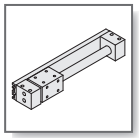
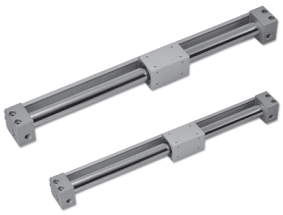


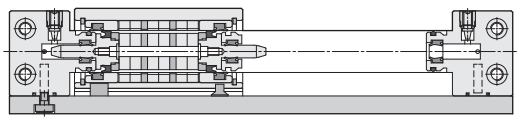
MRB series (Slide Mounting Type)
MAGNETIC RODLESS CYLINDER
Operating specification and Ordering expression

New

CHELIC PNEUMATIC



Internal structure



Specification

Item / Bore size (mm)	10	15	20	25	32	40
Operation	Double acting					
Fluid	Air					
Pressure range Kgf/cm² (Kpa)	1.5 ~ 4.5 (150 ~ 450)	1.5 ~ 6 (150 ~ 600)				
Max. service pressure Kgf/cm² (Kpa)	5.0 (500)	6.5 (650)				
Operating ambient temperature range °C	0 ~ 60					
Range of service speed mm/sec	50 ~ 500					
Lubrication	Free					
Port size	M5		PT 1/8 "			PT 1/4 "
Cushion device	Rubber cushion	Air pressure cushion				

Standard stroke (MRB series)

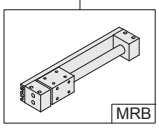
Unit : mm

Bore size	Stroke	Max. stroke
Ø10	50、100、150、200、250、300	300
Ø15	50、100、150、200、250、300、350、400、450、500	500
Ø20	50、100、150、200、250、300、350、400、450、500	800
Ø25	50、100、150、200、250、300、350、400、450、500、550、600	800
Ø32	50、100、150、200、250、300、350、400、450、500、550、600	800
Ø40	50、100、150、200、250、300、350、400、450、500、550、600	800

How to order

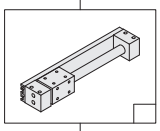
MRB – R | 10 × 50 – SD 2

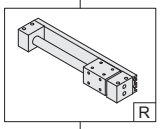
Model

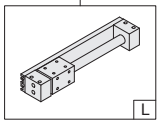


MRB :
Magnetic rodless Cylinder
(Slide mounting type)

Hole position





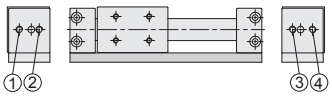


Bore size

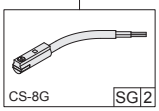
10 – Ø10
15 – Ø15
20 – Ø20
25 – Ø25
32 – Ø32
40 – Ø40

Stroke

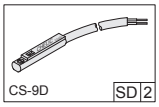
Ø10 – 50 ~ 300
Ø15 – 50 ~ 500
Ø20 – 50 ~ 800
Ø25 – 50 ~ 800
Ø32 – 50 ~ 800
Ø40 – 50 ~ 800



Sensor switch



None :
Without Sensor
SG : Sensor code
(CS-8G)



None :
Without Sensor
SD : Sensor code
(CS-9D)
SB : Sensor code
(CS-9B)

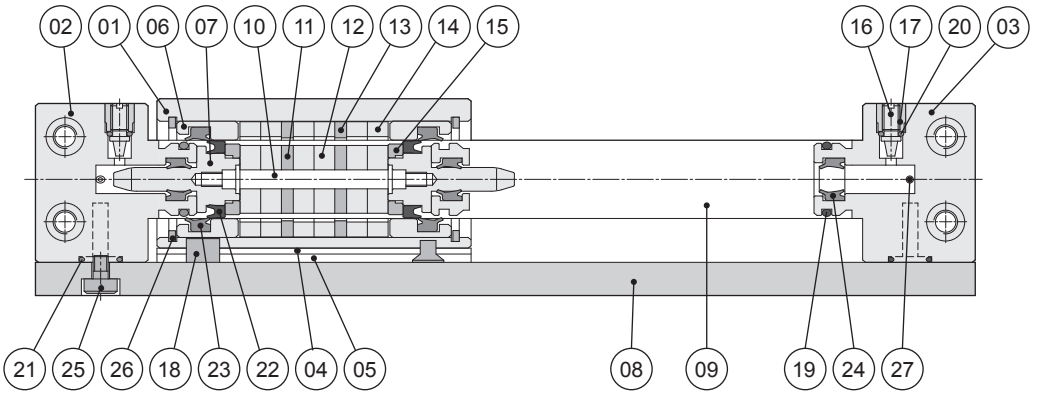
2 : Number of Sensor
1 : 1 PCS
2 : 2 PCS
(option)

