

# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

Product feature

**CHELIC**

## Feature

- Linear slide type, plastic steel slider type options
- Multiple piping way
- PREP (plastic steel slider type) is only suitable for plane loading



PRE

PRET(P)

PRU(F)2

PRUT2

## Specification

Item	Bore size (mm)	Ø16	Ø20	Ø25
Action		Double acting		
Fluid		Air		
Pressure range	kgf/cm <sup>2</sup> (kPa)	2 ~ 7 ( 200 ~ 700 )	1.5 ~ 7 ( 150 ~ 700 )	
Max. operating pressure	kgf/cm <sup>2</sup> (kPa)	8 ( 800 )		
Ambient and fluid temperature	°C	0 ~ 60		
Piston speed	mm/s	50 ~ 500		
Lubrication		Lubrication free type		
Cushion		Air cushion		
Port size		M5		PT1/8
Sensing device		With magnet		

## Standard stroke

Bore size	Standard stroke (mm)
Ø16	50 ~ 500
Ø20	50 ~ 500
Ø25	50 ~ 500

MRD

MRB

MRBT

MRX

MRU


MRH

MRY

## Theoretical output

Unit: kgf

Bore size (mm)	Operating	Piston area (cm <sup>2</sup> )	Air pressure (kgf / cm <sup>2</sup> )						
			1	2	3	4	5	6	7
Ø16	Push	2.10	—	4.2	6.3	8.4	10.5	12.6	14.7
Ø20	Push	3.15	—	6.3	9.45	12.6	15.75	18.9	22.05
Ø25	Push	5.03	—	10.06	15.09	20.12	25.15	30.18	35.21

 Note: All of above are theoretical data. Before actual adoption, the frictional resistance and mechanical efficiency shall be taken into consideration (about 70% ~ 80%)

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Code of order

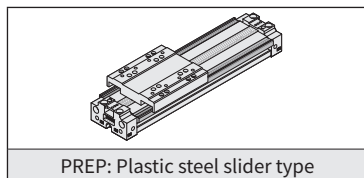
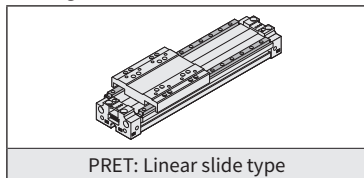
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## Code of order **PRET - F 16 x 200 - S - 8G 2**

1 — 2 — 3 — 4 — 5 — 6 — 7

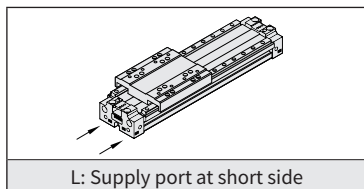
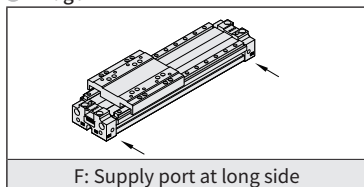
1	Mark	Model
	PRET	Linear slide type
	PREP	Plastic steel slider type

● Image



2	Mark	Port position
	F	Supply port at long side
	L	Supply port at short side


● Image



3	Mark	Bore size (mm)
	16	Ø16
	20	Ø20
	25	Ø25

4	Bore size	Stroke (mm)
	Ø16	50 ~ 500
	Ø20	50 ~ 500
	Ø25	50 ~ 500

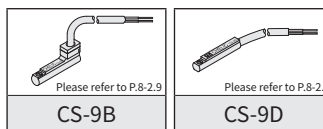
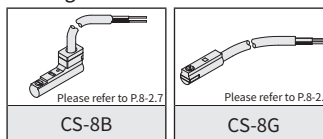
● Any strock available within above length with 1 mm as minimum.

5	Mark	Sensor switch bracket
	None	Without sensor bracket
	S	

● Order mark: JM01

6	Mark	Sensor switch
	None	Without sensor switch
	8B	CS-8B
	8G	CS-8G
	9B	CS-9B
	9D	CS-9D

● Image

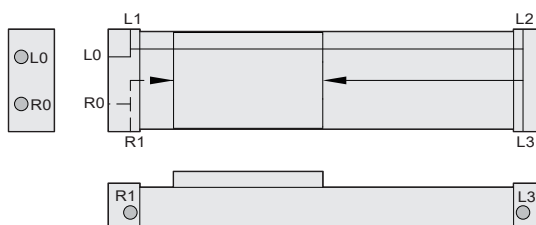


7	Mark	Sensor switch
	1	1 pc
	2	2 pcs

## Port position

1. When Port R (R0, R1) are used for air supply, Port L (L0, L1, L2, L3) are used as air exhaust. And when Port L (L0, L1, L2, L3) are used for air supply, Port R (R0, R1) are used as air exhaust.

