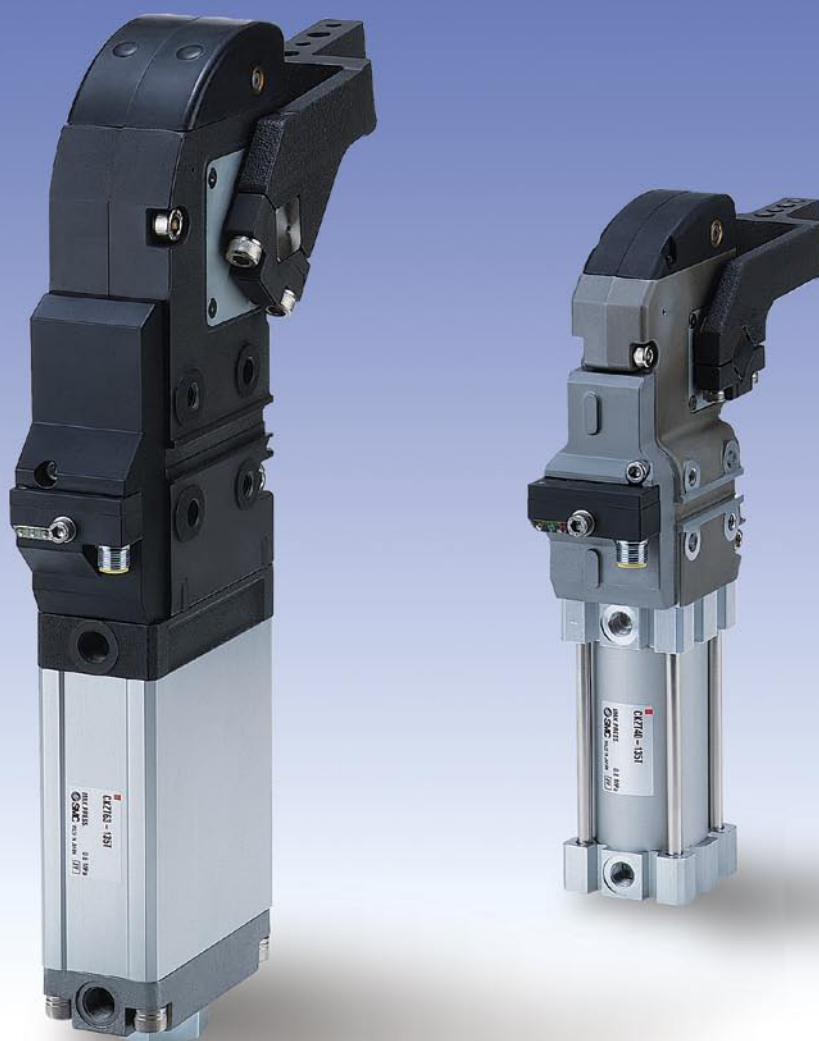


# Power Clamp Cylinder *Series CKZT*

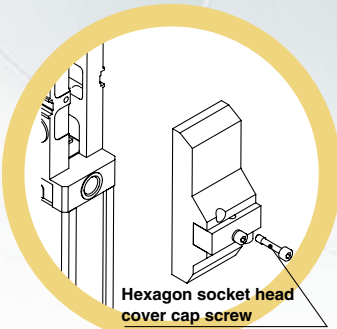


## Power Clamp Cylinder

### Series **CKZT** $\varnothing 40$ , $\varnothing 50$ , $\varnothing 63$ , $\varnothing 80$

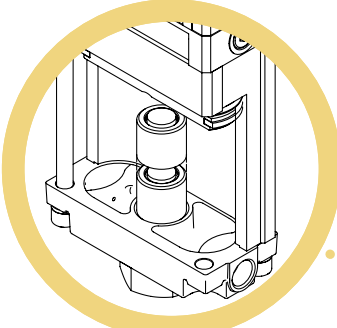
- Each size has 3 arm styles.
- Spatter proof, Water resistant

Proximity cassette installation and removal easily accomplished by unfastening a single bolt

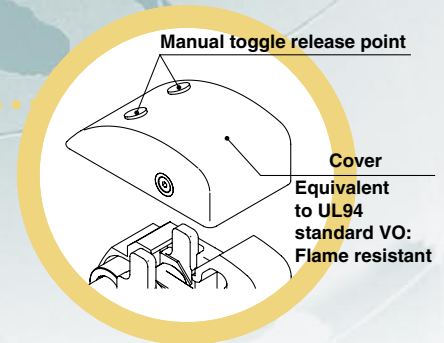


#### Simple arm opening angle changes.

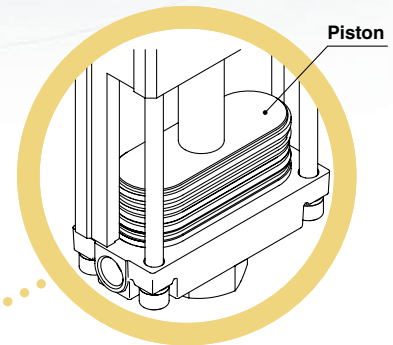
Cylinder disassembly is not necessary. The arm opening angle can be changed by replacing the stopper bolt.



Rounded cover design reduces weld spatter accumulation.

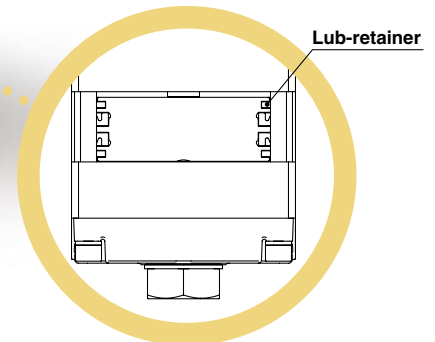


Elliptical design for space saving



Lub-retainer on piston is standard.

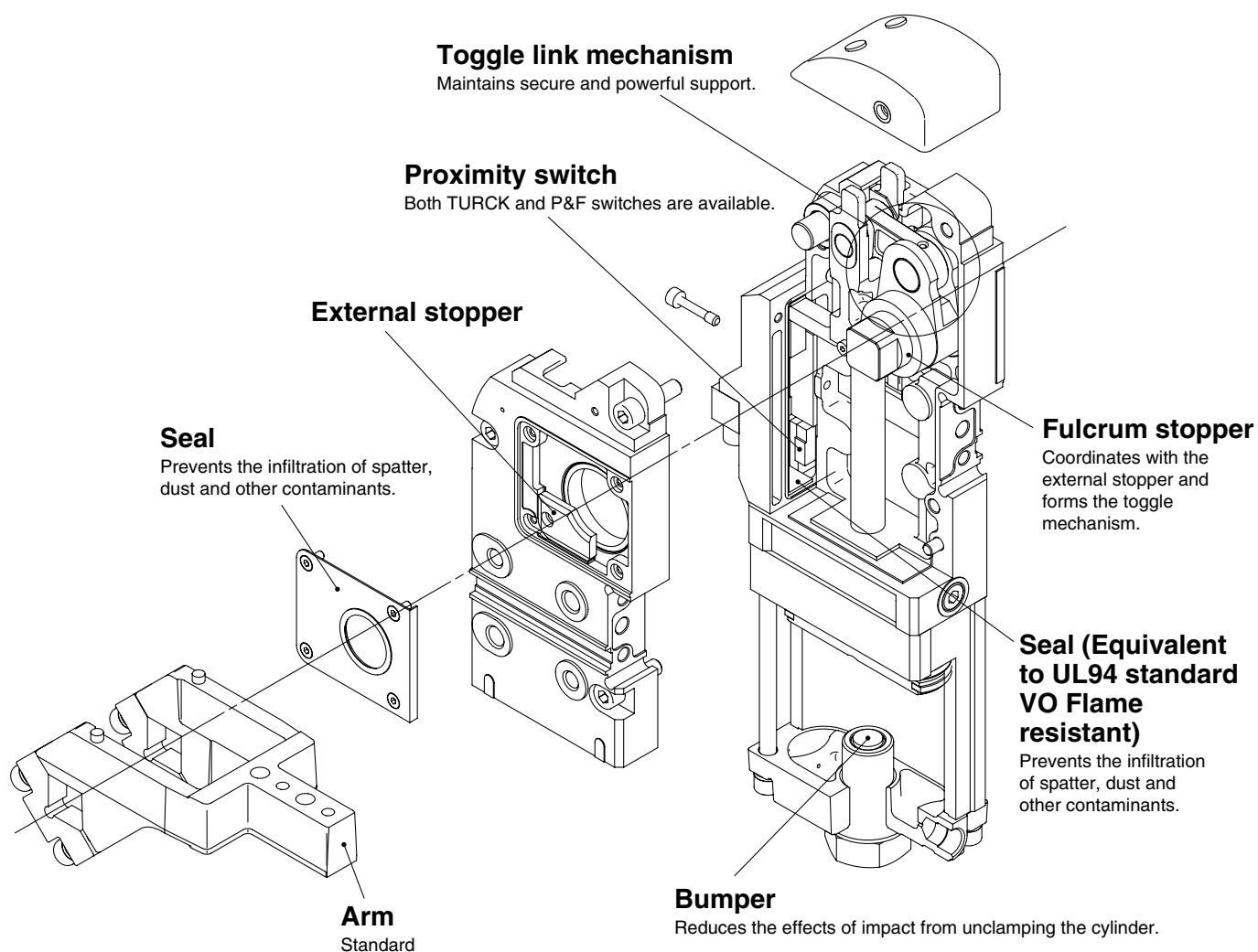
Highly protective seal design is less effected by poor air quality.



#### Made to Order

(Details → Refer to page 20 to 22.)

- Power clamp cylinder with metal cover
- Power clamp cylinder with angle adjustment
- Power clamp cylinder with manually operated handle
- Power clamp cylinder with pneumatic sensor
- Unclamped opening angle 15° kit (for change of angle)



## ■ 3D CAD

| Software    |
|-------------|
| CATIA       |
| UNIGRAPHICS |
| FIDES       |
| AUTO CAD    |
| SOLID WORKS |

\* For additional formats, please log on to the SMC web site [www.smcusa.com](http://www.smcusa.com) and click on the E-Tech icon.

## ■ Series Variations

| Series            | CKZT                                        |                   |                   |                   |
|-------------------|---------------------------------------------|-------------------|-------------------|-------------------|
| Bore size (mm)    | ø40                                         | ø50<br>Equivalent | ø63<br>Equivalent | ø80<br>Equivalent |
| Arm opening angle | 30°, 45°, 60°, 75°<br>90°, 105°, 120°, 135° |                   |                   |                   |
| Switch            | TURCK/P&F                                   |                   |                   |                   |
| Port thread type  | G/NPT                                       |                   |                   |                   |



# Series CKZT

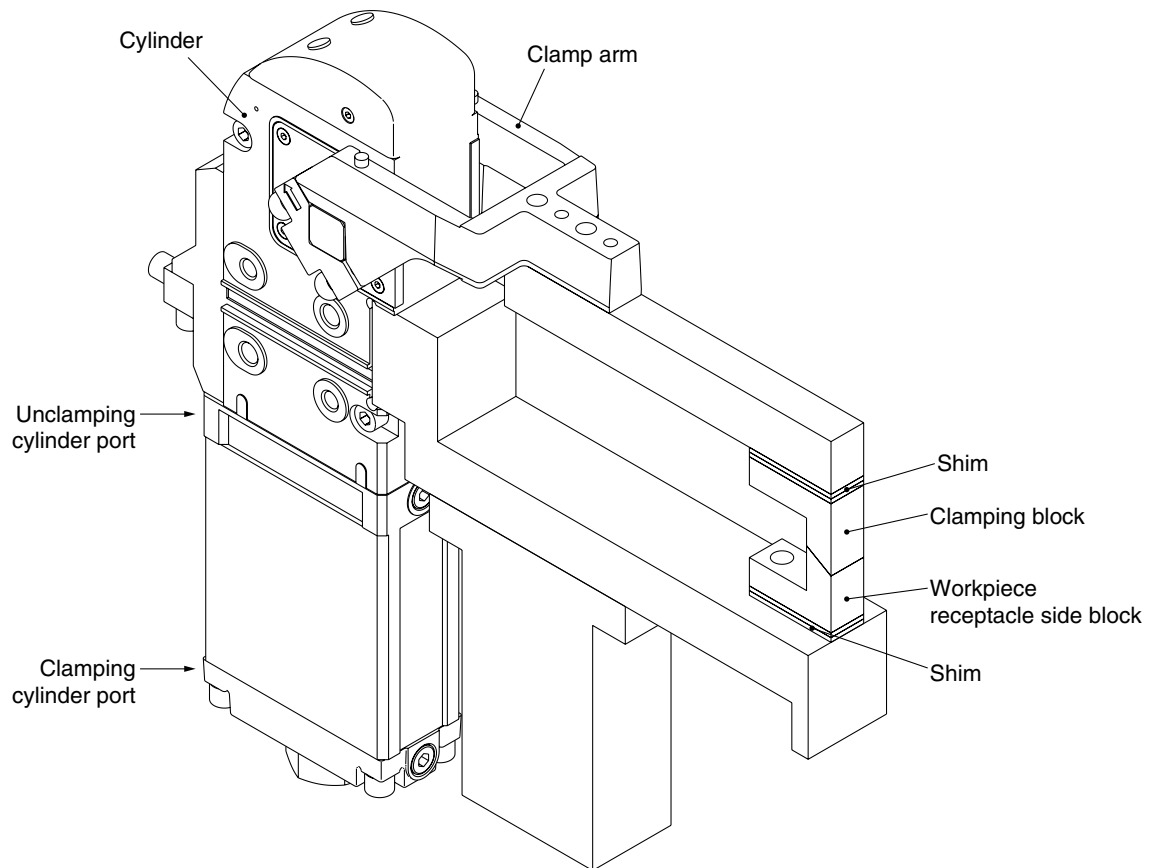
## Model Selection

### 1 Common precautions for each size

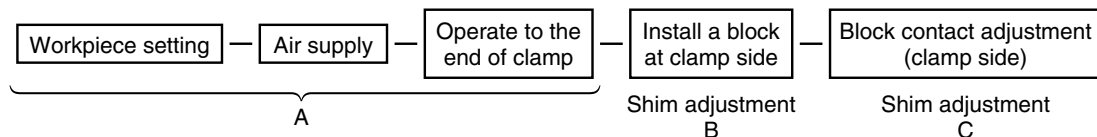
- 1) Use air filtered through a 5- $\mu$ m-element filter.
- 2) Before piping is connected to the slim-line power clamp cylinder it should be thoroughly flushed with air.
- 3) Only use the clamp arm in our catalog. Do not weld an arm to the cylinder.
- 4) Make sure to use a speed controller and adjust it to more than 1sec. when changing from clamping to unclamping (or vice versa).

