Bearing types for Groschopp AC and DC motors

ZK30

till 30 Nm

Smooth compact gearbox with high efficiency

Worm gear with helical gear preliminary stage

- High gear ratios due to worm stage
- High efficiency due to helical gear stage
- Ratios from 11,8:1 to 690:1 possible
- Enhanced resilience
- Robust, heavy-duty and low-noise design
- Integrated mounting surfaces
- Compact design
- All shafts ball bearing mounted
- Drive shaft with key

Approvals and characteristics of the combination

CE

The ZK30 combination gearbox is characterised by high transmission ratios on the one hand and high efficiency on the other. This is due to the combination of worm stage and helical gear stage.
The ZK30 gearbox is very resilient and quiet in operation. Thanks to the integrated mounting surfaces, the gear unit can be used for a wide range of applications.

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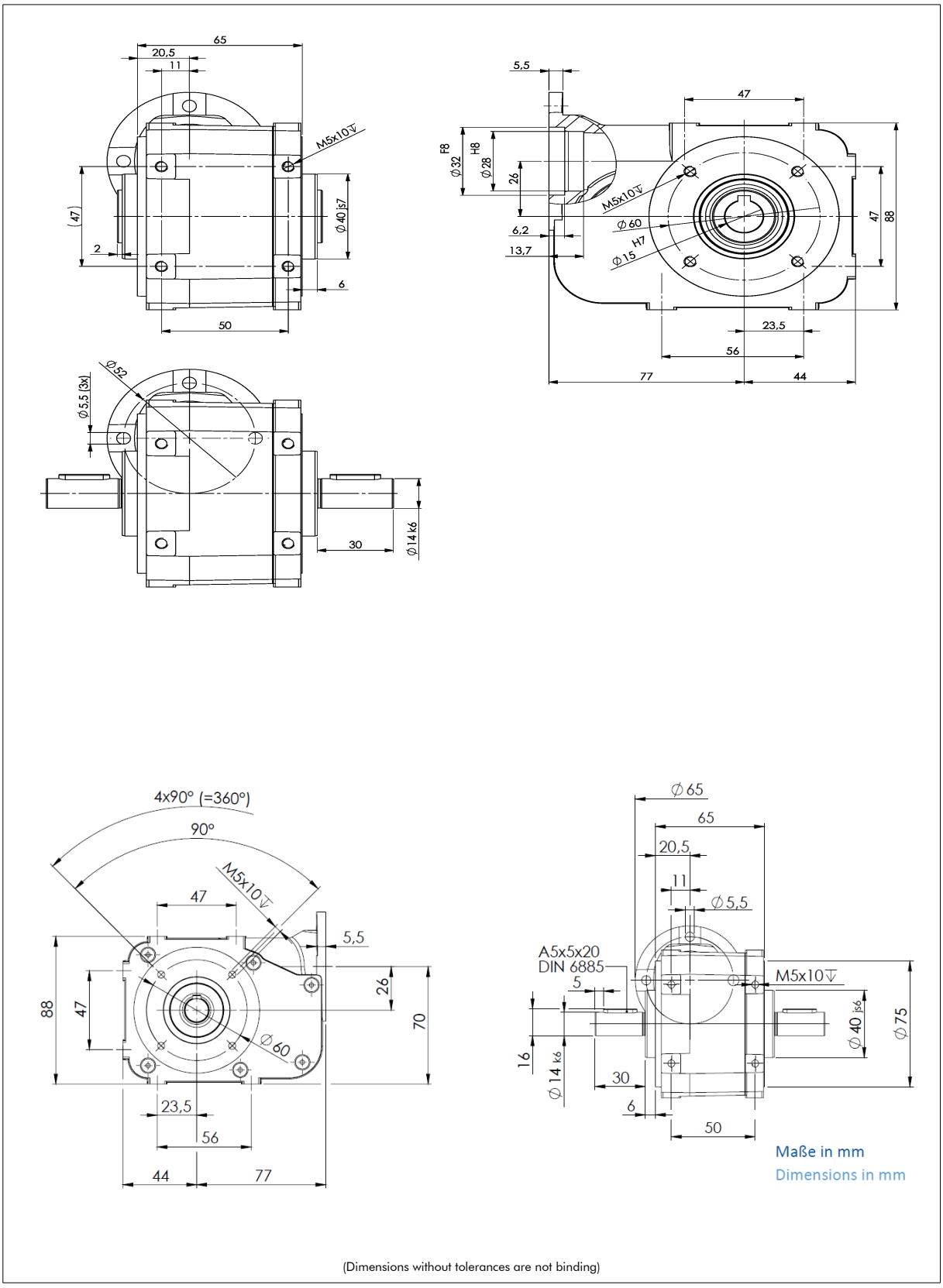
Technical drawing ZK30H



(Dimensions without tolerances are not binding)

