

Data sheet drylin® drive technology

Content:

Linear Module SLW-10120

SLW-10120-DS10X2

SLW-10120-DS10X3

SLW-10120-DS10X12

SLW-10120-DS10X25

SLW-10120-DS10X50

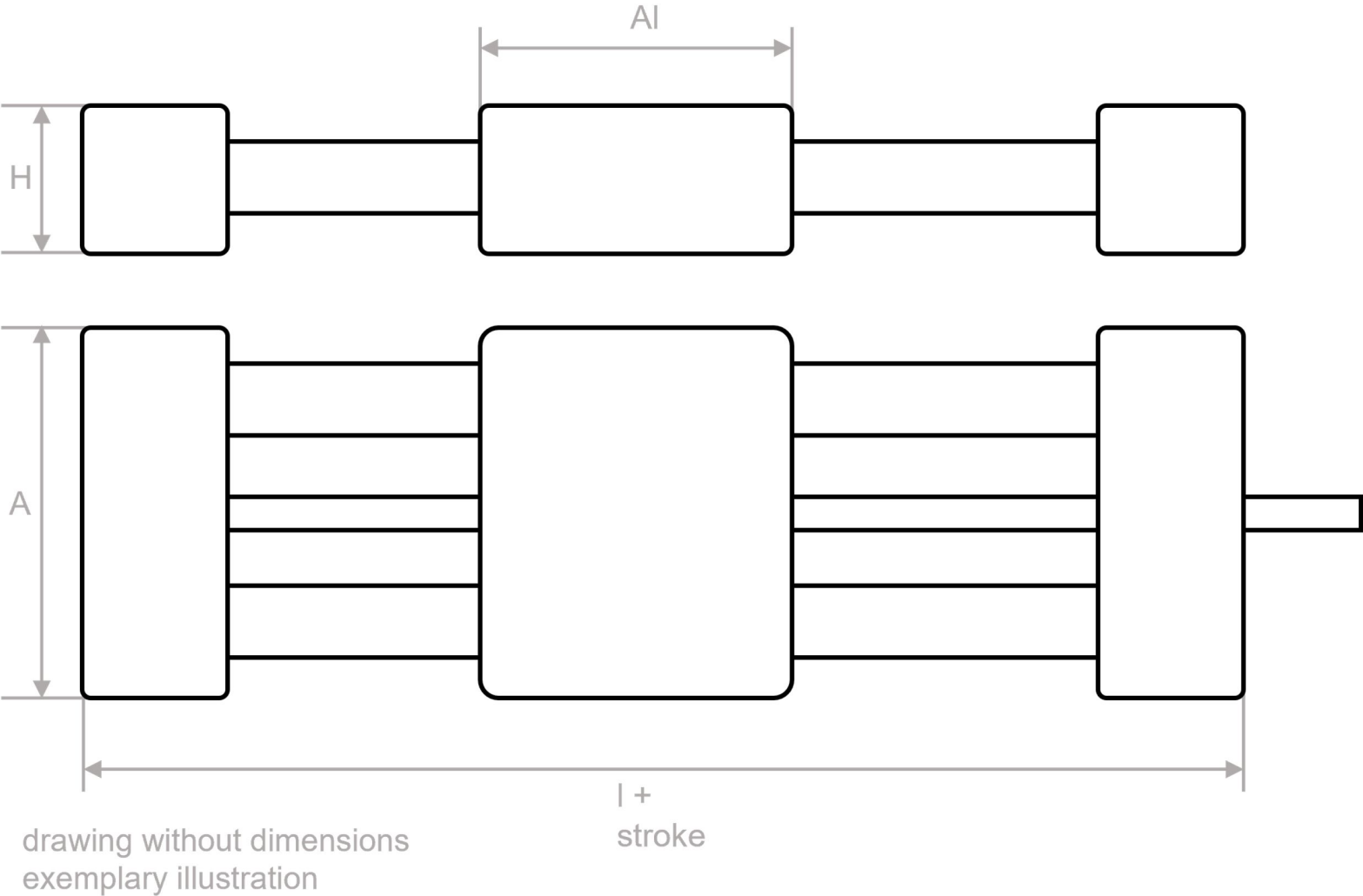
SLW-10120-TR10X2

SLW-10120-TR10X3

SLW-10120-TR10X4

Reading example

Disclaimer



Linear Module SLW-10120

SLW-10120-DS10X2

Diagram 1: Stroke / speed

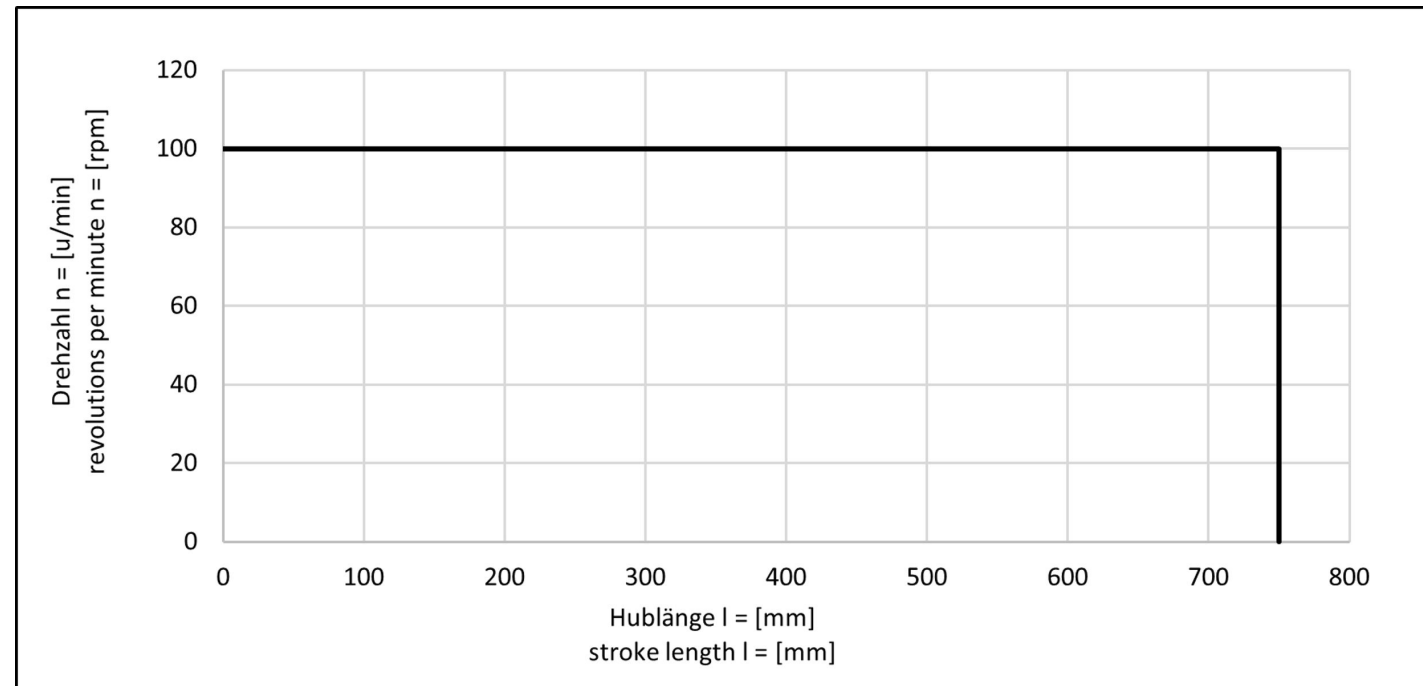
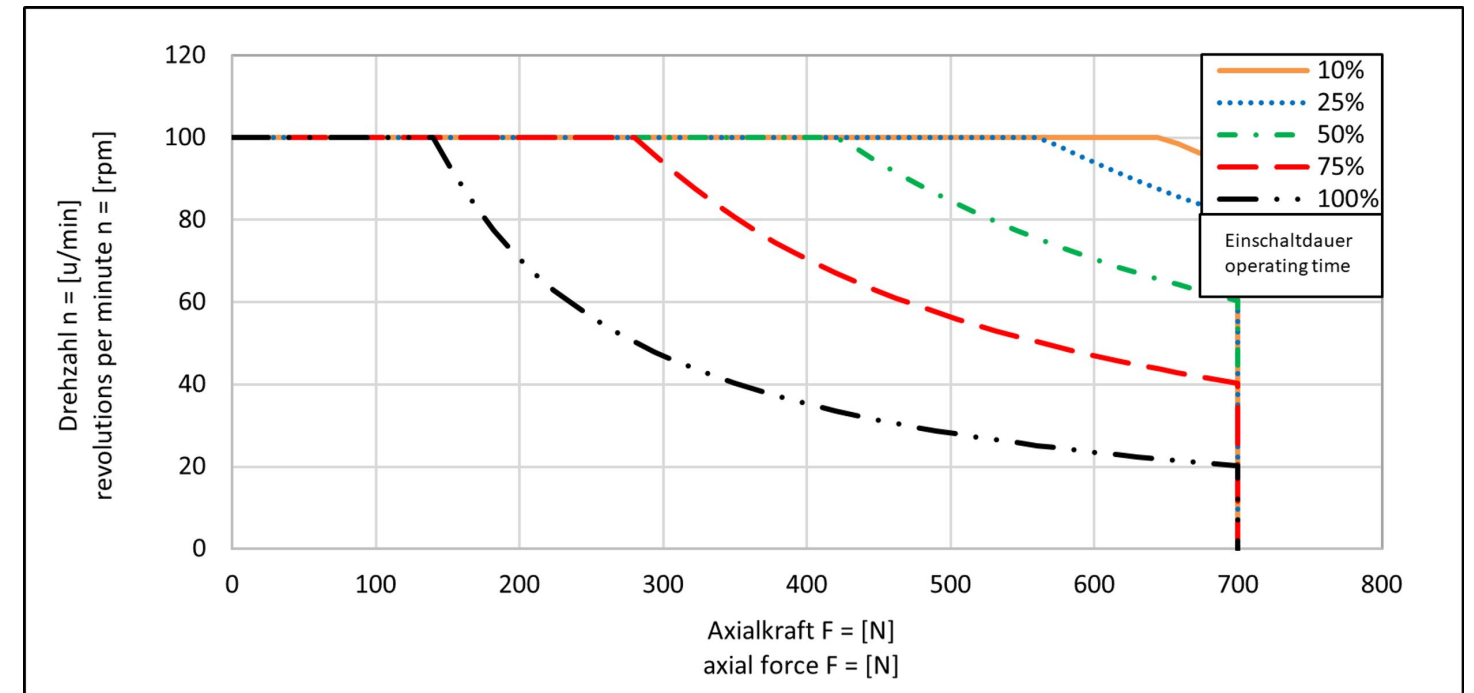