### 2 Slim-line power clamp cylinder mounting

When clamping by using clamping force only  
Example)



#### Mounting process



#### Procedure

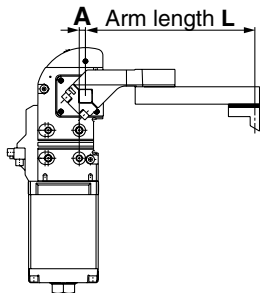
- A) Place the workpiece, supply air at clamp side without installing clamping block, operate the clamp arm to the end of clamp.
- B) Under the above conditions, adjust shim so that the space between the workpiece and the clamping block is about 0 mm. Theoretically there is no clamping force for holding a workpiece under this condition.
- C) In order to generate clamping force from the state described in step B, insert additional shim. The thickness of the shim differs depending on the arm length and pressure, so please refer to the graph on pages 2 and 3 as a guide. About 10% error may occur due to the difference in tolerance of the power clamp cylinder body.

# Model Selection

## 2 Slim-line power clamp cylinder mounting

### Relation between shim thickness and clamping force

Note) When a shim that exceeds the clamping force peak plotted on the graph is inserted, the self-locking mechanism doesn't work.  
Insert a shim with appropriate thickness.

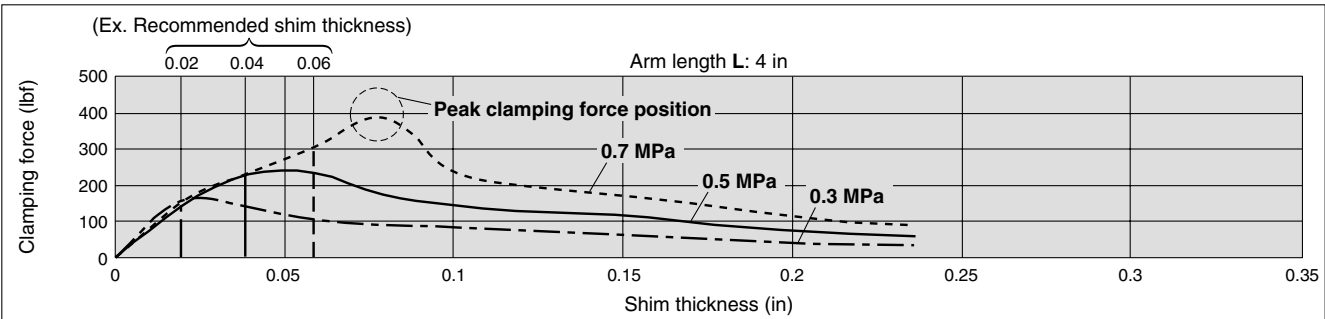
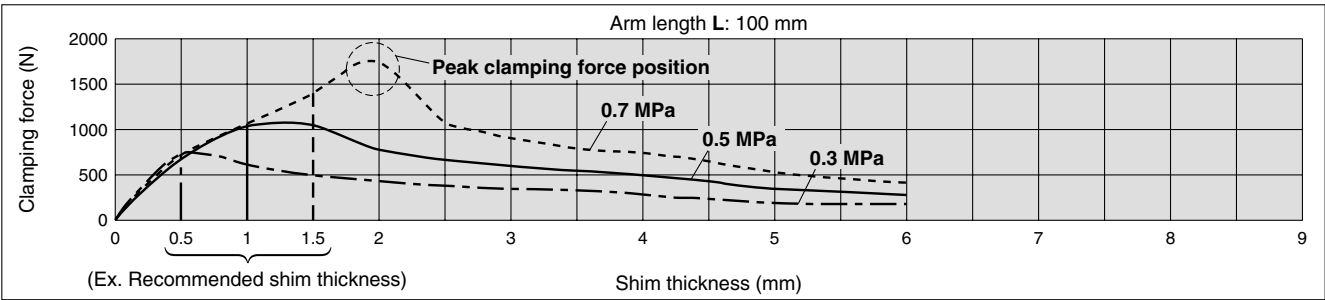


\* Arm length “L” indicates the distance between the clamp arm shaft and the clamping position.  
For distance “A” between knock positioning pinhole and clamp arm shaft, refer to the Table 1.

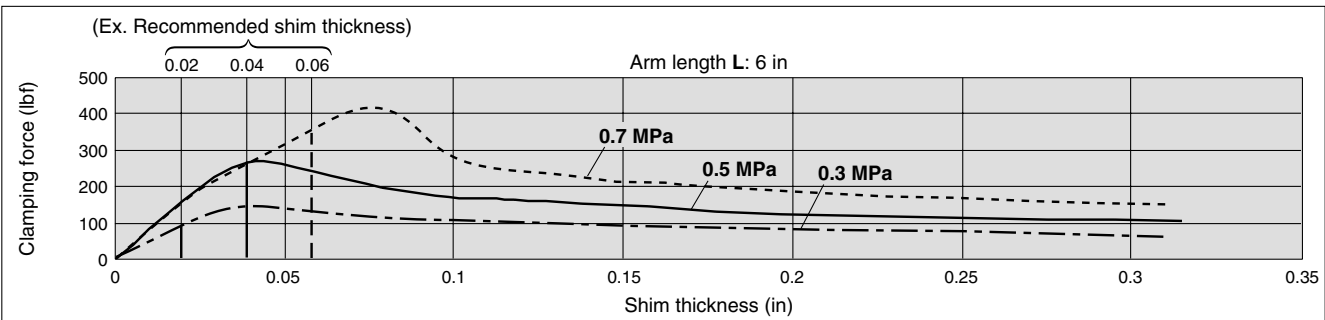
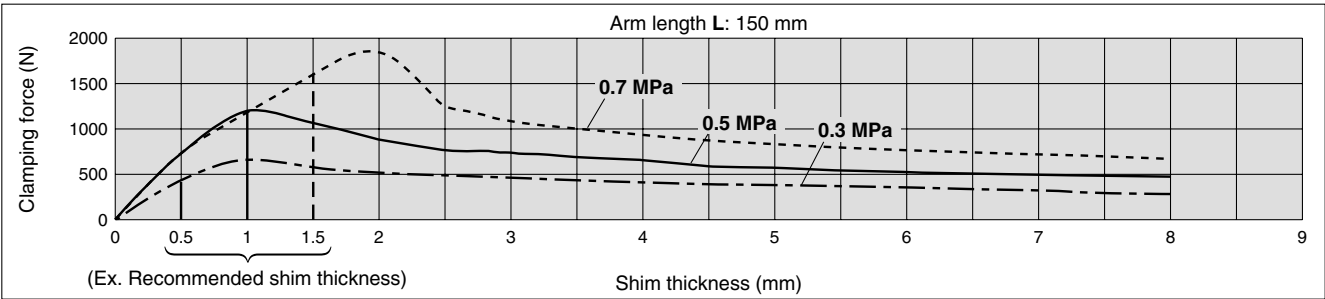
Table 1

| Model  | A  |
|--------|----|
| CKZT40 | 0  |
| CKZT50 | 5  |
| CKZT63 | 10 |
| CKZT80 | 15 |

ø40

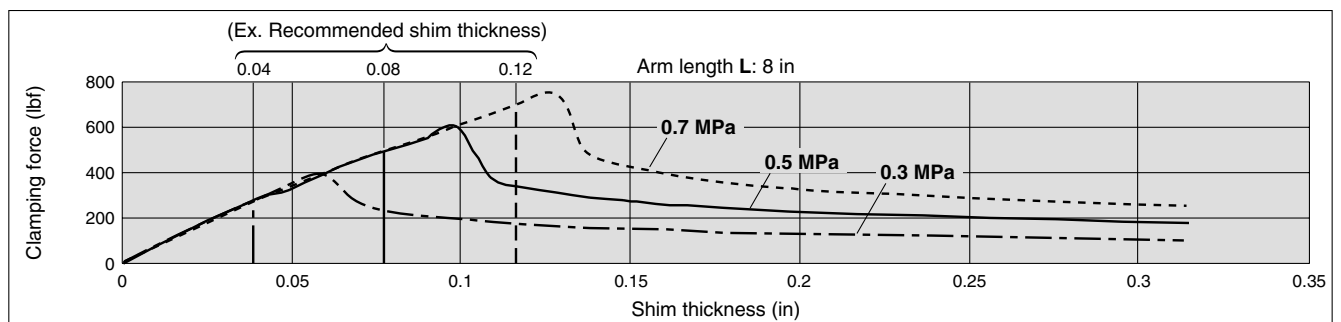
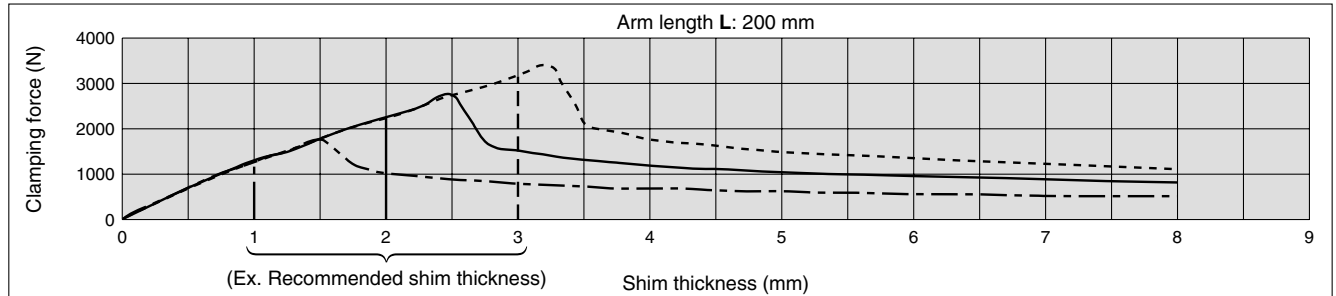


ø50

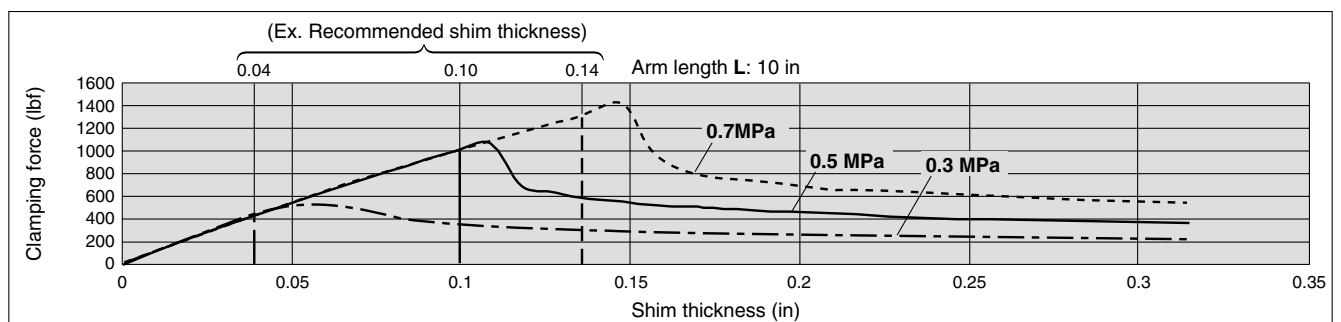
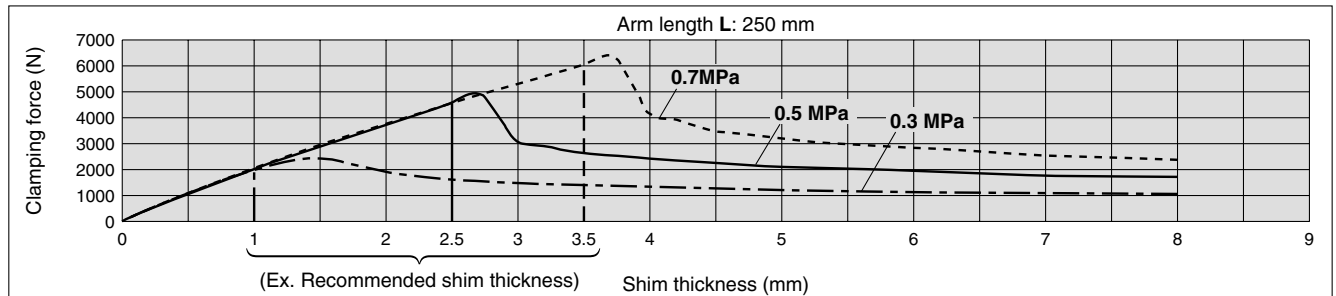


