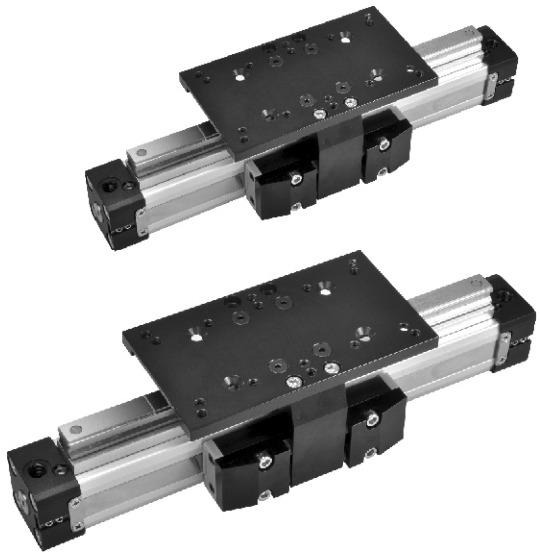
MCRPLK series

RODLESS CYLINDER WITH LINEAR GUIDE

Mindman



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	1~7.8 kgf/cm^2			
Ambient Temperature	-15℃ ~ +80℃ (No freezing)			
Lubrication	With or Without lubrication			
Cushion	With adjustable cushion at both ends			
Stroke range(※1)	ϕ16：100~3300 mm			
	ϕ25~40：100~3600 mm			
Sensor Switch	RCAL			
Sensor Switch Holder	HPL			

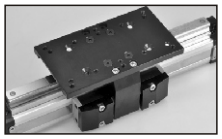
※1: Minimum stroke unit 1mm.
※2: The tube isn't airtight, so the cylinder is allowed little leakage. Before the cylinder is sale, it has passed the standard of leakage test.

Order example:

MCRPLK – D – 25 – 0850 – B – S – 24/2

Model

MCRPLK



Slider

—	single slider
D	dual slider

※ D-type is not suitable for ϕ16

Tube I.D.

16
25
32
40

Stoke

100~3600 mm
(4 codes)

Absorber

—	without absorber
B	absorber at both ends

Grease lubrication

—	standard
S	slow motion grease

Accessory

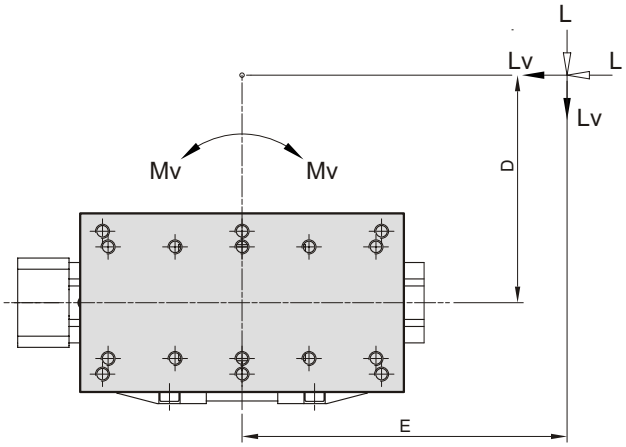
※Please refer to P.04 page code

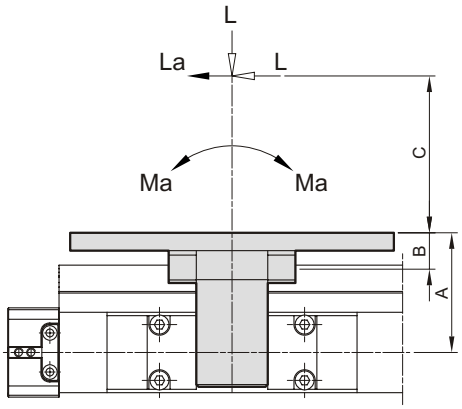
※Speed range for the different greases:

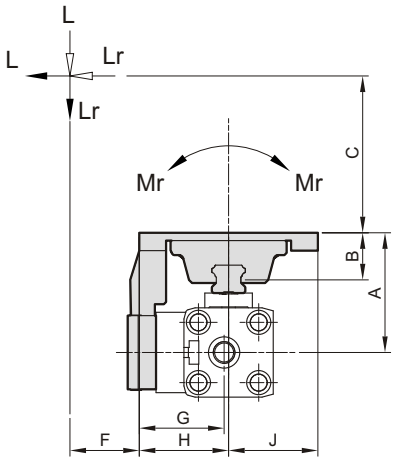
- **Standard grease**:
  NBR piston seals: 0.2 m/s≦V＜1 m/s
  VITON piston seals: 1 m/s≦V
- **Slow motion grease**:
  NBR piston seals: V＜0.2 m/s
  VITON piston seals: V＜0.2 m/s

MCRPLK Capacity

RODLESS CYLINDER WITH LINEAR GUIDE







Forces and moments

Tube I.D. / Code			16	25	32	40
Effect forces F		(N)	110	250	420	640
Custioning		(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

1. The above mentioned moments (Ma max, Mr max, Mv max) are related to the guide rail centre. The load force (L) is the summary of all single forces related to the common centre of the mass. The centre of the mass can be placed inside or outside the surface area of the carriage.

