

RSR Series

Registration of Design

Rotary Actuator

Smooth Operation with Free Backlash

Low Cost

**Compact Body
& High Torque**

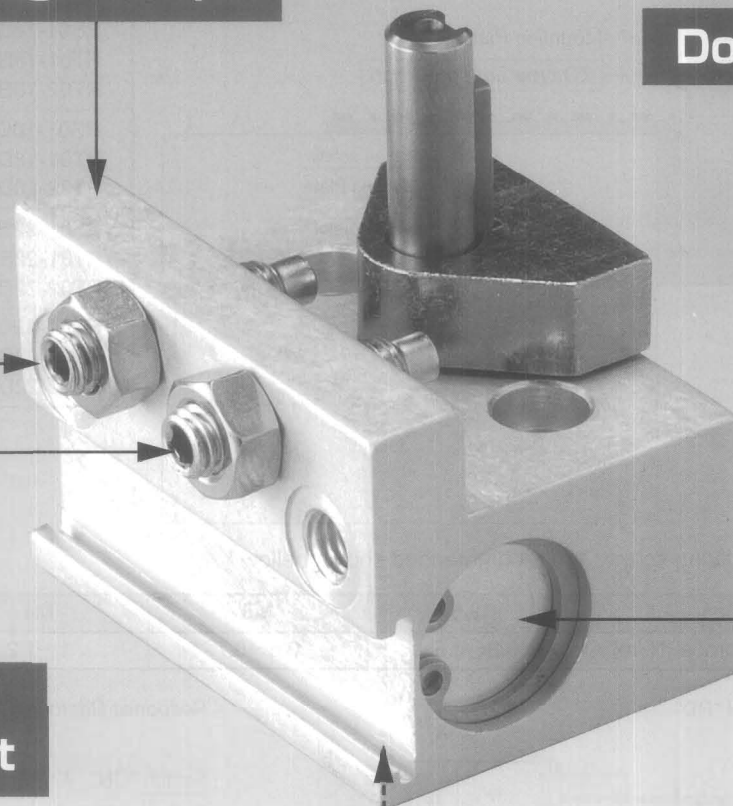
Double Acting

**Easy
Adjustment**

**Sensor Switch
(Optional)**

4-Way Mounting

Front mounting
Rear mounting
Bottom mounting
Through mounting



RSR Series

■ **Model Code No.**

SR W - 12 - 180

Series Name

SR : Non-Magnet Piston Type
RSR : Magnetic Piston Type

Maximum Swing Angle

90 : 90°
180 : 180°

Shaft

Blank : Single Shaft
W : Double Shaft

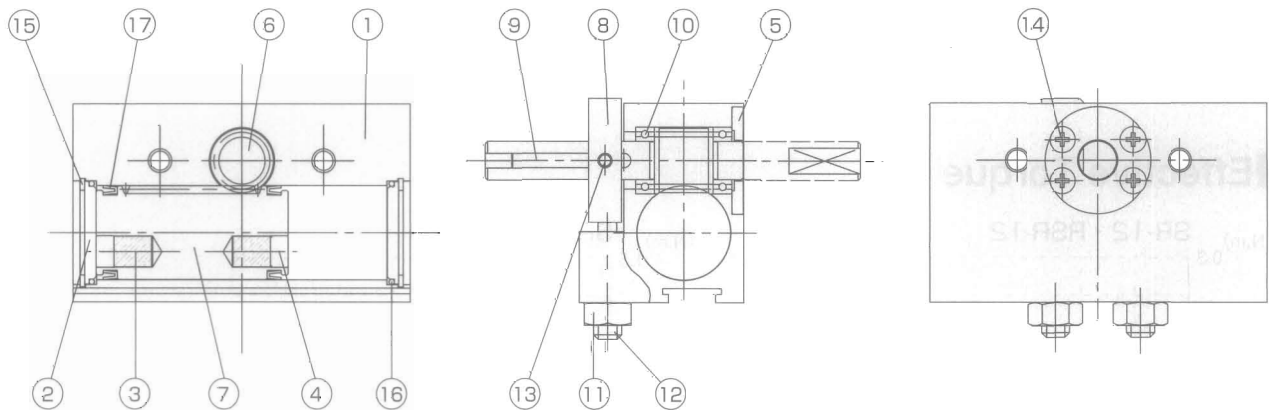
Cylinder Bore

12 : 12mm
20 : 20mm

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

RSR

■ **Internal Structure**



Parts List

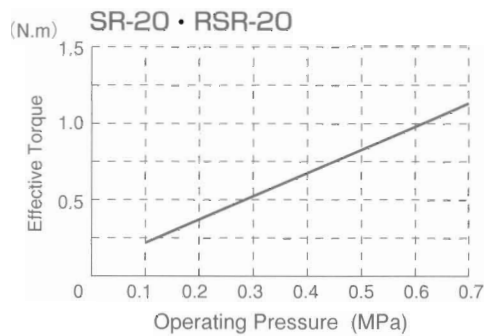
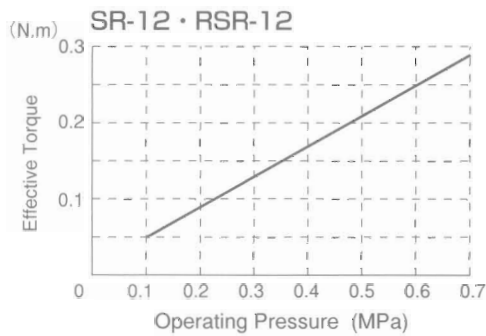
No.	Name	Material
1	Main Body	Aluminium Alloy
2	Head Cover	Aluminium Alloy
3	Magnet	Resin
4	Magnet Holder	Brass
5	Shaft Holder	Aluminium Alloy
6	Pinion Rod	Carbon Steel
7	Rack Piston	Stainless Steel
8	Stopper	Carbon Steel
9	Key	Carbon Steel
10	Bearing	Bearing Steel
