Data sheet drylin® drive technology

Content:

Al

H

A

l +
stroke

drawing without dimensions
exemplary illustration

Further information on travel speeds, accelerations, service life etc. can be found in
the online tool: igus.eu/DDX

igus® motion plastics®
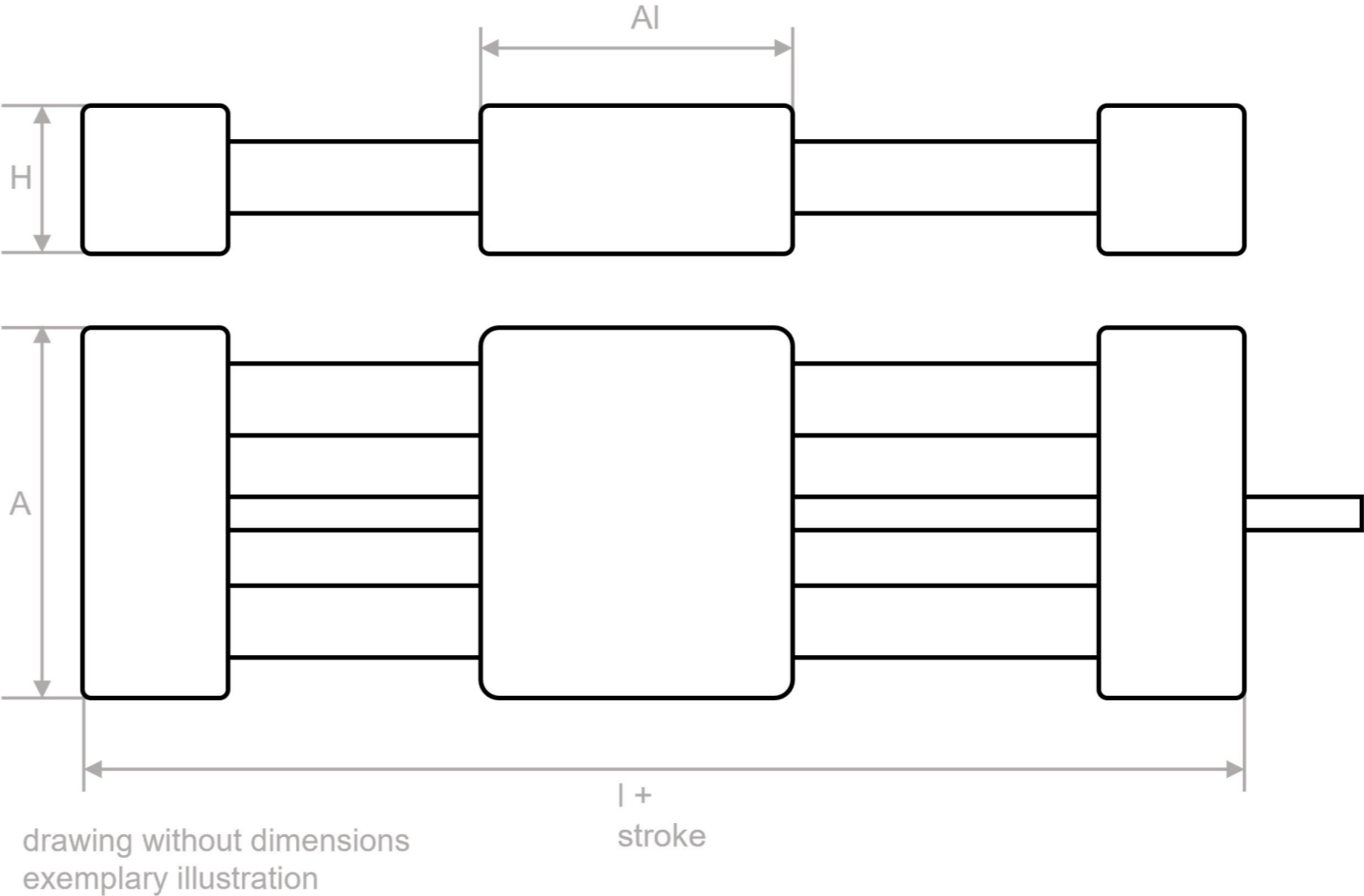
Linear Module SLW-1080
SLW-1080-DS10X2

Diagram 1: Stroke / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm]

Hublänge l = [mm]
stroke length l = [mm]

Diagram 2: Axial force / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm]

- 10%
- 25%
- 50%
- 75%
- 100%

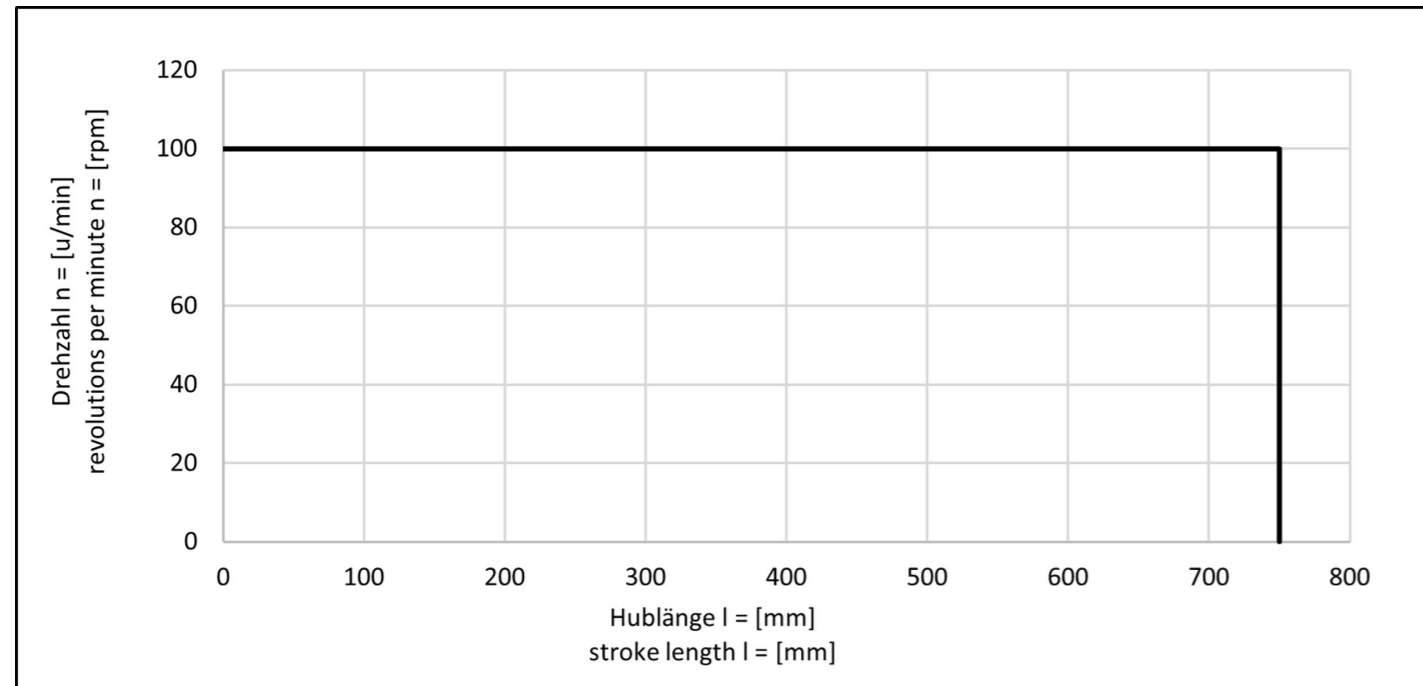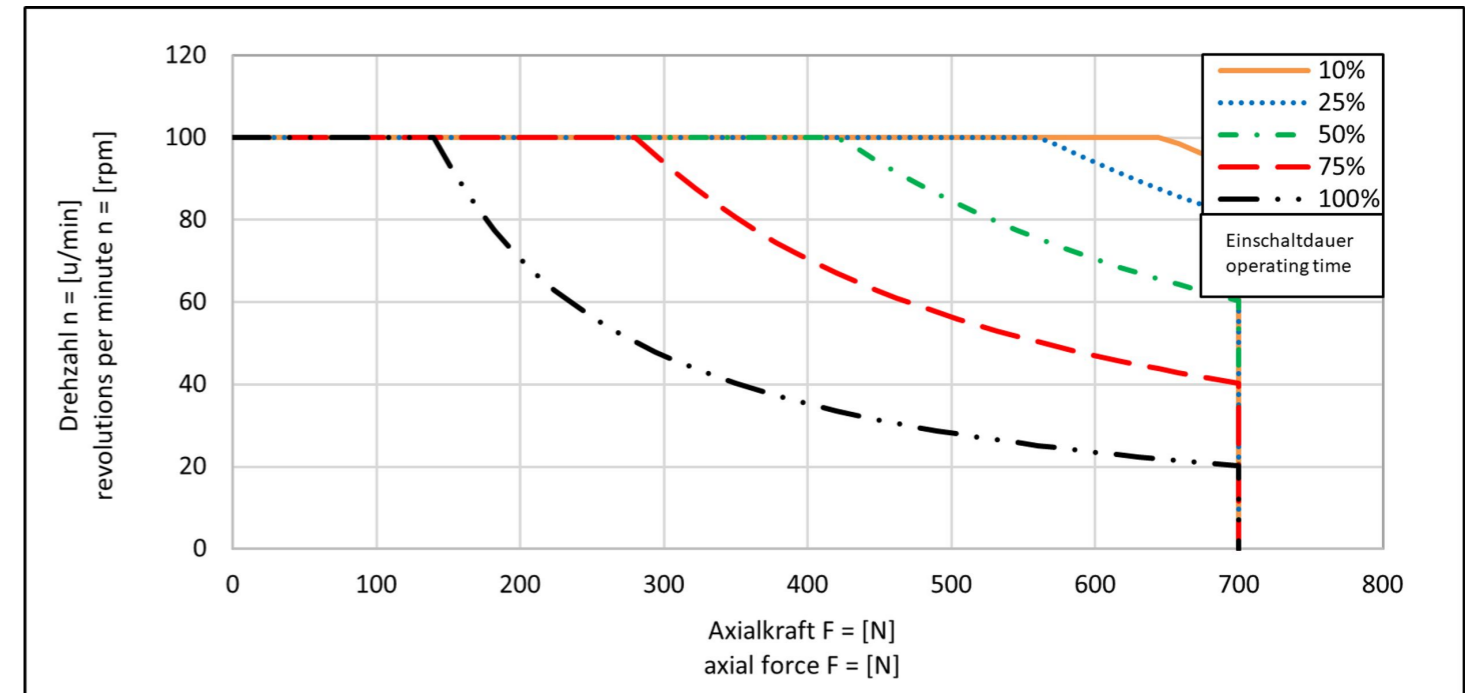Einschaltdauer operating time

