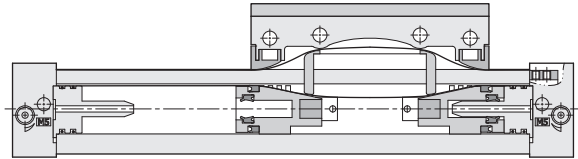


PRU / PRF series - RODLESS CYLINDER

Operating specification and Ordering expression

CHELIC PNEUMATIC

Internal structure



PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

PRUT
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
Ø16	Push	2.0	—	4	6	8	10	12	14
Ø20	Push	3.14	—	6.2	9.4	12.5	15.7	18.8	21.9
Ø25	Push	4.9	—	9	14	19	24	29	34
Ø32	Push	8.0	—	16	24	32	40	48	56
Ø40	Push	12.5	—	25	37.5	50	62.5	75	87.5

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%)

MRD
Magnetic
Rodless
Cylinder

MRB
Magnetic
Rodless
Cylinder

MRX
Magnetic
Rodless
Cylinder

MRU
Magnetic
Rodless
Cylinder

MRH
Magnetic
Rodless
Cylinder

Specification

New

Standard weight (PRU series)

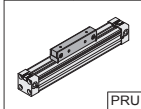
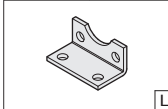
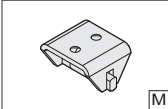
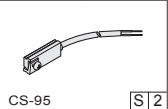
Item	Bore size (mm)	Ø16	Ø20	Ø25	Ø32	Ø40
Operation		Double acting				
Fluid		Air				
Pressure range	kgf/cm ² (kpa)	1.5 ~ 7 (150 ~ 700)				
Max. service pressure	kgf/cm ² (kpa)	8 (800)				
Operating ambient temperature range	°C	0 ~ 60				
Range of service speed	mm/sec	50 ~ 500				
Lubrication		Free				
Cushion device		Pressure cushion				
Port size		M5	G 1/8"	G 1/4"		
Magnet device		With magnet				

Bore size	Stroke	The weight for each additional stroke
Ø16	0.25	0.1
Ø20	0.47	0.15
Ø25	0.74	0.197
Ø32	1.62	0.354
Ø40	2.10	0.415

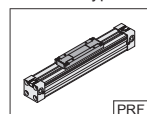
Unit : kg

How to order

PRU × **16** × **50** - **L** - **M** - **S** **2**

Model	Bore size	Stroke	Mounting bracket	Mounting bracket	Sensor switch
	16 - Ø16 20 - Ø20 25 - Ø25 32 - Ø32 40 - Ø40	Ø16 - 50~1000 Ø20 - 50~1000 Ø25 - 50~1500 Ø32 - 50~1500 Ø40 - 50~1500			

PRU :
Standard type



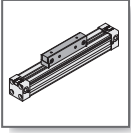
PRF :
Moderate type

None :

Without Sensor

[S] : Sensor code
(CS-95)

