

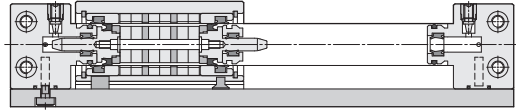
MRB series (Slide mounting type) Magnetic rodless cylinder

Operating specification and Ordering expression

CHELIC PNEUMATIC



Internal structure



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

Specification

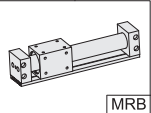
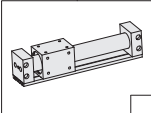
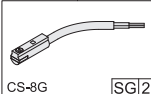
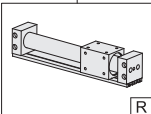
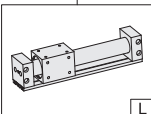
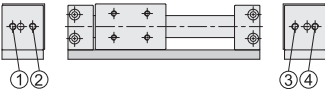
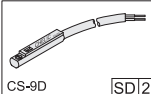
Item	Bore size (mm)	10	15	20	25	32
Operation		Double acting				
Fluid		Air				
Pressure range	Kgf/cm ² (Kpa)	1.5 ~ 4.5 (150 ~ 450)		1.5 ~ 6 (150 ~ 600)		
Max. service pressure	Kgf/cm ² (Kpa)	5.0 (500)		6.5 (650)		
Operating ambient temperature range	°C	0 ~ 60				
Range of service speed	mm/sec	50 ~ 500				
Lubrication		Free				
Port size		M5			PT 1/8 "	
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

How to order

MRB	-	R		×	50	-	SD	2
Model		Hole position		Bore size	Stroke		Sensor switch	
				10 - Ø10 15 - Ø15 20 - Ø20 25 - Ø25 32 - Ø32	Ø10 - 50 ~ 300 Ø15 - 50 ~ 500 Ø20 - 50 ~ 500 Ø25 - 50 ~ 600 Ø32 - 50 ~ 600			
MRB :							None :	
Magnetic rodless cylinder (Slide mounting type)							Without Sensor switch	
				① ②			SG : Sensor switch code (CS-8G)	
								
							None :	
							Without Sensor switch	
							SD : Sensor switch code (CS-9D)	
							SB : Sensor switch code (CS-9B)	
							2 : Number of Sensor switch	

None : Standard type, piping port located in left and right refer to picture ② ③

R : Piping port located in right side, refer to picture ③ ④

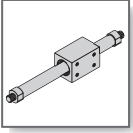
L : Piping port located in left side, refer to picture ① ②

2 : Number of Sensor switch

1 : 1 PCS

2 : 2 PCS

(option)

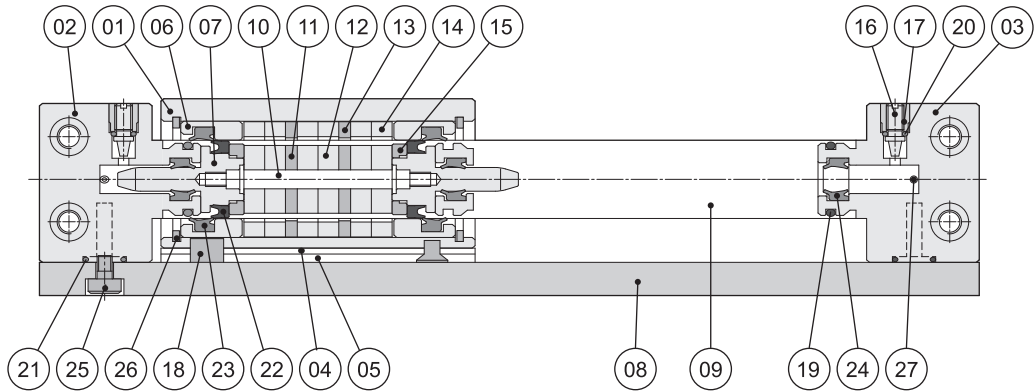


MRB series (Slide mounting type) Magnetic rodless cylinder

Components and Material list

CHELIC PNEUMATIC

Internal structure



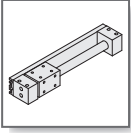
Components and Material list

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	POM	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
No.	2	2	2
Bore size mm			
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	-