Diagram 2: Axial force / speed



Thread size: DS10X2
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| DS10X2 | 100 | 2.2 | 2800 | 700 | 0.5 | 0.5 | 0.6 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-DS10X3

Diagram 1: Stroke / speed

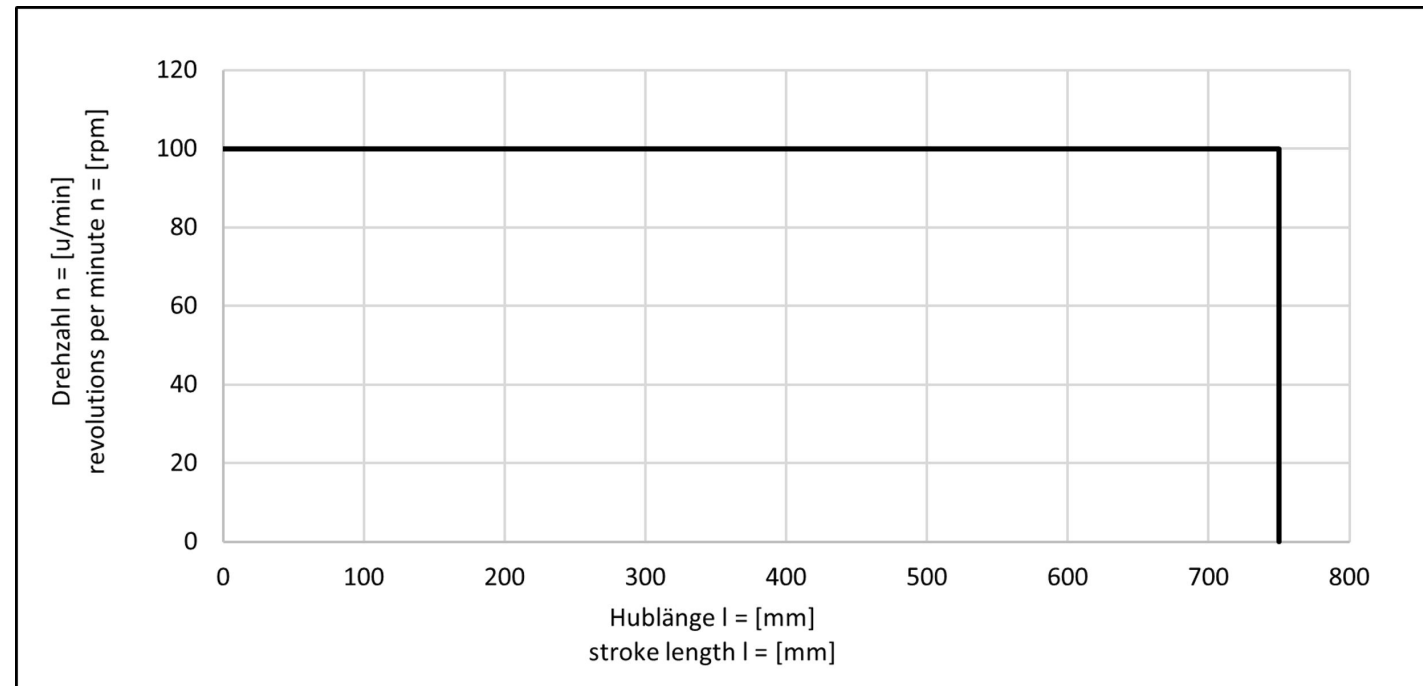
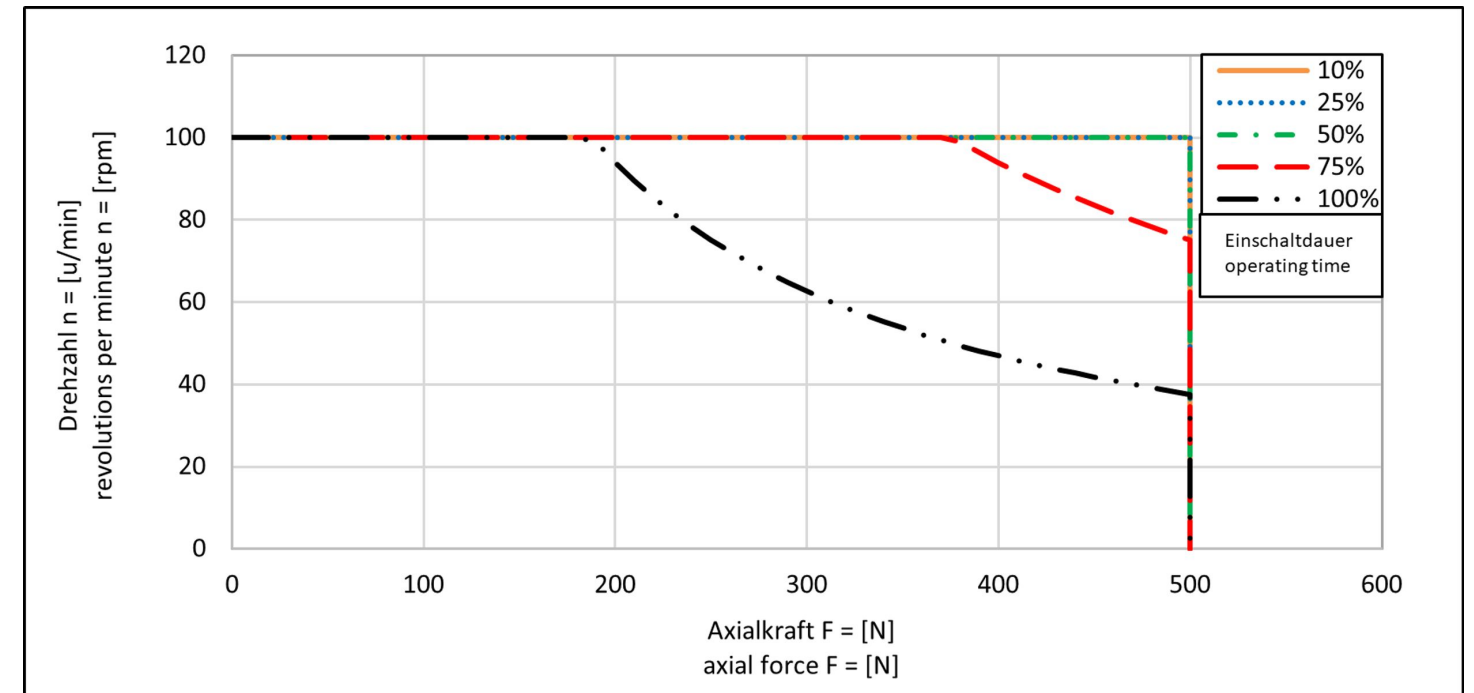