[2] : Number of Sensor

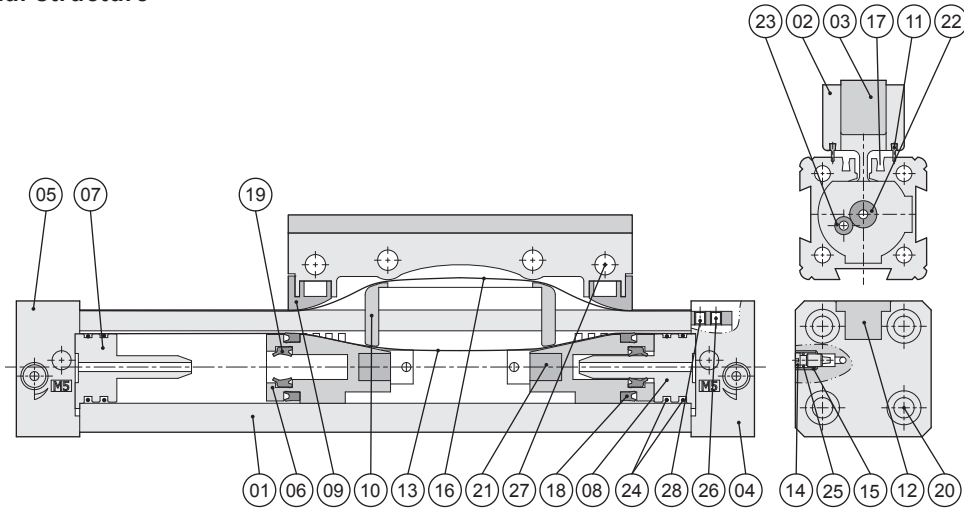


PRU / PRF series - RODLESS CYLINDER

Components and Material list

CHELIC PNEUMATIC

Internal structure

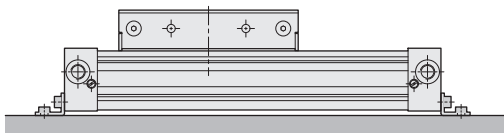


Components and Material list

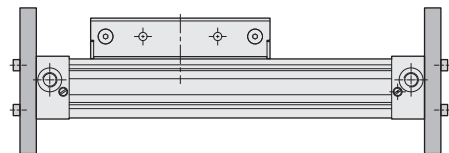
No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	15	Bush	Stainless steel
02	Sliding block	Aluminum alloy	16	Belt	NBR
03	Sliding plate	Aluminum alloy	17	Magnet belt	Rubber
04	Cover (right)	Aluminum alloy	18	Piston packing	NBR
05	Cover (left)	Copper	19	Cushion packing	NBR
06	Piston	Plastic steel	20	Screw	Medium carbon steel
07	Cushion rod (left)	Plastic steel	21	Piston magnet	SCM
08	Cushion rod (right)	Plastic steel	22	O-Ring	NBR
09	Block	Plastic steel	23	O-Ring	NBR
10	Block	Plastic steel	24	O-Ring	NBR
11	Band	NBR	25	O-Ring	NBR
12	Plate	Plastic steel	26	Screw	Medium carbon steel
13	Belt	Stainless steel	27	Screw	Medium carbon steel
14	Cushion needle	Copper	28	Screw	Medium carbon steel

Mounting type

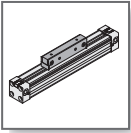
● Mounting bracket type



● Mounting cover type



※ It has thread hole in the mounting screw of cover to use, do not take out this screw.



PRU / PRF series - RODLESS CYLINDER

Design and Installation reference

CHELIC PNEUMATIC

Load and Moment allowable

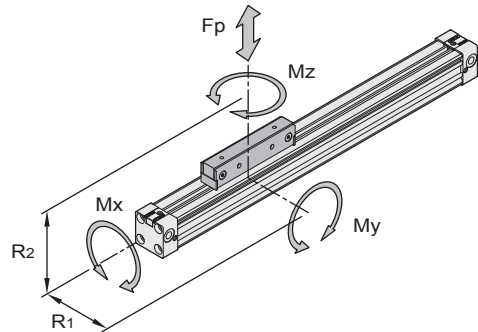
The maximum allowable moment is to calculate the piston of center of gravity.

In general situation, the moment of load can not exceed the range of allowable. If the moment of load is not single direction, its value can not bigger than 1.

$$M_x = F_p \times R_1$$

$$M_y = F_p \times R_2$$

$$M_z = F_p \times R_1$$



PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

PRUT
Rodless
Cylinder

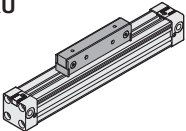
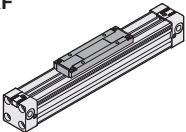
MRD
Magnetic
Rodless
Cylinder

