

MCRPLK series

RODLESS CYLINDER WITH LINEAR GUIDE

DISCONTINUED

Discontinued tube I.D.: Ø16, 25

Notification information 



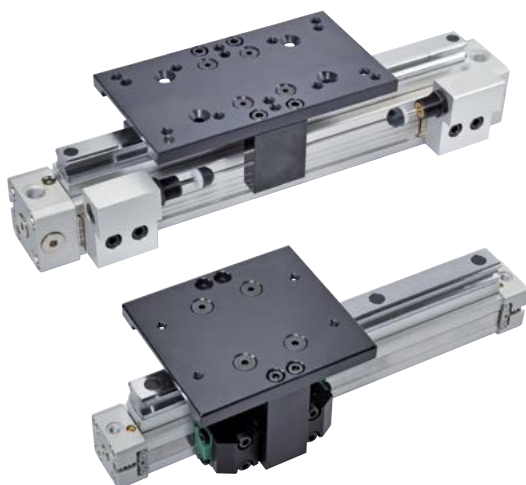
mindman



Technical data



Caution for safety
(Read before installing)



Features

- 50% space saving when compared to conventional cylinders.
- End caps with 3 air connections and adjustable cushioning.
- Load strength is higher than MCRPLF series (about 4 Multiple).
- Magnetic as standard.

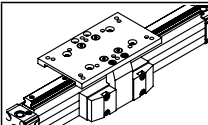
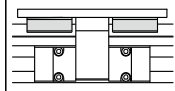
Specification

Model	MCRPLK			
Acting type	Double acting			
Tube I.D.(mm)	16	25	32	40
Port size	M5	G1/8	G1/4	G1/4
No. of port	3			
Medium	Air			
Operating pressure range	0.1~0.78 MPa			
Ambient temperature	-10°C ~ +80°C (No freezing)			
Lubrication	With or without lubrication			
Cushion	With adjustable cushion at both ends			
Stroke range (*1)	ø16: 100~3000 mm			
	ø25~40: 100~3600 mm			
Sensor switch	RCAL 			
Sensor switch Holder	HPL			

* 1. Minimum stroke unit 1mm.

* 2. The tube isn't airtight, so the cylinder is allowed little leakage.
Before the cylinder is sale, it has passed the standard of leakage test.

Order example

MCRPLK — D — 25 — 0850 — L V S						
Model	Slider	Tube I.D.	Stroke	Shock absorber set	Piston seals	Grease lubrication
	— Single slider	16 25 32 40	0100~3600 mm (4 digits)	(*) Without absorber set L Light M Medium H Powerful	— NBR V VITON	— Standard S Slow motion
	D Dual slider 					

* D-type is not suitable for ø16.

* It needs to be assembled by the original factory, and we don't suggest that you assemble by yourself.

*1. Shock absorber

Model	Shock absorber 			
	Model	L	M	H
MCRPLK-16	MAC-1005-	1	2	3
MCRPLK-25	MAC-1210-	1	2	3
MCRPLK-32	MAC-1412-	1	2	3
MCRPLK-40	MAC-1412-	1	2	3

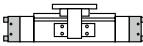
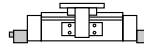
Available speed range

Piston seals	Grease lubrication	Available speed range (mm/s)
NBR	Slow motion	50~100
	Standard	within 101~1000
VITON	Slow motion	50~200
	Standard	201~1000 above

* Maximum seal life will be achieved when piston speeds do not exceed 1000mm/s.

* The suitable grease type can be selected according to the actual use.

