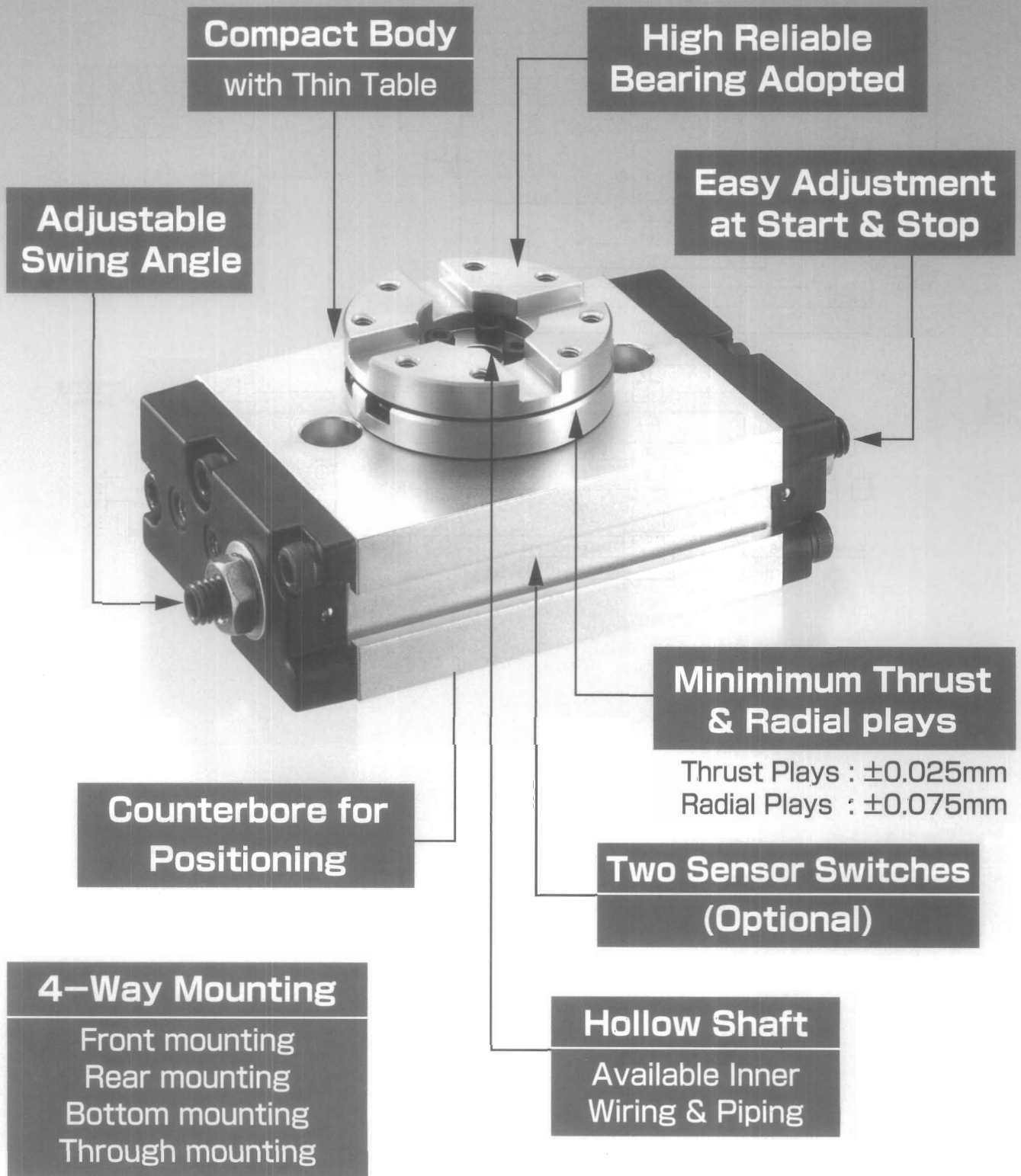
RT02 Series – 3, 4 stop position type –

# Rotary Actuator

## Smooth Operation with Free Backlash

**3 or 4-Stop  
position**

Innovative for  
Pneumatic Industry



# RT02 Series (D)

## Model Code No.

**RT02 - 18 D -  $\alpha$  +  $\beta$**

Series Name

Cylinder Bore

- 16 : 16mm
- 18 : 18mm
- 22 : 22mm

Stop Position Type

D : 3 or 4 stop position type

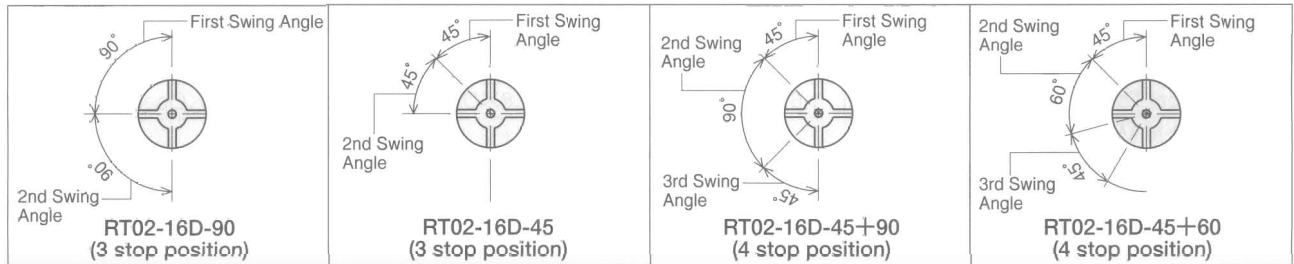
Description of Nominal (Standard) Swing Angle

	$\alpha$	$\beta$
3 stop position type	First & 2nd Swing Angle	(Blank)
	<i>However, <math>90^\circ \geq \alpha \geq 15^\circ</math></i>	
4 stop position type	First & 3rd Swing Angle	2nd Swing Angle
	<i>However, <math>90^\circ \geq \alpha \geq 15^\circ, 180^\circ \geq 2\alpha + \beta</math></i>	

Sensor switch :

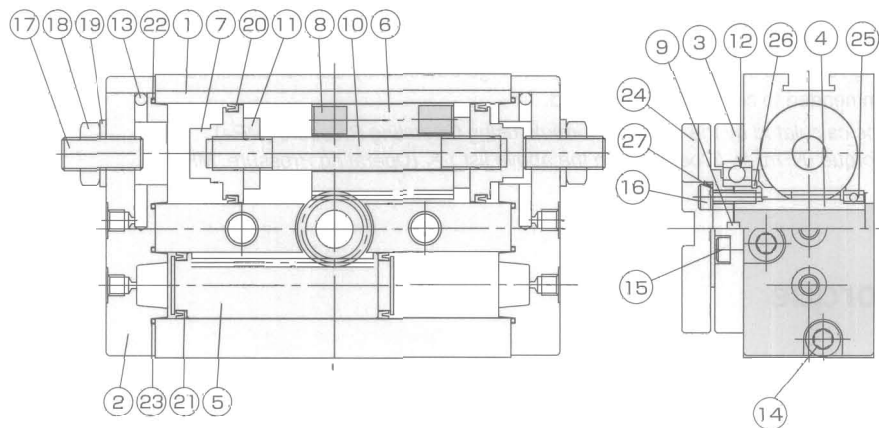
Refer to "Selection from New-Era Sensor Switch" (Page 265)

