



Technical data



Caution for safety
(Read before installing)



Features

- High resistance to wear.
- Ability to take high loads & moments in all directions.
- Low weight.
- Ability to take shock loadings and vibrations against blows and vibrations.

Specification

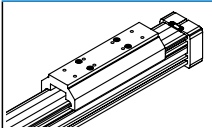
Model	MCRPLS			
Acting type	Double acting			
Tube I.D. (mm)	32	40	50	63
Port size	G1/4			G3/8
No. of port	3			
Medium	Air			
Operating pressure range	0.05~0.8 MPa			
Stroke range	100~2000 mm (*1)			
Ambient temperature	-10~+80°C (No freezing)			
Lubrication	With or without lubrication			
Cushion	With adjustable cushion at both ends			
Sensor switch	RNI / RPI 		RCAL 	
Sensor switch holder	—		HPL	

*1. In increments of 1mm, long strokes on request.

*2. The tube isn't airtight, so the certain leakage is allowed.

Before delivery, all products has passed the standard of leakage test.

Order example

MCRPLS — 90 V — 32 — 0850 — S					
Model	Type	Piston seals	Tube I.D.	Stroke	Grease lubrication
	90 Standard type	— NBR V VITON	32 40 50 63	0100~2000 mm (4 digits)	— Standard S Slow motion

Available speed range

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

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

Weight

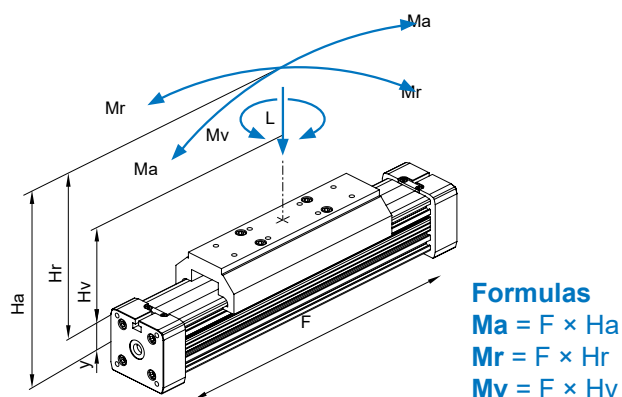
Unit: g

Model	Basic weight MCRPLS	Stroke 100 mm MCRPLS
Tube I.D.		
ø32	2,160	379
ø40	3,880	594
ø50	5,400	648
ø63	10,840	1,182

Order example of mounting accessories

Code	LB (LB×2)	LB1 (LB1×2)	MS (Mid section support)
Mounting			
Tube I.D.			
ø32	LB-P1-32x2	LB1-P1-32x2	MS-P3-32
ø40	LB-P1-40x2	—	MS-P3-40
ø50	LB-P1-50x2	—	MS-P1-50x2
ø63	LB-P1-63x2	—	MS-P1-63x2

* The dimensions of LB, LB1 and MS (ø50, ø63) mounting accessories, please refer to MCRPL(F)2 series .



Cylinder ø	Effect force (N) 0.6 MPa	La, Lr, Lv max (N)
32	420	495
40	640	825
50	1000	1320
63	1550	1815

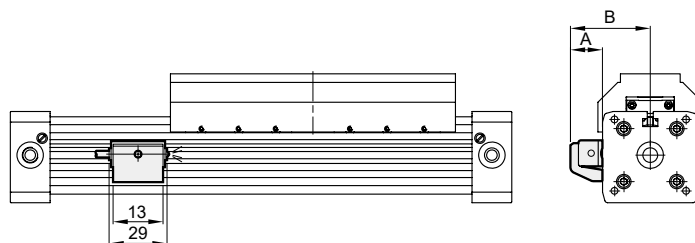
Cylinder ø	Ma max. (Nm)	Mr max. (Nm)	Mv max. (Nm)
32	35	10	35
40	75	20	75
50	170	58	170
63	305	95	305

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

- The above 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.
- 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 guided system. Use the following calculation formular.

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	ø4, 2C, PVC
Lead wire length	3 m
Indicator lamp	LED lights up when ON
Enclosure classification	IP 67 (NEMA 6)
Indicator	Green LED



