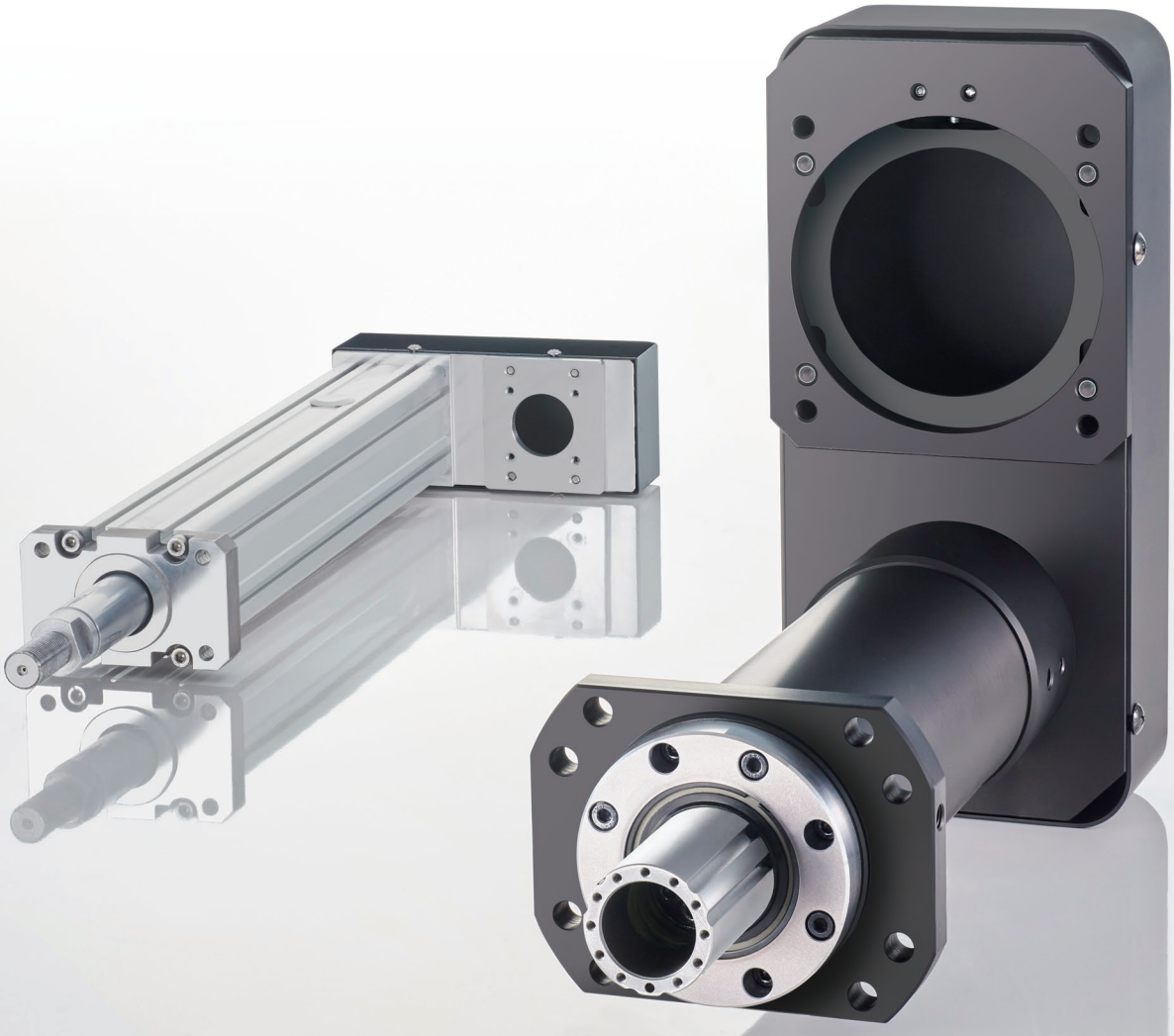
Electric cylinder

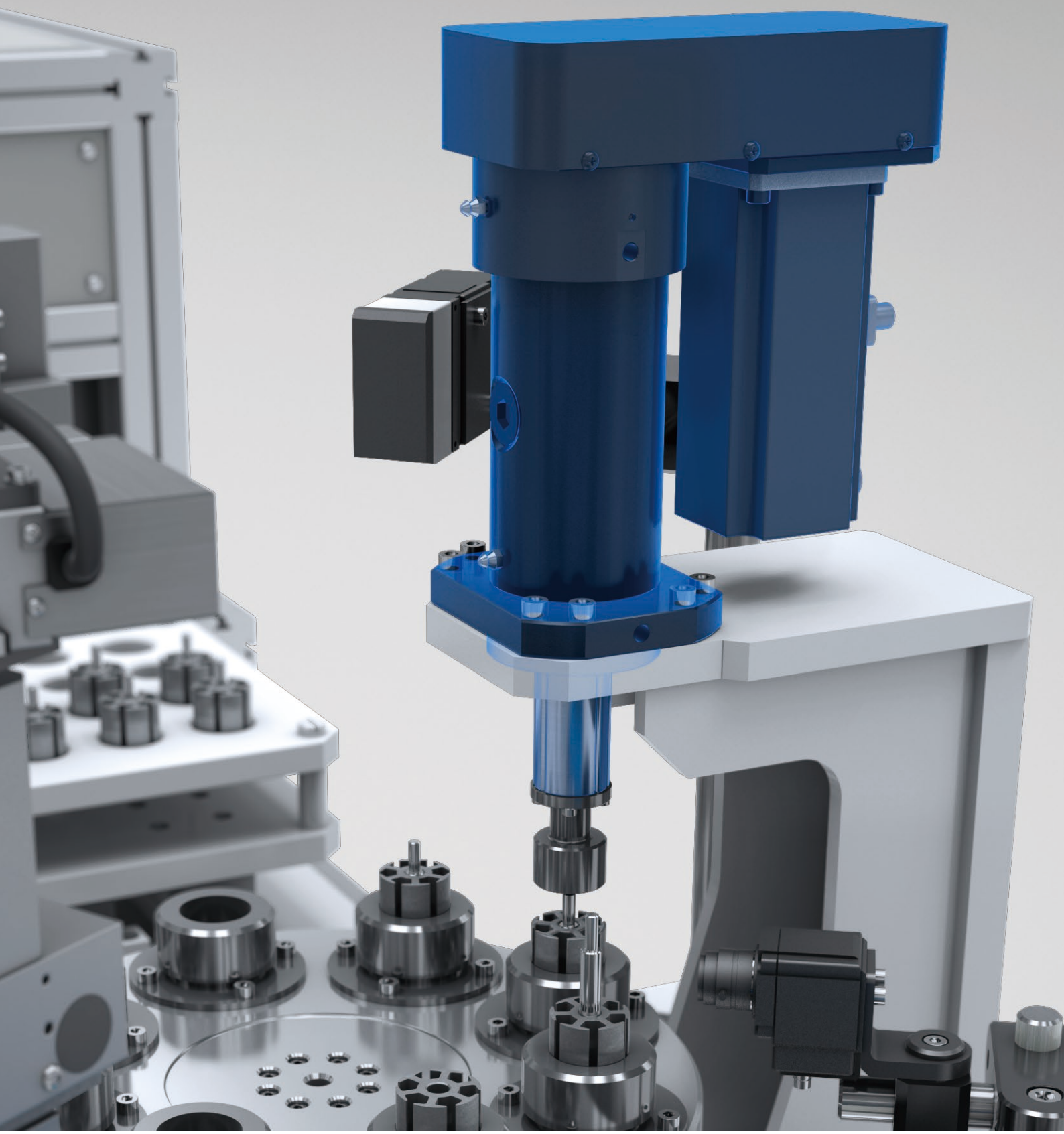
# PC/PCT



250 kN instantaneous maximum thrust
Smooth motion and high-accuracy repeated positioning
Space-saving

# High Efficiency × Low Running Costs

Motorizing various press processes

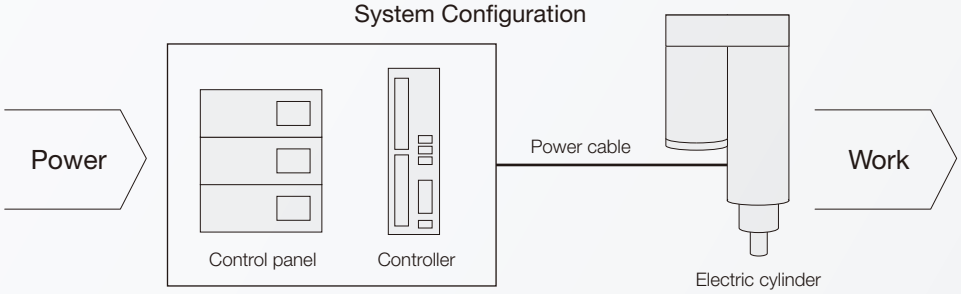


# Electric cylinders

Drive power provided by an electric cylinder offers five advantages.

| Energy savings | Space savings | Stable quality | Reduced defects | Streamlined equipment maintenance |
|---|---|---|---|---|

System Configuration




(Example) Comparison of electric and hydraulic cylinders

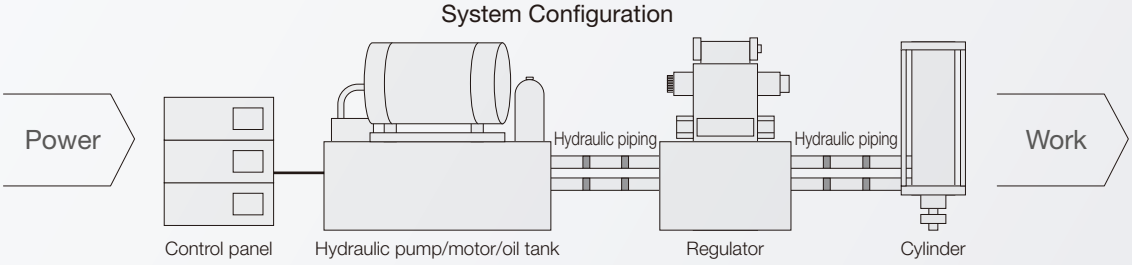
| | Motion control | | | | Machining control | | | Environment | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Electric | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ |
| Comparison Items | Arbitrary speed setting | High-speed operation | Arbitrary thrust setting | Bottom dead center position control when molding | High-accuracy machining | Support for hard-to-machine materials | Reduced load on mold | Reduced equipment footprint | Clean environment | Quiet |
| Hydraulic | ○ | ○ | ○ | – | – | ○ | – | – | – | – |

Note 1) The above represents a general comparison.
Note 2) ◎: Superior, ○: Good, –: Not applicable

# Hydraulic cylinders

| Reduced energy efficiency | Competition for equipment space | Noise and oil leakage | Affected by air temperature | Piping work/ frequent maintenance |
|---|---|---|---|---|

System Configuration



# Electric Cylinders PC/PCT

The use of a ball screw for the driving element enables stable high thrust and high-accuracy repeated positioning.

## PC

High-thrust electric cylinder
with a built-in original mechanism
integrating driving and guiding elements

### Enables press work requiring high thrust with high accuracy, high rigidity, and compactness.

The compact structure, integrating a ball spline shaft and a precision ball screw nut, helps save equipment space. It also offers high thrust (250 kN [1] instantaneous maximum thrust) and high-accuracy repeated positioning. Ideal for applications such as precision pressing, workpiece press-fitting, punching, and deep drawing.

### Smooth motion and high-accuracy repeated positioning
thanks to the ball spline and ball screw

The ball screw shaft diameter and loaded circuit count have been maximized to enable high load capacity.

Instantaneous maximum thrust
**250 kN** [1]
(25 tons)

Rated thrust
**106 kN** [1]
(16 tons)

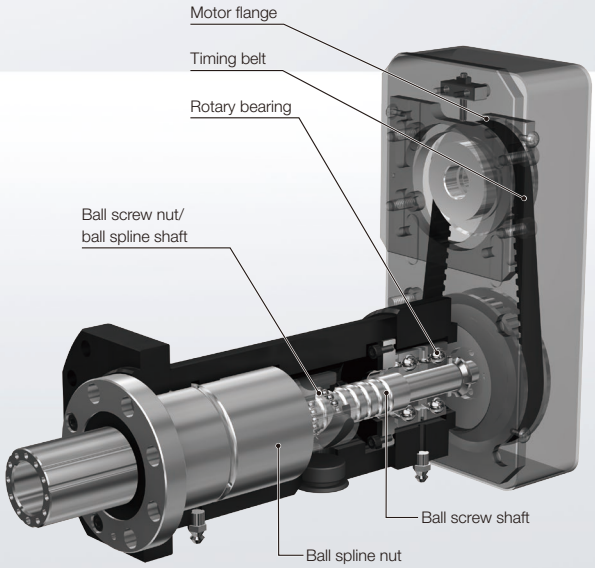
Reduced defects/
stable quality

[1] With PC120 (largest model)

Positioning repeatability > **±0.005 mm**

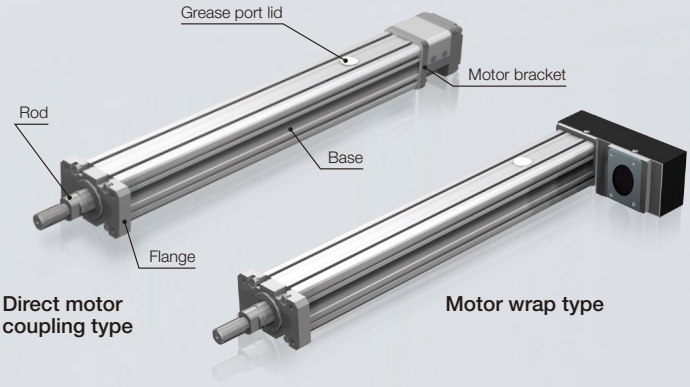
# PCT

Electric cylinder
with integrated ball screw




## Two mounting methods are available to handle various mounting options. Capable of high-accuracy repeated positioning.

The PCT offers superior axial load rigidity and can be used in small-scale press-fitting and caulking machines, etc.

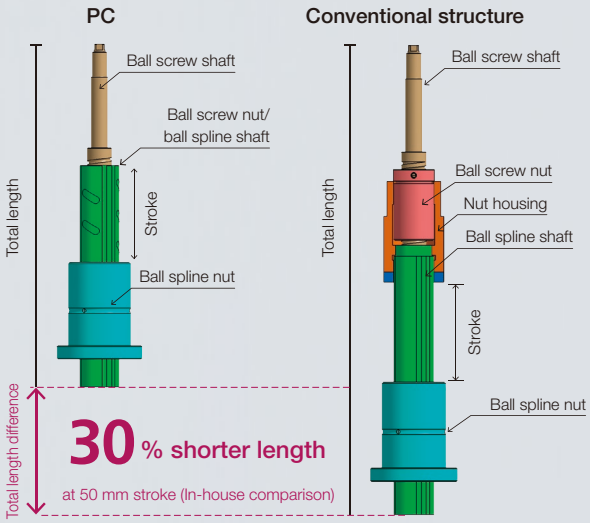



**Direct motor coupling type**

**Motor wrap type**

## More compact than ever
### with an original integrated structure

The integrated ball spline and precision ball screw structure significantly reduces overall length for a compact form with fewer components.




Rated thrust
**800 N max**

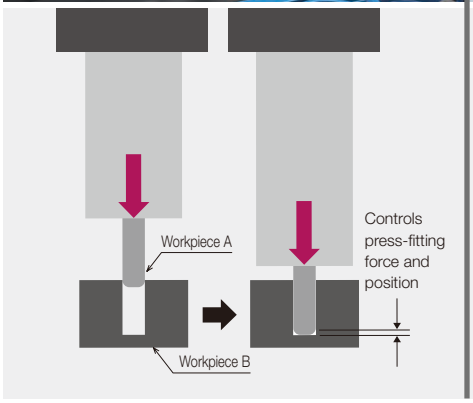
Positioning repeatability
**±0.01 mm**

Mounting options include flange mounting and body T-slot mounting.