## 2 Slim-line power clamp cylinder mounting

ø63



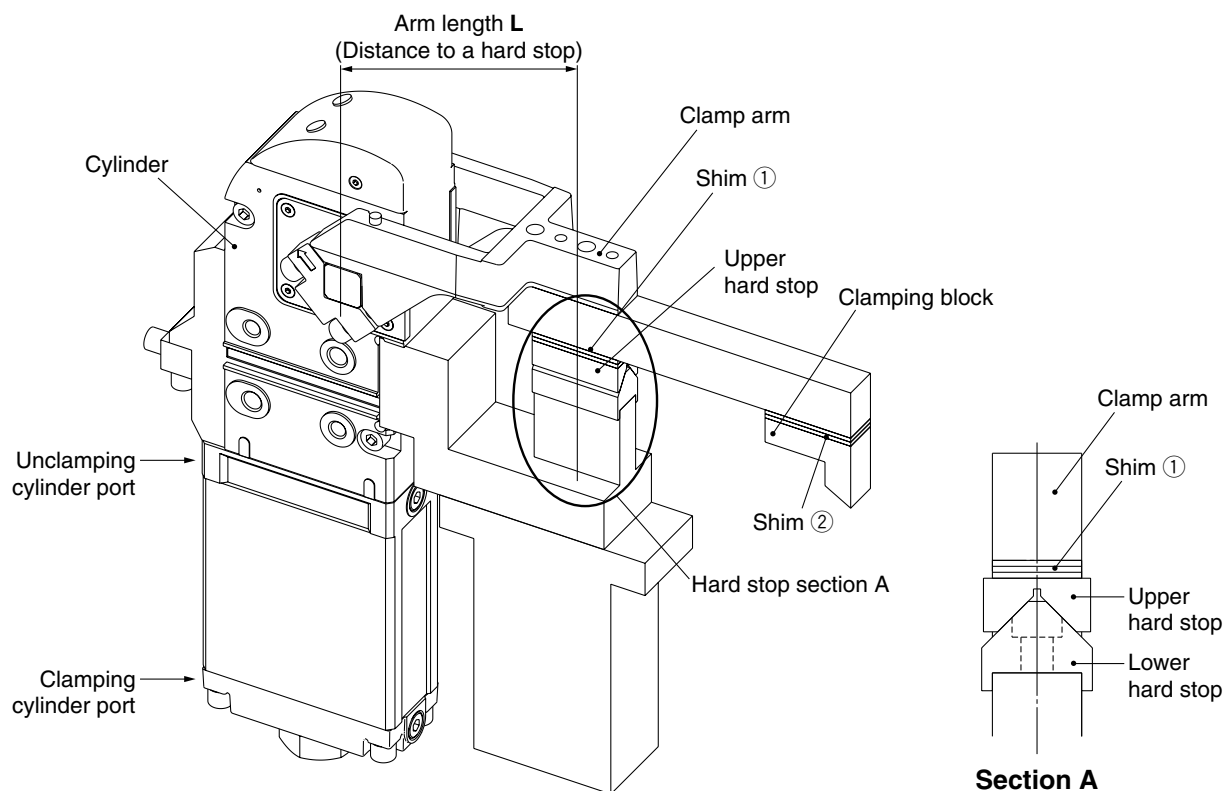
ø80



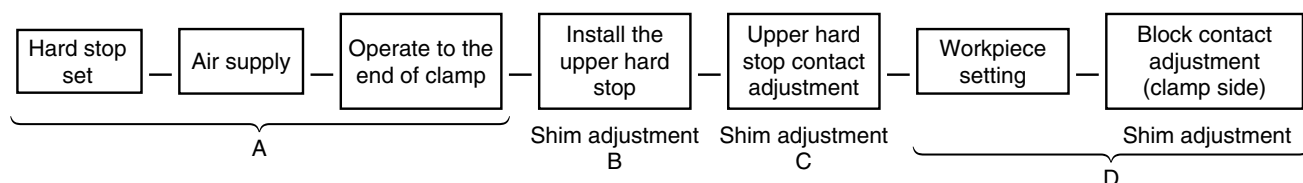
# Model Selection

## 2 Slim-line power clamp cylinder mounting

When using a hard stop



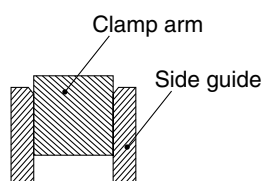
### Mounting process



### Procedure

- Supply air at clamp side without installation of upper hard stop, and operate the clamp arm to the end of clamp.
- Under the above conditions, adjust shim ① so that the space between the upper hard stop and the lower hard stop is about 0 mm. Theoretically there is no clamping force to the lower hard stop under this condition.
- In order to generate clamping force from the state described in step B, insert additional shim. The thickness of the shim differs depending on the arm length and pressure, so please refer to the graph on pages 2 and 3 as a guide. About 10% error may occur due to the difference in tolerance of the power clamp cylinder body.
- Under the state described in step C, adjust shim ② so there is contact between the clamping block and the workpiece.

### When using the side guide



### Precautions

When using the side guide to the clamp arm to prevent lateral motion, make sure not to apply a lateral load or galling to the clamp arm.

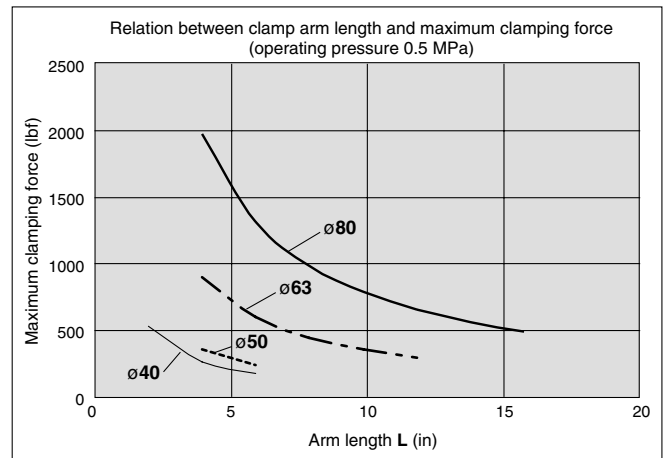
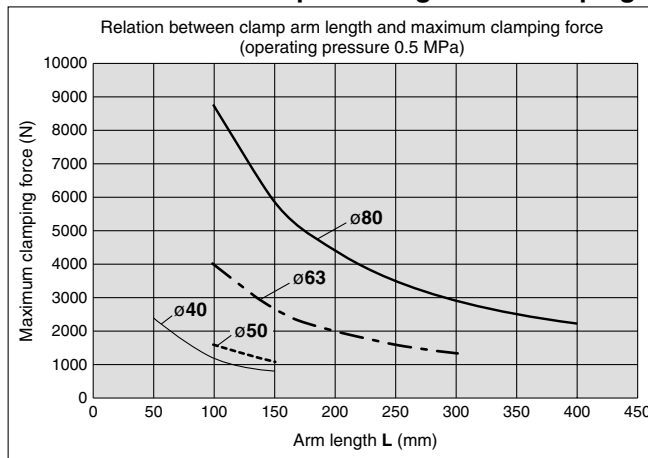
## 3 Clamp arm

Use the clamp arm in the catalog.

The length of the clamp arm “L” should be the length given below or less.

| Model         | Arm length L |
|---------------|--------------|
| <b>CKZT40</b> | 150 mm       |
| <b>CKZT50</b> | 150 mm       |
| <b>CKZT63</b> | 300 mm       |
| <b>CKZT80</b> | 400 mm       |

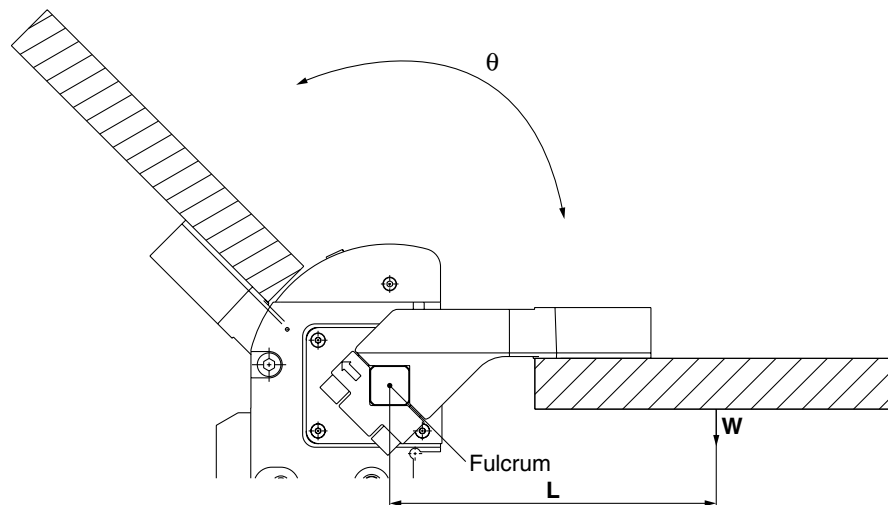
### Relation between clamp arm length and clamping force



### Allowable load for clamp arm end

Refer to the graph on pages 6 and 7 for parts weight of the arm.

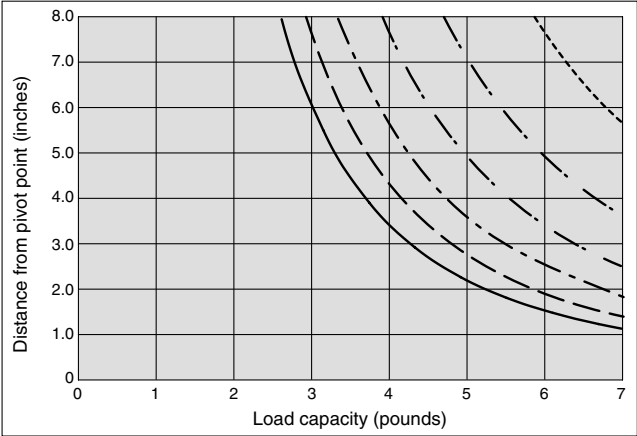
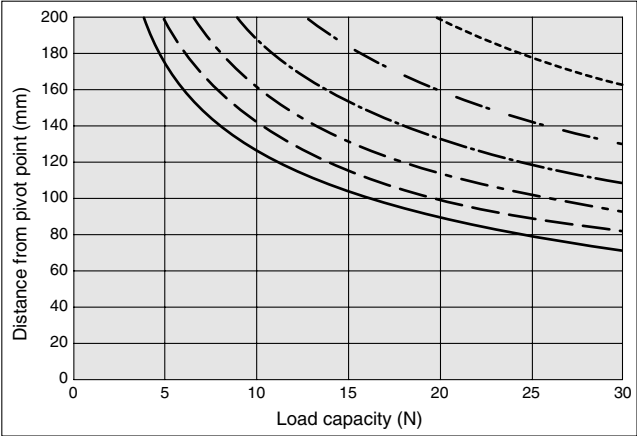
Use within the allowable arm end load range according to the distance “L” from the fulcrum to the mounting tool’s center position and the arm opening angle “ $\theta$ ”.



