

Manually Operated Unit

Table Clamp Type

Features: Direct table clamping avoids position drifts caused by leadscrew backlash.

Manually Operated Units – With Table Clamp Type

RoHS 10

KUEC

Handwheel Type A

Handwheel Type B

Components

| Parts | Frame | Table | Lead Screws | Lead Screw Nut |
|-------------------|----------------|----------------|-------------------|----------------|
| Material | Aluminum Alloy | Aluminum Alloy | 1045 Carbon Steel | Brass |
| Surface Treatment | Clear Anodize | Clear Anodize | Black Oxide | — |

| Parts | Nut Bracket | Side Plate | Clamp Plate |
|-------------------|----------------|----------------|----------------|
| Material | Aluminum Alloy | Aluminum Alloy | Aluminum Alloy |
| Surface Treatment | Clear Anodize | Clear Anodize | Clear Anodize |

Handwheel Type C

Arrow View A-A

Section View of Frame

Enlarged View of Slot for Nut

Note 1) Stroke limit is where stroke reaches the mechanical limit.

| Part Number | Type | No. | Handwheel Type | Base Length L (mm) | Effective Stroke St (mm) | Lead Screw | | Allowable Load (N) | | | Moment Load Capacity (N·m) | | | Base Mounting Hole | | (K) | | | Mass (kg) | | | | |
|-------------|------|-----|-----------------------|--------------------|--------------------------|-------------|------|--------------------|----------|----|----------------------------|----|-----|---------------------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|
| | | | | | | Thread Dia. | Lead | Horizontal | Vertical | Ma | Mb | Mc | S | Q (Number of Holes) | A | B | C | A | B | C | | | |
| KUEC | 14 | A | Plastic Handle | 170 | 53 | 14 | 3 | 245 | 49 | 7 | 7 | 13 | 150 | 4 | 99 | 81 | 113 | 2.9 | 2.9 | 3.2 | 3.5 | 3.5 | 3.8 |
| | | | | 220 | 103 | | | | | | | | | | | | | 3.4 | 3.4 | 3.7 | | | |
| | | | | 320 | 203 | | | | | | | | | | | | | 4.4 | 4.4 | 4.7 | | | |
| | | | | 370 | 253 | | | | | | | | | | | | | 4.9 | 4.9 | 5.2 | | | |
| | | | | 420 | 303 | | | | | | | | | | | | | 5.4 | 5.4 | 5.7 | | | |
| | | | | 470 | 353 | | | | | | | | | | | | | 5.9 | 5.9 | 6.2 | | | |
| | 20 | C | Five Spoked Handwheel | 170 | 53 | 20 | 4 | 490 | 98 | 14 | 14 | 27 | 150 | 4 | 107 | 89 | 121 | 4 | 4 | 4.3 | 6 | 6 | 6.3 |
| | | | | 220 | 103 | | | | | | | | | | | | | 5 | 5 | 5.3 | | | |
| | | | | 320 | 203 | | | | | | | | | | | | | 5.5 | 5.5 | 5.8 | | | |
| | | | | 370 | 253 | | | | | | | | | | | | | 6 | 6 | 6.3 | | | |
| | | | | 420 | 303 | | | | | | | | | | | | | 6 | 6 | 6.3 | | | |
| | | | | 470 | 353 | | | | | | | | | | | | | 6.5 | 6.5 | 6.8 | | | |

The allowable load for this product is the load that can be placed on the stage table such that it can still be moved. "Horizontal" and "vertical" indicate the installation orientation.

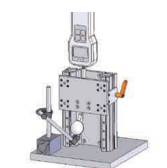
Part Number Example: **KUEHS20 - A - L - 320**

Required Torque / Required Turning Force

| Part Number | Type | No. | Required Torque (N·m) | | Required Turning Force (N) | |
|-------------|------|-------|-----------------------|----------|----------------------------|----------|
| | | | Horizontal | Vertical | Horizontal | Vertical |
| KUEC | 14 | 0.039 | 0.206 | 1.503 | 7.918 | |
| | | 0.059 | 0.426 | 2.261 | 16.402 | |

- * Torque and turning force required at max. load capacity.
- * Turning force is the force that rotates the handwheel.
- * Vertical values are those when elevating the table.

Clamping Force Testing Method



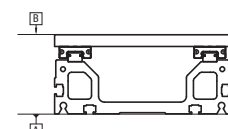
The clamping force shown is a force to move the table when tightened at 30N.

