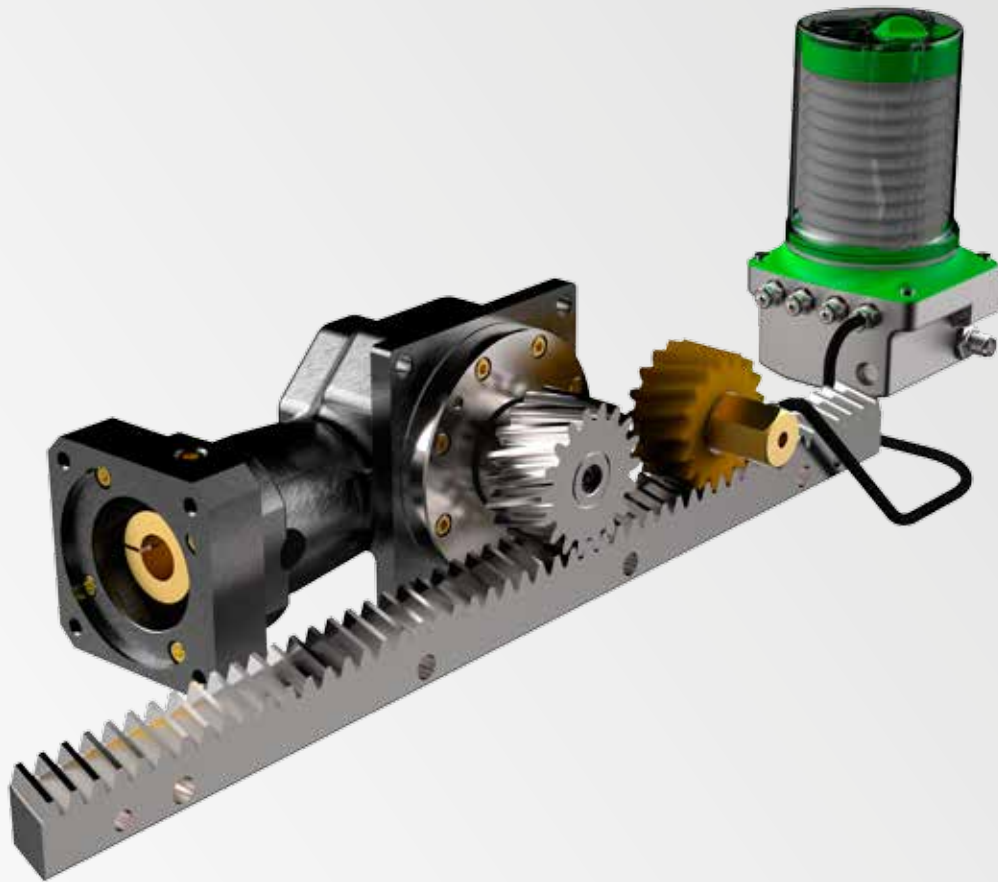
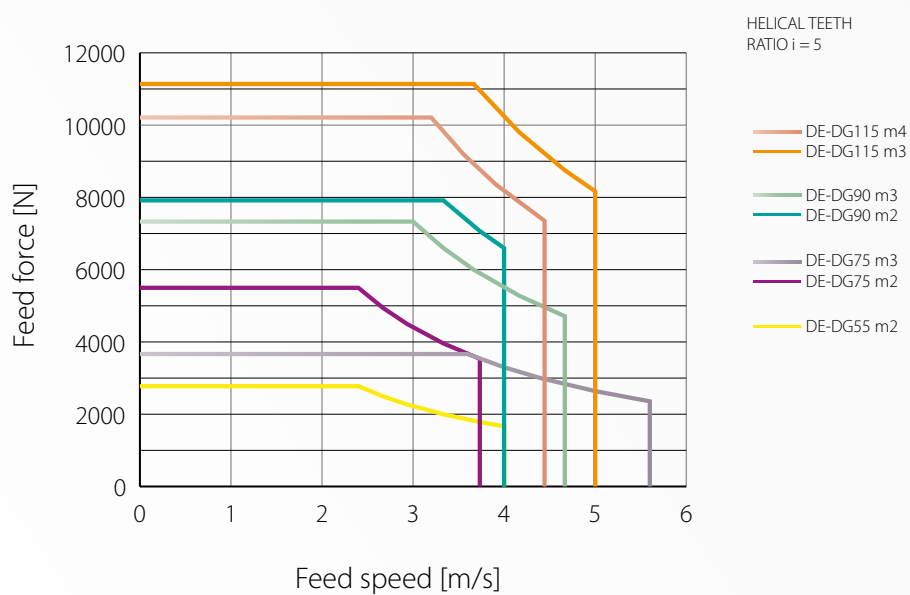