MRB
Magnetic
Rodless
Cylinder

MRX
Magnetic
Rodless
Cylinder

MRU
Magnetic
Rodless
Cylinder

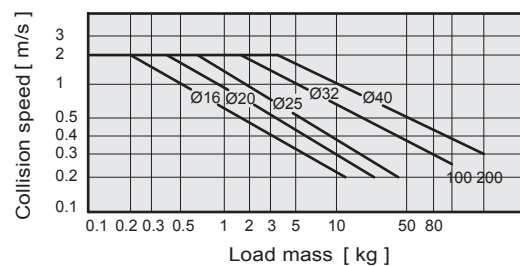
MRH
Magnetic
Rodless
Cylinder

Model	Bore size (mm)	Stroke (mm)	Theoretical force in 6 bar (N)	Max. load (N)		Max. moment (Nm)	
				Fp	Mz	Mx	My
 PRU	16	50~1000	121	120	0.5	0.3	4
	20	50~1000	189	200	1.2	0.8	8
	25	50~1500	294	300	3	1	15
	32	50~1500	482	450	5	2	30
	40	50~1500	754	750	8	4	60
 PRF	16	50~1000	121	120	0.5	0.45	4
	20	50~1000	189	200	1.2	1.2	8
	25	50~1500	294	300	3	1.5	15
	32	50~1500	482	450	5	3	30
	40	50~1500	754	750	8	6	60

Load mass and Collision speed

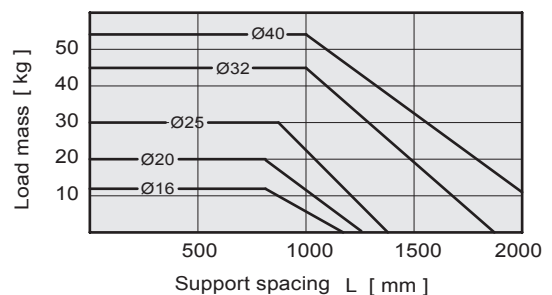
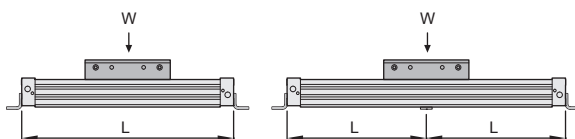
The cushion of the end of cylinder can be adjusted to make sure it do not cause the structure damage because of the stronger hit.

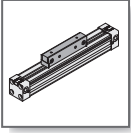
When operating with a load or speed exceeding the limit line, it should be add cushion to keep normal operating.



Load mass and Support spacing

For long stroke operation, the cylinder tube may be deflected depending on its own weight and load weight. In such a case, use a side support in the middle section.





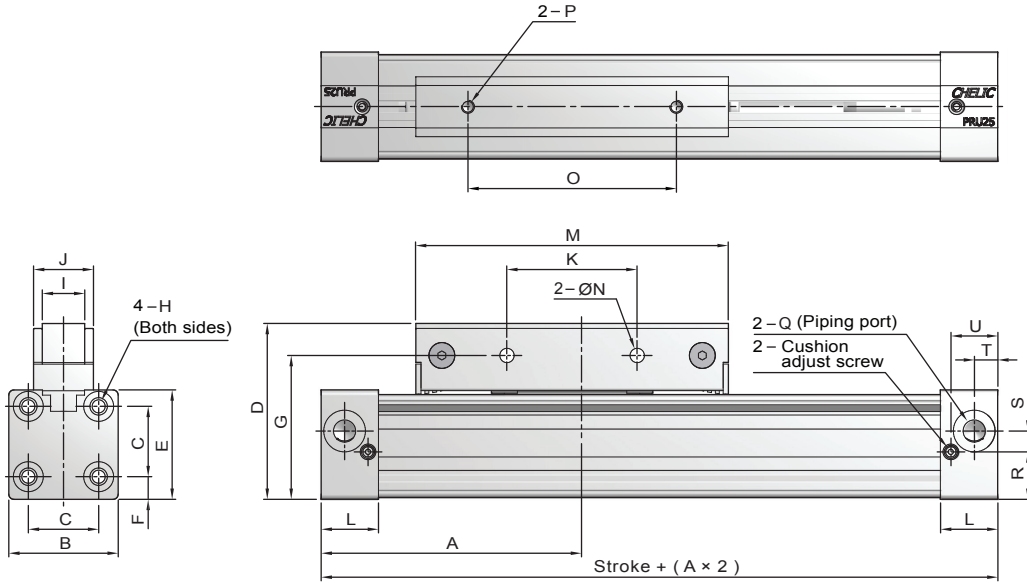
PRU series - RODLESS CYLINDER

(Standard Type)

