

# Actuator

## MK45

MK45 is a compact in-line actuator, which is designed for light load capacity with low current consumption. The concise appearance is suitable for limited installation space such as window opener and other applications in light industry. It also provides solutions for relatively quiet applications that do not require speed.



### Features and Options

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**Main application:** Industrial

**Standard features:**

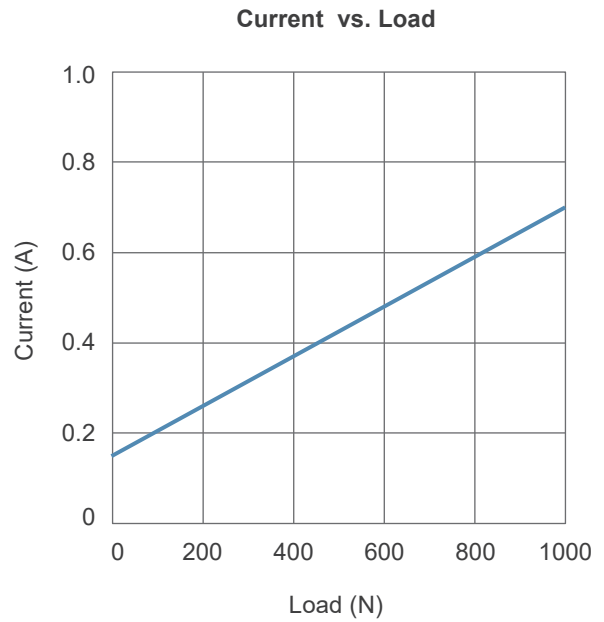
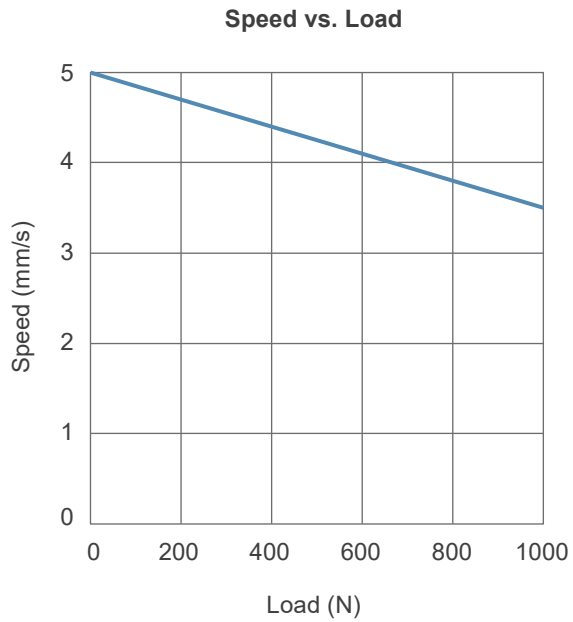
- Input voltage: 24V DC
- Max. Load: 1000N (Push/Pull)
- Max. Static load: 2500N
- Typical speed at no load: 5.0mm/sec
- Typical speed at full load: 3.5mm/sec (1000N Load)
- Stroke: 50 / 100 / 150 / 200 / 250 / 300mm
- Noise level:  $\leq 55$ dB
- IP Level: IP65
- Preset powerswitches for stroke end limits
- Material: Aluminum tube and case
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Ambient operation temperature:  $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Certified: CE Marking, EMC Directive 2014/30/EU

**Options:**

- Mounting bracket MB22 ( $\varnothing 8$ mm)

## Performance Data

| Model No. | Gear ratio | Push / Pull load Max. (N) | *Typical speed (mm/s) |           | *Typical current (A) @ 24VDC |           |
|-----------|------------|---------------------------|-----------------------|-----------|------------------------------|-----------|
|           |            |                           | No load               | Full load | No load                      | Full load |
| MK45      | 57:1       | 1000                      | 5.0                   | 3.5       | 0.15                         | 0.7       |



### Remarks:

- \* The typical speed or typical current means the average value neither upper limit nor lower limit. The performance curves are made with typical values.

