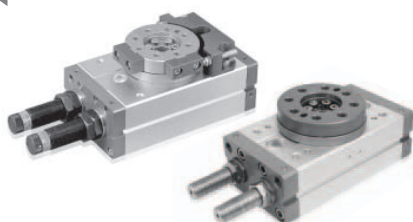


ROTARY CYLINDER

PRC-S(ST) Series

Features



- Rotary Cylinder in Double Piston by Rack & Pinion
- Variety of attachment method
- High-power compared with other models
- Unified wiring processing by hollow shaft
- Possible to mount shock absorber
- Auto Switch for the detection of position can be attached

Order Form

PRC 20 ST - 90 - W - P S - PNP - SH2

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

⑥ Auto Switch type

Symbol	Type	Length
A3	DSC APC	1m
A3L	(2-wire)	3m
P	Proximity PRO-08 (3-wire, M8×P1)	2m

※P type can be selected only in -ST types.

⑦ Auto Switch quantity

Blank	2ea
S	1ea

⑧ Output of Proximity Sensor

Name	Output
Blank	NPN type
PNP	PNP type

⑨ Shock Absorber mounting

Blank	Urethane Stopper
SH1	Shock Absorber 1ea
SH2	Shock Absorber 2ea

① Series

② Bore size

Name	Bore size(mm)
16	16
20	20
22	22
25	25
30	30
40	40
50	50

③ Stopper specification

ST	External Stopper
S	Internal Stopper

④ Rotation angle 90°, 180°

⑤ Sensor bracket quantity

Blank	None
W	Mount

※W" option selectable only for "-ST" type

※Not need sensor bracket if using magnetic sensor type.

Specification

Model	PRC16ST	PRC20ST	PRC22ST	PRC25ST	PRC30ST	PRC40ST	PRC50ST
Bore size(mm)	16	20	22	25	30	40	50
Maximum rotation angle(°)	190 (Standard 180° + Relief angle 10°)						
Angle adjustment range(°) <small>Note 2)</small>	Internal stopper: 0 ~ 190, External stopper: base angle ±4						
Cushion type(Shock Absorbing)	Urethane stopper / Shock Absorber						
Effective torque(kgf·cm) <small>P:Allowable air pressure(kgf/cm²)</small>	2×P	4×P	4.8×P	8.2×P	14.8×P	31×P	74×P
Allowable energy (kgf·cm)	Urethane stopper	0.25	0.38	0.38	0.45	1.35	3.8
	Shock Absorber	2.2	4	4	5	24	103
Air port size	M5	M5	PT1/8	PT1/8	PT1/8	PT1/8	PT1/8
Maximum radial load(kgf) <small>Note 3)</small>	11	14	21	31	35	46	85
Maximum thrust load(kgf)	6.5	9.3	10	16	17	20	44
Rotation time(sec/90°)	0.2 ~ 0.9	0.2 ~ 1.2	0.2 ~ 1.2	0.3 ~ 1.2	0.3 ~ 1.4	0.3 ~ 1.5	0.5 ~ 1.5
Fluid	Clean air <small>Note 1)</small>						
Air pressure(kgf/cm ²)	3 ~ 7						
Lubrication	No need (if need, use one sort of turbine oil: SPEC ISOVG 32)						
Temperature(°C)	5 ~ 60						
Motion type	Double-acting type (Structure: Rand & Pinion Type)						
Main body weight(kgf)	0.56	1	1.27	2.02	3.09	6.7	12

Note 1) Clean air: Fresh air containing solid matters with 0.3% of supersaturated moisture and 99.9% of liquid oil that passed through the 3-10 μ m degree of filtering

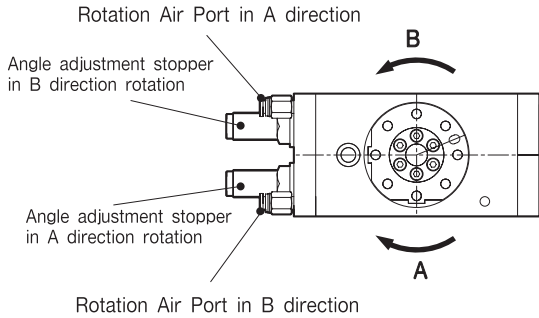
Note 2) If possible, adjust the angle within minimum Rotation angle of the next page, where energy efficiency is not degraded.

Note 3) Maximum radial load is allowable value at the end of turntable.

※ For detailed model selection method, please refer to page 516.



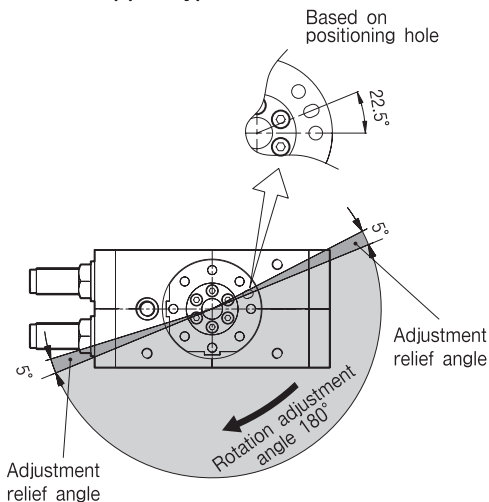
Rotation direction / Stopper adjustment



- ▶ Left figure shows stopper control position and air port position according to rotate direction.
- ▶ Rotation direction is marked based on the positioning hole in output shaft.
- ▶ Angle adjustment Stopper is set at a random position within the adjustment range of rotary angle. Readjust it as required for use.
- ▶ For SH type, shock absorber is replaced with stopper.

Rotation angle adjustment

Internal stopper type

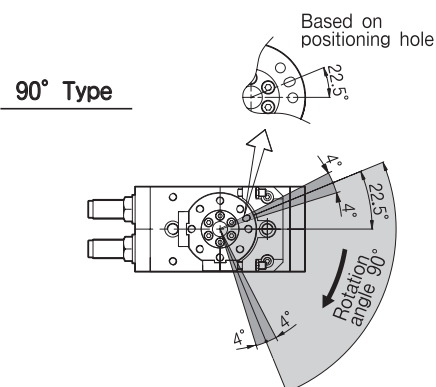
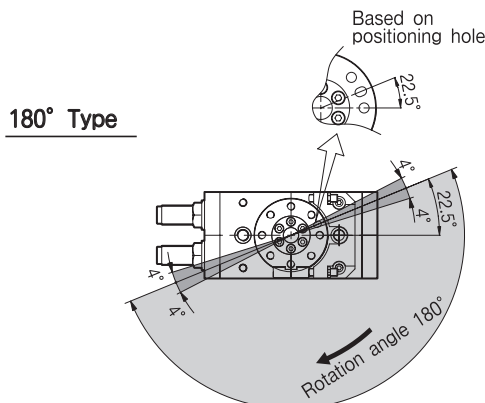


- ▶ As shown in the figure, turn it clockwise and then anti clockwise based on positioning hole.
- ▶ Angle can be set freely within 190° (Standard 180° and spare angle 10°) as shown in the figure by side stopper.
- ▶ Such setting is available even with the mounting of internal shock absorber.
- ▶ If possible, adjust the angle more than minimum Rotation angle, where energy efficiency is not degraded. (If the rotation stroke is smaller than the effective stroke of shock absorber, energy absorption power may be degraded)

※ Minimum rotation angle that has no degraded energy absorption capability

Bore size	16	20	22	25	30	40	50
Minimum rotation angle(°)	67	65	65	59	63	80	85

External stopper type



- ▶ As shown in the figure, turn it clockwise and then anti clockwise based on positioning hole.
- ▶ Angle can be adjusted and set within $\pm 4^\circ$ of range only at the end of rotation by side stopper as shown in the figure.

