

Bevel Gear Boxes

Housing Aluminum

SPECIFICATION

Type

- Type L: Angular gear 90°

Housing

- Aluminum
- Sealed to prevent dust entry
- Anodized, natural color **AN**

Bevel gear wheels

Steel, case-hardened

Ball bearing

- Steel
- Sealed (sealing disks 2RS)

Temperature range: -20 °C to +60 °C

INFORMATION

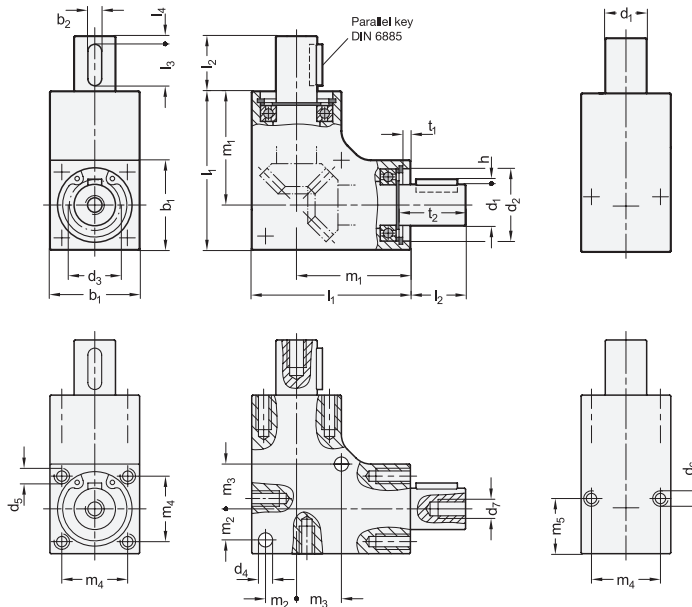
Bevel gear boxes GN 3971 can transmit high torque despite their very compact dimensions. They can readily be used for a multitude of applications, such as height adjustments or to change the direction of shaft rotation.

The numerous fastening holes allow for simple mounting in any orientation or position. The parallel keys can take any angular positions.



TECHNICAL INFORMATION

- Keyway DIN 6885 (see page A16)
- ISO-Fundamental Tolerances (see page A21)



Description	b1	d1 j6	b2	d2	d3**	d4	d5***	d6***	d7****	h	l1	l2	l3	l4	m1	m2	m3	m4	m5	t1	t2	
GN 3971-18-L-6-AN	18	6	2	13	-	3.1	M3	M3	M3	0.8	32	12	8	2	23	6	8.5	13	11	2.1	15.4	55
GN 3971-20-L-8-AN	20	8	2	16	9.2	3.1	M3	M3	M3	0.8	35	12	8	2	25	7	10	15	10	1.95	15.3	80
GN 3971-24-L-10-AN	24	10	4*	19	11.8	4.1	M4	M4	M4	1.5	42	16	12	3	30	8	12	18	16	2	18	144
GN 3971-26-L-12-AN	26	12	4	21	13.6	4.1	M4	M4	M4	1.5	46	16	12	3	33	9	13	20	16	2	19.5	190
GN 3971-30-L-12-AN	30	12	4	24	16.4	4.1	M4	M4	M5	1.5	53	16	12	3	38	11	15	22	16	2.1	18.3	270
GN 3971-32-L-12-AN	32	12	4	28	19.8	4.1	M4	M4	M5	1.5	56	16	12	3	40	12	17	24	16	2.1	18.3	332
GN 3971-35-L-12-AN	35	12	4	30	20.4	4.1	M4	M4	M5	1.5	60	16	12	3	42.5	13.5	17.5	26	16	2.1	18.3	418

* Deviating from DIN 6885

** Theoretically usable hub diameter

*** Usable thread depth: min. 2 x d₅ / d₆

**** Usable thread depth: min. 1.6 x d₇

Mechanical Features

Gear ratio i	1:1
Circumferential backlash at the drive shaft	$3^\circ \pm 0.5^\circ$
Shaft direction of rotation	Any
Life expectancy (guideline)	1.000 hours under full load at a rotational speed of 500 rpm, assuming the gear box is operating for 20% of every 5 minutes (1 minute of operation + 4 minutes break) at an ambient temperature of 20 °C
Maintenance	Permanent lubrication with grease, maintenance-free

b1	Max. torque in Nm			Max. radial force in N*	Max. axial force in N**
	at 100 min ⁻¹	at 500 min ⁻¹	at 1000 min ⁻¹		
18	0.35	0.1	0.05	60	60
20	0.75	0.3	0.15	100	100
24	2.5	1	0.5	120	120
26	4	1.5	0.75	140	140
30	5	2	1	240	240
32	8	3	1.5	550	550
35	10	4	2	550	550

* At axial force = 0

** At radial force = 0

Assembly Instructions

Do not exert any forces onto the housing or into the bearings during assembly. Use of the threaded holes d_6 in the shaft is recommended. The use of a corresponding coupling is recommended to compensate for manufacturing-related shaft offsets and runout tolerances as well as for damping vibrations and shocks.

Application example