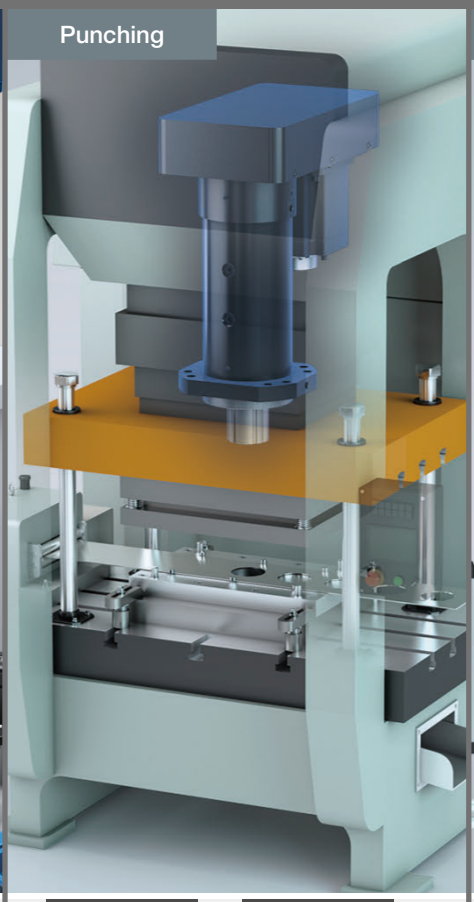
# APPLICATIONS

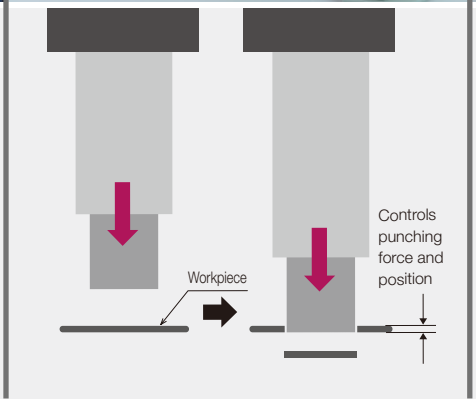
## PC

### Press-fitting

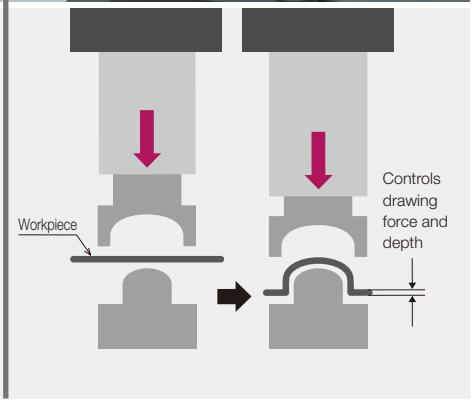



### Punching



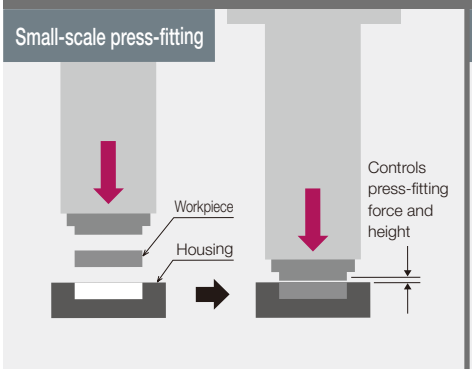



### Deep drawing

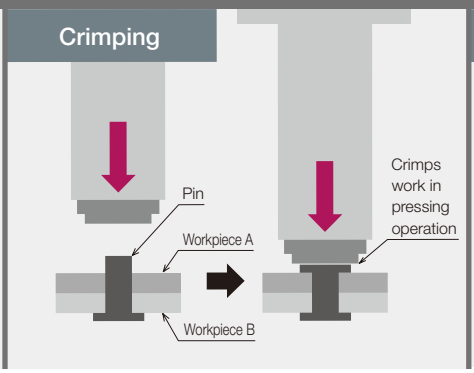



## PCT

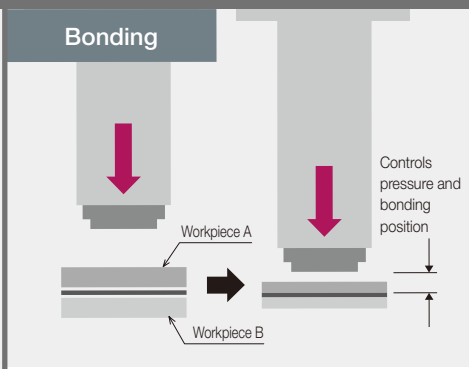
### Small-scale press-fitting



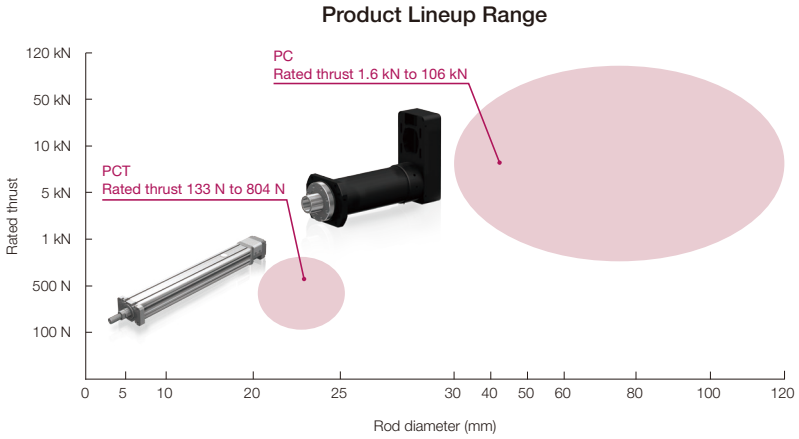

### Crimping




### Bonding



# Product Lineup




# Specifications

## PC

| Model | Servo motor | | Rated thrust (kN) | Instantaneous maximum thrust (kN) | Maximum load capacity (kg) | Maximum speed (mm/s) | Maximum stroke (mm) | Generated thrust[1] (kN) |
|---|---|---|---|---|---|---|---|---|
| | Manufacturer | Rated output (kW) | | | | | | 0 1 2 3 7.5 10 15 20 30 40 50 70 100 120 140 160 180 200 220 240 |
| PC30-06A | Mitsubishi Electric Corporation | 0.4 | 1.6 | 3.3 | 15 | 210 | 250 | 1.6 / 3.3 |
| | Yaskawa Electric Corporation | | | | | | | |
| | Sanyo Denki Co., Ltd. | | | | | | | |
| | OMRON Corporation | | | | | | | |
| PC40-06B | Mitsubishi Electric Corporation | 0.75 | 3.2 | 6.4 | 25 | 200 | | 3.2 / 6.4 |
| | Yaskawa Electric Corporation | | | | | | | |
| | Sanyo Denki Co., Ltd. | | | | | | | |
| | OMRON Corporation | | | | | | | |
| PC40H-08C | Mitsubishi Electric Corporation | 1 | 5.6 | 11.2 | 50 | 151 | | 5.6 / 11.2 |
| | Yaskawa Electric Corporation | 0.85 | 6.3 | | | 113 | | 6.3 / 11.2 |
| | Sanyo Denki Co., Ltd. | 1.2 | 6.7 | | | 151 | | 6.7 / 11.2 |
| | OMRON Corporation | 1 | 5.6 | | | 150 | | 5.6 / 11.2 |
| PC50-06D | Mitsubishi Electric Corporation | 1.5 | 8.4 | 16.8 | 75 | 150 | | 8.4 / 16.8 |
| | Yaskawa Electric Corporation | 1.3 | 9.8 | | | 112 | | 9.8 / 16.8 |
| | Sanyo Denki Co., Ltd. | 1.8 | 10.2 | | | 150 | | 10.2 / 16.8 |
| | OMRON Corporation | 1.5 | 8.4 | | | 150 | | 8.4 / 16.8 |
| PC60-10E | Mitsubishi Electric Corporation | 2 | 10.9 | 21.8 | 100 | 155 | | 10.9 / 21.8 |
| | Yaskawa Electric Corporation | 1.8 | 13.1 | | | 116 | | 13.1 / 21.8 |
| | Sanyo Denki Co., Ltd. | 2 | 10.9 | | | 155 | | 10.9 / 21.8 |
| | OMRON Corporation | 2 | 10.9 | | | 155 | | 10.9 / 21.8 |
| PC60H-10F | Mitsubishi Electric Corporation | 3.5 | 17.8 | 35.6 | 150 | 166 | | 17.8 / 35.6 |
| | Yaskawa Electric Corporation | 2.9 | 19.8 | | | 125 | | 19.8 / 35.6 |
| | Sanyo Denki Co., Ltd. | 3.5 | 18.1 | | | 166 | | 18.1 / 35.6 |
| | OMRON Corporation | 4 | 20.4 | | | 166 | | 20.4 / 35.6 |
| PC80L-12G | Mitsubishi Electric Corporation | 5 | 24 | 71 | 200 | 177 | | 24 / 71 |
| | Yaskawa Electric Corporation | 4.4 | 28 | 71 | | 133 | | 28 / 71 |
| | Sanyo Denki Co., Ltd. | 4.5 | 21 | 75 | | 177 | | 21 / 75 |
| | OMRON Corporation | 5 | 23.9 | 71.7 | | 177 | | 24 / 71 |
| PC80-12G | Mitsubishi Electric Corporation | 7 | 33 | 100 | 200 | 177 | | 33 / 100 |
| | Yaskawa Electric Corporation | 5.5 | 35 | 102 | | 133 | | 35 / 102 |
| | Sanyo Denki Co., Ltd. | 5.5 | 35 | 107 | | 133 | | 35 / 107 |
| | OMRON Corporation | 4.5 | 43 | 107 | | 88 | | 43 / 107 |
| PC80H-12G | Mitsubishi Electric Corporation | 4.2 | 40 | 120 | 200 | 88 | | 40 / 120 |
| | Yaskawa Electric Corporation | 7.5 | 48 | | | 133 | | 48 / 120 |
| | Sanyo Denki Co., Ltd. | 7.5 | 48 | | | 133 | | 48 / 120 |
| | OMRON Corporation | 7.5 | 47.8 | | | 133 | | 47.8 / 120 |
| PC100-20H | Mitsubishi Electric Corporation | 11 | 70 | 175 | 200 | 125 | 400 | 70 / 175 |
| | Yaskawa Electric Corporation | 11 | 70 | 175 | | 125 | | 70 / 175 |
| | Sanyo Denki Co., Ltd. | 11 | 70 | 175 | | 125 | | 70 / 175 |
| PC120-20J | Mitsubishi Electric Corporation | 15 | 106 | 250 | 200 | 112 | | 106 / 250 |
| | Yaskawa Electric Corporation | 15 | 106 | 250 | | 112 | | 106 / 250 |
| | Sanyo Denki Co., Ltd. | 15 | 106 | 240 | | 112 | | 106 / 240 |

Rated thrust / Instantaneous maximum thrust

[1] Contact THK if performing a pressing operation above the rated thrust and below the instantaneous maximum thrust.

## PCT

| Model | Motor rated output (W) | Rated thrust (N) | Maximum load capacity (kg) | | Maximum speed (mm/s) | Maximum stroke (mm) | Generated thrust[2] (N) |
|---|---|---|---|---|---|---|---|
| | | | Horizontal | Vertical | | | 0 100 250 500 1000 1500 2500 5000 |
| PCT20-06N | 50 | 133 | 20 | 5 | 300 | 200 | 130 / 402 |
| PCT20R-06N | | | | | | | |
| PCT25-06N | 100 | 266 | 35 | 10 | | 300 | 260 / 796 |
| PCT25R-06N | | | | | | | |
| PCT25-04N | | 400 | 40 | | 200 | | 400 / 1194 |
| PCT25R-04N | | | | | | | |
| PCT25-06N | 200 | 536 | 50 | 20 | 300 | | 500 / 1600 |
| PCT25R-06N | | | | | | | |
| PCT25-04N | | 804 | 55 | | 200 | | 800 / 2400 |
| PCT25R-04N | | | | | | | |

Rated thrust / Instantaneous maximum thrust

[2] Contact THK if performing a pressing operation above the rated thrust and below the instantaneous maximum thrust.

## PC Model Configuration

| Model | Lead, reduction ratio | Stroke | Design symbol | Option (Greasing position) | Applicable motor bracket |
|---|---|---|---|---|---|
| PC30 | 06A | 0200 | A | R | 0M |
| (1) | (2) | (3) | (4) | (5) | (6) |
| PC30 | 06A | 0050: 50 mm | A | D: Down | 0M |
| PC40 | 06B | 0100: 100 mm | | L: Left | 0Y |
| PC40H | 06D | 0150: 150 mm | | R: Right | 0S |
| PC50 | 08C | 0200: 200 mm | | | 0R |
| PC60 | 10E | 0250: 250 mm | | | |
| PC60H | 10F | 0400: 400 mm | | | |
| PC80L | 12G | | | | |
| PC80 | 20H | | | | |
| PC80H | 20J | | | | |
| PC100 | | | | | |
| PC120 | | | | | |

Select from Combinations below.

Maximum stroke differs depending on the model.
PC40H to PC80H: 250 mm
PC100, PC120: 400 mm

This symbol represents applicable motors. “M,” “Y,” “S,” or “R,” at the end of the symbol represents the motor manufacturer.
M: Mitsubishi Electric Corporation, Y: Yaskawa Electric Corporation, S: Sanyo Denki Co., Ltd., R: OMRON Corporation

Parts for mounting each applicable motor model number (motor mounting plate, mechanical lock, timing pulley, timing belt) are included.

When selecting PC100 or PC120, a reduction gear is mounted before shipping.
→ p.31, p.33

## Combinations

| Model (1) | Lead, reduction ratio (2) | Stroke (3) |
|---|---|---|
| PC30 | 06A | 0050 to 0250 |
| PC40 | 06B | |
| PC40H | 08C | |
| PC50 | 06D | |
| PC60 | 10E | |
| PC60H | 10F | |
| PC80L | 12G | |
| PC80 | | |
| PC80H | | |
| PC100 | 20H | 0200, 0400 |
| PC120 | 20J | |

## PCT Model Configuration

| Model | Lead, reduction ratio | Stroke | Options | With/without motor | Motor bracket | Motor shaft fixing method |
|---|---|---|---|---|---|---|
| PCT20R | 06N | 0200 | R | 0 | A1 | D |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| PCT20<br>PCT20R<br>PCT25<br>PCT25R | 04N<br>06N | 0050: 50 mm<br>to<br>0300: 300 mm | For direct coupling<br>N: Direct coupling<br>For wrap<br>D: Down<br>L: Left<br>R: Right | 0: Without motor | A1<br>A2<br>K1<br>K2<br>B1<br>B2 | For direct coupling<br>No symbol<br>For wrap<br>D: D-cut<br>K: Key<br>S: Clamp |

"R" represents motor wrap.

Symbols that can be selected differ depending on the model. Select from Combinations below.

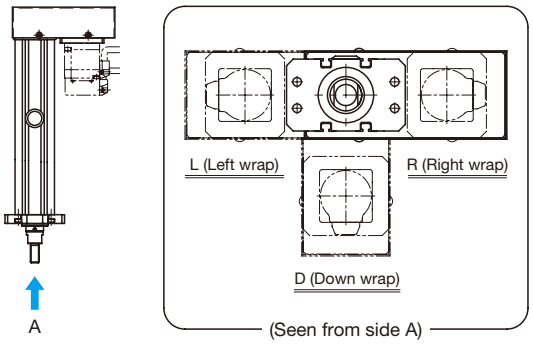
Specify "N" for direct motor coupling, and select the wrap direction from the figure below for motor wrap.

Direct coupled specification: A coupling is not provided. Indicate when placing an order if a coupling is required.
Motor wrap specification: Timing pulleys and timing belt are included.
Selection of (6) Motor bracket and (7) Motor fixing method is required.

