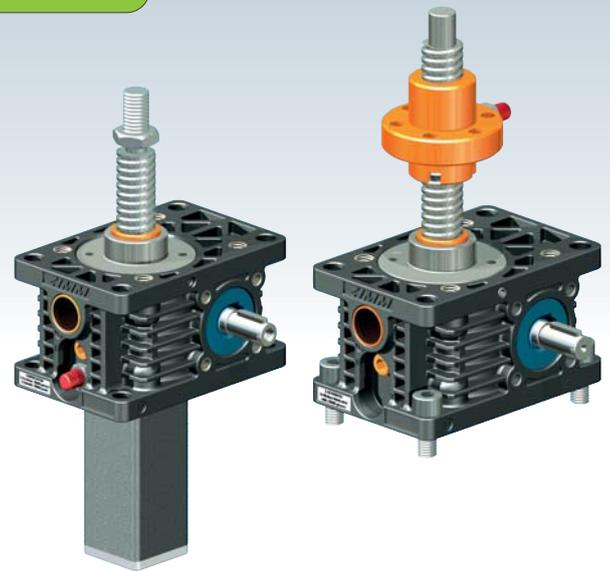


## Temperature

The ambient temperature is very important for system operation.

Always inform us about ambient temperature and conditions, especially if these deviate from the usual 20°C to 25°C.



### Normal temperature

Always specify on your enquiry and order if the equipment will be exposed to ambient temperatures below 10°C or above 40°C.

The highest temperature rises in operation occur at the shaft seal ring and on the trapezoidal screw. The Tr spindle can achieve a rise in temperature double that at the gearbox.



#### Example:

In operation at an ambient temperature of 20°C, the gearbox reaches 60°C (rise of 40°C) and the Tr screw about 100°C (rise of 80°C).

The temperature of the Tr spindle should not be allowed to exceed 100°C.

### Low temperature

The seals and most of our lubricants we use are specified in principle for operating temperatures down to -40°C. However the design should be checked for suitability if operating temperatures below 10°C are envisaged. Lubricants become stiffer and the break-away torque becomes higher.

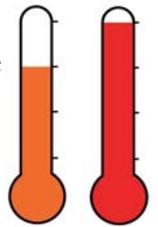
Generally speaking, all components must be sized adequately for temperatures below zero, because the material strength is reduced.



### High temperature

For operating temperatures above 60 °C we recommend the use of high-temperature grease in the gearbox, and the use of FPM seals. (standard paint finish up to 90 °C)

For operating temperatures above 100°C please contact us so that we can offer appropriate solutions.



### Temperature range of standard parts:

Standard screw jacks	-20°C to +80°C (when <10°C or >40°C please contact us)
High temperature screw jacks	up to 160°C, or 200°C
Round bellows	-20°C to +70°C (max. +85°C)
Polygonal bellows	-15°C to +70°C (no exposure to direct sunlight)
Limit switch	-40°C to +70°C
Limit switch cable standard	-25°C to +70°C
Limit switch cable special	-40°C to +105°C
Rotary pulse encoder DIG	-40°C to +80°C
Motors	above 40°C reduced power, e.g. factor 0.8 at 60°C
Connecting shafts VWZ+KUZ-KK	0°C to + 70°C, reduced from -20°C to +100°C (max. +120°C)
Couplings KUZ	-20°C to +70°C, reduced from -30°C to +100°C
Bevel gearboxes	-10°C to +90°C
Ball screws KGT	-20°C to +80°C

For lower and higher temperatures, please request information on the component from us, with your checklist (Section 7).

### Ambient and operating temperatures:

The ambient temperature is relevant for components such as limit switches or bellows. For gearboxes, the operating temperature is slightly or considerably higher than the ambient temperature, depending on the duty cycle.