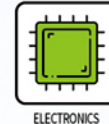


Mechanically Jointed Rodless Cylinder **PRU2** Series

Specs: PRU2 10/16/20/25/32/40/50

CHELIC®

Applicable



Enhanced Air Tightness for Stable Movement

Stable
speed
700
mm/s

Steel
structure
rigidity
150
mps

Space-
saving
50
%



Customizable for any stroke arrangement

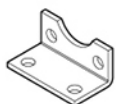
Flexible internal steel belt structure

Flexible, tight, and dust proof

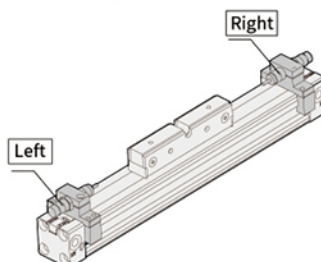
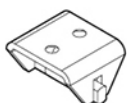
Diverse external devices

Cushioning device, fixed stand, and
floating bracket

- Installation stand
- Cushioning device



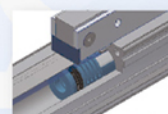
- Floating connect
bracket



High-speed movement stability

Long-axis piston structure for better loading
capacity and movement

Internal structure traits



Lubrication oil tank



Air pressure
cushioning device

Model



Standard



Flat



Guideway added



Mechanically Joint Rodless Cylinder

PRF2 series

Bore: Ø10, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50



CHELIC®

Industries served



AUTOMATION



PRINTING



TEXTILE



MEDICAL



ROBOT ARMS



PACKING



PLASTIC INJECTION



MACHINE TOOLING

Saving space

50%

in comparison with conventional cylinder

Rapid movement

700mm/s

Longest stroke

1500mm

Customization of any exclusive stroke is available

Stability in high-speed actuation

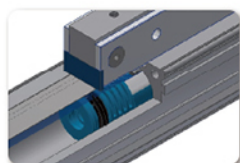
Long-axis piston structure, decent load resistance, and outstanding actuation

Structure of elastic inner steel belt

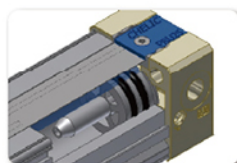
with functions of elastic resilience, leakproofness, and dustproofness



Internal structure features

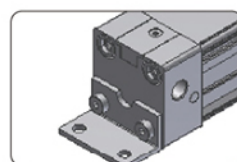


Lubricating oil tank device

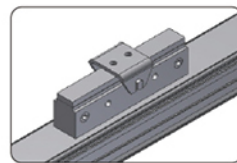


Pneumatic cushion device

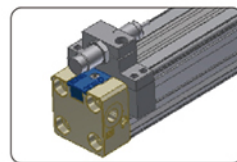
Externally attached device



Tripod mount



Floating bracket mount



External cushion device

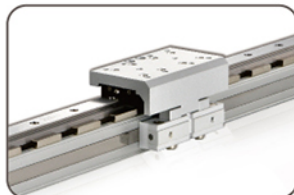
Selection of model



Standard-PRU2



Flat-PRF2



Rail mount-PRUT2

PRU(F)2 series Mechanically Jointed Rodless Cylinder

Product feature

CHELIC

Feature

- Space saving by 50% comparing from traditional type
- Precision adjustable pneumatic cushion to absorb the impact of inertia
- Stroke length is able to customized



Specification

Item	Bore size (mm)	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50
Action		Double acting					
Fluid		Air					
Pressure range	kgf/cm ² (kPa)	2~7(200~700)	1.5 ~ 7 (150 ~ 700)				
Max. operating pressure	kgf/cm ² (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		PT1/4		
Sensing device		With magnet					

Standard stroke

Bore size (mm)	Standard stroke (mm)
Ø16	50 ~ 1000
Ø20	50 ~ 1000
Ø25	50 ~ 1500
Ø32	50 ~ 1500
Ø40	50 ~ 1500
Ø50	50 ~ 1500