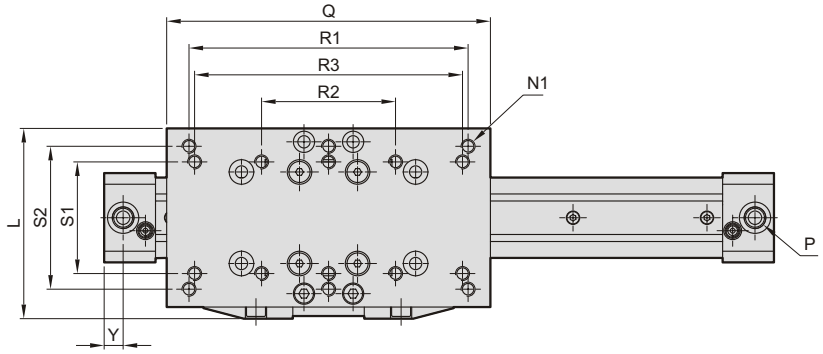
2.Normally the carriage would experience a dynamic load, which has to be considered with the calculation of needed piston force (F) and capacity of the ballguided system.

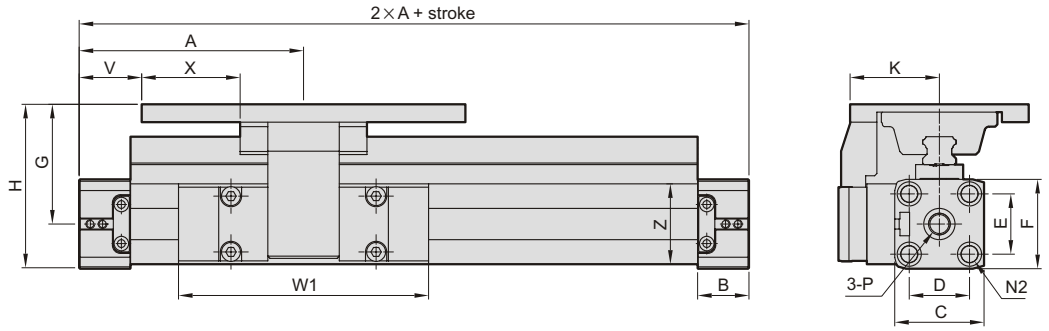
Use the following calculation formular:

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

MCRPLK Dimensions ϕ16~ϕ40

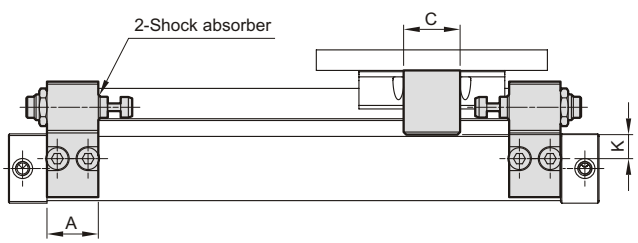
RODLESS CYLINDER WITH LINEAR GUIDE

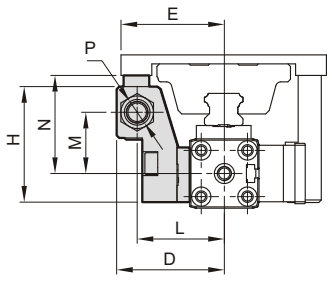




Code / Tube I.D.	A	B	C	D	E	F	G	H	K	L	N1	N2	P	Q	R1	R2
16	65	15	27	18	18	27	48.2	61.7	40	80	M4×0.7 thru	M3×0.5×7 dp	M5	90	—	—
25	100	23	40	27	27	40	53.2	73.2	40	85	M6×1.0 thru	M5×0.8×12 dp	G1/8	145	125	60
32	125	27	56	40	36	52	64	90.0	57.5	115	M8×1.25×12.5 dp	M6×1.0×15 dp	G1/4	190	164	—
40	150	30	69	54	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	Y	Z
16	70	36	—	20	69	16.5	5.5	25×24.5
25	120	50	64	28	112	44.0	8.5	36×36
32	—	—	96	30	152	64.3	10.5	48×52
40	—	—	96	55	152	64.3	16.0	58×58