ROTARY

PRC

PRC-S

PRC-ST

PRC-SH

PRY-S

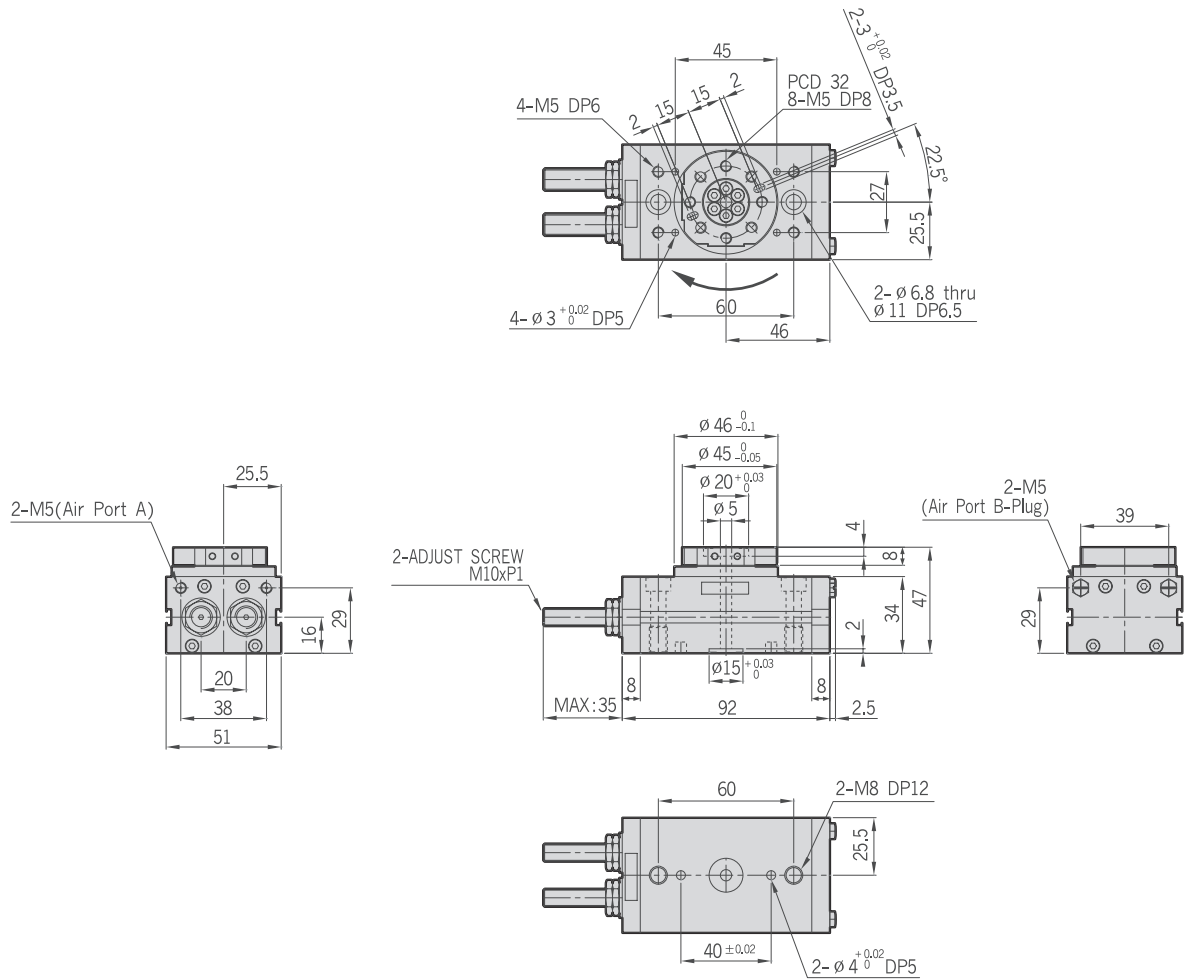
PRC-H

PRD

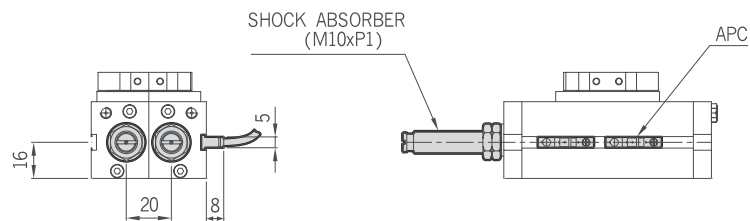
PRC-S Series

16S 20S 22S 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC16S

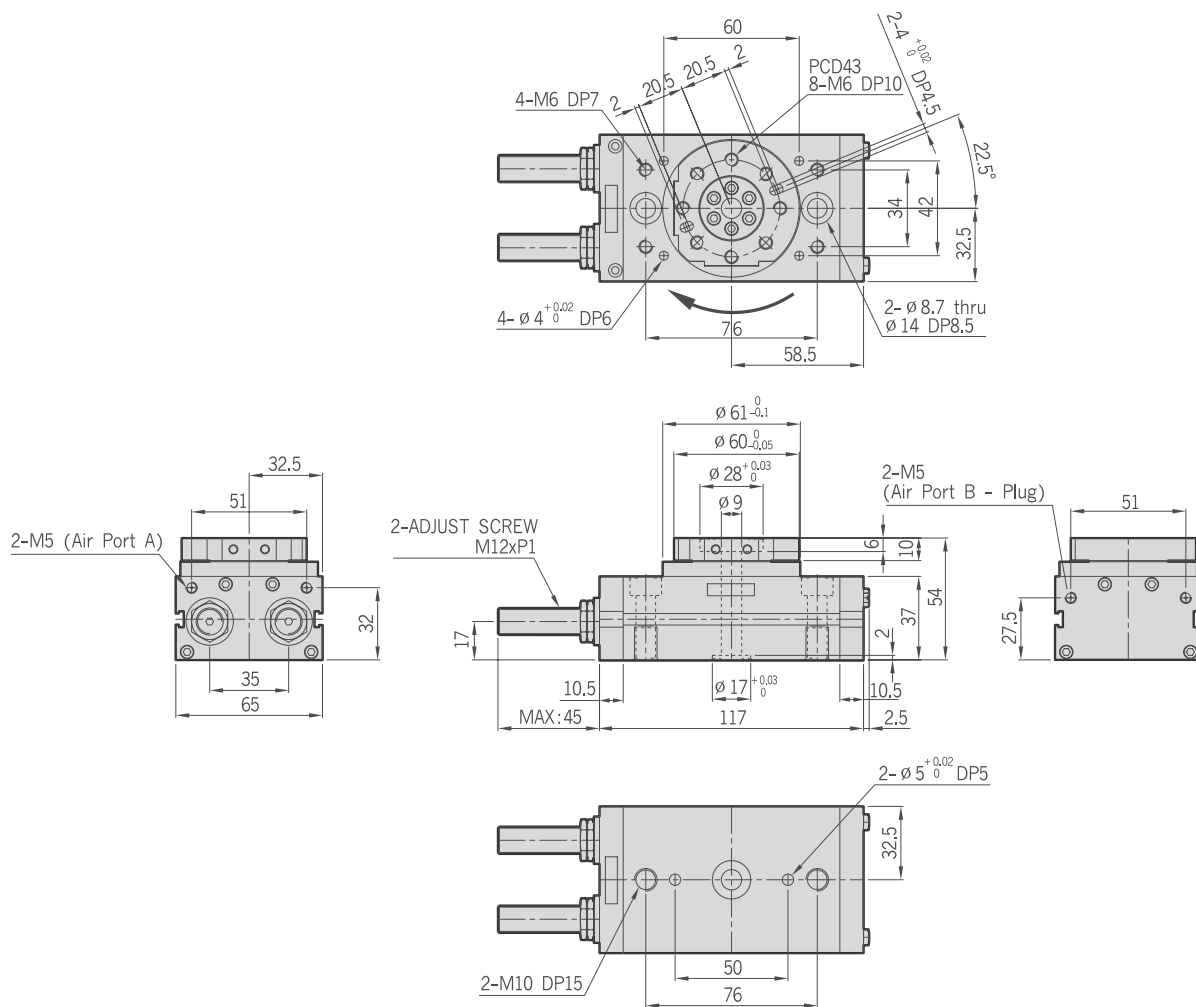


PRC16S-Auto Switch & Shock Absorber

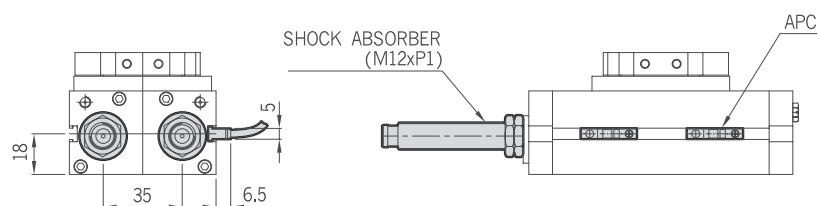


- 16S
- 20S
- 22S
- 25S
- 30S
- 40S
- 50S
- 16ST
- 20ST
- 22ST
- 25ST
- 30ST
- 40ST
- 50ST

PRC20S



PRC20S-Auto Switch & Shock Absorber



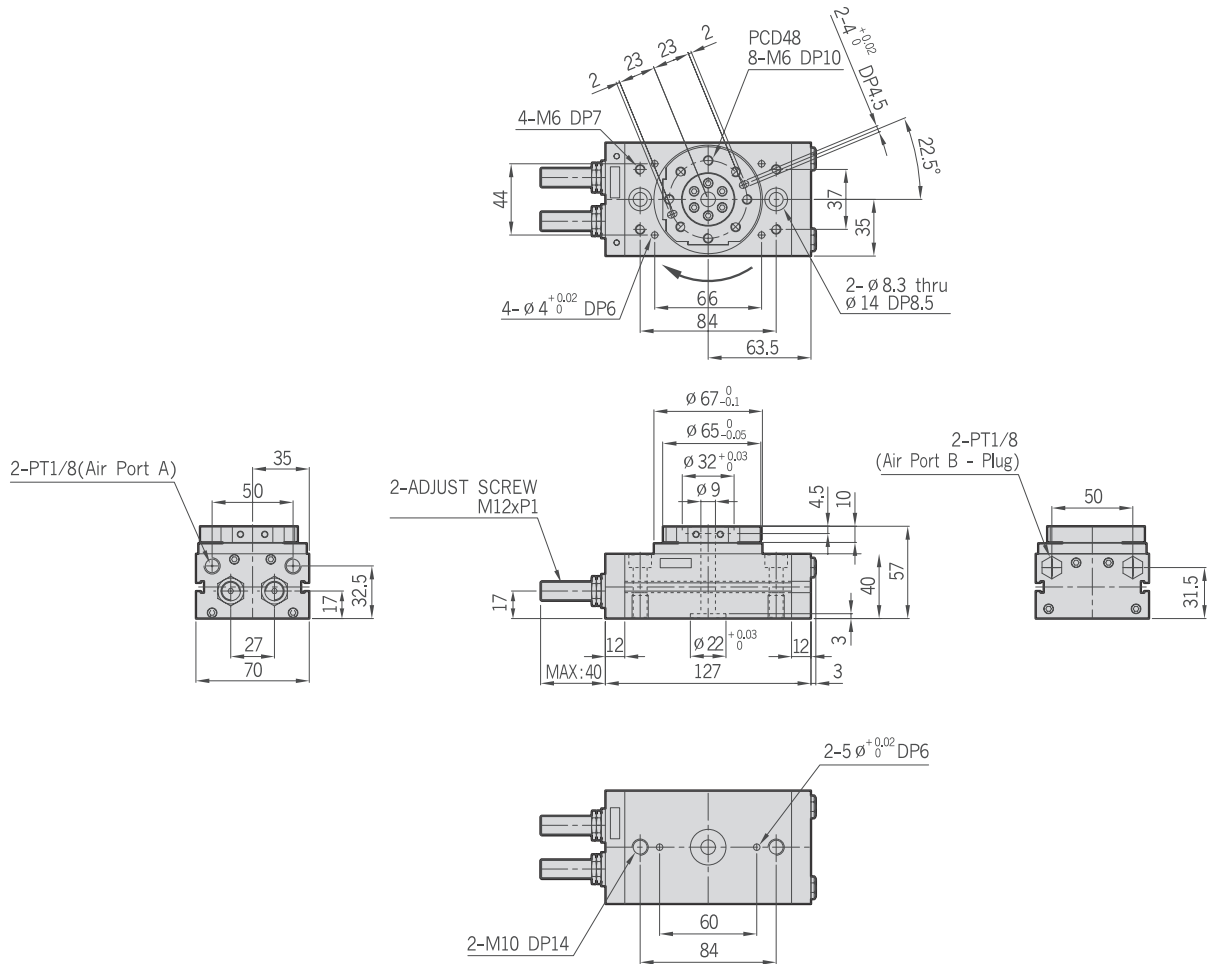
ROTARY

- PRC
- PRC-S
- PRC-ST
- PRC-SH
- PRY-S
- PRC-H
- PRD