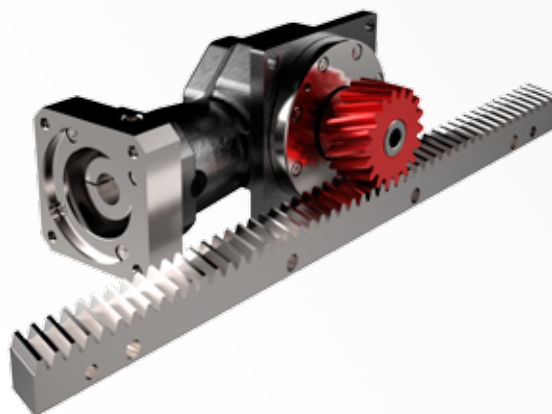


DYNAGEAR DG^{ECOSYSTEM} - FORCES AND SPEEDS with helical teeth and ratio $i=5$



DYNAGEAR DG^{ECOSYSTEM}

DE-DG55



TECHNICAL DATA

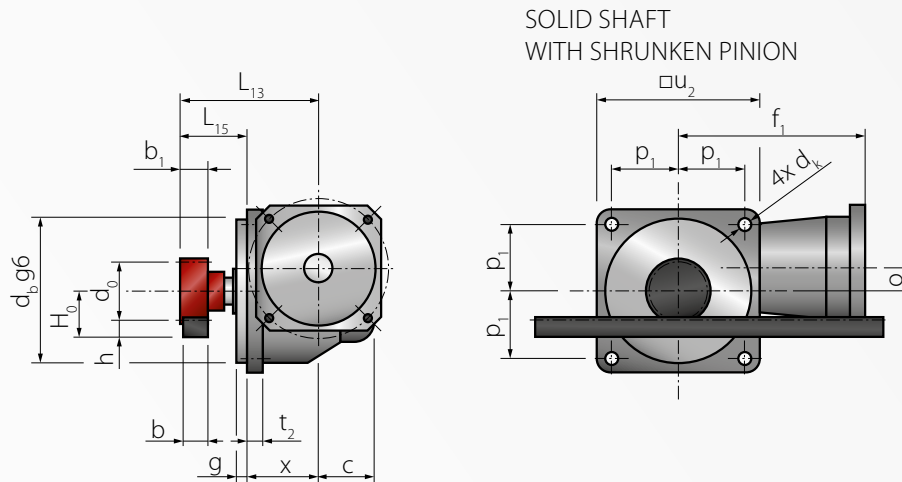
GEAR	Ratio i	[1]	5	8	10	15
	n_{1MAX}	[min ⁻¹]	6000			
	n_{1N}	[min ⁻¹]	3100		3800	
	T_{2N}	[Nm]	35			25
	T_{2B}	[Nm]	53			50
	T_{2NOT}	[Nm]	70			95
	Weight	[kg]	2,5			
	η^2	[%]	>96			>93

			STRAIGHT						HELICAL					
PROFESSIONAL	Module m	[mm]	2						2					
	Teeth z	[1]	18	20	22	25	28	30	18	20	22	25	28	30
	F _{vMAX} ³	[N]	2650	2409	2208	1963	1767	1656	2512	2282	2091	1858	1671	1567
	V _{MAX} ³	[m/s]	2,3	2,5	2,8	3,1	3,5	3,8	2,4	2,7	2,9	3,3	3,7	4,0
	T _{2N} ¹	[Nm]	35	35	35	35	35	35	35	35	35	35	35	35
	T _{2B} ¹	[Nm]	53	53	53	53	53	53	53	53	53	53	53	53
	T _{2NOT} ¹	[Nm]	70	70	70	70	70	70	70	70	70	70	70	70
	P _{A MAX}	[μm]	199	203	207	216	222	226	199	203	210	216	222	226
	P _{R MAX}	[μm]	37	41	45	51	57	61	37	41	45	51	57	61