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Available translations

i =	11,84	13,81	19,33	27,26	33,14:1	41,43:1
	48,3:1	57,5:1	69:1	82,8:1	103,5:1	124,2:1
	138:1	151,8:1	165,6:1	172,5:1	207:1	262,2:1
	345:1	379,5:1	414 :1	483:1	517,5:1	621:1
	690:1					

Technical data of the gearbox

Maximum permissible torque	**30 Nm**
Load capacity of the drive shaft	
radial	300 N (Attack: Centre of freely protruding shaft end)
axial	140 N
Static self-locking [2)]	i=???:1 i=???:1, i=???:1
Dynamic self-locking [2)]	i=???:1
Maximum permissible power loss during continuous operation	115 W [1)]
Weight	ca. 0,0 kg
Worm wheel material	Bronze

[1)] Depending on the mounting or installation position, a vent hole is required at the highest point and outside the centrifugal area

[2)] **Self-locking**

Self-locking is influenced by the lead angle, the surface roughness of the flanks, the sliding speed, the lubricant and the heating. A distinction must be made between dynamic and static self-locking.

Dynamic self-locking

Pitch angle up to 3°	with grease lubrication
Pitch angle up to 2,5°	for lubrication with synthetic oils

Static self-locking

Pitch angle from 3° to 5°	with grease lubrication
Pitch angle from 2.5° to 4.5°	for lubrication with synthetic oils
Pitch angle over 4.5° or 5°	No self-locking

Shocks or vibrations can neutralise the self-locking effect. A number of factors relating to lubrication, sliding speed and load can also create such favourable sliding properties that self-locking is negatively affected. For this reason, it is not possible to assume any warranty obligations with regard to self-locking.

Solution approach

As the ZK30 are currently lubricated with grease, the self-locking mechanism is as follows:

Accordingly, the following gear ratios have dynamic self-locking
414; **517**; 621; **690**

and the following gear ratios at least static self-locking
193,2; 220,8; 310,5; **345**; **379,5**; 483

(The entries in bold are the translations contained in the catalogue)

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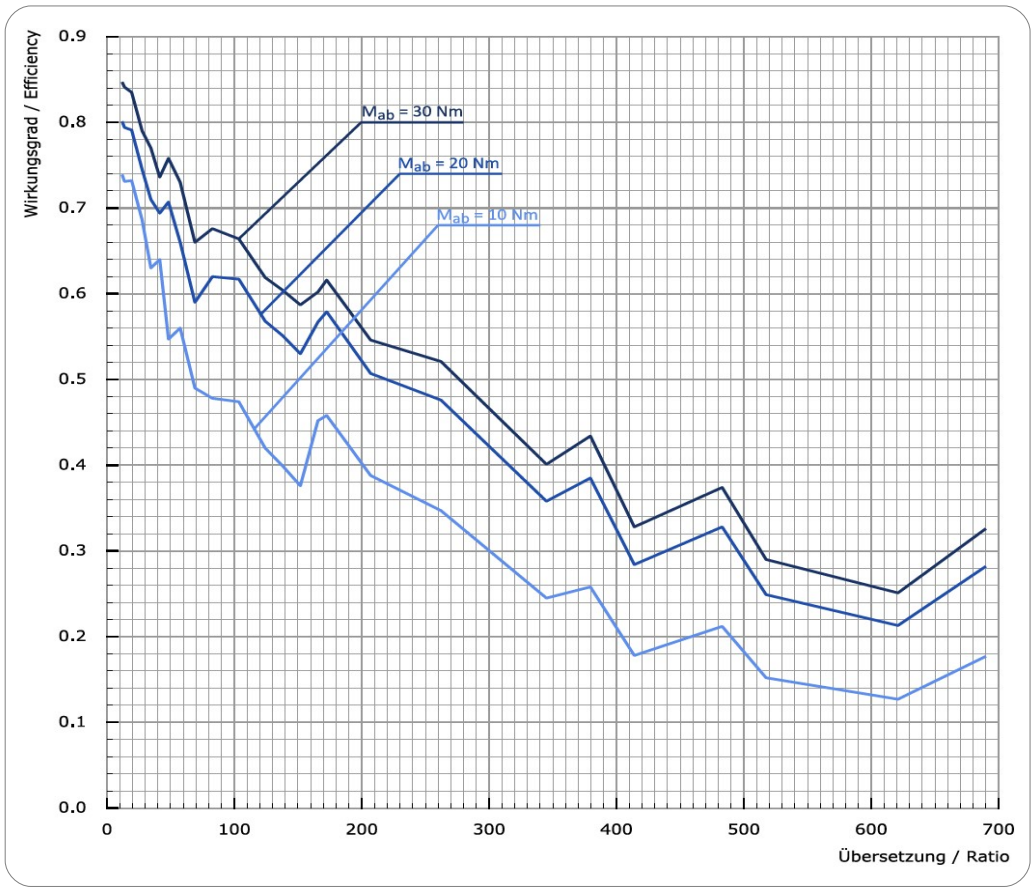
Efficiency



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