External dimension

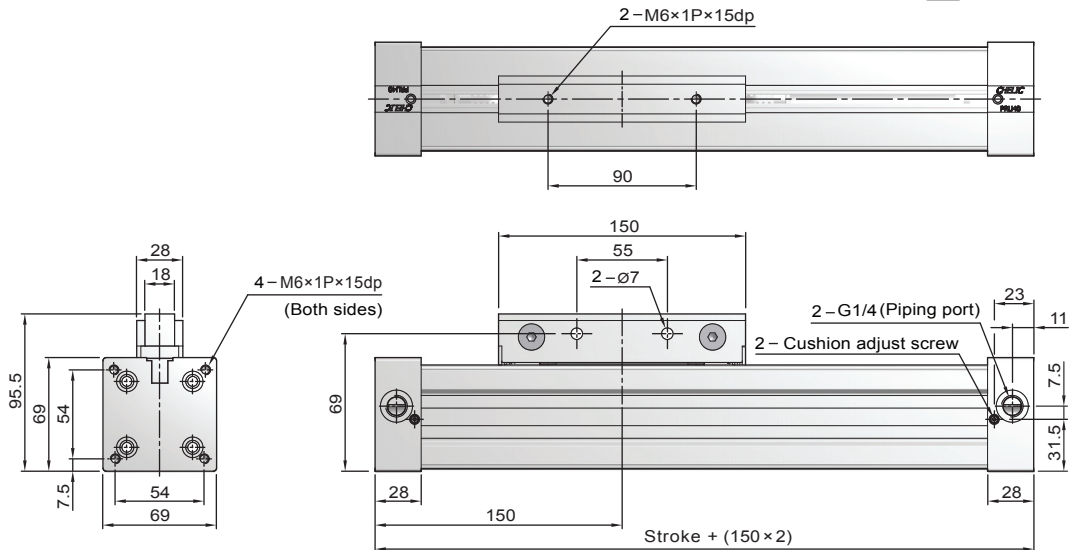
HELIC PNEUMATIC

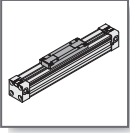
PRU Ø16 ~ Ø32



Model Bore size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Ø16	65	30	18	45	30	6.4	39	M3×0.5P×9dp	10	18	32	14	76	4.5	48	M4×0.7P×8dp	M5×0.8P	13.4	3.5	4	10
Ø20	80	37	24	55	37	6	48	M4×0.7P×12dp	12	20	40	22	96	4.5	65	M4×0.7P×8dp	G 1/8	17	5	9	19.7
Ø25	100	42	27	67.5	42	8.7	55.2	M5×0.8P×15dp	16.6	23	50	22	120	5.5	80	M5×0.8P×10dp	G 1/8	18.2	8	9	17.5
Ø32	125	54	36	88.3	55	9.5	74.6	M6×1P×15dp	18	27	60	25.5	160	7	90	M6×1P×15dp	G 1/4	24	9	11	21