None : Standard type, piping port located in left and right refer to picture ②③

R : Piping port located in right side, refer to picture ③④

L : Piping port located in left side, refer to picture ①②

Internal structure



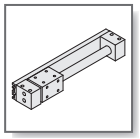
Components and Material list

No.	Item	Material	No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Piston magnetic yoke	Iron	21	O-Ring	NBR
02	Cover (left)	Aluminum alloy	12	Piston magnetic	Rare earth metals	22	Piston packing	NBR
03	Cover (right)	Aluminum alloy	13	Body magnetic yoke	Iron	23	Rod packing	NBR
04	Plate	Iron	14	Body magnetic	Rare earth metals	24	Cushion packing	NBR
05	Wear ring	Teflon	15	Wear ring	Teflon	25	Mounting screw	Alloy steel
06	Rod packing base	Plastic	16	Cushion needle	Medium carbon steel	26	C type snap ring	Alloy steel
07	Piston	Aluminum alloy	17	Cushion needle bush	Copper	27	Steel ball	Stainless steel
08	Switch rail	Aluminum alloy	18	Magnet	Rare earth metals			
09	Rod	Stainless steel	19	O-Ring	NBR			
10	Piston joiner	Stainless steel	20	O-Ring	NBR			

Packing and O-Ring list

Item	Piston packing	Rod packing	Cushion O-Ring
Bore size mm / No.	2	2	2
Ø10	PPY − 10	PDU − 11 × 16.7	Ø2.8 × Ø1.9
Ø15	DYP − 15	PDU − 17 × 22.4	Ø10 × Ø1.5
Ø20	DYP − 20	PDU − 21 × 28.3	−
Ø25	PPY − 25	PDU − 26 × 34.4	−
Ø32	PPY − 32	PDU − 33.2 × 45.4	−
Ø40	PPY − 40	PDU − 41.3 × 51	−

Note : Piston packing and rod packing all adopt imports. (Mitsubishi , Sakagami and same grade)



MRB series (Slide Mounting Type)
MAGNETIC RODLESS CYLINDER
Design and Installation reference

Theoretical force

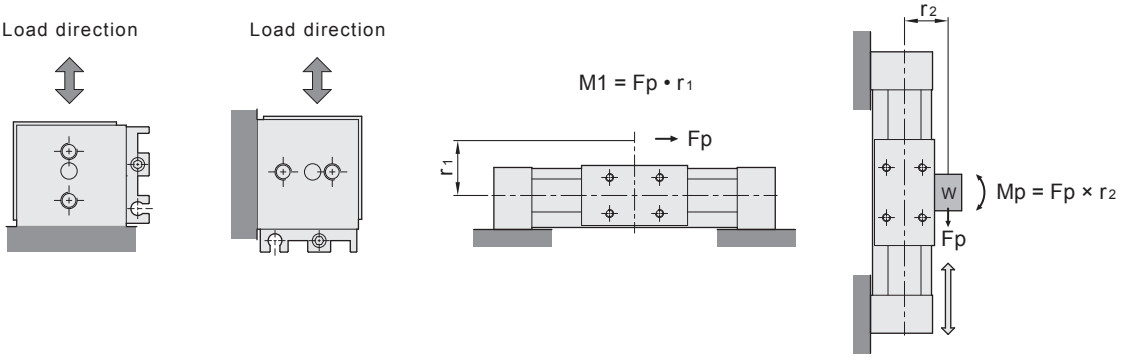
Unit : kgf

Bore size mm	Action	Piston area cm²	Air pressure (kgf/cm²)						
			1	2	3	4	5	6	7
10	Push	1.5	—	1.6	2.4	3.2	4	4.7	5.5
15	Push	1.76	—	3	5	7	8	10	12
20	Push	3.14	—	6	9	12	15	18	21
25	Push	4.90	—	9	14	19	24	29	34
32	Push	8.04	—	16	24	32	40	48	55
40	Push	12.5	—	25	37	50	62	75	87