Diagram 2: Axial force / speed



Thread size: DS10X3
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| DS10x3 | 100 | 1.7 | 2000 | 500 | 0.5 | 0.5 | 0.29 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-DS10X12

Diagram 1: Stroke / speed

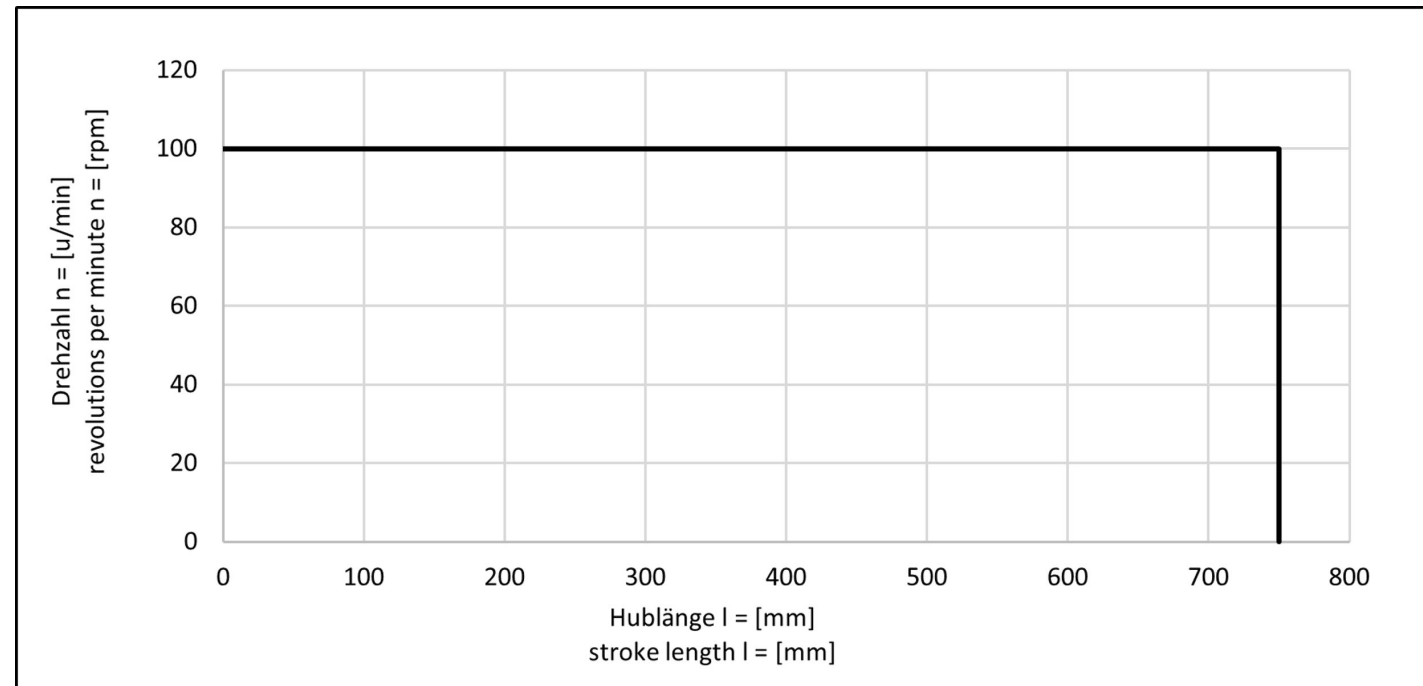
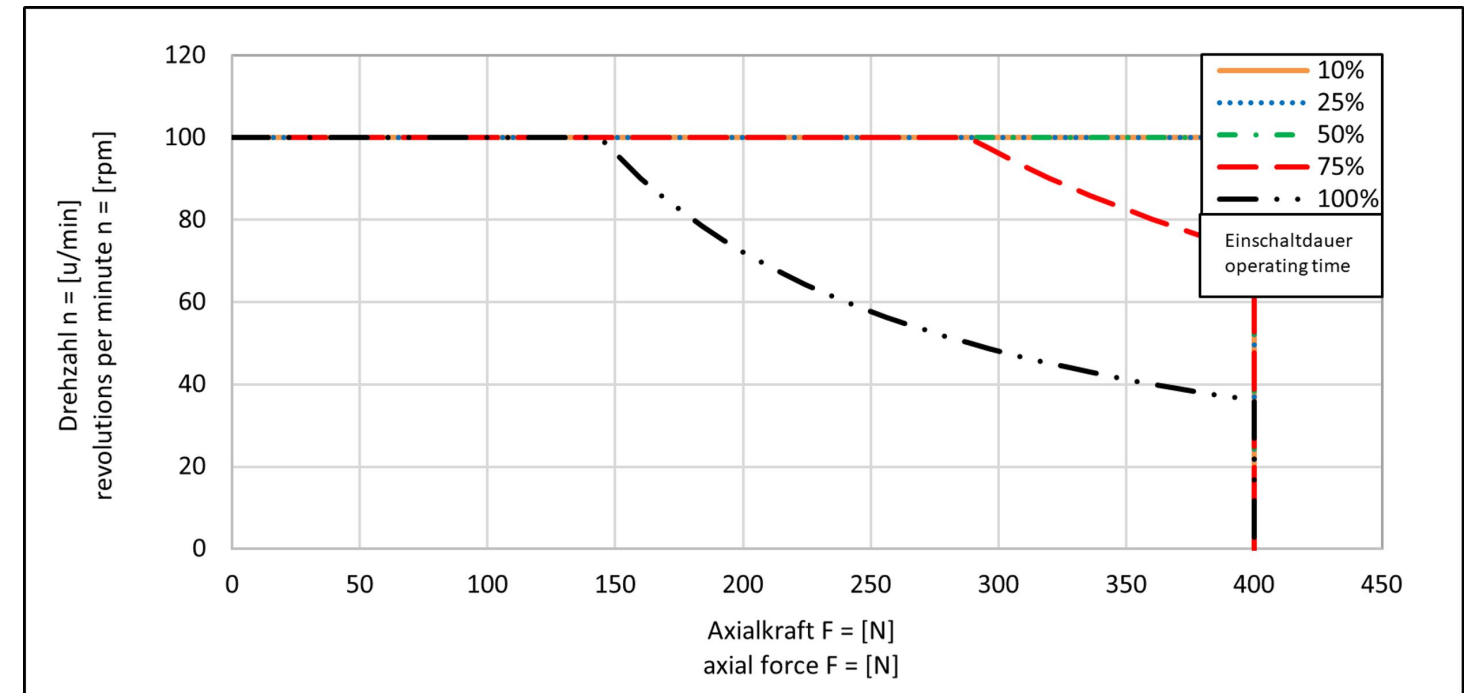


Diagram 2: Axial force / speed



Thread size: DS10X12
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| DS10x12 | 100 | 2.1 | 1600 | 400 | 0.5 | 0.5 | 0.6 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-DS10X25