### Model Examples



RT02(D)

## Internal Structure



### Parts List

No.	Name	Material	No.	Name	Material
1	Main Body	Aluminium Alloy	15	Slotted Head Bolt	Carbon Tool Steel
2	Head Cover	Aluminium Alloy	16	Slotted Head Bolt	Carbon Tool Steel
3	Case (Swivel Joint Lower)	Aluminium Alloy	17	Slotted Head Bolt	Carbon Tool Steel
4	Pinion Rod	Carbon Steel	18	Hexagonal Nut	Mild Steel
5	Rack Piston	Carbon Steel	19	Fastener Seal	Mild Steel + NBR
6	Rack	Stainless Steel	20	Piston Packing	NBR
7	Piston	Stainless Steel	21	Piston Packing	NBR
8	Magnet	Resin	22	O Ring	NBR
9	Key	Carbon Steel	23	O Ring	NBR
10	Piston Rod	Carbon Steel	24	Table (Swivel Joint Upper)	Aluminium Alloy
11	Tightening Nut	Brass	25	Bearing	Bearing Steel
12	Bearig	Bearing Steel	26	Snap Ring	Carbon Steel
13	Steel Ball	Bearing Steel	27	Spring Plate Washer	Carbon Steel
14	Slotted Head Bolt	Carbon Tool Steel			