Note :Above are theoretical date ; please take into consideration the frictional resistance and the mechanical efficiency of value should be added calculation before using. (About 70%~80%)

Load and Moment allowable

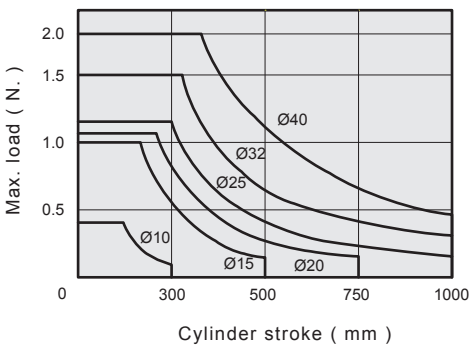
- Load allowable
- Moment allowable



Load and Moment allowable

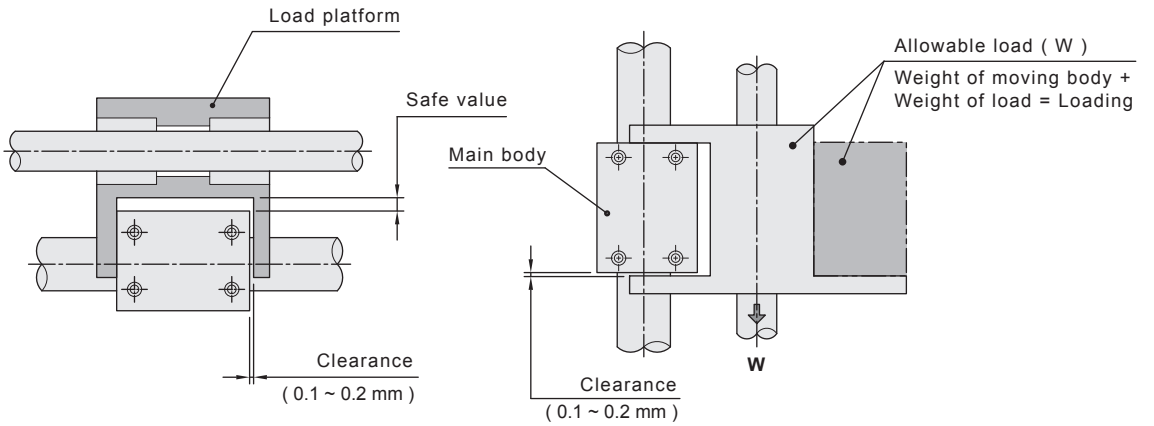
Bore size (mm)	Max. load allowable W (kgf)	Max. moment allowable Mp (kgf•m)
Ø10	0.4	0.2
Ø15	1.0	1.18
Ø20	1.1	2.45
Ø25	1.2	3.92
Ø32	1.5	8.83
Ø40	2.0	13.7