Diagram 1: Stroke / speed

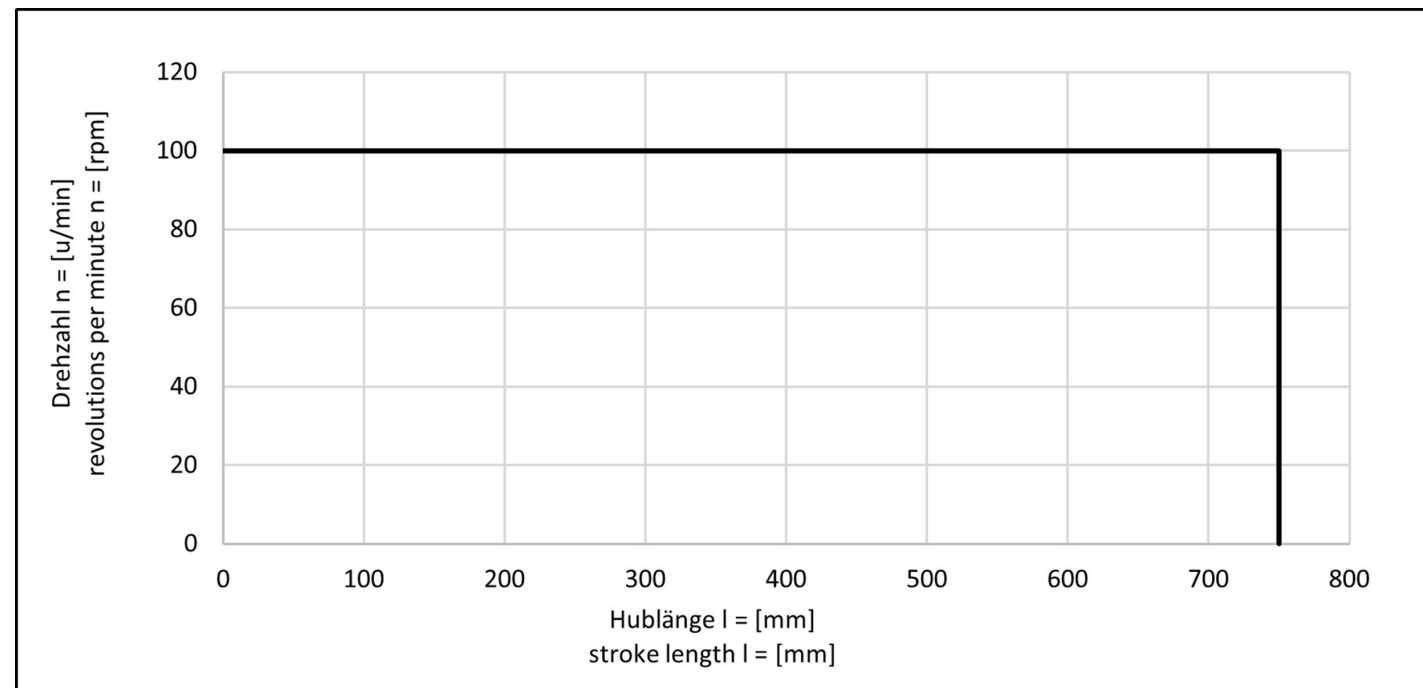
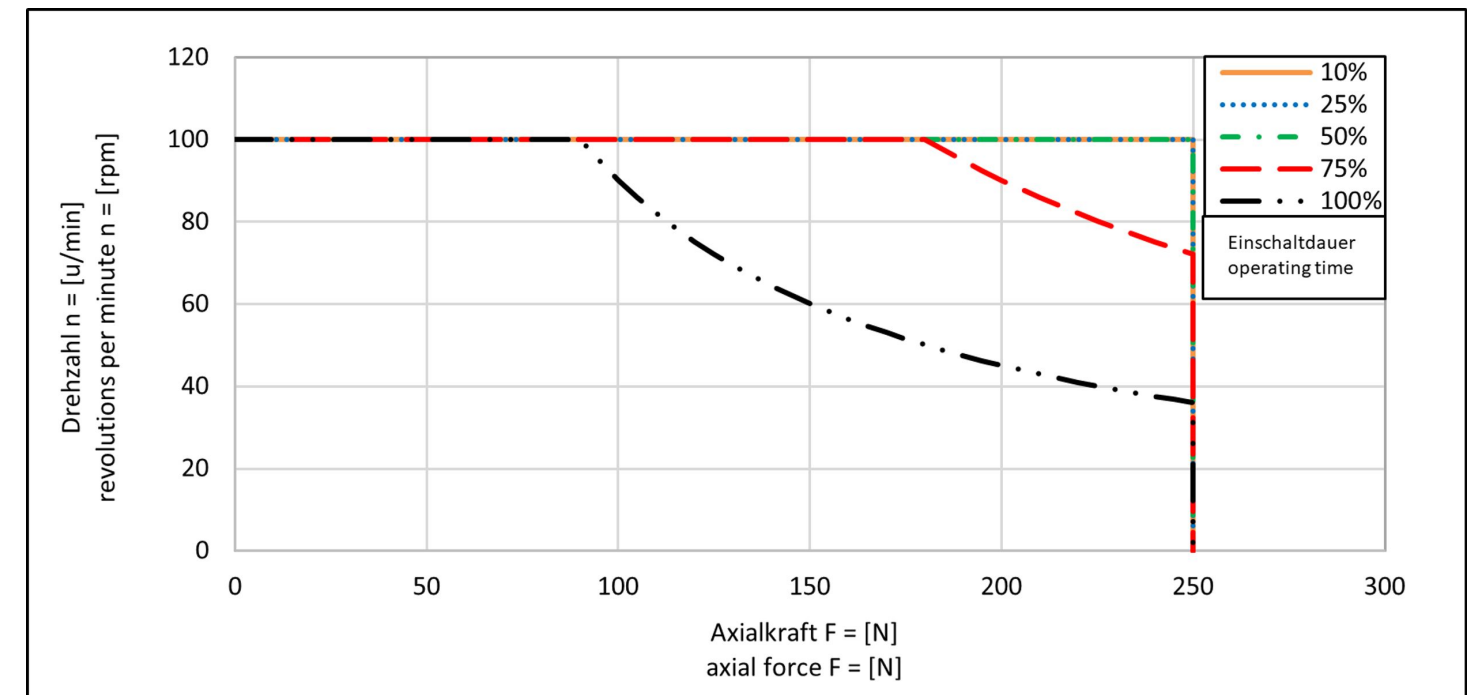


Diagram 2: Axial force / speed



Thread size: DS10X25
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| DS10x25 | 100 | 2.1 | 1000 | 250 | 0.5 | 0.5 | 0.38 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-DS10X50