Axialkraft F = [N]
axial force F = [N]

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 load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in the online tool: igus.eu/DDX

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Linear Module SLW-1080
SLW-1080-DS10X3

Diagram 1: Stroke / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Hublänge l = [mm]
stroke length l = [mm]

Diagram 2: Axial force / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Axialkraft F = [N]
axial force F = [N]

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

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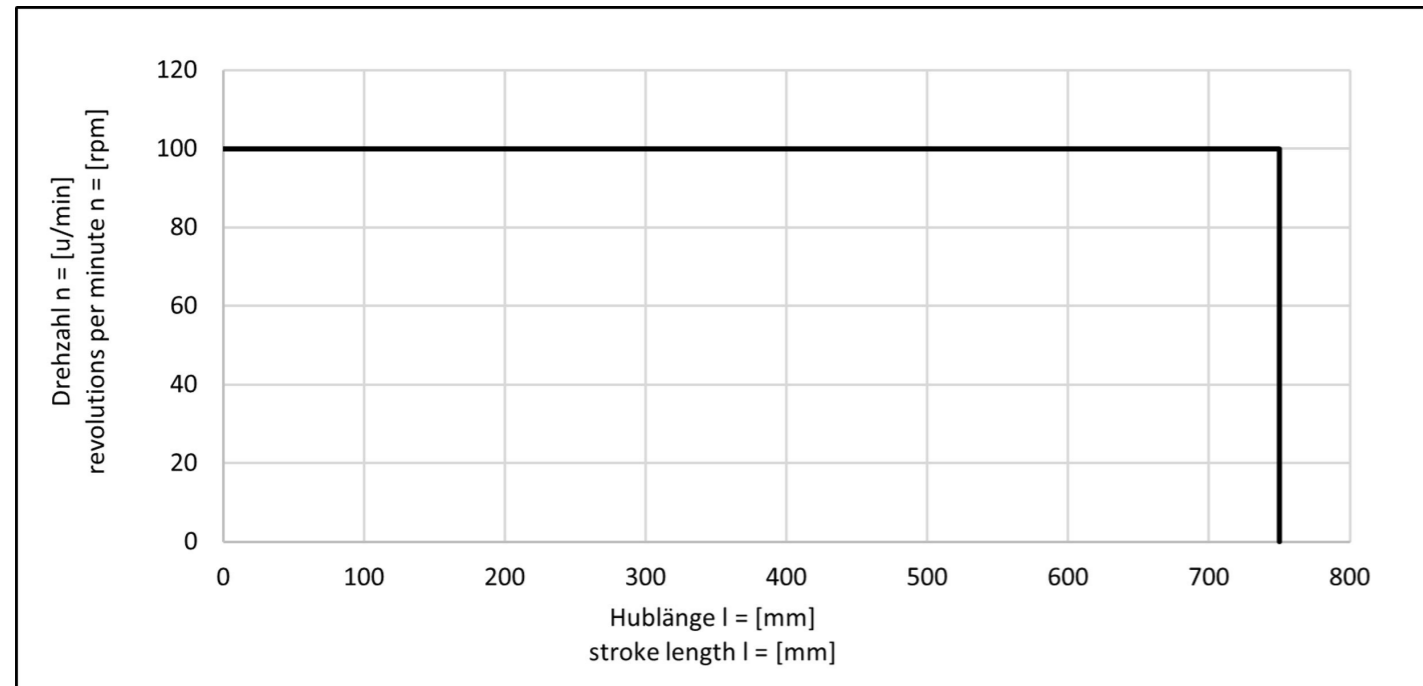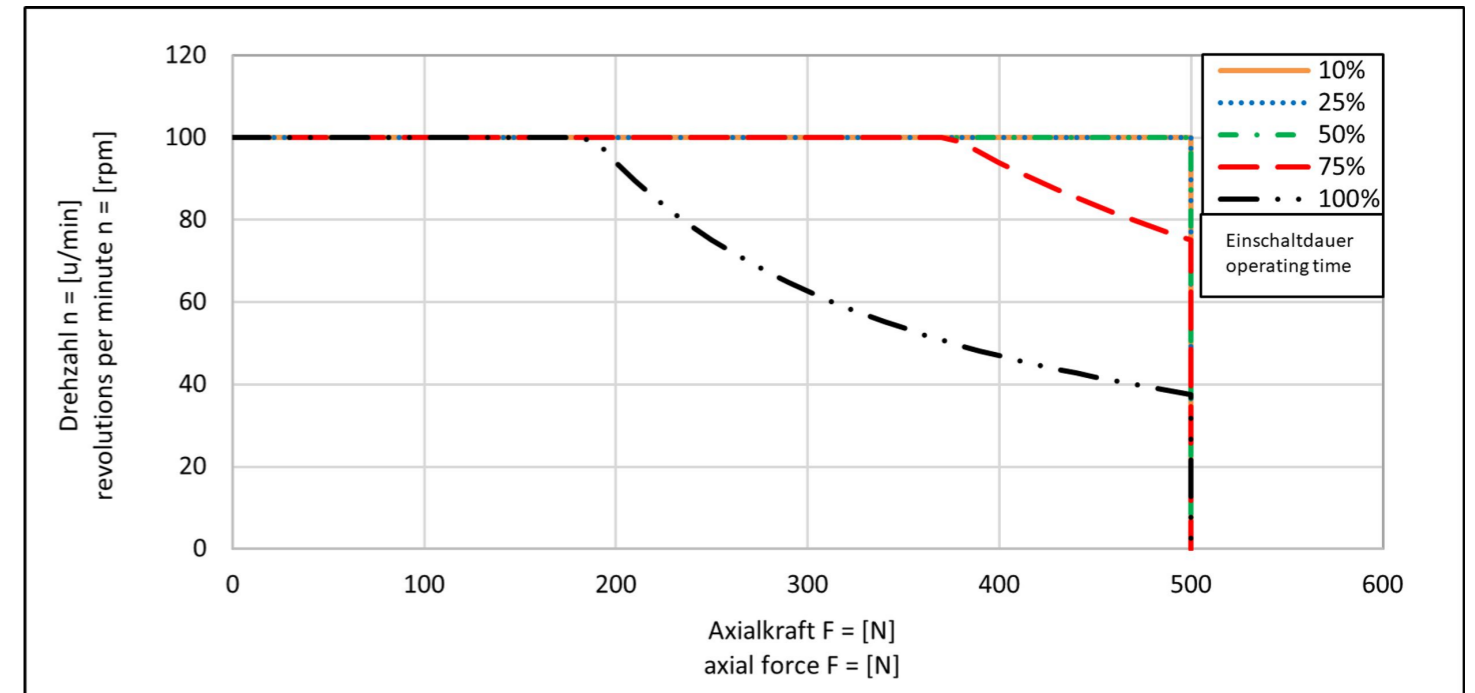
Thread size: DS10X3
Stroke [mm]: 100; lead screw support: GL
Nut length [mm]: 20 mm