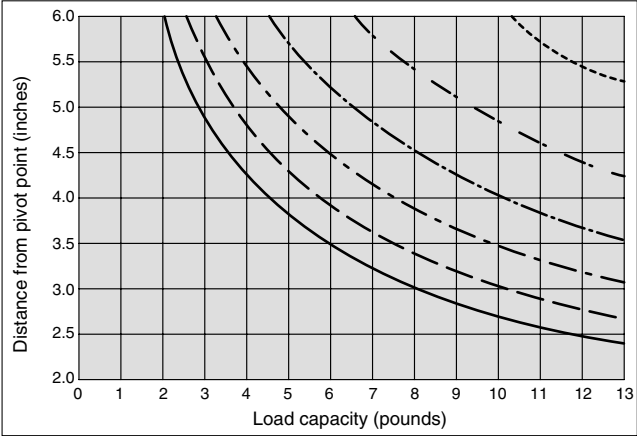
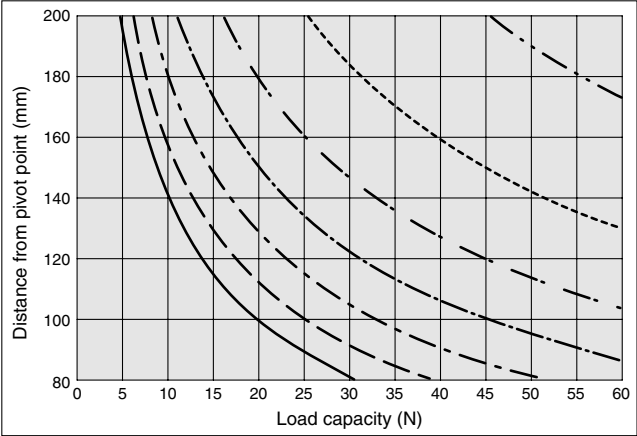
# Model Selection

## 3 Clamp arm

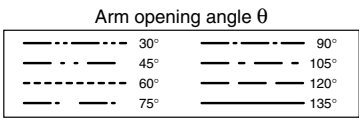
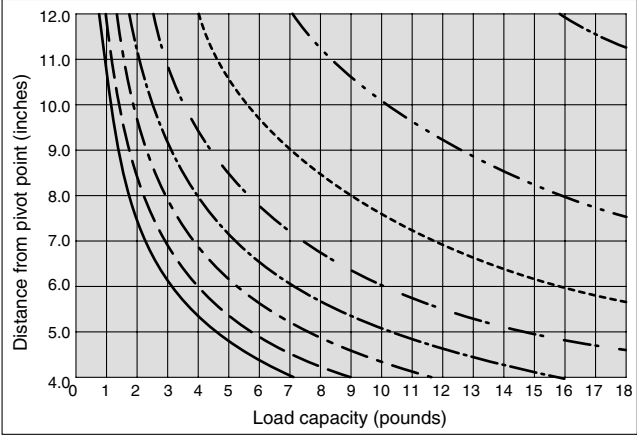
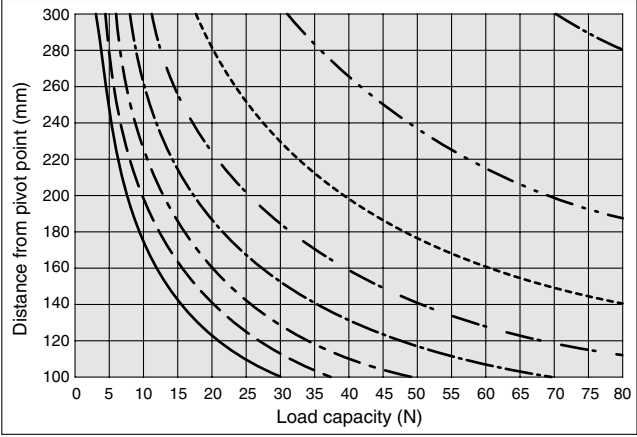
ø40



ø50

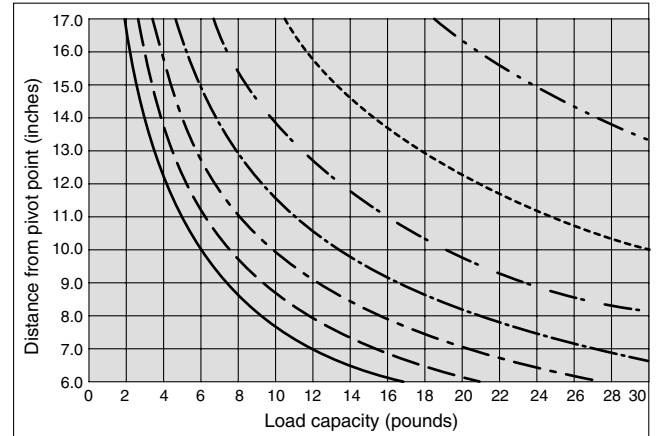
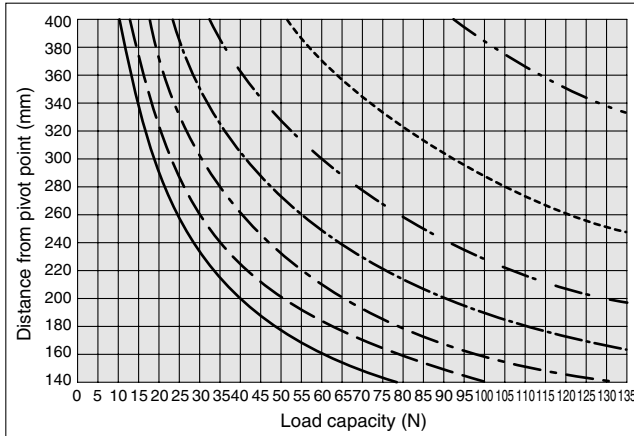


ø63



## 3 Clamp arm

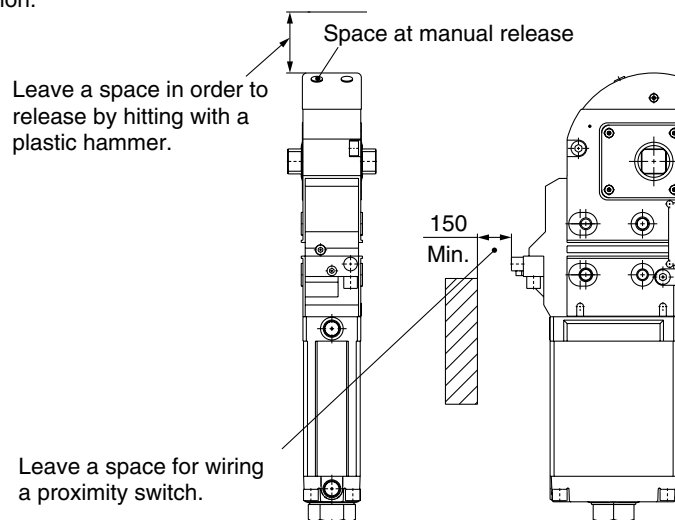
ø80



| Arm opening angle $\theta$ |      |
|----------------------------|------|
| ---                        | 30°  |
| - - -                      | 45°  |
| ----                       | 60°  |
| - . -                      | 75°  |
| ----                       | 90°  |
| - - -                      | 105° |
| ----                       | 120° |
| ----                       | 135° |

## 4 Space in design

Leave a space in the below position.



# Power Clamp Cylinder

## Series *CKZT*

ø40, ø50, ø63, ø80



### How to Order

#### Clamp Cylinder (Without Arm)

**CKZT 63 TN - 120 T**

- Power clamp cylinder European type
- Bore size
 

|    |     |
|----|-----|
| 40 | ø40 |
| 50 | ø50 |
| 63 | ø63 |
| 80 | ø80 |
- Cylinder port
 

|     |     |
|-----|-----|
| Nil | G   |
| TN  | NPT |
- Switch type
 

|   |       |
|---|-------|
| T | TURCK |
| P | P&F   |
- Arm mounting position
 

|     |      |
|-----|------|
| 30  | 30°  |
| 45  | 45°  |
| 60  | 60°  |
| 75  | 75°  |
| 90  | 90°  |
| 105 | 105° |
| 120 | 120° |
| 135 | 135° |

#### Clamp Arm (40)

**CKZT 40 - A015 C S**

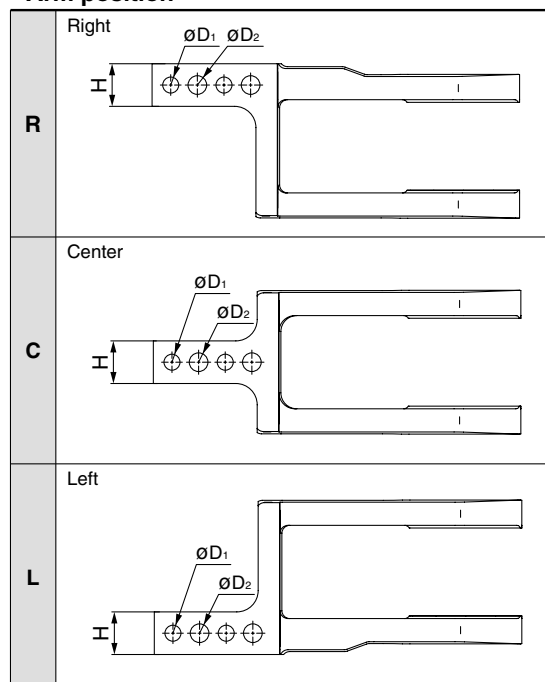
- Power clamp cylinder European type
- Bore size
 

|    |     |
|----|-----|
| 40 | ø40 |
|----|-----|
- Offset
 

|      |           |
|------|-----------|
| A015 | Offset 15 |
| A045 | Offset 45 |
- Mounting hole
 

| Symbol | D <sub>1</sub> | D <sub>2</sub> | H  |
|--------|----------------|----------------|----|
| S*     | 6              | 7              | 16 |
| B      | 8              | 10.2           | 20 |

\* For A015, S type only
- Arm position



How to Order

Clamp Cylinder (50, 63, 80)

**CKZT 63 - A015 C S**

Power clamp cylinder  
European type

**Bore size**

|           |     |
|-----------|-----|
| <b>50</b> | ø50 |
| <b>63</b> | ø63 |
| <b>80</b> | ø80 |

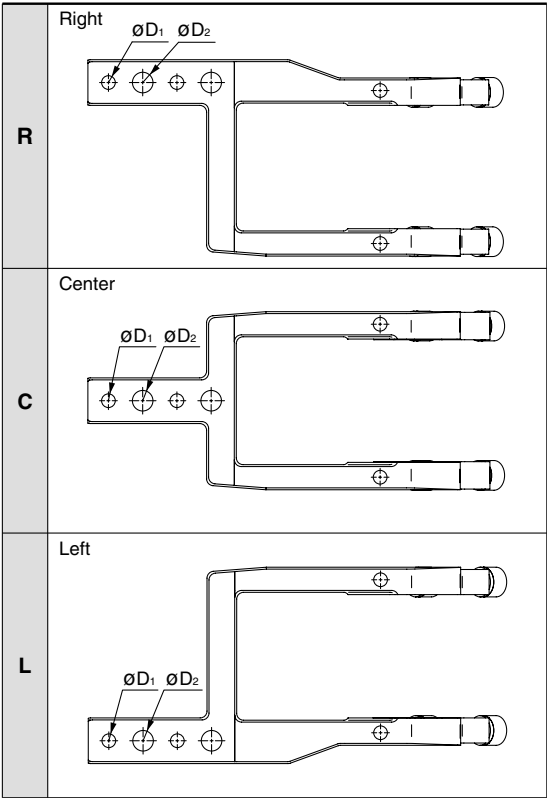
**Offset**

|             |           |
|-------------|-----------|
| <b>A015</b> | Offset 15 |
| <b>A045</b> | Offset 45 |

**Mounting hole**

| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

**Arm position**



# Series CKZT

## Cylinder Specifications

| Bore size (mm)                | 40                                                    | 50 | 63 | 80 |
|-------------------------------|-------------------------------------------------------|----|----|----|
| Action                        | Double acting                                         |    |    |    |
| Fluid                         | Air                                                   |    |    |    |
| Proof pressure                | 1.2 MPa (174 psi)                                     |    |    |    |
| Max. operating pressure       | 0.8 MPa (116 psi)                                     |    |    |    |
| Min. operating pressure       | 0.3 MPa (44 psi)                                      |    |    |    |
| Ambient and fluid temperature | -10 to 60°C (14 to 140°F)                             |    |    |    |
| Cushion                       | Clamping side: None<br>Unclamping side: Rubber bumper |    |    |    |
| Min. operating time           | 1.0 second to clamp, 1.0 second to unclamp            |    |    |    |

## Weight (Cylinder Without Arm)

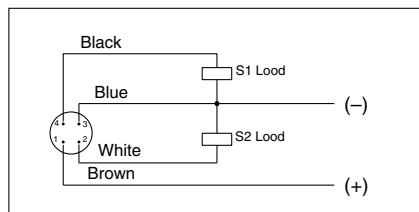
| Bore size (mm) | Arm angle     |               |               |               |               |               |               |               | Unit: kg (lbs) |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
|                | 30°           | 45°           | 60°           | 75°           | 90°           | 105°          | 120°          | 135°          |                |
| 40             | 1.57 (3.45)   | 1.57 (3.45)   | 1.57 (3.45)   | 1.57 (3.45)   | 1.56 (3.43)   | 1.56 (3.43)   | 1.56 (3.43)   | 1.56 (3.43)   |                |
| 50             | 5.21 (11.46)  | 5.19 (11.42)  | 5.17 (11.37)  | 5.15 (11.33)  | 5.12 (11.26)  | 5.09 (11.20)  | 5.07 (11.15)  | 5.06 (11.13)  |                |
| 63             | 7.37 (16.21)  | 7.34 (16.15)  | 7.31 (16.08)  | 7.28 (16.02)  | 7.24 (15.93)  | 7.21 (15.86)  | 7.18 (15.80)  | 7.16 (15.75)  |                |
| 80             | 17.20 (37.84) | 17.13 (37.69) | 17.07 (37.55) | 17.00 (37.40) | 16.93 (37.25) | 16.86 (37.09) | 16.80 (36.96) | 16.76 (36.87) |                |

