

### Features

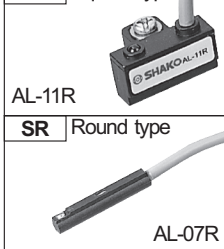
- \* Hard anodized aluminum barrel provides corrosion and wear resistance as well as long life.
- \* Compact size and space saving.
- \* Strict quality control ensures the product in stability and excellent performance.
- \* Simple maintenance and installation.
- \* Different bore sizes and strokes for selection.
- \* Various sensor switches are available.



### How to order

※ For  $\phi$  JC32~ $\phi$  100 non-rotated type, please contact our sales for request.

JC	32	B	50	H	M	SS	1			
Type	Bore size		Stroke	Rod thread		Magnet		Sensor type		Number of sensor
JC	Standard double acting	12 $\phi$ 12		Blank	Female thread	Blank	W/O magnet	Blank	W/O sensor	1 pc
JCO	Single acting/Spring extended ( $\phi$ 12~ $\phi$ 50)	16 $\phi$ 16 20 $\phi$ 20		H	Male thread	M	W/I magnet	SS	Square type	2 pcs
JCI	Single acting/Spring return ( $\phi$ 12~ $\phi$ 50)	25 $\phi$ 25 32 $\phi$ 32								
JCA	Stroke adjustable 25mm ( $\phi$ 20~ $\phi$ 100)	40 $\phi$ 40 50 $\phi$ 50 63 $\phi$ 63								
JCB	Stroke adjustable 50mm ( $\phi$ 20~ $\phi$ 100)	80 $\phi$ 80 100 $\phi$ 100								
JCDD	Double rod/Double acting ( $\phi$ 20~ $\phi$ 100)									

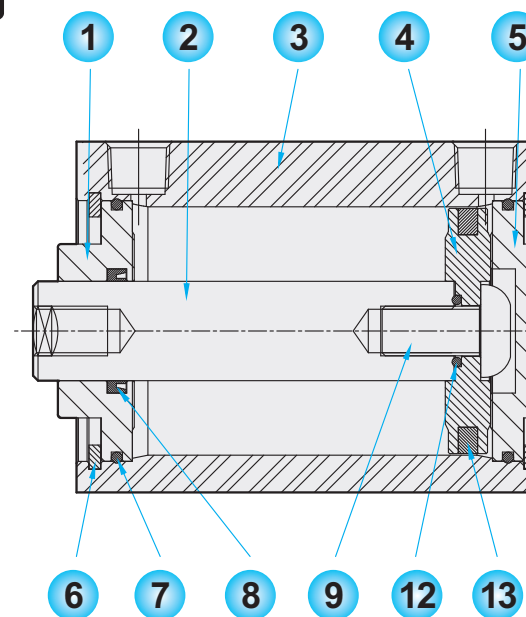


### Specifications

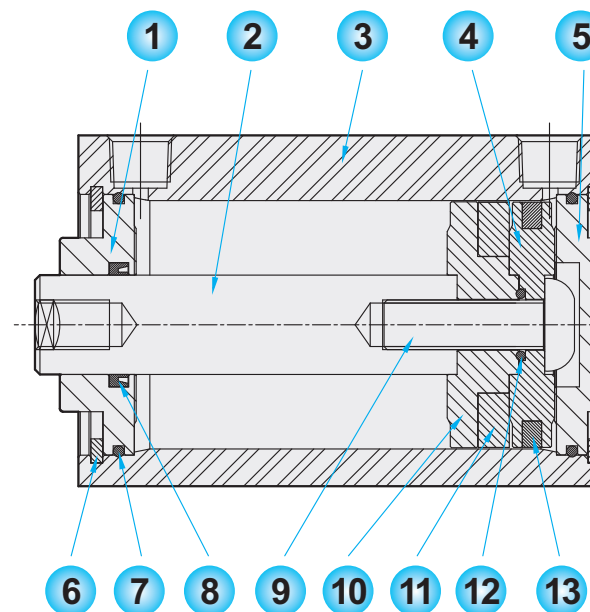
Bore size	$\phi$ 12	$\phi$ 16	$\phi$ 20	$\phi$ 25	$\phi$ 32	$\phi$ 40	$\phi$ 50	$\phi$ 63	$\phi$ 80	$\phi$ 100	
Port size	M5x0.8				1/8"	1/4"	3/8"				
Fluid	Compressed air										
Acting	Double acting or single acting										
Operating pressure range	1.0 ~ 9 kgf/cm <sup>2</sup>										
Max operating pressure	9.5 kgf/cm <sup>2</sup>										
Barrel material	Aluminum alloy										
Magnet	Option										
Ambient temperature	-5°C ~ 60°C										
Piston speed	50~700mm/Sec										
Double acting mm/Sec.	50~500				50~300		50~250				
Single acting mm/Sec.	100~500						-				