Diagram 1: Stroke / speed

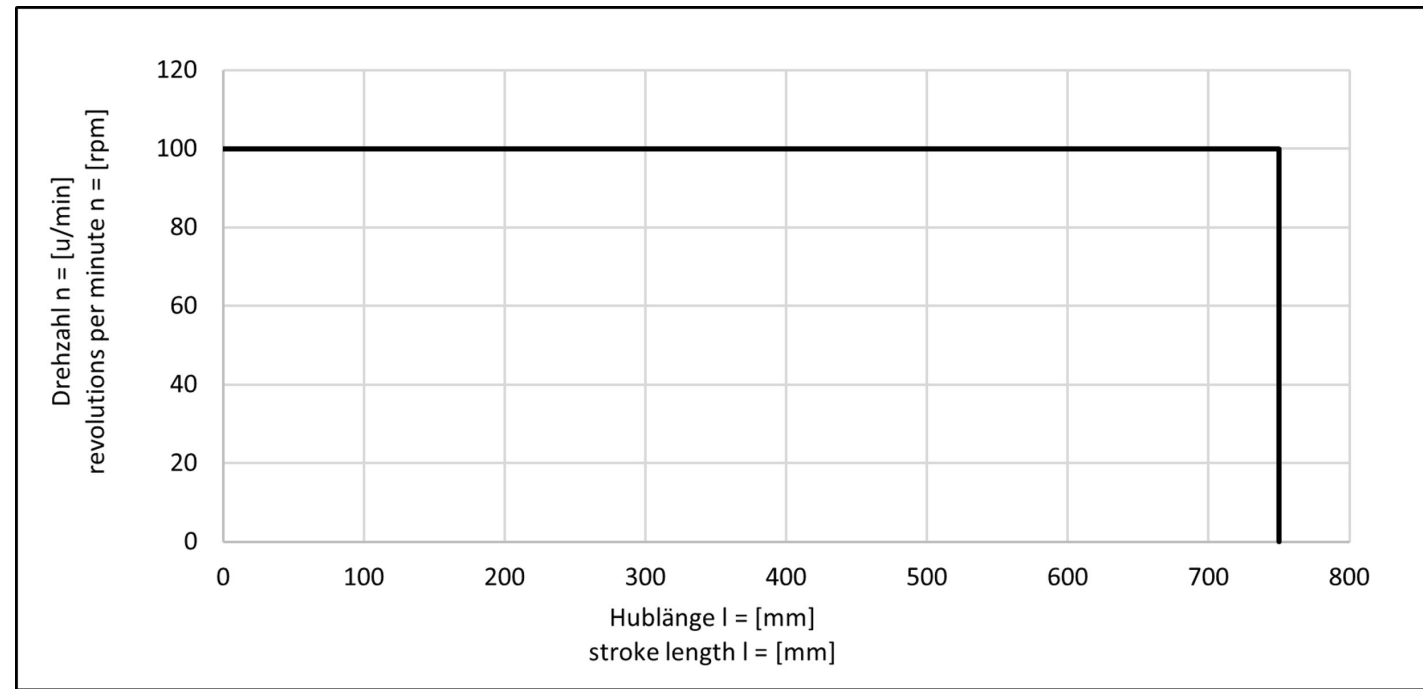
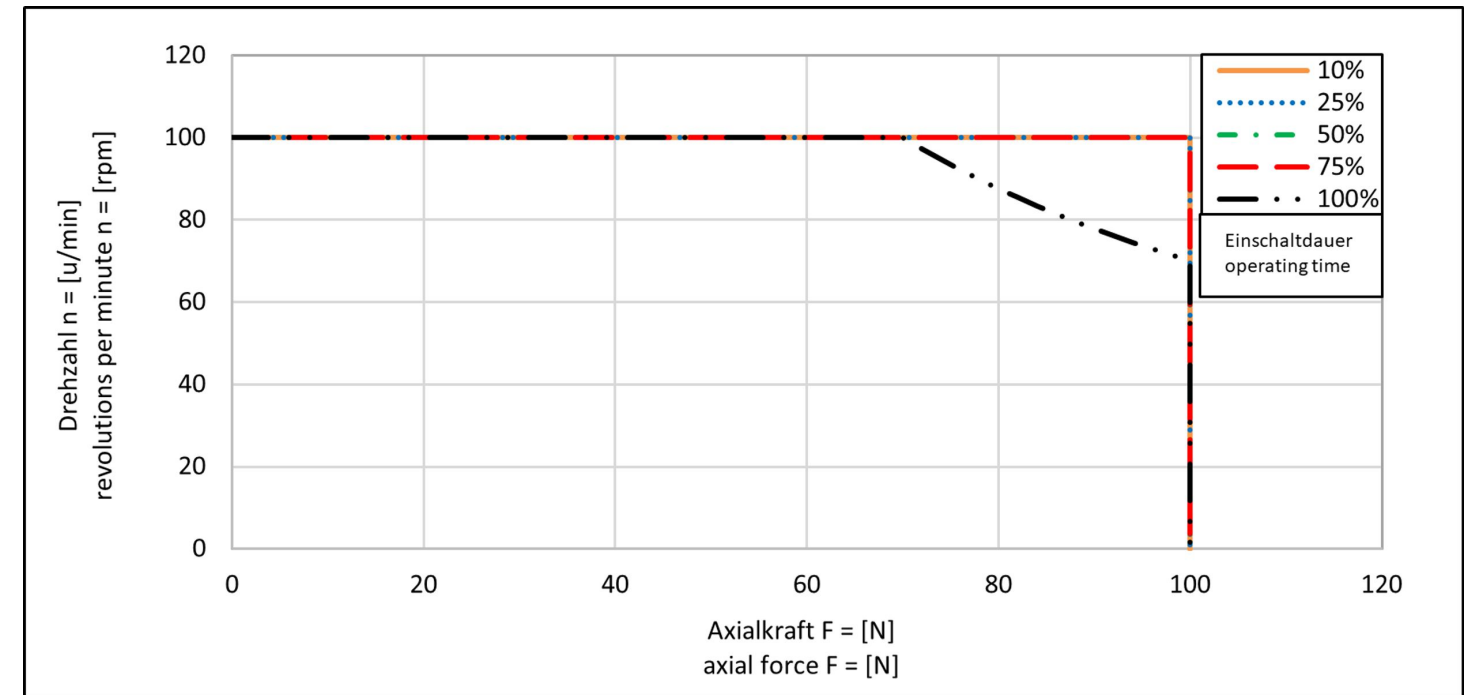


Diagram 2: Axial force / speed



Thread size: DS10X50
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| DS10x50 | 100 | 1.9 | 400 | 100 | 0.5 | 0.5 | 0.6 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-TR10X2

Diagram 1: Stroke / speed

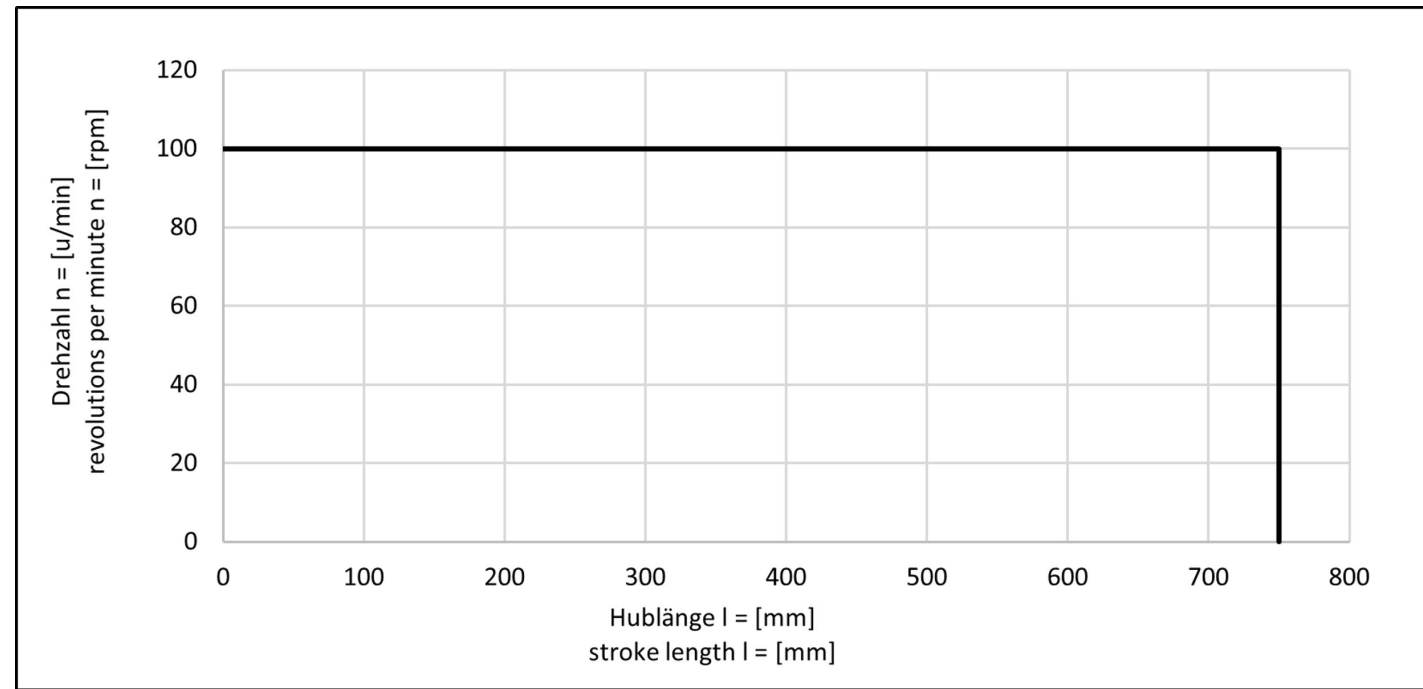
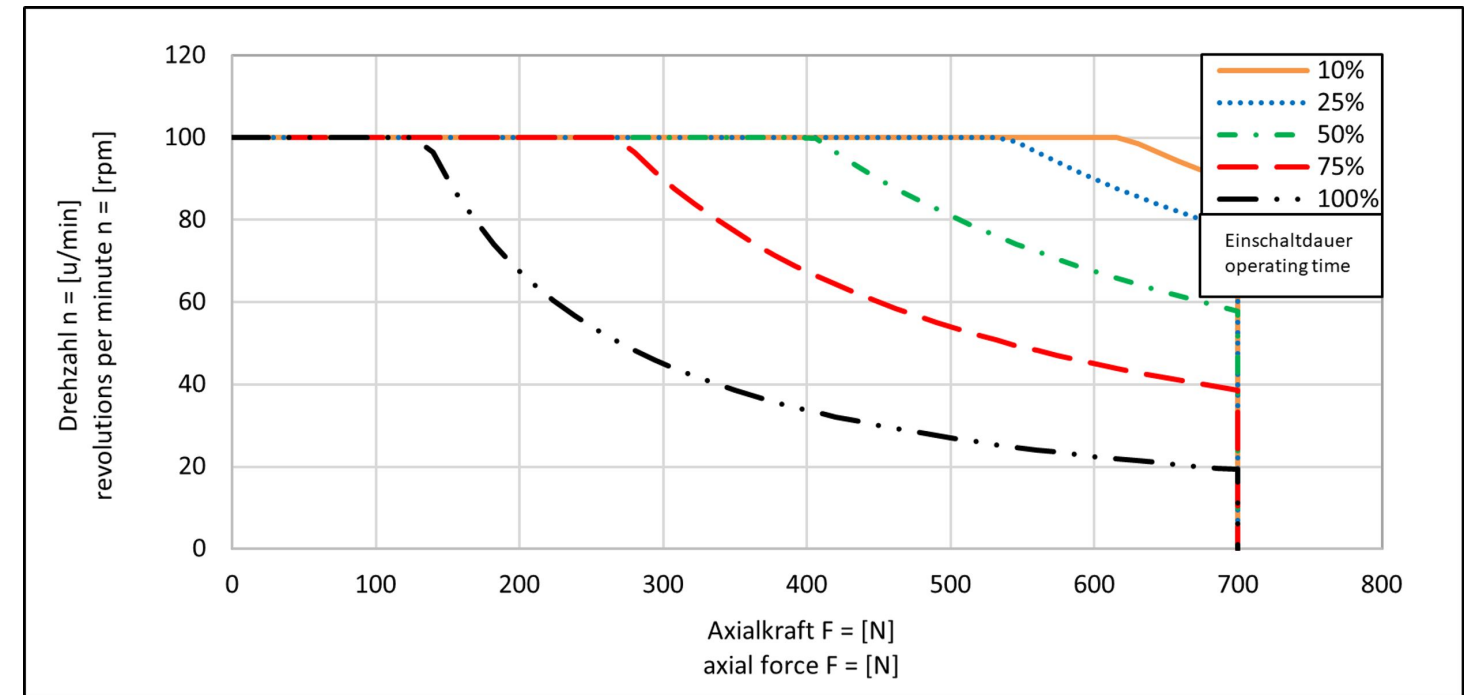