**Specifications**

		RT02-16D- $\alpha + \beta$	RT02-18D- $\alpha + \beta$	RT02-22D- $\alpha + \beta$
Stop Positions		3 or 4		
Cylinder Bore	(mm)	16+24	18+26	22+30
Fluid		Air		
Operating Pressure	(MPa)	0.2~0.7		
Proof Pressure	(MPa)	1.05		
Ambient Temperature		5~60		
Standard Swing Angle	3-stop type	$180 \geq 2\alpha \geq 30$		
	4-stop type	$180 \geq 2\alpha + \beta$		
Adjustable Swing Angle	90° type	30~95		
	180° type	120~185		
Detecting Swing Angle	90° type	20~95		
	180° type	20~185		
Cushion		None		
Permissible Kinetic Energy	(J)	0.035	0.07	0.11
Theoretical Torque *	(N·m)	1.6×Operating pressure	2.8×Operating pressure	4.2×Operating pressure
Permissible Moment	(N·m)	4.0	6.5	9.0
Permissible Radial Load		120	245	355
Permissible Thrust Load	(Pull) N	120	245	355
	(Push) N	160	340	500
Air Port Size		M5×0.8		
Main Body Weight	3-stop type	820	1,230	1,985
	4-stop type	820	1,230	1,985

For the swing angle beyond the Standard Swing Angle (180°), consult New-Era Co., Ltd.

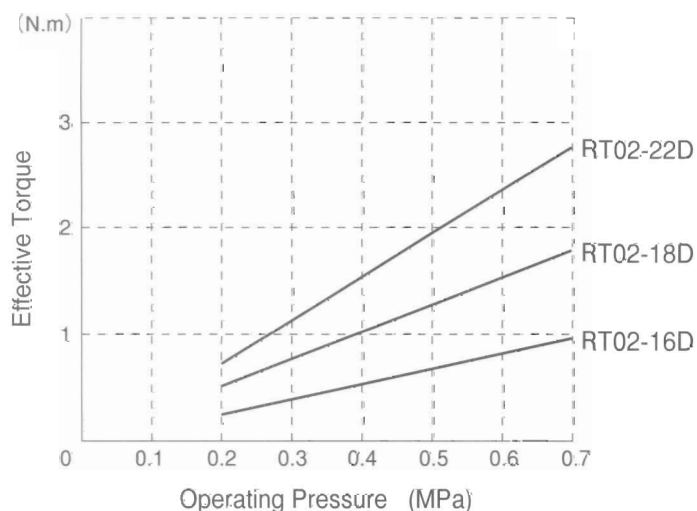
The above Adjustable Swing Angle is recommendatory.

The above "Detecting Swing Angle" is shown the Swing Angle Range detected by Sensor Switches.

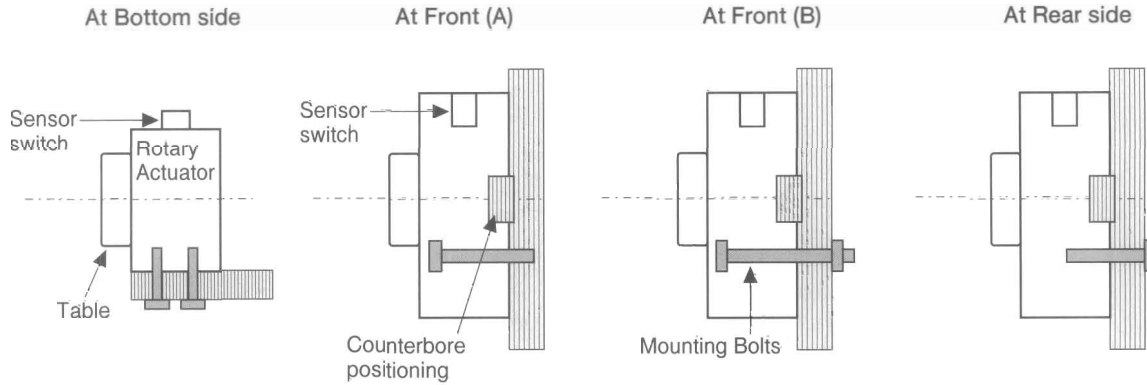
A speed controller is recommended to control a swing speed.