2. Standard type: air supply ports are at the front (code F), and other ports will be blocked by screws. Please select code L for supply port at short side.

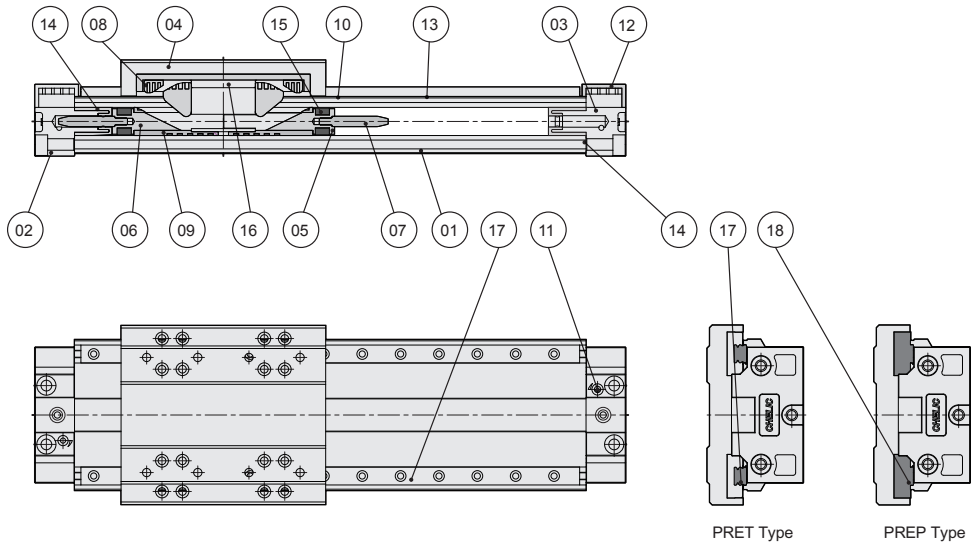


# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

Product feature

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## Internal structure



## Components and material list

NO.	Item	Material	Quantity	NO.	Item	Material	Quantity
01	Body	Aluminum alloy	1	10	Outer belt	Stainless	1
02	Left end cap	Aluminum alloy	1	11	Cushion pin screw	Stainless	2
03	Right end cap	Aluminum alloy	1	12	Cover	Stainless	2
04	Slider	Aluminum alloy	1	13	Inner belt	TPU	1
05	Piston	Aluminum alloy	1	14	End cap sleeve	NBR	2
06	Sub-piston	Aluminum alloy	1	15	Piston packing	NBR	2
07	Air cushion lever	Aluminum alloy	2	16	Piston bracket	Alloy steel	1
08	Belt guide block	POM	2	17	Rail	Alloy steel	2
09	Wear ring	POM	2	18	POM slider	POM	4

## Product weight

Unit: kg

Bore size(mm)	Stroke = 0mm	Additional weight
Ø16	0.3	0.14
Ø20	0.6	0.17
Ø25	0.8	0.25

Note: Additional weight per each 100 mm in ± 5% difference

# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

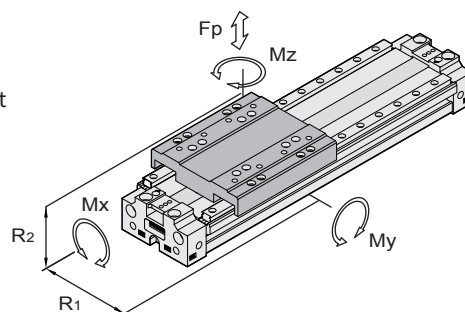
## Installation

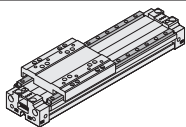
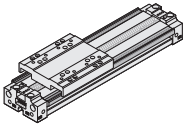
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### Load and moment allowable

The maximum allowable moment is to calculate the piston of center of gravity. In general situation, the moment of load can not exceed the allowable range. If the moment of load is not single direction, its value can not bigger than 1.