Diagram 2: Axial force / speed



Thread size: TR10X2
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| TR10X2 | 100 | 2.2 | 2800 | 700 | 0.5 | 0.5 | 0.33 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-TR10X3

Diagram 1: Stroke / speed

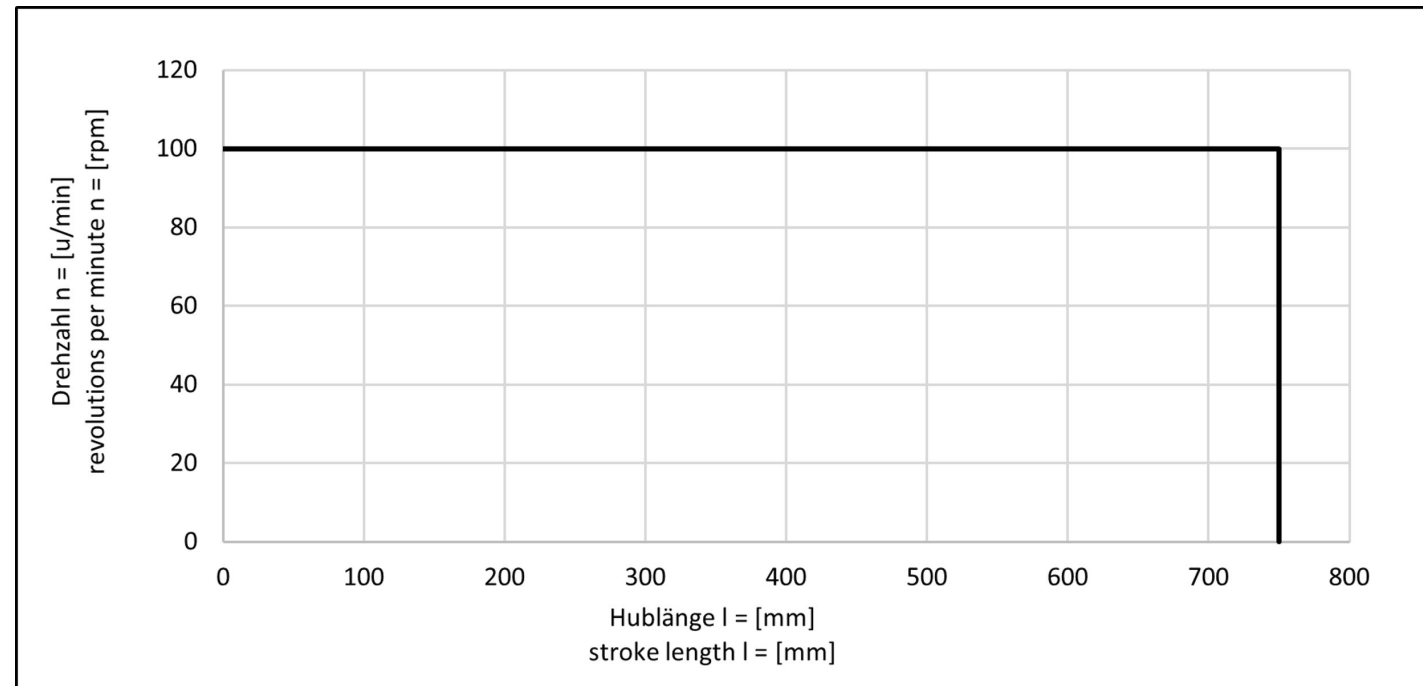
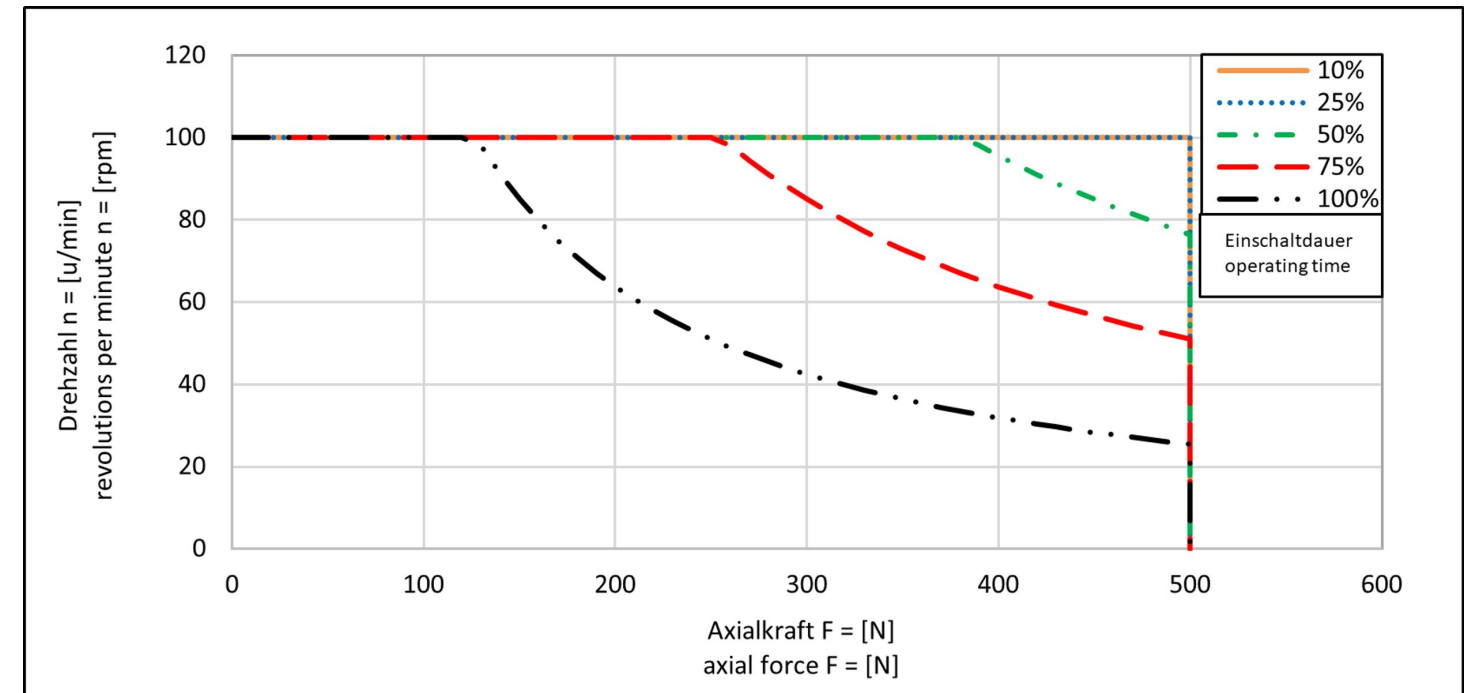