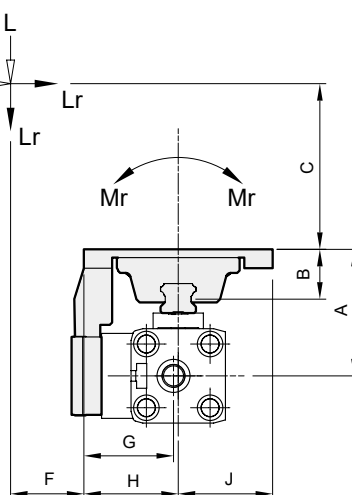
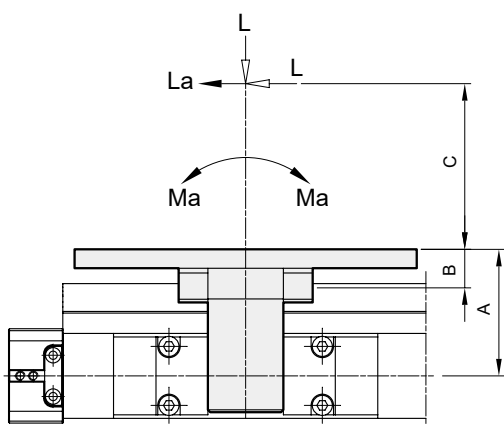
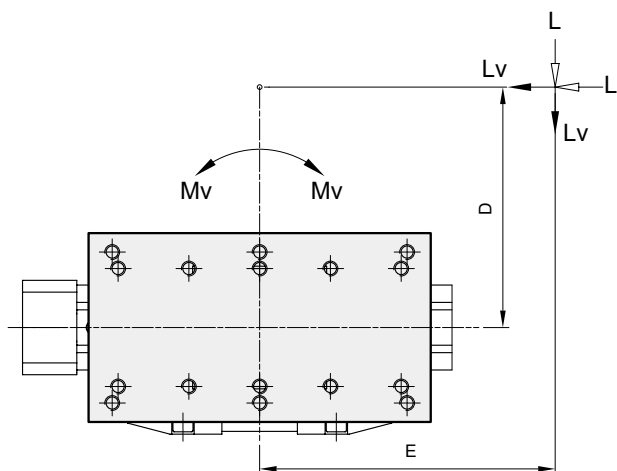
Order example of mounting accessories

Code	LB (LB×2)	LB1 (LB1×2)
Mounting Tube I.D.		
ø16	LB-P1-16x2	—
ø25	LB-P1-25x2	—
ø32	LB-P1-32x2	LB1-P1-32x2
ø40	LB-P1-40x2	—

1. The below mentioned moments (Ma max, Mr max, Mv max.) are related to the guide rail center. The load force (L) is the summary of all single forces related to the common center of the mass. The center of the mass can be placed inside or outside the surface area of the carriage.
2. Normally the carriage would experience a dynamic load, which has to be considered with the calculation of needed piston force (F) and capacity of the ball guided system.

Use the following calculation formula:

$$\frac{Ma}{Ma \max.} + \frac{Mr}{Mr \max.} + \frac{Mv}{Mv \max.} + \frac{L}{L \max.} \leq 1$$



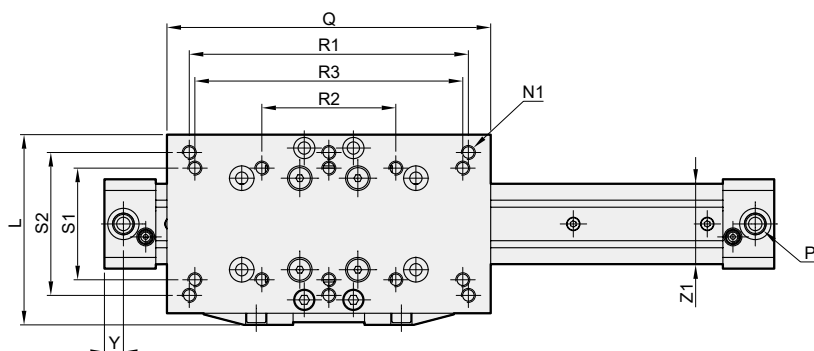
Forces and moments

Tube I.D. Code		16	25	32	40
Effect forces F	(N)	110	250	420	640
Cushioning	(mm)	15	21	26	32
A	(mm)	48.2	53.2	64	69
B	(mm)	21	21	24.4	24.4
C / D / E / F	(mm)	Dimensions according			
G	(mm)	38	38	55	54.5
H	(mm)	40	40	57.5	57.5
J	(mm)	40	40	57.5	57.5
Single slider	Load forces L(N)	500	1500	2950	3960
	Moment forces La, Lr, Lv (N)	500	1500	2950	3960
	Axial moments Ma (Nm)	4	40	61	115
	Radial moments Mr (Nm)	6	14	30	52
	Torsion moments Mv (Nm)	11	40	62	70
Dual slider	Load forces L (N)	—	1550	3020	4030
	Moment forces La, Lr, Lv (N)	—	1550	3020	4030
	Axial moments Ma (Nm)	—	85	85	130
	Radial moments Mr (Nm)	—	20	45	65
	Torsion moments Mv (Nm)	—	80	90	100