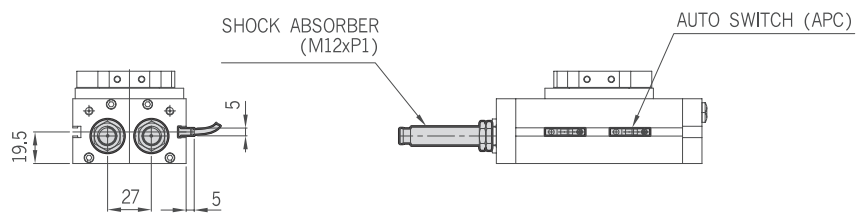
PRC-S Series

16S 20S **22S** 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC22S

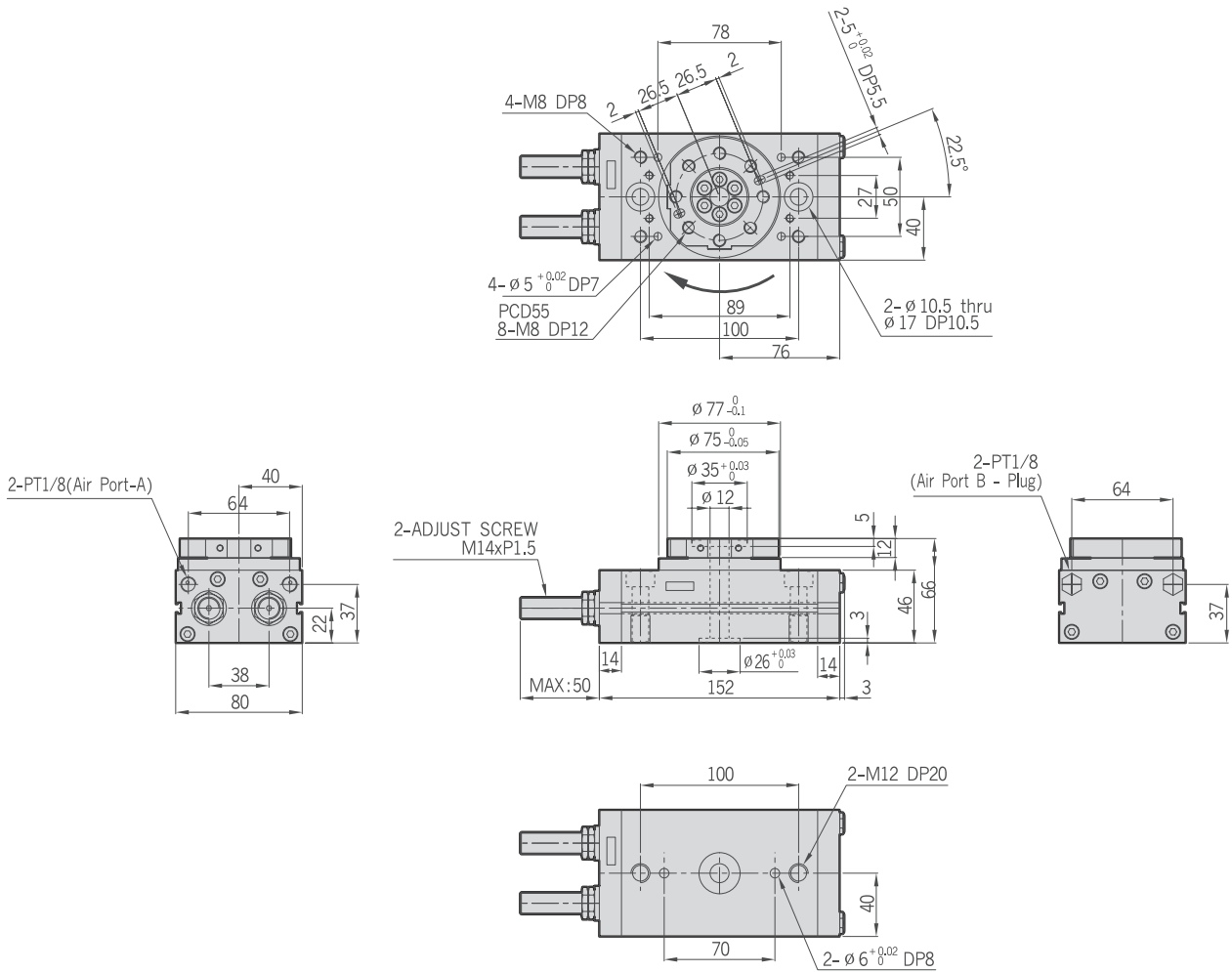


PRC22S-Auto Switch & Shock Absorber

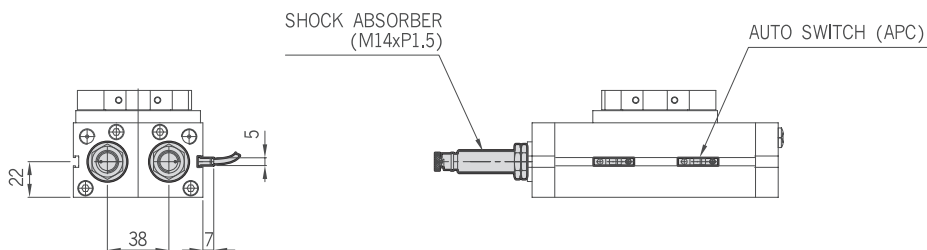


- 16S 20S 22S **25S** 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC25S



PRC25S-Auto Switch & Shock Absorber



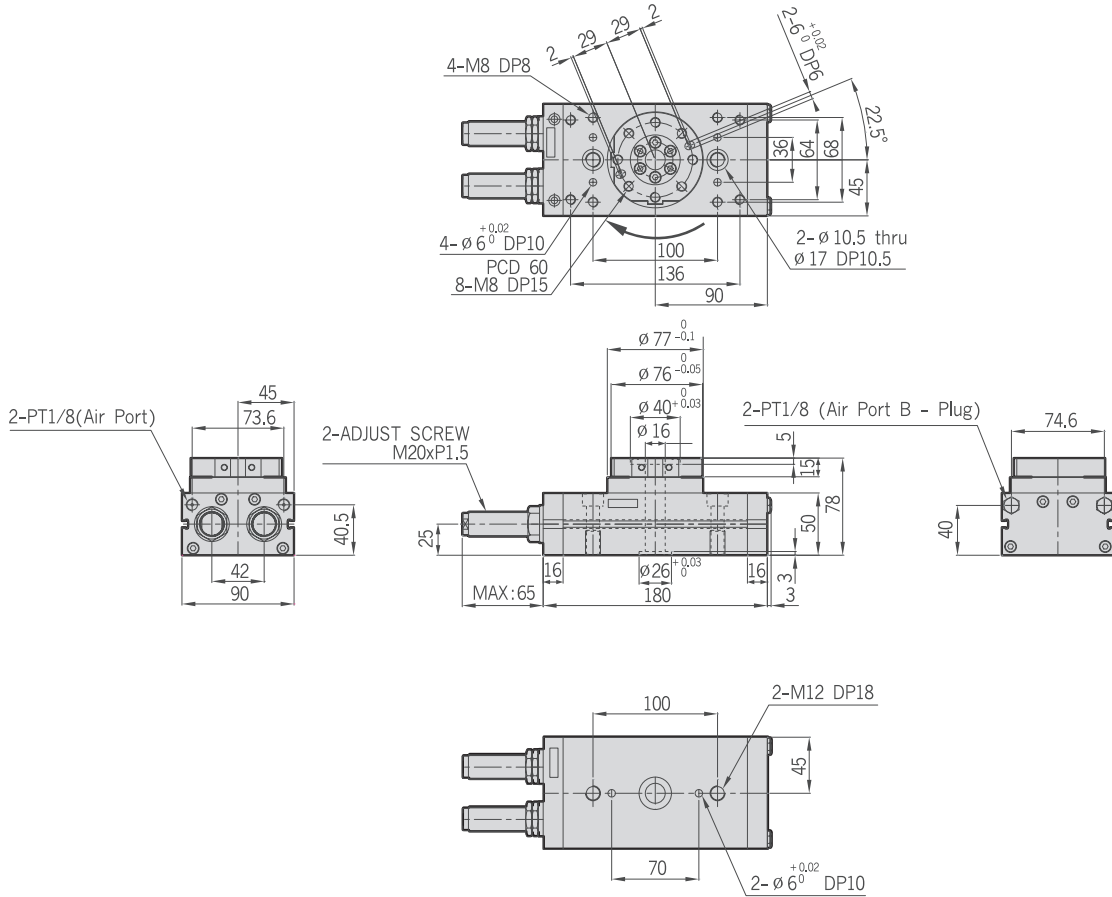
ROTARY

- PRC
PRC-S
 PRC-ST
 PRC-SH
 PRY-S
 PRC-H
 PRD

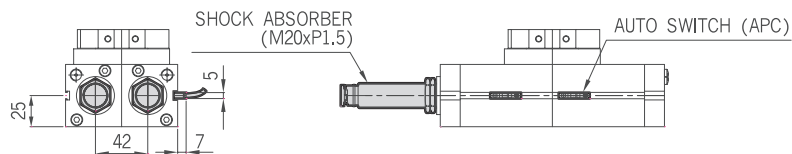
PRC-S Series

16S 20S 22S 25S **30S** 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC30S