### Material of parts

#### Without magnet



#### With magnet



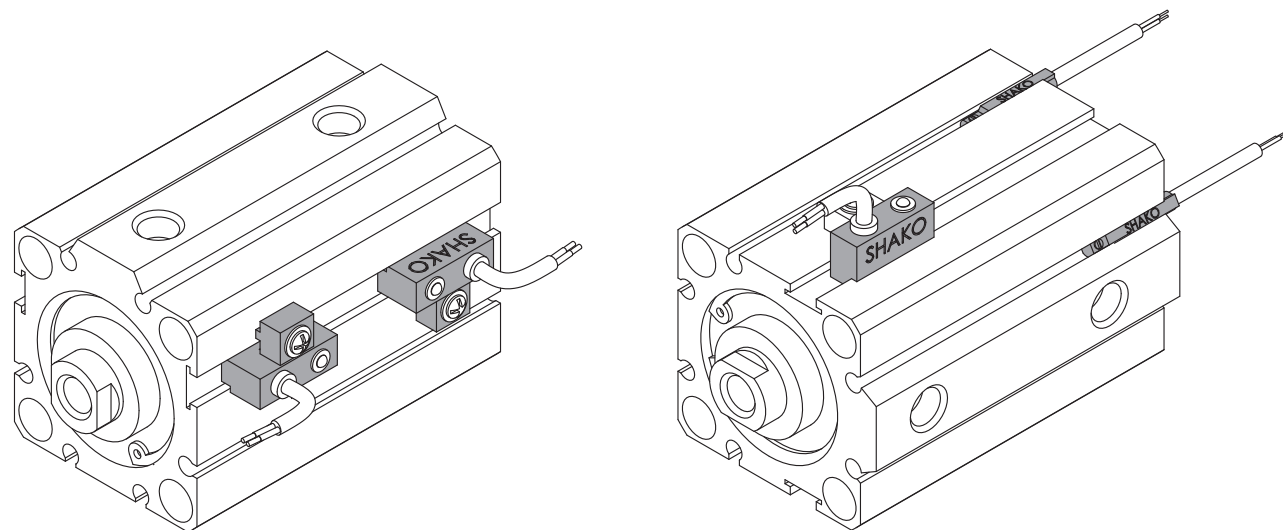
No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Front cover	Aluminum alloy	1	8	Rod packing	NBR	1
2	Piston rod	S45C+Cr	1	9	Hex socket head cap screw	Fe	1
3	Barrel	Aluminum alloy	1	10	Magnet holder	Aluminum	1
4	Piston	Aluminum alloy	1	11	Magnet	Ferrite magnet	1
5	Rear cover	Aluminum alloy	1	12	O-ring	NBR	1
6	Snap ring	Spring steel	2	13	U-Piston seal	NBR	1
7	O-ring	NBR	2				

**Stroke table**

Model	Bore size	Standard stroke (mm)	Standard stroke (with magnet)
Double acting	φ12	5 10 15 20 25 30	5 10 15 20 25 30
	φ16		
	φ20	5 10 15 20 25 30 (35)	5 10 15 20 25 30 (35)
	φ25		
	φ32	(5) 10 (15) 20 (25) 30 (35)	(5) 10 (15) 20 (25) 30 (35)
	φ40		
	φ50	40 (45) 50	40 (45) 50
	φ63		
φ80	(5) 10 (15) 20 (25) 30 (35)	(5) 10 (15) 20 (25) 30 (35)	
φ100			
Single acting	φ12	5 10	(5) 10 (15) 20
	φ16		
	φ20		
	φ25		
	φ32		
	φ40		
	φ50		

Note: 1.The body length is increased of 5mm for stroke 15mm, 25mm, 35mm, 45mm, 55mm.  
2.Strokes on ( ) are optional.