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

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● Theoretical force

Unit : kgf

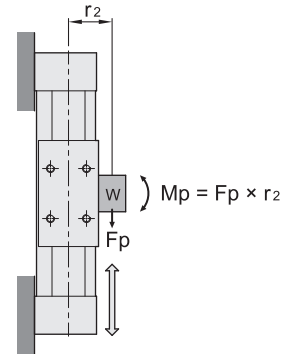
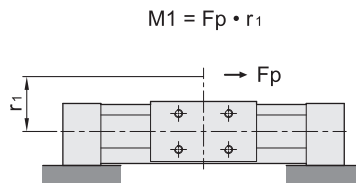
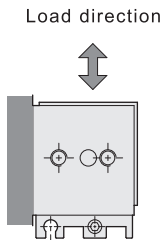
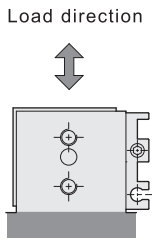
Bore size mm	Action	Piston area cm ²	Air pressure (kgf/cm ²)						
			1	2	3	4	5	6	7
10	Push	1.5	—	1.6	2.4	3.2	4	4.7	5.5
15	Push	1.76	—	3	5	7	8	10	12
20	Push	3.14	—	6	9	12	15	18	21
25	Push	4.90	—	9	14	19	24	29	34
32	Push	8.04	—	16	24	32	40	48	55

🔍 Note : Above are theoretical data : 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

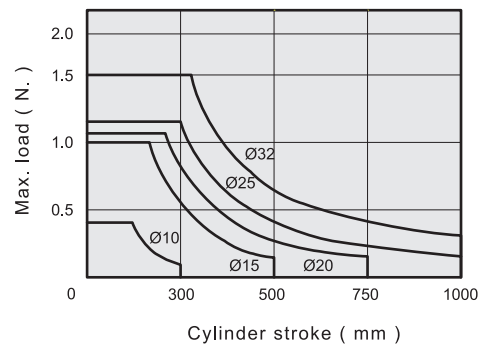


● Load and Moment allowable

Unit : N. [kgf • m]

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

● Load and Stroke characteristic



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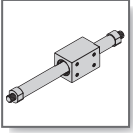
MRD
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MRB
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MRX
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MRH
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MRB series (Slide mounting type) Magnetic rodless cylinder

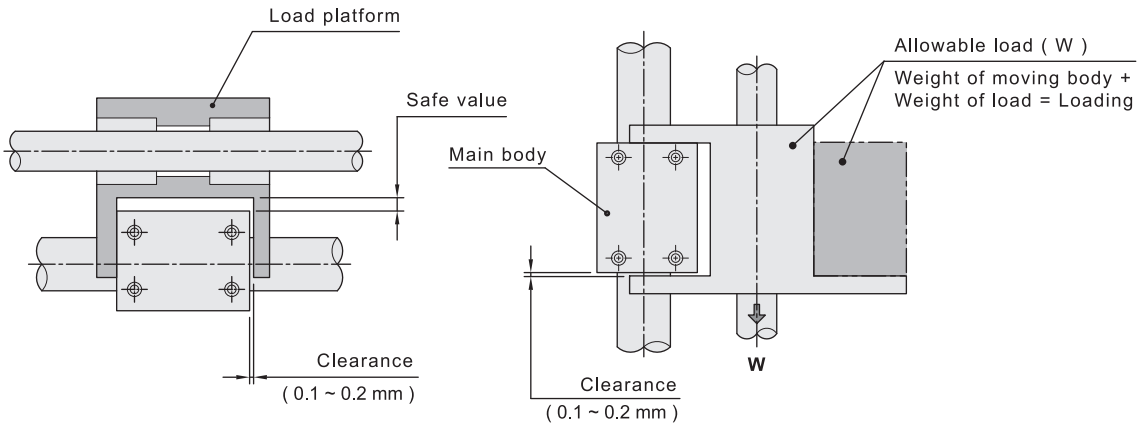
Design and Installation reference

CHELIC PNEUMATIC

Mounting type

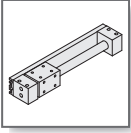
● Horizontal load

● Vertical load



Caution

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

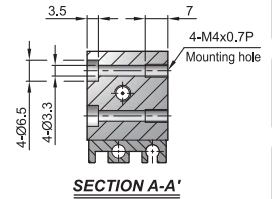
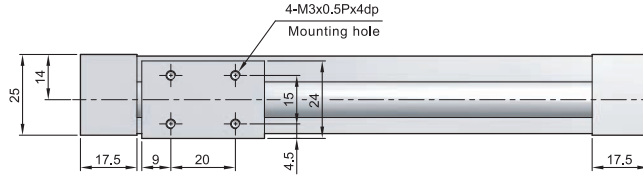