ULTIMATE	Module m	[mm]	STRAIGHT						HELICAL					
	Teeth z	[1]	2						2					
	F _{yMAX} ³	[N]	18	20	22	25	28	30	18	20	22	25	28	30
	V _{MAX} ³	[m/s]	2,3	2,5	2,8	3,1	3,5	3,8	2,4	2,7	2,9	3,3	3,7	4,0
	T _{2N} ¹	[Nm]	35	35	35	35	35	35	35	35	35	35	35	35
	T _{2B} ¹	[Nm]	53	53	53	53	53	53	53	53	53	53	53	53
	T _{2NOT} ¹	[Nm]	70	70	70	70	70	70	70	70	70	70	70	70
	P _{A MAX}	[μm]	87	91	95	104	110	114	87	91	98	104	110	114
	P _{R MAX}	[μm]	37	41	45	51	57	61	37	41	45	51	57	61

An explanation of how to use the tables can be found on pages 4-7.

DIMENSIONS



Module m	[mm]	2					
Teeth z	[1]	18	20	22	25	28	30
b	[mm]	24					
b ₁	[mm]	25					
c	[mm]	36					
d ₀	straight [mm]	36	40	44	50	56	60
	helical [mm]	38,20	42,44	46,69	53,05	59,42	63,66
d _b g6	[mm]	89					
d _k	[mm]	6,6					
g ₂	[mm]	13					
h	[mm]	22					
H ₀	straight [mm]	40	42	44	47	50	52
	helical [mm]	41,10	43,22	45,34	48,53	51,71	53,83
L ₁₃	[mm]	87					
L ₁₅	[mm]	50					
o	[mm]	9					
q	[mm]	39					
u ₂	[mm]	90					
t ₂	[mm]	9					
x	[mm]	37					

MOTOR ATTACHMENT

Flange		V1	V2	V3
Shaft -Ø d ₁	[mm]	9	11	14
Shaft length l	[mm]	23	26	33
Square u ₁	[mm]	60	75	75
Pitch circle -Ø v ₁	[mm]	63	75	75
Centering -Ø w ₁	[mm]	40	60	60
Threads 4x s ₁	[mm]	M4	M5	M5
f ₁	[mm]	130	130	130

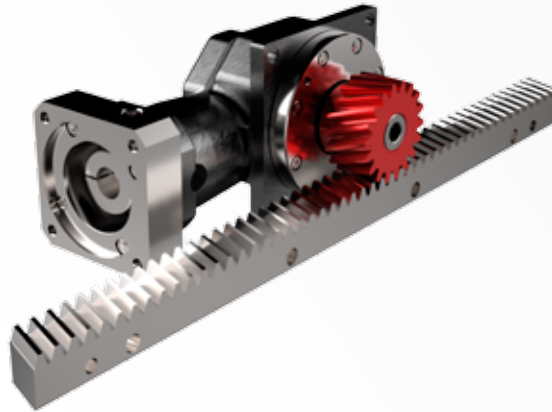
¹ Reduced torques apply to the ratio 15. See the gear data for additional technical details.

² For bearing lifespan and gear efficiency calculations, visit www.gearfox.com

³ Values were determined at a ratio of 5:1.

All values assume sufficient lubrication and a well adjusted tooth contact pattern. Additional axial forces reduce the torque values.

NOTE: For optimal adjustment of the backlash, it is recommended that the connection structure is designed at least 1-2 mm larger.



