

PGII / PGIIR Gearbox Performance

Model No.		Stages ⁽⁶⁾	Ratio ⁽¹⁾	Type	PGII 040	PGII 060	PGII 080	PGII 120	PGII 160
					PGIIR 040	PGIIR 060	PGIIR 080	PGIIR 120	PGIIR 160
Nominal Output Torque T _{2N}	Nm	1	3	All	16	42	110	217	430
			4		16	42	113	223	440
			5		15	40	118	220	435
			7		12	35	96	198	366
			9		8	24	60	125	273
			10		10	27	68	155	295
		2	12		16	42	110	217	430
			15		15	40	109	213	424
			16		16	42	116	228	452
			20		16	42	116	230	454
			25		15	40	123	228	450
			30		15	40	108	212	422
			35		12	35	100	206	382
			40		16	43	117	232	459
			50		15	40	123	228	450
			70		12	35	100	206	382
			81		8	24	59	131	285
			100		10	27	70	162	308
		3	120		19	50	137	-	-
			160		16	43	118	-	-
			200		16	43	118	-	-
			280		12	35	99	-	-
			350		12	35	99	-	-
			500		15	40	122	-	-
700	12		35	99	-	-			
1000	10		27	70	-	-			
Emergency Stop Torque T _{2NOT}	Nm	1,2,3	3~1000	All	3 times T _{2N}				
Max. Acceleration Torque T _{2B}	Nm	1,2,3	3~1000	All	T _{2B} = 60% of T _{2NOT}				
No Load Running Torque ⁽⁴⁾	Nm	1	3~10	PGII	0.05	0.10	0.40	0.80	2.50
				PGIIR	0.15	0.6	1.6	3	6.8
		2	12~100	PGII	0.05	0.10	0.30	0.40	0.80
				PGIIR	0.15	0.58	1.58	2.5	3
		3	120~1000	PGII	0.05	0.10	0.40	-	-
				PGIIR	0.15	0.58	1.58	-	-
Backlash ⁽²⁾	arcmin	1	3~10	PGII	≤ 8	≤ 7	≤ 6	≤ 6	≤ 6
				PGIIR	≤ 12	≤ 11	≤ 10	≤ 10	≤ 10
		2	12~100	PGII	≤ 10	≤ 9	≤ 8	≤ 8	≤ 8
				PGIIR	≤ 14	≤ 13	≤ 12	≤ 12	≤ 12
		3	120~1000	PGII	≤ 12	≤ 11	≤ 10	-	-
				PGIIR	≤ 16	≤ 15	≤ 14	-	-
Torsional Rigidity	Nm/arcmin	1,2,3	3~1000	All	0.5	2	8	12	16
Nominal Input Speed n _{1N}	rpm	1,2,3	3~1000	All	4,500	4,000	3,600	3,600	2,500
Max. Input Speed n _{1B}	rpm	1,2,3	3~1000	All	8,000	6,000	6,000	4,800	3,600
Max. Radial Load F _{2rB} ⁽³⁾	N	1,2,3	3~1000	All	520	1,030	1,570	3,590	4,690
Max. Axial Load F _{2aB} ⁽³⁾	N	1,2,3	3~1000	All	260	515	785	1,795	2,345
Max. Tilting Moment M _{2K}	Nm	1,2,3	3~1000	All	10	35	55	170	300
Operating Temp	°C	1,2,3	3~1000	All	0° C~ +90° C				
Degree of Gearbox Protection		1,2,3	3~1000	All	IP65				
Lubrication		1,2,3	3~1000	All	Synthetic lubrication grease				
Mounting Position		1,2,3	3~1000	All	All directions				
Running Noise ⁽⁴⁾	dB(A)	1,2,3	3~1000	PGII	≤ 60	≤ 62	≤ 64	≤ 66	≤ 68
				PGIIR	≤ 70	≤ 72	≤ 74	≤ 75	≤ 77
Max. bending moment based on the gearbox input flange Mb ⁽⁵⁾	Nm	1,2,3	3~1000	PGII	5	12	22	45	54
				PGIIR	3	6	10	17	19
Efficiency η	%	1	3~10	PGII	≥ 97%				
				PGIIR	≥ 93%				
		2	12~100	PGII	≥ 94%				
				PGIIR	≥ 90%				
		3	120~1000	PGII	≥ 91%				
				PGIIR	≥ 87%				

(1) Ratio (i= N_{in} / N_{out}).

(2) Backlash is measured at 2% of Nominal Output Torque T_{2N}.

(3) Applied to the output shaft center at 100 rpm

(4) The dB values are measured by gearbox with ratio 10 (1-stage) or ratio 100 (2-stage), or ratio 1,000 (3-stage) no loading at 3,000 RPM or at the respective Nominal Input Speed by bigger model size.

By lower ratio and/or higher RPM, the noise level could be 3 to 5 dB higher.

(5) Max. motor weight* (kg) = $\frac{0.1 \times Mb}{\text{motor length (m)}}$

*with symmetrically distributed motor weight

*with horizontal and stationary mounting