PRU Ø40



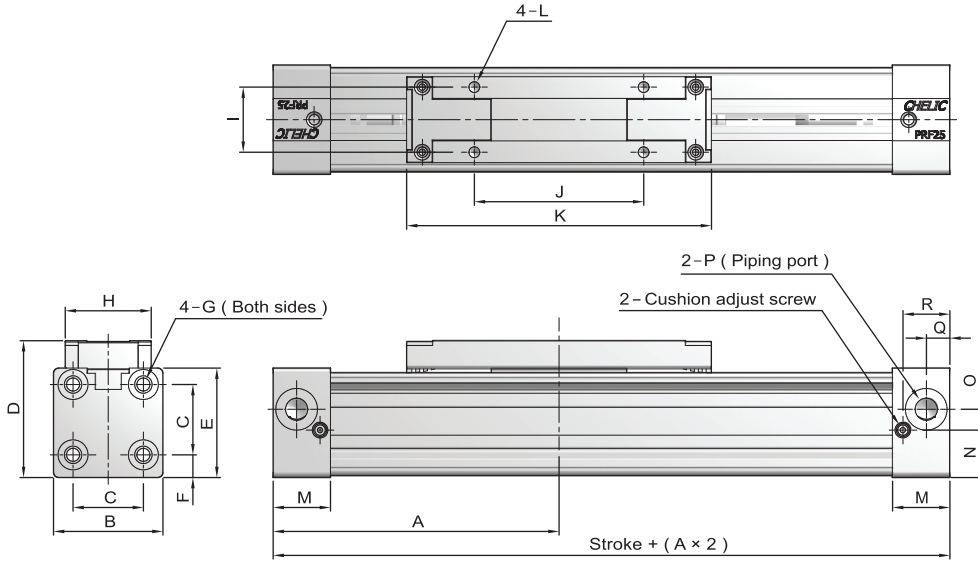


PRF series - RODLESS CYLINDER

External dimension

CHELIC PNEUMATIC

○ PRF Ø16 ~ Ø32



PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

PRUT
Rodless
Cylinder

MRD
Magnetic
Rodless
Cylinder

MRB
Magnetic
Rodless
Cylinder

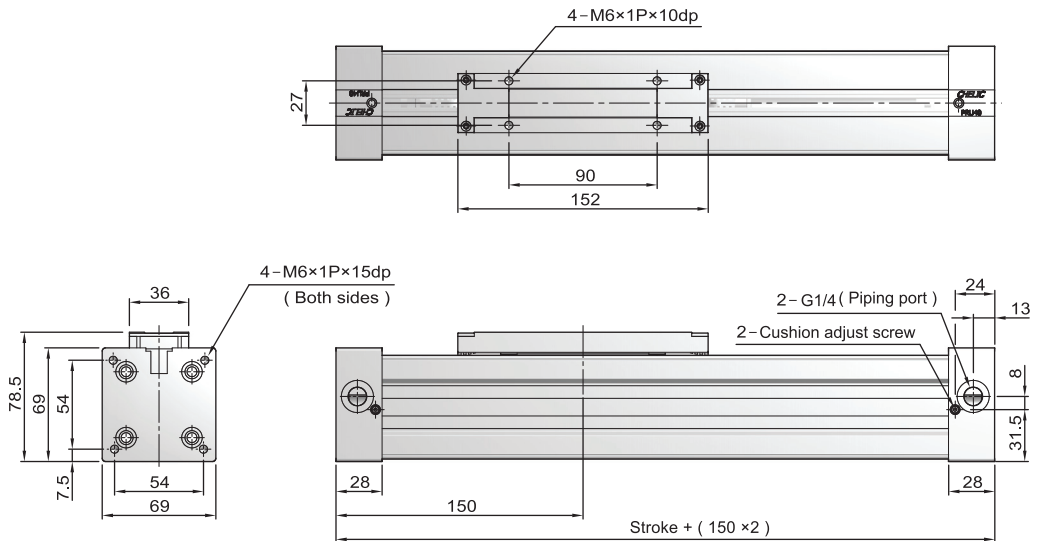
MRX
Magnetic
Rodless
Cylinder

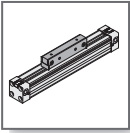
MRU
Magnetic
Rodless
Cylinder

MRH
Magnetic
Rodless
Cylinder

Model Bore size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ø16	65	30	18	38	30	6.4	M3x0.5Px9dp	22	16.5	36	69	M4x0.7Px6dp	14	13.4	3.5	M5x0.8p	4	10
Ø20	80	37	24	46	37	6	M4x0.7Px12dp	28	20	50	90	M4x0.7Px6dp	22	17	5	G 1/8	9	19.7
Ø25	100	42	27	52.5	42	8.7	M5x0.8Px15dp	33	25	65	117	M5x0.8Px8dp	22	18.2	8	G 1/8	9	17.5
Ø32	125	54	36	66.5	55	9.5	M6x1Px15dp	36	27	90	152	M6x1Px10dp	25.5	26.3	8	G 1/4	11	21