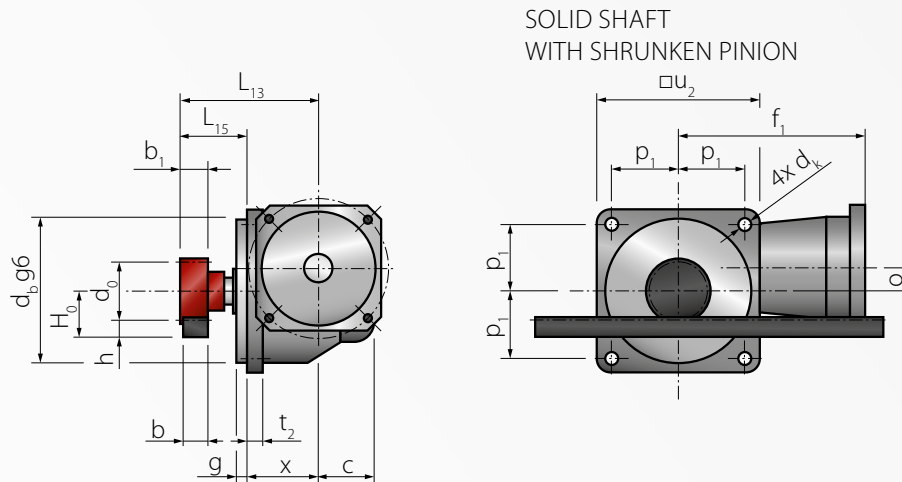
TECHNICAL DATA

GEAR	Ratio i	[1]	5	8	10	15
	n_{1MAX}	[min ⁻¹]	6000			
	n_{1N}	[min ⁻¹]	2400		2900	
	T_{2N}	[Nm]	70			50
	T_{2B}	[Nm]	105			75
	T_{2NOT}	[Nm]	140			100
	Weight	[kg]	4,2			
	η^2	[%]	>96			>93

PROFESSIONAL	Module m	[mm]	STRAIGHT										HELICAL									
			2					3					2					3				
	Teeth z	[1]	18	20	22	25	28	18	20	22	25	28	18	20	22	25	28	18	20	22	25	28
	F_{vMAX}^3	[N]	3400	2955	2875	2778	2533	3500	3182	2917	2593	2333	4834	3704	3670	3506	3311	3318	3015	2762	2454	2208
	v_{MAX}^3	[m/s]	2,3	2,5	2,8	3,1	3,5	3,4	3,8	4,1	4,7	5,3	2,4	2,7	2,9	3,3	3,7	3,6	4,0	4,4	5,0	5,6
	T_{2N}^1	[Nm]	60	64	67	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
	T_{2B}^1	[Nm]	68	65	69	75	76	105	105	105	105	105	102	86	93	100	105	105	105	105	105	105
	T_{2NOT}^1	[Nm]	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
	$P_{A MAX}$	[μm]	199	203	207	216	222	217	223	229	241	251	199	203	210	216	222	220	229	235	244	254
	$P_{R MAX}$	[μm]	37	41	45	51	57	55	61	67	76	86	37	41	45	51	57	55	61	67	76	86

ULTIMATE	Module m	[mm]	STRAIGHT										HELICAL									
			2					3					2					3				
	Teeth z	[1]	18	20	22	25	28	18	20	22	25	28	18	20	22	25	28	18	20	22	25	28
	F_{vMAX}^3	[N]	5833	5250	4773	4200	3750	3889	3500	3182	2800	2500	5498	4948	4498	3958	3534	3665	3299	2999	2639	2356
	v_{MAX}^3	[m/s]	2,3	2,5	2,8	3,1	3,5	3,4	3,8	4,1	4,7	5,3	2,4	2,7	2,9	3,3	3,7	3,6	4,0	4,4	5,0	5,6
	T_{2N}^1	[Nm]	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
	T_{2B}^1	[Nm]	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	T_{2NOT}^1	[Nm]	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
	$P_{A MAX}$	[μm]	87	91	95	104	110	105	111	117	129	139	87	91	98	104	110	108	117	123	132	142
	$P_{R MAX}$	[μm]	37	41	45	51	57	55	61	67	76	86	37	41	45	51	57	55	61	67	76	86

