

# RAL Series Mini Type Cylinder

## RAL

### Mini Type Cylinder



### Specifications

Bore size(mm)	16	20	25	32	40	50	63
Acting type	Double Acting/Single Acting						
Working medium	Clean Air(40 μ m filtration)						
Working pressure (MPa)	0.1~0.7(Double Acting) 0.2~0.7(Single Acting)		0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)				
Guaranteed pressure (MPa)	1.5						
Working temperature (°C)	-20~80(No freezing)						
Speed range (mm/s)	Double Acting: 30~800			Single Acting:50~800			
Cushion type	Rubber cushion / Air cushion						
Barrel material	Aluminum alloy						
Mounting type	LB FA SDB						
Port size	M5 x 0.8		G1/8 ①			G1/4 ①	

① PT, NPT port size is optional.

### How to Order?

Series No	Cushion Type	Type No	Bore	X	Stroke	Adjustable Stroke	Magnet No	Tail Type	Mounting Type	Thread Type
RAL:Aluminium alloy cylinder	C: Air cushion		16		25	10	Blank: No magnet		Blank: No	Blank: G
	Blank: Rubber cushion		20		50	20	S: With magnet		LB	P: PT
			25		75	30			FA	T: NPT
			32		...	40		Blank: Swiveling tail	SDB	
			40			50		U: Flat tail	IJ	
			50			75		CM: Round tail	YJ	
			63			100		(CM is not available for Φ50, Φ63 series)	BJ	...

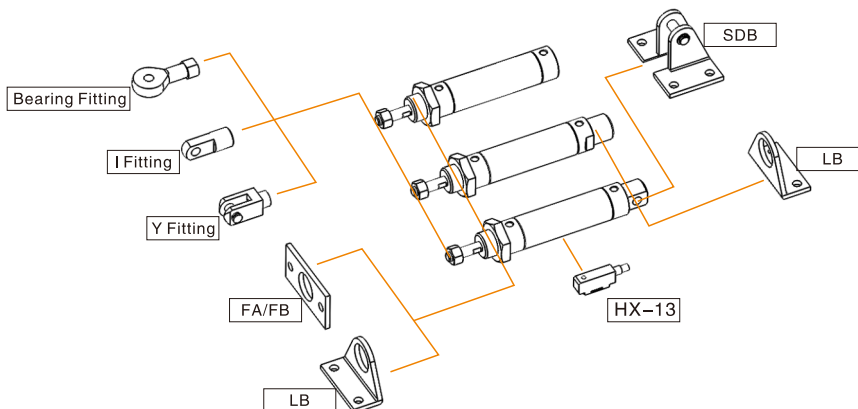
Blank: Basic type  
D: Double shaft type  
J: Double shaft and adjustable stroke type  
SA: Single action extend type  
SB: Single action return type  
(Note: single action is available for rubber cushion type only)

#### Order Example:

RAL series, Double shaft and adjustable stroke type, air cushion, Bore 32mm, stroke 25mm, Adjustable stroke 20, with magnet, No Mounting type, Round tail, PT thread.  
ERP code is: RALCJ32\*25-20-S-CM-P

Note: If cylinder with several different mounting accessories, pls with this sequential coding: LB/FA/SDB /IJ/YJ/BJ

### Optional Accessories

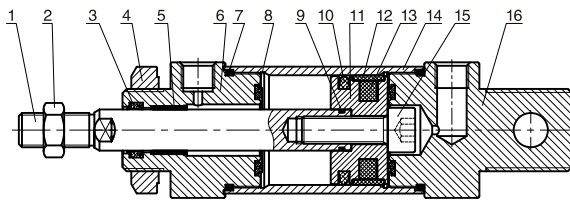


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## Stroke

	Bore (mm)	Standard Stroke (mm)	Max. Stroke (mm)
Double Acting	16~20	25 50 75 80 100 125 150 160 175 200 250 300	800
	25~63	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	800
Single Acting	16	25 50 75 100	100
	20~40	25 50 75 100 125 150	150

## Internal Structure

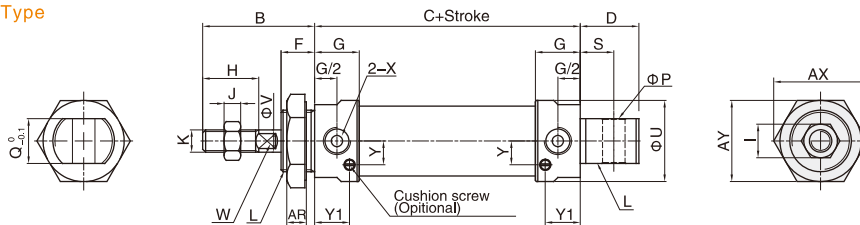


No.	Part Name	Material
1	Piston rod	S45C hard chrome carbon steel
2	Nut	Carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	O-ring	NBR
8	Anti-bump cushion	TPU
9	O-ring	NBR
10	Piston seal	NBR
11	Piston	Aluminum alloy
12	Wear ring	PTFE
13	Magnet	Plastic
14	Barrel	Aluminum alloy
15	Hexagon screw	Carbon steel
16	Rear cover	Aluminum alloy