Code	A	B	Switch holder
40	10.5	46.5	HPL
50	16.5	56	
63	15.5	68.5	

Deflection diagram

- Max. distance (SL) in m — for ø32~63mm

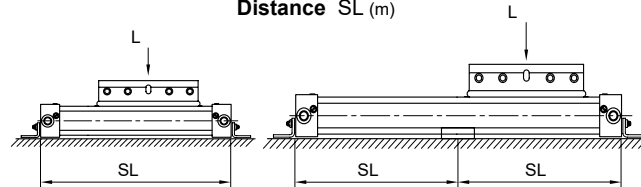
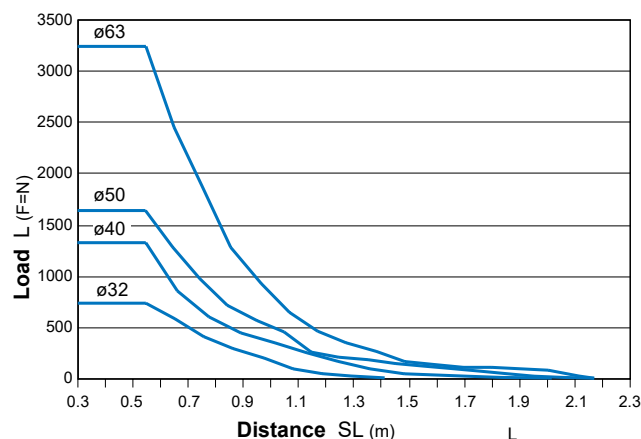
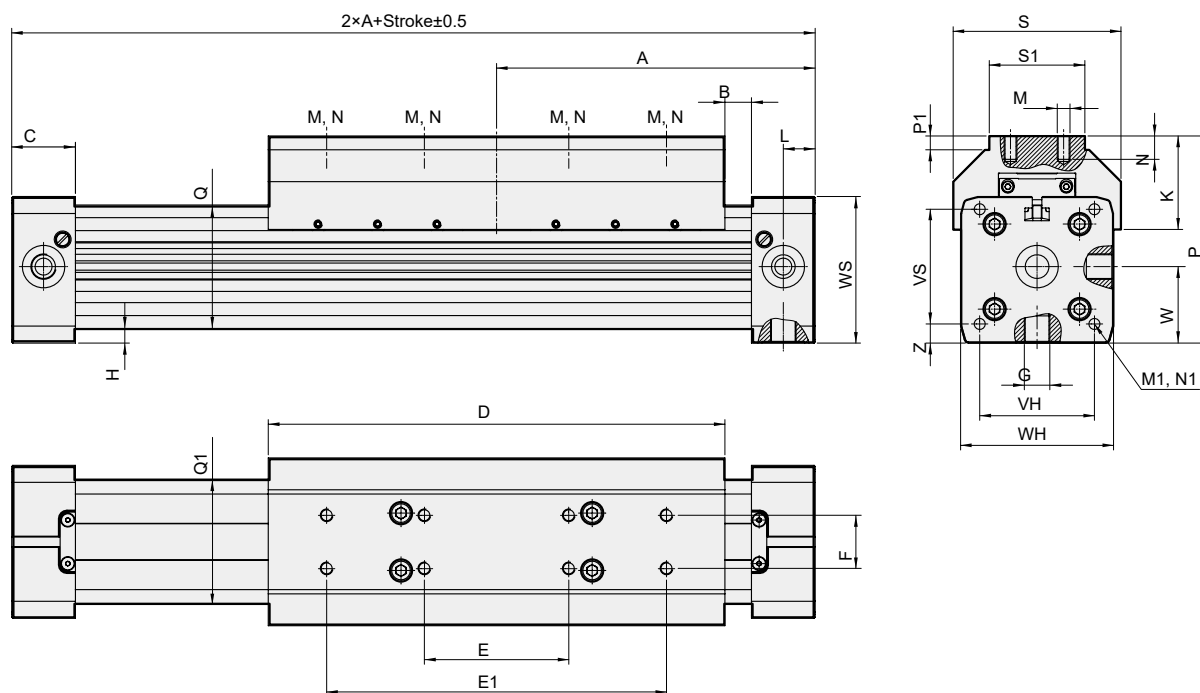


Diagram information

- Calculated deflections without support of 0.5~1 mm allow exceeding of supporting distance.
- Calculated deflections without support of 1 mm ~ max. 1.5 mm require reduction of the supporting distance.



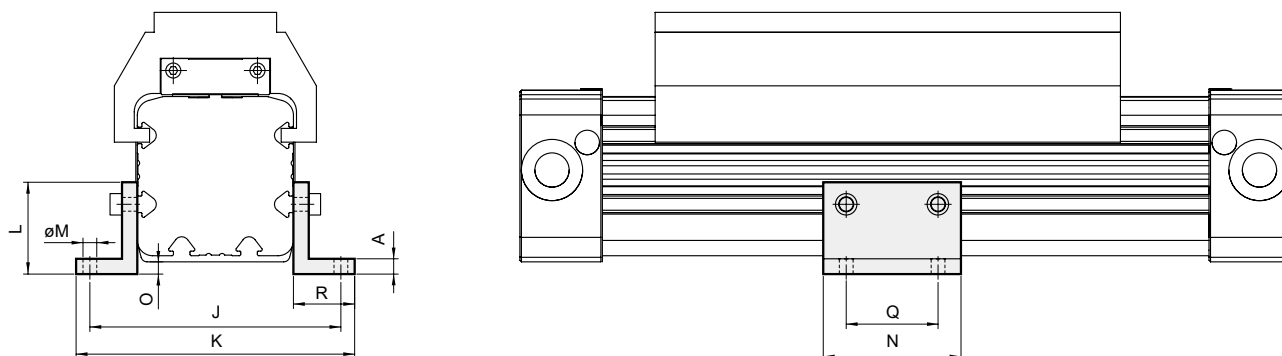
Code Tube I.D.	A	B	C	D	E	E1	F	G	H	K	L	M	N	M1	N1
32	125	22.0	27	152	60	120	25	1/4	2.0	42.5	10.5	M5	10	M6	14
40	150	12.5	30	215	68	160	25	1/4	7.0	44.0	15.0	M8	10	M6	17
50	175	17.5	33	250	84	190	25	1/4	0.5	48.5	11.7	M8	10	M6	18
63	215	5.0	50	320	120	240	25	3/8	1.5	56.0	25.0	M8	14	M8	18

Code Tube I.D.	P	P1	Q×Q1	S	S1	VH	VS	W	WH	WS	Z
32	81.5	6.5	52×51	66	40	36	40	30.0	52	56	8.0
40	97.5	6.5	58.5×59	79	45	54	54	36.0	72	69	9.0
50	110.0	6.5	77×78	92	50	70	70	43.5	80	80	4.0
63	137.0	5.0	102×102	116	50	78	78	62.5	106	106	14.5

MS Mid section support (2 pcs)

ø32, ø40

Material: Aluminum alloy



Code Tube I.D.	A	J	K	L	M	N	O	Q	R	Weight (g)
32	5	82	91	30	ø4.5	45	6	30	20	53
40	5	90	99	25	ø4.5	45	8.5	30	20	47