Theoretical output

Unit: kgf

Bore size (mm)	Operating	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
Ø50	Push	19.6	—	39.2	58.8	78.4	98	117.2	137.2

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

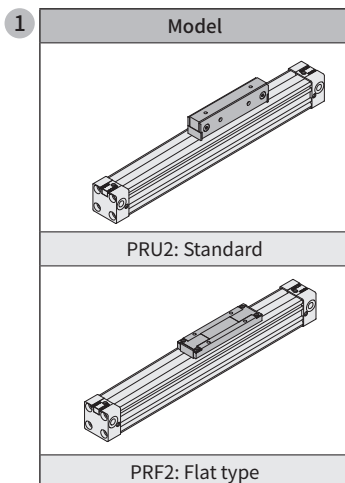
PRU(F)2 series Mechanically Jointed Rodless Cylinder

Code of order

CHELIC

Code of order **PRU2 16 x 200 - L - M - AM2 - 95 2**

1 2 3 4 5 6 7 8



2

Mark	Bore size (mm)
16	Ø16
20	Ø20
25	Ø25
32	Ø32
40	Ø40
50	Ø50

● PRU2 without bore size of 10 mm & 50 mm

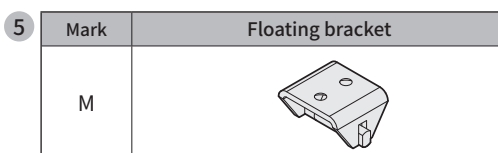
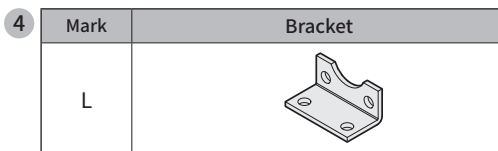
● PRU/ PRF Specification

Model	Bore size (mm)
PRU	Ø16、Ø20、Ø25、Ø32、Ø40
PRF	Ø16、Ø20、Ø25、Ø32、Ø40、Ø50

3

Bore size	Stroke (mm)
Ø16	50 ~ 1000
Ø20	
Ø25	50 ~ 1500
Ø32	
Ø40	
Ø50	

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



6

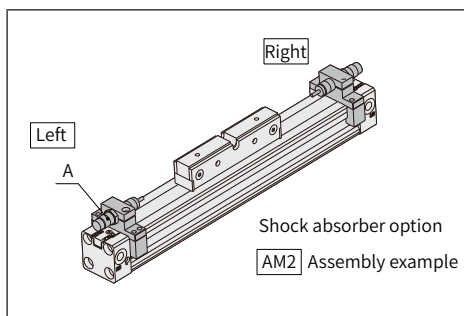
Mark	Cushion option	Cushion
None	Without cushion	A:
AM1	Left side with shock absorber	Shock absorber
AM2	Both sides with shock absorber	M:
AM3	Right side with shock absorber	Shock abosorber base

● Remark: Above for PRU only

● How to select Shock absorber

Bore size (mm)	Shock absorber model	Maximum absroption (N · m)
16	SAT-1007C	6
20	SAT-1007C	6
25	SAT-1210C	10
32	SAT-1412C	20
40	SAT-2015C	59

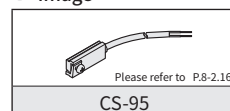
● Assembly example and direction



7

Mark	Sensor switch
None	Without sensor switch
95	CS-95

● Image



8

Mark	Sensor switch
1	1 pc
2	2 pcs

PRE

PRET(P)

