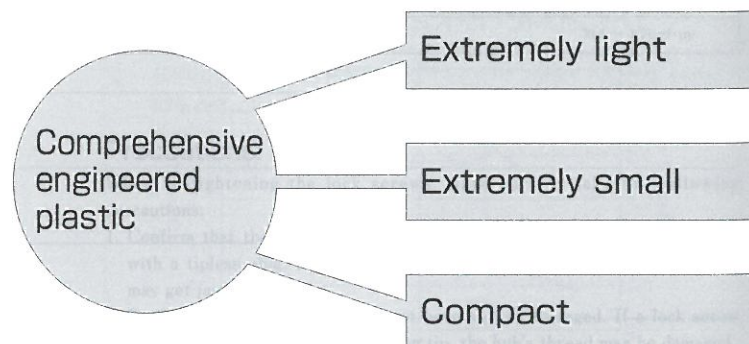
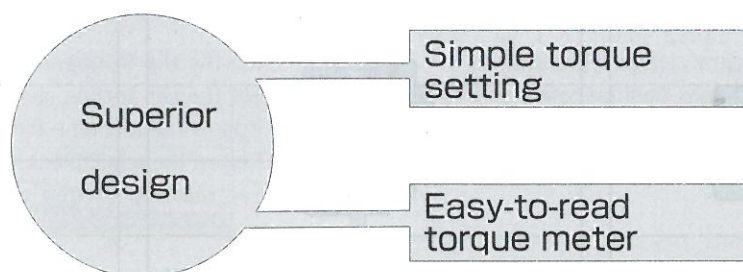
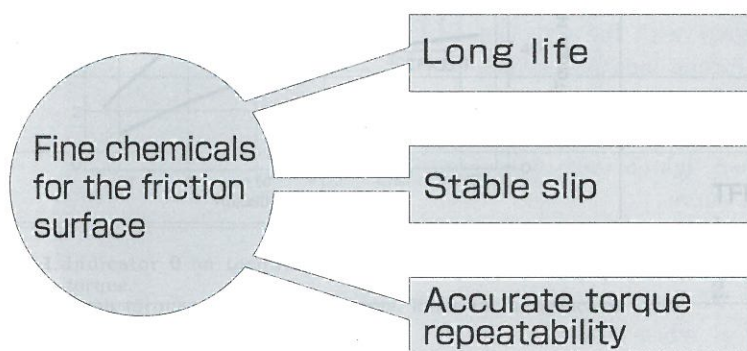


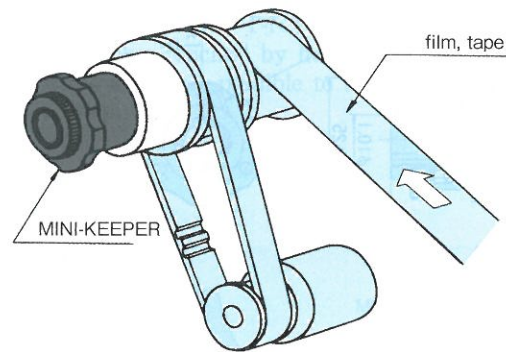
## Features

Highly accurate, light and super-compact slipping clutch and brake

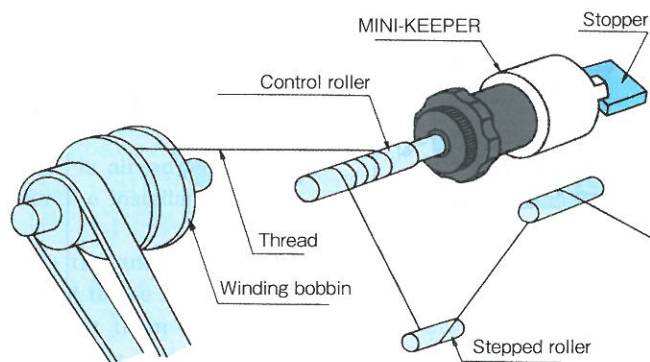
The TSUBAKI MINI-KEEPER is a super-compact slipping clutch and brake, constructed from fine chemicals and engineering plastic. With the MINI-KEEPER we have achieved supreme levels of lightness, compactness, and accuracy among similar devices. The MINI-KEEPER is ideal for braking, accumulating, and dragging applications in OA equipment and precision machinery.



## Application Examples



The MINI-KEEPER slips and maintains constant tension on the tape (or film, etc.). It is ideal for braking in the winding and unwinding.



The MINI-KEEPER is installed on the tension controller in previous stage of the winding roll. It provides stable slip torque and maintains stable tension on the thread.