Technical data

Thread size	max. perm. speed [1/min]²	max. perm. drive torque [Nm]²	max. perm. radial load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in the online tool: igus.eu/DDX

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Linear Module SLW-1080
SLW-1080-DS10X12

Diagram 1: Stroke / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm]

Hublänge l = [mm]
stroke length l = [mm]

Diagram 2: Axial force / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm]

Axialkraft F = [N]
axial force F = [N]

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

Einschaltdauer operating time

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 load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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-1080
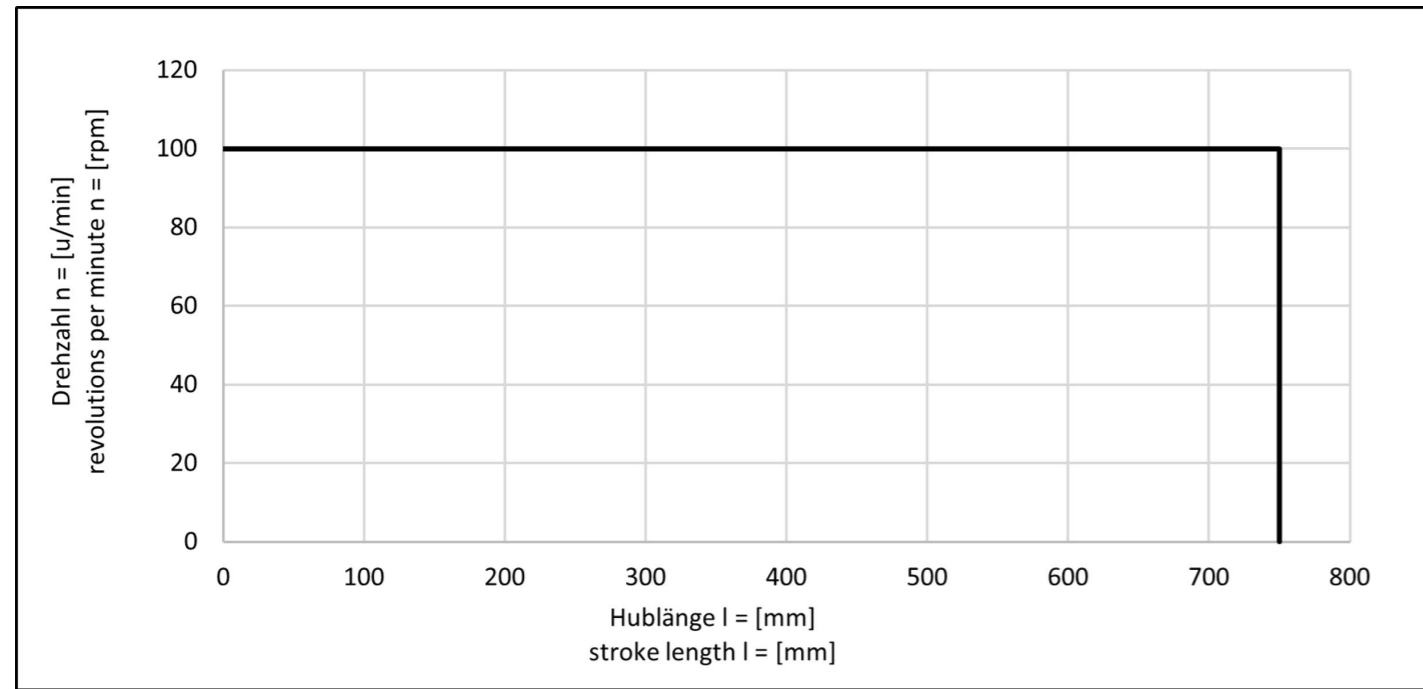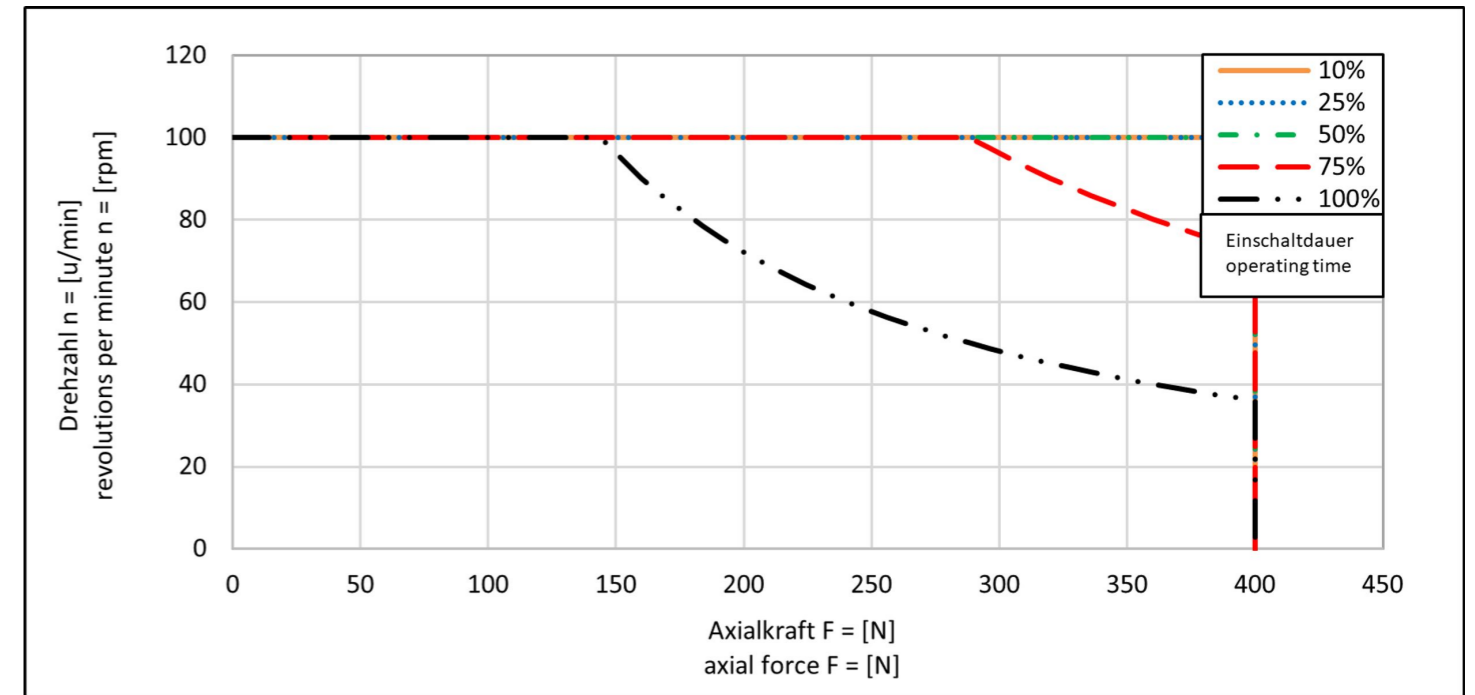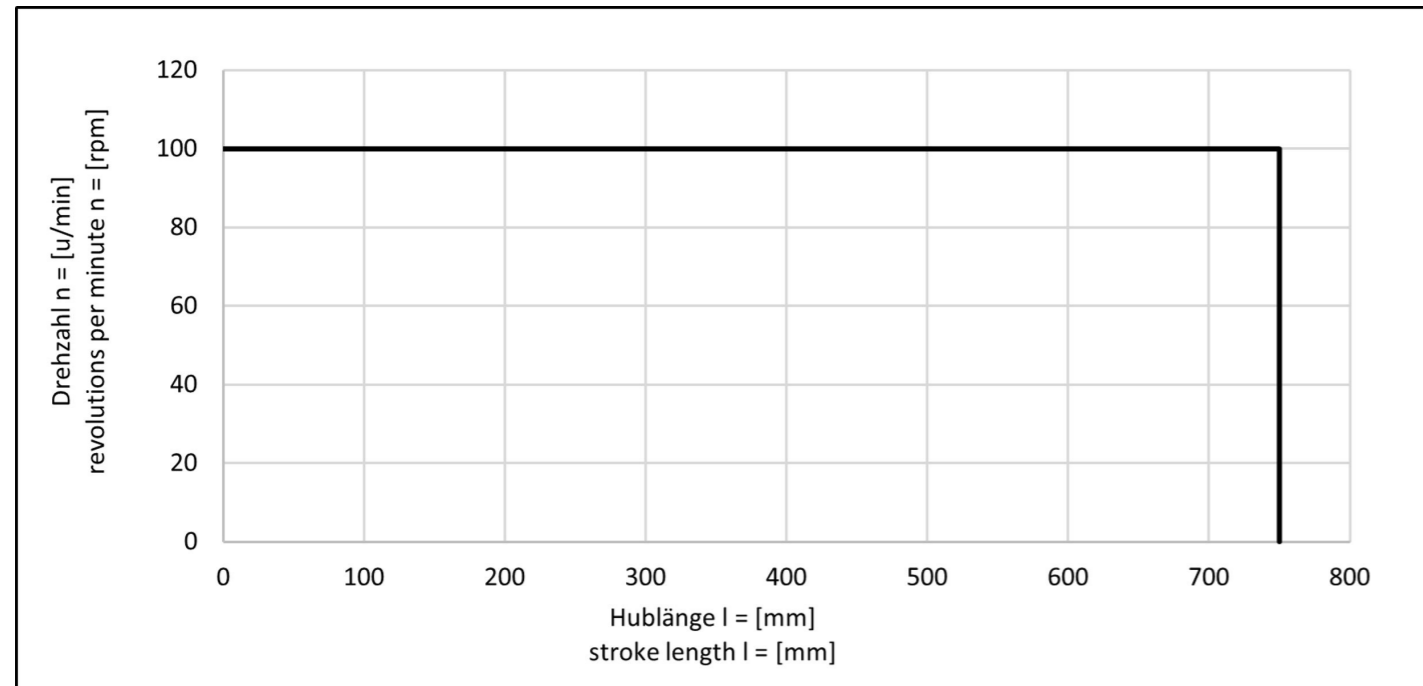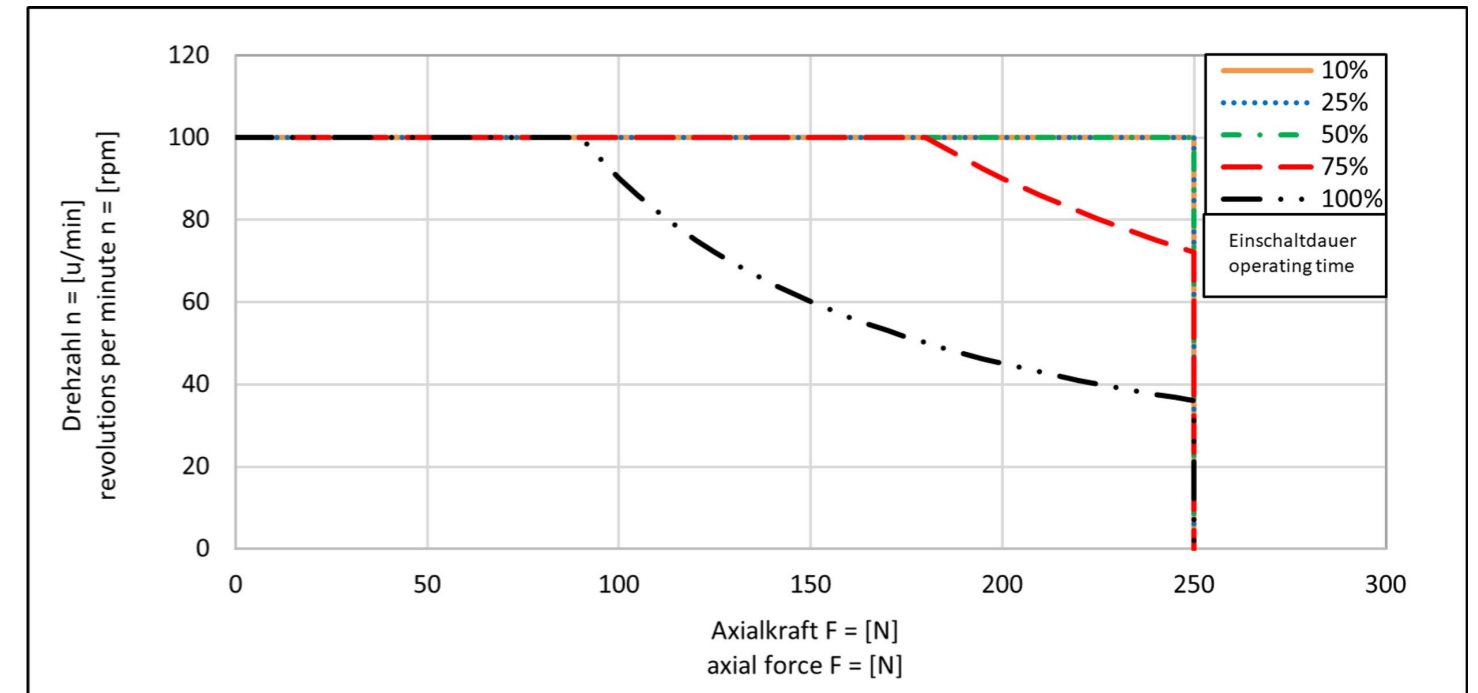## SLW-1080-DS10X25