○ PRF Ø40





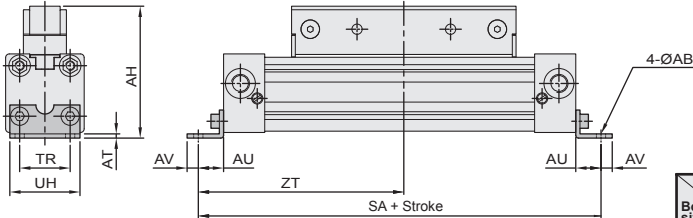
PRU / PRF series - RODLESS CYLINDER

Accessories external dimension

CHELIC PNEUMATIC

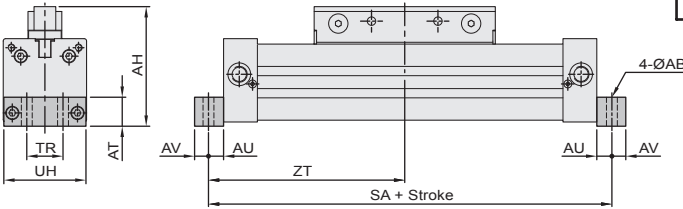
○ L type mounting bracket (PRU)

● PRU Ø 16 ~ Ø 32



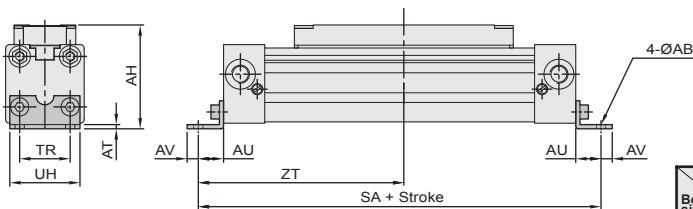
Model Bore size	AB	AH	AT	AU	AV	SA	TR	UH	ZT
Ø16	3.6	45	1.6	10	4	150	18	26	75
Ø20	4.6	56	1.6	11	5	182	24	35	91
Ø25	5.8	68	2.5	16	6	232	27	39	116
Ø32	6.6	89.8	3	18	8	286	36	50	143
Ø40	9	99	24	12.5	11.5	325	30	68	162.5

● PRU Ø 40



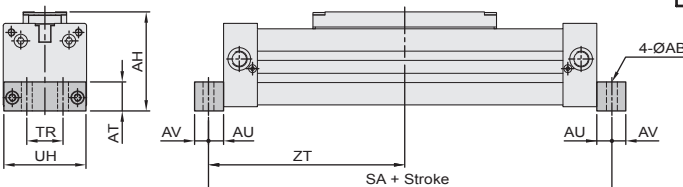
○ L type mounting bracket (PRF)

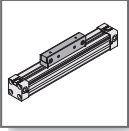
● PRF Ø 16 ~ Ø 32



Model Bore size	AB	AH	AT	AU	AV	SA	TR	UH	ZT
Ø16	3.6	38	1.6	10	4	150	18	26	75
Ø20	4.6	47	1.6	11	5	182	24	35	91
Ø25	5.8	53	2.5	16	6	232	27	39	116
Ø32	6.6	68	3	18	8	286	36	50	143
Ø40	9	82	24	12.5	11.5	325	30	68	162.5