### <Other potential applications>

Thermal printer

Paper feeder

Plotter

Copier

Textile machine

Wire cutter

Film processing equipment

Accumulation conveyor

Automatic packaging machine

Coil winding machine

Labeler

Barcode printer

Electronic device manufacturing equipment

Various robots

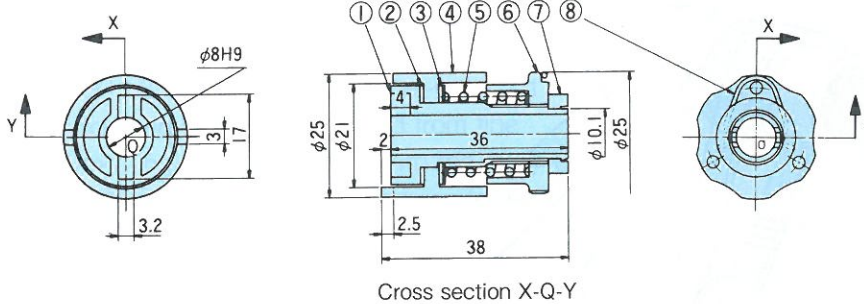
Ribbon printer

Facsimile



## Dimensions

### MK08



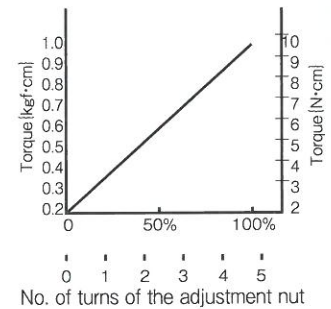
Cross section X-Q-Y

Setting torque range  
 $1.96 \sim 9.80 \text{ N} \cdot \text{cm}$   
 $\{0.2 \sim 1.0 \text{ kgf} \cdot \text{cm}\}$   
 Maximum slip rpm  
 Refer to "T-N Curve" on the next page  
 Mass: 18 g

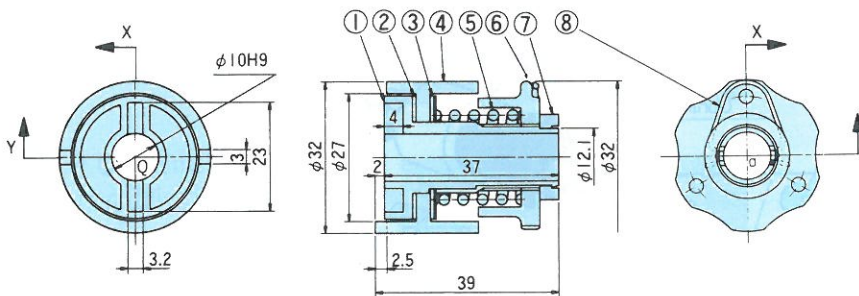
- |                     |                      |
|---------------------|----------------------|
| ① Hub               | ⑤ Coil spring        |
| ② Friction facing A | ⑥ Adjustment nut     |
| ③ Friction facing B | ⑦ Stop collar        |
| ④ Flange            | ⑧ Anti-rotation clip |

## Torque Curves

The percentage axis indicates the percentage of maximum torque.



### MK10

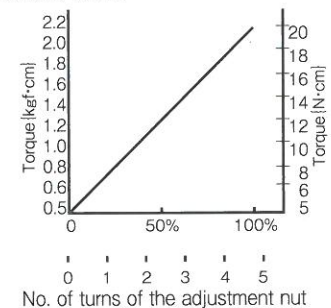


Cross section X-Q-Y

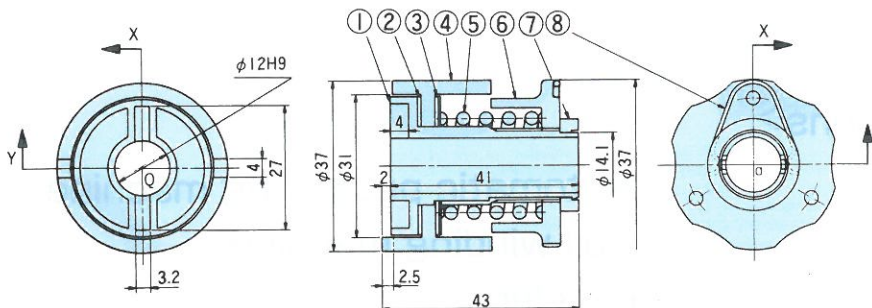
Setting torque range  
 $4.90 \sim 19.6 \text{ N} \cdot \text{cm}$   
 $\{0.5 \sim 2.0 \text{ kgf} \cdot \text{cm}\}$   
 Maximum slip rpm  
 Refer to "T-N Curve" on the next page  
 Mass: 30 g

- |                     |                      |
|---------------------|----------------------|
| ① Hub               | ⑤ Coil spring        |
| ② Friction facing A | ⑥ Adjustment nut     |
| ③ Friction facing B | ⑦ Stop collar        |
| ④ Flange            | ⑧ Anti-rotation clip |

The percentage axis indicates the percentage of maximum torque.



### MK12



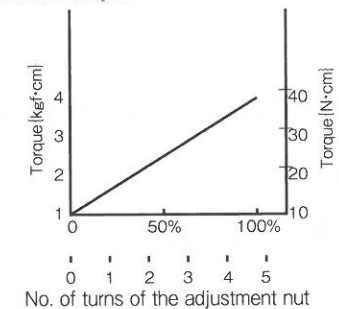
Cross section X-Q-Y

Note: All models are in stock.