Load and Stroke characteristic



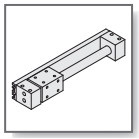
Mounting type

- Horizontal load
- Vertical load



⚠ Caution

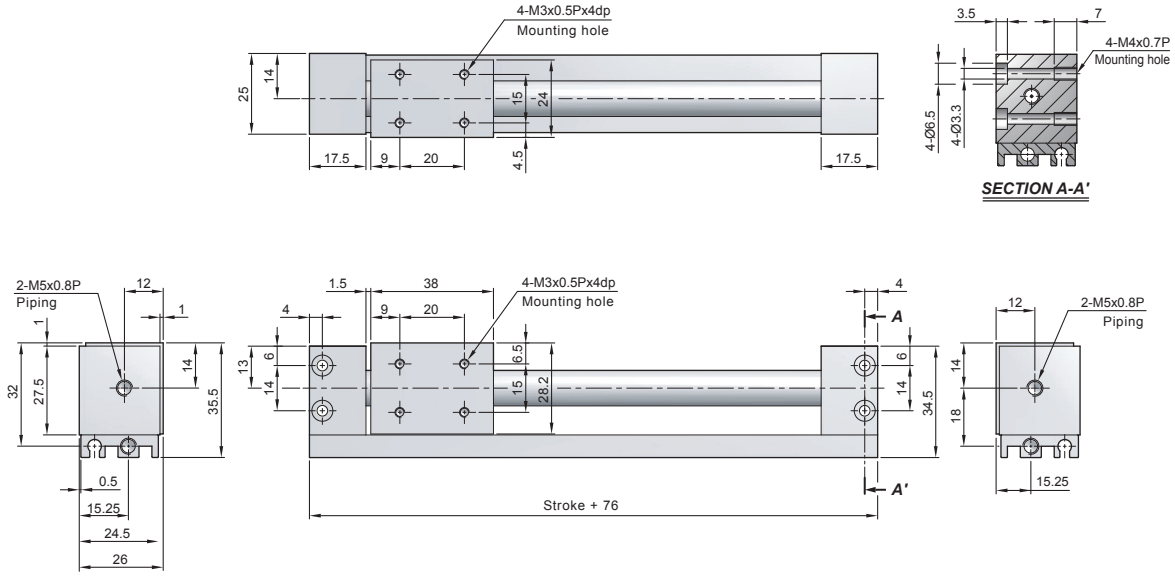
The moving slide block of cylinder should offer indirect load with connecter only for moving, avoid direct load to cause cylinder winding and badly operating.