## Switch Specifications

| Manufacturer            | TURCK                                         | P&F                                           |
|-------------------------|-----------------------------------------------|-----------------------------------------------|
| Operating range         | 2 mm ± 10%                                    | 2 mm ± 10%                                    |
| Supply voltage          | 10 to 30 VDC                                  | 10 to 30 VDC                                  |
| Output                  | N.O., PNP                                     | N.O., PNP                                     |
| Continuous load current | 150 mA                                        | 100 mA                                        |
| Response frequency      | 30 Hz                                         | 25 Hz                                         |
| Housing material        | PBT-GP30                                      | PA6, PBT                                      |
| Output indication       | Clamping side: Red<br>Unclamping side: Yellow | Clamping side: Red<br>Unclamping side: Yellow |
| Voltage indication      | Green                                         | Green                                         |

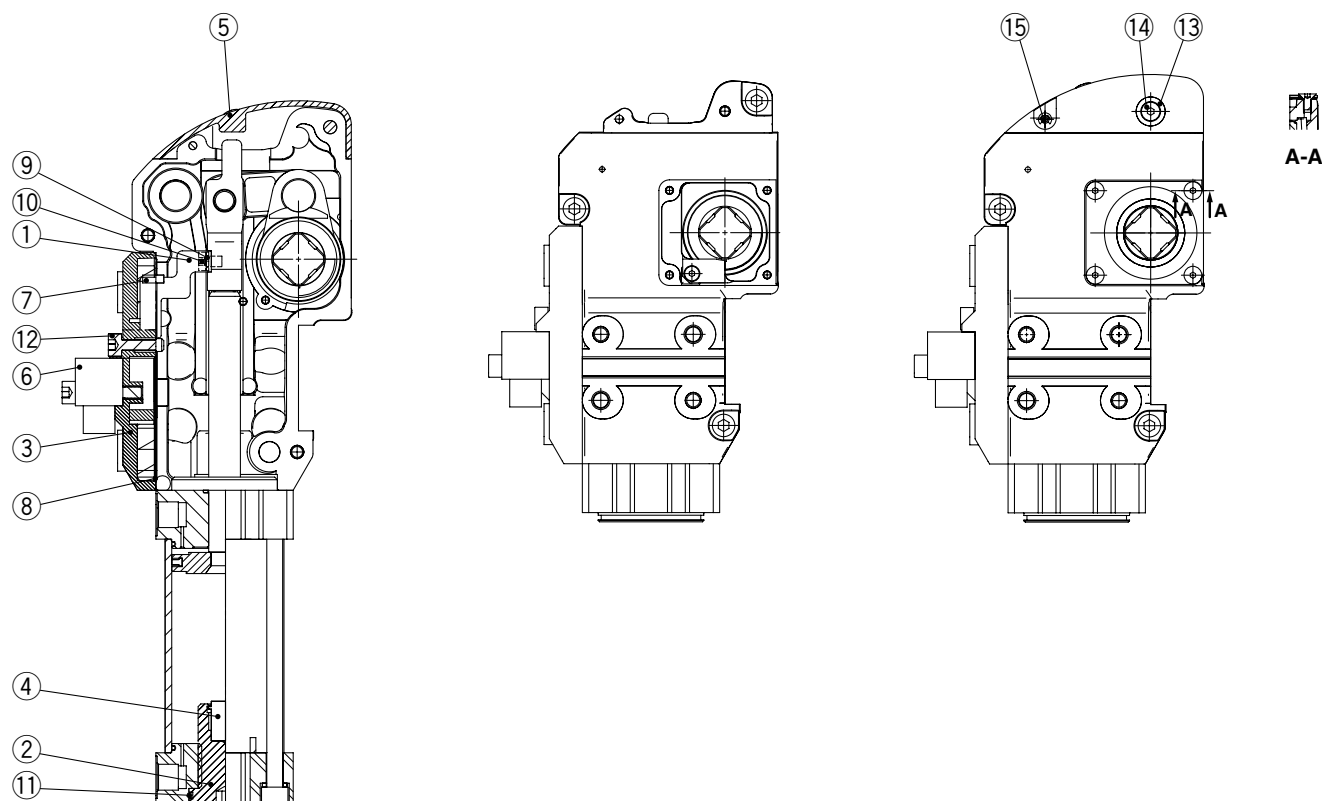
Note) Switch specifications are corresponding to manufacturer's technical information.

## Wiring Diagram



Note) Both TURCK and P&F are common.

**Construction (40)**



**Replaceable Kits List**

| Description                            | Bore size (mm) | Kit no.                                                | Contents                                                                                       |
|----------------------------------------|----------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Switch cassette                        | 40             | CKZT-S040 <sup>T</sup> <sub>P</sub> <sup>Note 1)</sup> | ③ Switch holder<br>⑥ Proximity switch<br>⑦ Parallel pin<br>⑧ Sheet gasket<br>⑫ Cover cap screw |
| Kits for changing opening angle of arm | 40             | CKZT-D040□ <sup>Note 2)</sup>                          | ① Stay<br>⑨ Spring washer<br>⑩ Socket head cap screw                                           |
|                                        |                | CKZT-B040□ <sup>Note 2)</sup>                          | ② Stopper bolt<br>④ Bumper<br>⑪ O ring                                                         |
|                                        |                | CKZT-K040□ <sup>Note 2)</sup>                          | CKZT-D040□<br>CKZT-B040□                                                                       |
| Top cover kits                         | 40             | CKZT-T040                                              | ⑤ Top cover<br>⑬ Spacer<br>⑭ Short head cap screw<br>⑮ Seal washer                             |

Note 1) T = TURCK, P = P&F

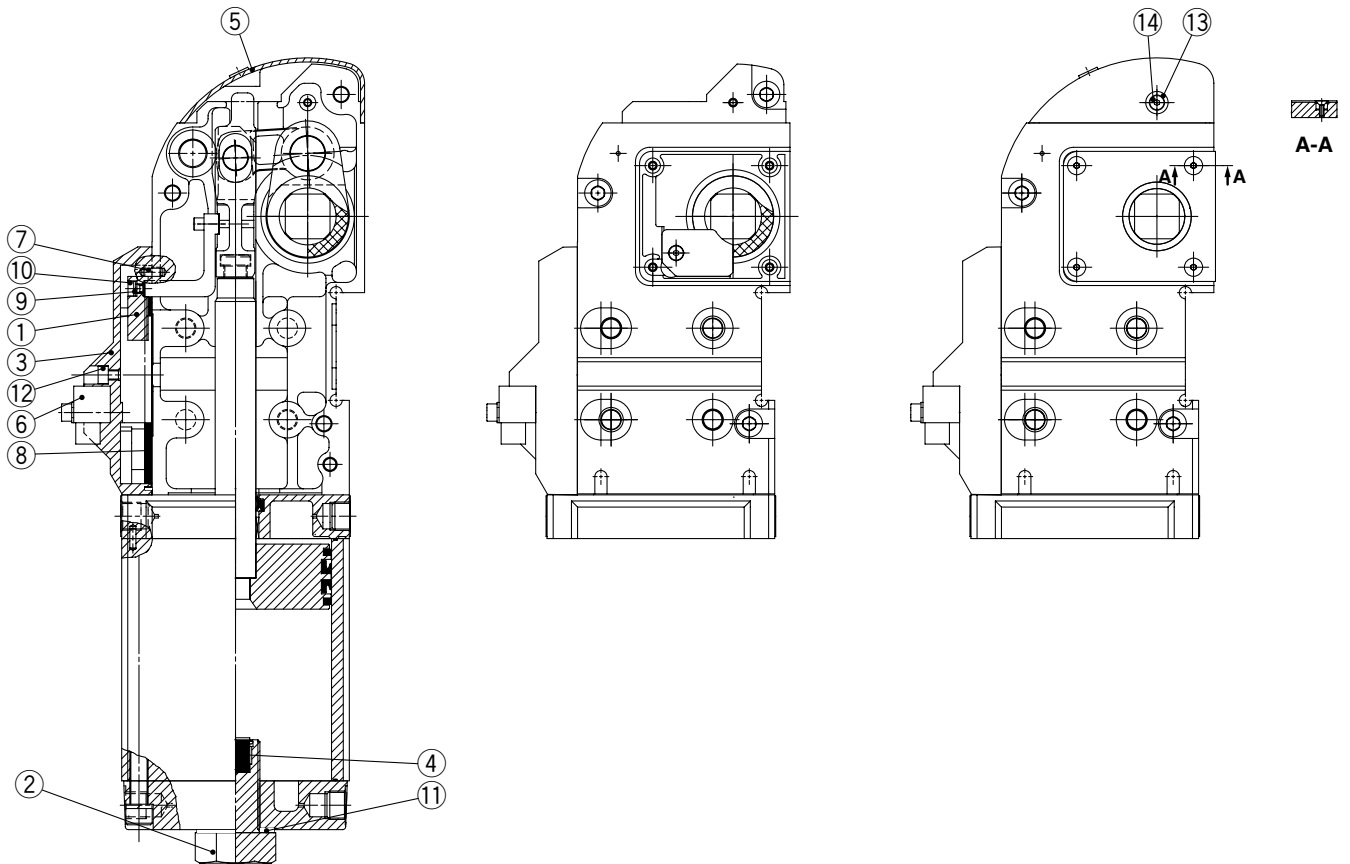
Note 2) Please specify the opening angle by the code in Table 1.

**Table 1**

| Opening angle | Code |
|---------------|------|
| 30°           | H    |
| 45°           | G    |
| 60°           | F    |
| 75°           | E    |
| 90°           | D    |
| 105°          | C    |
| 120°          | B    |
| 135°          | A    |

# Series CKZT

## Construction (50, 63, 80)



### Replaceable Kits List

| Description                            | Bore size (mm) | Kit no.                                      | Contents                                                        |
|----------------------------------------|----------------|----------------------------------------------|-----------------------------------------------------------------|
| Switch cassette                        | 50             | CKZ1N-S050 <sup>T</sup> Note 1) <sub>P</sub> | ③ Switch holder<br>⑥ Proximity switch                           |
|                                        | 63             | CKZ1N-S063 <sup>T</sup> Note 1) <sub>P</sub> | ⑦ Parallel pin<br>⑧ Sheet gasket                                |
|                                        | 80             | CKZ1N-S080 <sup>T</sup> Note 1) <sub>P</sub> | ⑫ Cover cap screw                                               |
| Kits for changing opening angle of arm | 50             | CKZN-D050□ <sup>Note 2)</sup>                | ① Switch actuator<br>⑨ Spring washer<br>⑩ Socket head cap screw |
|                                        |                | CKZN-B050□ <sup>Note 2)</sup>                | ② Stopper bolt<br>④ Bumper<br>⑪ Seal washer                     |
|                                        |                | CKZN-K050□ <sup>Note 2)</sup>                | CKZ1N-D050□<br>CKZN-B050□                                       |
|                                        | 63             | CKZN-D063□ <sup>Note 2)</sup>                | ① Switch actuator<br>⑨ Spring washer<br>⑩ Socket head cap screw |
|                                        |                | CKZN-B063□ <sup>Note 2)</sup>                | ② Stopper bolt<br>④ Bumper<br>⑪ Seal washer                     |
|                                        |                | CKZN-K063□ <sup>Note 2)</sup>                | CKZ1N-D063□<br>CKZN-B063□                                       |
|                                        | 80             | CKZN-D080□ <sup>Note 2)</sup>                | ① Switch actuator<br>⑨ Spring washer<br>⑩ Socket head cap screw |
|                                        |                | CKZN-B080□ <sup>Note 2)</sup>                | ② Stopper bolt<br>④ Bumper<br>⑪ Seal washer                     |
|                                        |                | CKZN-K080□ <sup>Note 2)</sup>                | CKZ1N-D080□<br>CKZN-B080□                                       |
| Top cover kits                         | 50             | CKZ2N-T050                                   | ⑤ Top cover                                                     |
|                                        | 63             | CKZ2N-T063                                   | ⑬ Spacer                                                        |
|                                        | 80             | CKZ2N-T080                                   | ⑭ Short head cap screw                                          |

Table 1

| Opening angle | Code |
|---------------|------|
| 30°           | H    |
| 45°           | G    |
| 60°           | F    |
| 75°           | E    |
| 90°           | D    |
| 105°          | C    |
| 120°          | B    |
| 135°          | A    |

Note 1) T = TURCK, P = P&F

Note 2) Please specify the opening angle by the code in Table 1.

