

# Single Axis Robot

## KU Series

### 5.1 Features

- Lightweight
- Dustproof
- High accuracy, high efficiency, high reliability
- Easy system installation and maintenance

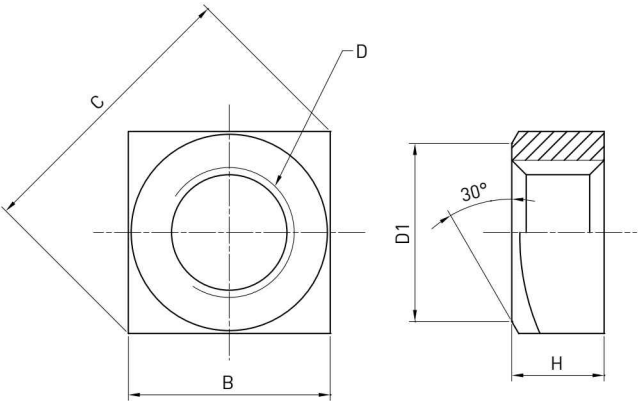
### 5.2 Applications

- Precision Industry & Semiconductor
- Inspection, Testing & Assembly equipment
- Optical & Medical equipment

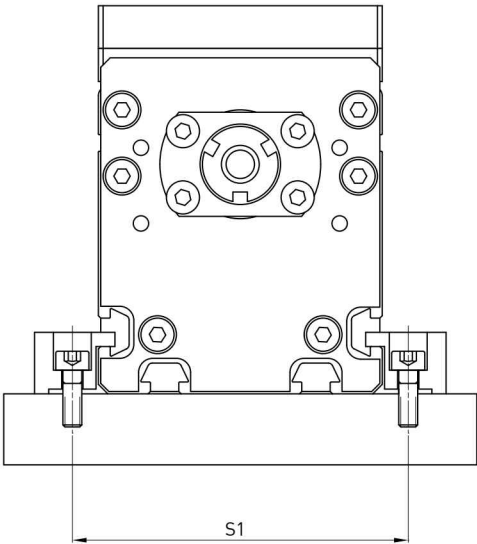


5.3 KU Mounting

Square nut



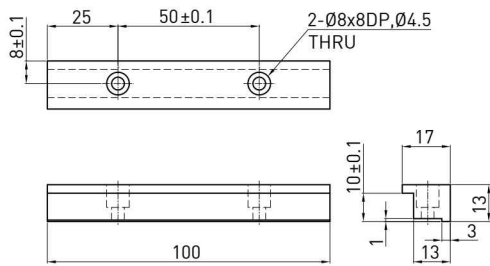
|      | B | C    | D      | D1  | H   |
|------|---|------|--------|-----|-----|
| KU60 | 7 | 9.9  | M4x0.7 | 6.8 | 3.2 |
| KU80 | 8 | 11.3 | M5x0.8 | 7.8 | 4   |



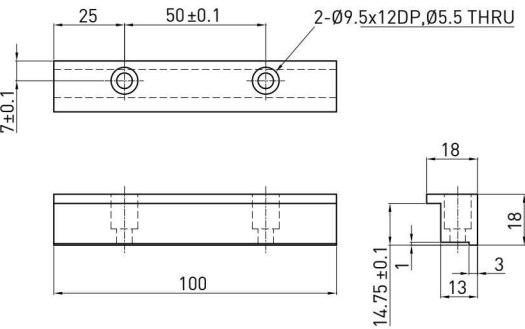
| KU Model | S1 | Screw |
|----------|----|-------|
| KU80     | 93 | M5    |
| KU60     | 71 | M4    |