Setting torque range  
 $10.8 \sim 39.2 \text{ N} \cdot \text{cm}$   
 $\{1.1 \sim 4.0 \text{ kgf} \cdot \text{cm}\}$   
 Maximum slip rpm  
 Refer to "T-N Curve" on the next page  
 Mass: 46 g


- |                     |                      |
|---------------------|----------------------|
| ① Hub               | ⑤ Coil spring        |
| ② Friction facing A | ⑥ Adjustment nut     |
| ③ Friction facing B | ⑦ Stop collar        |
| ④ Flange            | ⑧ Anti-rotation clip |

The percentage axis indicates the percentage of maximum torque.



## Selection

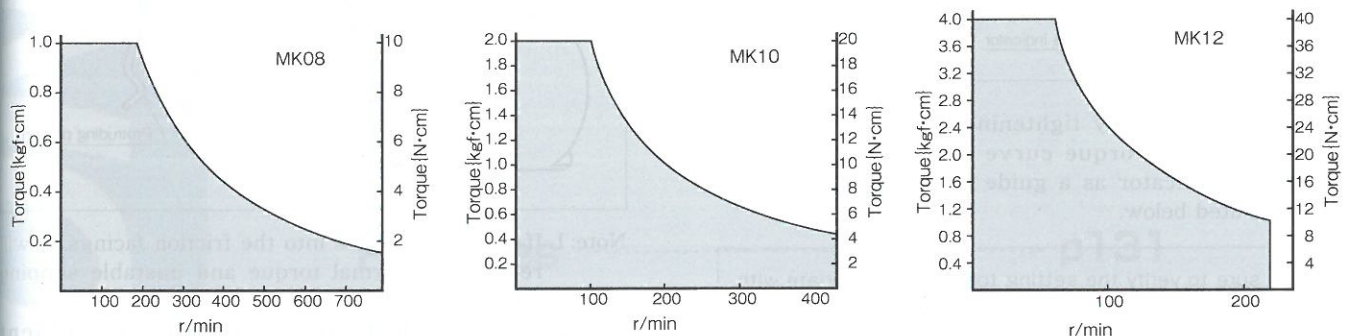
When using the MINI-KEEPER with a human transport device or a lifting device, install a suitable protection device on that equipment for safety purposes. Otherwise an accident resulting in death, serious injury or damage to the equipment may occur due to human disaster and an accidental falling.

Choose set torque and slip rpm from the  part of the T-N curve graphs below.

※The T-N curve graph displays the limit value reached by heat generation during continual slip. When the slip time per one operation is short and the interval is long, it is possible to use the MINI-KEEPER in excess of the T-N value. In this case, please contact TEM for a consultation.

※Contact TEM for non-standard specifications.

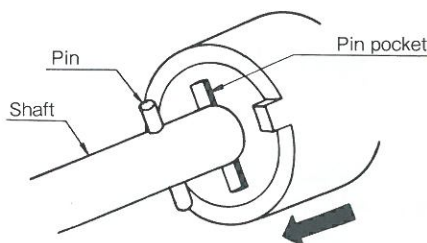
## T-N Curve



## Handling

### Installation onto a shaft

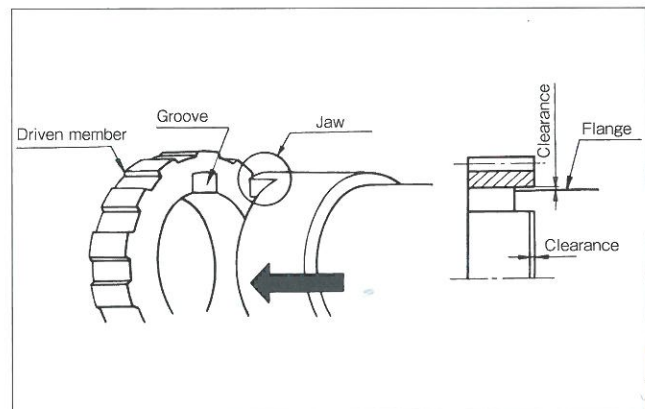
1. The MINI-KEEPER's shaft bore is already finished. We recommend a tolerance for the installation shaft dia. of h7 or h8.
2. Use the pin pocket (groove) on the end face of the hub to connect the MINI-KEEPER to the shaft. Insert the pin into the shaft, and then set them to the pin pocket as shown in the diagram below. The clearance should be about 0.5mm.



Make sure to set a clearance between pin end face, side and pin pocket.  
Pin bore machining is different depending on the sort of pin.

### Installation onto a driven member

1. Use a jaw at flange to install the MINI-KEEPER onto a driven member (gear, pulley, etc.).



Cut a groove into the end face of the driven member, and slide the jaw into it. At this time, be sure to allow a clearance so that thrust and radial loads do not act on the flange end face including the jaw. The clearance should be about 0.5mm.