11	Hexagonal Nut	Mild Steel
12	Hexagonal Slotted Head Screw	Chrome Molybdenum Steel Steel
13	Hexagonal Slotted Head Screw	Chrome Molybdenum Steel Steel
14	Cross Slotted Head Screw	Stainless Steel
15	Retaining Ring	Carbon Tool Steel
16	O-ring	NBR
17	Piston Packing	NBR

Specifications

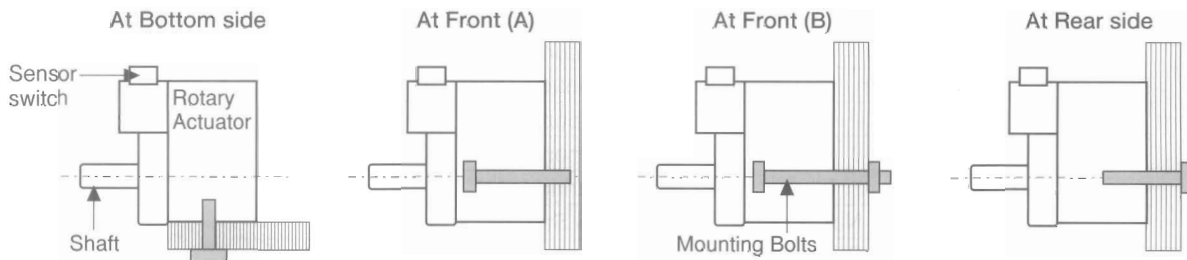
		SR-12-90 RSR-12-90	SR-12-180 RSR-12-180	SR-20-90 RSR-20-90	SR-20-180 RSR-20-180
Cylinder Bore	(mm)	12		20	
Shaft Diameter	(mm)	6		8	
Fluid		Air			
Operating Pressure	(MPa)	0.1~0.7			
Proof Pressure	(MPa)	1.05			
Ambient Temperature	(°C)	5~60			
Swing Angle	(°)	Max 90	Max 180	Max 90	Max 180
Adjustable Swing Angle	(°)	-5~+5			
Detecting Swing Angle	(°)	0~90	0~180	0~90	0~180
Cushion		None			
Permissible Kinetic Energy	(J)	0.004		0.01	
Theoretical Torque *	(N·m)	0.45P		1.88P	
Permissible Radial Load	(N)	300		500	
Permissible Thrust Load	(N)	150		200	
Internal Volume	(cc)	1.6	3	6	12
Air Port Size		M5×0.8			
Main Body Weight	(g)	SR:110, RSR:128	124	238	320
Additional Weight (Double Shaft)	(g)	4		10	