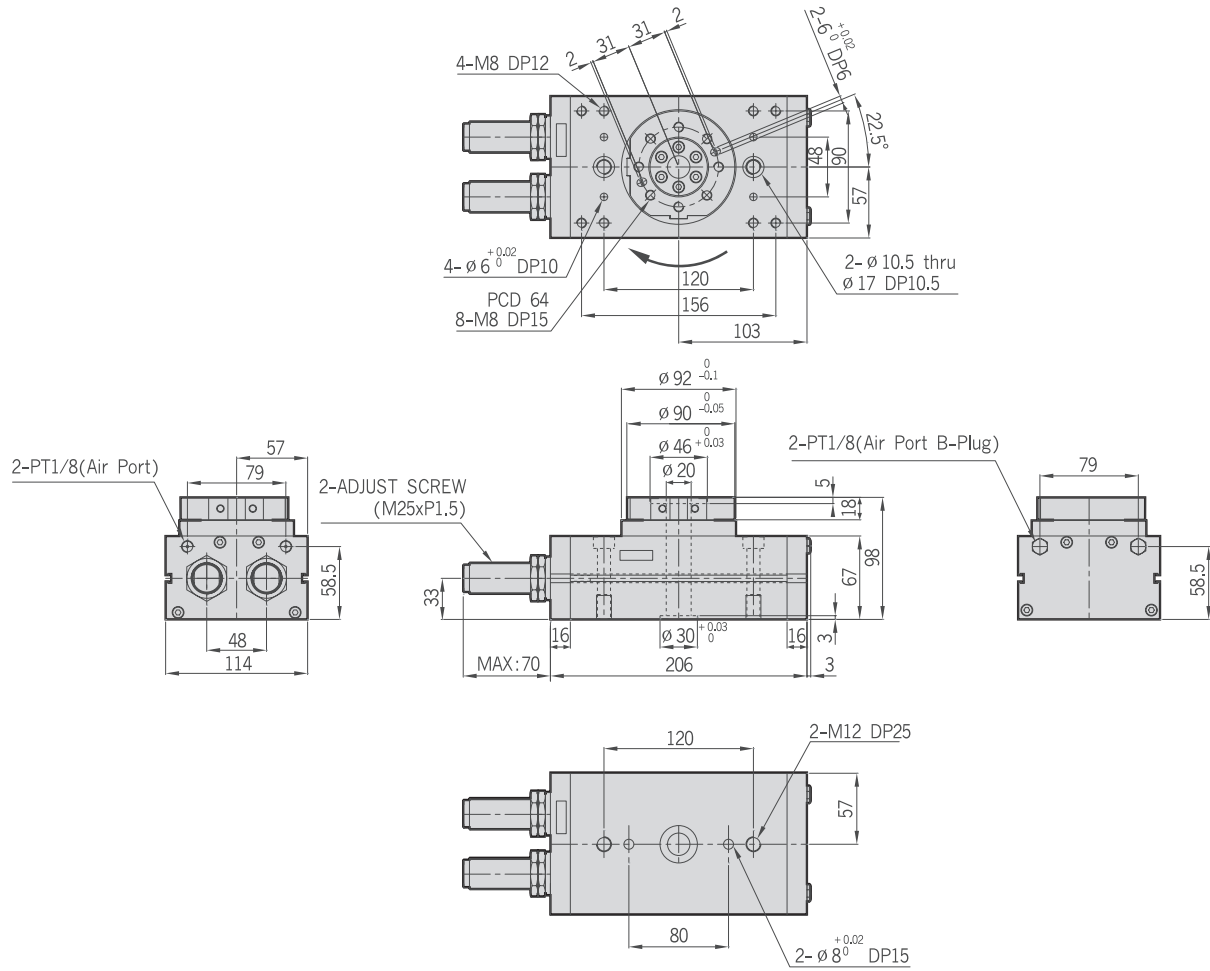


PRC30S-Auto Switch & Shock Absorber

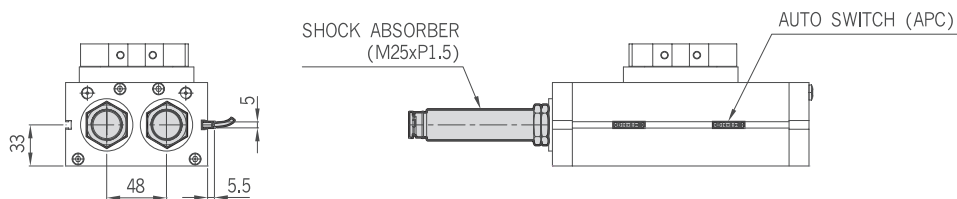


- 16S
- 20S
- 22S
- 25S
- 30S
- 40S
- 50S
- 16ST
- 20ST
- 22ST
- 25ST
- 30ST
- 40ST
- 50ST

PRC40S



PRC40S-Auto Switch & Shock Absorber



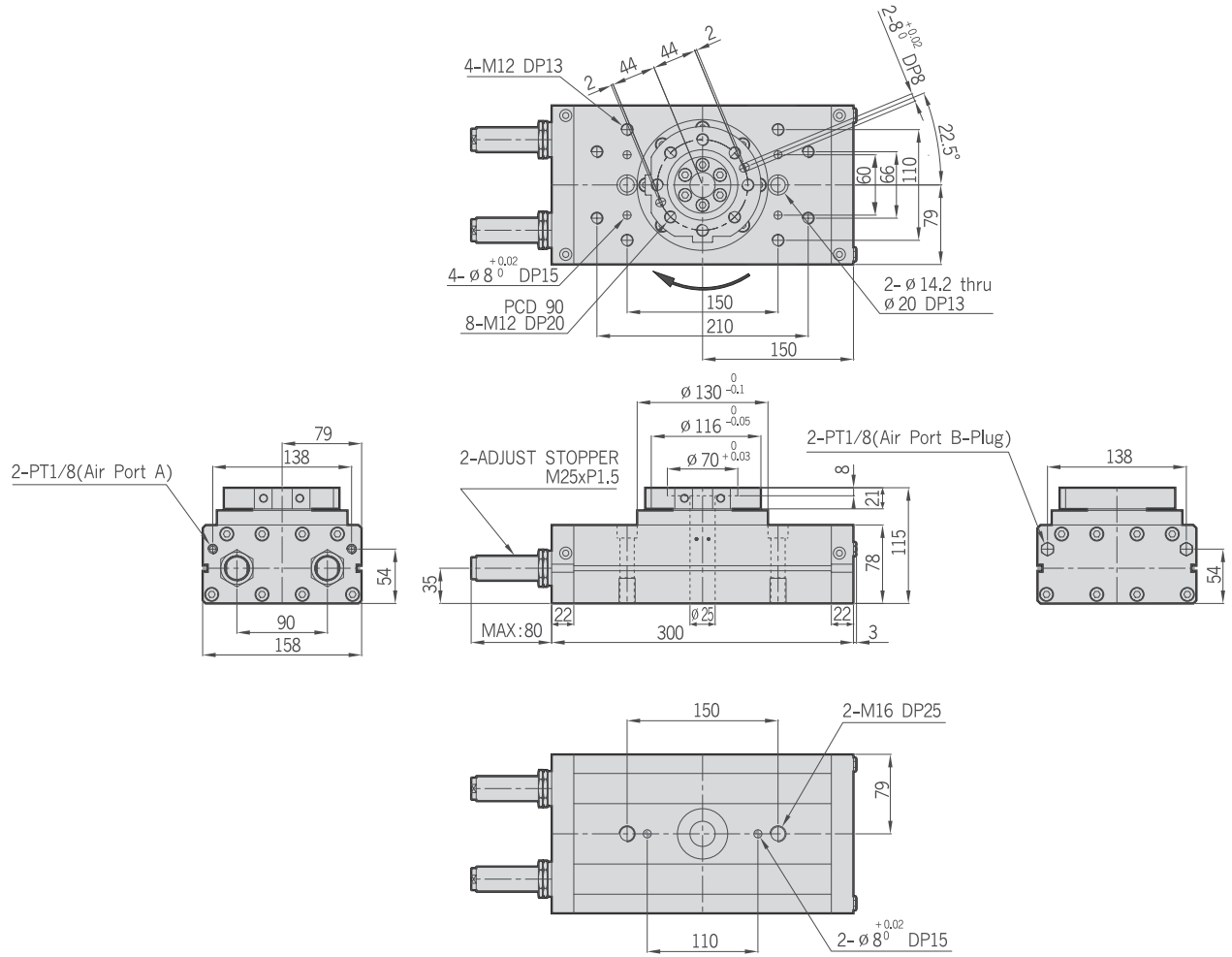
ROTARY

- PRC
- PRC-S**
- PRC-ST
- PRC-SH
- PRY-S
- PRC-H
- PRD

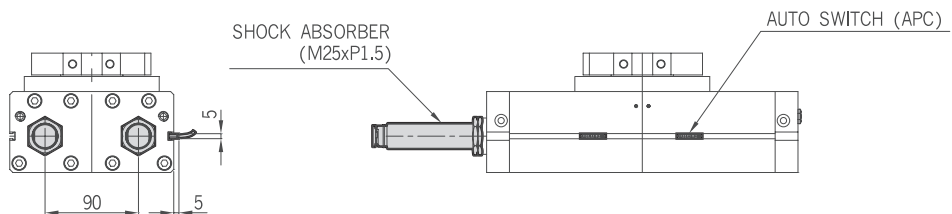
PRC-S Series

16S 20S 22S 25S 30S 40S **50S** 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC50S



PRC50S-Auto Switch & Shock Absorber



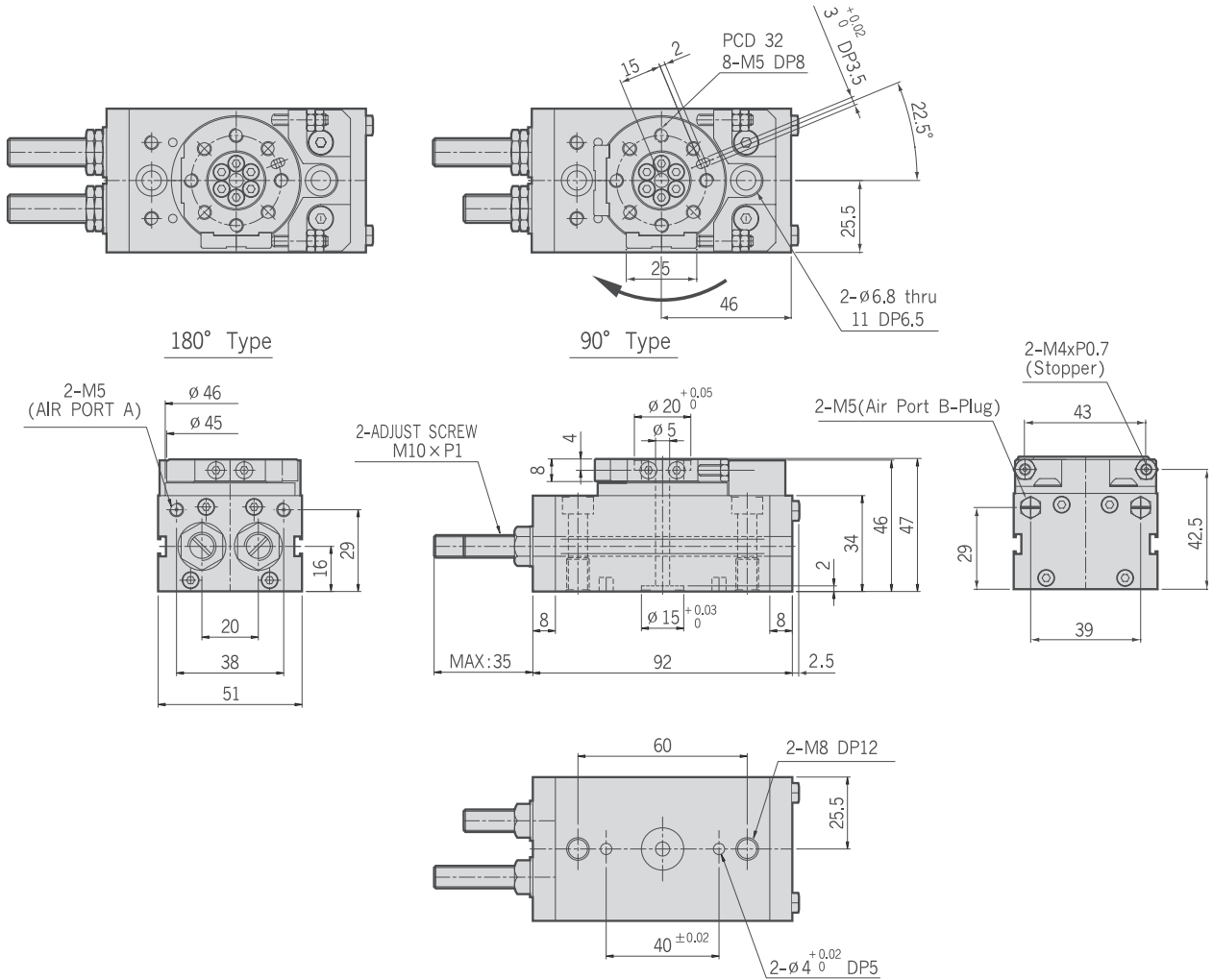


PRC-ST Series

PROTEC