## Allowable Locking Moment

| Bore size (mm) | Allowable locking moment |        |
|----------------|--------------------------|--------|
|                | N·m                      | lbf·in |
| <b>40</b>      | 380                      | 3363   |
| <b>50</b>      | 800                      | 7080   |
| <b>63</b>      | 1500                     | 13274  |
| <b>80</b>      | 2500                     | 22124  |

\* The moment when the clamp arm is locked at the time of air release in the clamped state.

## Maximum Clamping Moment

| Bore size (mm) | Max. clamping force |        |         |        |         |        |         |        |         |        |         |        |
|----------------|---------------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|                | 0.3 MPa             |        | 0.4 MPa |        | 0.5 MPa |        | 0.6 MPa |        | 0.7 MPa |        | 0.8 MPa |        |
|                | N·m                 | lbf·in | N·m     | lbf·in | N·m     | lbf·in | N·m     | lbf·in | N·m     | lbf·in | N·m     | lbf·in |
| <b>40</b>      | 35                  | 310    | 76      | 673    | 118     | 1044   | 154     | 1363   | 178     | 1575   | 194     | 1717   |
| <b>50</b>      | 100                 | 885    | 130     | 1150   | 160     | 1416   | 190     | 1681   | 220     | 1947   | 250     | 2212   |
| <b>63</b>      | 300                 | 2655   | 350     | 3097   | 400     | 3540   | 450     | 3982   | 500     | 4425   | 550     | 4867   |
| <b>80</b>      | 560                 | 4956   | 720     | 6372   | 880     | 7788   | 1040    | 9204   | 1200    | 10619  | 1360    | 12035  |

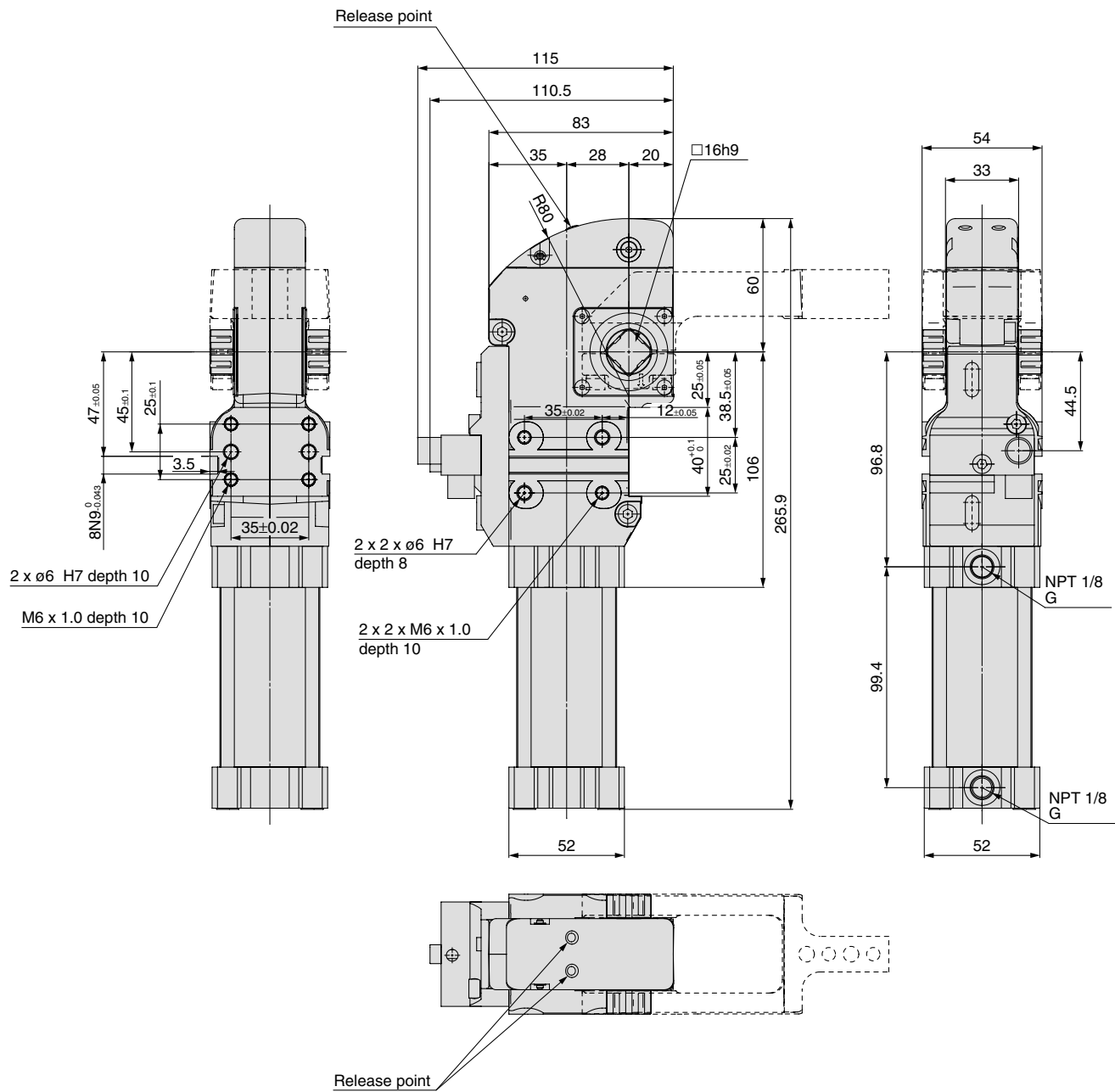
## Cylinder Stroke

| Unit: (mm)         |      |      |      |      |      |       |       |       |  |
|--------------------|------|------|------|------|------|-------|-------|-------|--|
| Angle<br>Bore size | 30°  | 45°  | 60°  | 75°  | 90°  | 105°  | 120°  | 135°  |  |
| <b>40</b>          | 26.8 | 33.3 | 39.6 | 45.9 | 52.3 | 58.4  | 63.6  | 67.3  |  |
| <b>50</b>          | 31.1 | 38.9 | 46.4 | 54.1 | 61.9 | 69.6  | 76.4  | 81.3  |  |
| <b>63</b>          | 34.1 | 42.5 | 50.5 | 58.6 | 66.8 | 74.7  | 81.5  | 86.3  |  |
| <b>80</b>          | 47.3 | 59.4 | 71.1 | 83.2 | 95.7 | 108.0 | 119.1 | 127.3 |  |

# Series CKZT

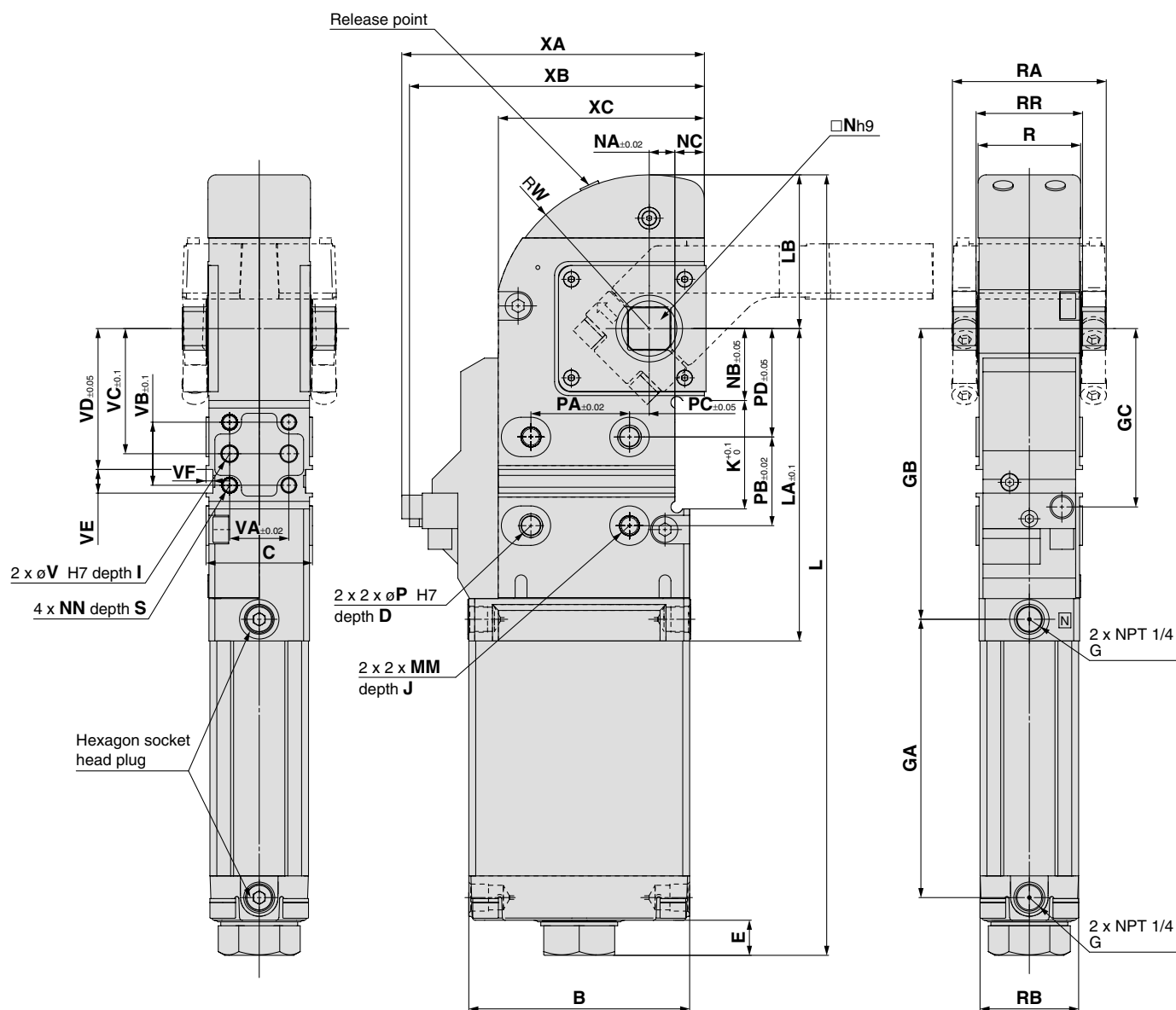
## Dimensions (Clamp Cylinder Without Arm)

### CKZT40



# Dimensions (Clamp Cylinder Without Arm)

CKZT50, 63, 80



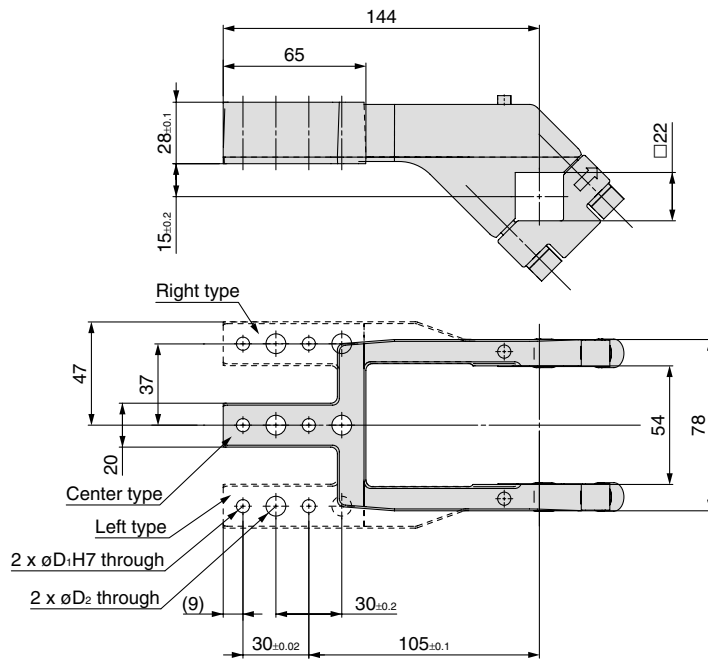
| Bore size (mm) | B   | C  | D  | E    | GA    | GB    | GC    | I  | J  | K  | L     | LA    | LB    | MM         | N  | NA | NB   | NC   | NN        | P  |
|----------------|-----|----|----|------|-------|-------|-------|----|----|----|-------|-------|-------|------------|----|----|------|------|-----------|----|
| 50             | 95  | 48 | 12 | 13.7 | 134.3 | 138.5 | 93    | 10 | 12 | 55 | 376.4 | 149.5 | 78.4  | M10 x 1.5  | 19 | 13 | 36.5 | 10.3 | M8 x 1.25 | 10 |
| 63             | 112 | 54 | 12 | 16.6 | 141.2 | 147.5 | 90.5  | 10 | 12 | 55 | 395.6 | 158.5 | 78    | M10 x 1.5  | 22 | 13 | 36.5 | 15.8 | M8 x 1.25 | 10 |
| 80             | 154 | 76 | 13 | 19.6 | 185.8 | 199   | 137.5 | 12 | 18 | 80 | 530.9 | 214   | 113.7 | M12 x 1.75 | 30 | 21 | 50   | 20.8 | M10 x 1.5 | 12 |

| Bore size (mm) | PA | PB | PC | PD | R  | RA  | RB | RR | S  | V | VA | VB | VC   | VD   | VE | VF  | W     | XA    | XB    | XC    |
|----------------|----|----|----|----|----|-----|----|----|----|---|----|----|------|------|----|-----|-------|-------|-------|-------|
| 50             | 50 | 45 | 10 | 55 | 45 | 68  | 45 | 48 | 11 | 8 | 30 | 32 | 63.5 | 71.5 | 12 | 3.5 | 78.4  | 141.8 | 137.3 | 92.8  |
| 63             | 50 | 45 | 10 | 55 | 52 | 78  | 50 | 54 | 11 | 8 | 30 | 32 | 63.5 | 71.5 | 12 | 3.5 | 78    | 154.4 | 150.4 | 105.3 |
| 80             | 70 | 75 | 15 | 65 | 70 | 108 | 68 | 76 | 15 | 8 | 50 | 50 | 90   | 96.5 | 12 | 3.5 | 113.7 | 197.3 | 192.8 | 148.3 |