Diagram 1: Stroke / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Hublänge l = [mm]
stroke length l = [mm]

Diagram 2: Axial force / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Axialkraft F = [N]
axial force F = [N]

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

Einschaltdauer
operating time

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 load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in
the online tool: igus.eu/DDX

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Linear Module SLW-1080
SLW-1080-DS10X50

Diagram 1: Stroke / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Hublänge l = [mm] / stroke length l = [mm] (x-axis)

Diagram 2: Axial force / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Axialkraft F = [N] / axial force F = [N] (x-axis)

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

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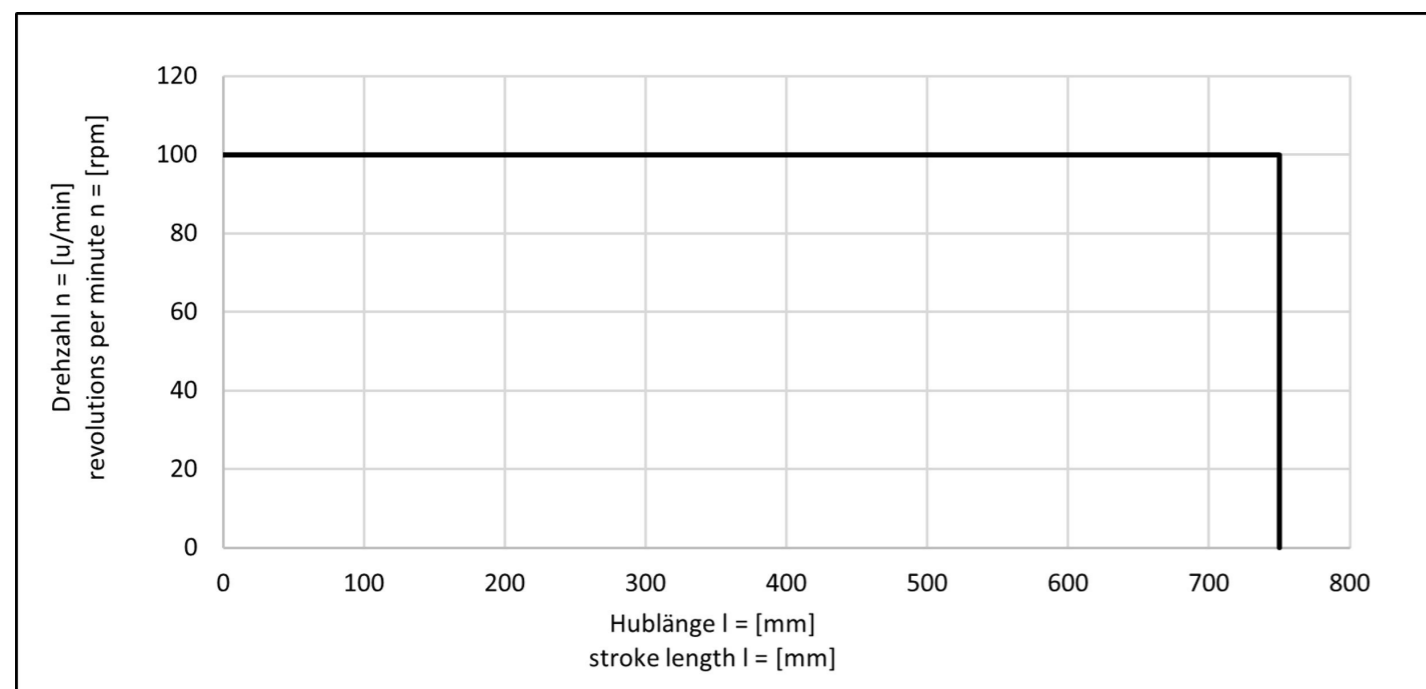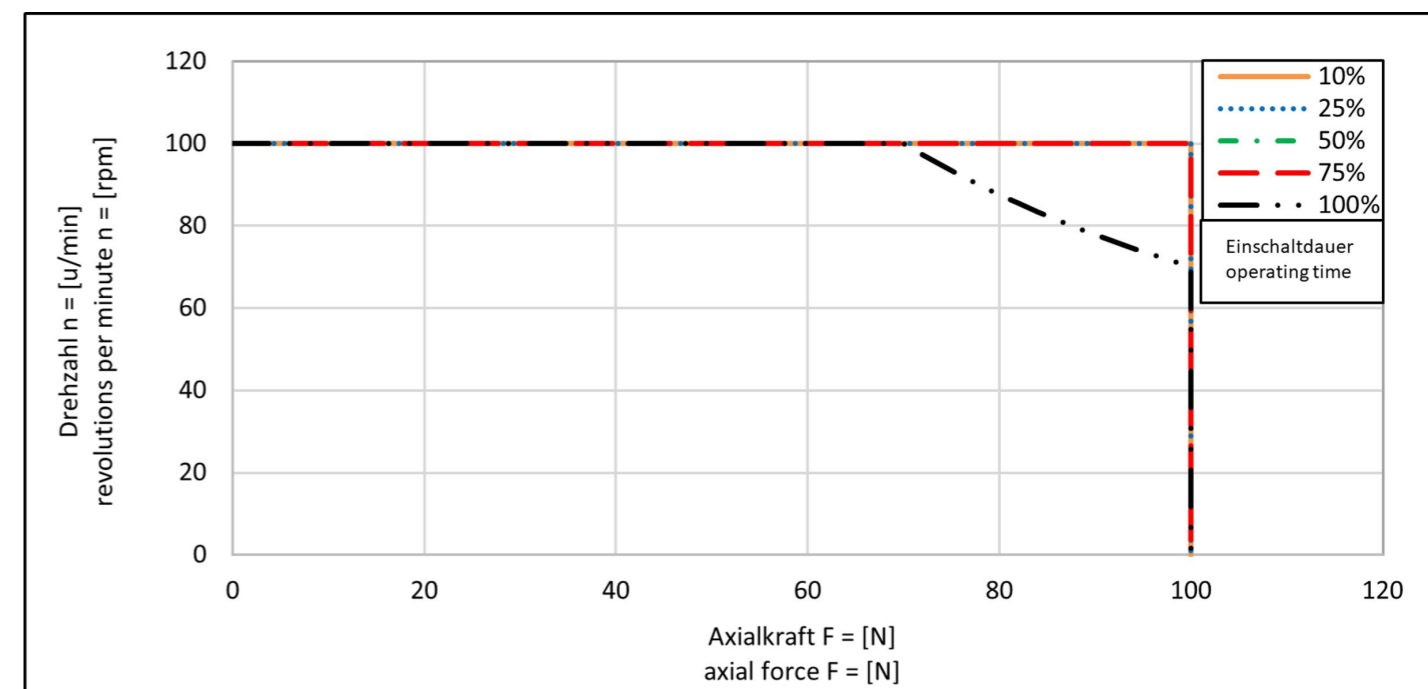
Thread size: DS10X50
Stroke [mm]: 100; lead screw support: GL
Nut length [mm]: 20 mm

Technical data

Thread size	max. perm. speed [1/min]²	max. perm. drive torque [Nm]²	max. perm. radial load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in the online tool: igus.eu/DDX

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Linear Module SLW-1080
SLW-1080-TR10X2

Diagram 1: Stroke / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Hublänge l = [mm] stroke length l = [mm] (x-axis)

Diagram 2: Axial force / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Axialkraft F = [N] axial force F = [N] (x-axis)