\* Theoretical Torque can be calculated by the following formula using Operating Pressure (MPa).

(Example): Theoretical Torque (N·m) = (Coefficient in the above list) × (Operating Pressure, MPa)

**Effective Torque**

## Installation Examples



	Specifications of Mounting holes / thread			
	At Bottom side	At Front (A)	At Front (B)	At Rear side
RT02-16D	4×M4×0.7 Depth 6	2×M8×1.25 Through Counterbored $\phi$ 11 Depth 6.5		2×M8×1.25 Through
RT02-18D	4×M5×0.8 Depth 7	2×M10×1.5 Through Counterbored $\phi$ 14 Depth 8.5		2×M10×1.5 Through
RT02-22D	4×M6×1 Depth 8	2×M10×1.5 Through Counterbored $\phi$ 14 Depth 8.5		2×M10×1.6 Through

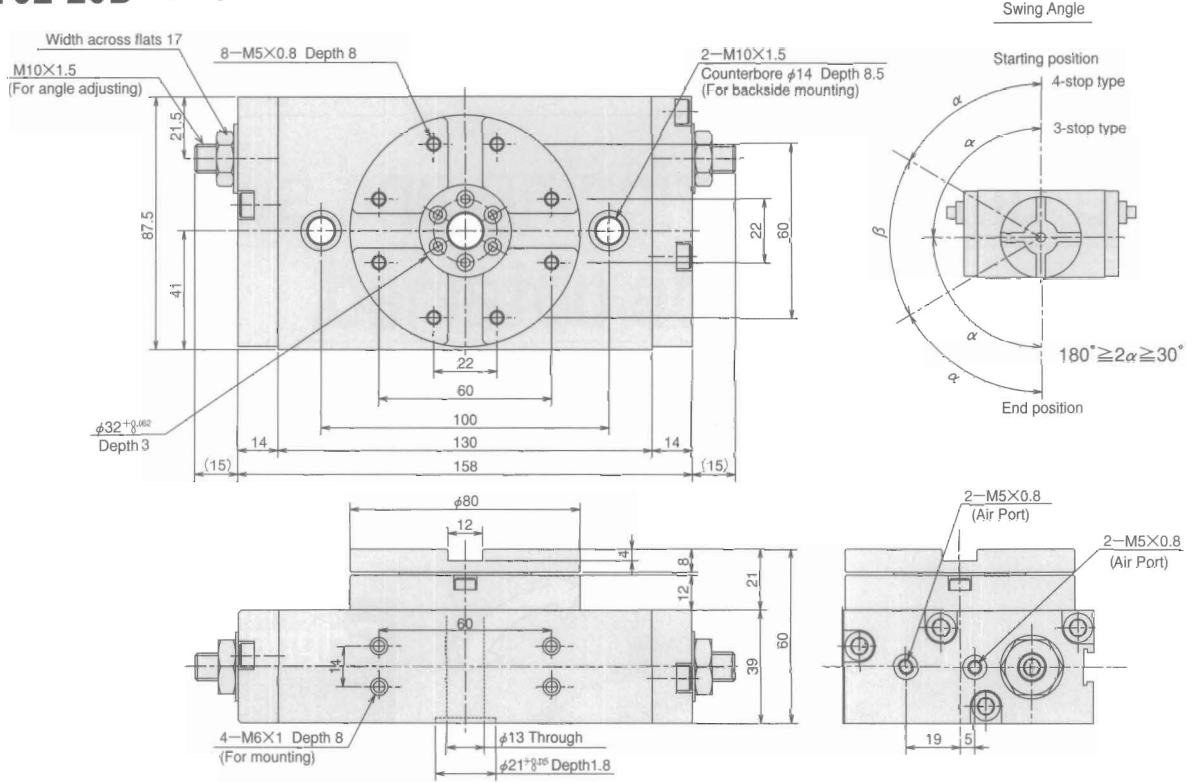
RT02(D)



Unit : mm

**Dimensions**

Weight  
**RT02-20D** 1,985g



RT02(D)