DIMENSIONS



Module m		[mm]	2					3				
Teeth z		[1]	18	20	22	25	28	18	20	22	25	28
b		[mm]	24					29				
b ₁		[mm]	25					30				
c		[mm]	42					42				
d ₀	straight	[mm]	36	40	44	50	56	54	60	66	75	84
	helical	[mm]	38,20	42,44	46,69	53,05	59,42	57,30	63,66	70,03	79,58	89,13
d _b g6		[mm]	105					105				
d _k		[mm]	6,6					6,6				
g ₂		[mm]	13					13				
h		[mm]	22					26				
H ₀	straight	[mm]	40	42	44	47	50	53	56	59	63,5	68
	helical	[mm]	41,10	43,22	45,34	48,53	51,71	54,65	57,83	61,01	65,79	70,56
L ₁₃		[mm]	100					100				
L ₁₅		[mm]	55					55				
o		[mm]	14					14				
q		[mm]	49					49				
u ₂		[mm]	11					11				
t ₂		[mm]	115					115				
x		[mm]	45					45				

MOTOR ATTACHMENT

Flange		V1	V2	V3
Shaft -Ø d ₁	[mm]	11	14	19
Shaft length l	[mm]	26	33	43
Square u ₁	[mm]	75	75	90
Pitch circle -Ø v ₁	[mm]	75	75	100
Centering -Ø w ₁	[mm]	60	60	80
Threads 4x s ₁	[mm]	M5	M5	M6
f ₁	[mm]	156	156	156

¹ Reduced torques apply to the ratio 15. See the gear data for additional technical details.

² For bearing lifespan and gear efficiency calculations, visit www.gearfox.com

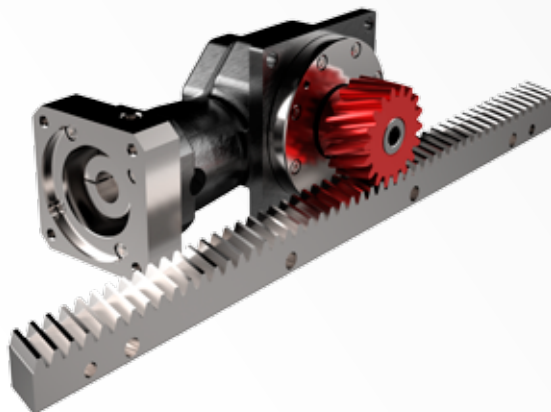
³ Values were determined at a ratio of 5:1.

All values assume sufficient lubrication and a well adjusted tooth contact pattern. Additional axial forces reduce the torque values.

NOTE: For optimal adjustment of the backlash, it is recommended that the connection structure is designed at least 1-2 mm larger.

DYNAGEAR DG^{ECOSYSTEM}

DE-DG90



TECHNICAL DATA

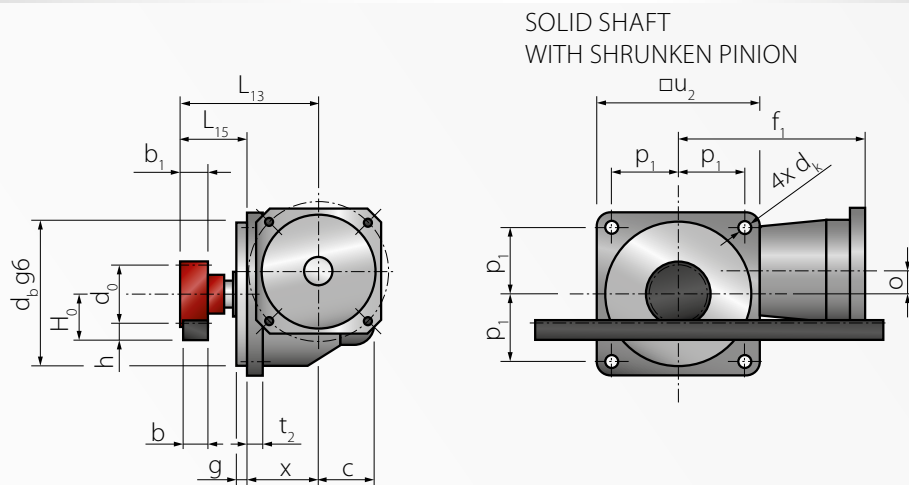
GEAR	Ratio i	[1]	5	8	10	15
	n_{1MAX}	[min ⁻¹]	5000			
	n_{1N}	[min ⁻¹]	2100		2600	
	T_{2N}	[Nm]	140			95
	T_{2B}	[Nm]	210			143
	T_{2NOT}	[Nm]	280			190
	Weight	[kg]	8,2			
	η^2	[%]	>96			>93