● PRF Ø 40





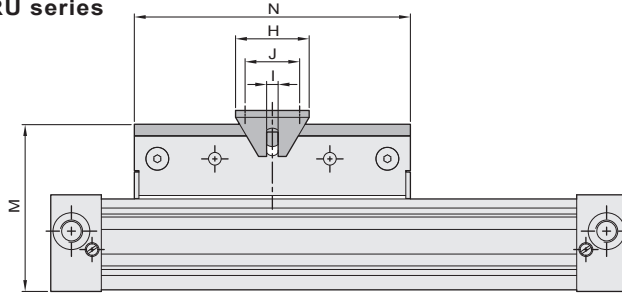
PRU / PRF series - RODLESS CYLINDER

Accessories external dimension

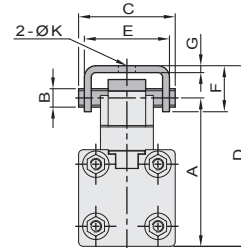
CHELIC PNEUMATIC

Mounting bracket

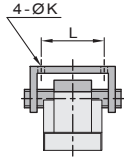
PRU series



PRU Ø16 ~ Ø32



PRU Ø40



Bore size	Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ø16		44	5	28	53	25	13	2	20	3	10	4.5	-	49	76
Ø20		52.5	5	37	61.5	34	13	2	26	3	15	4.5	-	57.5	96
Ø25		64.5	8	42	78.5	37	20	3	32	5	16	5.5	-	72.5	120
Ø32		83	12	55	102.5	44	30	4	60	8	40	6.6	-	94	160
Ø40		91.5	12	84	114.5	70	32	6	90	8	75	7	55	103.5	150

PRU
Rodless
Cylinder

PRF
Rodless
Cylinder

PRUT
Rodless
Cylinder

MRD
Magnetic
Rodless
Cylinder

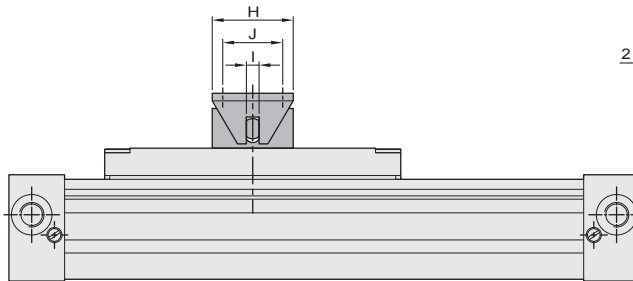
MRB
Magnetic
Rodless
Cylinder

MRX
Magnetic
Rodless
Cylinder

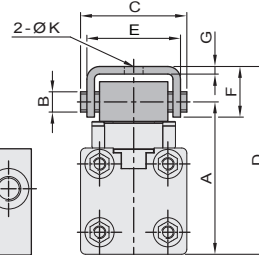
MRU
Magnetic
Rodless
Cylinder

MRH
Magnetic
Rodless
Cylinder

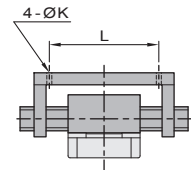
PRF series



PRF Ø16 ~ Ø32



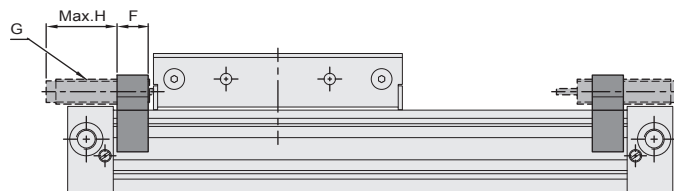
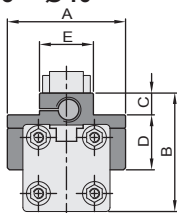
PRF Ø40



Bore size	Model	A	B	C	D	E	F	G	H	I	J	K	L
Ø16		40.5	5	31	49.5	28	13	2	20	3	10	4.5	-
Ø20		48.5	5	37	57.5	34	13	2	26	3	15	4.5	-
Ø25		60.2	8	42	74.2	37	20	3	32	5	16	5.5	-
Ø32		75.7	12	55	95.2	44	30	4	60	8	40	6.6	-
Ø40		85.5	12	84	108.5	70	32	6	90	8	75	7	55

Cushion device

PRU Ø16 ~ Ø40



Bore size	Model	A	B	C	D	E	F	G	H
Ø16		43	41.9	8	20	22	10	M10×1.0P	37
Ø20		52	51.9	10.5	24.8	24	10	M10×1.0P	37
Ø25		57	57.1	10.5	26.5	26	15	M12×1.0P	37.5
Ø32		69	71.4	11.5	33.9	28	15	M14×1.5P	52
Ø40		80	91.4	18.9	41	34	20	M20×1.5P	53