Diagram 2: Axial force / speed



Thread size: TR10X3
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| TR10X3 | 100 | 1.7 | 2000 | 500 | 0.5 | 0.5 | 0.5 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Linear Module SLW-10120

SLW-10120-TR10X4

Diagram 1: Stroke / speed

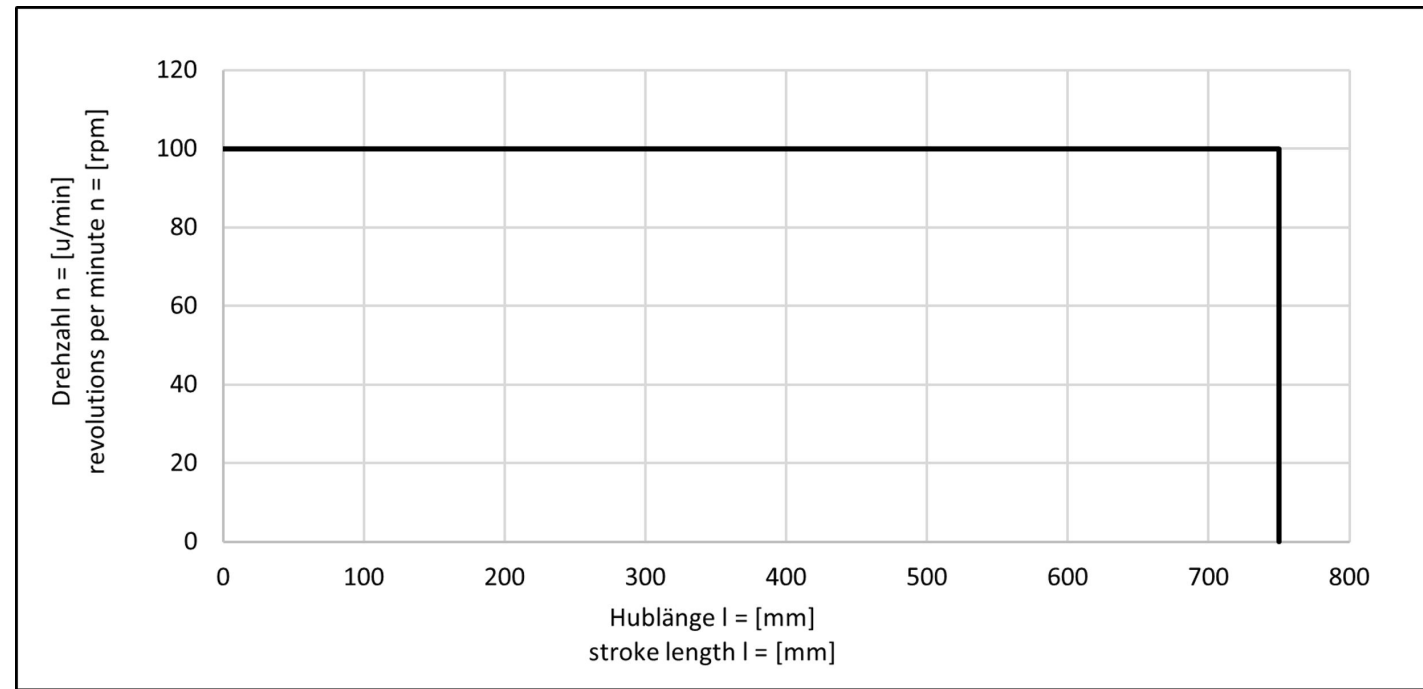
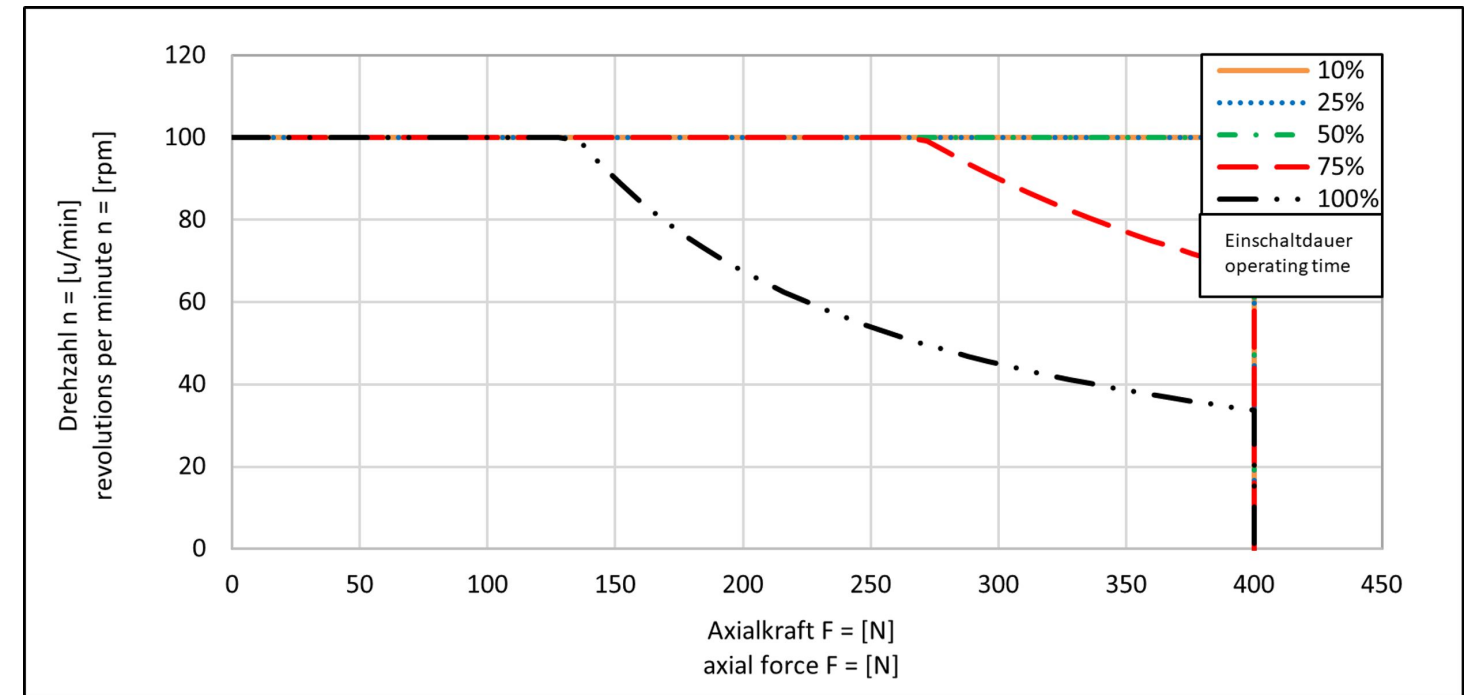


Diagram 2: Axial force / speed



Thread size: TR10X4
 Stroke [mm]: 100; lead screw support: GL
 Nut length [mm]: 20 mm

Technical data

| Thread size | max. perm. speed [1/min] ² | max. perm. drive torque [Nm] ² | max. perm. radial load ² | max. perm. axial force [N] ² | Wear limit linear bearing [mm] | Wear limit linear axial bearing [mm] | Wear limit nut [mm] |
|-------------|---------------------------------------|---|-------------------------------------|---|--------------------------------|--------------------------------------|---------------------|
| TR10X4 | 100 | 1.5 | 1600 | 400 | 0.5 | 0.5 | 0.33 |

Dimensions and weight

| Carriage Length Al [mm] | Width (A) x Height (H) x Length (L+Stroke) [mm] | Maximum permissible stroke [mm] ³ | Base weight aluminium [kg] | Additional weight aluminium [kg/100mm] |
|-------------------------|---|--|----------------------------|--|
| 100 | 154 x 29 x 144 | 750 | 1.26 | 0.27 |
| 150 | 154 x 29 x 194 | 700 | 1.51 | 0.27 |
| 200 | 154 x 29 x 244 | 650 | 1.76 | 0.27 |

