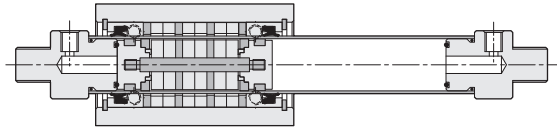
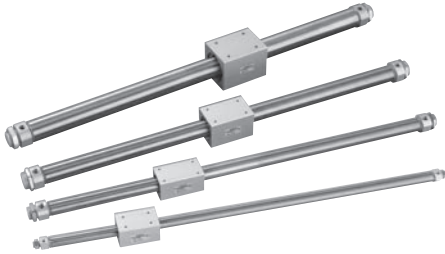


MRD series (Single rod type) Magnetic rodless cylinder

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

Theoretical force

Unit : kgf

Bore size mm	Action	Piston area cm ²	Air pressure (kgf/cm ²)						
			1	2	3	4	5	6	7
Ø10	Push	0.78	—	1.5	2.3	3.1	3.9	4.6	5.4
Ø15	Push	1.76	—	3	5	7	8	10	12
Ø20	Push	3.14	—	6	9	12	15	18	21
Ø25	Push	4.90	—	9	14	19	24	29	34
Ø32	Push	8.04	—	16	24	32	40	48	56
Ø40	Push	12.5	—	25	38	50	63	75	88

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%)

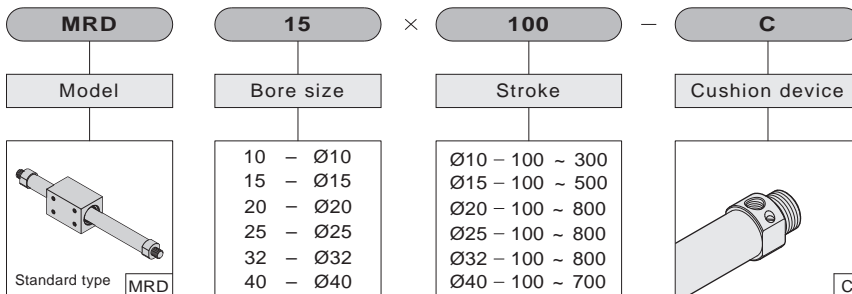
Specification

Standard stroke (MRD series)

Item	Bore size (mm)	Ø10	Ø15	Ø20	Ø25	Ø32	Ø40
Operation		Double acting					
Fluid		Air					
Pressure range	kgf/cm ² (kpa)	1.5 ~ 4.5 (150~450)		1.5 ~ 6.0 (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					
Cushion device		Air pressure cushion					
Port size		M5			PT 1/8"		

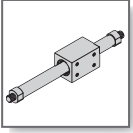
Bore size	Stroke	Max. stroke
Ø 10	100、200、300	300
Ø 15	100、200、300、350、400、450、500	500
Ø 20	100、200、300、350、400、450、500、600、700、800	900
Ø 25	100、200、300、350、400、450、500、600、700、800	900
Ø 32	100、200、300、350、400、450、500、600、700、800	900
Ø 40	100、200、300、350、400、450、500、600、700	800

How to order



MRD :
Single rod rodless cylinder

None :
Without cushion device
C : Air cushion device
 ※ Ø10、Ø15
 Without cushion device