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

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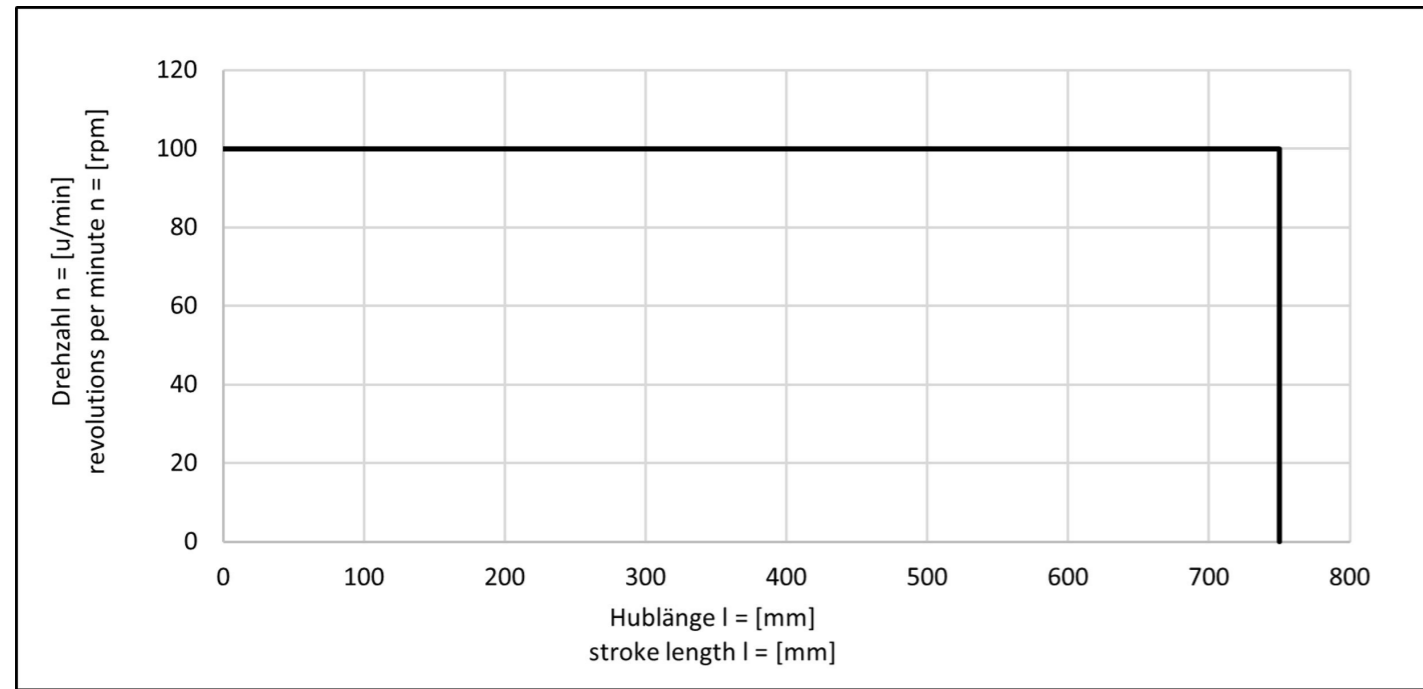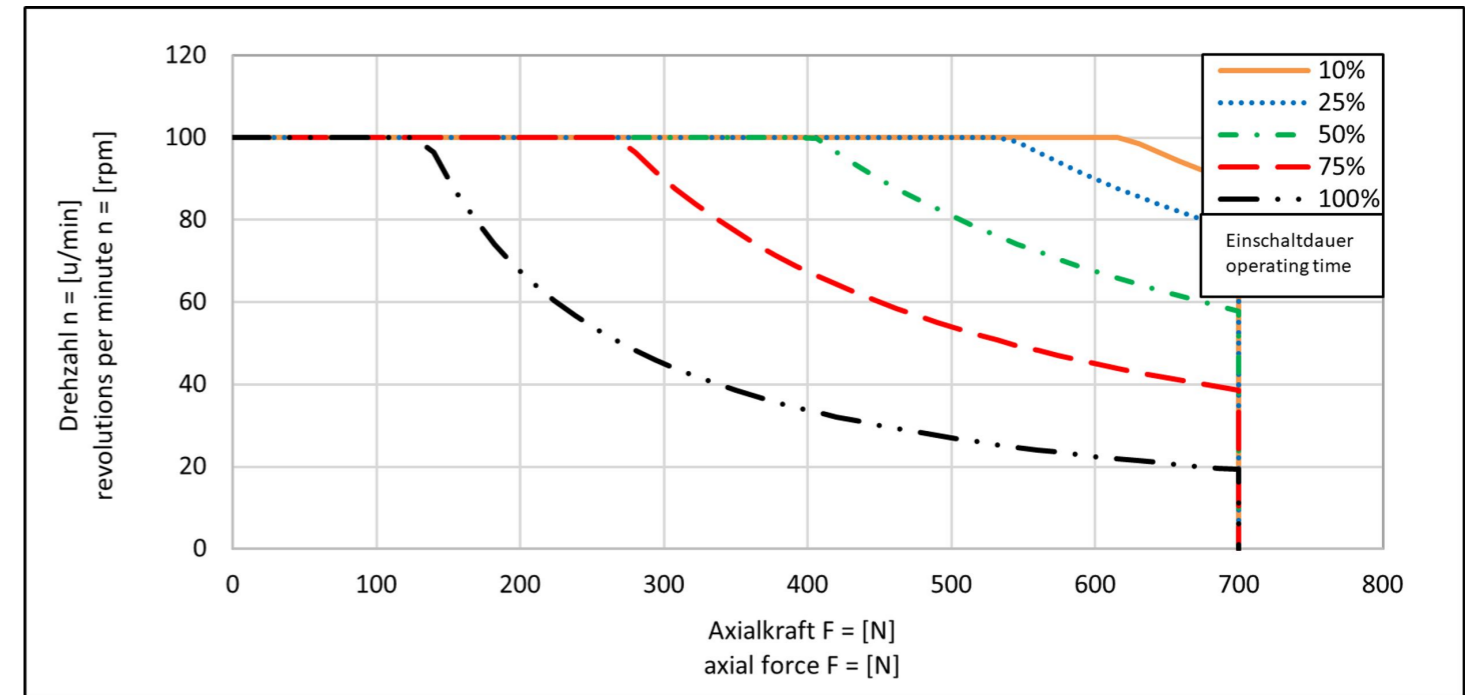
Thread size: TR10X2
Stroke [mm]: 100; lead screw support: GL
Nut length [mm]: 20 mm

Technical data

Thread size	max. perm. speed [1/min]²	max. perm. drive torque [Nm]²	max. perm. radial load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in the online tool: igus.eu/DDX

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Linear Module SLW-1080
SLW-1080-TR10X3

Diagram 1: Stroke / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Hublänge l = [mm]
stroke length l = [mm]

Diagram 2: Axial force / speed

Drehzahl n = [u/min]
revolutions per minute n = [rpm]

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

Einschaltdauer
operating time

Axialkraft F = [N]
axial force F = [N]