$$\begin{aligned} M_x &= F_p \times R_1 \\ M_y &= F_p \times R_2 \\ M_z &= F_p \times R_1 \end{aligned}$$

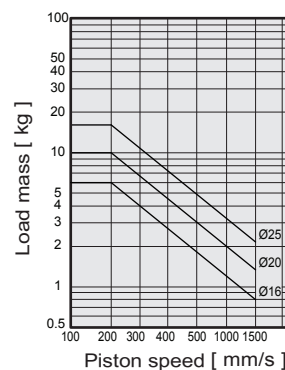


Model	Bore size (mm)	Stroke (mm)	Max. load (N)				Max. Moment allowable (Nm)			
			Fp		Mz	Mx	My	Mz	Mx	My
 PRET	16	50~500	980		2.85	4.7	2.85			
	20	50~500	980		2.85	4.7	2.85			
	25	50~500	980		2.85	4.7	2.85			
 PREP	16	50~1000	450		0.7	2.8	0.3			
	20	50~1000	450		1.2	4.5	0.7			
	25	50~1500	450		2	9	1.2			

PREP (plastic steel slider type) is only suitable for plane loading

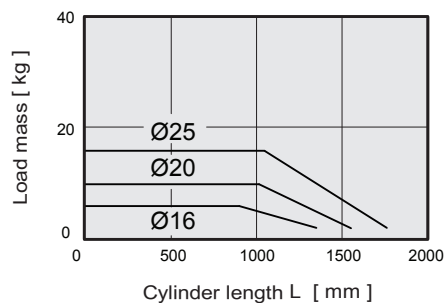
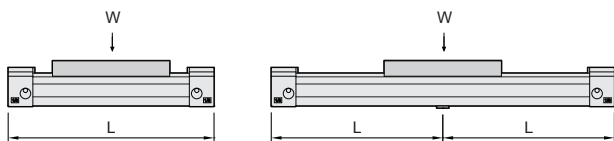
### Load weight and piston speed

The shock absorbing device at end of cylinder is adjustable for preventing damage from huge impact. The shock absorber shall be applied before the cylinder produce high movements.



### Load weight and stroke length

The long stroke cylinder may curve when load weight increased. The support bracket shall be considered to apply at the middle of stroke for preventing deforming.