PRU(F)2

PRUT2

MRD

MRB

MRBT

MRX

MRU

MRH

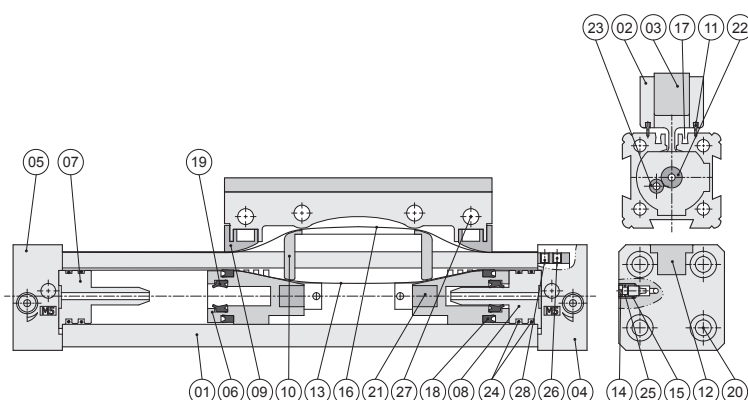
MRY

PRU(F)2 series Mechanically Jointed Rodless Cylinder

Product feature

CHELIC

Internal structure



Product weight

Unit: kg

Bore size (mm)	Stroke = 0mm	Additional weight
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
Ø50	4.28	0.660

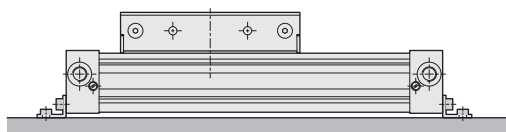
Note: Additional weight per each 100 mm in $\pm 5\%$ difference

Components and material list

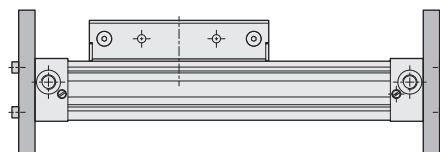
NO.	Item	Material	NO.	Item	Material
01	Body	Aluminum alloy	15	Bush	Stainless steel
02	Slider	Aluminum alloy	16	Outer belt	Stainless steel
03	Slider cap	Aluminum alloy	17	Magnet belt	Rare earth metal
04	Left end cap	Aluminum alloy	18	Piston packing	NBR
05	Right end cap	Aluminum alloy	19	Air cushion packing	NBR
06	Piston	POM	20	End cap screw	Carbon steel
07	Air cushion lever (left)	POM	21	Piston magnet	Rare earth metal
08	Air cushion lever (right)	POM	22	End cap O-ring	NBR
09	Outer belt block	POM	23	Air cushion lever O-ring_1	NBR
10	Belt guide block	POM	24	Air cushion lever O-ring_2	NBR
11	Slider plate	NBR	25	Air cushion pin O-ring	NBR
12	Cover	POM	26	Cap screw	Carbon steel
13	Inner belt	PU	27	Slider plate screw	Carbon steel
14	Air cushion pin	Copper Alloy	28	Inner belt screw	Carbon steel

Mounting type

● Mounting bracket type



● End bracket type



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

PRU(F)2 series Mechanically Jointed Rodless Cylinder

Installation

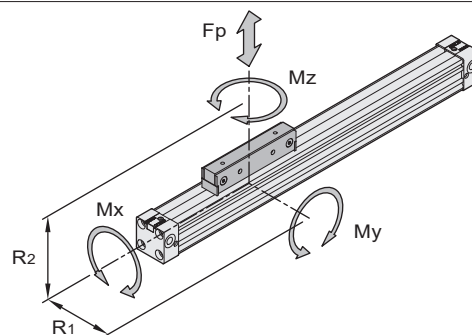
CHELIC

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.

$$M_x = F_p \times R_1 \quad M_y = F_p \times R_2 \quad M_z = F_p \times R_1$$

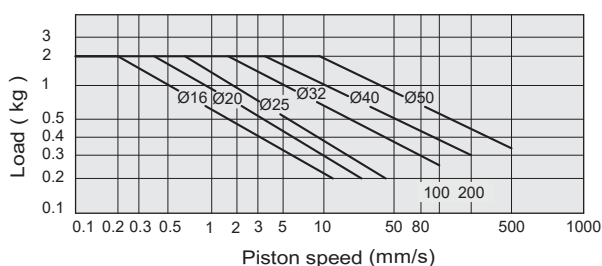
$$\frac{M_x}{M_{x \max}} + \frac{M_y}{M_{y \max}} + \frac{M_z}{M_{z \max}} + \frac{F_p}{F_{p \max}} + \frac{F_y}{F_{y \max}} \leq 1$$