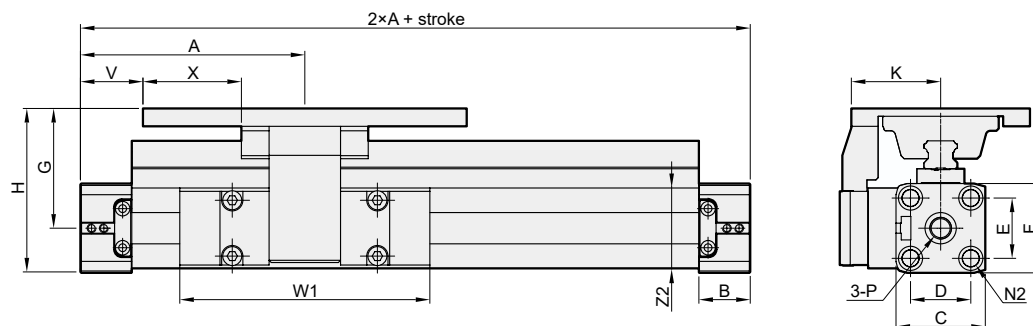
Weight

Unit: g

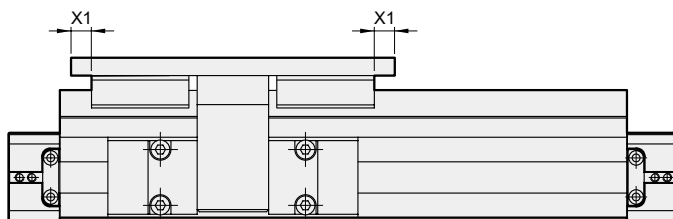
Tube I.D.	Without absorber		With absorber		Stroke 100 mm
	Single slider basic weight	Dual slider basic weight	Single slider basic weight	Dual slider basic weight	
16	932	—	1082	—	255
25	1698	1908	2032	2242	457
32	4082	4278	4635	4831	569
40	5709	5905	6260	6456	787



Single slider



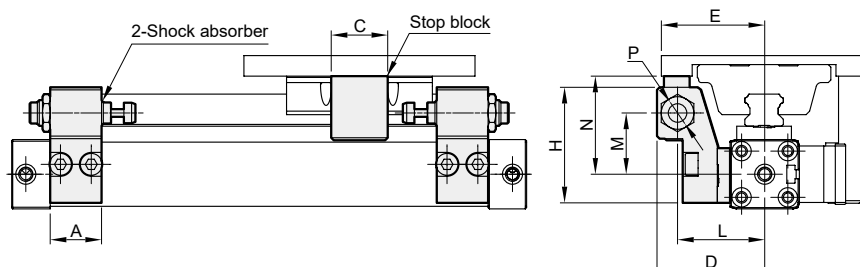
Dual slider



Code Tube I.D.	A	B	C	D	E	F	G	H	K	L	N1	N2	P	Q	R1	R2
16	65	15	27	18	18	27	48.2	61.7	40	80	M4×0.7 thru	M3×0.5×7 dp	M5	90	—	—
25	100	23	40	27	27	40	53.2	73.2	40	85	M6×1.0 thru	M5×0.8×12 dp	G1/8	145	125	60
32	125	27	56	40	36	52	64	90.0	57.5	115	M8×1.25×12.5 dp	M6×1.0×15 dp	G1/4	190	164	—
40	150	30	69	54	54	72	69	105.0	57.5	115	M8×1.25×12.5 dp	M6×1.0×15 dp	G1/4	190	164	—

Code Tube I.D.	R3	S1	S2	V	W1	X	X1	Y	Z1×Z2
16	70	36	—	20	69	16.5	—	5.5	25×24.5
25	120	50	64	28	112	44.0	13.5	8.5	36×36
32	—	—	96	30	152	64.3	16.8	10.5	48×52
40	—	—	96	55	152	64.3	16.8	16.0	58×58