PROFESSIONAL			STRAIGHT								HELICAL							
	Module m	[mm]	2			3					2			3				
	Teeth z	[1]	25	28	30	18	20	22	25	28	25	28	30	18	20	22	25	28
	$F_v^{MAX}^3$	[N]	2778	2533	2469	7000	6364	5833	5185	4667	3506	3438	3429	6636	6029	5524	4908	4415
	v_{MAX}^3	[m/s]	3,1	3,5	3,8	2,8	3,1	3,5	3,9	4,4	3,3	3,7	4,0	3,0	3,3	3,7	4,2	4,7
	T_{2N}^1	[Nm]	72	73	75	140	140	140	140	140	97	106	112	140	140	140	140	140
	T_{2B}^1	[Nm]	75	76	79	210	210	210	210	210	100	109	116	210	210	210	210	210
	T_{2NOT}^1	[Nm]	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
	$P_{A MAX}$	[μm]	209	214	217	209	214	220	230	238	209	214	217	212	220	226	233	241
	$P_{R MAX}$	[μm]	44	49	52	47	52	58	65	73	44	49	52	47	52	58	65	73

ULTIMATE	Module m	[mm]	STRAIGHT								HELICAL							
			2			3					2			3				
	Teeth z	[1]	25	28	30	18	20	22	25	28	25	28	30	18	20	22	25	28
	$F_v^{MAX}{}^3$	[N]	6680	6679	6667	7778	7000	6364	5600	5000	7804	7069	6597	7330	6597	5998	5278	4712
	$V_{MAX}{}^3$	[m/s]	3,1	3,5	3,8	2,8	3,1	3,5	3,9	4,4	3,3	3,7	4,0	3,0	3,3	3,7	4,2	4,7
	T_{2N}^1	[Nm]	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
	T_{2B}^1	[Nm]	167	187	200	210	210	210	210	210	207	210	210	210	210	210	210	210
	T_{2NOT}^1	[Nm]	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
	$P_{A MAX}$	[μm]	97	102	105	97	102	108	118	126	97	102	105	100	108	114	121	129
	$P_{R MAX}$	[μm]	44	49	52	47	52	58	65	73	44	49	52	47	52	58	65	73

An explanation of how to use the tables can be found on pages 4-7.

DIMENSIONS



Module m		[mm]	2			3				
Teeth z		[1]	25	28	30	18	20	22	25	28
b		[mm]	24			29				
b ₁		[mm]	25			30				
c		[mm]	52			52				
d ₀	straight	[mm]	50	56	60	54	60	66	75	84
	helical	[mm]	53,05	59,42	63,66	57,30	63,66	70,03	79,58	89,13
d _{bg6}		[mm]	125			125				
d _k		[mm]	11			11				
g ₂		[mm]	16			16				
h		[mm]	22			26				
H ₀	straight	[mm]	47	50	52	53	56	59	63,5	68
	helical	[mm]	48,53	51,71	53,83	54,65	57,83	61,01	65,79	70,56
L ₁₃		[mm]	126			126				
L ₁₅		[mm]	68			68				
o		[mm]	18			18				
q		[mm]	59			59				
u ₂		[mm]	14			14				
t ₂		[mm]	140			140				
x		[mm]	58			58				

MOTOR ATTACHMENT

Flange		V1	V2	V3
Shaft -Ø d ₁	[mm]	14	19	24
Shaft length l	[mm]	33	43	53
Square u ₁	[mm]	90	90	115
Pitch circle -Ø v ₁	[mm]	100	100	130
Centering -Ø w ₁	[mm]	80	80	110
Threads 4x s ₁	[mm]	M6	M6	M8
f ₁	[mm]	187	187	187

¹ Reduced torques apply to the ratio 15. See the gear data for additional technical details.