Model	Bore size (mm)	Stroke (mm)	Theoretical output at 6 bar (N)	Max. load (N)		Max. Moment allowable(Nm)		
				Fp		Mz	Mx	My
PRU2	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
PRF2	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
	50	50~1500	1178	1200		15	7	115

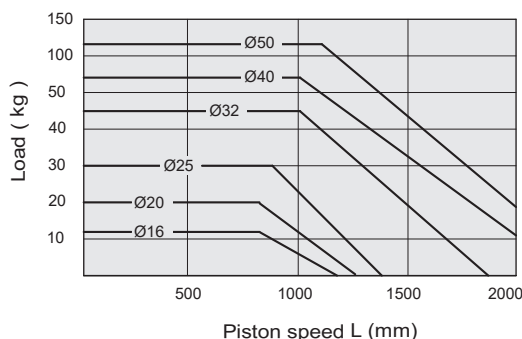
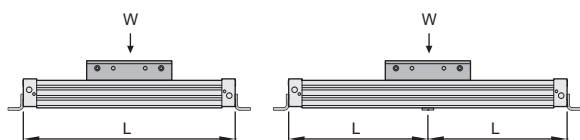
Load weight and piston speed

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.

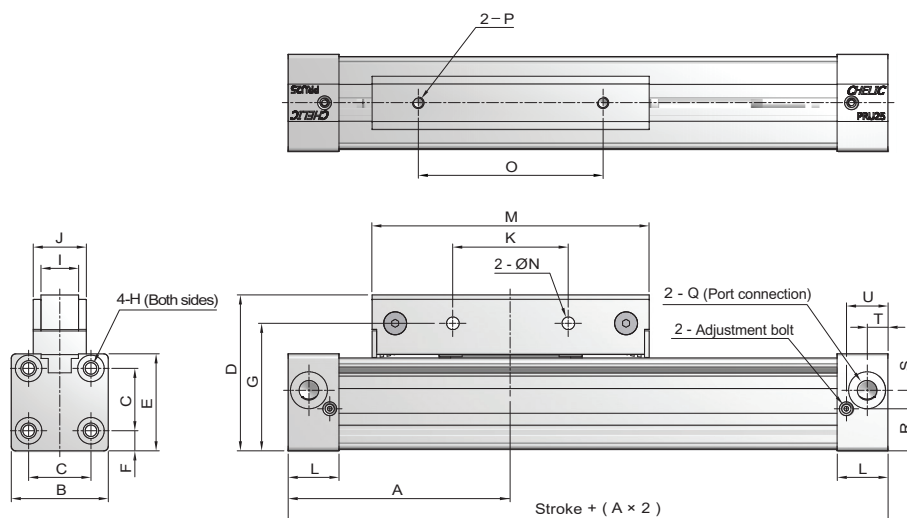


PRU2 series Mechanically Jointed Rodless Cylinder (Standard type)