**Sensor mounting example**



**Theoretical force**

Bore size	Rod diameter	Acting	Piston area mm <sup>2</sup>	Operating pressure kgf/cm <sup>2</sup>							
				1	2	3	4	5	6	7	
φ12	φ6	Single acting	85	-	0.43	1.28	2.13	2.98	3.83	4.68	
		Single acting	113	-	0.57	1.7	2.83	3.96	5.09	6.22	
		Double acting	Push	85	-	2.26	3.39	4.52	5.65	6.78	7.91
			Pull	113	-	3.62	5.43	7.24	9.05	10.86	12.67
φ16	φ6	Single acting	201	-	1.01	3.02	4.03	7.04	9.05	11.06	
		Single acting	173	-	0.87	2.6	4.33	6.06	7.79	9.52	
		Double acting	Push	201	-	4.02	6.03	8.04	10.05	12.06	14.07
			Pull	173	-	3.46	5.19	6.92	8.65	10.38	12.11
φ20	φ8	Single acting	264	-	1.57	4.71	7.85	10.99	14.13	17.27	
		Single acting	314	-	1.32	3.96	6.6	9.24	11.88	14.52	
		Double acting	Push	264	-	6.28	9.42	12.56	15.7	18.84	21.98
			Pull	314	-	5.28	7.92	10.56	13.2	15.84	18.48
φ25	φ10	Single acting	490	-	2.45	7.35	12.25	17.15	22.05	26.95	
		Single acting	412	-	2.06	6.18	10.3	14.42	18.54	22.66	
		Double acting	Push	490	-	9.8	14.7	19.6	24.5	29.4	34.3
			Pull	412	-	8.24	12.36	16.48	20.6	24.72	28.84
φ32	φ12	Single acting	804	-	4.02	12.06	20.1	28.14	36.18	44.22	
		Single acting	690	-	3.45	10.35	17.25	24.15	31.05	37.95	
		Double acting	Push	804	-	16.08	24.12	32.16	40.2	48.24	56.28
			Pull	690	-	13.8	20.7	27.6	34.5	41.4	48.3
φ40	φ16	Single acting	1256	-	6.28	18.84	31.4	43.96	56.52	69.08	
		Single acting	1055	-	5.28	15.83	26.38	36.93	47.48	58.03	
		Double acting	Push	1256	12.56	25.12	37.68	50.24	62.8	75.36	87.92
			Pull	1055	10.55	21.1	31.65	42.2	52.75	63.3	73.85
φ50	φ20	Double acting Push	1963	19.63	39.26	58.89	78.52	98.15	117.78	137.41	
		Double acting Pull	1649	16.49	32.98	49.47	65.96	82.45	98.94	115.43	
φ63	φ20	Double acting Push	3117	31.17	62.34	93.51	124.68	155.85	187.02	218.19	
		Double acting Pull	2803	28.03	56.06	84.09	112.12	140.15	168.18	196.21	
φ80	φ25	Double acting Push	5026	50.26	100.52	150.78	201.04	251.3	301.56	351.82	
		Double acting Pull	4536	45.36	90.72	136.08	181.44	226.8	272.16	317.52	
φ100	φ32	Double acting Push	7853	78.53	157.06	235.59	314.12	392.65	471.18	549.71	
		Double acting Pull	7049	70.49	140.98	211.47	281.96	352.45	422.94	493.43	

**Formula of cylinder acting force calculation**

Formula of cylinder acting force calculation

$$F = P \times A - f$$

F : Cylinder acting force (N)  
P : Operating pressure (Mpa)  
A : Piston area (mm<sup>2</sup>)  
f : Friction (N)