MRB series (Slide mounting type) Magnetic rodless cylinder

External dimension

CHELIC PNEUMATIC

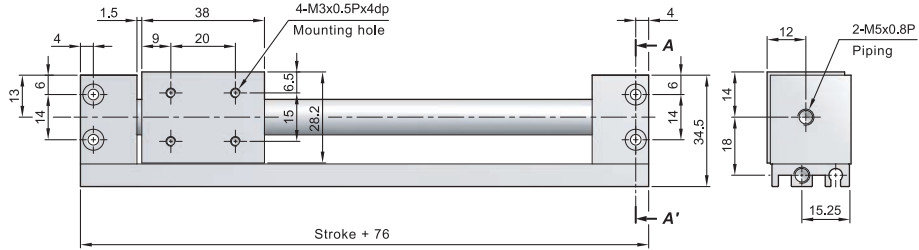
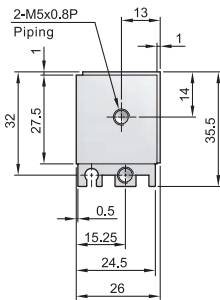
MRB 10 × ST



PRU
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Cylinder

PRF
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Cylinder

PRUT
Rodless
Cylinder



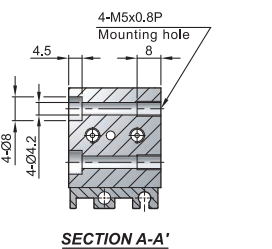
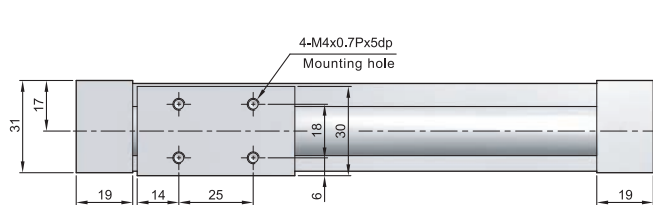
MRD
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Cylinder

MRB
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Rodless
Cylinder

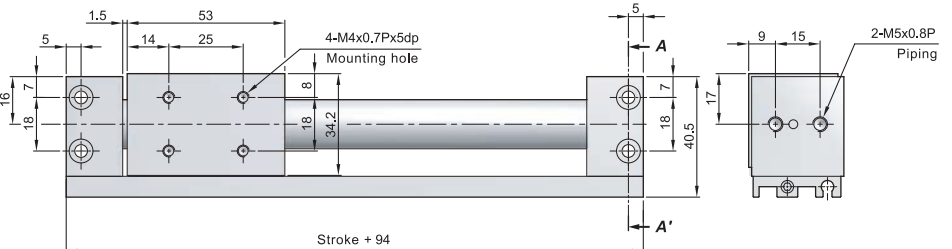
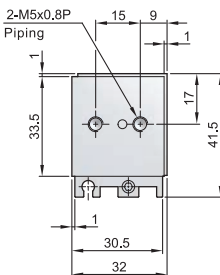
MRX
Magnetic
Rodless
Cylinder

MRU
Magnetic
Rodless
Cylinder

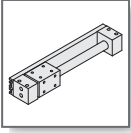
MRB 15 × ST



SECTION A-A'