Dimensions

CHELIC

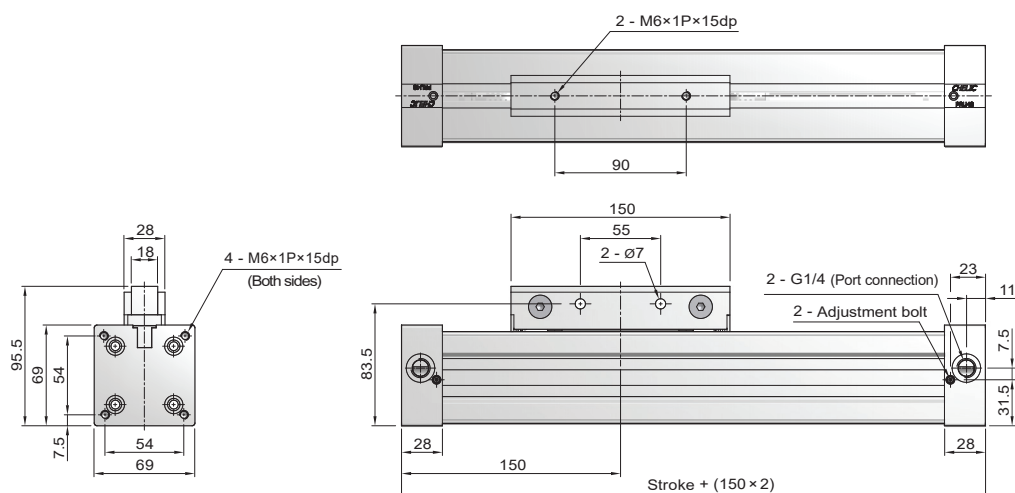
PRU2 Ø16 ~ Ø32



Unit: mm

Mark	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	G1/8	17	5	9	18
Ø25	100	42	27	67.5	42	8.7	55.2	M5×0.8P×15dp	16.3	23	50	22	120	5.5	80	M5×0.8P×10dp	G1/8	18.2	8	9	18
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	G1/4	24	9	11	21

PRU2 Ø40

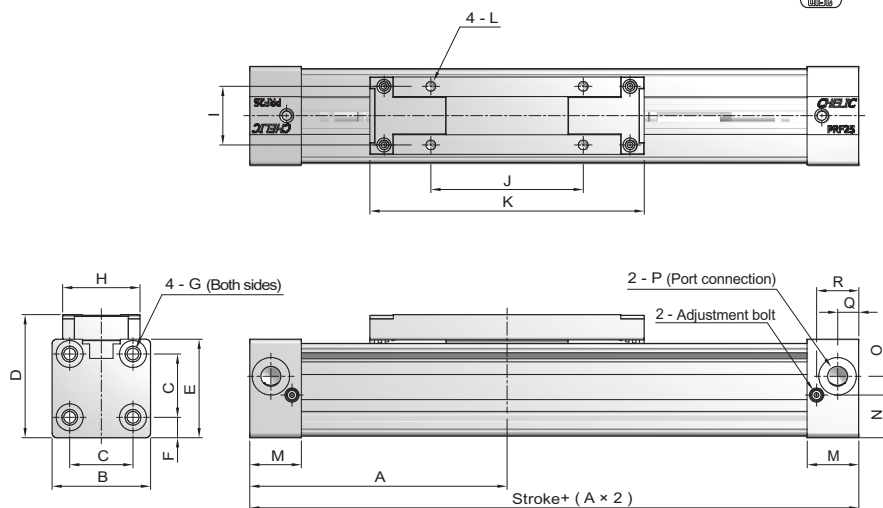


PRF2 series Mechanically Jointed Rodless Cylinder (Plate type)