* 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

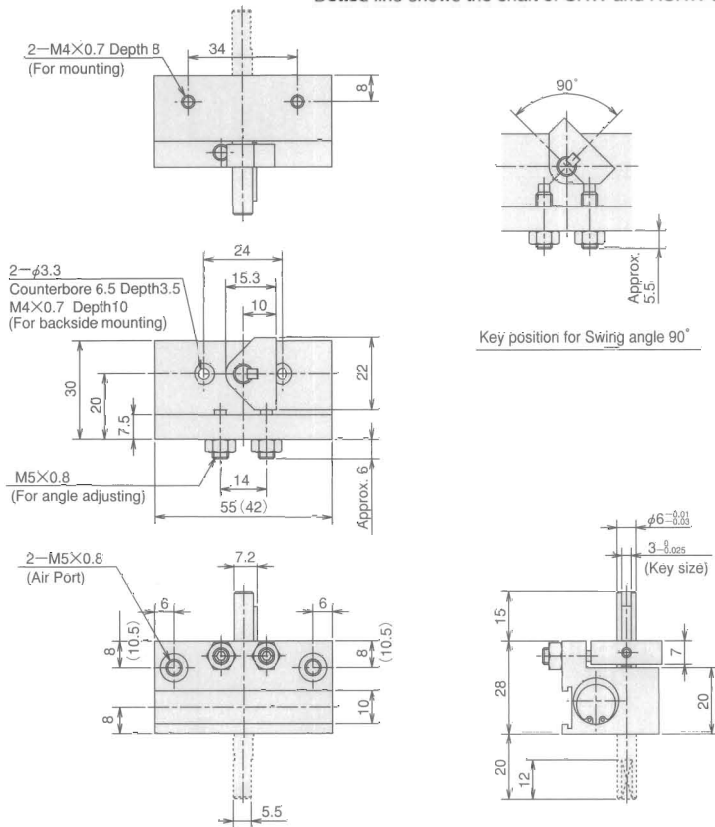


	Specifications of Mounting holes / thread			
	At Bottom side	At Front (A)	At Front (B)	At Rear side
SR-12	2×M4×0.7 Depth 8	2×φ3.3 Through holes Counterbored φ6.5 Depth 3.5		2×M4×0.7 Depth 10
SR-20	2×M5×0.8 Depth 10	2×φ4.2 Through holes Counterbored φ8 Depth 4.5		2×M5×0.8 Depth 15

Dimensions

	Weight
SR-12-90	110g
SR-12-180	124g
RSR-12-90	128g
RSR-12-180	124g
SRW-12-90	114g
SRW-12-180	128g
RSRW-12-90	132g
RSRW-12-180	128g

() shows the dimensions of SR-12-90 and RSR-12-90 types. Unit : mm
Dotted line shows the shaft of SRW and RSRW types.



	Weight
SR-20-90	238g
SR-20-180	320g
RSR-20-90	238g
RSR-20-180	320g
SRW-20-90	248g
SRW-20-180	330g
RSRW-20-90	248g
RSRW-20-180	330g

() shows the dimensions of SR-20-90 and RSR-20-90 types. Unit : mm
Dotted line shows the shaft of SRW and RSRW types.

