

Worm Gear Units KES 30

Angular drives with hollow output shaft for high torques at very low dimensions. Suitable in a wide variety of applications. Center distance 30 mm, in 8 ratios.

Housing: Aluminium, silver anodized. Sealed against lubricant leaks, protected against dust. Can be mounted in any position. Worm shaft in vertically position not recommended for continuous operation.

Gearing: Worm from steel, wheel from special brass.

Bearing: Ball bearings with rubber seal RS.

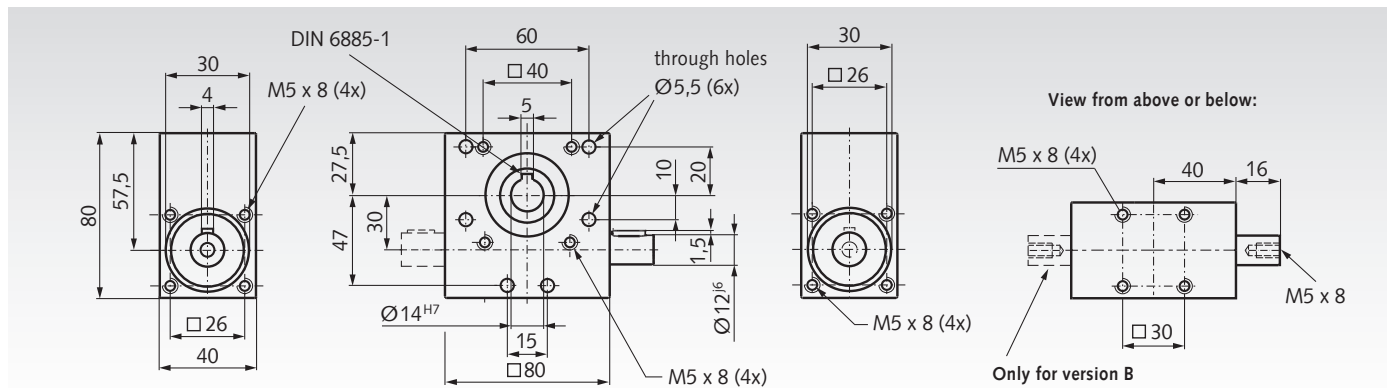
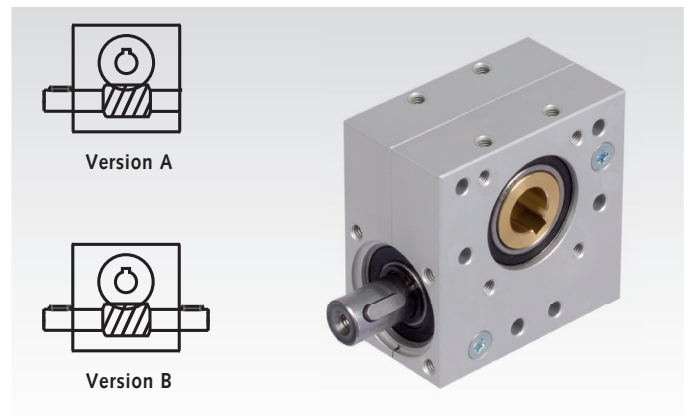
Lubrication: Maintenance free grease lubrication.

Angular backlash: $1^\circ \pm 0,5^\circ$. **Operating time:** 20% at 5 min.

Life time: approx. 1,000 hours at max. performance at speed 500 min^{-1} and operating time 20%, at $+20^\circ\text{C}$.

Permiss. operating temperature: -20° to $+60^\circ\text{C}$.

Ordering Details: e.g.: Product No. 42003005 Bevel Gearbox KES 30 A Ratio 5:1



Performance Data

Product No. Version A	Product No. Version B	Ratio i	Self-locking static	Permittable Output Torque at Speed*			Permittable Input Power at Speed*			Efficiency approx. η	Shaft Load		Weight Vers. B g
				100 min^{-1} Nm	500 min^{-1} Nm	1.000 min^{-1} Nm	100 min^{-1} W	500 min^{-1} W	1.000 min^{-1} W		F_R^{**} N	F_A^{***} N	
420 030 05	420 030 05B	5:1	no	19	17	15	56,8	254,3	448,8	0,7	400	300	903
420 030 10	420 030 10B	10:1	no	20	18	16	36,1	162,5	288,9	0,58	400	300	880
420 030 17	420 030 17B	17:1	no	17	15	14	22,8	100,4	187,5	0,46	400	400	877
420 030 20	420 030 20B	20:1	yes	15	13,5	12	18,3	82,2	146,1	0,43	500	400	885
420 030 25	420 030 25B	25:1	yes	13,5	12	11	13,8	61,3	112,4	0,41	500	500	885
420 030 34	420 030 34B	34:1	yes	12	11	10	12,7	58,4	106,2	0,29	600	500	881
420 030 45	420 030 45B	45:1	yes	10,5	9,5	9	9,8	44,2	83,8	0,25	700	600	886
420 030 64	420 030 64B	64:1	yes	8,5	7,5	6	5,2	22,7	36,4	0,27	700	600	897

* Input speed, at the worm shaft.

** Permiss. radial force at $F_A=0$.

*** Permiss. axial force at $F_R=0$.

Note to the keys:

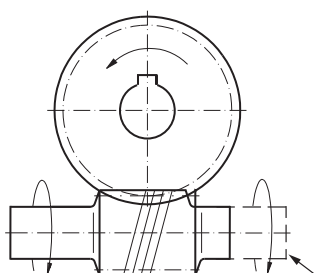
The position of the keyway to the tothing is not defined.

The positions of the keyways on the shaft are also not defined, they are not aligned to each other.

Rotational Sense (Rot. direction interchangeable)

The gearset is left-handed.

Output:
Worm wheel on hollow shaft



Input:
Worm shaft

Only for version B

Torque Conversion

Output torque = Input Torque x Efficiency x Transmission

$$\text{Input torque} = \frac{\text{Output torque}}{\text{Efficiency} \times \text{Ratio}}$$

$$\text{Power } P = \frac{M \times n}{9550}$$

$$\text{Torque } M = \frac{9550 \times P}{n}$$

M = Torque [Nm]
P = Power [kW]
n = Speed [min^{-1}]