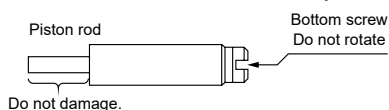
Shock absorber set



Code Tube I.D.	A	C	D	E	H	L	M	N	P
16	20	22	42	40	45	34	23.8	38.2	M10×1.0
25	35	32	44.7	40	45	33.7	24.35	43.7	M12×1.0
32,40	40	60	54.7	57.5	45	43.7	26.35	41.11	M14×1.5

With shock absorber

- Do not rotate the screw set on bottom of shock absorber.
This is not the screw for adjusting. If this screw is rotated, it may cause oil leakage.
- Do not scratch the exposed portion of the piston rod.
Decrease in life or malfunction may result.



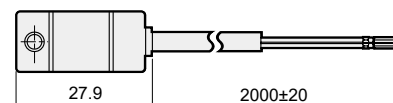
- Shock absorber is considered a consumable component. When energy absorption is decreased, replace it.

Model	Shock absorber			
	Model	L	M	H
MCRPLK-16	MAC1005-	1	2	3
MCRPLK-25	MAC1210-	1	2	3
MCRPLK-32	MAC1412-	1	2	3
MCRPLK-40	MAC1412-	1	2	3

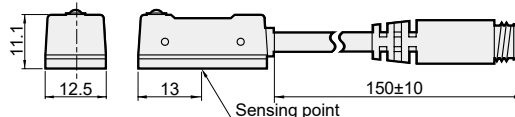
Sensor switch specification

Model	RCAL
Switch type	Reed switch
Contracts	Normal open
Voltage range	DC/AC 5~240V
Current range	100 mA max.
Switch range	10W max.
Shock resistance	30 G
Voltage drop	2.5V max.
Response time	Max. 1ms
Temperature	-10~70°C
Lead wire	$\varnothing 4$, 2C, PVC
Lead wire length	3 m
Indicator lamp	LED lights up when ON
Enclosure classification	IP 67 (NEMA 6)
Indicator	Green LED

Standard lead wire



QD connector

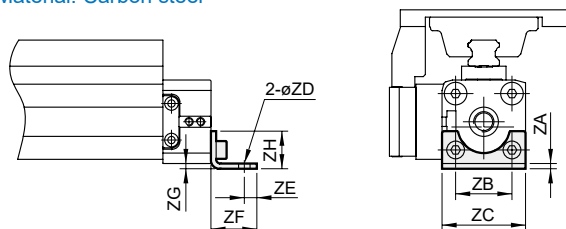


Mounting accessories

LB End cover bracket (foot)

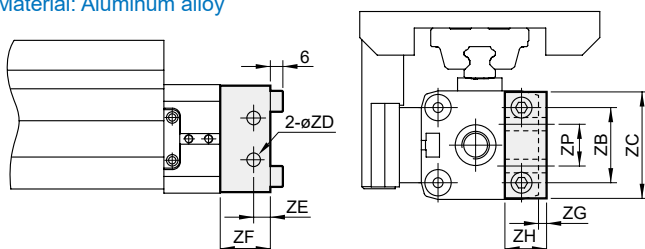
$\varnothing 16, \varnothing 25$

Material: Carbon steel



$\varnothing 32, \varnothing 40$

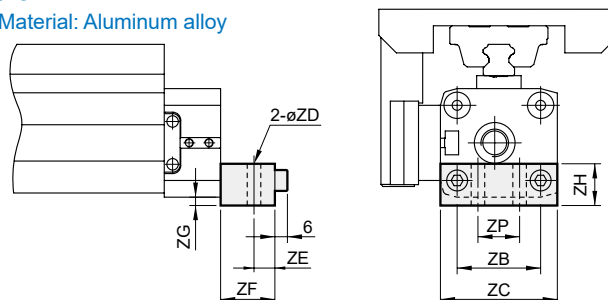
Material: Aluminum alloy



LB1 End cover bracket (foot)

$\varnothing 32^*$

Material: Aluminum alloy



Code Tube I.D.	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZP
16	1.6	18	26	3.6	4	14	1.5	12.5	—
25	2.5	27	40	5.5	6	22	2.5	18	—
32	—	36	51	6.5	8	24	4	20	20
32*	—	40	56	6.5	8	26	4	20	20
40	—	54	71	9	11.5	24	2	20	30