Dimensions

CHELIC

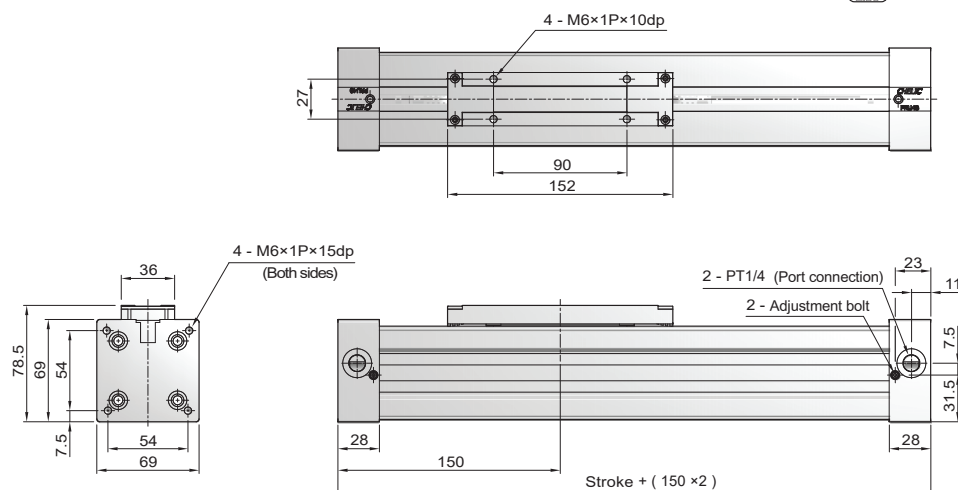
PRF2 Ø16 ~ Ø32



Unit: mm

Mark	A	B	C	C2	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ø16	65	30	18	13	38	30	6.4	M3x0.5Px9dp	22	16.5	36	69	M4x0.7Px6dp	14	13.4	3.5	M5x0.8p	5	10
Ø20	80	37	24	24	46	37	6	M4x0.7Px12dp	28	20	50	90	M4x0.7Px6dp	22	17	5	PT1/8	9	18
Ø25	100	42	27	27	52.5	42	8.7	M5x0.8Px15dp	33	25	65	117	M5x0.8Px8dp	22	18.2	8	PT1/8	9	18
Ø32	125	54	36	66.5	66.5	55	9.5	M6x1Px15dp	36	27	90	152	M6x1Px10dp	25.5	24	9	PT1/4	11	21

PRF2 Ø40

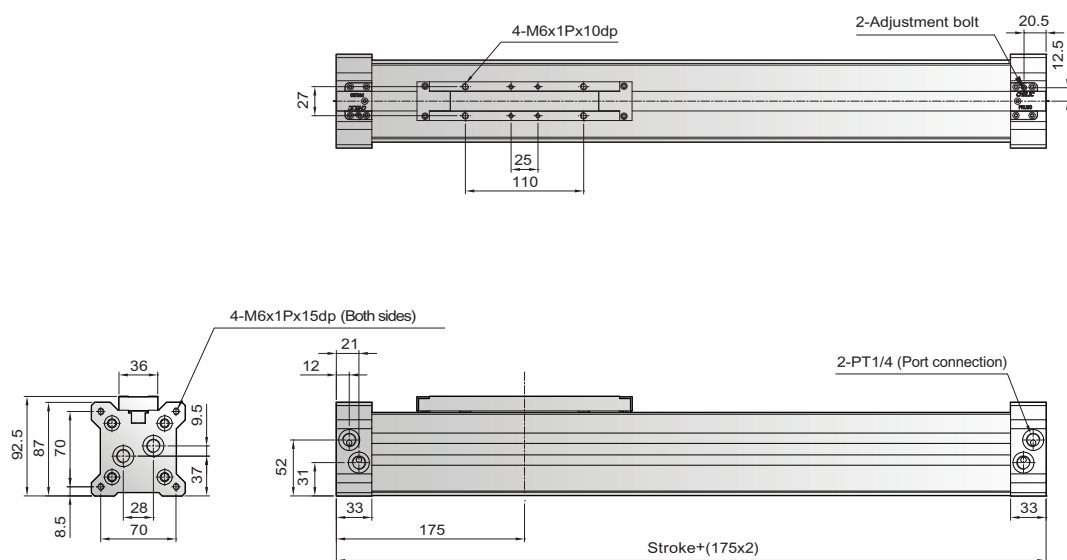


PRF2 series Mechanically Jointed Rodless Cylinder (Plate type)

Dimensions

CHELIC

PRF2 Ø50



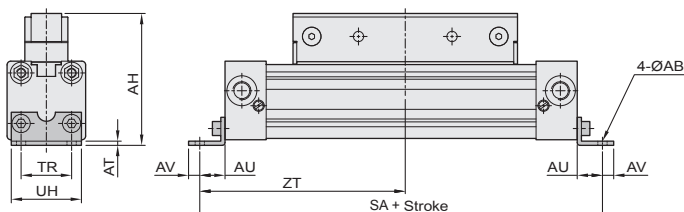
PRU(F)2 series Mechanically Jointed Rodless Cylinder

Accessory

CHELIC

L series Mounting bracket (PRU)

