

# Data sheet drylin® drive technology

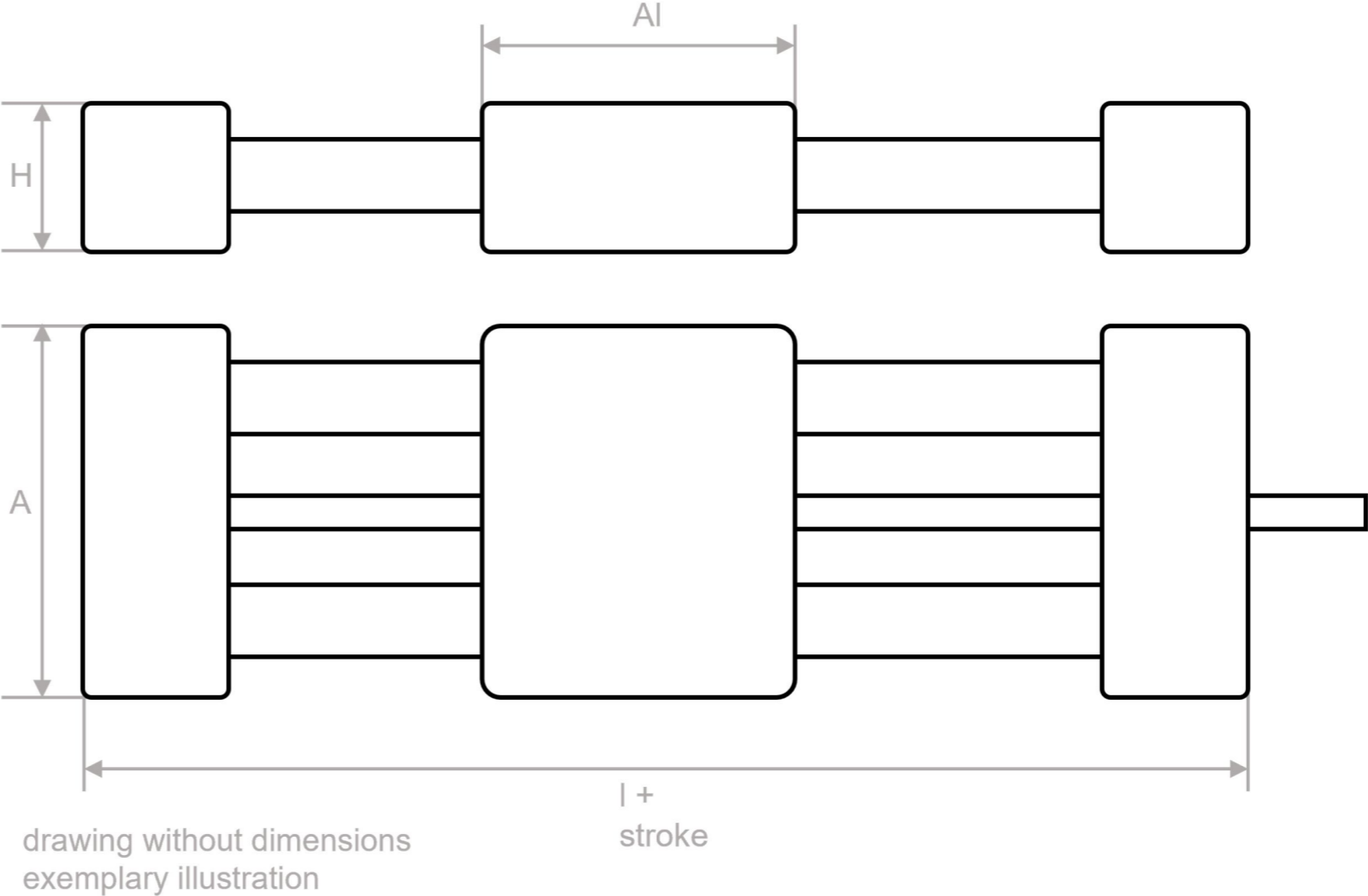
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Linear Module SET-25-AWM-F