MRH
Magnetic
Rodless
Cylinder

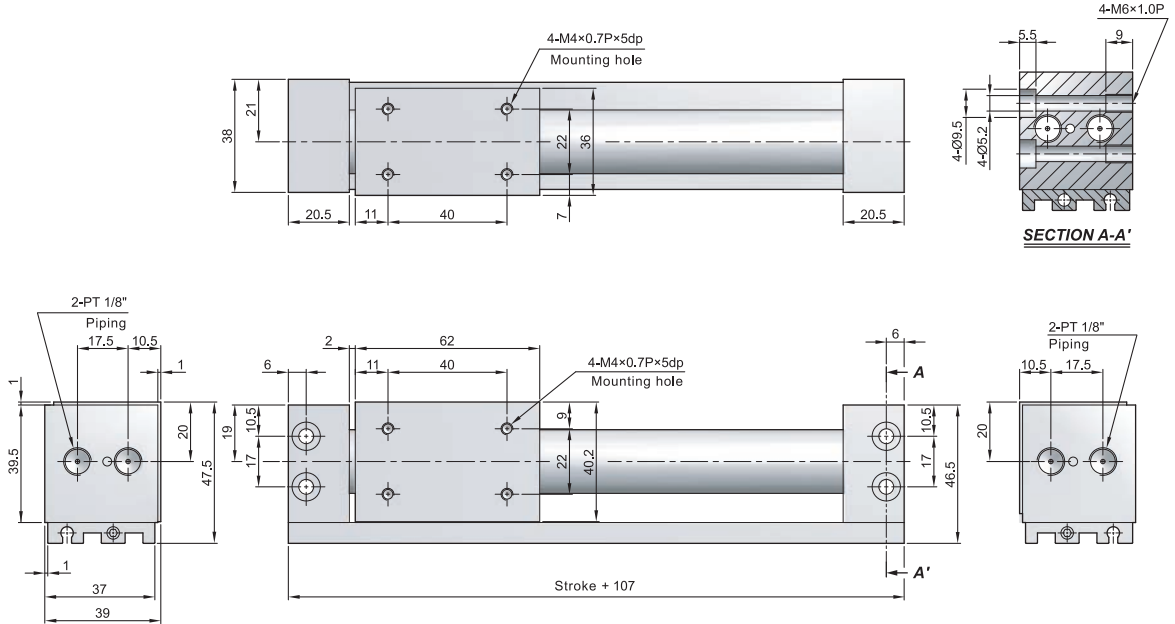


MRB series (Slide mounting type) Magnetic rodless cylinder

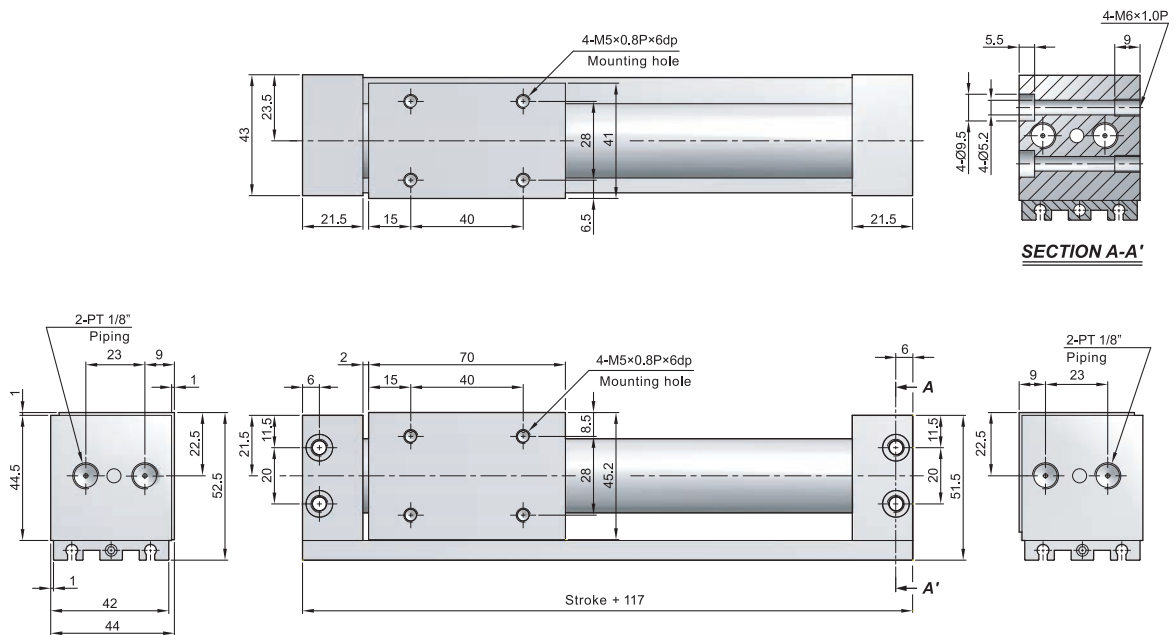
External dimension

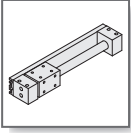
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MRB 20 × ST