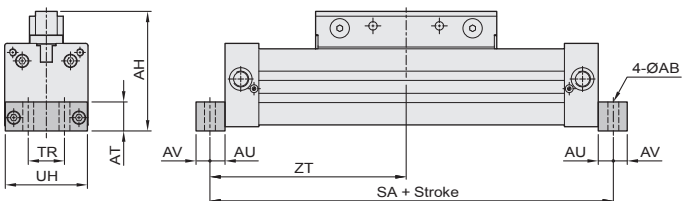
● PRU Ø 16 ~ Ø 32



Unit: mm

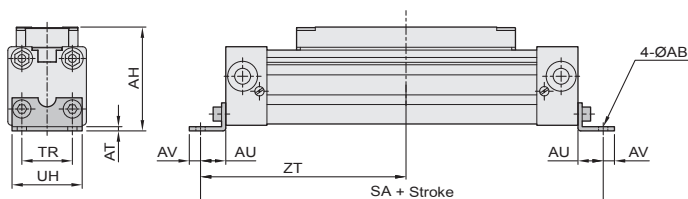
Mark	AB	AH	AT	AU	AV	SA	TR	UH	ZT
Ø16	3.6	45	1.6	10	4	150	18	26	75
Ø20	4.6	56	1.6	11	5	182	24	35	91
Ø25	5.8	68	2.5	16	6	232	27	39	116
Ø32	6.6	89.8	3	18	8	286	36	50	143

● PRU Ø 40



L series Mounting bracket (PRF)

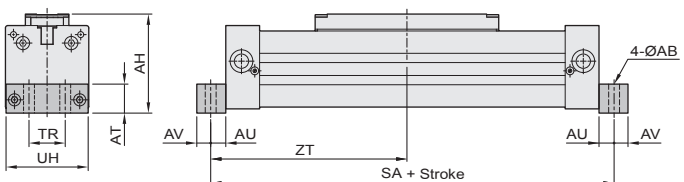
● PRF Ø 10 ~ Ø 32



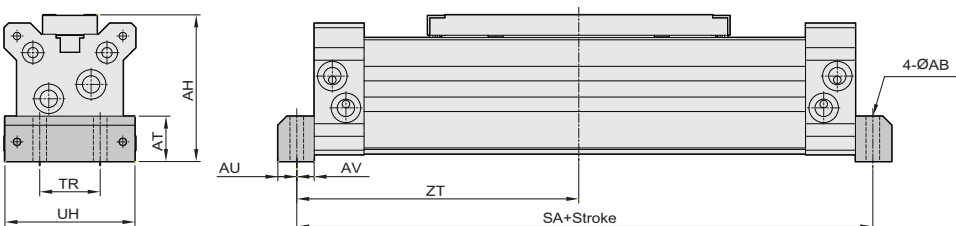
Unit: mm

Mark	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
Ø50	9	97	30	12.5	11.5	373	40	86	186.5

● PRF Ø 40



● PRF Ø 50



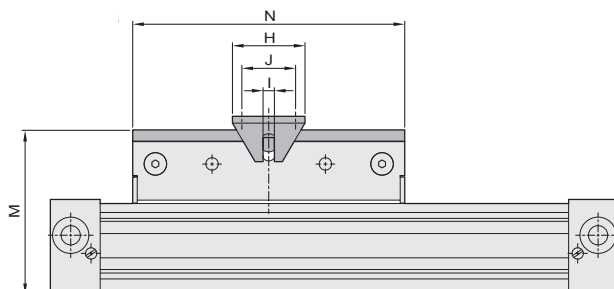
PRU(F)2 series Mechanically Jointed Rodless Cylinder

Accessory

CHELIC

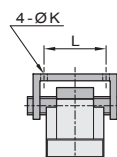
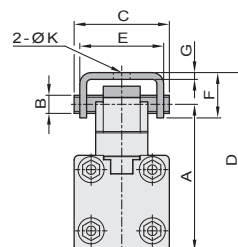
Floating bracket