## Combinations

| Model (1) | Lead, reduction ratio (2) | Stroke (3) |
|---|---|---|
| PCT20<br>PCT20R | 06 N | 0050 to 0200 |
| PCT25<br>PCT25R | 06N, 04N | 0050 to 0300 |

### (4) Option (Motor wrap)



# Applicable Motor (Control Device) List by Model

| Model | Manufacturer | | Motor model | Motor rated output (kW) | Applicable motor bracket |
|---|---|---|---|---|---|
| PC30-06A | Mitsubishi Electric Corporation | Without brake | HG-KR43 | 0.4 | 0M |
| | | With brake | HG-KR43B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7J-04AFA21 | 0.4 | 0Y |
| | | With brake | SGM7J-04AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA06040FXHC0 | 0.4 | 0S |
| | | With brake | R2AA06040FCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K40030T | 0.4 | 0R |
| | | With brake | R88M-K40030T-B | | |
| PC40-06B | Mitsubishi Electric Corporation | Without brake | HG-KR73 | 0.75 | 0M |
| | | With brake | HG-KR73B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7J-08AFA21 | 0.75 | 0Y |
| | | With brake | SGM7J-08AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA08075FXHC0 | 0.75 | 0S |
| | | With brake | R2AA08075FCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K75030T | 0.75 | 0R |
| | | With brake | R88M-K75030T-B | | |
| PC40H-08C | Mitsubishi Electric Corporation | Without brake | HG-SR102 | 1 | 0M |
| | | With brake | HG-SR102B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-09AFA21 | 0.85 | 0Y |
| | | With brake | SGM7G-09AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA13120BXHC0 | 1.2 | 0S |
| | | With brake | R2AA13120BCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K1K020T | 1 | 0R |
| | | With brake | R88M-K1K020T-B | | |
| PC50-06D | Mitsubishi Electric Corporation | Without brake | HG-SR152 | 1.5 | 0M |
| | | With brake | HG-SR152B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-13AFA21 | 1.3 | 0Y |
| | | With brake | SGM7G-13AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA13180HXHC0 | 1.8 | 0S |
| | | With brake | R2AA13180HCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K1K520T | 1.5 | 0R |
| | | With brake | R88M-K1K520T-B | | |
| PC60-10E | Mitsubishi Electric Corporation | Without brake | HG-SR202 | 2 | 0M |
| | | With brake | HG-SR202B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-20AFA21 | 1.8 | 0Y |
| | | With brake | SGM7G-20AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA13200LXHC0 | 2 | 0S |
| | | With brake | R2AA13200LCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K2K020T | 2 | 0R |
| | | With brake | R88M-K2K020T-B | | |
| PC60H-10F | Mitsubishi Electric Corporation | Without brake | HG-SR352 | 3.5 | 0M |
| | | With brake | HG-SR352B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-30AFA21 | 2.9 | 0Y |
| | | With brake | SGM7G-30AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA18350LXHC0 [1] | 3.5 | 0S |
| | | With brake | R2AA18350LCHC0 [1] | | |
| | OMRON Corporation | Without brake | R88M-K4K020T | 4 | 0R |
| | | With brake | R88M-K4K020T-B | | |
| PC80L-12G | Mitsubishi Electric Corporation | Without brake | HG-SR502 | 5 | 0M |
| | | With brake | HG-SR502B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-44AFA21 | 4.4 | 0Y |
| | | With brake | SGM7G-44AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA18450HXHC0 | 4.5 | 0S |
| | | With brake | R2AA18450HCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K5K020T | 5 | 0R |
| | | With brake | R88M-K5K020T-B | | |
| PC80-12G | Mitsubishi Electric Corporation | Without brake | HG-SR702 | 7 | 0M |
| | | With brake | HG-SR702B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-55AFA21 | 5.5 | 0Y |
| | | With brake | SGM7G-55AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA18550HXHC0 | 5.5 | 0S |
| | | With brake | R2AA18550HCHC0 | | |
| | OMRON Corporation | Without brake | R88M-K4K510T | 4.5 | 0R |
| | | With brake | R88M-K4K510T-B | | |
| PC80H-12G | Mitsubishi Electric Corporation | Without brake | HG-SR421 | 4.2 | 0M |
| | | With brake | HG-SR421B | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-75AFA21 | 7.5 | 0Y |
| | | With brake | SGM7G-75AFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA18750HXHC0 | 7.5 | 0S |
| | | With brake | R2AA18750HCHC0 | | |
| | OMRON Corporation | Without brake | R88-K7K515T | 7.5 | 0R |
| | | With brake | R88-K7K515T-B | | |
| PC100-20H | Mitsubishi Electric Corporation | Without brake | HG-JR11K1M | 11 | 0M |
| | | With brake | HG-JR11K1MB | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-1AAFA21 | 11 | 0Y |
| | | With brake | SGM7G-1AAFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA2211KBXHC0 | 11 | 0S |
| | | With brake | R2AA2211KBCHC0 | | |
| PC120-20J | Mitsubishi Electric Corporation | Without brake | HG-JR15K1M | 15 | 0M |
| | | With brake | HG-JR15K1MB | | |
| | Yaskawa Electric Corporation | Without brake | SGM7G-1EAFA21 | 15 | 0Y |
| | | With brake | SGM7G-1EAFA2C | | |
| | Sanyo Denki Co., Ltd. | Without brake | R2AA2215KBXHC0 | 15 | 0S |
| | | With brake | R2AA2215KBCHC0 | | |

[1] PC specification special product (Output shaft length differs from the manufacturer's catalog.)
Note) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

MEMO

# PC30-06A

## Model Configuration

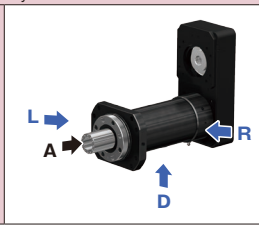
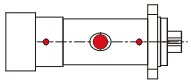
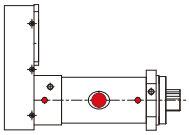
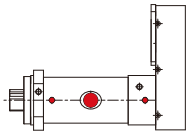
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC30 | - | 06A | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC30 | | 06A | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

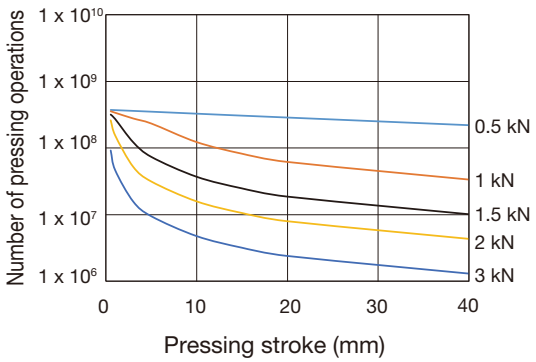


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 6 |
| Permissible axial load [1] (kN) | Pressing direction | 3.3 |
| | Tensile direction | 1.6 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 2.6 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

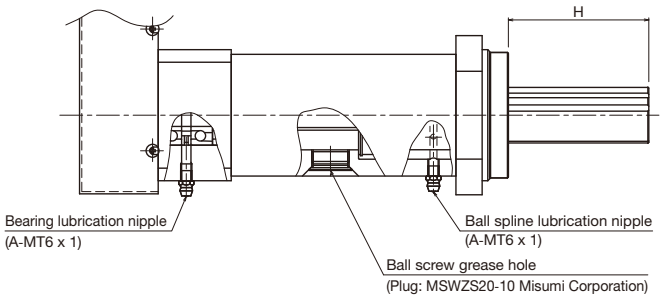



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
- Mounting orientation: Vertical (rod reaching lower end)
- Pressing direction: Compression direction
- Payload: At maximum load capacity (15 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.

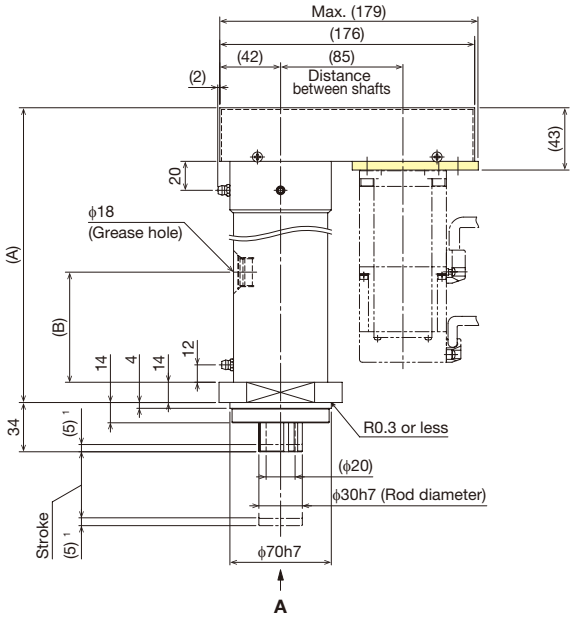


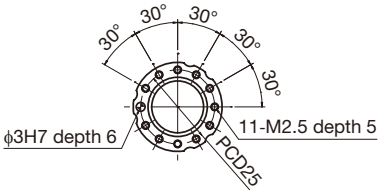

Unit: mm

| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 65 | 102 | 102 | 102 | 103 |

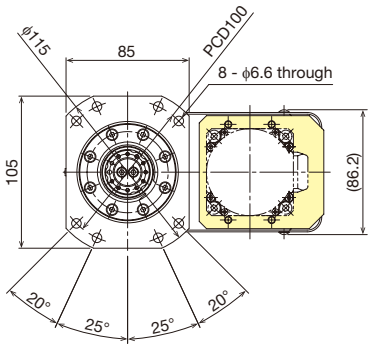
## Dimensions

This diagram shows greasing position: D (down)

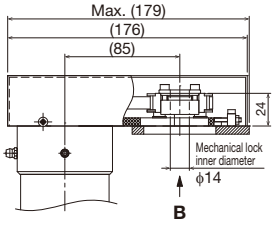


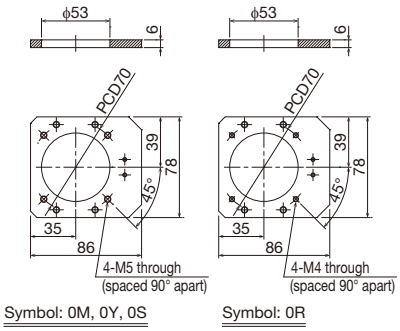




Ball spline shaft end details (arrow view A)




Details of motor mounting part




Symbol: 0M, 0Y, 0S

Symbol: 0R

Arrow view B

[1] Stroke up to mechanical stopper.

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 203.5 | 253.5 | 303.5 | 353.5 | 403.5 |
| | B | 67 | 80 | 130 | 180 | 230 |
| Weight (kg) | | 6.8 | 7.9 | 9 | 10.1 | 11.3 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC40-06B

## Model Configuration

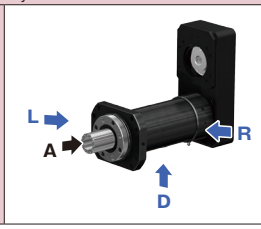
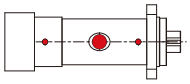
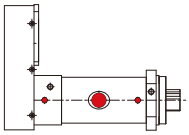
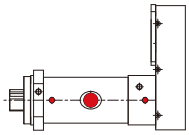
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC40 | - | 06B | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC40 | | 06B | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

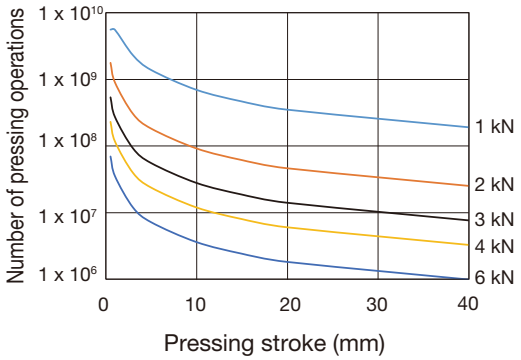


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 6 |
| Permissible axial load [1] (kN) | Pressing direction | 6.4 |
| | Tensile direction | 3.2 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 4.8 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

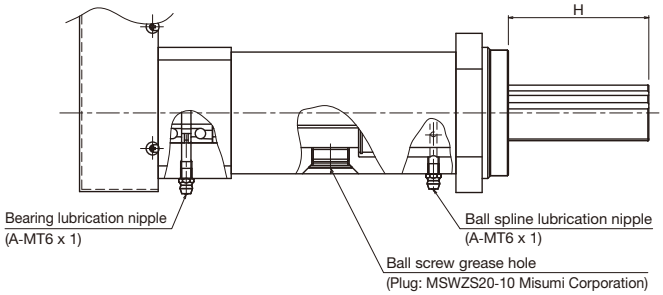



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
- Mounting orientation: Vertical (rod reaching lower end)
- Pressing direction: Compression direction
- Payload: At maximum load capacity (25 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.



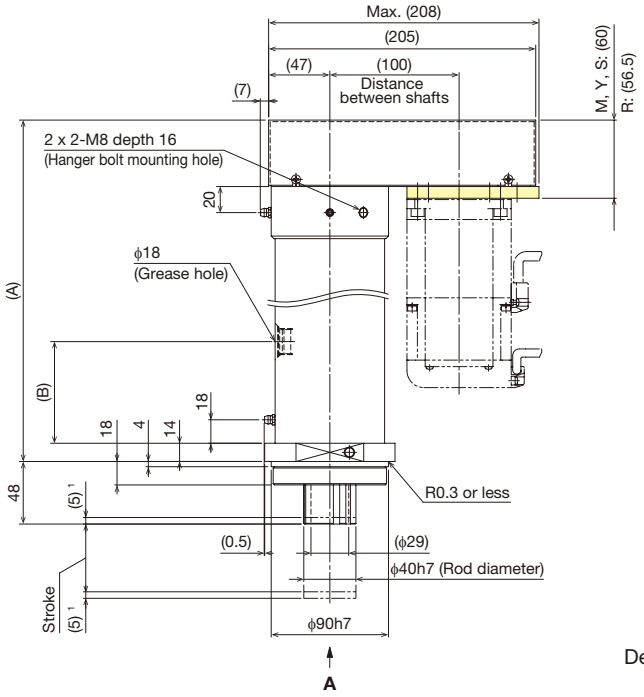

Unit: mm

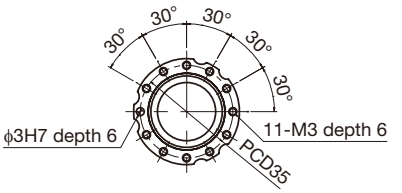
| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 75 | 115 | 115 | 115 | 115 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

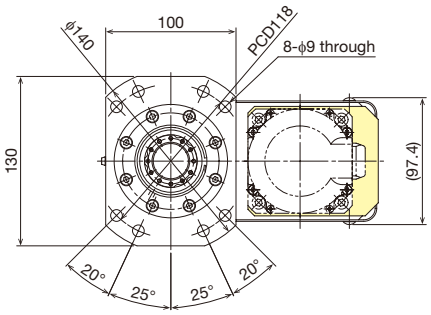
## Dimensions

This diagram shows greasing position: D (down)

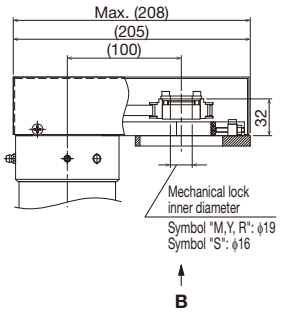


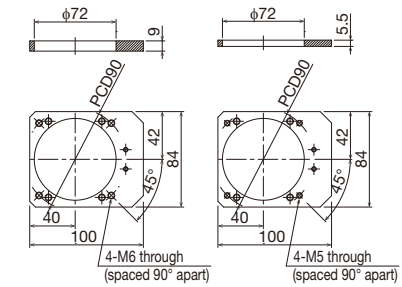




Ball spline shaft end details (arrow view A)




Details of motor mounting part




Symbol: 0M, 0Y, 0S

Symbol: 0R

Arrow view B

[1] Stroke up to mechanical stopper.

