GRAESSNER

MS-Graessner GmbH & Co. KG

THE GEAR COMPANY

DYNAGEAR D37 NEW

Dynamic and Precision in small format

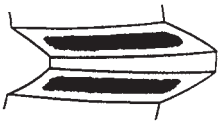
www.graessner.de

Highlights

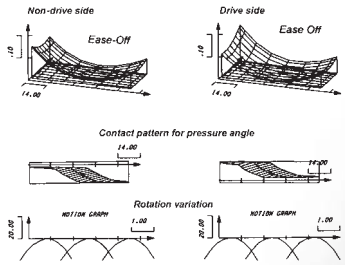
DYNA GEAR D37

The design of the DynaGear series has been influenced by extremely varied applications within many industry sectors.
With the DynaGear D37 we created an additional size, which is designed for highly dynamic servo drive solutions in compact applications.

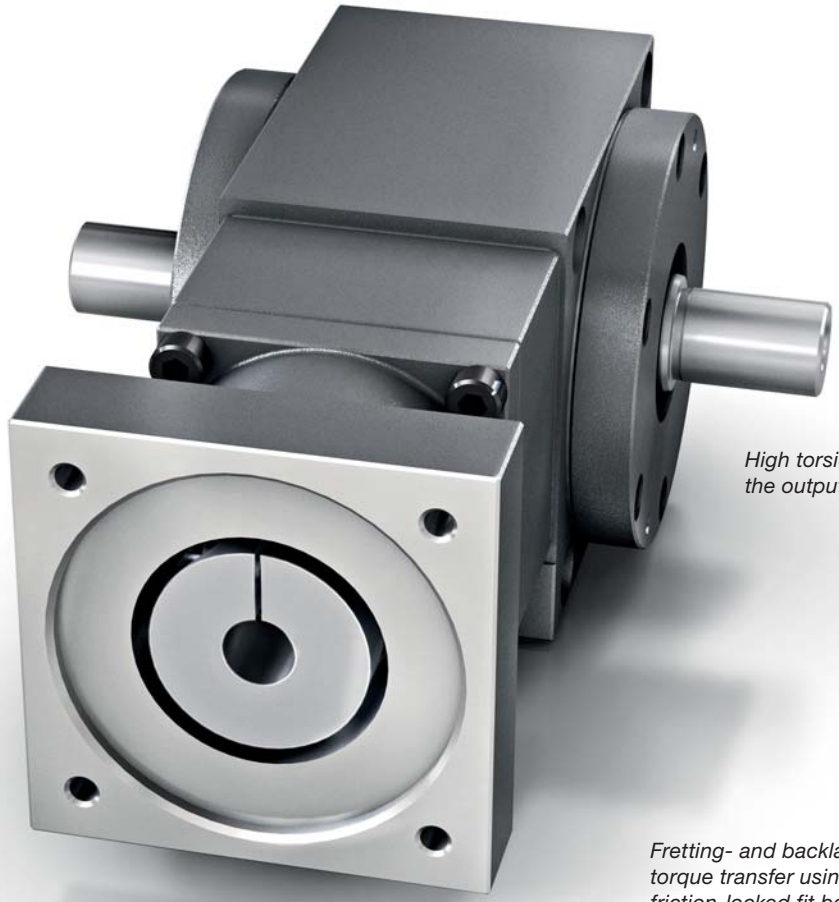
- Right angle gearbox, single-stage, ratios from 3:1 to 15:1.
- The compact and rigid design ensures highest performance whilst being space and weight efficient.
- Lubricated for life, the gearboxes are virtually maintenance-free (when used under normal conditions).
- The high efficiency rating of 96% saves energy costs.



Optimized contact pattern assembly for uniform load distribution



Optimized Gleason hypoid-gearing for high torque ratings and low backlash



High torsional stiffness at the output

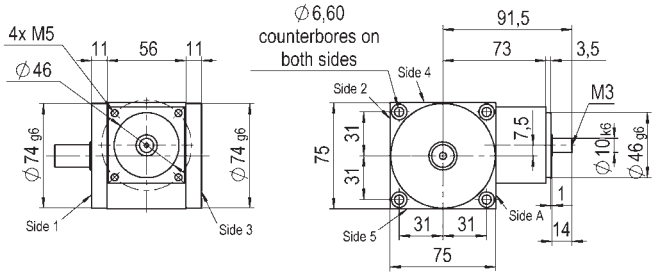
Fretting- and backlash-free torque transfer using a friction-locked fit between shaft and hub

Small moments of inertia at the input

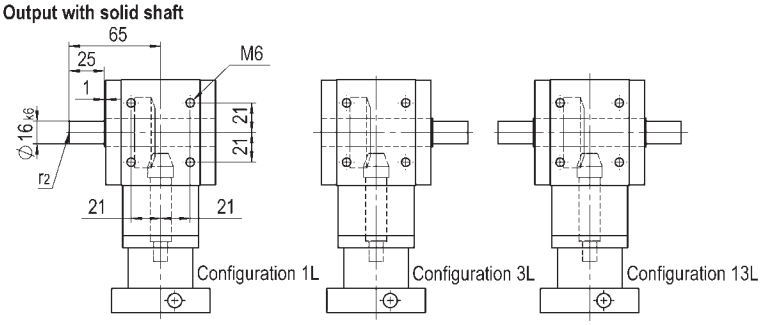
System optimization via variable torsional coupling stiffness