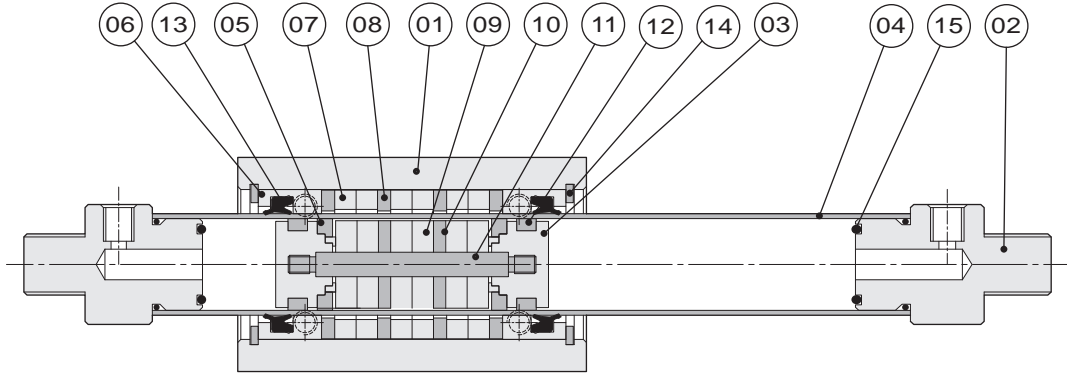


MRD series (Single Rod Type) Magnetic rodless cylinder

Components and Material list

CHELIC PNEUMATIC

Internal structure



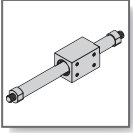
Components and Material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Piston joiner	Stainless steel
02	Front cover	Aluminum alloy	12	Piston packing	NBR
03	Piston	Stainless steel	13	Rod packing	NBR
04	Cylinder tube	Stainless steel	14	Snap	Alloy steel
05	Wear ring	Teflon	15	Cushion O-Ring	NBR
06	Rod piston holder	POM			
07	Magnet	Rare earth metals			
08	Inner yoke	Iron			
09	Piston magnet	Rare earth metals			
10	Piston magnetic yoke	Iron			

Packing and O-Ring list

Item	Piston packing	Rod packing	Cushion O-ring
No.	2	2	2
Bore size mm			
Ø 10	PPY – 10	PDU – 11.5 x 16	Ø6 x Ø1.5
Ø 15	DYP – 15	PDU – 17 x 22.4	Ø10 x Ø1.5
Ø 20	DYP – 20	PDU – 21 x 28.3	–
Ø 25	PPY – 25	PDU – 26 x 34.4	–
Ø 32	PPY – 32	PDU – 33.2 x 45.4	–
Ø 40	PPY – 40	PDU – 48 x 51	–

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



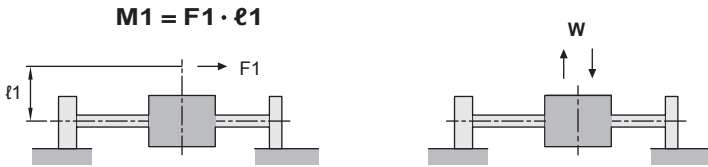
MRD series (Single rod type) Magnetic rodless cylinder

Design and Installation reference

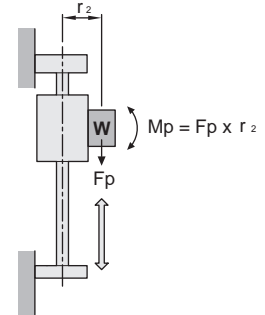
CHELIC PNEUMATIC

Load and Moment allowable

Horizontal load



Vertical load



PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

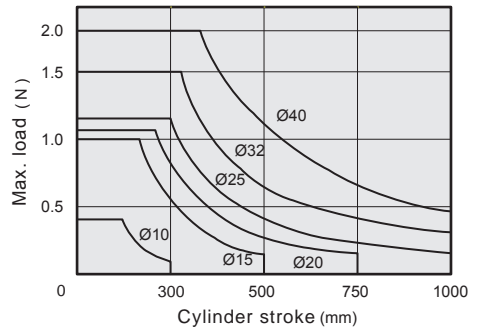
PRUT
Rodless
Cylinder

Load and Moment allowable

Unit : N. [kgf • m]

Bore size mm	Horizontal load W N. [kgf]	Moment allowable Mp
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



MRD
Magnetic
Rodless
Cylinder

MRB
Magnetic
Rodless
Cylinder

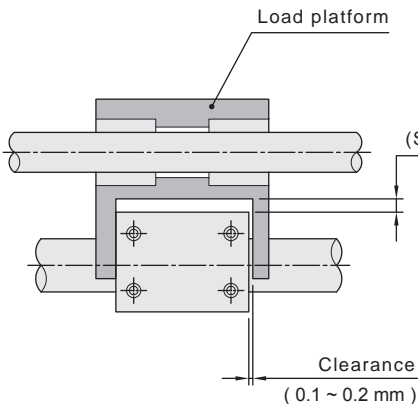
MRX
Magnetic
Rodless
Cylinder

MRU
Magnetic
Rodless
Cylinder

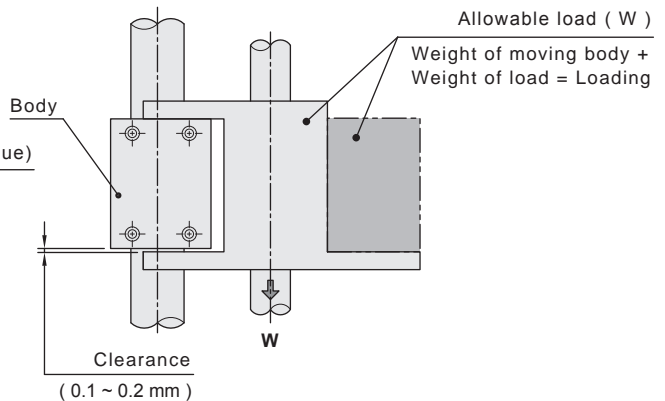
MRH
Magnetic
Rodless
Cylinder

Mounting type

Horizontal load

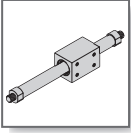


Vertical load



⚠ 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.