## Dimensions

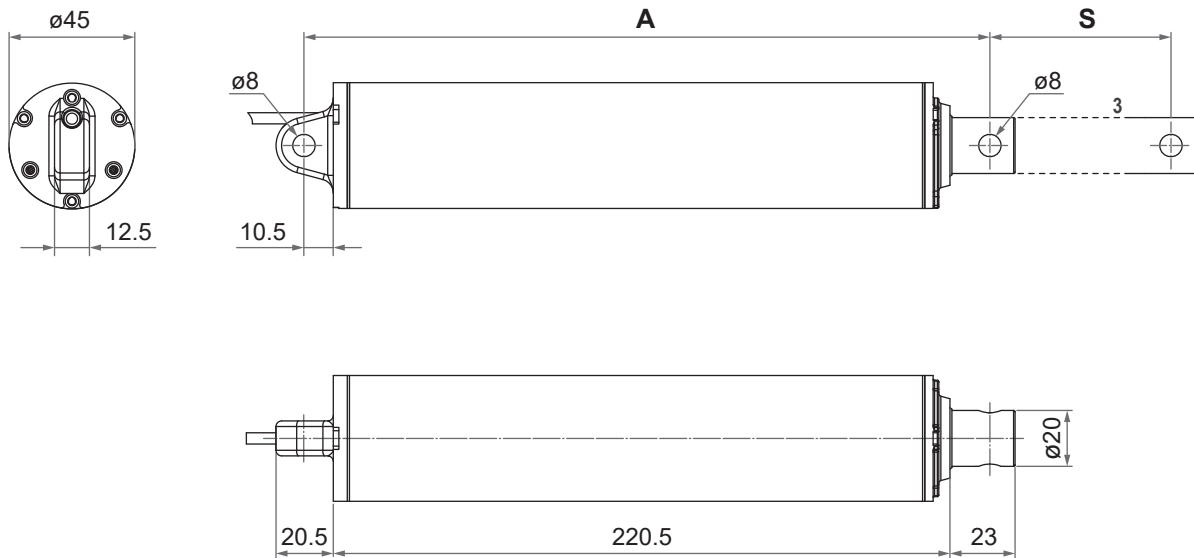
- **Stroke (S):** 50~300mm
- **Installation dimension:** Minimum retracted length(A) of various options;  
Extended length = Retracted length(A) + Stroke(S)

| Minimum retracted length (A) | Front connector code | Stroke (S) |       |       |       |       |       |
|------------------------------|----------------------|------------|-------|-------|-------|-------|-------|
|                              |                      | 50         | 100   | 150   | 200   | 250   | 300   |
| 1                            | 1                    | 245        | 295   | 345   | 395   | 445   | 495   |
| 3                            | 3                    | 286        | 336   | 386   | 436   | 486   | 536   |
| 6                            | 6                    | 255.5      | 305.5 | 355.5 | 405.5 | 455.5 | 505.5 |

(Tolerance:  $\pm 3$ mm)

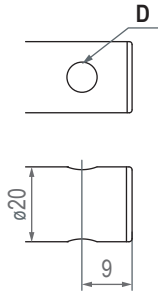
### • Drawing

Unit: mm

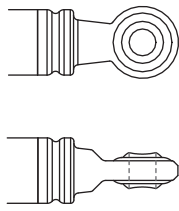


● **Front connector**

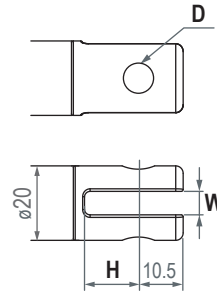
1: Drilled hole



3: Spherical rod eye



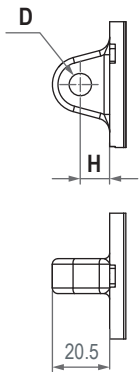
6: Plastic slot



| Front connector code | Diameter of pivot without bushing (D) | Slot width (W) | Depth (H) |
|----------------------|---------------------------------------|----------------|-----------|
| 1                    | ø6.4, ø8, ø10                         | N/A            | N/A       |
| 3                    | ø8                                    | N/A            | N/A       |
| 6                    | ø8, ø10                               | 6              | 15        |