Dimensions and Configurations

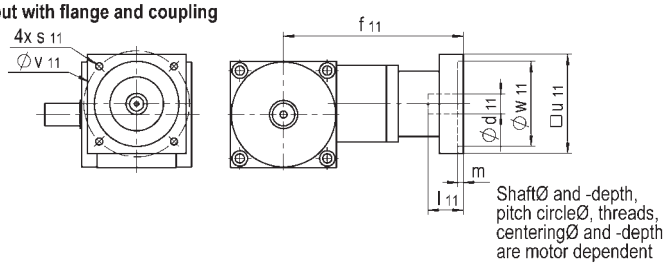
Input without flange, without coupling



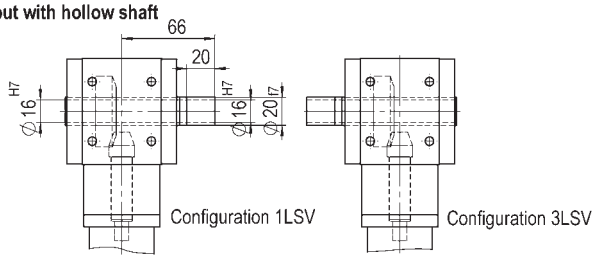
Output with solid shaft



Input with flange and coupling



Output with hollow shaft



Performance table/Technical data

DynaGear D37

Size			D37	D37
Ratio		**i**	**3/4/5/6/8/10**	**12/15**
Output torque				
Nominal torque		T_{2N} [Nm]	22	15
Maximum acceleration ④		T_{2B} [Nm]	33	22
Emergency stop torque ③		T_{2Not} [Nm]	44	30
Maximum input speed		n_{1max} [min^{-1}]	8000	8000
Nominal	**i = 3/4/5**	n_{1N} [min^{-1}]	2300	–
input speed	**i = 6/8/10**	n_{1N} [min^{-1}]	3700	–
	i = 12/15	n_{1N} [min^{-1}]	–	4500
Standard backlash ①		j_t [arcmin]	< 5	< 5
Reduced backlash ①		j_t [arcmin]	< 3	< 3
Backlash stiffness at the output ⑤		C_{t21} [Nm/arcmin]	1,3	1,3
Radial force ②		F_{2Rmax} [N]	2200	2200
Axial force ②		F_{2Amax} [N]	1100	1100
Efficiency rating at full load		η [%]	> 96	> 93
Noise level (n_1=3000 min^{-1})		L_{pA} [dB(A)]	≤ 65	≤ 65
Weight approx.		m [kg]	1,9	1,9

Service life (SL) [h]: > 30.000 based on operation mode S5
Lubrication: Lubricated for life, closed system
Mounting positions: Any
Operating temperature: -10° C to 90° C
Paint: Primary coated RAL 9005 – dull black
Ex-protection: Ex II 2 D/G c T4
Type of protection: IP 64

① at the output, at 2 % load or max 10 Nm
② resulting force centre of output shaft at output speed 400 min^{-1}
③ max 1000 times during the service life of the gearbox
④ at max 1000 cycles per hour, please consider reducing factor in other cases
⑤ at nominal torque (DynaGear without coupling)

Mass moment of inertia I_1 [kgcm²] (values without coupling)

Ratio i	Size D37
3:1	0,178
4:1	0,140
5:1	0,123
6:1	0,113

Ratio i	Size D37
8:1	0,104
10:1	0,099
12:1	0,097
15:1	0,095

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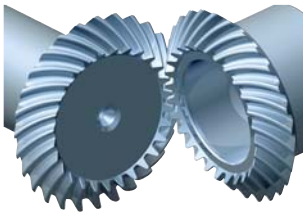
BEVEL GEAR

Spiral, Hypoid and Zerol Bevel Gears



- Standard range of products and custom-made versions
- Module ms from 0.5 to 12
- Diameters up to 410 mm
- Shaft angles from 10° to 170°
- More than 60 years of experience
- In-house gearing calculations
- We manufacture to your drawing or advise you of possible alternatives
- Milled or ground gear tooth cutting

POWER GEAR

The high performance bevel gearbox

- High torque, small size
- For highest input speeds
- Ratios from i = 1:1 to 5:1
- Torques up to 7000 Nm
- Output via solid and hollow shaft
- Motor mounting either directly or via coupling and lantern
- Variable ratios and uniform dimensions

DYNA GEAR

The highly dynamic servo right angle gearbox

- Hypoid gearing
- High input speeds at medium to high torques
- Ratios single-stage i = 3:1 to 30:1
- Ratios, two-stage , up to 150:1
- Torques up to 1440 Nm
- Flexible motor mounting via coupling and lantern
- Low backlash < 2 arcmin
- Variable ratios and uniform dimensions

DYNA GEAR *Economy*

The cost-effective servo right angle gearbox

- Hypoid gearing
- High input speeds at medium torques
- Ratios single-stage i= 5:1, 8:1, 10:1 and 15:1
- Torques up to 260 Nm
- Flexible motor mounting via coupling and flange
- Backlash < 6 arcmin
- Variable ratios and uniform dimensions

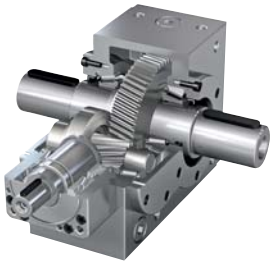
DESIGN GEAR

The customised gearbox

- Single-stage gearbox available as gear-change or reversing gearbox
- Forced oil circulation lubrication system gearbox for high speeds and torques
- Labyrinth sealed gearbox with an efficiency of > 99%
- Special gearbox with additional functional elements
- Endless possibilities on request

KS TWIN GEAR

The bevel helical gearbox



- Two-stage bevel helical gearbox with ratios of up to 75:1
- Torques up to 7500 Nm
- Torsional backlash < 6 arcmin
- Compact design
- Motor mounting either directly or via coupling and lantern
- High input speeds at high torques
- Variable ratios and uniform dimensions

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