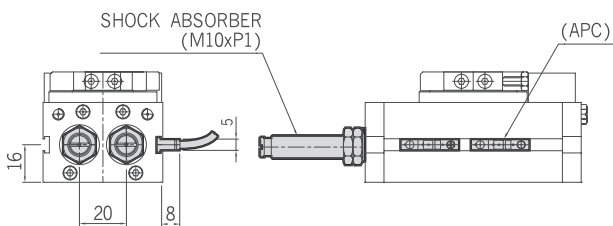
- 16S
- 20S
- 22S
- 25S
- 30S
- 40S
- 50S
- 16ST
- 20ST
- 22ST
- 25ST
- 30ST
- 40ST
- 50ST

PRC16ST

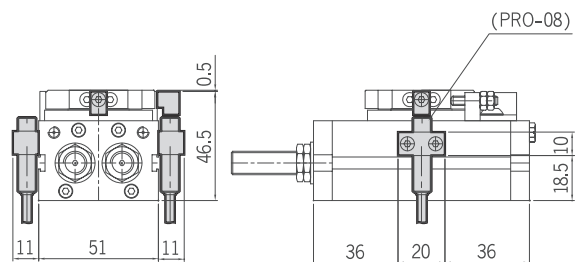


PRC16ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR



2. PROXIMITY SENSOR



ROTARY

PRC

PRC-S

PRC-ST

PRC-SH

PRY-S

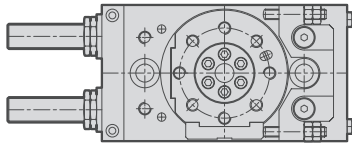
PRC-H

PRD

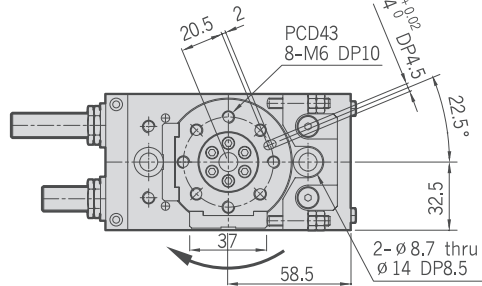
PRC-ST Series

16S 20S 22S 25S 30S 40S 50S 16ST **20ST** 22ST 25ST 30ST 40ST 50ST

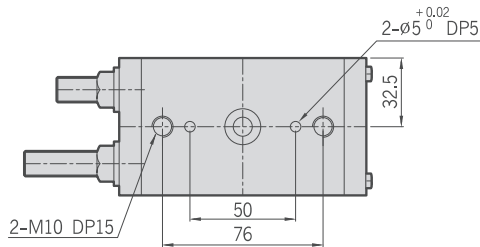
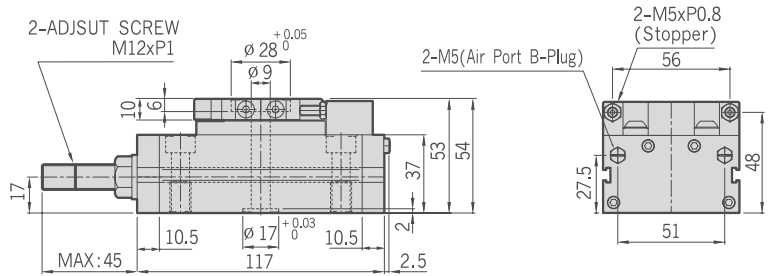
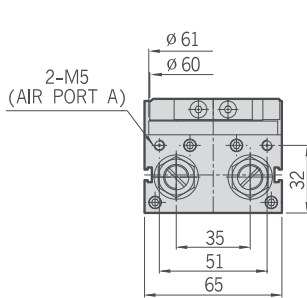
PRC20ST