Fixed plate

•KU060



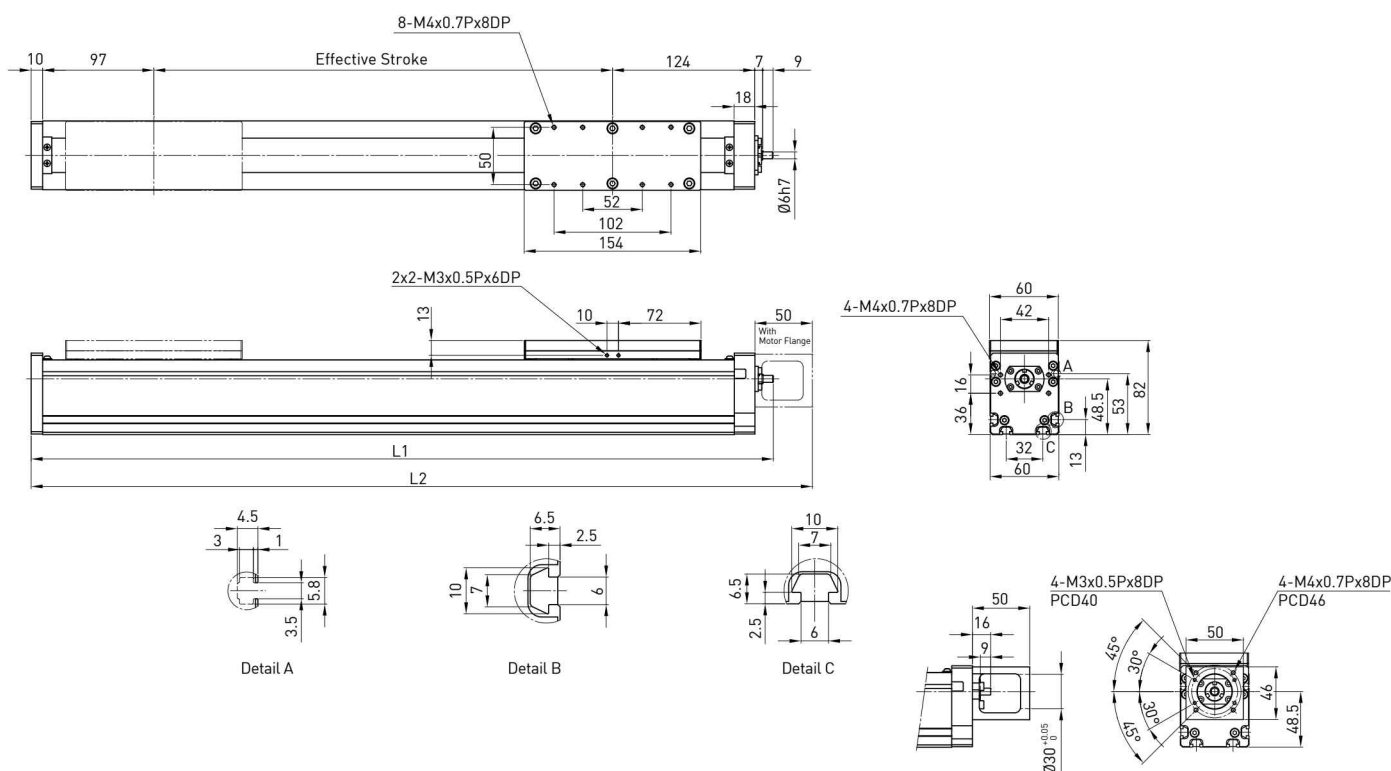
•KU080

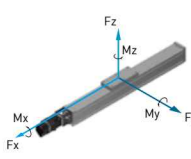


## 5.4 KU Series

### Model Number for KU060

| KU060 | -10           | P                                   | -600             | A              | F0                       | S1                                                                                                    | M                                                       |
|-------|---------------|-------------------------------------|------------------|----------------|--------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Model | Lead          | Precision Grade                     | Effective Stroke | Slider Type    | Motor Flange             | Limit Switch                                                                                          | Motor                                                   |
|       | 5 mm<br>10 mm | C:<br>Normal<br><br>P:<br>Precision |                  | A:<br>Standard | F0: 100W<br>F: No Flange | S1: OMRON SX671<br>S2: OMRON SX674<br>S3: SUNX GX-F12A<br>S4: SUNX GX-F12A-P<br>None: No Limit Switch | M:<br>Supplied With Motor<br><br>None:<br>Without Motor |