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 237 | 287 | 337 | 387 | 437 |
| | B | 83 | 93 | 143 | 193 | 243 |
| Weight (kg) | | 11 | 12.6 | 14.1 | 15.6 | 17.1 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC40H-08C

## Model Configuration

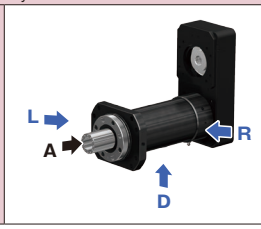
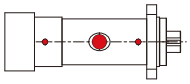
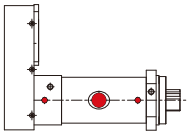
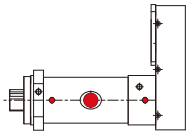
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC40H | - | 08C | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC40H | | 08C | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | Symbol | Down | Left | Right |
|---|---|---|---|---|
| | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

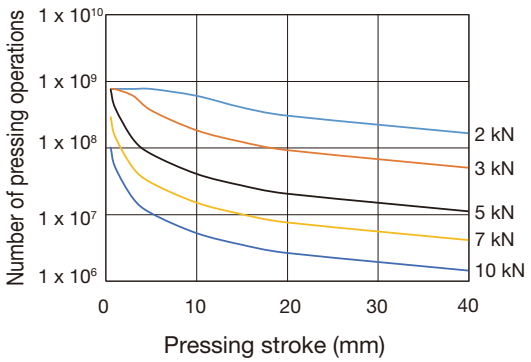


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 8 |
| Permissible axial load [1] (kN) | Pressing direction | 11.2 |
| | Tensile direction | 5.6 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 9.5 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

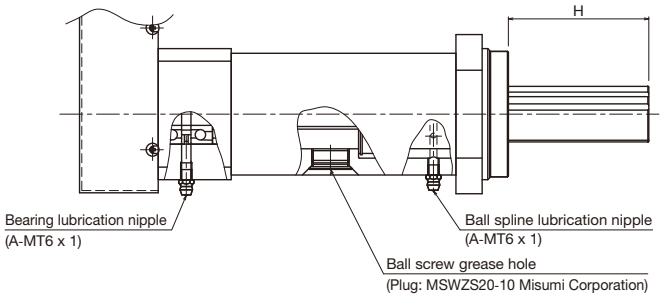



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
- Mounting orientation: Vertical (rod reaching lower end)
- Pressing direction: Compression direction
- Payload: At maximum load capacity (50 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.



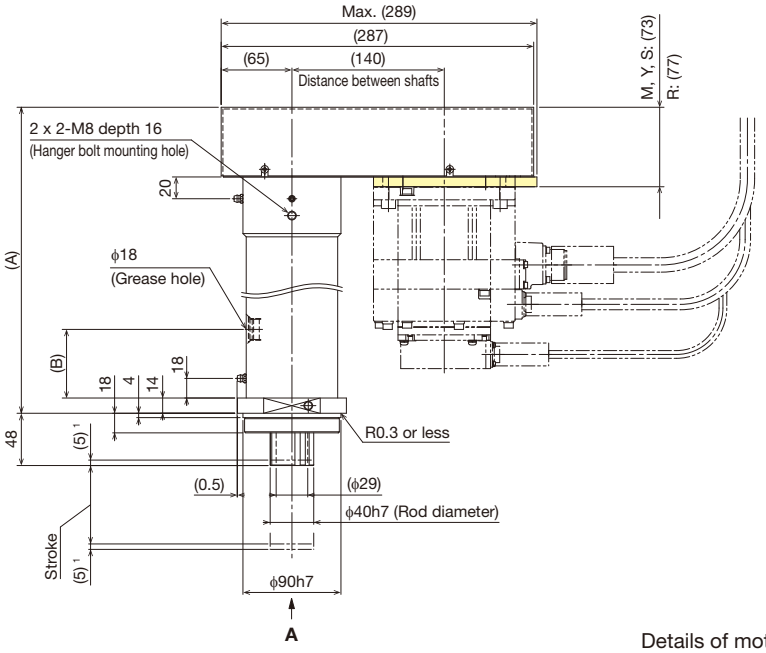

Unit: mm

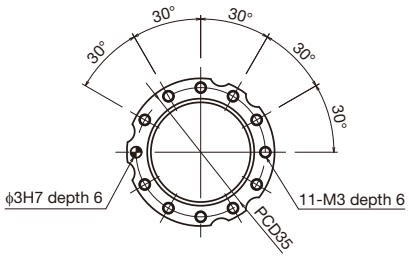
| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 78 | 118 | 148 | 148 | 148 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

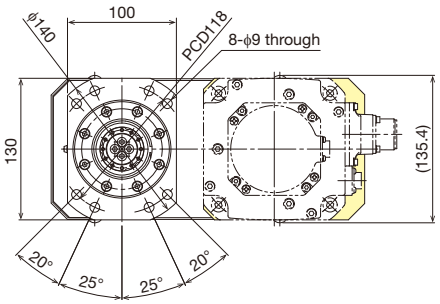
## Dimensions

This diagram shows greasing position: D (down)

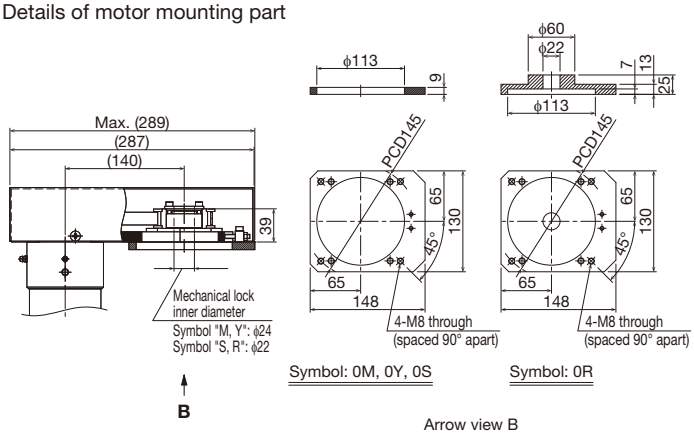



Ball spline shaft end details (arrow view A)




Details of motor mounting part




Arrow view B

[1] Stroke up to mechanical stopper.

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 271 | 321 | 371 | 421 | 471 |
| | B | 83 | 93 | 113 | 163 | 213 |
| Weight (kg) | | 15.6 | 17.2 | 18.8 | 20.4 | 22 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC50-06D

## Model Configuration

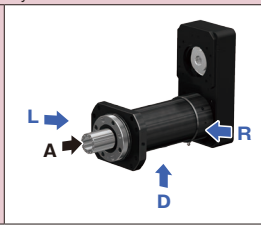
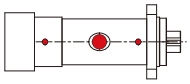
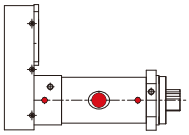
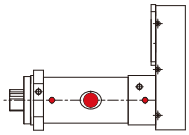
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC50 | - | 06D | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC50 | | 06D | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | Symbol | Down | Left | Right |
|---|---|---|---|---|
| | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

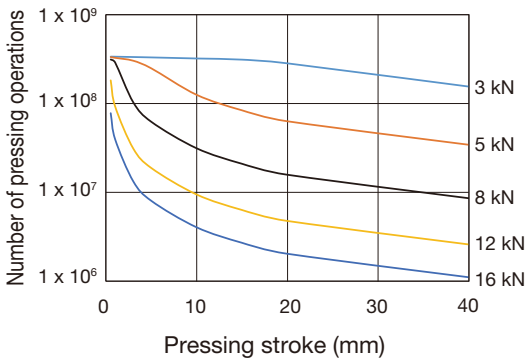


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 6 |
| Permissible axial load [1] (kN) | Pressing direction | 16.8 |
| | Tensile direction | 8.4 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 14.3 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

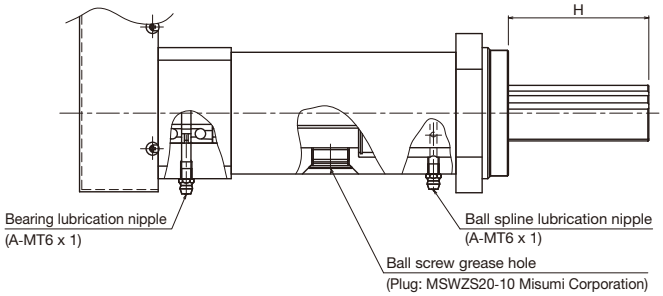



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
- Mounting orientation: Vertical (rod reaching lower end)
- Pressing direction: Compression direction
- Payload: At maximum load capacity (75 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.



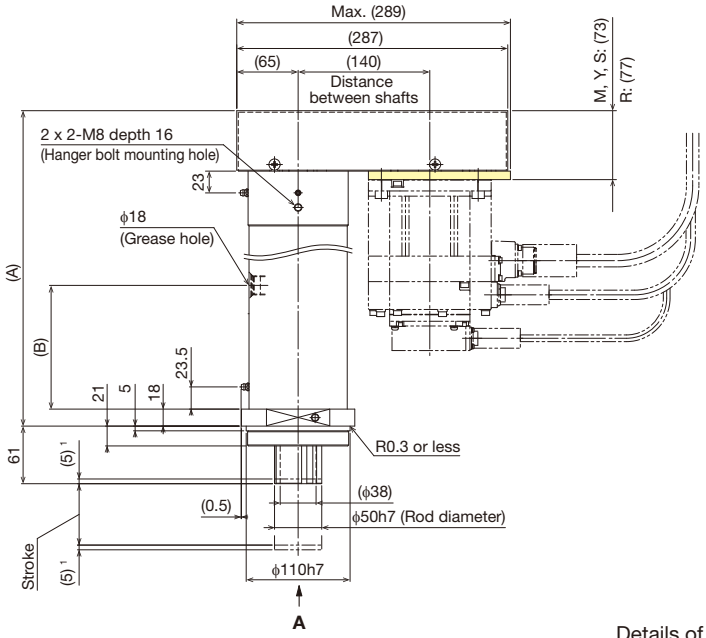

Unit: mm

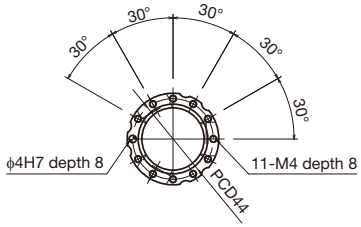
| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 83 | 133 | 173 | 173 | 173 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

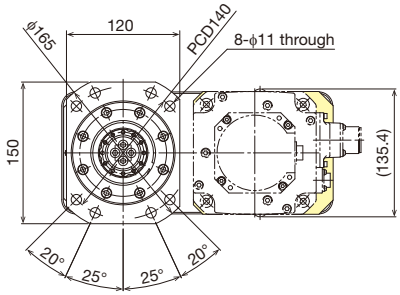
## Dimensions

This diagram shows greasing position: D (down)



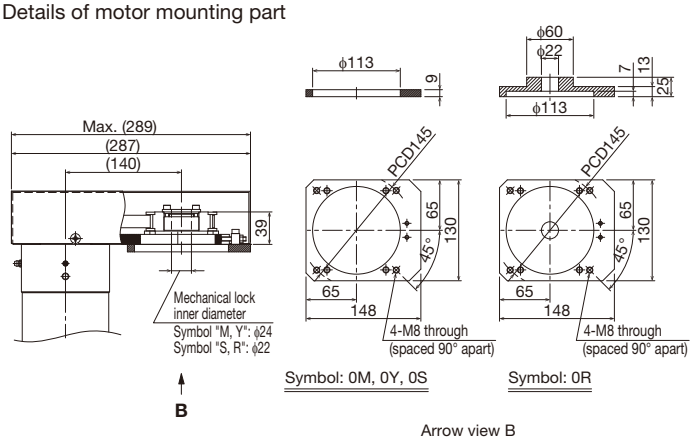




Ball spline shaft end details (arrow view A)




[1] Stroke up to mechanical stopper.

Details of motor mounting part




Arrow view B

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 294 | 344 | 394 | 444 | 494 |
| | B | 101 | | 111 | 161 | 211 |
| Weight (kg) | | 21.8 | 24.3 | 26.7 | 29.2 | 31.7 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC60-10E

## Model Configuration

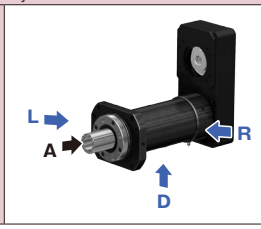
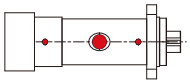
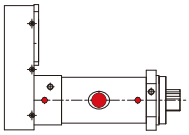
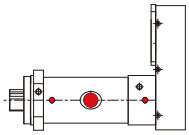
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC60 | - | 10E | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC60 | | 10E | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

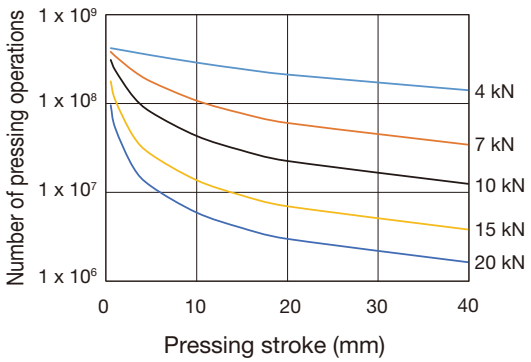


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 10 |
| Permissible axial load [1] (kN) | Pressing direction | 21.8 |
| | Tensile direction | 10.9 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 19.1 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

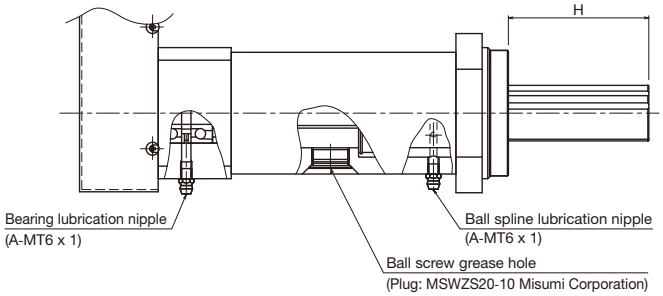



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (100 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.



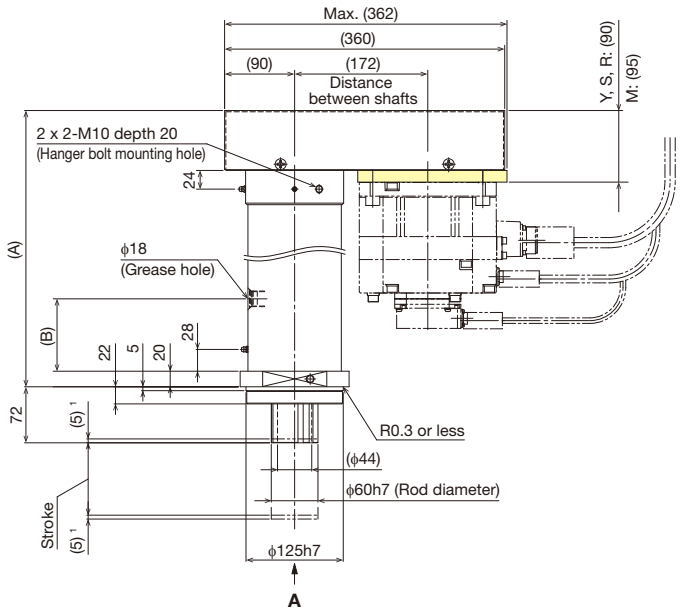

Unit: mm

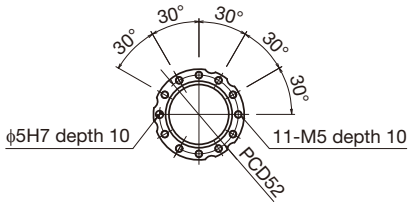
| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 91 | 141 | 191 | 191 | 191 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

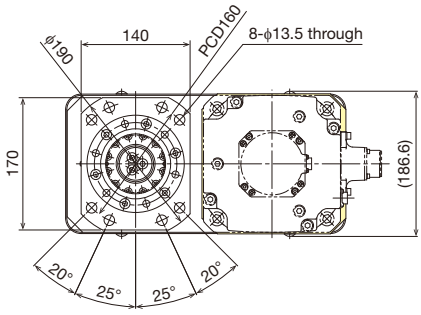
## Dimensions

This diagram shows greasing position: D (down)



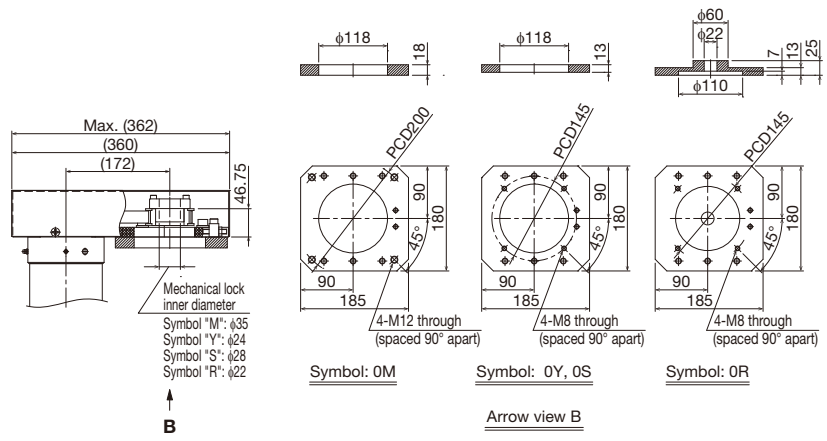




Ball spline shaft end details (arrow view A)




[1] Stroke up to mechanical stopper.

