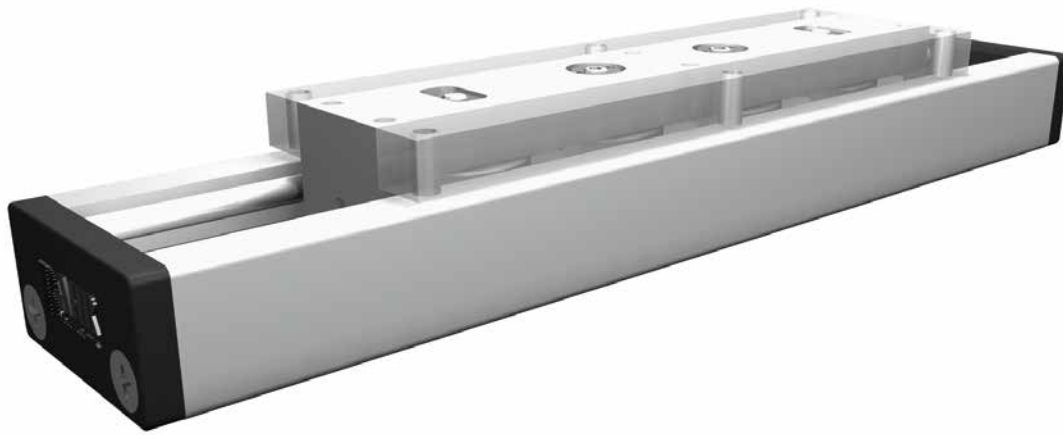


# Positioning system UL 40, 60, 80

Roller guide unit without drive

Specifications

2.1



## Function:

Very low building roller system achieved by an aluminium guide body with integrated, hardened steel guide rods. The carriage, which has internal linear ball bearings that can be adjusted free of play, moves along the body.

**Fitting position:** As required, max. length 6.000 mm.

**Carriage connection:** By tapped holes

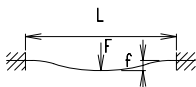
**Unit mounting:** Afterwards by holes or tapped holes

| Forces and torques   | Size   | UL 40                 |         | UL 60                |         | UL 80                 |         |
|--|--|-----------------------|---------|----------------------|---------|-----------------------|---------|
|  | Forces/Torques   | static                | dynamic | static               | dynamic | static                | dynamic |
|  | $F_x$ (N)  | -                     | -       | -                    | -       | -                     | -       |
|  | $F_y$ (N)  | 1200                  | 700     | 3000                 | 2000    | 3000                  | 2000    |
|  | $F_z$ (N)  | 900                   | 650     | 1700                 | 1100    | 1700                  | 1100    |
|  | $M_x$ (Nm)   | 25                    | 20      | 67                   | 43      | 90                    | 55      |
|  | $M_y$ (Nm)   | 32                    | 18      | 90                   | 70      | 110                   | 80      |
|  | $M_z$ (Nm)   | 35                    | 25      | 120                  | 100     | 150                   | 120     |
|  | <b>All forces and torques relate to the following:</b><br>existing values $\frac{F_y}{F_{y_{dyn}}} + \frac{F_z}{F_{z_{dyn}}} + \frac{M_x}{M_{x_{dyn}}} + \frac{M_y}{M_{y_{dyn}}} + \frac{M_z}{M_{z_{dyn}}} \leq 1$<br>table values |                       |         |                      |         |                       |         |
| <b>Speed</b>   |  |                       |         |                      |         |                       |         |
| max. (m/s)   |  | 4                     |         | 5                    |         | 6                     |         |
| <b>Geometrical moments of inertia of aluminium profile</b> |  |                       |         |                      |         |                       |         |
| $I_x$ mm <sup>4</sup>                                      |  | 0,157x10 <sup>5</sup> |         | 1,71x10 <sup>5</sup> |         | 2,8x10 <sup>5</sup>   |         |
| $I_y$ mm <sup>4</sup>                                      |  | 0,654x10 <sup>5</sup> |         | 6,1x10 <sup>5</sup>  |         | 10,59x10 <sup>5</sup> |         |
| E-Modulus N/mm <sup>2</sup>                                |  | 70000                 |         | 70000                |         | 70000                 |         |

For life-time calculation of rollers use our homepage.