180° Type

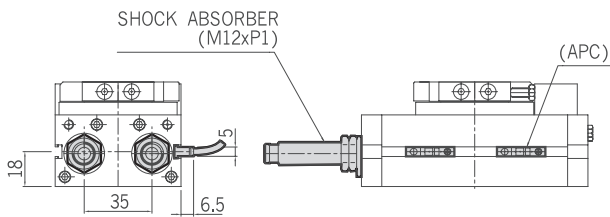


90° Type

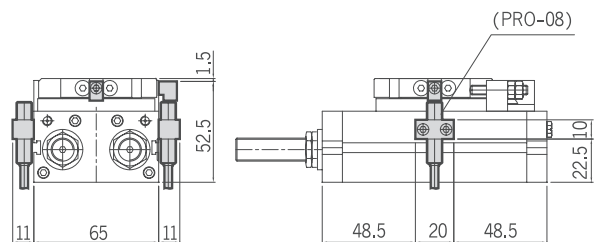


PRC20ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR

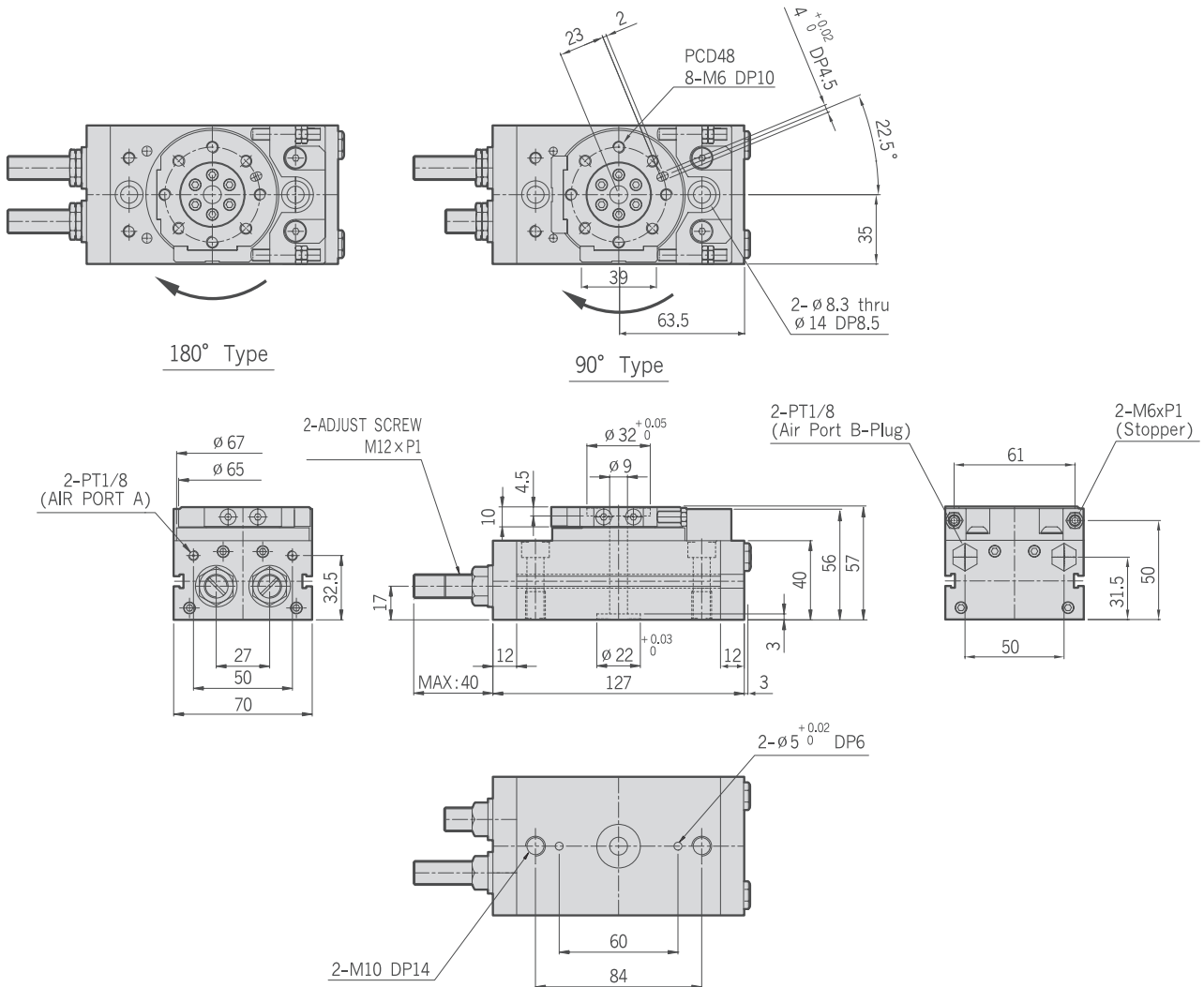


2. PROXIMITY SENSOR



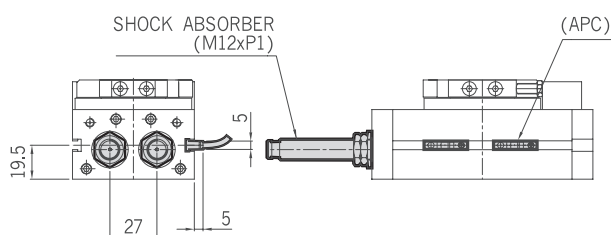
- 16S 20S 22S 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC22ST