Accuracy

| Type | Parallelism (mm) | Backlash (mm) |
|------|------------------|---------------|
| KUEC | 0.15 | 0.3 |

- * Parallelism is the degree of running parallelism for dimension B against dimension A. (See the figure below)
- * The backlash value shown is for a lead screw model, and is a reference value.

Parallelism Fig.



Manually Operated Units

Handwheel Direction Configurable Type

Manually Operated Units – Handwheel Direction Configurable Type

RoHS 10

KUEF Handwheel Type A

Plastic Offset Handwheel PHLK80

Handwheel Type B

Plastic Offset Handwheel PHLFK80

Components

| Parts | Frame | Table | Lead Screws | Lead Screw Nut |
|-------------------|----------------|----------------|---------------------------------|----------------|
| Material | Aluminum Alloy | Aluminum Alloy | 1045 Carbon Steel or Equivalent | Brass |
| Surface Treatment | Clear Anodize | Clear Anodize | Black Oxide | — |

| Parts | Nut Bracket | Side Plate | Bevel Gear | Cover |
|-------------------|----------------|----------------|---------------------------------|-----------------------|
| Material | Aluminum Alloy | Aluminum Alloy | 1045 Carbon Steel or Equivalent | 304 Stainless SteelHL |
| Surface Treatment | Clear Anodize | Clear Anodize | — | — |

Handwheel Type C

Arrow View A-A

Section View of Frame

Enlarged View of the Slot for Nut

Note 1) Stroke limit is where stroke reaches the mechanical limit.

Allowable Load / Allowable Moment

| Part Number | Type | No. | Handwheel Type | Handwheel Orientation Configurable | Base Length L (mm) | Effective Stroke St (mm) | Lead Screw | | Allowable Load (N) | | | Allowable Moment (N·m) | | | Handwheel Type | | | Base Mounting Hole | | Mass (kg) | | | | | | | | | | | | | | | | | |
|-------------|------|-----|----------------|------------------------------------|--------------------|--------------------------|-------------|------|--------------------|----------|----|------------------------|----|-----|----------------|----|-----|---------------------|----|-----------|-------|----|-----|---|-----|-----|-----|---|-----|-----|-----|-----|-----|---|-----|-----|-----|
| | | | | | | | Thread Dia. | Lead | Horizontal | Vertical | Ma | Mb | Mc | A | B | C | S | Q (Number of Holes) | A | B | C | | | | | | | | | | | | | | | | |
| KUEF | 20 | A | Plastic Handle | U | 170 | 53 | 20 | 4 | 490 | 98 | 14 | 14 | 27 | 107 | 109.5 | 67 | 122 | 124.5 | 82 | 122 | 124.5 | 82 | 150 | 4 | 3.5 | 3.5 | 3.8 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | D | 220 | 103 | 200 | 4 | 4 | 4 | 4 | 4 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | L | 320 | 203 | 150 | 6 | 5 | 5 | 5 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | R | 370 | 253 | 175 | 6 | 5.5 | 5.5 | 5.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 420 | 303 | 200 | 6 | 6 | 6 | 6.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 470 | 353 | 150 | 8 | 6.5 | 6.5 | 6.8 |

The allowable load for this product is the load that can be placed on the stage table such that it can still be moved. "Horizontal" and "vertical" indicate the installation orientation.

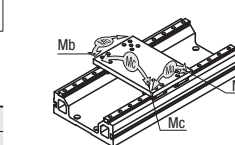
Part Number Example: **KUEF20 - A - L - 320**

Required Torque / Required Turning Force

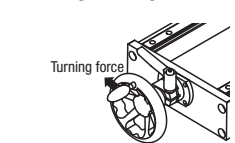
| Part Number | Type | No. | Required Torque (N·m) | | Required Turning Force (N) | |
|-------------|------|-------|-----------------------|----------|----------------------------|----------|
| | | | Horizontal | Vertical | Horizontal | Vertical |
| KUEF | 20 | 0.059 | 0.420 | 2.261 | 16.164 | |

- * Required torque and turning force are at the allowable load.
- * Turning force is the force that rotates the handwheel. (See the figure on the right)
- * Vertical values are those when elevating the table.

Moment Fig.



Turning Force Fig.



Accuracy

| Type | Parallelism (mm) | Backlash (mm) |
|------|------------------|---------------|
| KUEF | 0.15 | 0.5 |

- * Parallelism is when surface B and surface A are running side by side. (See figure below)
- * Backlash is not a guaranteed value but reference value.

Parallelism Fig.