MRB series (Slide Mounting Type)
MAGNETIC RODLESS CYLINDER
External dimension

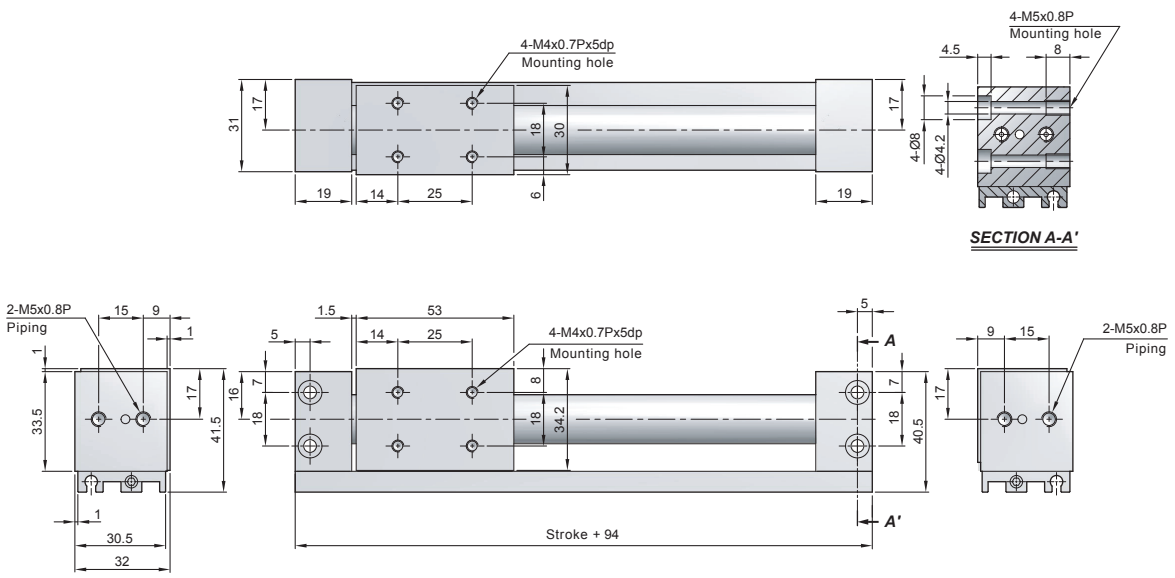
MRB 10 × ☐ ST

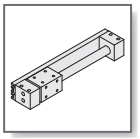
MRB ☐ × ☐ ST



MRB 15 × ☐ ST

MRB ☐ × ☐ ST

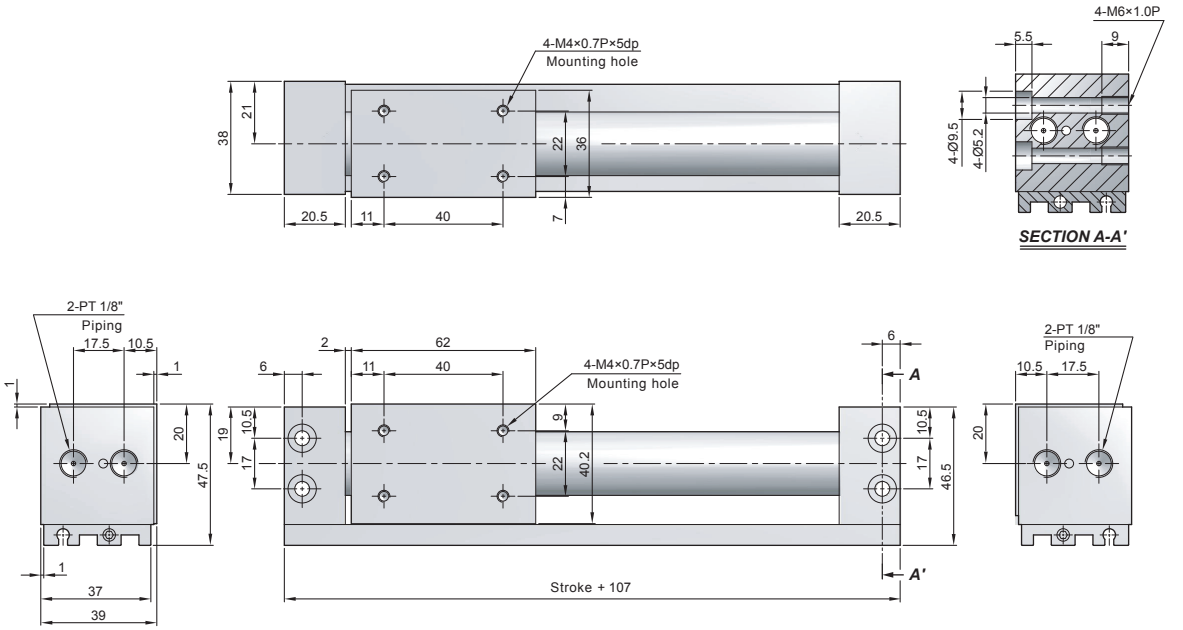




MRB series (Slide Mounting Type)
MAGNETIC RODLESS CYLINDER
External dimension

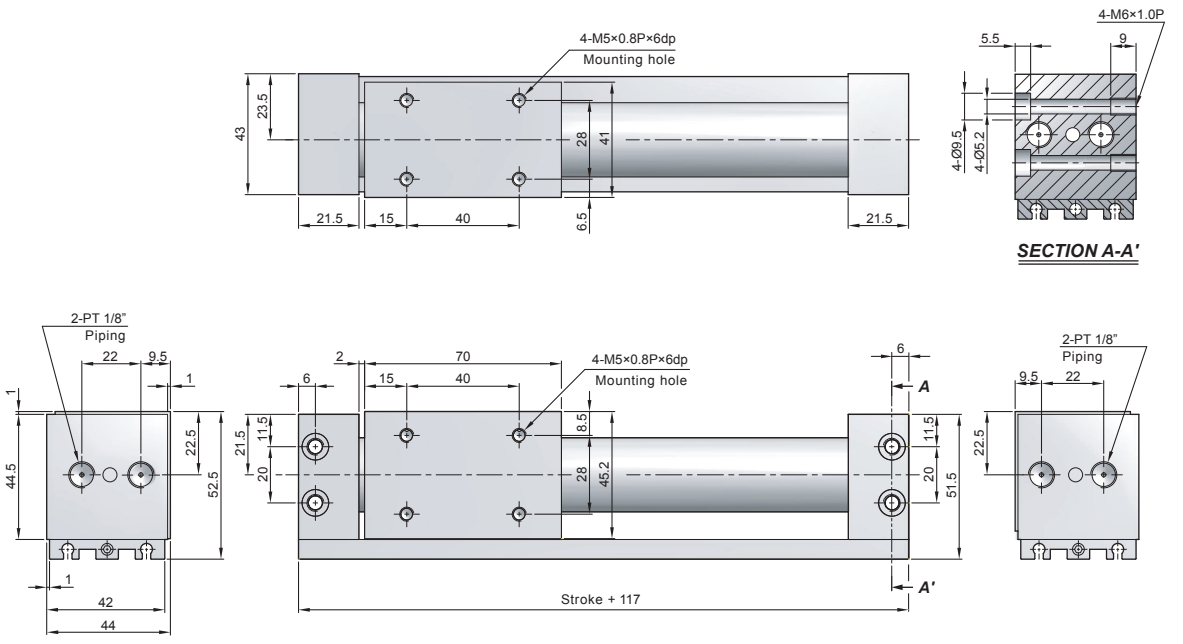
MRB 20 × □ ST

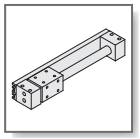
MRB □ × □ ST



MRB 25 × □ ST

MRB □ × □ ST

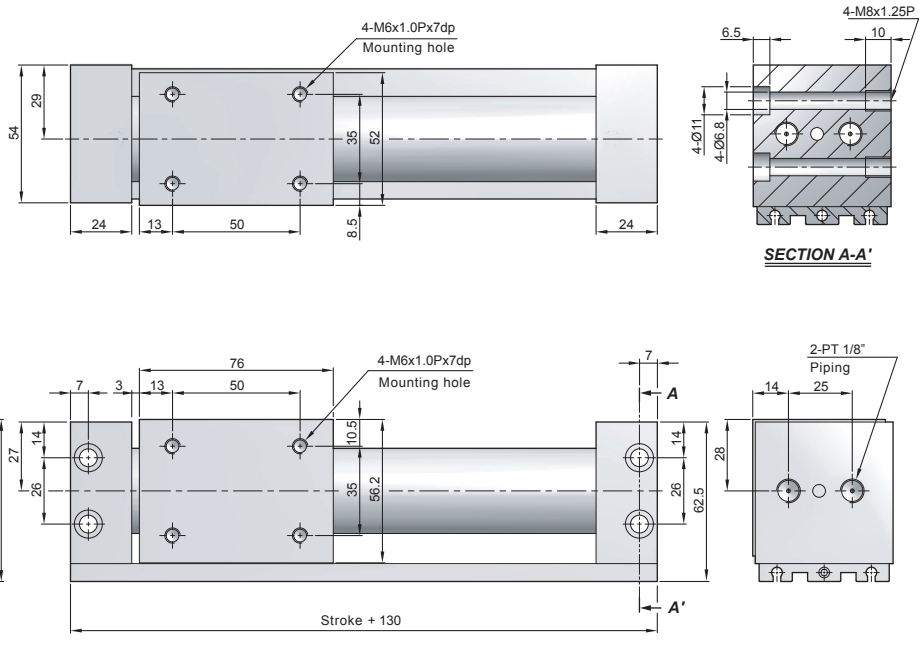




MRB series (Slide Mounting Type)