Deflection:

$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$

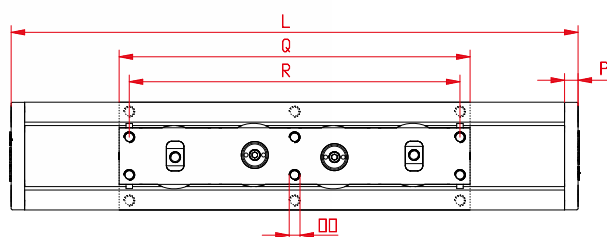
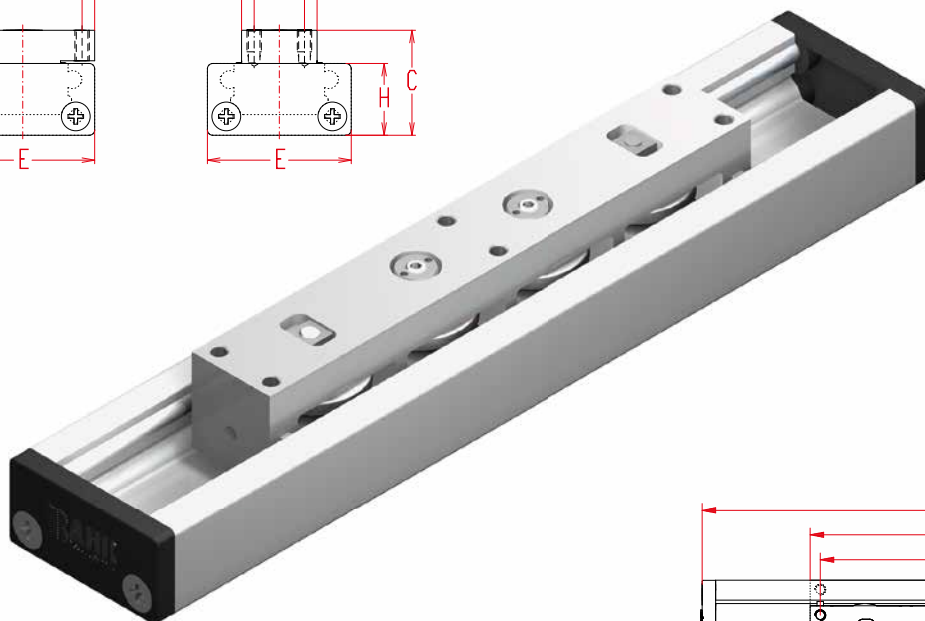
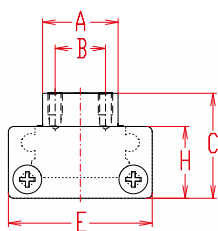
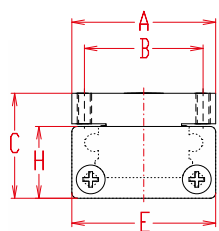


f = deflection (mm)  
 F = load (N)  
 L = free length (mm)  
 E = elastic modulus 70000 (N/mm<sup>2</sup>)  
 I = second moment of area (mm<sup>4</sup>)

# Positioning system UL 40, 60, 80

Dimensions (mm)

2.1



| Size  | Basic length L | A     | B     | C    | E  | H  | OO for     | P  | Q    | R   | Basic weight | Weight per 100 mm |
|-------|----------------|-------|-------|------|----|----|------------|----|------|-----|--------------|-------------------|
| UL 40 | 160            | 40/20 | 31/13 | 33   | 40 | 22 | M 5/M 5x8  | 6  | 146* | 120 | 1,2 kg       | 0,13 kg           |
| UL 60 | 215            | 60/29 | 48/20 | 43   | 60 | 30 | M 6/M 6x10 | 8  | 194* | 180 | 2,1 kg       | 0,20 kg           |
| UL 80 | 285            | 80/42 | 66/28 | 58,5 | 80 | 40 | M 8/M 8x12 | 10 | 260* | 245 | 4,2 kg       | 0,48 kg           |

\* = the carriage is not available in different lengths

**0 Choice of guide body profile:**

- (0) Standard
- (2) corrosion-protected guide rods and screws
- (4) expanded corrosion-protected version (depending on the availability of components)

**0 Choice of carriage:**

(0) Standard

(1) narrow carriage



**1500** Basic length + stroke = total length

UL 40 0 0 0 0 0 0 0 0 0 1500

For combination kits and connecting elements refer to chapter 2.2

Pos. 1 2 3 4 5 6 7

Sample ordering code:

UL 40, non driven system, standard body profile, standard carriage (wide version), 1340 mm stroke