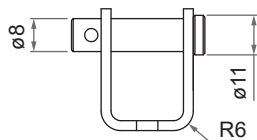
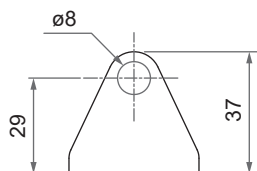
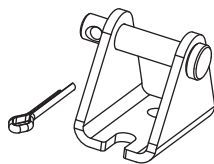
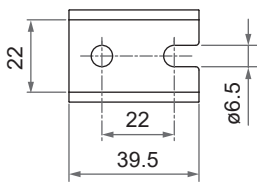
● **Rear connector**

1: Metal



| Rear connector code | Diameter of pivot without bushing (D) | Slot width (W) | Depth (H) |
|---------------------|---------------------------------------|----------------|-----------|
| 1                   | ø8                                    | N/A            | 10.5      |

● **Mounting bracket (MB22)**

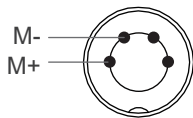


## Compatibility

| Product     | Model                                 | MK45 spec             |
|-------------|---------------------------------------|-----------------------|
| Control box | T-control, CS1, CS2, CBT2, CB3T, CB4M | Motek F-type DIN plug |
|             | CF16                                  | Bare wires            |

## Power Cable

### • Motek F-type DIN Plug



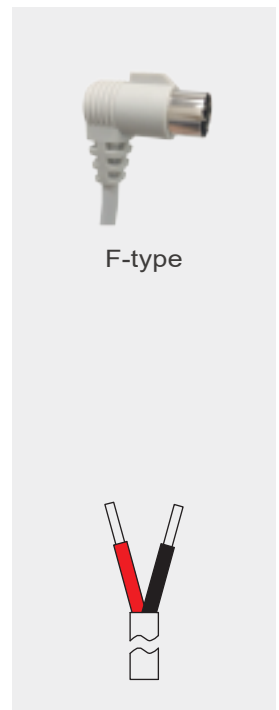
4-pin DIN Plug

**Note:** Connect Pin (M+) to “+” & Pin (M-) to “-” of DC power, the actuator will extend.

### • Bare wires

| Wire color | Definition |
|------------|------------|
| Red        | M+         |
| Black      | M-         |

**Note:** Connect red wire (M+) to “+” & black wire (M-) to “-” of DC power, the actuator will extend.



## Certifications

The MK45 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

| Emission                          | Immunity  |
|-----------------------------------|---|
| EN 61000-6-3:2007+A1:2011+AC:2012 | EN 61000-6-1:2007<br>IEC 61000-4-2:2008<br>IEC 61000-4-3:2006+A1:2007+A2:2010<br>IEC 61000-4-8:2009 |

## Ordering Key

|                         | <b>MK45- 24 K3 - 57 - 100 - 1 1 0 0 0 0 1</b>   |
|-------------------------|---|
| Input voltage           | <b>24:</b> 24V DC   |
| Motor and Spindle type  | <b>K3:</b> 6000rpm, 3mm pitch   |
| Gear ratio              | <b>57:</b> 57:1   |
| Stroke                  | <b>050:</b> 50mm<br><b>100:</b> 100mm<br><b>150:</b> 150mm<br><b>200:</b> 200mm<br><b>250:</b> 250mm<br><b>300:</b> 300mm |
| Front connector         | <b>1:</b> Drilled hole<br><b>3:</b> Spherical rod eye<br><b>6:</b> Plastic slot<br>(Refer to page 3)                      |
| Rear connector          | <b>1:</b> Metal<br>(Refer to page 3)  |
| Reserved                | <b>0</b>  |
| Reserved                | <b>0</b>  |
| Reserved                | <b>0</b>  |
| Mounting bracket (MB22) | <b>0:</b> None<br><b>1:</b> Mounting bracket (ø8mm) x 1<br><b>2:</b> Mounting bracket (ø8mm) x 2                          |
| Cable length            | <b>1:</b> 700mm straight<br><b>2:</b> 1500mm straight   |

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