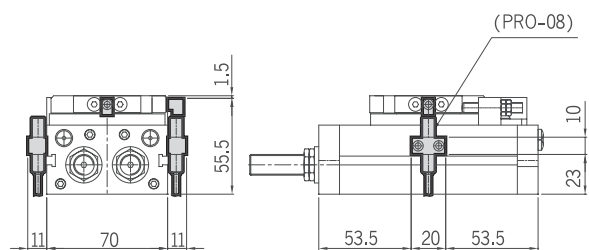


PRC22ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR



2. PROXIMITY SENSOR



ROTARY

PRC

PRC-S

PRC-ST

PRC-SH

PRY-S

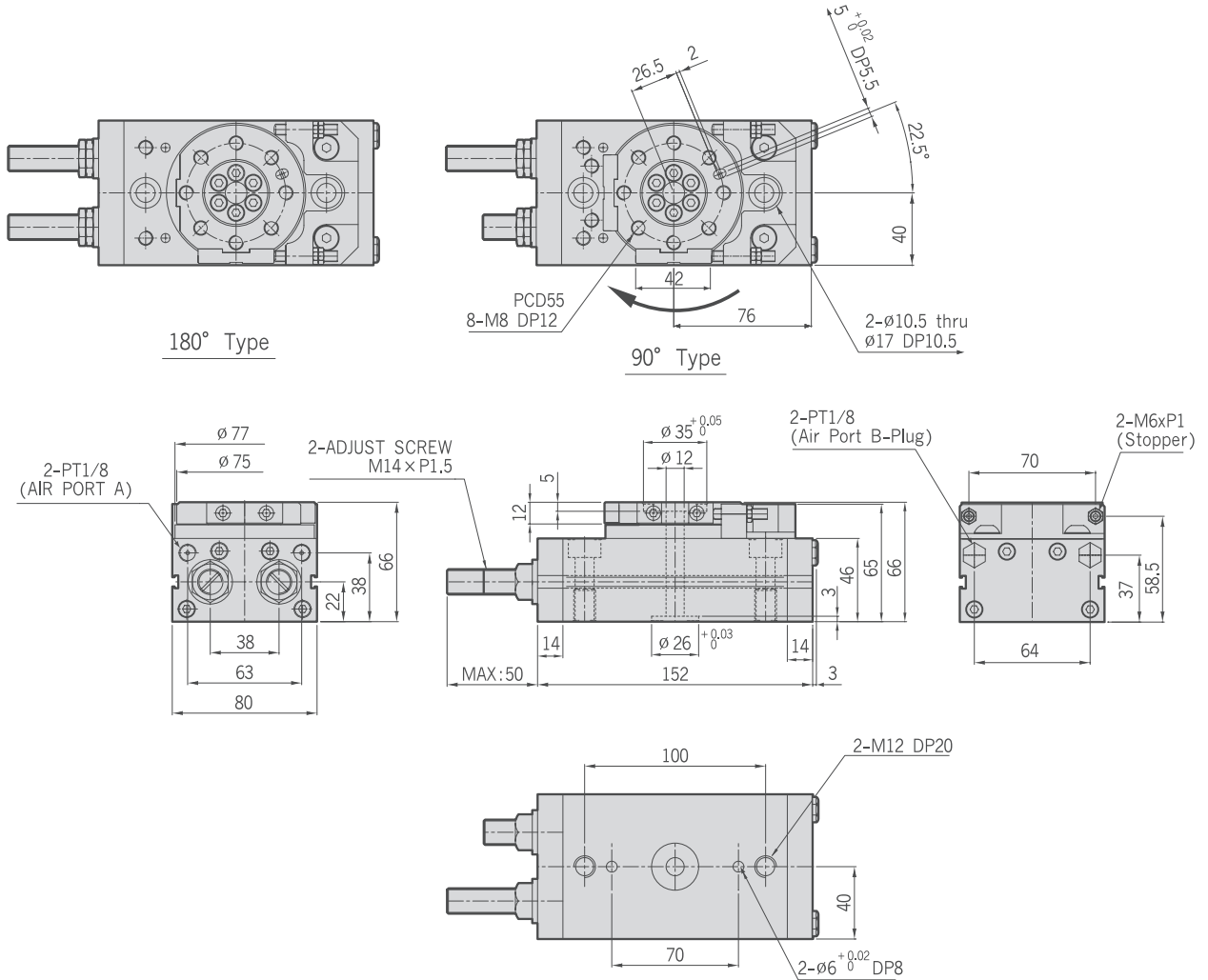
PRC-H

PRD

PRC-ST Series

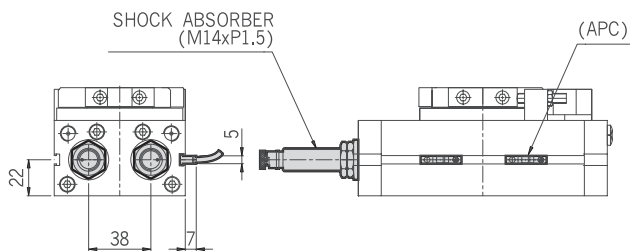
16S 20S 22S 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC25ST

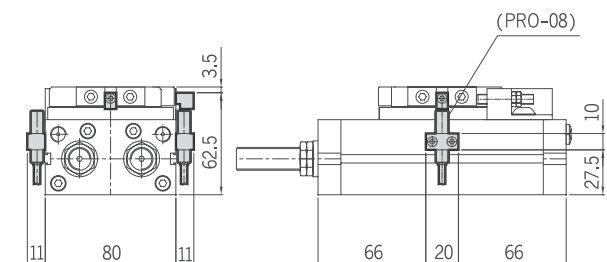


PRC25ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR

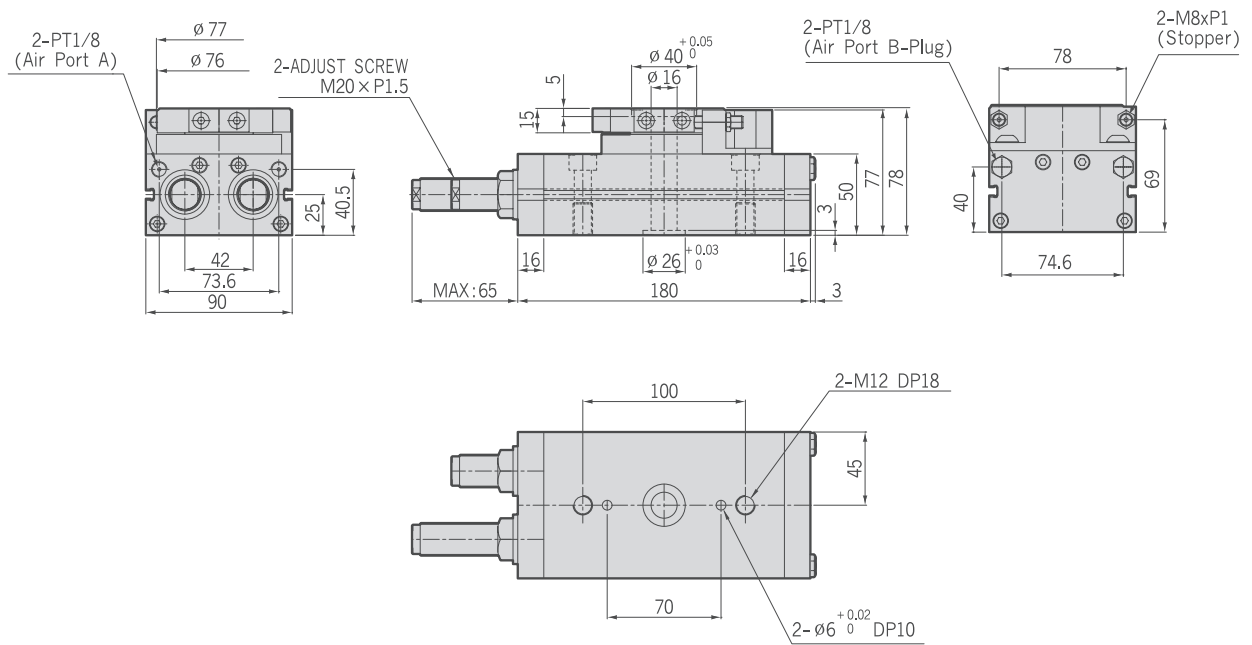
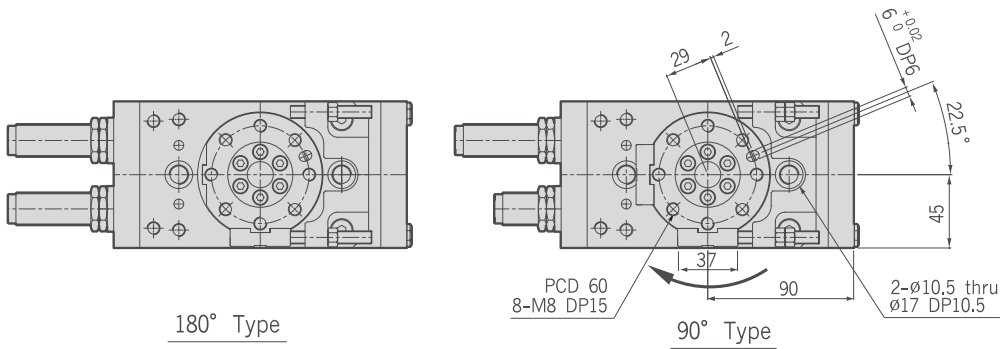


2. PROXIMITY SENSOR



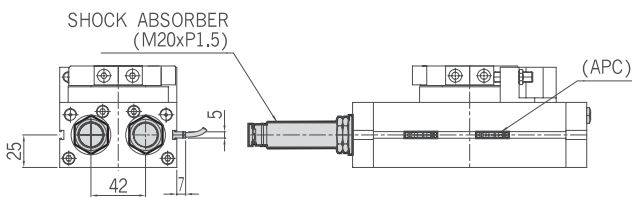
16S	20S	22S	25S	30S	40S	50S	16ST	20ST	22ST	25ST	30ST	40ST	50ST
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PRC30ST