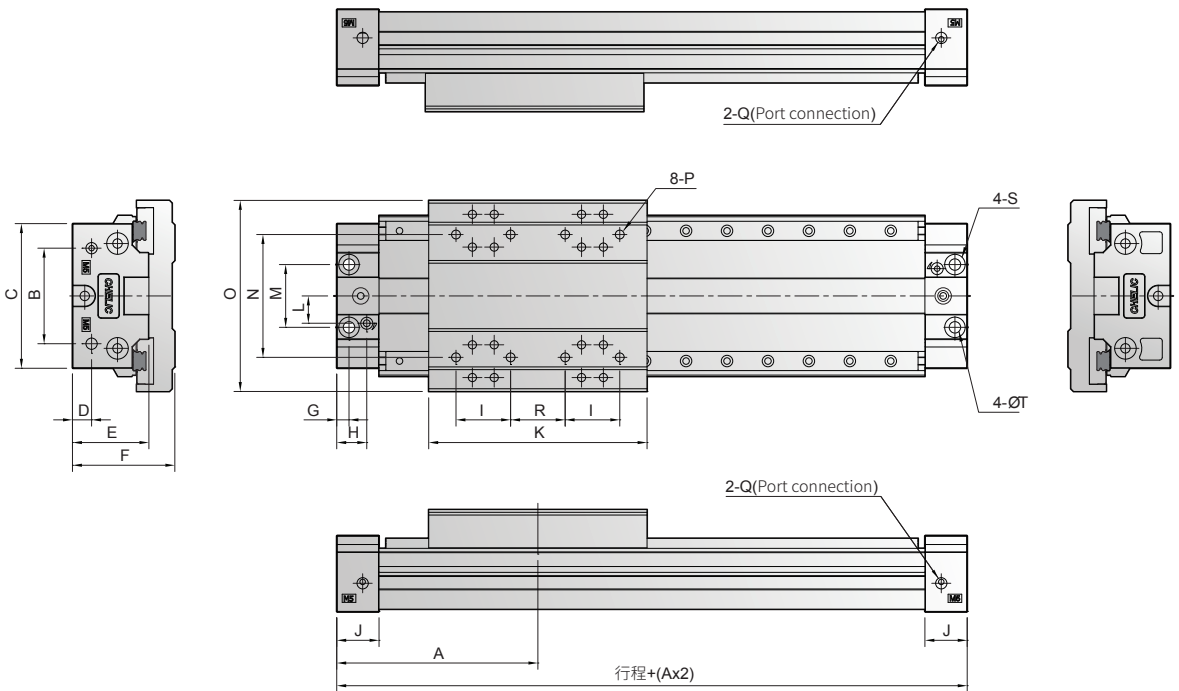


# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

## Dimensions

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PRET Ø16 ~ Ø25



- PRE
- PRET(P)
- PRU(F)2
- PRUT2
- MRD
- MRB
- MRBT
- MRX
- MRU
- MRH
- MRY

Unit: mm

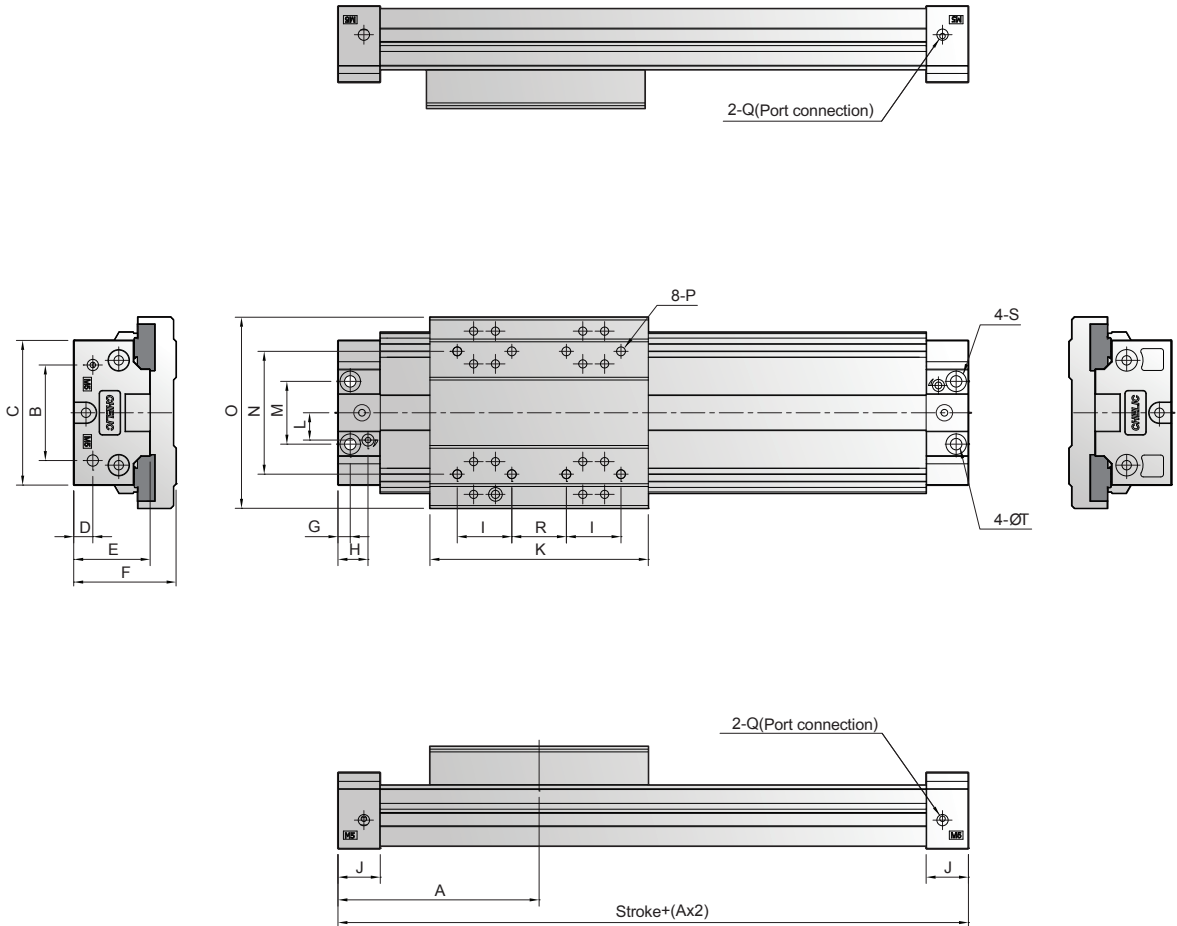
Mark Bore size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Ø16	61	29	43	5.8	23.5	33	4	9.5	16	13.5	65	8.5	23	40	62	M4x0.7Px5.5dp	M5x0.8P	16	Ø6.5x3.5dp	3.3
Ø20	74	35	53	7	28	38	4.5	11	20	15.5	80	10	23	45	70	M4x0.7Px7dp	M5x0.8P	20	Ø7.5x4.5dp	4.2
Ø25	89	47	65	8	31.5	42	6	14	30	20	95	10	30	50	80.6	M5x0.8Px7dp	PT1/8	20	Ø9x6dp	5.2

# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

## Dimensions

**CHELIC**

■ PREP Ø16 ~ Ø25



Unit: mm

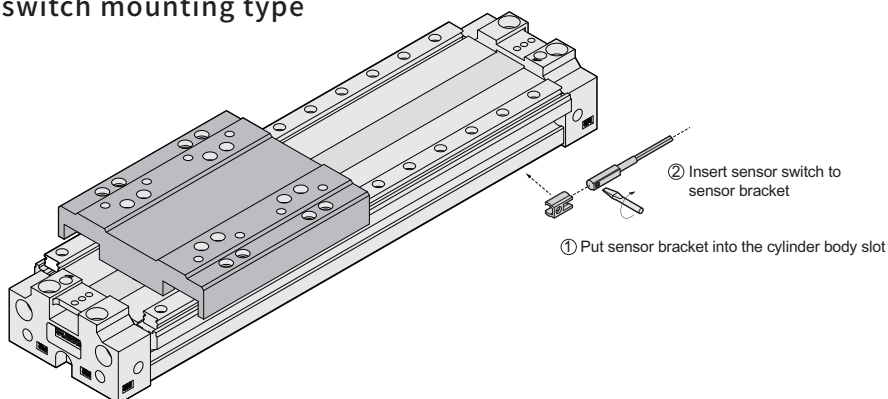
Bore size \ Mark	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Ø16	61	29	43	5.8	23.5	33	4	9.5	16	13.5	65	8.5	23	40	62	M4x0.7Px5.5dp	M5x0.8P	16	Ø6.5x3.5dp	3.3
Ø20	74	35	53	7	28	38	4.5	11	20	15.5	80	10	23	45	70	M4x0.7Px7dp	M5x0.8P	20	Ø7.5x4.5dp	4.2
Ø25	89	47	65	8	31.5	42	6	14	30	20	95	10	30	50	80.6	M5x0.8Px7dp	PT1/8	20	Ø9x6dp	5.2

# PRET(P) series Mechanically Jointed Rodless Cylinder (POM slider type)

## Mounting type and operation of sensor switch

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### PRET(P) Sensor switch mounting type



PRE

PRET(P)

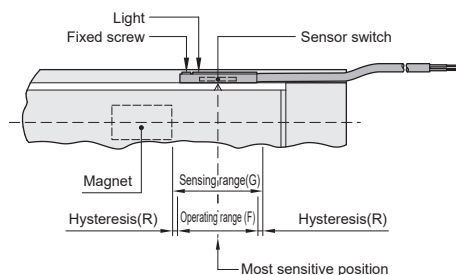
PRU(F)2

PRUT2

### Setting 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.

### Sensor switch setting and operating range



MRD

MRB

MRBT

MRX

### 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)

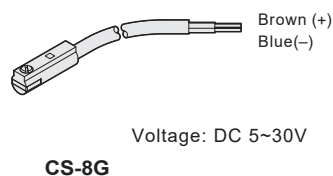
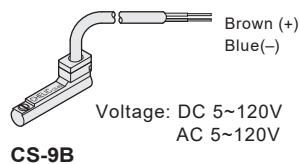
### Sensor switch introduction

Unit: mm

Model	CS-9D(B)	
Bore size	Operating range (F)	Hysteresis(R)
Ø12	8	1
Ø16	8	1
Ø25	8	1

Unit: mm

Model	CS-8G(B)	
Bore size	Operating range(F)	Hysteresis(R)
Ø12	10	1
Ø16	10	1
Ø25	10	1



MRY