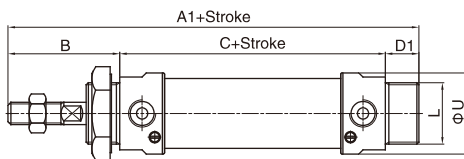
## Main Dimension

RAL  $\phi 16$  -  $\phi 63$

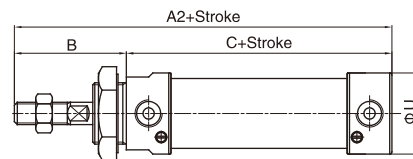
CA Type



CM Type (CM is not available for  $\phi 50$ ,  $\phi 63$  series)



U Type



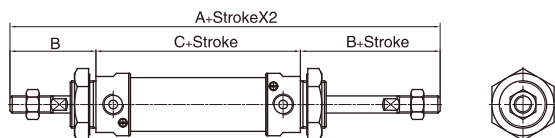
Bore\Sign	A1	A2	B	C	D	D1	F	G	H	I	J	K	L	P	Q	S	U	V	W	X	AR	AX	AY	Y	Y1
16	102	92	36	56	14	10	14	11	16	10	5	M6X1.0	M16X1.5	6	12	7	20	6	5	M5X0.8	6	25	22	6.3	8
20	122	110	40	70	21	12	12	16	20	12	6	M8X1.25	M22X1.5	8	16	12	29	8	6	1/8"	7	33	29	8.5	12.5
25	128	114	44	70	21	14	14	16	22	17	6	M10X1.25	M22X1.5	8	16	12	34	10	8	1/8"	7	33	29	10	12.5
32	128	114	44	70	27	14	14	16	22	17	6	M10X1.25	M24X2.0	10	16	15	39.5	12	10	1/8"	8	37	32	12	12
40	152	138	46	92	27	14	14	22	24	17	7	M12X1.25	M30X2.0	12	20	15	49.5	16	14	1/4"	9	47	41	16	18
50	146	146	54	92	27	22	22	24	24	19	8	M14X1.5	M36X2.0	12	20	16	55	20	18	1/4"	11	53	48	13.6	14
63	146	146	54	92	27	22	22	24	24	19	8	M14X1.5	M36X2.0	12	20	16	69	20	18	1/4"	11	53	48	19.8	14

Note: With magnet and no magnet, the dimensions are same.

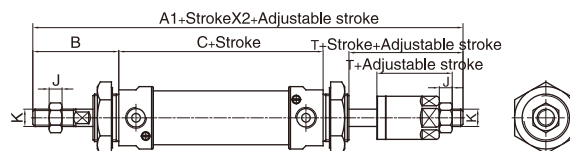
# RAL Series Mini Type Cylinder

## ◎ Main Dimension

RALD  $\Phi 16-\Phi 40$



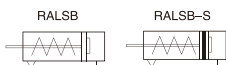
RALJ  $\Phi 16-\Phi 40$



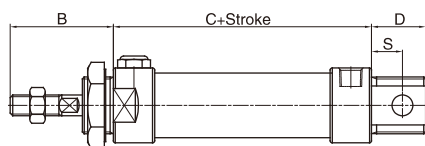
Bore\Sign	A	A1	B	C	J	K	T
16	128	127	36	56	5	M6X1.0	21
20	150	147	40	70	6	M8X1.25	25
25	158	155	44	70	6	M10X1.25	27
32	158	155	44	70	6	M10X1.25	27
40	184	180	46	92	7	M12X1.25	28

Note: Unlabeled the same size as standard type.

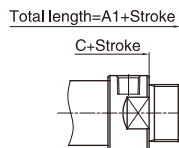
RALSB  $\Phi 16-\Phi 40$



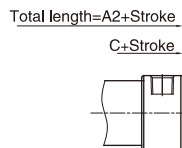
CA Type



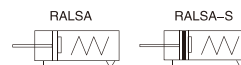
CM Type



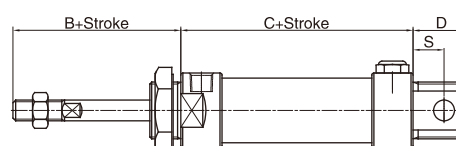
U Type



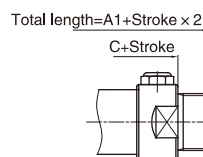
RALSA  $\Phi 16-\Phi 40$



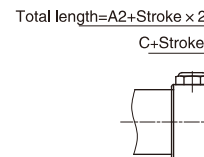
CA Type



CM Type



U Type



Bore\Sign	A1			A2			C			B	D	S
	0-50	51-100	101-150	0-50	51-100	101-150	0-50	51-100	101-150			
16	127	152	-	117	142	-	81	106	-	36	14	7
20	147	172	197	135	160	185	95	120	145	40	21	12
25	153	178	203	139	164	189	95	120	145	44	21	12
32	153	178	203	139	164	189	95	120	145	44	27	15
40	177	202	227	163	188	213	117	142	167	46	27	15

Note: Unlabeled the same size as standard type.