² For bearing lifespan and gear efficiency calculations, visit www.gearfox.com

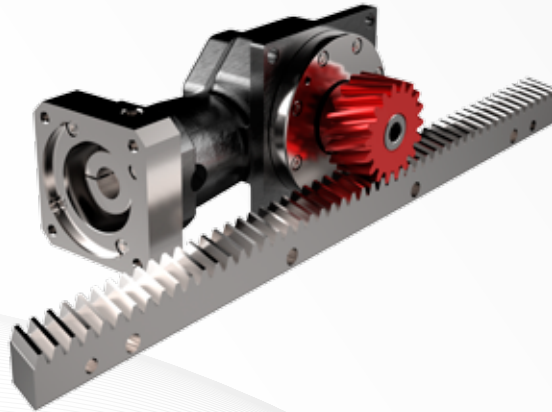
³ Values were determined at a ratio of 5:1.

All values assume sufficient lubrication and a well adjusted tooth contact pattern. Additional axial forces reduce the torque values.

NOTE: For optimal adjustment of the backlash, it is recommended that the connection structure is designed at least 1-2 mm larger.

DYNAGEAR DG^{ECOSYSTEM}

DE-DG115



TECHNICAL DATA

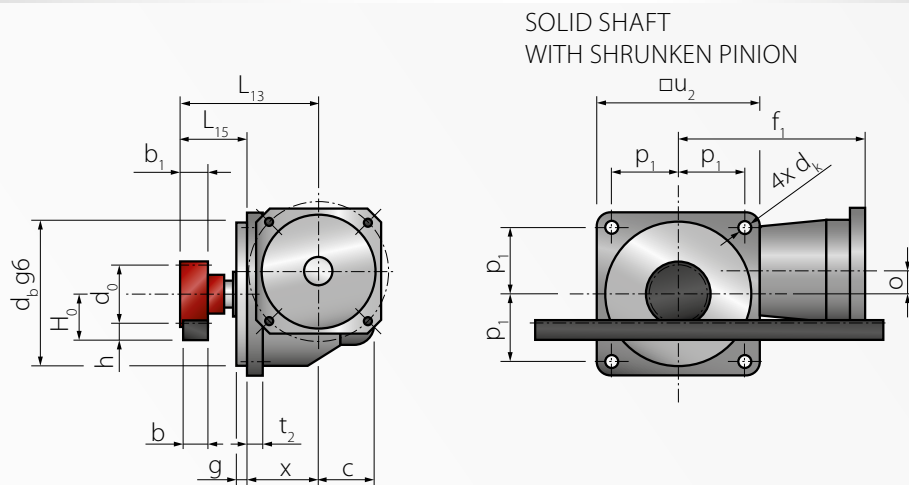
GEAR	Ratio i	[1]	5	8	10	15
	n_{1MAX}	[min ⁻¹]	4000			
	n_{1N}	[min ⁻¹]	1820		2250	
	T_{2N}	[Nm]	260			180
	T_{2B}	[Nm]	390			270
	T_{2NOT}	[Nm]	520			360
	Weight	[kg]	13,5			
	η^2	[%]	>96			>93

PROFESSIONAL	Module m	[mm]	STRAIGHT								HELICAL							
			3				4				3				4			
	Teeth z	[1]	22	25	28	30	18	20	22	25	22	25	28	30	18	20	22	25
	F_{vMAX}^3	[N]	7722	7556	7400	7313	9750	8864	8125	7222	9418	9115	8200	7685	9242	8398	7695	6836
	v_{MAX}^3	[m/s]	3,5	3,9	4,4	4,7	3,8	4,2	4,6	5,2	3,7	4,2	4,7	5,0	3,2	3,6	3,9	4,4
	T_{2N}^1	[Nm]	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
	T_{2B}^1	[Nm]	278	306	333	351	390	390	390	390	358	390	390	390	390	390	390	390
	T_{2NOT}^1	[Nm]	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520
	$P_{A MAX}$	[μm]	220	230	238	244	231	238	245	255	226	233	241	247	231	238	245	259
	$P_{R MAX}$	[μm]	58	65	73	79	63	70	77	87	58	65	73	79	63	70	77	87