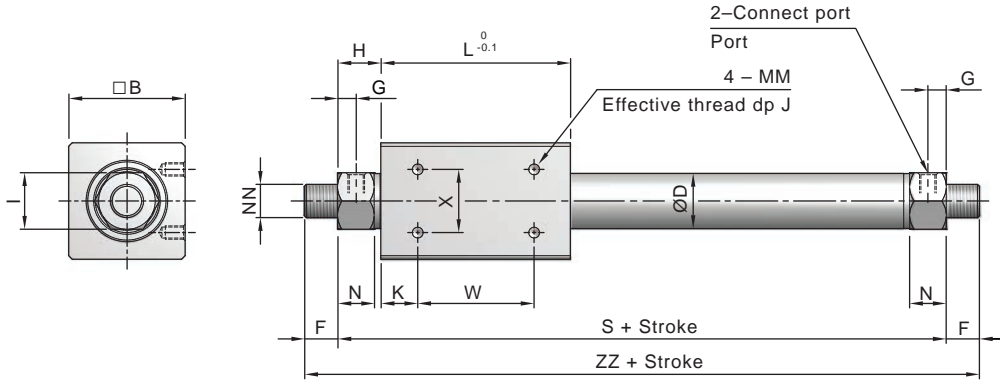
MRD series (Single rod type)

Magnetic rodless cylinder

External dimension

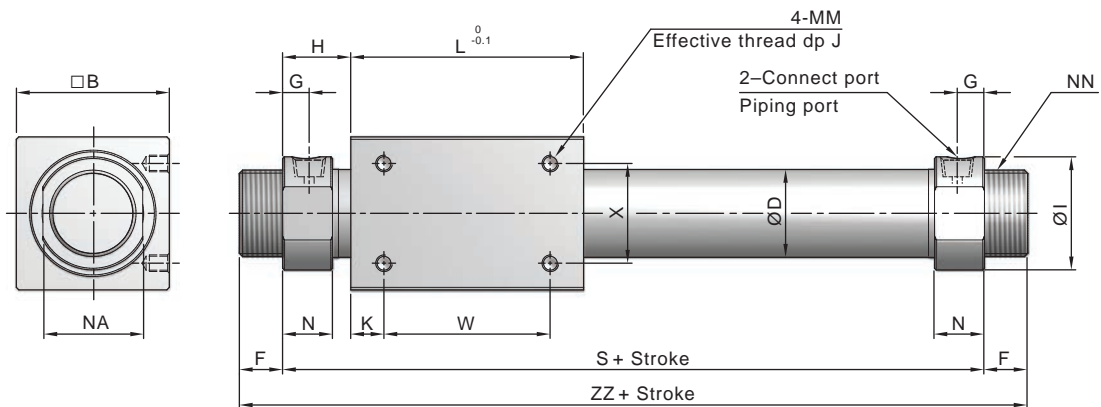
CHELIC PNEUMATIC

MRD Ø10 ~ Ø15



Bore size	Range of stroke	Connect port	$\square B$	$\varnothing D$	F	G	H	I	K	L	MM x J	N	NN	S	W	X	ZZ
Ø10	100 ~ 300	M5x0.8P	25	11	9	5	12.5	14	4	38	M3x0.5Px4	11	M10x1.0P	63	30	16	81
Ø15	100 ~ 500	M5x0.8P	35	16.6	10	5.5	13	17	11	57	M4x0.7Px6	11	M10x1.0P	83	35	19	103

MRD Ø20 ~ Ø40



Bore size	Range of stroke	Connect port	$\square B$	$\varnothing D$	F	G	H	I	K	L	MM x J	N	NA	NN	S	W	X	ZZ
Ø20	100 ~ 900	PT 1/8"	36	21.4	13	8	20	28	8	66	M4x0.7Px6	15	24	M20x1.5P	106	50	25	132
Ø25	100 ~ 900	PT 1/8"	46	26.4	13	8	20.5	34	10	70	M5x0.8Px8	15	30	M26x1.5P	111	50	30	137
Ø32	100 ~ 900	PT 1/8"	60	33.6	16	9	22	40	15	80	M6x1.0Px8	17	36	M26x1.5P	124	50	40	156
Ø40	100 ~ 800	PT 1/8"	70	41.6	16	11	29	50	16	92	M6x1.0Px10	21	46	M32x2.0P	150	60	40	182