Details of motor mounting part




## Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 305 | 355 | 405 | 455 | 505 |
| | B | 113 | | | 163 | 213 |
| Weight (kg) | | 36.4 | 29.9 | 43.4 | 47 | 50.5 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC60H-10F

## Model Configuration

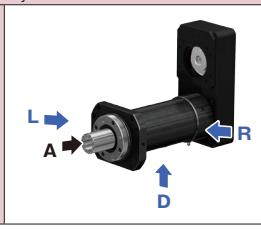
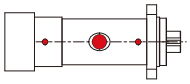
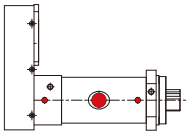
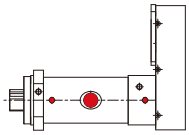
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC60H | - | 10F | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC60H | | 10F | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | Symbol | Down | Left | Right |
|---|---|---|---|---|
| | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

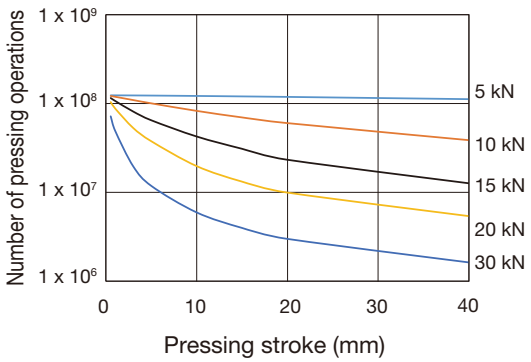


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 10 |
| Permissible axial load [1] (kN) | Pressing direction | 35.6 |
| | Tensile direction | 17.8 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 33.4 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

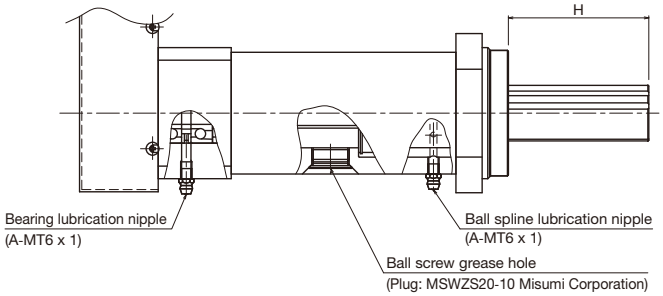



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (150 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft. Perform with the rod extended out to a position that makes adding grease possible.



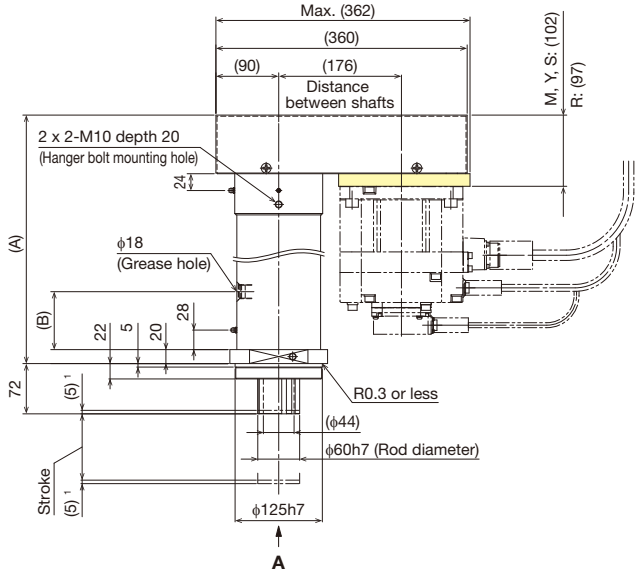

Unit: mm

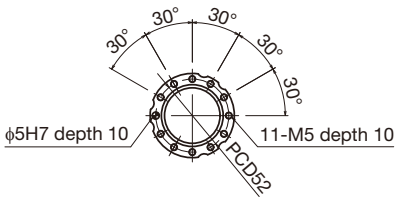
| Stroke | 50 | 100 | 150 | 200 | 250 |
|---|---|---|---|---|---|
| Greasing position: H | 100 | 150 | 200 | 230 | 230 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

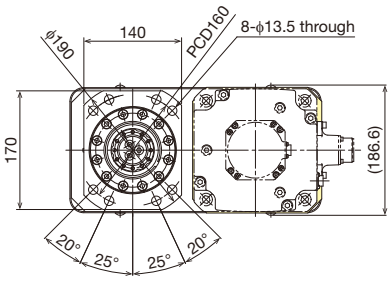
## Dimensions

This diagram shows greasing position: D (down)

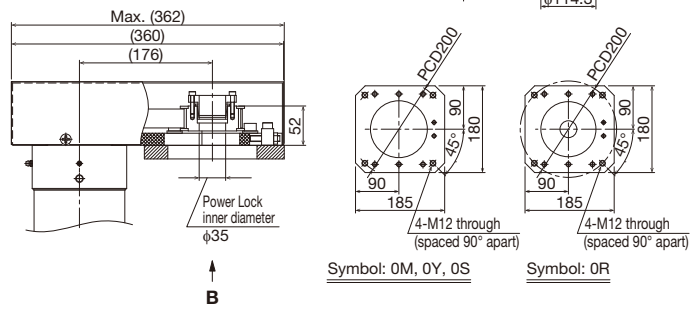



Ball spline shaft end details (arrow view A)




Details of motor mounting part




Arrow view B

[1] Stroke up to mechanical stopper.

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 349 | 399 | 449 | 499 | 549 |
| | B | 123 | | | 145 | 195 |
| Weight (kg) | | 41.2 | 44.7 | 48.3 | 51.8 | 55.3 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC80L-12G

## Model Configuration

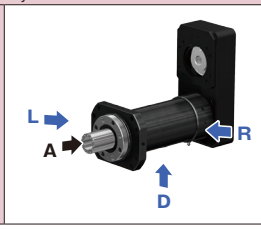
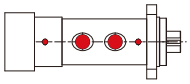
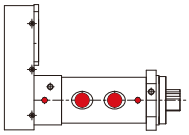
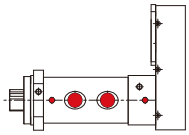
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC80L | - | 12G | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC80L | | 12G | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

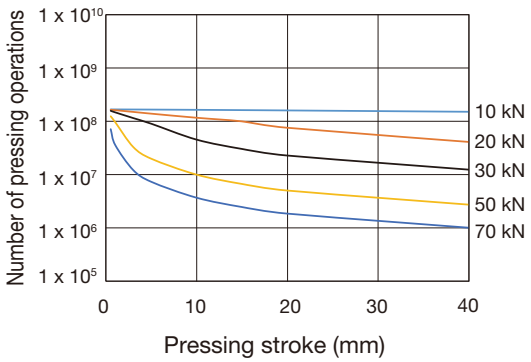


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 12 |
| Permissible axial load [1] (kN) | Pressing direction | 120 |
| | Tensile direction | 48 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 120 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

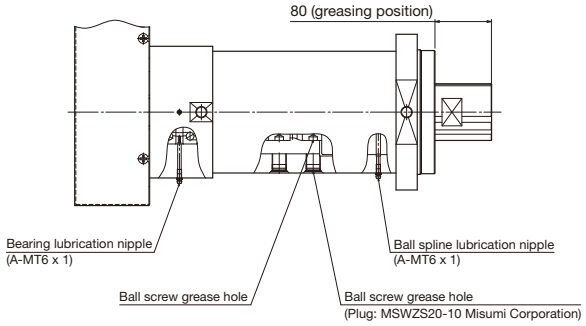



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (200 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease via the ball screw grease hole.

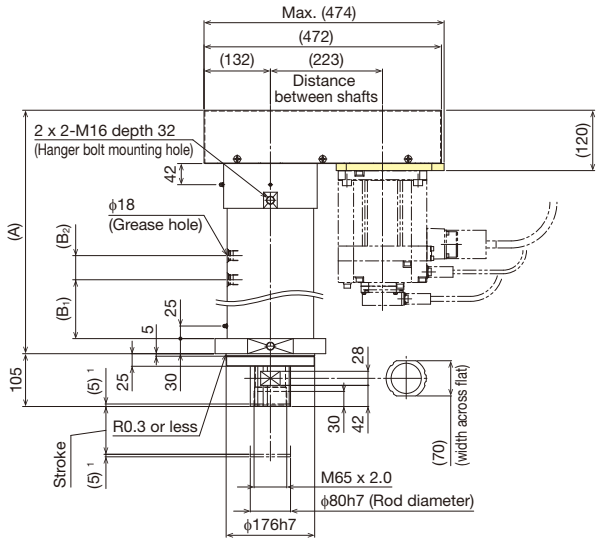


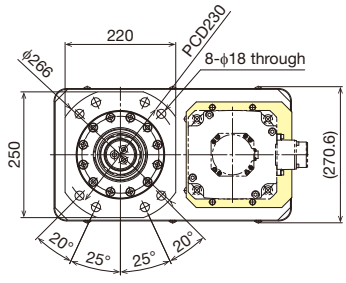

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

Rod Diameter 80 mm | Motor Wrap | Stroke Max. 250 mm

## Dimensions

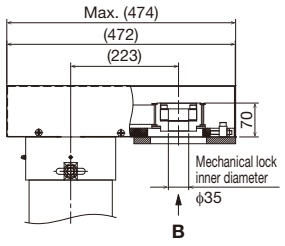
This diagram shows greasing position: D (down)

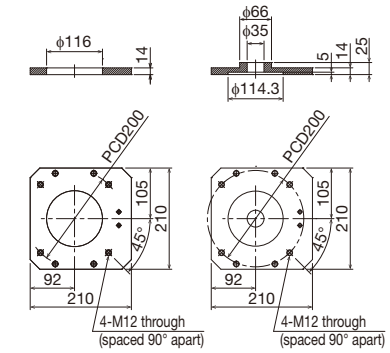



[1] Stroke up to mechanical stopper.

Details of motor mounting part




Symbol: 0M, 0Y, 0S

Symbol: 0R

Arrow view B

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 484 | 534 | 584 | 634 | 684 |
| | $B_1$ | 117 | 119 | 121 | 171 | 221 |
| | $B_2$ | 48 | 96 | 144 | | |
| Weight (kg) | | 112.6 | 119.3 | 126 | 132.7 | 139.4 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC80-12G

## Model Configuration

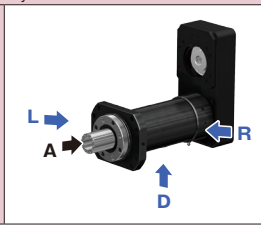
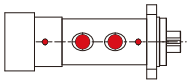
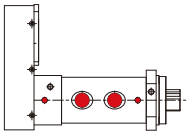
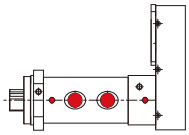
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC80 | - | 12G | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC80 | | 12G | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

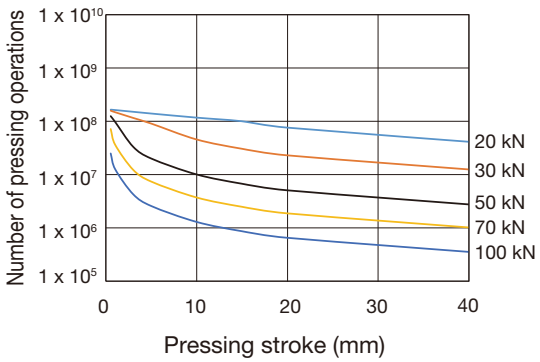


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 12 |
| Permissible axial load [1] (kN) | Pressing direction | 120 |
| | Tensile direction | 48 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 120 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

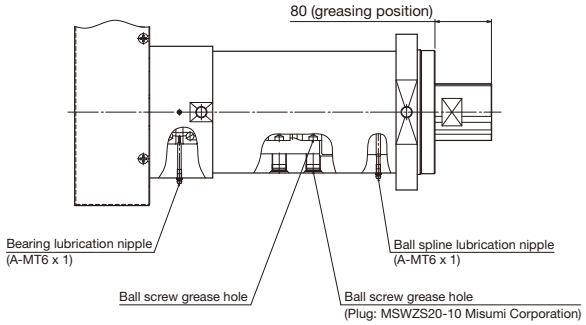



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (200 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

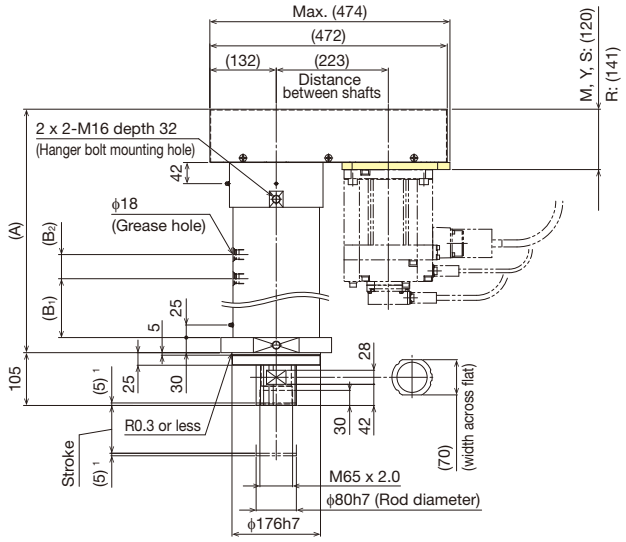
Standard grease: L500
To grease the ball screw, remove the plug and apply the grease via the ball screw grease hole.

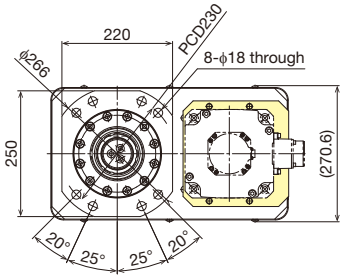


Rod Diameter 80 mm | Motor Wrap | Stroke Max. 250 mm

## Dimensions

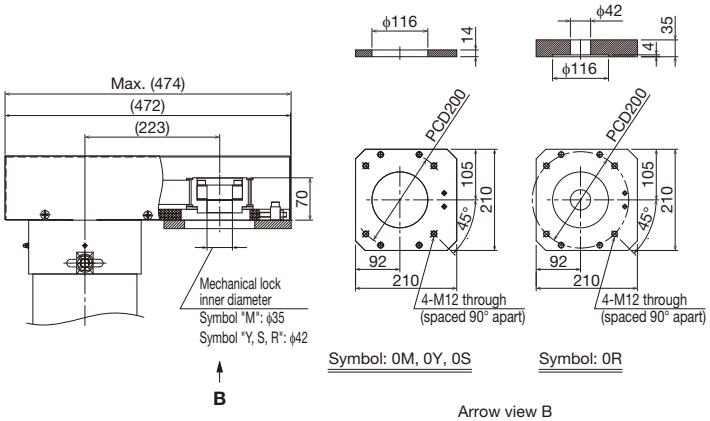
This diagram shows greasing position: D (down)




[1] Stroke up to mechanical stopper.