| Effective Stroke (mm) | L1  | L2  | Weight (kg) | AC motor output                                                                                | W                                                                                                                                                   | 100                  |      |      |
|-----------------------|-----|-----|-------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------|------|
|                       |     |     |             | Drive                                                                                          |                                                                                                                                                     | Ballscrew C7(normal) |      |      |
| 50                    | 297 | 331 | 1           | Lead                                                                                           | mm                                                                                                                                                  | 5                    | 10   |      |
| 100                   | 347 | 381 | 1.5         | Rated RPM                                                                                      | RPM                                                                                                                                                 | 3000                 | 3000 |      |
| 150                   | 397 | 431 | 2           | Max linear speed*                                                                              | mm/sec                                                                                                                                              | 250                  | 500  |      |
| 200                   | 447 | 481 | 2.5         | Rated thrust                                                                                   | N                                                                                                                                                   | 280                  | 140  |      |
| 250                   | 497 | 531 | 3           | Repeatability                                                                                  | mm                                                                                                                                                  | ±0.02                |      |      |
| 300                   | 547 | 581 | 3.5         | Effective stroke                                                                               | mm                                                                                                                                                  | 50~600               |      |      |
| 350                   | 597 | 631 | 4           | Max load (H)                                                                                   | kg                                                                                                                                                  | 30                   | 20   |      |
| 400                   | 647 | 681 | 4.5         | <div></div> | Fyd                                                                                                                                                 | N                    | 50   | 50   |
| 450                   | 697 | 731 | 5           |                                                                                                | Fzd                                                                                                                                                 | N                    | 300  | 200  |
| 500                   | 747 | 781 | 5.5         |                                                                                                | Mxd                                                                                                                                                 | N-m                  | 10   | 10.5 |
| 550                   | 797 | 831 | 6           |                                                                                                | Myd                                                                                                                                                 | N-m                  | 8    | 9    |
| 600                   | 847 | 881 | 6.5         |                                                                                                | Mzd                                                                                                                                                 | N-m                  | 8    | 9    |
|                       |     |     |             | Permitted load condition***                                                                    | $\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$<br>Fy、Fz、Mx、My、Mz are working loads |                      |      |      |

Motor Adaptor Flange F0

\* Vibration might occur when the effective stroke is longer than 500mm.

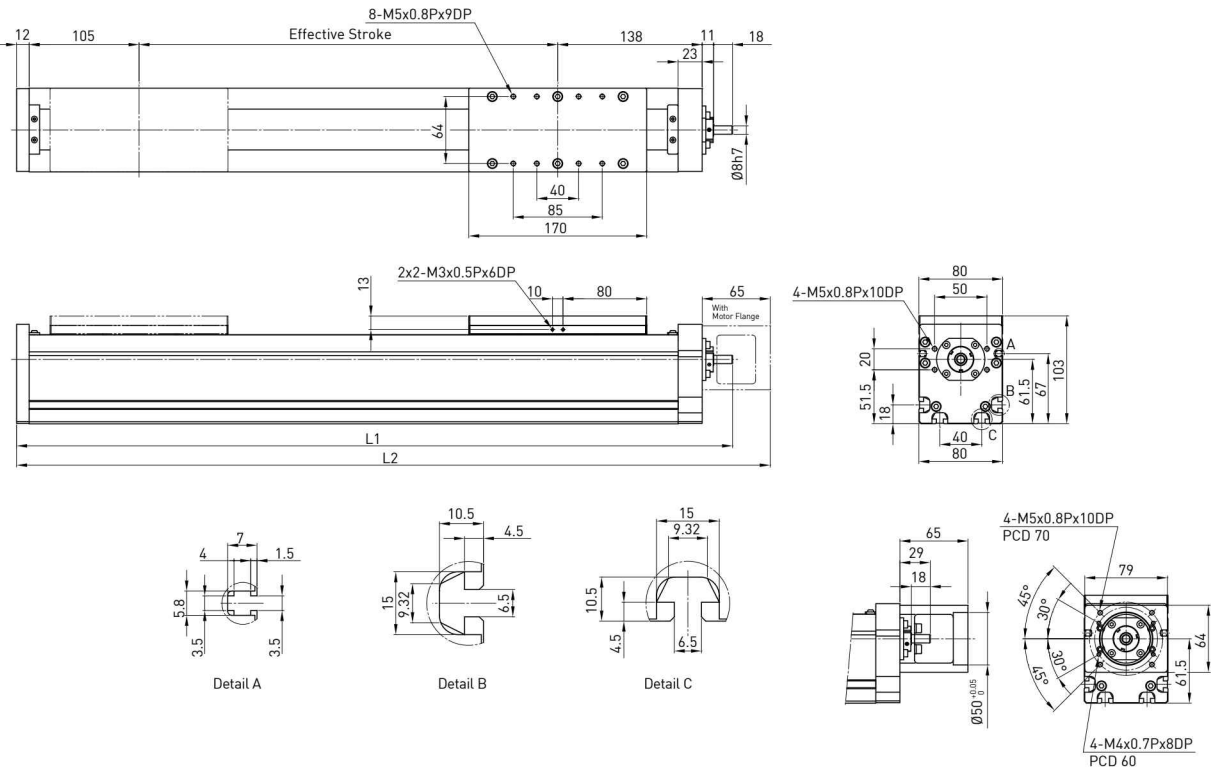
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

\*\*The load condition is based on 10,000km operation.

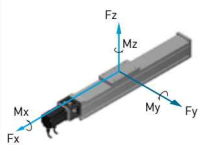
\*\*\* If used in a special condition, please contact HIWIN.

