

# Performance table/Technical data

# DYNA GEAR

DynaGear

Size		D55	D75	D90	D115	D130	D140	D160	D190
Ratio	i	3/4/5/6/8/10							
Output torque									
Nominal torque	$T_{2N}$ [Nm]	35	70	140	260	430	720	1100	1440
Maximum acceleration ④	$T_{2B}$ [Nm]	53	105	210	390	645	1080	1650	2160
Emergency stop torque ③	$T_{2Not}$ [Nm]	70	140	280	520	860	1440	2200	2880
Maximum input speed	$n_{1max}$ [min <sup>-1</sup> ]	8000	8000	7000	6000	5000	5000	4500	4500
Nominal input speed i = 3/4/5	$n_{1N}$ [min <sup>-1</sup> ]	2100	1800	1500	1150	1000	700	600	550
Nominal input speed i = 6/8/10	$n_{1N}$ [min <sup>-1</sup> ]	3200	2700	2200	1800	1500	1200	1100	1000
Standard backlash ①	$j_t$ [arcmin]	< 5	< 5	< 4	< 4	< 4	< 4	< 4	< 4
Reduced backlash ①	$j_t$ [arcmin]	< 3	< 3	< 2	< 2	< 2	< 2	< 2	< 2
Backlash stiffness at the output ⑤	$C_{t21}$ [Nm/arcmin]	2.1	4.2	10.5	23.4	39.6	61.8	90.0	126.0
Radial force ②	$F_{2Rmax}$ [N]	3300	4900	7200	10000	12600	15000	18000	22500
Axial force ②	$F_{2Amax}$ [N]	1650	2450	3600	5000	6300	7500	9000	11250
Efficiency rating at full load	$\eta$ [%]	> 96	> 96	> 96	> 96	> 96	> 96	> 96	> 96
Noise level ( $n_1=3000$ min <sup>-1</sup> )	$L_{pA}$ [dB(A)]	< 66	< 66	< 68	< 68	< 70	< 70	< 72	< 72
Weight approx.	m [kg]	3.5	5.5	9.5	15.5	23.5	32.5	46.5	60

Size		D55	D75	D90	D115	D130	D140	D160	D190
Ratio	i	12/15							
Output torque									
Nominal torque	$T_{2N}$ [Nm]	25	50	95	180	300	510	815	1020
Maximum acceleration ④	$T_{2B}$ [Nm]	38	75	143	270	450	765	1223	1530
Emergency stop torque ③	$T_{2Not}$ [Nm]	50	100	190	360	600	1020	1630	2040
Maximum input speed	$n_{1max}$ [min <sup>-1</sup> ]	8000	8000	7000	6000	5000	5000	4500	4500
Nominal input speed	$n_{1N}$ [min <sup>-1</sup> ]	3900	3300	2800	2300	2000	1600	1350	1300
Standard backlash ①	$j_t$ [arcmin]	< 5	< 5	< 4	< 4	< 4	< 4	< 4	< 4
Reduced backlash ①	$j_t$ [arcmin]	< 3	< 3	< 2	< 2	< 2	< 2	< 2	< 2
Backlash stiffness at the output	$C_{t21}$ [Nm/arcmin]	2.1	4.2	10.5	23.4	39.6	61.8	90.0	126.0
Radial force ②	$F_{2Rmax}$ [N]	3300	4900	7200	10000	12600	15000	18000	22500
Axial force ②	$F_{2Amax}$ [N]	1650	2450	3600	5000	6300	7500	9000	11250
Efficiency rating at full load	$\eta$ [%]	> 93	> 93	> 93	> 93	> 93	> 93	> 93	> 93
Noise level ( $n_1=3000$ min <sup>-1</sup> )	$L_{pA}$ [dB(A)]	≥ 66	≥ 66	≥ 68	≥ 68	≥ 70	≥ 70	≥ 72	≥ 72
Weight approx	m [kg]	3.5	5.5	9.5	15.5	23.5	32.5	46.5	60

Size		D55HR	D75HR	D90HR	D115HR	D130HR	D140HR	D160HR	D190HR
Ratio	i ⑥	18/24/30/40/50/60/80/100							
Output torque									
Nominal torque	$T_{2N}$ [Nm]	35	70	140	260	430	720	1100	1440
Maximum acceleration ④	$T_{2B}$ [Nm]	53	105	210	390	645	1080	1650	2160
Emergency stop torque ③	$T_{2Not}$ [Nm]	70	140	280	520	860	1440	2200	2880
Maximum input speed	$n_{1max}$ [min <sup>-1</sup> ]	6000	6000	6000	6000	5000	5000	4500	4500
Nominal input speed	$n_{1N}$ [min <sup>-1</sup> ]	3500	3000	3000	2500	2500	2500	2500	2500
Standard backlash ①	$j_t$ [arcmin]	< 7	< 7	< 6	< 6	< 6	< 6	< 6	< 6
Reduced backlash ①	$j_t$ [arcmin]	< 5	< 5	< 3	< 3	< 3	< 3	< 3	< 3
Backlash stiffness at the output	$C_{t21}$ [Nm/arcmin]	2.1	4.1	10.2	22.8	37.8	60.1	86.5	119.2
Radial force ②	$F_{2Rmax}$ [N]	3300	4900	7200	10000	12600	15000	18000	22500
Axial force ②	$F_{2Amax}$ [N]	1650	2450	3600	5000	6300	7500	9000	11250
Efficiency rating at full load	$\eta$ [%]	> 92	> 92	> 92	> 92	> 92	> 92	> 92	> 92
Noise level ( $n_1=3000$ min <sup>-1</sup> )	$L_{pA}$ [dB(A)]	< 66	< 66	< 68	< 68	< 70	< 70	< 72	< 72
Weight approx	m [kg]	4.0	6.5	12.5	19.5	27	36	49	61.5

Service life (SL) [h]: > 30.000 based operation mode S5  
 Lubrication: Lubricated for life, closed system  
 Mounting positions: Any  
 Operation temperature: -10 °C to 100 °C  
 Paint: Primary coated RAL 9005 – black  
 Ex-protection / type of protection: Ex II 2 D / G T4 / IP 64

① At the output, at 2 % load  
 ② Resulting force centre of output shaft at output speed 400 min<sup>-1</sup>  
 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 (DynaGearHR with coupling)  
 ⑥ Ratios 120:1 and 150:1 on request