Details of motor mounting part




### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 484 | 534 | 584 | 634 | 684 |
| | $B_1$ | 117 | 119 | 121 | 171 | 221 |
| | $B_2$ | 48 | 96 | 144 | | |
| Weight (kg) | | 112.6 | 119.3 | 126 | 132.7 | 139.4 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC80H-12G

## Model Configuration

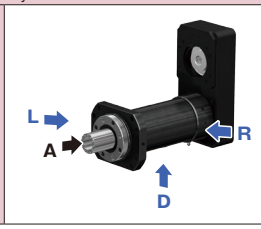
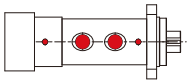
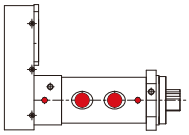
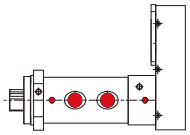
| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC80H | - | 12G | - | 0200 | A | - | R | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC80H | | 12G | | 0050: 50 mm | A | | D: Down | | 0M |
| | | | | 0100: 100 mm | | | L: Left | | 0Y |
| | | | | 0150: 150 mm | | | R: Right | | 0S |
| | | | | 0200: 200 mm | | | | | 0R |
| | | | | 0250: 250 mm | | | | | |

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.
- R: OMRON Corporation

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

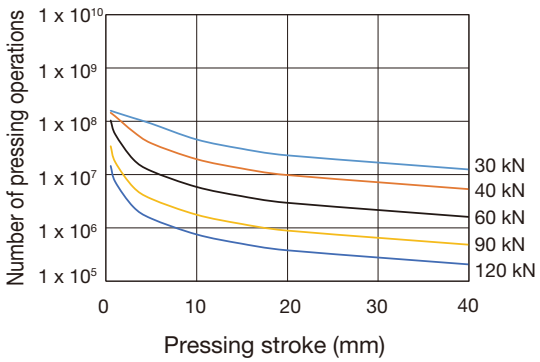


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 12 |
| Permissible axial load [1] (kN) | Pressing direction | 120 |
| | Tensile direction | 48 |
| Positioning repeatability (mm) | | ±0.005 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 120 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 1) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

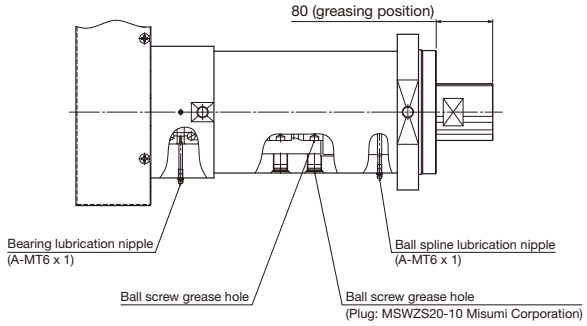



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (200 kg)

Note 2) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease via the ball screw grease hole.

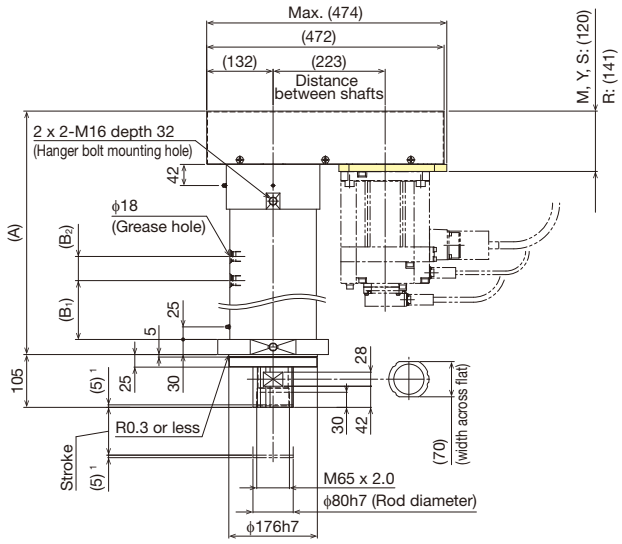


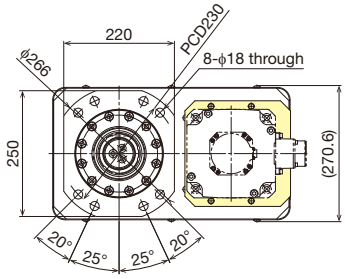

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

Rod Diameter 80 mm | Motor Wrap | Stroke Max. 250 mm

## Dimensions

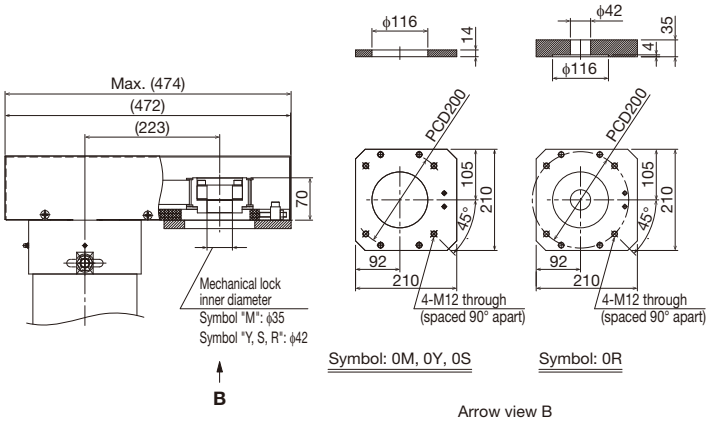
This diagram shows greasing position: D (down)




[1] Stroke up to mechanical stopper.

Details of motor mounting part




### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) |
|---|---|---|---|---|---|---|
| Dimensions (mm) | A | 484 | 534 | 584 | 634 | 684 |
| | $B_1$ | 117 | 119 | 121 | 171 | 221 |
| | $B_2$ | 48 | 96 | 144 | | |
| Weight (kg) | | 112.6 | 119.3 | 126 | 132.7 | 139.4 |

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC100-20H

## Model Configuration

| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC100 | - | 20H | - | 0400 | A | - | D | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC100 | | 20H | | 0200: 200 mm | A | | D: Down | | 0M |
| | | | | 0400: 400 mm | | | L: Left | | 0Y |
| | | | | | | | R: Right | | 0S |

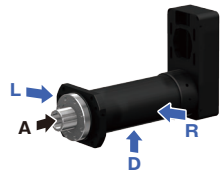
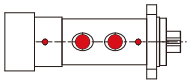
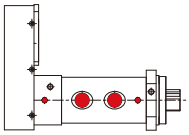
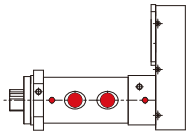
Note 1) A reduction gear is mounted before shipping.

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

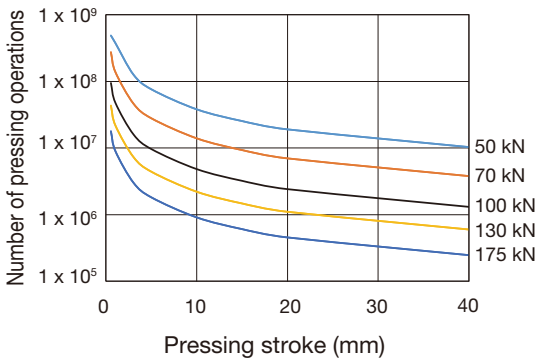


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 20 |
| Reduction ratio (pulley ratio) | | 38/38 |
| Reduction ratio (decelerator) | | 1/4 |
| Permissible axial load [1] (kN) | Pressing direction | 175 |
| | Tensile direction | 70 |
| Positioning repeatability (mm) | | ±0.01 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 175 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 2) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

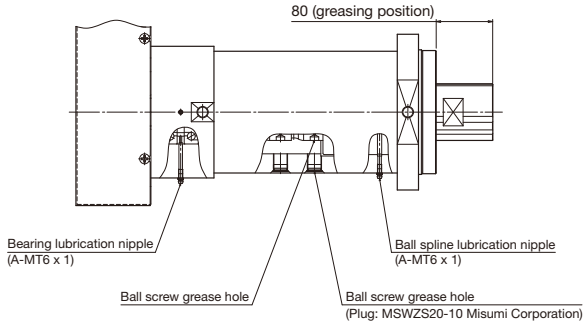



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (200 kg)

Note 3) The graph does not guarantee pressing stroke operation for pressing loads.

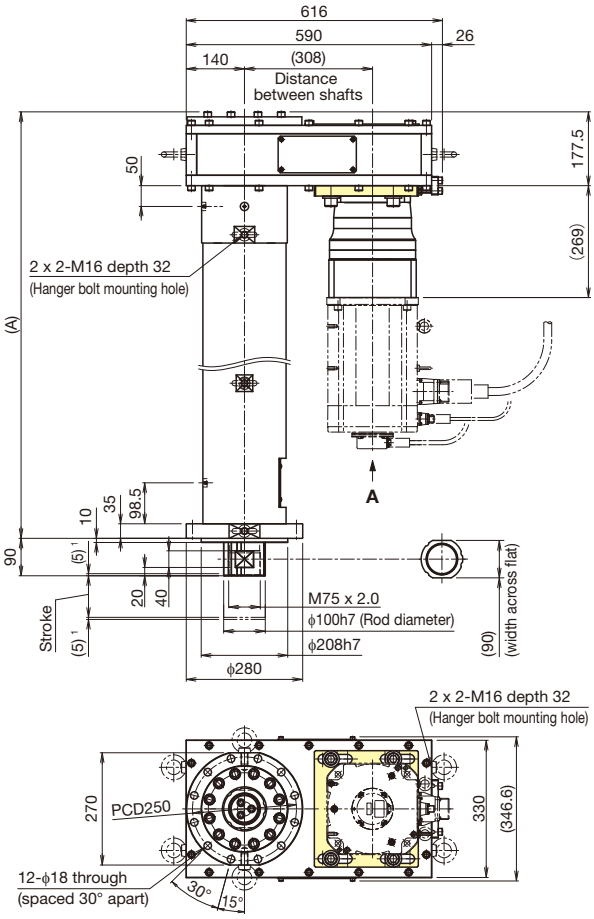
## Maintenance

Standard grease: L500
To grease the ball screw, remove the plug and apply the grease via the ball screw grease hole.

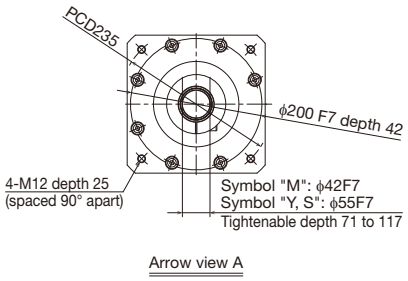


## Dimensions

This diagram shows greasing position: D (down)




Details of motor mounting part




Arrow view A

[1] Stroke up to mechanical stopper.

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 200 (210) | 400 (410) |
|---|---|---|---|
| Dimensions (mm) | A | 825.5 | 1025.5 |
| Weight [2] (kg) | | 327 | 355 |

[2] Weight includes reduction gear.

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PC120-20J

## Model Configuration

| Model | | Lead, reduction ratio | | Stroke | Design symbol | | Option (Greasing position) | | Applicable motor bracket |
|---|---|---|---|---|---|---|---|---|---|
| PC120 | - | 20J | - | 0400 | A | - | D | - | 0M |
| (1) | | (2) | | (3) | (4) | | (5) | | (6) |
| PC120 | | 20J | | 0200: 200 mm | A | | D: Down | | 0M |
| | | | | 0400: 400 mm | | | L: Left | | 0Y |
| | | | | | | | R: Right | | 0S |

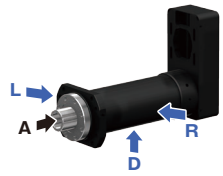
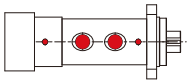
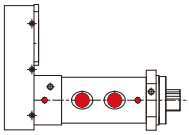
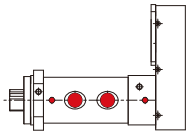
Note 1) A reduction gear is mounted before shipping.

Applicable motor bracket symbol configuration

0 Without motor

Y
- M: Mitsubishi Electric Corporation
- Y: Yaskawa Electric Corporation
- S: Sanyo Denki Co., Ltd.

(5) Option (greasing position)

| Greasing position | | Down | Left | Right |
|---|---|---|---|---|
| Symbol | | D | L | R |
| Greasing position (Seen from side A) |  |  |  |  |

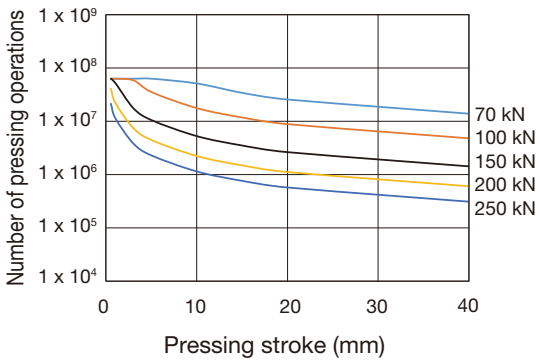


## Basic Specifications

| | | |
|---|---|---|
| Ball screw lead (mm) | | 20 |
| Reduction ratio (pulley ratio) | | 36/40 |
| Reduction ratio (decelerator) | | 1/4 |
| Permissible axial load [1] (kN) | Pressing direction | 250 |
| | Tensile direction | 106 |
| Positioning repeatability (mm) | | ±0.01 |
| Backlash (mm) | | 0.02 |
| Permissible input torque [2] (N·m) | | 224 |
| Standard grease | | THK L500 Grease |

[1] Permissible axial load is the load that can be applied to the actuator when static.
[2] To prevent mechanical damage, the motor must be operated within the permissible input torque limit.
Note 2) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

## Theoretical Pressing Force Service Life (number of presses)

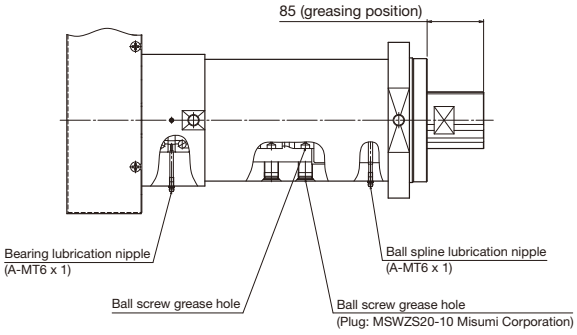



Service life varies depending on pressing load and pressing stroke.
The operating life is a theoretical value under the following conditions.
Mounting orientation: Vertical (rod reaching lower end)
Pressing direction: Compression direction
Payload: At maximum load capacity (200 kg)

Note 3) The graph does not guarantee pressing stroke operation for pressing loads.

## Maintenance

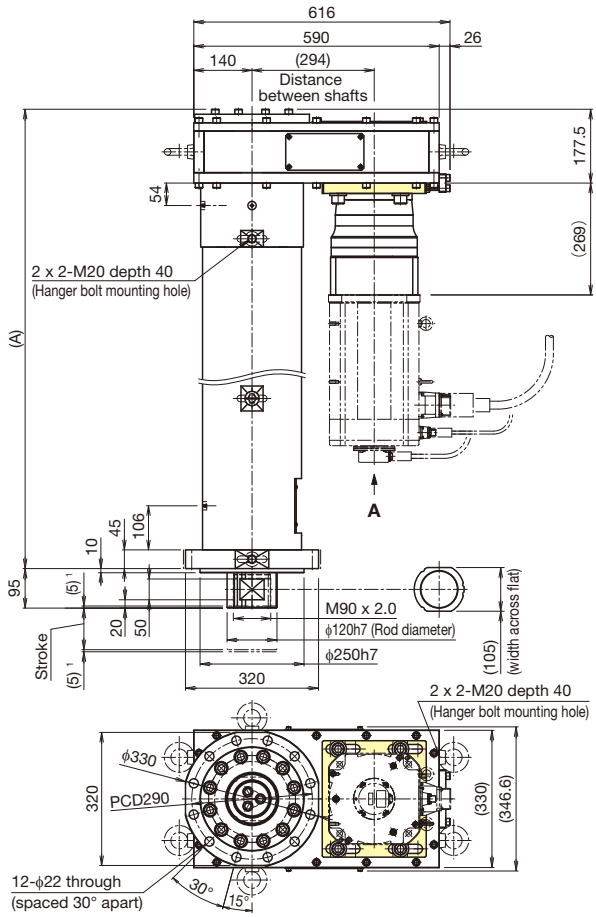
Standard grease: L500
To grease the ball screw, remove the plug and apply the grease via the ball screw grease hole.




PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

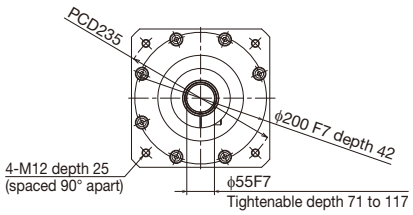
## Dimensions

This diagram shows greasing position: D (down)




[1] Stroke up to mechanical stopper.

Details of motor mounting part




Arrow view A

### Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 200 (210) | 400 (410) |
|---|---|---|---|
| Dimensions (mm) | A | 904.5 | 1104.5 |
| Weight [2] (kg) | | 415 | 462 |

[2] Weight includes reduction gear.

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PCT20/PCT20R

## Model Configuration

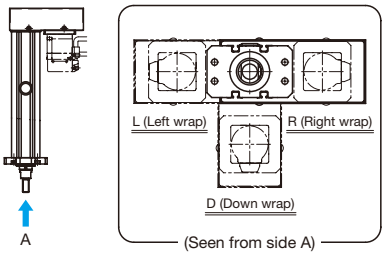
| Model | | Lead, reduction ratio | | Stroke | | Options | | With/without motor | | Motor bracket | Motor shaft fixing method |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PCT20R | - | 06N | - | 0200 | - | R | - | 0 | - | A1 | D |
| (1) | | (2) | | (3) | | (4) | | (5) | | (6) | (7) |
| PCT20<br>PCT20R | | 06N | | 0050: 50 mm<br>0100: 100 mm<br>0150: 150 mm<br>0200: 200 mm | | For direct coupling<br>N: Direct coupling<br>For wrap<br>D: Down<br>L: Left<br>R: Right | | 0: Without motor | | A1<br>K1 | For direct coupling<br>No symbol<br>For wrap<br>D: D-cut<br>K: Key<br>S: Clamp |

"R" represents motor wrap.

When selecting "PCT20R" for (1) Model, "N" cannot be selected.

Direct coupled specification: A coupling is not provided. Indicate when placing an order if a coupling is required.
Motor wrap specification: Timing pulleys and timing belt are included.

(4) Option (Motor wrap)




## Motor bracket and motor shaft fixing method compatibility table

■ Direct coupling

| Motor type | Manufacturer | Series | Motor model | Motor rated output (W) | Motor bracket | Applicable coupling |
|---|---|---|---|---|---|---|
| AC servo motor | Yaskawa Electric Corporation | Σ-7 | SGM7J-A5 | 50 | A1 | SFC-010DA2-6B-8B (Miki Pulley Co., Ltd.)<br>XGT2-19C-6-8 (NBK) |
| | | | SGM7A-A5 | | | |
| | Mitsubishi Electric Corporation | MELSERVO J4 | HG-KR053 | | | |
| | | | HG-MR053 | | | |
| | Tamagawa Seiki Co., Ltd. | TBL-iII | TS4602 | | | |
| | | TBL-iIV | TSM3102 | | | |
| | OMRON Corporation | OMNUC G5 | R88M-K05030 | | | |
| | Sanyo Denki Co., Ltd. | SANMOTION R | R2□A04005 | | | |
| | Panasonic Corporation | MINAS A6 | MSMF5A | | K1 | |

■ Wrap

| Motor type | Manufacturer | Series | Motor model | Motor rated output (W) | Motor bracket | Motor shaft fixing method |
|---|---|---|---|---|---|---|
| AC servo motor | Yaskawa Electric Corporation | Σ-7 | SGM7J-A5 | 50 | A1 | D, K, S |
| | | | SGM7A-A5 | | | |
| | Mitsubishi Electric Corporation | MELSERVO J4 | HG-KR053 | | | |
| | | | HG-MR053 | | | |
| | Tamagawa Seiki Co., Ltd. | TBL-iII | TS4602 | | | |
| | | TBL-iIV | TSM3102 | | | |
| | OMRON Corporation | OMNUC G5 | R88M-K05030 | | | |
| | Sanyo Denki Co., Ltd. | SANMOTION R | R2□A04005 | | | |
| | Panasonic Corporation | MINAS A6 | MSMF5A | | K1 | |

Note 2) When installing a motor other than the ones listed above, contact THK.
Note 3) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

## Basic Specifications

| | | | |
|---|---|---|---|
| Motor rated output (W) | | | 50 |
| Ball screw | Screw shaft diameter (mm) | | ϕ8 |
| | Ball screw lead (mm) | | 6 |
| | Basic dynamic load rating Ca (N) | | 1950 |
| | Basic static load rating $C_0a$ (N) | | 3510 |
| | Thread minor diameter (mm) | | ϕ6.872 |
| | Ball center-to-center diameter (mm) | | ϕ8.4 |
| Bearing (Fixed side) | Axial direction | Basic dynamic load rating Ca (N) | 8000 |
| | | Static permissible load $P_0a$ (N) | 3240 |
| Positioning repeatability (mm) | | | ±0.01 |
| Lost motion (mm) | | | 0.1 |
| Rod non-rotational accuracy (°) | | | ±1 |
| Starting torque [1] (N·cm) | | | 1.6 |
| Maximum input torque (N·m) | | | 0.48 |
| Standard grease | | | THK AFB-LF Grease |

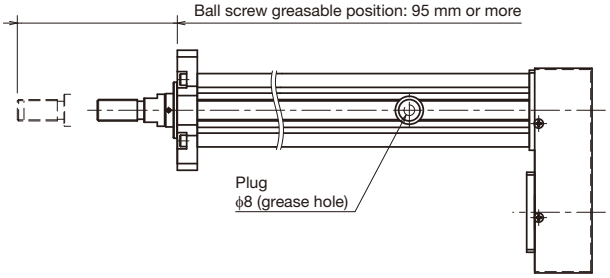
[1] Timing pulleys and timing belt are not included.
Note 4) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

### Wrap part details

| | | |
|---|---|---|
| Motor rated output (W) | | 50 |
| Timing belt | Manufacturer | Gates Unitta Asia Company |
| | Model | 196-2GT-6 |

## Maintenance

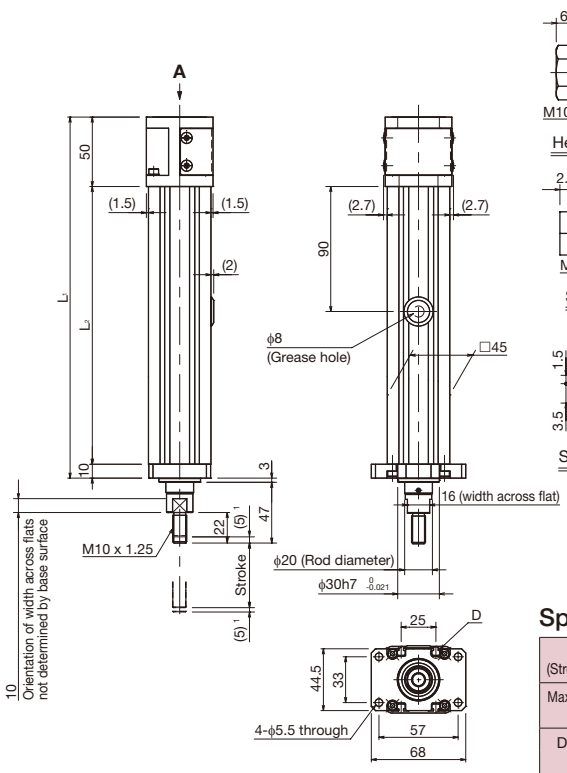
Standard grease: AFB-LF
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft.



Rod Diameter 20 mm | Direct Motor Coupling | Motor Wrap | Stroke Max. 200 mm

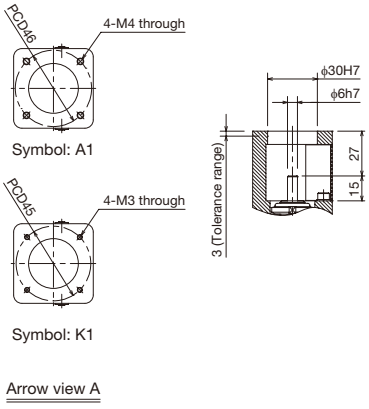
# Dimensions

## Direct coupling




[1] Stroke up to mechanical stopper.

## Details of motor mounting part

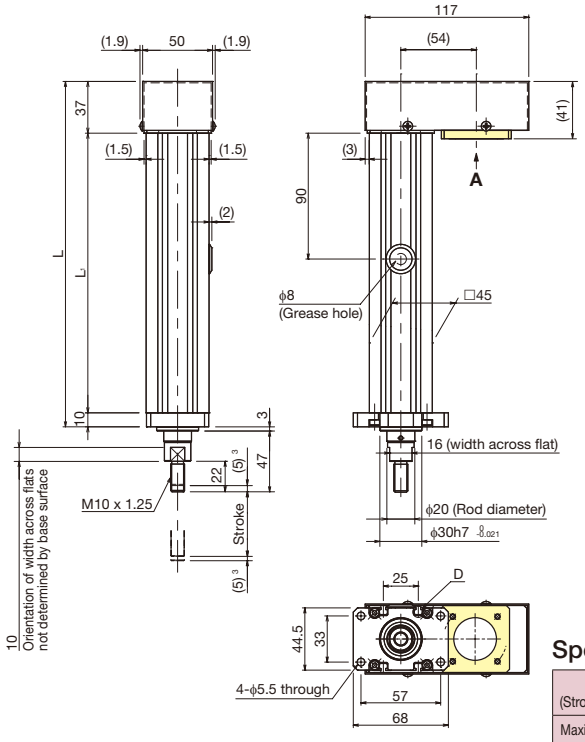



## Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) |
|---|---|---|---|---|---|
| Maximum speed [2] (mm/s) | Ball screw lead: 6 mm | 300 | | | 230 |
| Dimensions (mm) | $L_1$ | 260 | 310 | 360 | 410 |
| | $L_2$ | 200 | 250 | 300 | 350 |
| Weight (kg) | | 1.4 | 1.6 | 1.8 | 2.1 |

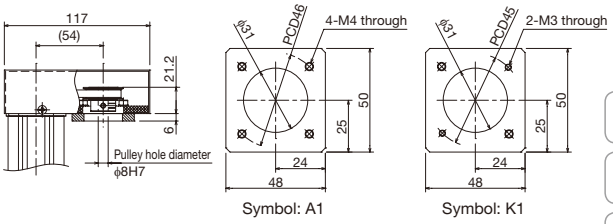
[2] The maximum speed is the speed limited by the motor rotational speed of 3000 min$^{-1}$ or the actuator's permissible speed.

## Wrap




[3] Stroke up to mechanical stopper.

## Details of motor mounting part




## Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) |
|---|---|---|---|---|---|
| Maximum speed [4] (mm/s) | Ball screw lead: 6 mm | 300 | | | 230 |
| Dimensions (mm) | L | 247 | 297 | 347 | 397 |
| | $L_1$ | 200 | 250 | 300 | 350 |
| Weight (kg) | | 1.6 | 1.8 | 2 | 2.2 |

[4] The maximum speed is the speed limited by the motor rotational speed of 3000 min$^{-1}$ or the actuator's permissible speed.

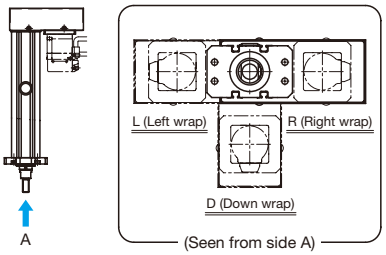
PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

# PCT25/PCT25R

## Model Configuration

| Model | Lead, reduction ratio | Stroke | Options | With/without motor | Motor bracket | Motor shaft fixing method |
|---|---|---|---|---|---|---|
| PCT25R | 04N | 0200 | R | 0 | A1 | D |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| PCT25 | 04N | 0050: 50 mm | For direct coupling | 0: Without motor | A1 | For direct coupling |
| PCT25R | 06N | 0100: 100 mm | N: Direct coupling | Direct coupled specification: A coupling is not provided. Indicate when placing an order if a coupling is required. Motor wrap specification: Timing pulleys and timing belt are included. | A2 | No symbol |
| *"R" represents motor wrap. | | 0150: 150 mm | For wrap | | K1 | For wrap |
| | | 0200: 200 mm | D: Down | | K2 | D: D-cut |
| | | 0250: 250 mm | L: Left | | B1 | K: Key |
| | | 0300: 300 mm | R: Right | | B2 | S: Clamp |
| | | | When selecting "PCT25R" for (1) Model, "N" cannot be selected. | | | |

(4) Option (Motor wrap)




## Motor bracket and motor shaft fixing method compatibility table

■ Direct coupling

| Motor type | Manufacturer | Series | Motor model | Motor rated output (W) | Motor bracket | Applicable coupling |
|---|---|---|---|---|---|---|
| AC servo motor | Yaskawa Electric Corporation | Σ-7 | SGM7J-01 | 100 | A1 | SFC-020DA2-8B-8B (Miki Pulley Co., Ltd.) XGT2-25C-8-8 (NBK) |
| | | | SGM7A-01 | | | |
| | Mitsubishi Electric Corporation | MELSERVO J4 | HG-KR13 | | | |
| | | | HG-MR13 | | | |
| | Tamagawa Seiki Co., Ltd. | TBL-iII | TS4603 | | | |
| | | TBL-iIV | TSM3104 | | | |
| | OMRON Corporation | OMNUC G5 | R88M-K10030 | | | |
| | Sanyo Denki Co., Ltd. | SANMOTION R | R2□A04010 | | | |
| | Yaskawa Electric Corporation | Σ-7 | SGM7J-02 | 200 | A2 | SFC-025DA2-8B-14B (Miki Pulley Co., Ltd.) XGT2-27C-8-14 (NBK) |
| | | | SGM7A-02 | | | |
| | Mitsubishi Electric Corporation | MELSERVO J4 | HG-KR23 | | | |
| | | | HG-MR23 | | | |
| | Tamagawa Seiki Co., Ltd. | TBL-iII | TS4607 | | | |
| | | TBL-iIV | TSM3202 | | | |
| | Sanyo Denki Co., Ltd. | SANMOTION R | R2□A06020 | | | |
| | Panasonic Corporation | MINAS A6 | MSMF01 | 100 | K1 | SFC-020DA2-8B-8B (Miki Pulley Co., Ltd.) XGT2-25C-8-8 (NBK) |
| | OMRON Corporation | OMNUC G5 | R88M-K20030 | 200 | K2 | SFC-025DA2-8B-11B (Miki Pulley Co., Ltd.) XGT2-25C-8-11 (NBK) |
| | Panasonic Corporation | MINAS A6 | MSMF02 | | | |
| Stepper motor | Oriental Motor Co. Ltd. | α step | AZ6*, AR6* | | B1 | SFC-020DA2-8B-10B (Miki Pulley Co., Ltd.) XGT2-25C-8-10 (NBK) |
| | | 5-phase CVK | PKP56* (excluding PKP569FM*) | | B1 | SFC-020DA2-8B-8B (Miki Pulley Co., Ltd.) XGT2-25C-8-8 (NBK) |
| | | 2-phase CVK | PKP26* | | B2 | |