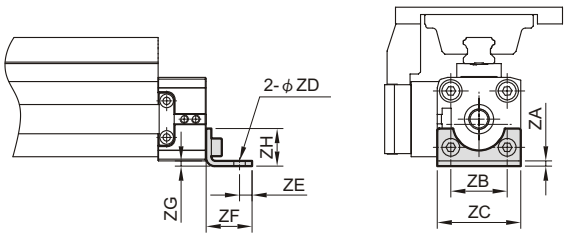




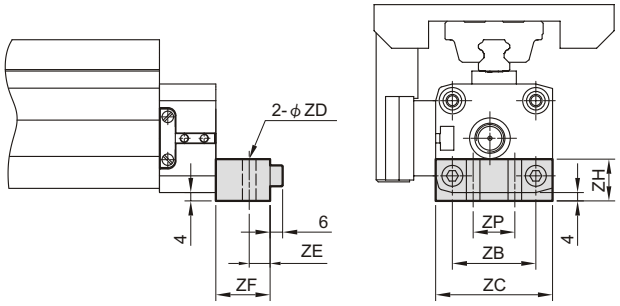
Code / Tube I.D.	A	C	D	E	H	K	L	M	N	P
16	20	22	42	40	45	9.35	34	23.8	38.2	M10×1.0
25	35	32	44.7	40	45	15.65	33.7	24.35	43.7	M12×1.0
32,40	40	60	54.7	57.5	45	2.76	43.7	26.35	41.11	M14×1.5

End cover bracket (foot)

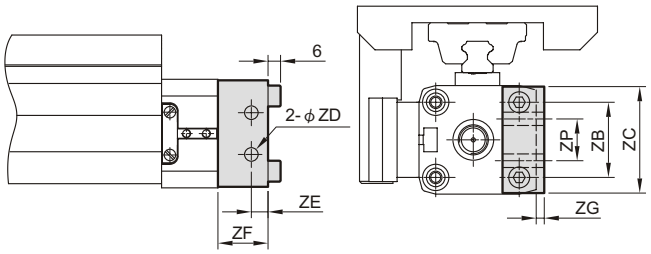
ϕ16 ϕ25



ϕ32※



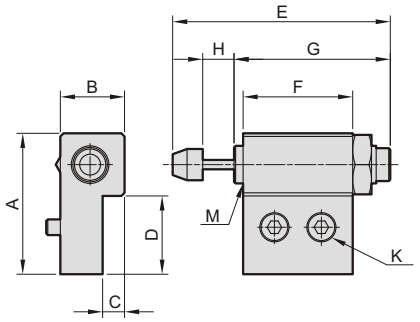
ϕ32 ϕ40



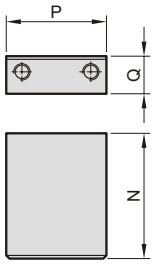
Code / Tube I.D.	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZP	order number
16	1.6	18	26	3.6	4	14	1.5	12.5	--	PL 24/1
25	2.5	27	40	5.5	6	22	2	18	--	PL 24/2
32	--	36	51	6.5	8	24	4	20	20	PL 24/3
32※	–	40	56	6.5	8	26	4	20	20	PL 24/3.1
40	–	54	71	9	11.5	24	2	20	30	PL 24/4

absorber group

Body fixed group



Stop block



Code / Tube I.D.	Body fixed group										Stop block		
	A	B	C	D	E	F	G	H	K	M	N	P	Q
16	45	23.5	10	25	41.2	20	31.7	5	M5×12L	M10×1.0	25	22	10
25	45	20.5	7	25	69.5	35	49.9	10	M5×12L	M12×1.0	40	32	12
32,40	45	20.5	7	25	98.7	40	76	12	M5×12L	M14×1.5	40	60	20

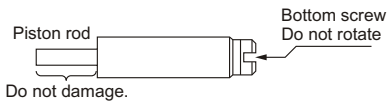
With shock absorber

❶ 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.

❷ Do not scratch the exposed portion of the piston rod.

Decrease in life or malfunction may result.



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

Model	Part No. of shock absorber
MCRPLK-16	MAC1005-3
MCRPLK-25	MAC1210-3
MCRPLK-32	MAC1412-3
MCRPLK-40	MAC1412-3