● PRU2 series



● PRU2 Ø16 ~ Ø32

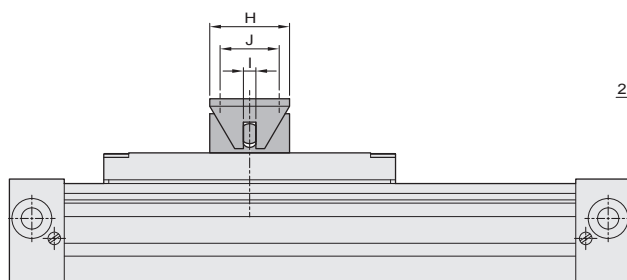
● PRU2 Ø40



Unit: mm

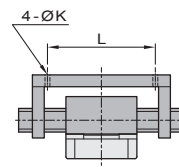
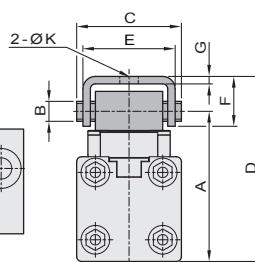
Mark Bore size	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ø16	44	5	28	53	25	13	2	20	3	10	4.5	-	49	76
Ø20	52.5	5	37	63	34	14	2	26	3	15	4.5	-	59	96
Ø25	64.5	8	42	78.5	37	20	3	32	5	16	5.5	-	72.5	120
Ø32	83	12	55	102.5	44	30	4	60	8	40	6.6	-	94	160
Ø40	91.5	12	84	114.5	70	32	6	90	8	75	7	55	103.5	150

● PRF2 series



● PRF2 Ø16 ~ Ø32

● PRF2 Ø40 ~ Ø50



Unit: mm

Mark Bore size	A	B	C	D	E	F	G	H	I	J	K	L
Ø16	42.5	5	28	52	25	13	2	20	3	10	4.5	—
Ø20	48.5	5	37	57.5	34	14	2	26	3	15	4.5	—
Ø25	60.2	8	42	74.2	37	20	3	32	5	16	5.5	—
Ø32	78	12	55	97.5	44	30	4	60	8	40	6.6	—
Ø40	85.5	12	84	108.5	70	32	4	90	8	75	7	55
Ø50	99.5	12	55	122.5	70	32	4	90	8	75	7	55

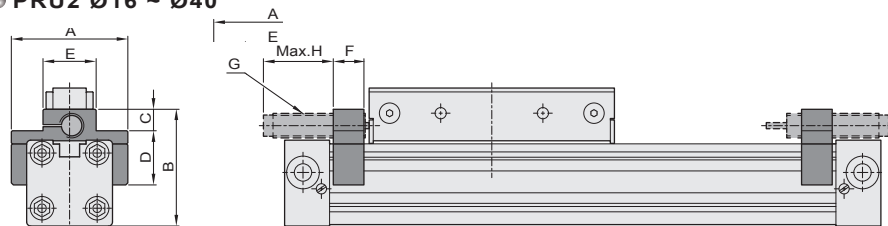
PRU(F)2 series Mechanically Jointed Rodless Cylinder

Accessory

CHELIC

Cushion

● PRU2 Ø16 ~ Ø40



Unit: mm

Mark Bore size	A	B	C	D	E	F	G	H
Ø16	43	44.5	10.5	19.6	24	10	M10×1.0P	37
Ø20	52	53.2	11.8	24.6	27	10	M10×1.0P	37
Ø25	57	64.7	17.5	27	30	15	M12×1.0P	37.5
Ø32	69	79.2	19.5	34	31	15	M14×1.5P	52
Ø40	80	91.4	18.9	38.5	38	20	M20×1.5P	52

Operating range

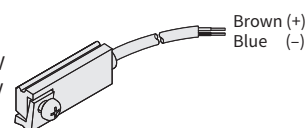
Unit: mm

Model	CS - 95	
Bore size	Operating range(F)	Hysteresis(R)
Ø16	10	1
Ø20	9	1.2
Ø25	9	1.2
Ø32	13	1.2
Ø40	10.5	1.5

► Sensor switch introduction

CS-95

Voltage: DC 5 ~ 120V
AC 5 ~ 120V



PRE

PRET(P)

PRU(F)2

PRUT2

MRD

MRB

MRBT

MRX

MRU

MRH

MRY