■ Wrap

| Motor type | Manufacturer | Series | Motor model | Motor rated output (W) | Motor bracket | Motor shaft fixing method |
|---|---|---|---|---|---|---|
| AC servo motor | Yaskawa Electric Corporation | Σ-7 | SGM7J-01 | 100 | A1 | D, K, S |
| | | | SGM7A-01 | | | |
| | | | SGM7J-02 | 200 | A2 | D, K, S |
| | | | SGM7A-02 | | | |
| | Mitsubishi Electric Corporation | MELSERVO J4 | HG-KR13 | 100 | A1 | D, S |
| | | | HG-MR13 | | | |
| | | | HG-KR23 | 200 | A2 | D, S |
| | | | HG-MR23 | | | |
| | Tamagawa Seiki Co., Ltd. | TBL-iII | TS4603 | 100 | A1 | D, K, S |
| | | | TS4607 | 200 | A2 | D, K, S |
| | | TBL-iIV | TSM3104 | 100 | A1 | D, K, S |
| | | | TSM3202 | 200 | A2 | D, K, S |
| | Panasonic Corporation | MINAS A6 | MSMF01 | 100 | K1 | D, K, S |
| | | | MSMF02 | 200 | K2 | D, K, S |
| | Sanyo Denki Co., Ltd. | SANMOTION R | R2□A04010 | 100 | A1 | D, K, S |
| | | | R2□A06020 | 200 | A2 | D, K, S |
| | OMRON Corporation | OMNUC G5 | R88M-K10030 | 100 | A1 | K, S |
| | | | R88M-K20030 | 200 | K2 | K, S |

Note 2) When installing a motor other than the ones listed above, contact THK.
Note 3) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

## Basic Specifications

| Motor rated output (W) | | | 100 | | 200 | |
|---|---|---|---|---|---|---|
| Ball screw | Screw shaft diameter (mm) | | ϕ14 | ϕ12 | ϕ14 | ϕ12 |
| | Ball screw lead (mm) | | 4 | 6 | 4 | 6 |
| | Basic dynamic load rating Ca (N) | | 6600 | 4910 | 6600 | 4910 |
| | Basic static load rating $C_0a$ (N) | | 12300 | 9600 | 12300 | 9600 |
| | Thread minor diameter (mm) | | ϕ11.5 | ϕ9.872 | ϕ11.5 | ϕ9.872 |
| | Ball center-to-center diameter (mm) | | ϕ14.4 | ϕ12.65 | ϕ14.4 | ϕ12.65 |
| Bearing (Fixed side) | Axial direction | Basic dynamic load rating Ca (N) | 13800 | | | |
| | | Static permissible load $P_0a$ (N) | 5850 | | | |
| Positioning repeatability (mm) | | | ±0.01 | | | |
| Lost motion (mm) | | | 0.1 | | | |
| Rod non-rotational accuracy (°) | | | ±1 | | | |
| Starting torque [1] (N·cm) | | | 2.8 | 3.2 | 2.8 | 3.2 |
| Maximum input torque [2] (N·m) | | | 1.91 (0.95) | | 1.91 | |
| Standard grease | | | THK AFB-LF Grease | | | |

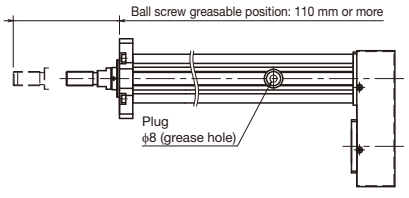
[1] Timing pulleys and timing belt are not included.
[2] The value in parentheses is for motor wrap specification.
Note 4) If a load is applied to the rod in any direction other than axial, install a separate guide mechanism.

### Wrap part details

| Motor rated output (W) | | 100 | 200 |
|---|---|---|---|
| Timing belt | Manufacturer | Gates Unitta Asia Company | |
| | Model | 273-3GT-6 | 273-3GT-9 |

## Maintenance

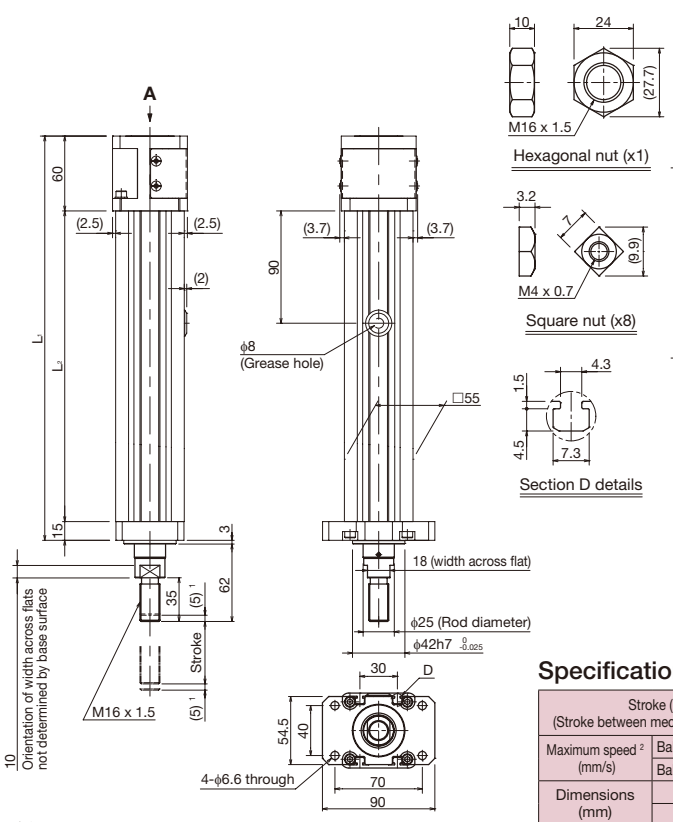
Standard grease: AFB-LF
To grease the ball screw, remove the plug and apply the grease directly to the ball screw shaft.




PC 30
PC 40
PC 50
PC 60
PC 80
PC 100
PC 120
PCT 20
PCT 25

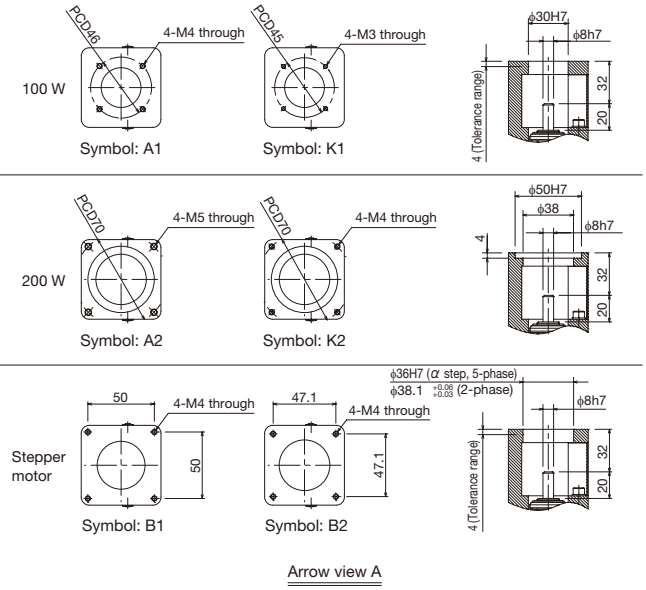
# Dimensions

## Direct coupling




[1] Stroke up to mechanical stopper.

## Details of motor mounting part



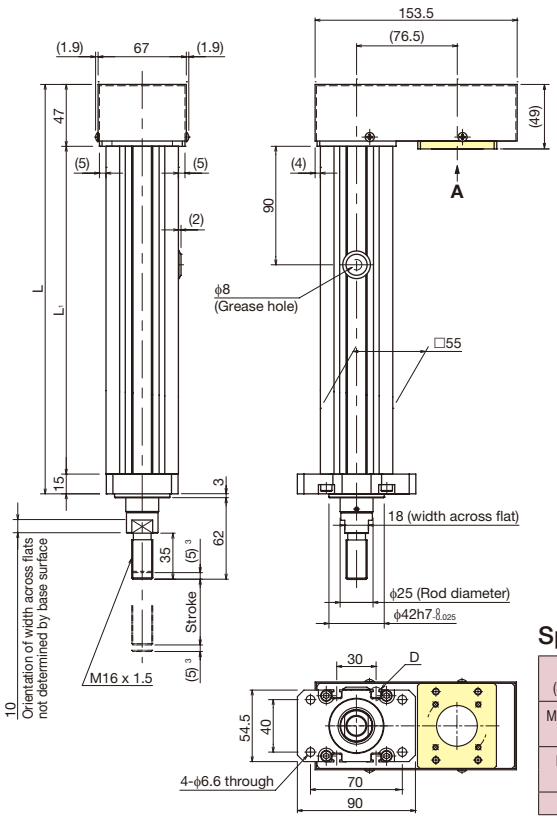

Arrow view A

## Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) | 300 (310) |
|---|---|---|---|---|---|---|---|
| Maximum speed [2] (mm/s) | Ball screw lead: 4 mm | 200 | | | | 160 | 130 |
| | Ball screw lead: 6 mm | 300 | | | 260 | 200 | 160 |
| Dimensions (mm) | $L_1$ | 324 | 374 | 424 | 474 | 524 | 574 |
| | $L_2$ | 249 | 299 | 349 | 399 | 449 | 499 |
| Weight (kg) | | 2.8 | 3.2 | 3.5 | 3.8 | 4.2 | 4.5 |

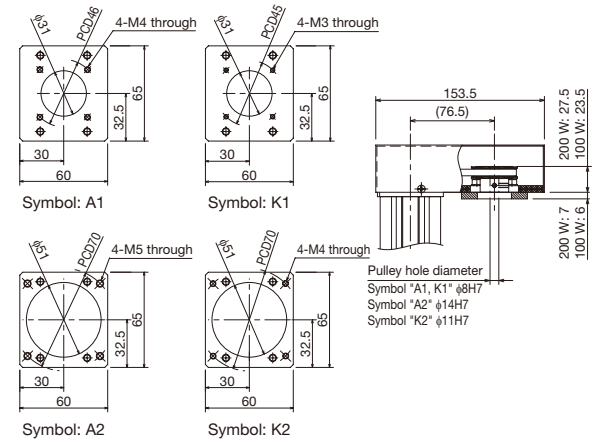
[2] The maximum speed is the speed limited by the motor rotational speed of 3000 min$^{-1}$ or the actuator's permissible speed.

## Wrap




[3] Stroke up to mechanical stopper.

## Details of motor mounting part




Arrow view A

## Specification table

| Stroke (mm) (Stroke between mechanical stoppers) | | 50 (60) | 100 (110) | 150 (160) | 200 (210) | 250 (260) | 300 (310) |
|---|---|---|---|---|---|---|---|
| Maximum speed [4] (mm/s) | Ball screw lead: 4 mm | 200 | | | | 160 | 130 |
| | Ball screw lead: 6 mm | 300 | | | 260 | 200 | 160 |
| Dimensions (mm) | L | 311 | 361 | 411 | 461 | 511 | 561 |
| | $L_1$ | 249 | 299 | 349 | 399 | 449 | 499 |
| Weight (kg) | | 3.1 | 3.4 | 3.8 | 4.1 | 4.4 | 4.7 |

[4] The maximum speed is the speed limited by the motor rotational speed of 3000 min$^{-1}$ or the actuator's permissible speed.

MEMO

# ⚠ Precautions for Use

### Application of These Products
· These products cannot be used for equipment or systems used in situations involving human life and limb.
· Be certain to contact THK in advance if considering utilizing for special applications, such as devices or systems used in passenger vehicles, medical equipment, aerospace, nuclear power, or electric power equipment.

## Rotational motor drive products

### Handling
· When using the product in locations exposed to constant vibrations or in special environments such as in clean rooms, vacuums, and low/high temperatures, contact THK.
· Tilting the table or the outer rail may cause them to fall due to their own weight.

### Safety Precautions
· Before operation, thoroughly read and follow "Manipulating industrial robots - Safety" (JIS B 8433) and "Ordinance on Industrial Safety and Health" (Ministry of Health, Labour and Welfare of Japan).
· Be certain to read the instruction manual carefully, ensure you fully understand its contents, and observe precautions for safety.
· When installing, adjusting, inspecting and maintaining the actuator body, controller, and related connected devices, be sure to unplug all plugs from outlets and lock them or prepare a safety plug so that the power cannot be turned on except by the operator. In a visible location, post a notice clearly stating that work is in progress.
· Never touch the operating parts of the actuator while it is live. Also, do not enter the operating range of the actuator while the product is in operation or a ready state.
· If multiple people are involved in the operation, confirm procedures such as work process, signs, and abnormalities in advance, and appoint a separate person for monitoring the operation.
· Do not disassemble these products unnecessarily. Otherwise, foreign material contamination or accuracy deterioration may occur. There is also a risk of electric shock from the controller.
· Take care not to drop or strike this product. Otherwise, it may cause injury or damage the unit. Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
· Do not exceed the permissible rotation speed when using the product. This could damage the product or otherwise cause it to malfunction. Please use the product within the range of speeds we have specified.
· Take care to avoid contamination of foreign material such as debris or cutting chips. This may result in damage to the ball circulation parts or decreased functionality.
· Contact THK regarding use in environments where coolant may enter the product.
· An impact-absorbing mechanism such as a shock absorber must be installed if there is a risk that the slider may collide with the stoppers attached to both ends of the movable range.
The stoppers are not intended to absorb impacts during slider collision. Colliding with the stoppers during operation may result in damage or injury.
· Operation of the actuator over the torque limit value may lead to component damage or accidents.
· Keep the torque limit setting parameters within the allowable torque limit values.
· Motor wrap types do not include a safety device to protect users if the timing belt snaps. The customer must provide a safety device.
· PC is designed for pressing operations. Applying a load in the tensile direction may shorten product life.
· Only axial loads can be used with PCT. Use an LM Guide, etc., to ensure that loads other than axial load are not applied to the rod.
· Contact THK if a rotational torque or moment load must be applied to the PC rod.
· The total weight of PC exceeds 20 kg. Use hanger bolts to raise and move the product. When transporting or assembling, always take safety into consideration to avoid injury or damage.
Do not use a hanger belt alone to raise the product.
When moving the product vertically, such as for installation, use the two bolts at the motor side and the rod side.
When moving it horizontally, use the two or four bolts at the motor side and the rod side.
Some models may tilt when raised due to an unbalanced center of gravity.

### Operating Environment
· Indoors, ambient temperature within 0 to 40°C, and ambient humidity within 20 to 80% RH (no condensation).
· Places free from corrosive gas and flammable gas.
· Places where vibration or impacts are not transmitted to the unit.
· Places free from electrically conductive powder (such as iron powder), dust, oil mist, moisture, salt, and organic solvents.
· Places free from direct sunlight and radiant heat.
· Places free from strong electric and magnetic fields.
· Places that are easily accessible for maintenance and cleaning.
· When using the product in locations exposed to constant vibrations or in special environments such as in vacuums or low/high temperatures, contact THK.

### Actuator Mounting Surface
· Mount to a flat surface suitable for mechanical machining or with comparable precision. Some products have regulated degrees of flatness.
· Mount to a base with sufficient rigidity.

### Lubrication
· For effective use of the actuator's functions, lubrication is required. Insufficient lubrication may cause greater wear on moving parts, leading to premature damage.
· Do not use a mix of lubricants with different properties. Note that the encapsulated lubricant may differ depending on the product.
· Contact THK if using special lubricants.
· Guidelines for greasing intervals are 100 km travel distance in normal operation or 500 km travel distance for ordinary action when pressing with one stroke end, or 6 months if sooner. However, this may vary depending on the operating conditions, so THK recommends determining a greasing interval during the initial inspection.
· Regular lubricant may not be usable in special environments such as constantly vibrating locations, vacuums, high/low temperatures, or clean rooms. Contact THK in these cases.
· Contact THK if using oil lubrication.
· Thoroughly wipe off anti-rust oil and feed lubricant before using the product.
· The ball screw does not have a grease nipple, so grease should be applied directly to the rotating surface.

### Storage
· When storing this actuator, pack it as designated by THK and store it in a horizontal position away from high or low temperatures and high humidity.
· When storing the controller, avoid high or low temperatures and high humidity.

### Disposal
· The product should be treated as industrial waste and disposed of appropriately.

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● The actual products may differ from the illustrations and photographs in this catalog.

● Outward appearances and specifications are subject to change without notice for the purpose of improvement.Please consult with THK before using.

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