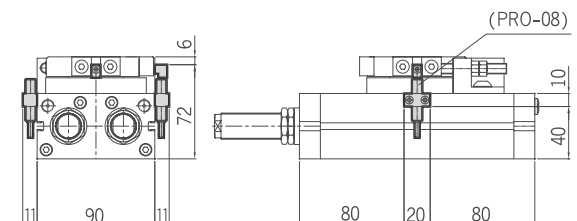


PRC30ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR



2. PROXIMITY SENSOR



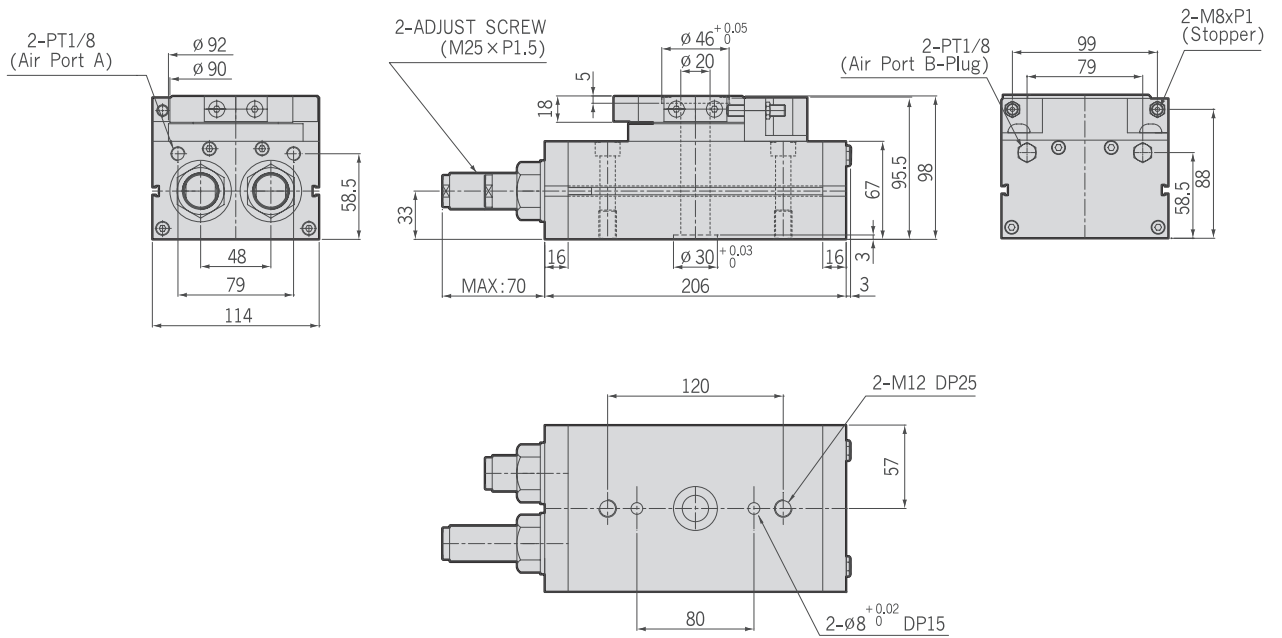
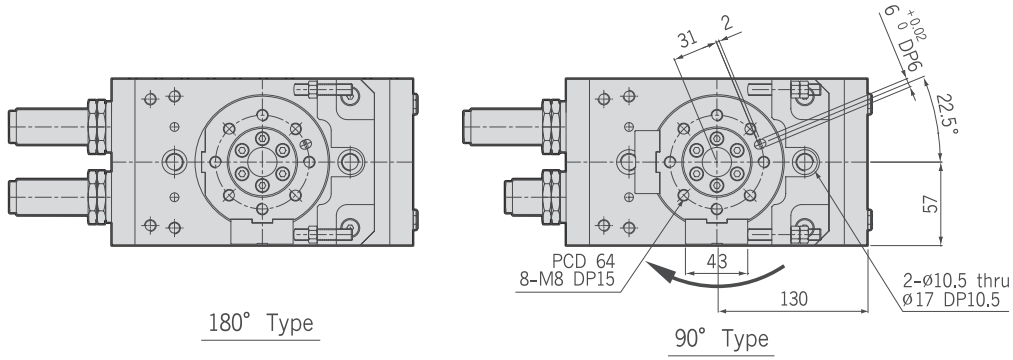
ROTARY

- PRC
- PRC-S
- PRC-ST**
- PRC-SH
- PRY-S
- PRC-H
- PRD

PRC-ST Series

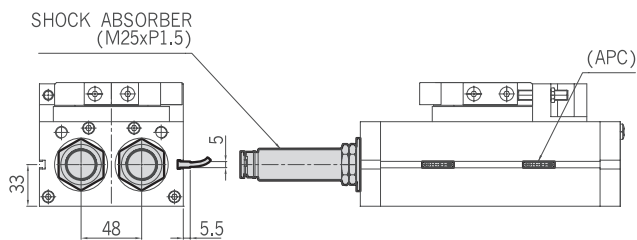
16S 20S 22S 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST **40ST** 50ST

PRC40ST

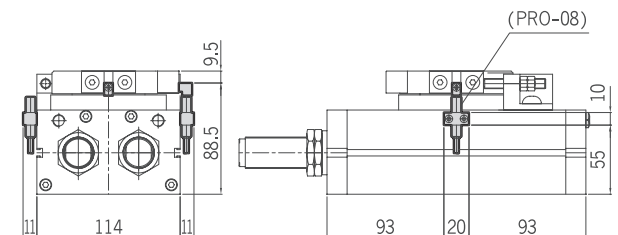


PRC40ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR

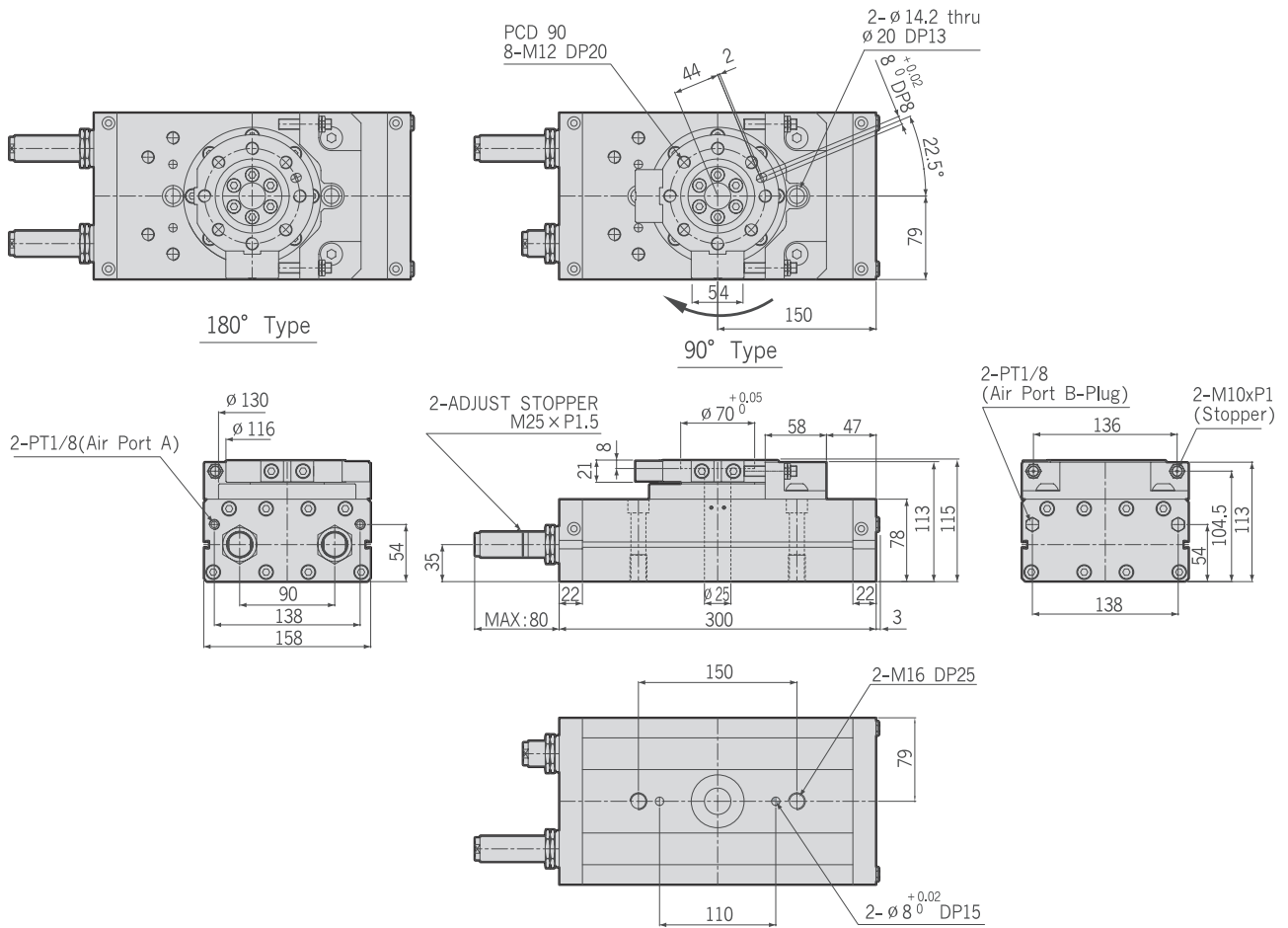


2. PROXIMITY SENSOR



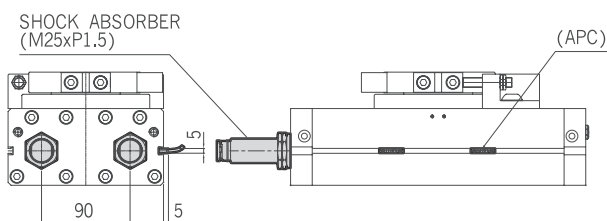
16S 20S 22S 25S 30S 40S 50S 16ST 20ST 22ST 25ST 30ST 40ST 50ST

PRC50ST

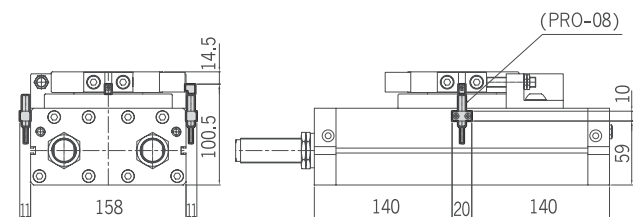


PRC50ST-Auto Switch & Shock Absorber

1. MAGNETIC SENSOR



2. PROXIMITY SENSOR



ROTARY

- PRC
- PRC-S
- PRC-ST
- PRC-SH
- PRY-S
- PRC-H
- PRD