SET-25-AWM-F-TR12X3

Reading example

Disclaimer



# Linear Module SET-25-AWM-F

## SET-25-AWM-F-TR12X3

Diagram 1: Stroke / speed

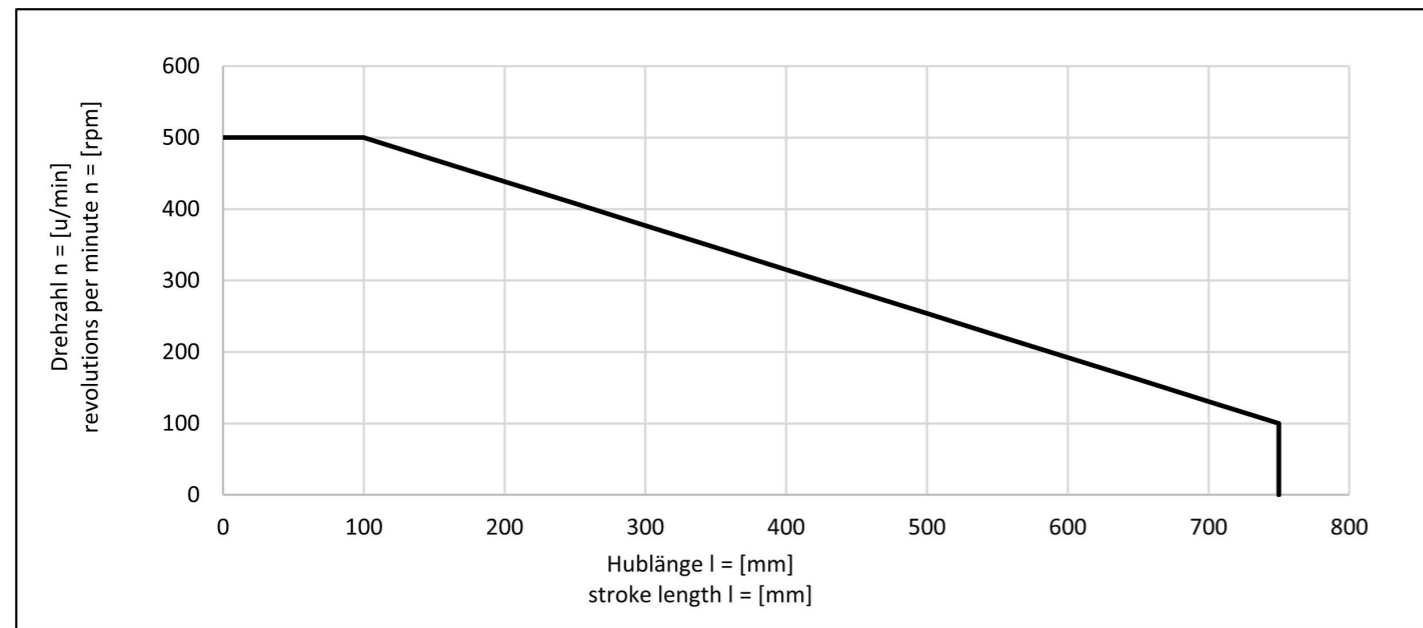
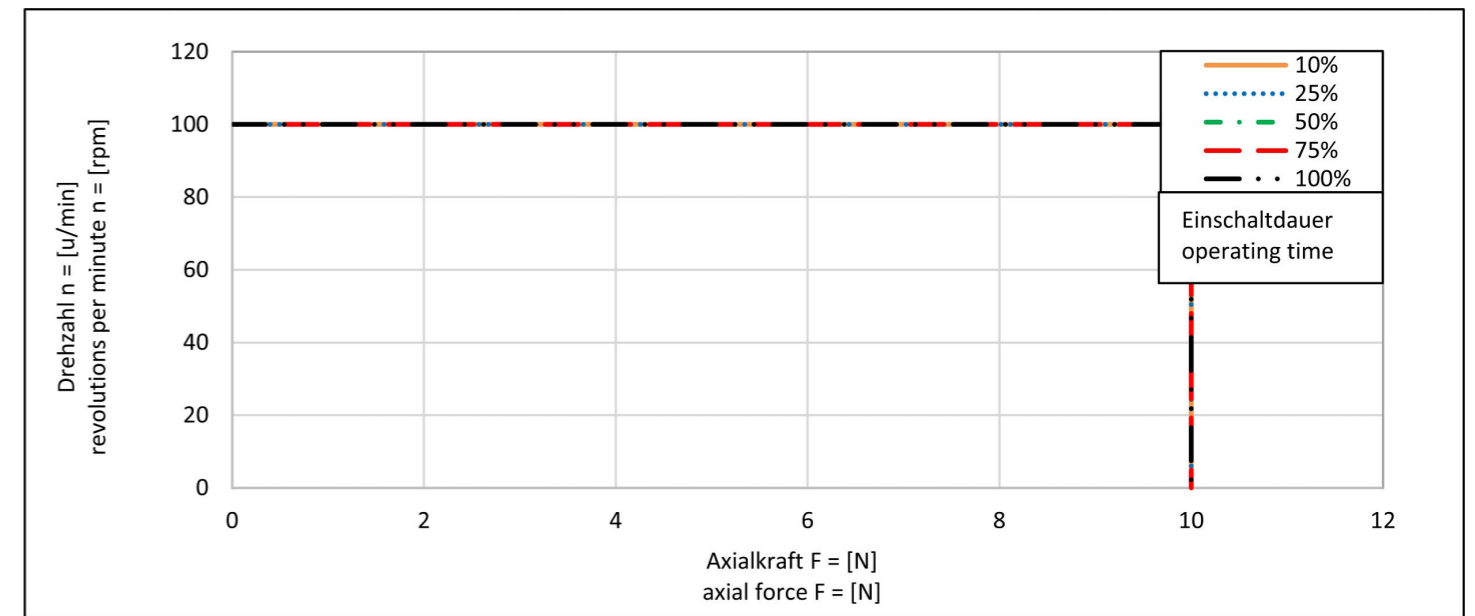