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 load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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-1080
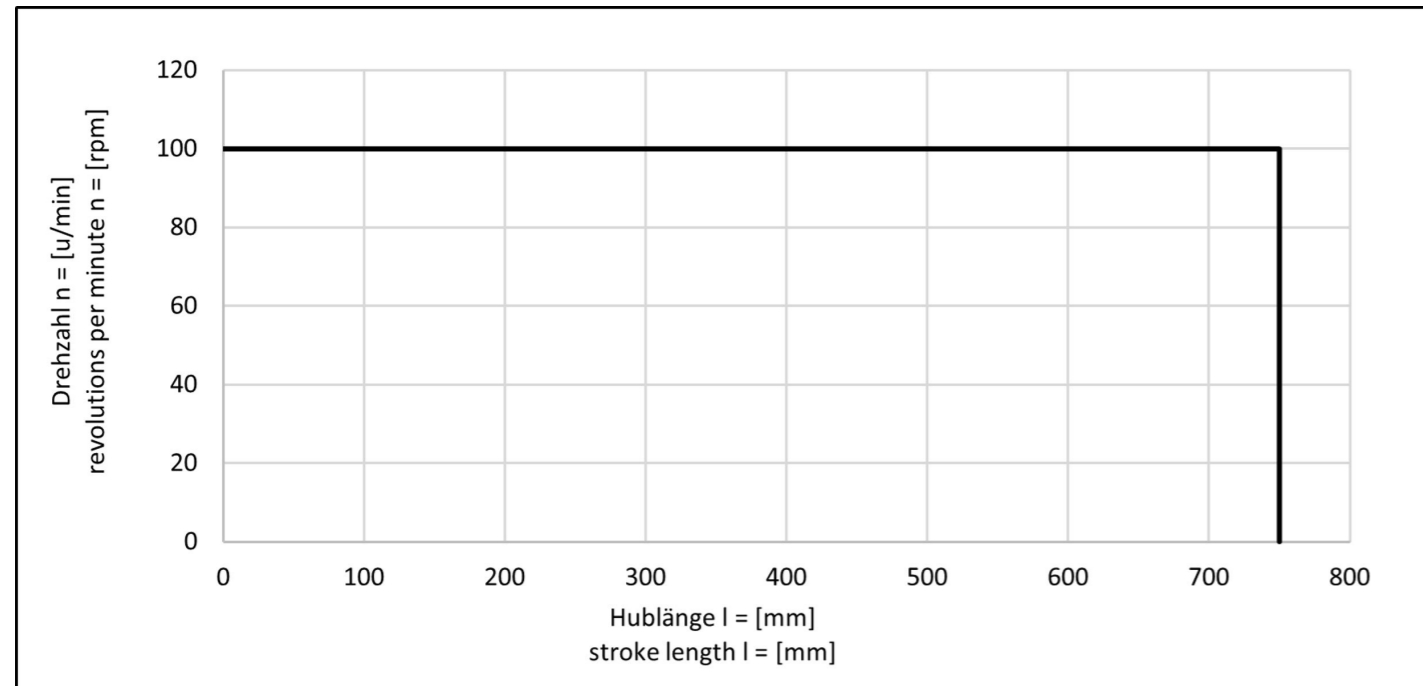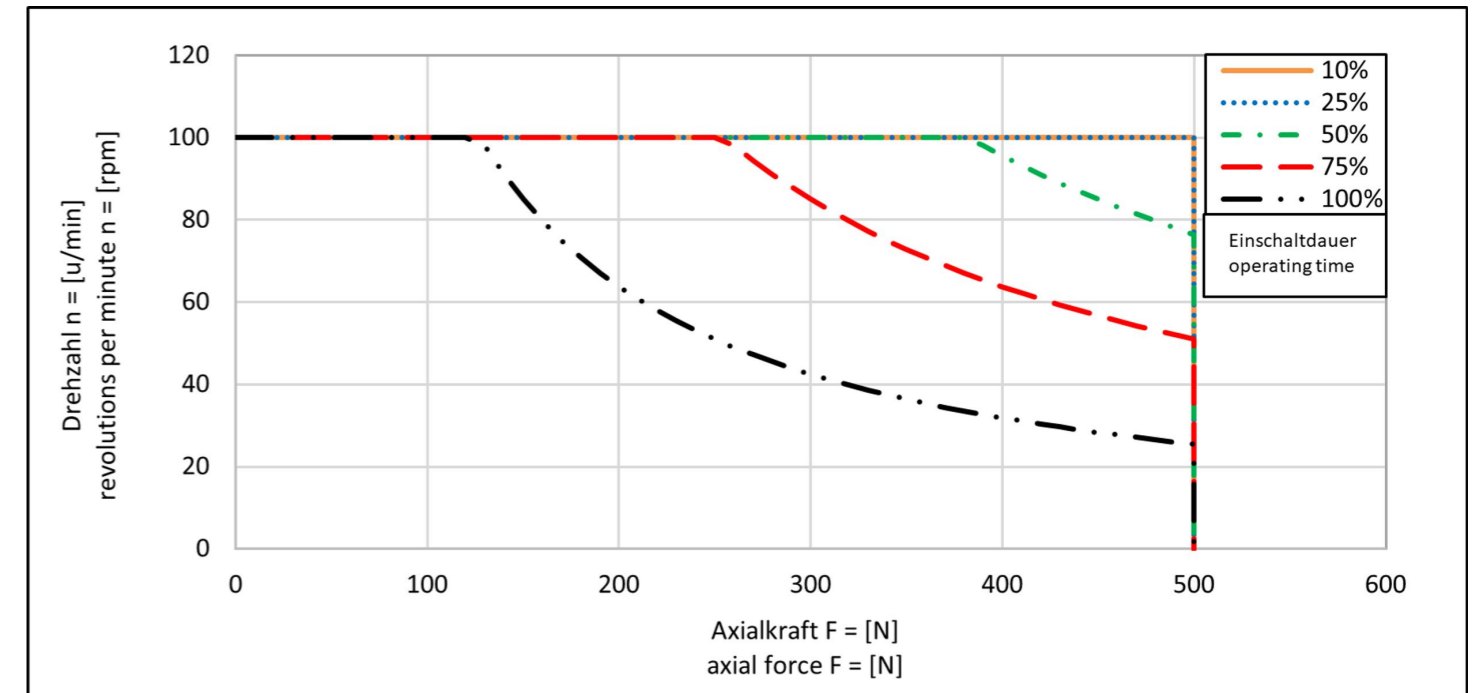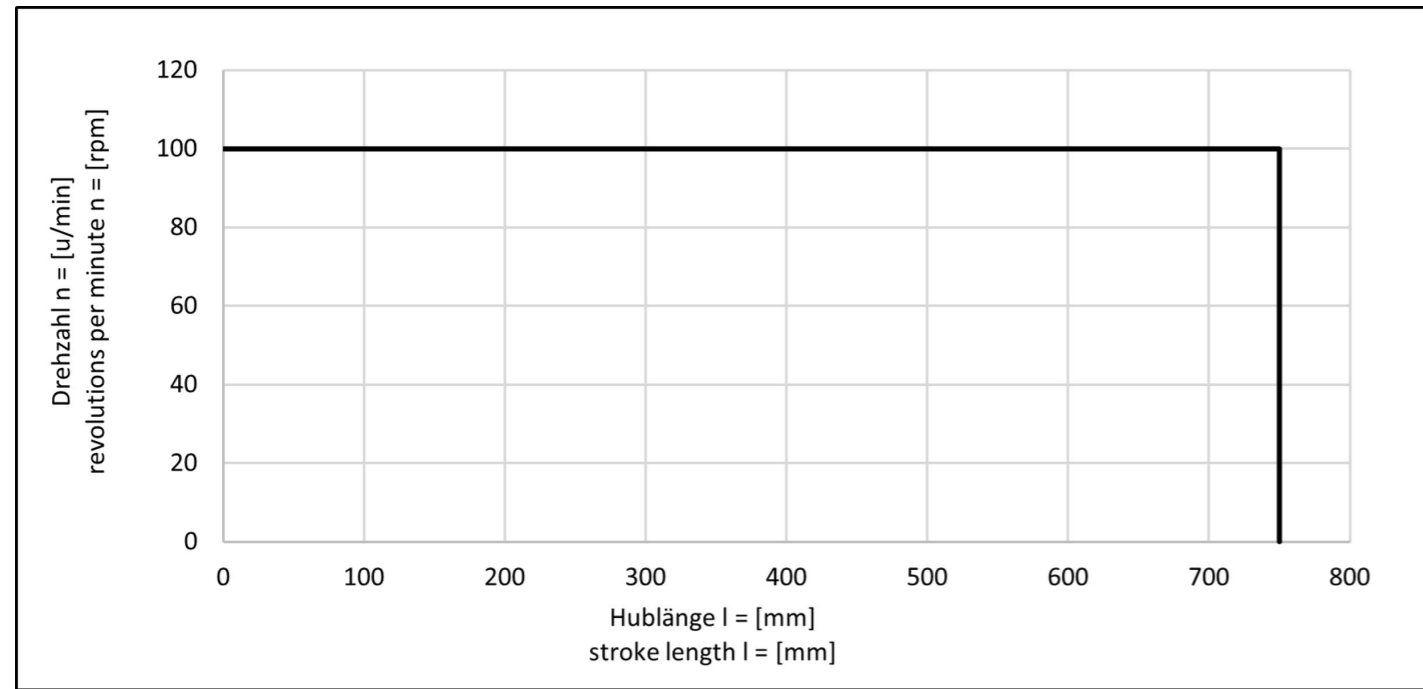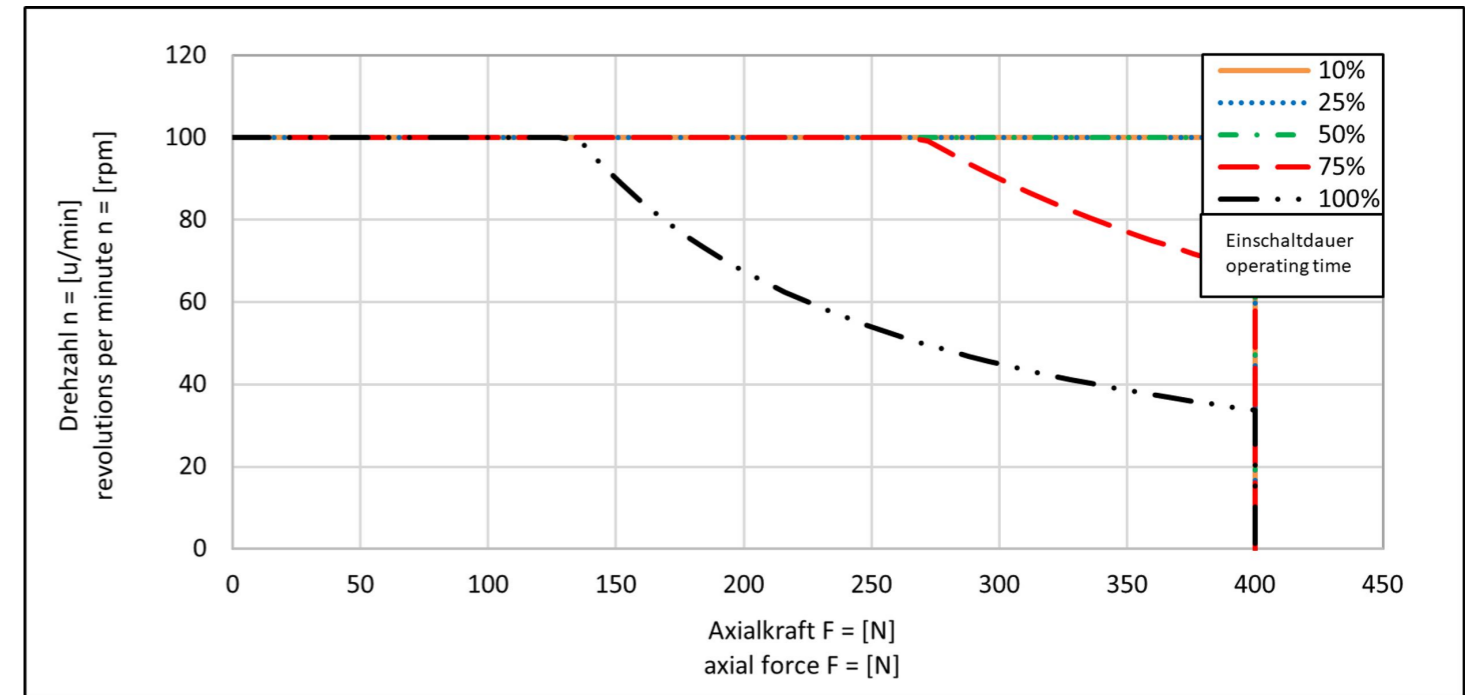## SLW-1080-TR10X4