MAGNETIC RODLESS CYLINDER
External dimension

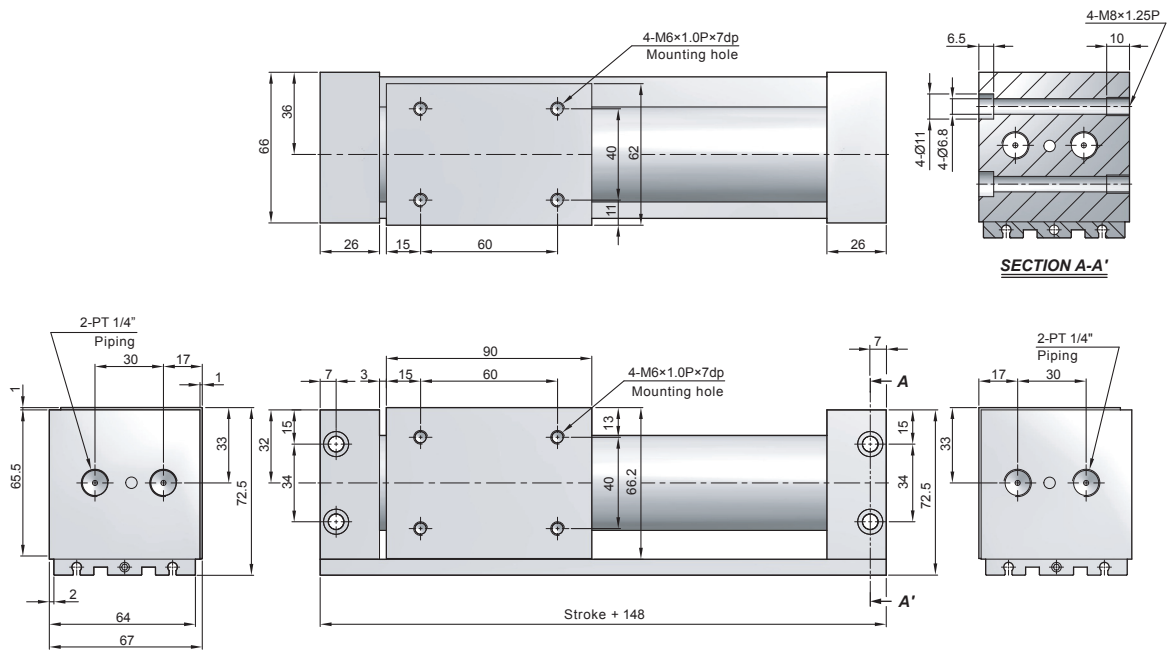
MRB 32 × ☐ ST

MRB ☐ × ☐ ST



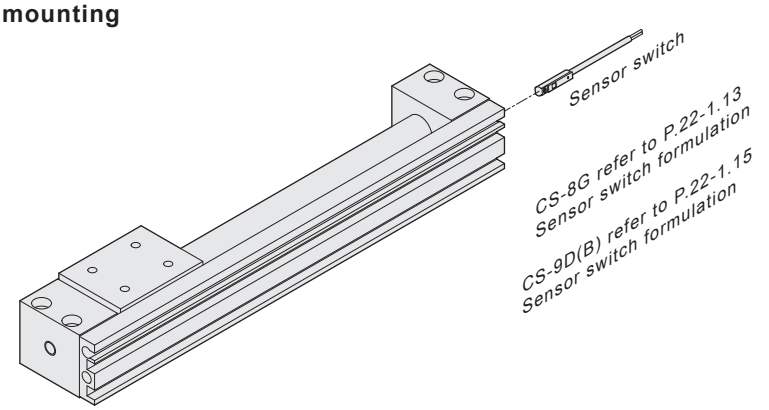
MRB 40 × ☐ ST

MRB ☐ × ☐ ST



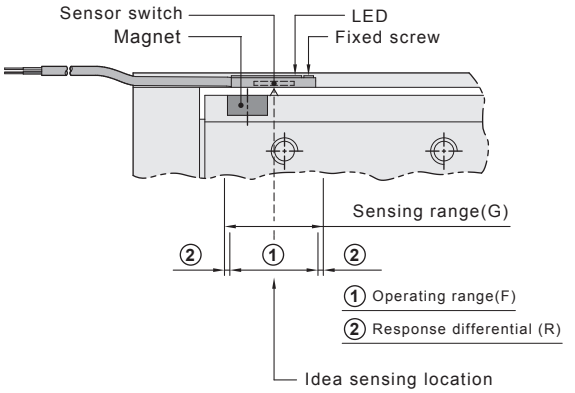
PRU Rodless Cylinder
PRF Rodless Cylinder
PRUT Rodless Cylinder
MRD Magnetic Rodless Cylinder
MRB Magnetic Rodless Cylinder
MRX Magnetic Rodless Cylinder
MRU Magnetic Rodless Cylinder
MRH Magnetic Rodless Cylinder

Sensor switch mounting



Sensor switch setting and Operating range

CS-9D(B)



Sensing range

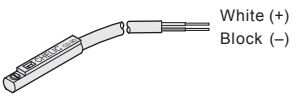
Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the Sensor switch when it enters the operating range. It has 0.5mm differential.

Operating range

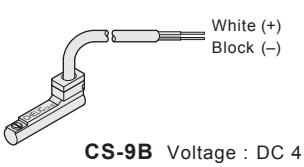
When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

Model	CS-9D(B)		CS-8G	
Bore size	Operating range (F)	Response differential(R)	Operating range (F)	Response differential(R)
Ø10	8	1	10	1
Ø15	8	1	10	1
Ø20	8	1	10	1
Ø25	11	1.5	13	1.5
Ø32	11	1.5	13	1.5
Ø40	11	1.5	13	1.5

Connector type



CS-9D Voltage : DC 4 ~ 120 V
AC 4 ~ 120 V



CS-9B Voltage : DC 4 ~ 120 V
AC 4 ~ 120 V