## Dimensions (Clamp Arm: Offset 15)

Ø63



### How to Order

**CKZT63—A015** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

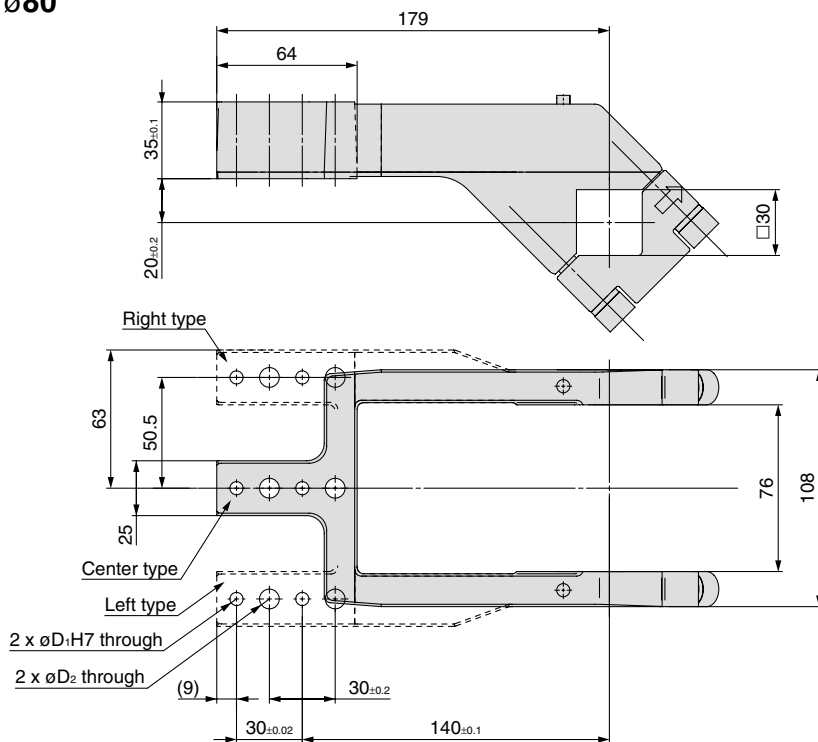
#### Mounting hole

| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

#### Weight

|                      | kg (lbs)    |
|----------------------|-------------|
| <b>CKZT63-A015CS</b> | 1.02 (2.25) |
| <b>CKZT63-A015CB</b> | 1.01 (2.23) |
| <b>CKZT63-A015RS</b> | 1.10 (2.43) |
| <b>CKZT63-A015RB</b> | 1.08 (2.38) |
| <b>CKZT63-A015LS</b> | 1.10 (2.43) |
| <b>CKZT63-A015LB</b> | 1.08 (2.38) |

Ø80



### How to Order

**CKZT80—A015** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

#### Mounting hole

| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

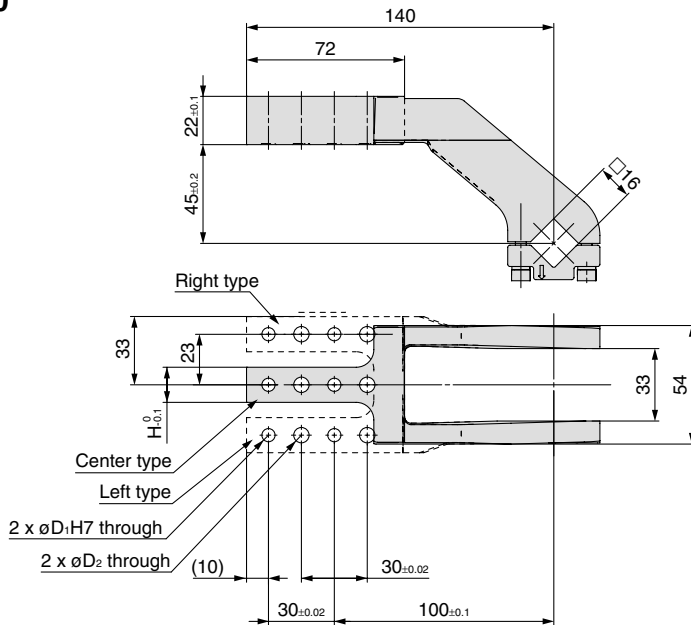
#### Weight

|                      | kg (lbs)    |
|----------------------|-------------|
| <b>CKZT80-A015CS</b> | 2.17 (4.78) |
| <b>CKZT80-A015CB</b> | 2.16 (4.76) |
| <b>CKZT80-A015RS</b> | 2.21 (4.87) |
| <b>CKZT80-A015RB</b> | 2.19 (4.83) |
| <b>CKZT80-A015LS</b> | 2.21 (4.87) |
| <b>CKZT80-A015LB</b> | 2.19 (4.83) |

# Series CKZT

## Dimensions (Clamp Arm: Offset 45)

ø40



### How to Order

**CKZT40—A045** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

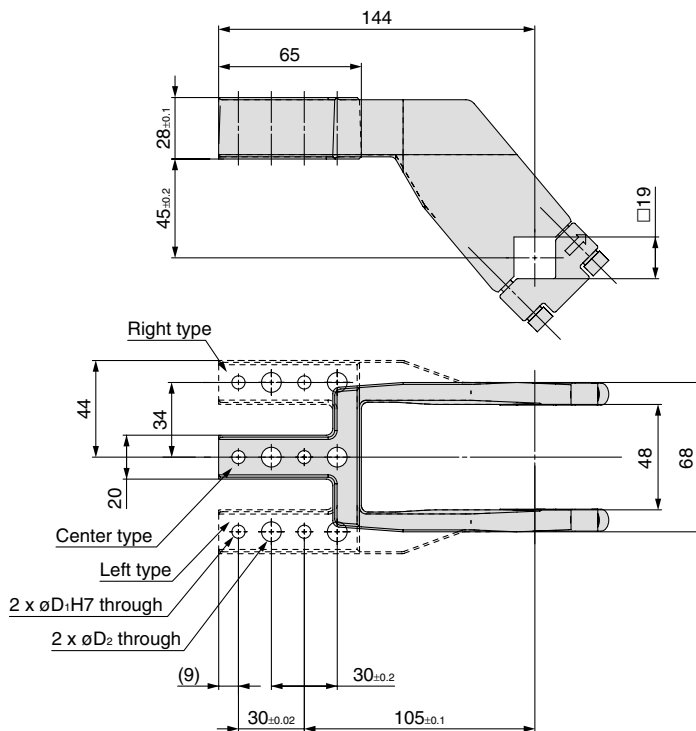
#### Mounting hole

| Symbol   | D <sub>1</sub> | D <sub>2</sub> | H  |
|----------|----------------|----------------|----|
| <b>S</b> | 6              | 7              | 16 |
| <b>B</b> | 8              | 10.2           | 20 |

#### Weight

|                      | kg (lbs)    |
|----------------------|-------------|
| <b>CKZT40-A045CS</b> | 0.63 (1.39) |
| <b>CKZT40-A045CB</b> | 0.64 (1.41) |
| <b>CKZT40-A045RS</b> | 0.64 (1.41) |
| <b>CKZT40-A045RB</b> | 0.66 (1.46) |
| <b>CKZT40-A045LS</b> | 0.64 (1.41) |
| <b>CKZT40-A045LB</b> | 0.66 (1.46) |

ø50



### How to Order

**CKZT50—A045** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

#### Mounting hole

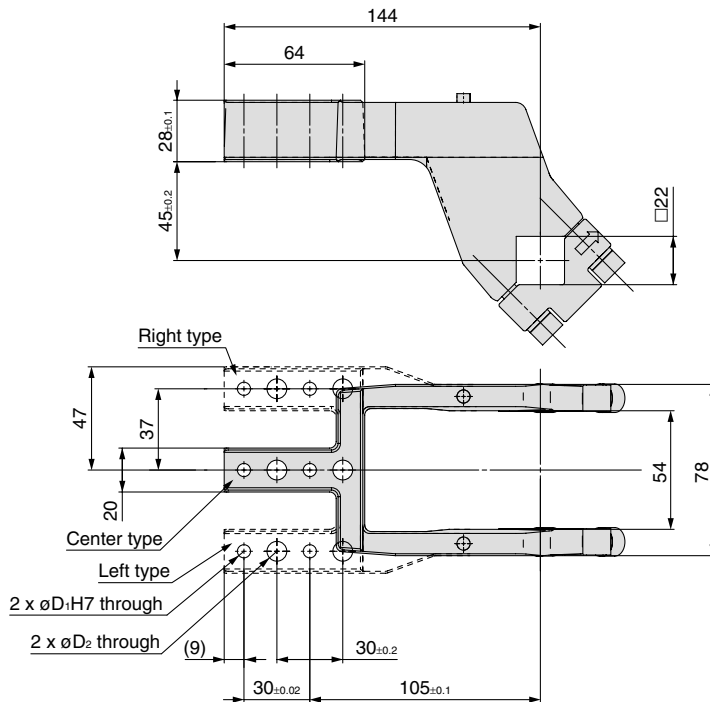
| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

#### Weight

|                      | kg (lbs)    |
|----------------------|-------------|
| <b>CKZT50-A045CS</b> | 0.93 (2.05) |
| <b>CKZT50-A045CB</b> | 0.92 (2.03) |
| <b>CKZT50-A045RS</b> | 1.02 (2.25) |
| <b>CKZT50-A045RB</b> | 1.01 (2.23) |
| <b>CKZT50-A045LS</b> | 1.02 (2.25) |
| <b>CKZT50-A045LB</b> | 1.01 (2.23) |

## Dimensions (Clamp Arm: Offset 45)

Ø63



### How to Order

**CKZT63—A045** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

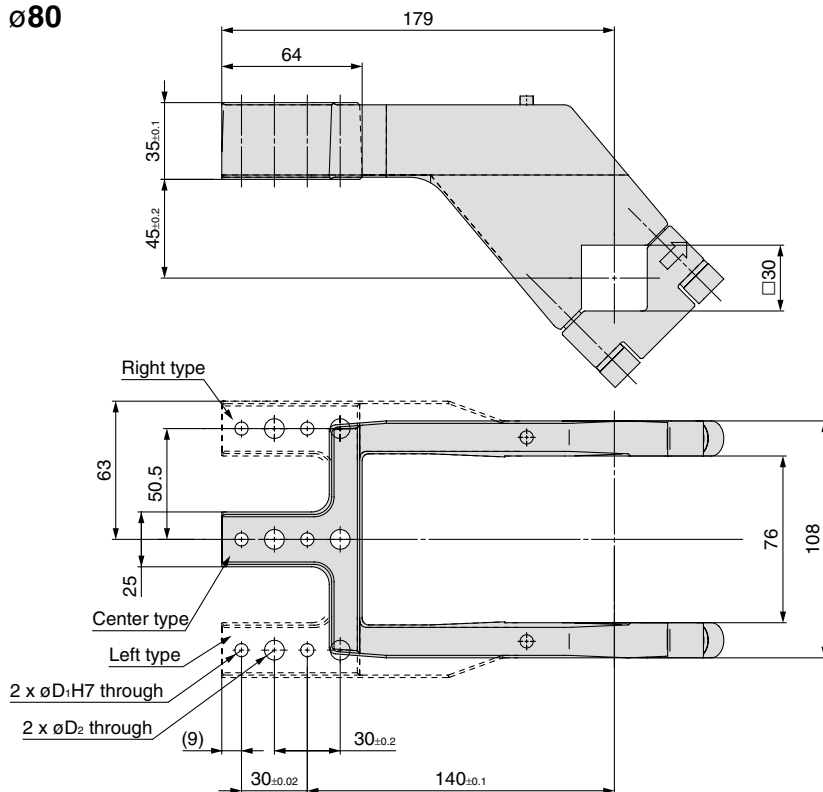
#### Mounting hole

| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

#### Weight kg (lbs)

|                      |             |
|----------------------|-------------|
| <b>CKZT63-A045CS</b> | 1.19 (2.62) |
| <b>CKZT63-A045CB</b> | 1.18 (2.60) |
| <b>CKZT63-A045RS</b> | 1.25 (2.76) |
| <b>CKZT63-A045RB</b> | 1.23 (2.71) |
| <b>CKZT63-A045LS</b> | 1.25 (2.76) |
| <b>CKZT63-A045LB</b> | 1.23 (2.71) |

Ø80



### How to Order

**CKZT80—A045** **C** **S**

#### Arm position

|          |        |
|----------|--------|
| <b>C</b> | Center |
| <b>R</b> | Right  |
| <b>L</b> | Left   |

#### Mounting hole

| Symbol   | D <sub>1</sub> | D <sub>2</sub> |
|----------|----------------|----------------|
| <b>S</b> | 6              | 9              |
| <b>B</b> | 8              | 10.2           |

#### Weight kg (lbs)

|                      |             |
|----------------------|-------------|
| <b>CKZT80-A045CS</b> | 2.46 (5.42) |
| <b>CKZT80-A045CB</b> | 2.44 (5.38) |
| <b>CKZT80-A045RS</b> | 2.61 (5.75) |
| <b>CKZT80-A045RB</b> | 2.59 (5.71) |
| <b>CKZT80-A045LS</b> | 2.61 (5.75) |
| <b>CKZT80-A045LB</b> | 2.59 (5.71) |

# Series CKZT Made to Order 1

Contact SMC for detailed dimensions, specifications and delivery.