Diagram 2: Axial force / speed



Thread size: TR12X3  
 Stroke [mm]: 100; lead screw support: GL  
 Nut length [mm]: 20 mm

### Technical data

Thread size	max. perm. speed [1/min] <sup>2</sup>	max. perm. drive torque [Nm] <sup>2</sup>	max. perm. radial load <sup>2</sup>	max. perm. axial force [N] <sup>2</sup>	Wear limit linear bearing [mm]	Wear limit linear axial bearing [mm]	Wear limit nut [mm]
TR12X3	100	1.7	300	150	0.7	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] <sup>3</sup>	Base weight aluminium [kg]	Additional weight aluminium [kg/100mm]
55	60 x 49 x 125	750	0.15	0.12

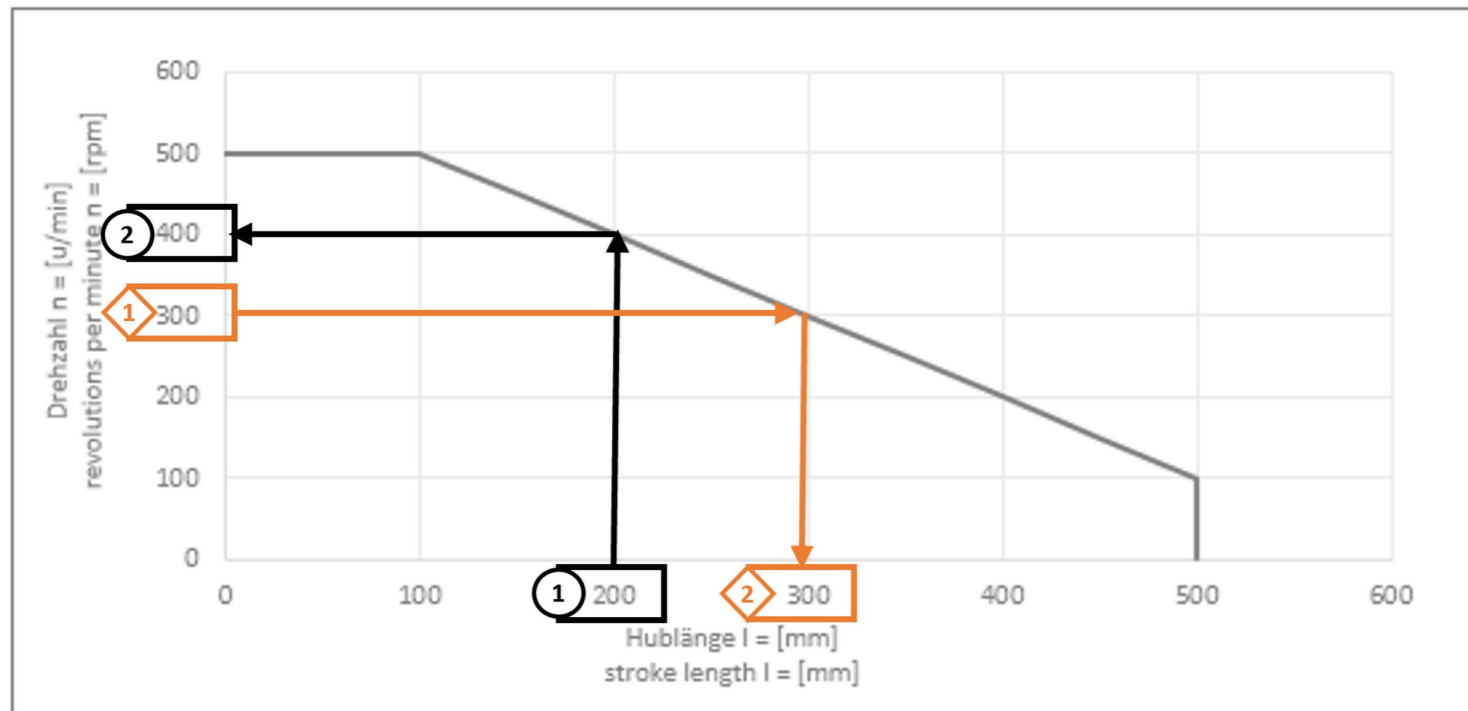
<sup>2</sup>Maximum values! These values are maximum values and apply only to one criterion. Combined load data can be found in the diagrams. In addition, these speed and load data only apply to the linear bearing and threaded nut material iglidur® J