Diagram 1: Stroke / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Hublänge l = [mm] / stroke length l = [mm] (x-axis)

Diagram 2: Axial force / speed

Drehzahl n = [u/min] revolutions per minute n = [rpm] (y-axis)

Axialkraft F = [N] / axial force F = [N] (x-axis)

Legend:
- 10%
- 25%
- 50%
- 75%
- 100%

Einschaltdauer operating time

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 load²	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	108 x 29 x 144	750	0.96	0.21
150	108 x 29 x 194	700	1.15	0.21
200	108 x 29 x 244	650	1.33	0.21

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

Further information on travel speeds, accelerations, service life etc. can be found in the online tool: igus.eu/DDX

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Reading example
Linear Module SLW-1080

Reading example diagram 1: Stroke / speed

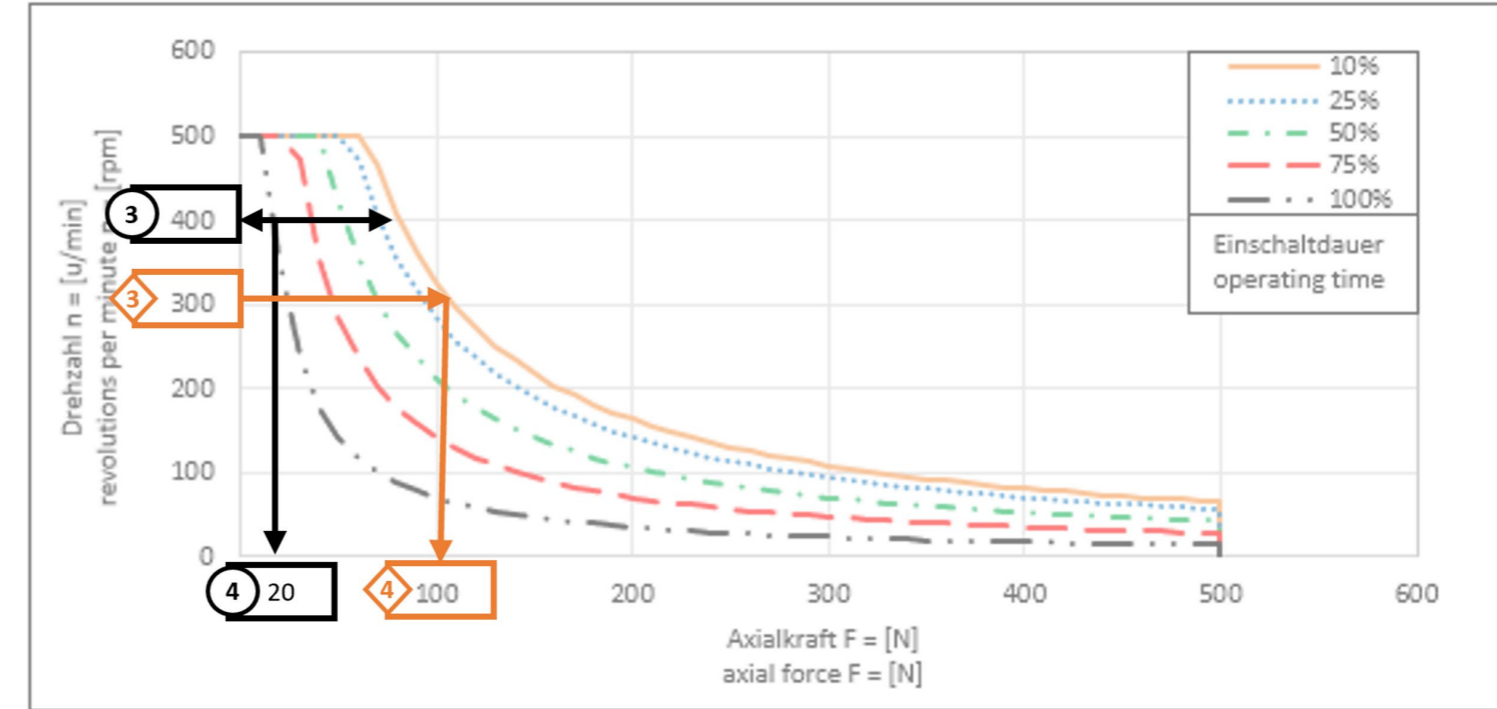### Reading example diagram 2: Axial force / speed
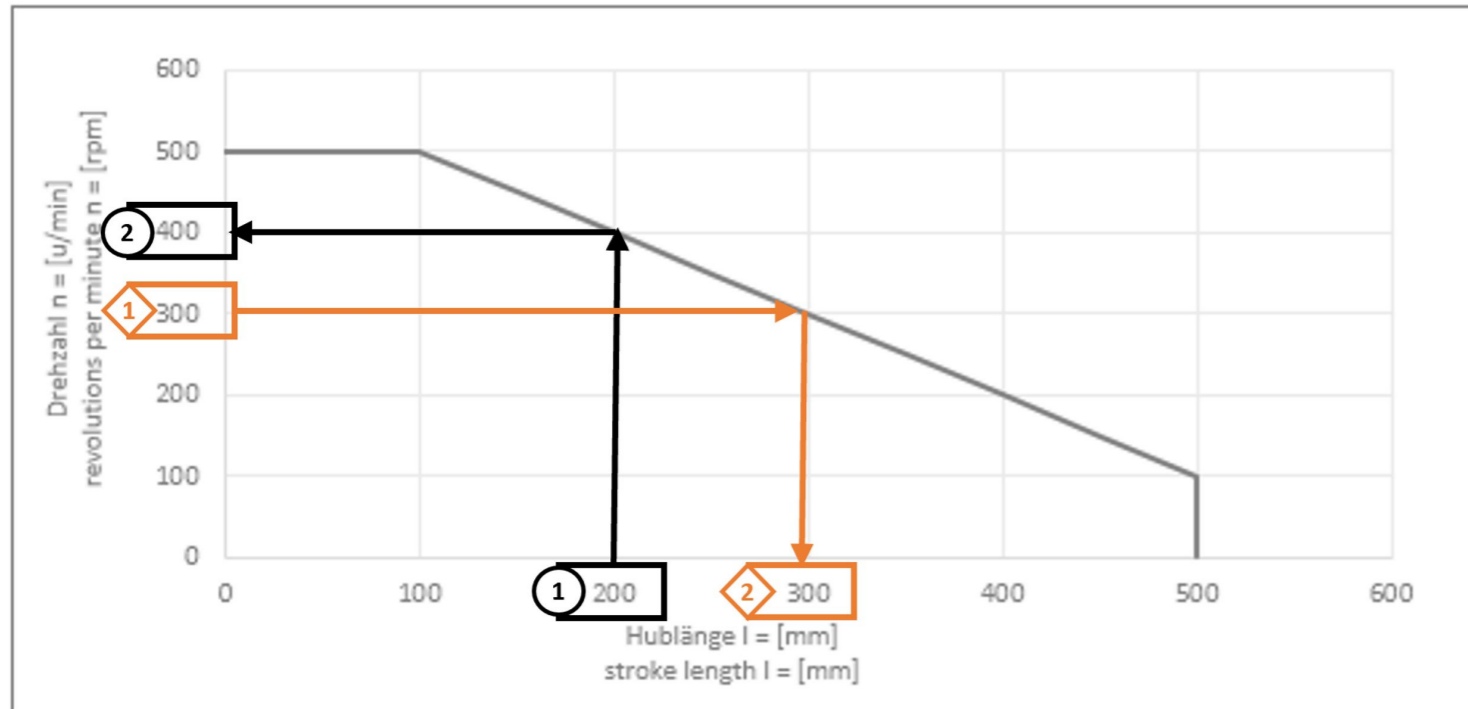
Example 1 (black): available stroke = 200 mm

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.

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.

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

Calculation example:

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

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.