Model Number for KU080

| KU080 | -10                    | P                                   | -1100            | A              | F0                                   | S1                                                                                                    | M                                                       |
|-------|------------------------|-------------------------------------|------------------|----------------|--------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Model | Lead                   | Precision Grade                     | Effective Stroke | Slider Type    | Motor Flange                         | Limit Switch                                                                                          | Motor                                                   |
|       | 5 mm<br>10 mm<br>20 mm | C:<br>Normal<br><br>P:<br>Precision |                  | A:<br>Standard | F0: 200W<br><br>F:<br>Without Flange | S1: OMRON SX671<br>S2: OMRON SX674<br>S3: SUNX GX-F12A<br>S4: SUNX GX-F12A-P<br>None: No Limit Switch | M:<br>Supplied With Motor<br><br>None:<br>Without Motor |



Motor Adaptor Flange F0

| Effective Stroke (mm) | L1   | L2   | Weight (kg) | AC motor output                                                                                                                                | W                                                                                                                                                   | 200                   |      |      |     |  |
|-----------------------|------|------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|------|-----|--|
|                       |      |      |             | Drive                                                                                                                                          |                                                                                                                                                     | Ball screw C7(normal) |      |      |     |  |
|                       |      |      |             | Lead                                                                                                                                           | mm                                                                                                                                                  | 5                     | 10   | 20   |     |  |
| 100                   | 384  | 420  | 7.04        | Rated RPM                                                                                                                                      | RPM                                                                                                                                                 | 3000                  | 3000 | 3000 |     |  |
| 150                   | 434  | 470  | 7.48        | Max linear speed*                                                                                                                              | mm/sec                                                                                                                                              | 250                   | 500  | 1000 |     |  |
| 200                   | 484  | 520  | 7.92        | Rated thrust                                                                                                                                   | N                                                                                                                                                   | 560                   | 280  | 140  |     |  |
| 250                   | 534  | 570  | 8.36        | Repeatability                                                                                                                                  | mm                                                                                                                                                  | ±0.02                 |      |      |     |  |
| 300                   | 584  | 620  | 8.8         | Effective stroke                                                                                                                               | mm                                                                                                                                                  | 100~1100              |      |      |     |  |
| 350                   | 634  | 670  | 9.24        | Max load (H)                                                                                                                                   | kg                                                                                                                                                  | 60                    | 40   | 20   |     |  |
| 400                   | 684  | 720  | 9.68        | <div></div> Rated dynamic load**                            | Fyd                                                                                                                                                 | N                     | 50   | 50   | 50  |  |
| 450                   | 734  | 770  | 10.12       |                                                                                                                                                | Fzd                                                                                                                                                 | N                     | 600  | 400  | 200 |  |
| 500                   | 784  | 820  | 10.56       |                                                                                                                                                | Mxd                                                                                                                                                 | N-m                   | 11   | 12.5 | 14  |  |
| 550                   | 834  | 870  | 11.0        |                                                                                                                                                | Myd                                                                                                                                                 | N-m                   | 9    | 10   | 11  |  |
| 600                   | 884  | 920  | 11.44       |                                                                                                                                                | Mzd                                                                                                                                                 | N-m                   | 9    | 10   | 11  |  |
| 650                   | 934  | 970  | 11.88       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 700                   | 984  | 1020 | 12.32       | Permitted load condition***                                                                                                                    | $\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$<br>Fy、Fz、Mx、My、Mz are working loads |                       |      |      |     |  |
| 750                   | 1034 | 1070 | 12.76       | * Vibration might occur when the effective stroke is longer than 550mm.<br>The maximum speed should be decreased by 15% for every 100mm of inc |                                                                                                                                                     |                       |      |      |     |  |
| 800                   | 1084 | 1120 | 13.2        | **The load condition is based on 10 000km operation.                                                                                           |                                                                                                                                                     |                       |      |      |     |  |
| 850                   | 1134 | 1170 | 13.64       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 900                   | 1184 | 1220 | 14.08       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 950                   | 1234 | 1270 | 14.52       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 1000                  | 1284 | 1320 | 14.96       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 1050                  | 1334 | 1370 | 15.4        |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |
| 1100                  | 1384 | 1420 | 15.84       |                                                                                                                                                |                                                                                                                                                     |                       |      |      |     |  |

\* Vibration might occur when the effective stroke is longer than 550mm.  
The maximum speed should be decreased by 15% for every 100mm of increased stroke.  
\*\*The load condition is based on 10,000km operation.  
\*\*\*If used in a special condition, please contact HIWIN.