<sup>3</sup>A deviating stroke length affects the load data

# Reading example

## Linear Module SET-25-AWM-F

Reading example diagram 1: Stroke / speed



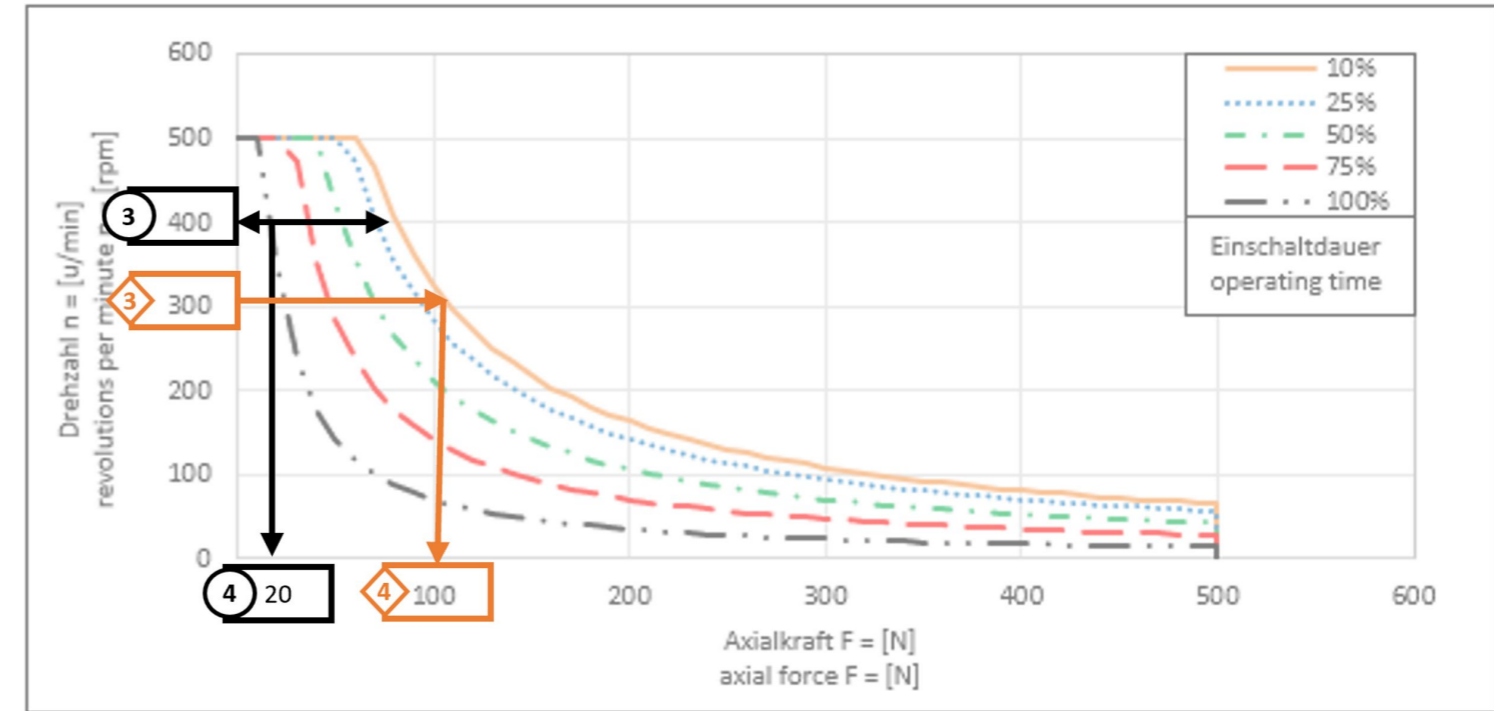
**Example 1 (black):** available stroke = 200 mm

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  $\leq 100\text{mm}$ . For stroke lengths  $> 100\text{mm}$ , 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.