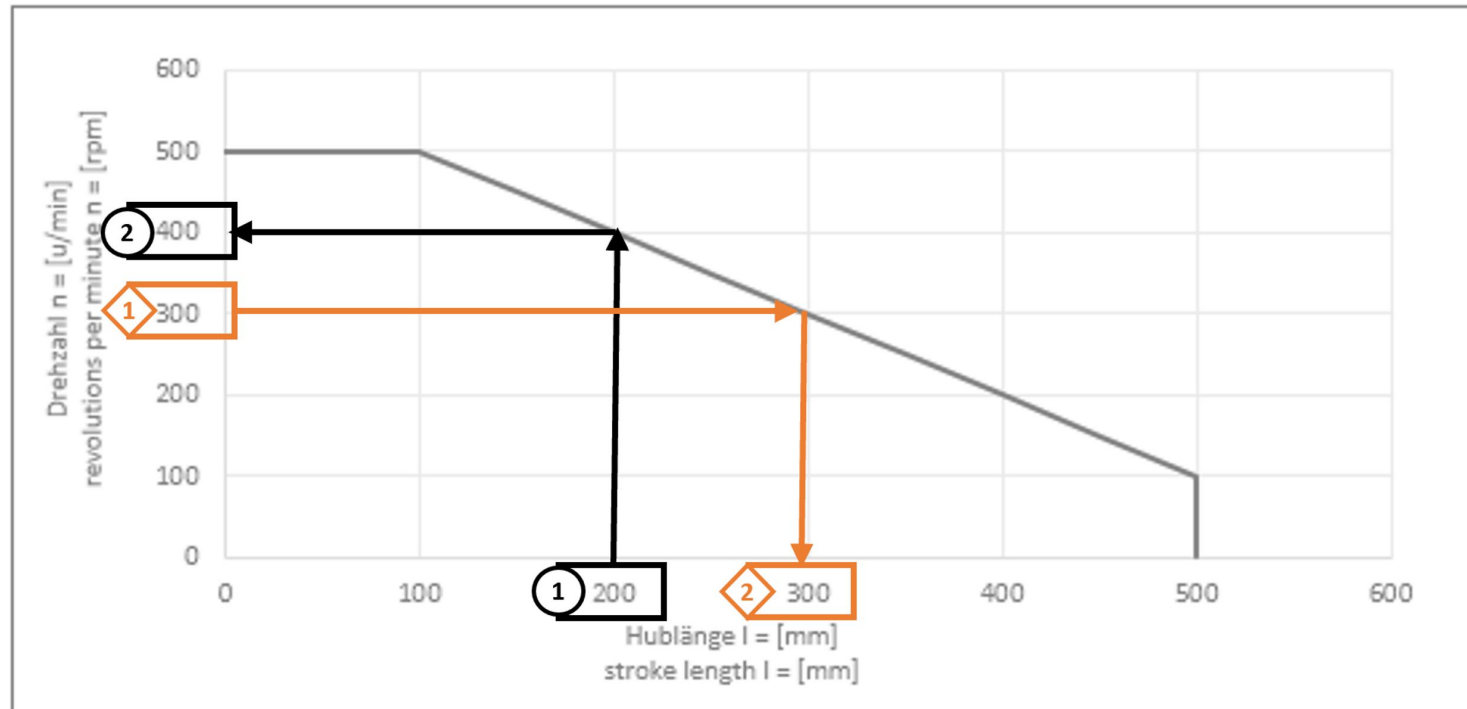
²Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

³A deviating stroke length affects the load data

Reading example

Linear Module SLW-10120

Reading example diagram 1: Stroke / speed



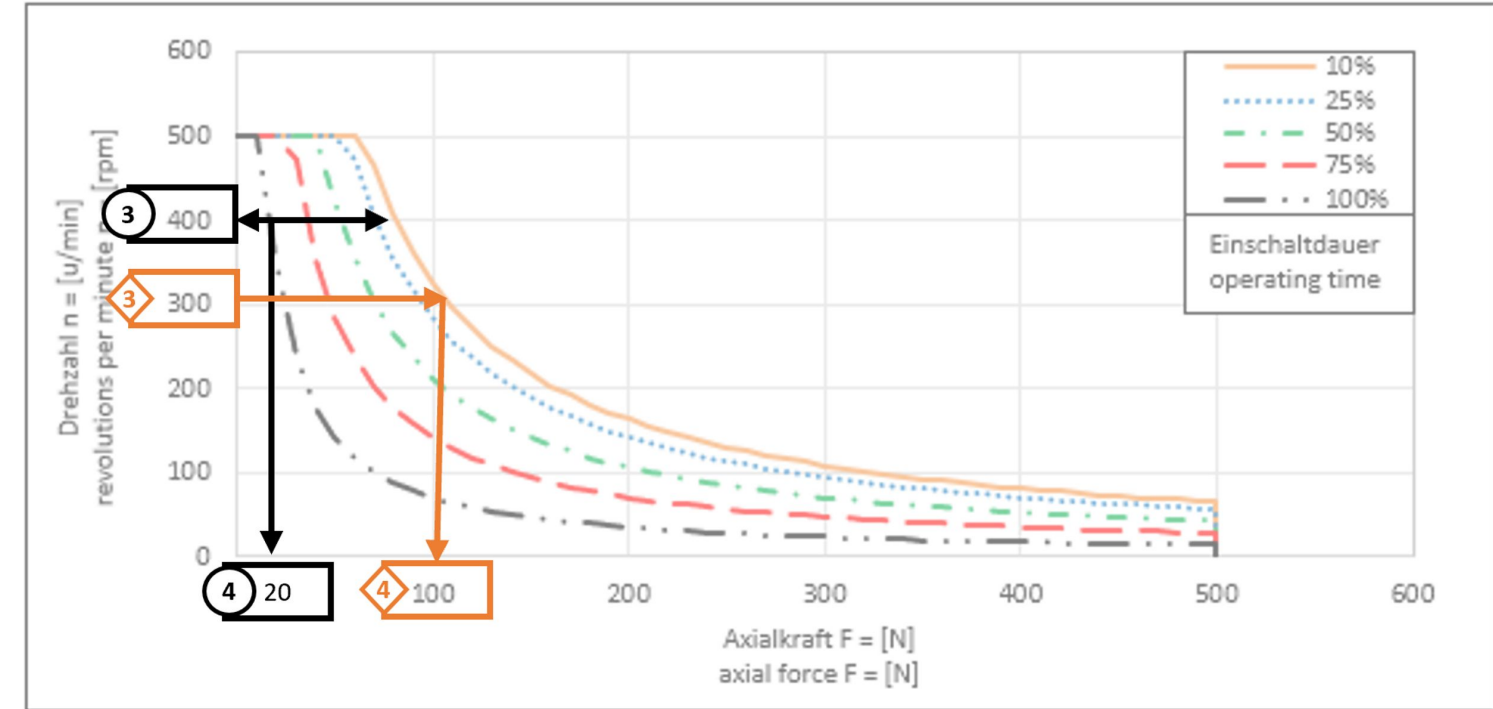
Example 1 (black): available stroke = 200 mm

Based on the existing stroke length ① the permissible speed can be determined. ②

At 200 mm stroke ① a permissible speed of 400 U/min ② can be determined.

Based on the permissible rotational speed ③, the permissible axial force ④ can be read as a function of the duty cycle (diagram legend). abgelesen werden. With a duty cycle of 100% and a speed of 400 U/min ③ a permissible axial force of 20 N ④ can be determined.

Reading example diagram 2: Axial force / speed



Example 2 (orange): rotational speed = 300 rpm

Dependent on the required speed ① the permissible stroke ② can be determined. At a speed of 300 rpm ① a permissible stroke length of 300 mm ② can be determined.

Based on the speed ③ the permissible axial force ④ can be read as a function of the duty cycle (diagram legend). With a duty cycle of 10% and a speed of 300 rpm ③ a permissible axial force of 100 N ④ can be determined.

Hint!

The diagram 2: Axial force / speed only refers to stroke lengths ≤ 100mm. For stroke lengths > 100mm, the max. permissible axial force can be increased with a correction factor. The limit values from the table of technical data must not be exceeded.

Calculation example:

$$F_k = F_{zul} * (0.008 * \text{stroke length} + 0.2)$$

$$F_k = 20 \text{ N} * (0.008 * 200 + 0.2) = 36 \text{ N}$$

The corrected force can be used with the previously determined stroke-dependent speed.

Disclaimer

The preceding information is the result of tests carried out. None of the information comprises one or more guarantees on certain properties nor does it comprise one or more guarantees in respect of the suitability of a product for a specific purpose, since the tests were carried out under laboratory conditions. A guarantee on certain product properties and/or their suitability for specific use is to be made in writing in the order confirmation. Since the results have been gained under laboratory conditions, which are almost never able to simulate real application-conditions, we recommend application-specific measurements under real application conditions.