ULTIMATE	Module m	[mm]	STRAIGHT								HELICAL							
			3				4				3				4			
	Teeth z	[1]	22	25	28	30	18	20	22	25	22	25	28	30	18	20	22	25
	F_{vMAX}^3	[N]	11818	10400	9286	8667	10833	9750	8864	7800	11138	9802	8752	8168	10210	9189	8354	7351
	v_{MAX}^3	[m/s]	3,5	3,9	4,4	4,7	3,8	4,2	4,6	5,2	3,7	4,2	4,7	5,0	3,2	3,6	3,9	4,4
	T_{2N}^1	[Nm]	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
	T_{2B}^1	[Nm]	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390	390
	T_{2NOT}^1	[Nm]	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520
	$P_{A MAX}$	[μm]	108	118	126	132	119	126	133	143	114	121	129	135	119	126	133	147
	$P_{R MAX}$	[μm]	58	65	73	79	63	70	77	87	58	65	73	79	63	70	77	87

An explanation of how to use the tables can be found on pages 4-7.

DIMENSIONS



Module m		[mm]	3				4			
Teeth z		[1]	22	25	28	30	18	20	22	25
b		[mm]	29				39			
b ₁		[mm]	30				40			
c		[mm]	63				63			
d ₀	straight	[mm]	66	75	84	90	72	80	88	100
	helical	[mm]	70,03	79,58	89,13	95,49	76,39	84,88	93,37	106,10
d _b g6		[mm]	150				150			
d _k		[mm]	13,5				13,5			
g ₂		[mm]	16				16			
h		[mm]	26				35			
H ₀	straight	[mm]	59	63,5	68	71	71	75	79	85
	helical	[mm]	61,01	65,79	70,56	73,75	73,20	77,44	81,69	88,05
L ₁₃		[mm]	146				146			
L ₁₅		[mm]	75				75			
o		[mm]	23				23			
q		[mm]	72				72			
u ₂		[mm]	17				17			
t ₂		[mm]	170				170			
x		[mm]	71				71			

MOTOR ATTACHMENT

Flange		V1	V2	V3
Shaft -Ø d ₁	[mm]	19	24	32
Shaft length l	[mm]	43	53	63
Square u ₁	[mm]	115	115	140
Pitch circle -Ø v ₁	[mm]	130	130	165
Centering -Ø w ₁	[mm]	110	110	130
Threads 4x s ₁	[mm]	M8	M8	M10
f ₁	[mm]	225	225	225

¹ Reduced torques apply to the ratio 15. See the gear data for additional technical details.

² For bearing lifespan and gear efficiency calculations, visit www.gearfox.com

³ Values were determined at a ratio of 5:1.

All values assume sufficient lubrication and a well adjusted tooth contact pattern. Additional axial forces reduce the torque values.

NOTE: For optimal adjustment of the backlash, it is recommended that the connection structure is designed at least 1-2 mm larger.

DYNAGEAR DG^{ECOSYSTEM}

ORDER KEY



DE-DG90 - ULP - 080 - 1 3 2 03 - SS 030 18

Gear size

DE-DG55.....DynaGear DE-DG55
DE-DG75.....DynaGear DE-DG75
DE-DG90.....DynaGear DE-DG90
DE-DG115....DynaGear DE-DG115

Precision class

PRO.....Professional
ULT.....Ultimate
ULP.....Ultimate^{PLUS}

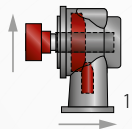
Ratio

005..... $i = 5^1$
010..... $i = 10^1$
etc.

¹ available ratios
one-stage
5, 8, 10, 15

Direction of rotation / pinion location

1.....Pinion on side 1



Max. input speed

1..... $< 250 \text{ min}^{-1}$
2..... $< 1000 \text{ min}^{-1}$
3..... $< 2000 \text{ min}^{-1}$
4..... $< 3500 \text{ min}^{-1}$
5..... $\geq 3500 \text{ min}^{-1}$

Number of teeth pinion

18, 20, 22,, 28, 30²
² available numbers of teeth
see catalogue pages
Additional executions on request

Module

020.....Module 2
030.....Module 3
040.....Module 4

Pinion

SG.....Straight pinion
SS.....Helical pinion

Motor attachment

03.....V3 (V1...V3³, VX⁴)

³ See catalogue pages for available
flanges

⁴ More dimensions on request

Mounting position

1.....MP1
2.....MP2
3.....MP3
4.....MP4
5.....MP5
6.....MP6