MRB 25 × ST





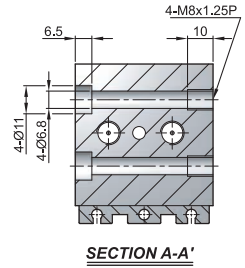
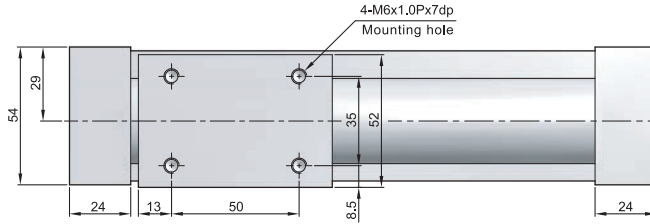
MRB series (Slide mounting type) Magnetic rodless cylinder

External dimension

CHELIC PNEUMATIC

MRB 32 × ST

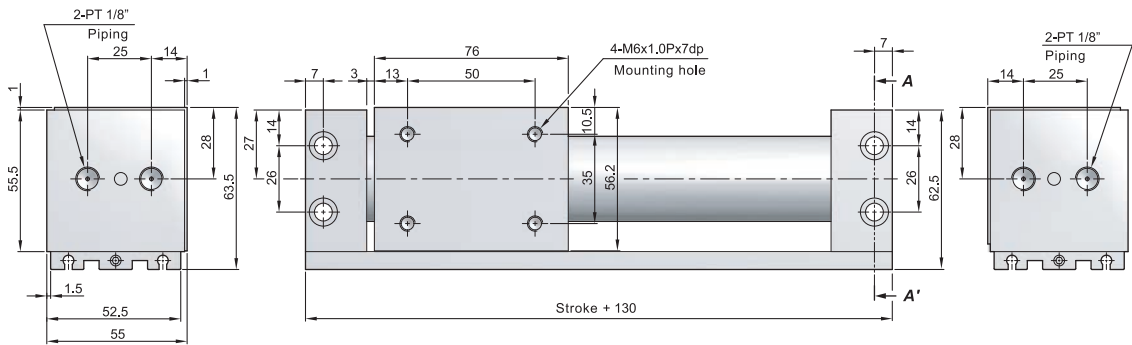
MRB × ST



PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

PRUT
Rodless
Cylinder



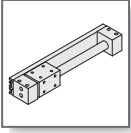
MRD
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Rodless
Cylinder

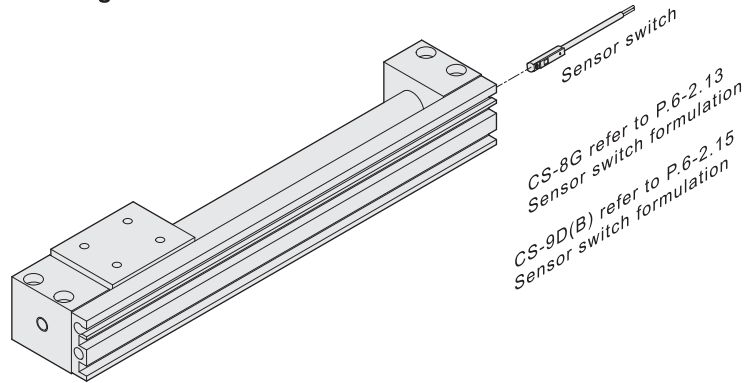


MRB series (Slide mounting type) Magnetic rodless cylinder

Sensor switch installation and Sensing setting

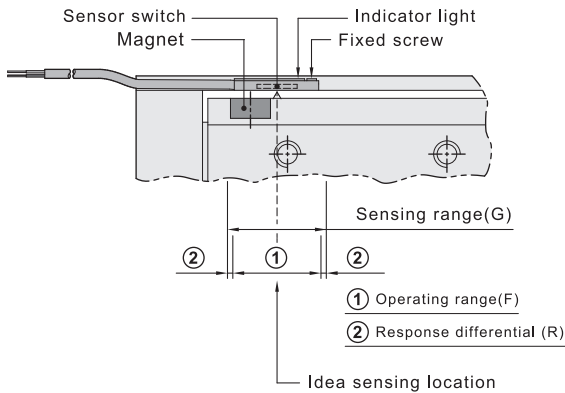
CHELIC PNEUMATIC

◉ Sensor switch mounting



◉ Sensor switch setting and Operating range

● CS-9D(B)



◉ Sensing range

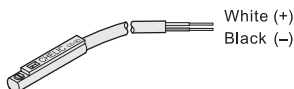
Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the Sensor switch when it enters the operating range. It has 0.5mm differential.

◉ Operating range

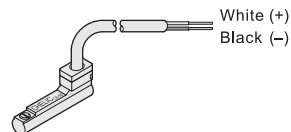
When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

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

◉ Connector type



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



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