## 1 Power clamp cylinder with metal cover



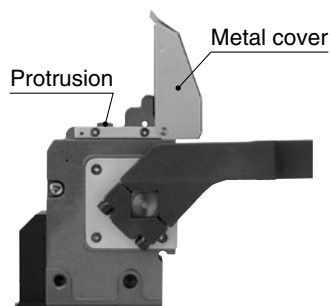
- Applicable model  
**CKZT40, 50, 63, 80**
- Applicable to Arc-melting-resistant line
- In addition to the existing rubber cover type, Opening/closing metal cover type is available for releasing part of the toggle construction.

### Cylinder Specifications

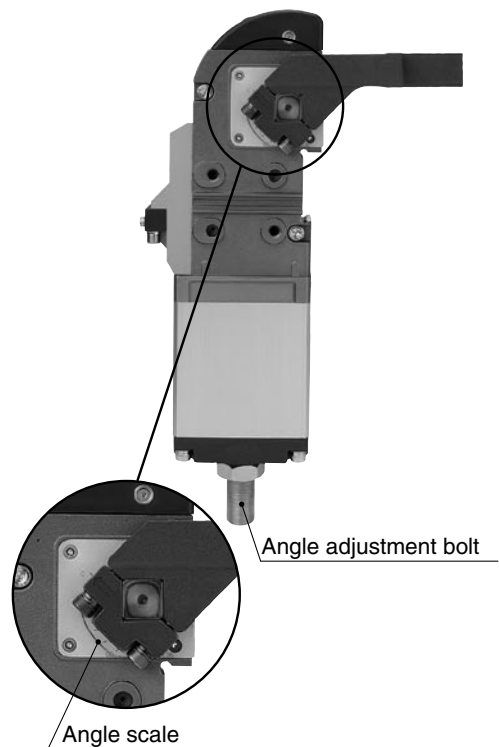
| Bore size (mm)                       | 50                                        | 63 | 80 |
|--------------------------------------|-------------------------------------------|----|----|
| <b>Angle</b>                         | 30°, 45°, 60°, 75°, 90°, 105°, 120°, 135° |    |    |
| <b>Cushion</b>                       | Unclamping side: Rubber bumper            |    |    |
| <b>Maximum operating pressure</b>    | 0.8 MPa (116 psi)                         |    |    |
| <b>Ambient and fluid temperature</b> | -10 to 60°C (14 to 140°F)                 |    |    |
| <b>Minimum operating time</b>        | 1.0 sec. to clamp, 1.0 sec. to unclamp    |    |    |

### Manual toggle release

The toggle link mechanism can be released easily by opening the metal cover and hitting the portion of the protrusion by using of plastic hammer (hammer made of soft material), etc.



## 2 Power clamp cylinder with angle adjustment



- Applicable model  
**CKZT40, 50, 63, 80**
- Unclamped opening angle can be adjusted by one process. (no need to adjust the proximity switch)
- Adjustable range: 30° to 135°
- With angle scale

### Cylinder Specifications

| Bore size (mm)                       | 40                                     | 50 | 63 | 80 |
|--------------------------------------|----------------------------------------|----|----|----|
| <b>Angle</b>                         | 30° to 135°                            |    |    |    |
| <b>Cushion</b>                       | Unclamping side: Rubber bumper         |    |    |    |
| <b>Maximum operating pressure</b>    | 0.8 MPa (116 psi)                      |    |    |    |
| <b>Ambient and fluid temperature</b> | -10 to 60°C (14 to 140°F)              |    |    |    |
| <b>Minimum operating time</b>        | 1.0 sec. to clamp, 1.0 sec. to unclamp |    |    |    |

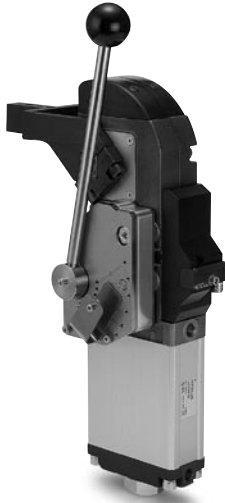
# Series CKZT

## Made to Order 2

Contact SMC for detailed dimensions, specifications and delivery.



### 3 Power clamp cylinder with manually operated handle

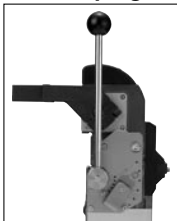


- Applicable model  
**CKZT50, 63, 80**
- Applicable to equipment requiring manual clamps.
- Handle unit R/L is replaceable.
- Self-weight drop prevention when unclamping

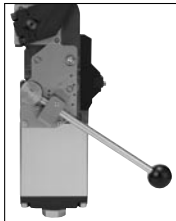
#### Cylinder Specifications

| Bore size (mm)                       | 50                                     | 63 | 80                            |
|--------------------------------------|----------------------------------------|----|-------------------------------|
| <b>Angle</b>                         | 30°, 45°, 60°, 75°, 90°, 105°, 120°    |    | 30°, 45°, 60°, 75°, 90°, 105° |
| <b>Cushion</b>                       | Unclamping side: Rubber bumper         |    |                               |
| <b>Maximum operating pressure</b>    | 0.8 MPa (116 psi)                      |    |                               |
| <b>Ambient and fluid temperature</b> | -10 to 60°C (14 to 140°F)              |    |                               |
| <b>Minimum operating time</b>        | 1.0 sec. to clamp, 1.0 sec. to unclamp |    |                               |

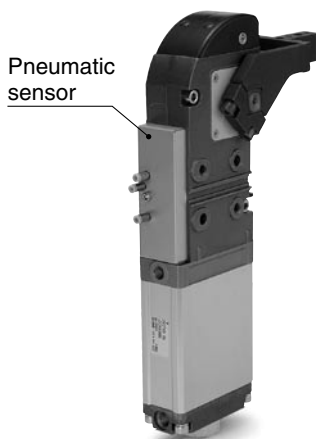
Clamping



Unclamping



### 4 Power clamp cylinder with pneumatic sensor



Pneumatic sensor

- Applicable model  
**CKZT50, 63, 80**
- Applicable to all air circuit equipment.
- Built-in mechanical valve. Position detection is possible at clamping or unclamping according to the signal received from the mechanical valve.

#### Cylinder Specifications

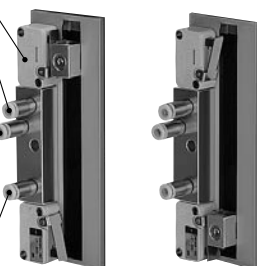
| Bore size (mm)                       | 50                                        | 63 | 80 |
|--------------------------------------|-------------------------------------------|----|----|
| <b>Angle</b>                         | 30°, 45°, 60°, 75°, 90°, 105°, 120°, 135° |    |    |
| <b>Cushion</b>                       | Unclamping side: Rubber bumper            |    |    |
| <b>Maximum operating pressure</b>    | 0.8 MPa (116 psi)                         |    |    |
| <b>Ambient and fluid temperature</b> | -10 to 60°C (14 to 140°F)                 |    |    |
| <b>Minimum operating time</b>        | 1.0 sec. to clamp, 1.0 sec. to unclamp    |    |    |

Mechanical valve

Clamping output signal pressure port

Signal pressure supply port

Unclamping output signal pressure port



Clamping

Unclamping

With cover removed

# Series CKZT

## Made to Order 3

Contact SMC for detailed dimensions, specifications and delivery.



### 5 Unclamped opening angle 15° kit (for change of angle)



- Applicable model  
**CKZT40, 50, 63, 80**
- In addition to the standard unclamped opening angle, 15° specification is available.
- Unclamped opening angle can be changed to 15° without disassembling the toggle construction.

#### Cylinder Specifications

| Bore size (mm)                | 50                                     | 63 | 80 |
|-------------------------------|----------------------------------------|----|----|
| Angle                         | 15°                                    |    |    |
| Cushion                       | Unclamping side: Rubber bumper         |    |    |
| Maximum operating pressure    | 0.8 MPa (116 psi)                      |    |    |
| Ambient and fluid temperature | -10 to 60°C (14 to 140°F)              |    |    |
| Minimum operating time        | 1.0 sec. to clamp, 1.0 sec. to unclamp |    |    |



# Series CKZT

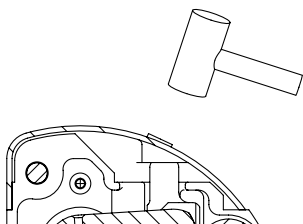
## Specific Product Precautions

Be sure to read this before handling. Refer for Safety Instructions and “Precautions for Handling Pneumatic Devices” (M-03-E3A) for Actuator Precautions.

### 1. Manual toggle release

The toggle link mechanism can be released easily by hitting the portion of round shaped projection on the cover by using of plastic hammer (hammer made of soft material), etc.

Please be sure to perform manual toggle release after safety has been confirmed because the clamp arm can suddenly move up during manual release.



### 2. Do not disassemble the power clamp

No special maintenance is necessary because the power clamp has a fully enclosed design to protect the clamp against welding spatter, and also the power clamp has a contamination resistant construction. So, please do not disassemble the power clamp except changing replaceable parts as there is a possibility of deterioration of the clamp performance.

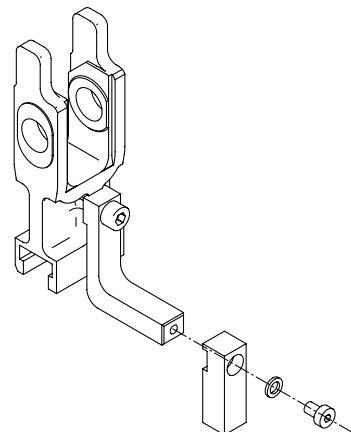
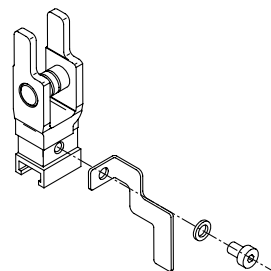
### 3. Tightening torque of spare parts

Please make sure to tighten spare parts recommended in accordance with the following torque shown in the table.

| Description         | Bore size (mm) | Tightening torque |              |
|---------------------|----------------|-------------------|--------------|
|                     |                | N · m             | lbf · in     |
| Switch cassette kit | 40             | 3.0 to 4.0        | 27 to 35     |
|                     | 50             | 5.0 to 7.0        | 44 to 62     |
|                     | 63             | 5.0 to 7.0        | 44 to 62     |
|                     | 80             | 5.0 to 7.0        | 44 to 62     |
| Switch bracket kit  | 40             | 1.5 to 2.0        | 13 to 18     |
|                     | 50             | 3.0 to 4.0        | 27 to 35     |
|                     | 63             | 3.0 to 4.0        | 27 to 35     |
|                     | 80             | 3.0 to 4.0        | 27 to 35     |
| Stopper bolt kit    | 40             | 12.5 to 17.0      | 110 to 150   |
|                     | 50             | 130 to 150        | 1150 to 1327 |
|                     | 63             | 160 to 200        | 1416 to 1770 |
|                     | 80             | 480 to 520        | 4248 to 4600 |
| Top cover kit       | 40             | 1.5 to 2.0        | 13 to 18     |
|                     | 50             | 2.5 to 3.0        | 22 to 27     |
|                     | 63             | 2.5 to 3.0        | 22 to 27     |
|                     | 80             | 3.0 to 5.0        | 27 to 44     |

Note: (1) Please make sure that the switch cassette is tightly secured to the body when it has been replaced with a new one.

(2) Please make sure that the dog is mounted so that the stamped side is secured as shown below if replacing.



### 4. Clamp Arm Tightening Torque

| Bore size (mm) | Tightening torque |            |
|----------------|-------------------|------------|
|                | N · m             | lbf · in   |
| 40             | 6 to 9            | 53 to 80   |
| 50             | 12 to 15          | 106 to 133 |
| 63             | 15 to 20          | 133 to 177 |
| 80             | 18 to 24          | 159 to 212 |



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