



# PGII und PGII R-Serie Planetengetriebe



## PGII Planetengetriebe

### Technische Daten

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Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte Bauweise

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### Nenn-Abtriebsdrehmoment

T2N: 8 – 459 Nm

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### Untersetzungen

1-stufig: 3 / 4 / 5 / 7 / 10

2-stufig: 15 / 16 / 20 / 25 / 30 / 35 / 40 / 50 / 70 / 100

3-stufig: 120 / 160 / 200 / 280 / 350 / 500 / 700 / 1000

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### Geringes Verdrehspiel

1-stufig: 6 – 8 Winkelminuten

2-stufig: 8 – 10 Winkelminuten

3-stufig: 10 – 12 Winkelminuten

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### Hoher Wirkungsgrad

1-stufig:  $\geq 97\%$

2-stufig:  $\geq 94\%$

3-stufig:  $\geq 90\%$

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### Arbeitstemperatur

0°C bis 90°C mit Standardfett

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### Baugrößen

PGII 040 / PGII 060 / PGII 080 / PGII 120 / PGII 160

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### Verwendung

Anwendungen im Maschinenbau, bei denen kostengünstige und gleichzeitig hochwertige Planetengetriebe gefordert sind.



## PGIIR Winkelplanetengetriebe

### Technische Daten

Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte Bauweise

### Nenn-Abtriebsdrehmoment

T2N: 8 – 459 Nm

### Untersetzungen

1-stufig: 3 / 4 / 5 / 7 / 9 / 10

2-stufig: 15 / 16 / 20 / 25 / 30 / 35 / 40 / 50 / 70 / 81 / 100

3-stufig: 120 / 160 / 200 / 280 / 350 / 500 / 700 / 1000

### Geringes Verdrehspiel

1-stufig: 10 – 12 Winkelminuten

2-stufig: 12 – 14 Winkelminuten

3-stufig: 14 – 24 Winkelminuten

### Hoher Wirkungsgrad

1-stufig:  $\geq 93\%$

2-stufig:  $\geq 90\%$

3-stufig:  $\geq 88\%$

### Arbeitstemperatur

0°C bis 90°C mit Standardfett

### Baugrößen

PGIIR 040 / PGIIR 060 / PGIIR 080 / PGIIR 120 / PGIIR 160

### Verwendung

Anwendungen im Maschinenbau, bei denen kostengünstige und gleichzeitig hochwertige Planetengetriebe gefordert sind.



# PGII / PGIIR Spezifikationen

Model No.	Stages <sup>(6)</sup>	Ratio <sup>(1)</sup>	Type	PGII 040	PGII 060	PGII 080	PGII 120	PGII 160	
				PGIIR 040	PGIIR 060	PGIIR 080	PGIIR 120	PGIIR 160	
Nominal Output Torque $T_{2N}$	1	3	All	16	42	110	217	430	
				16	42	113	223	440	
				15	40	118	220	435	
				12	35	96	198	366	
				10	27	68	155	295	
	2	15		16	15	40	109	213	424
					16	42	116	228	452
					16	42	116	230	454
					15	40	123	228	450
					15	40	108	212	422
					12	35	100	206	382
					16	43	117	232	459
					15	40	123	228	450
					12	35	100	206	382
					10	27	70	162	308
	3	120		160	19	50	137	-	-
					16	43	118	-	-
					16	43	118	-	-
					12	35	99	-	-
					12	35	99	-	-
15			40		122	-	-		
12			35		99	-	-		
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 <sup>(4)</sup>	1	3~10	PGII	0.05	0.10	0.40	0.80	2.50	
			PGIIR	0.10	0.15	0.45	0.85	2.55	
	2	15~100	PGII	0.05	0.10	0.30	0.40	0.80	
			PGIIR	0.10	0.15	0.35	0.45	0.85	
	3	120~1000	PGII	0.05	0.10	0.40	-	-	
			PGIIR	0.10	0.15	0.45	-	-	
Backlash <sup>(2)</sup>	1	3~10	PGII	≤ 8	≤ 7	≤ 6	≤ 6	≤ 6	
			PGIIR	≤ 12	≤ 11	≤ 10	≤ 10	≤ 10	
	2	15~100	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 $F_{2rB}$ <sup>(3)</sup>	N	1,2,3	3~1000	All	520	1,030	1,570	3,590	4,690
Max. Axial Load $F_{2aB}$ <sup>(3)</sup>	N	1,2,3	3~1000	All	260	515	785	1,795	2,345
Service Life <sup>(5)</sup>	hr	1,2,3	3~1000	All	20,000				
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 <sup>(4)</sup>	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 $M_b$ <sup>(7)</sup>	Nm	1,2,3	3~1000	PGII	5	12	22	45	54
				PGIIR	3	6	10	17	19
Efficiency $\eta$	1	3~10	PGII	≥ 97%					
			PGIIR	≥ 93%					
	2	15~100	PGII	≥ 94%					
			PGIIR	≥ 90%					
	3	120~1000	PGII	≥ 91%					
			PGIIR	≥ 87%					

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

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

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

(4) These values are measured by gearbox with ratio = 10 (1-stage) or ratio = 100 (2-stage) at 3,000 rpm without load, By ratio smaller than 10, the noise value would be 3-5dB higher.

(5) For continuous operation, the service life time is less than 10,000 hrs.

(6) 3-stage is available for following types: PGII040, PGIIR040, PGII060, PGIIR060, PGII080, PGIIR080.

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

\*with symmetrically distributed motor weight

\*with horizontal and stationary mounting

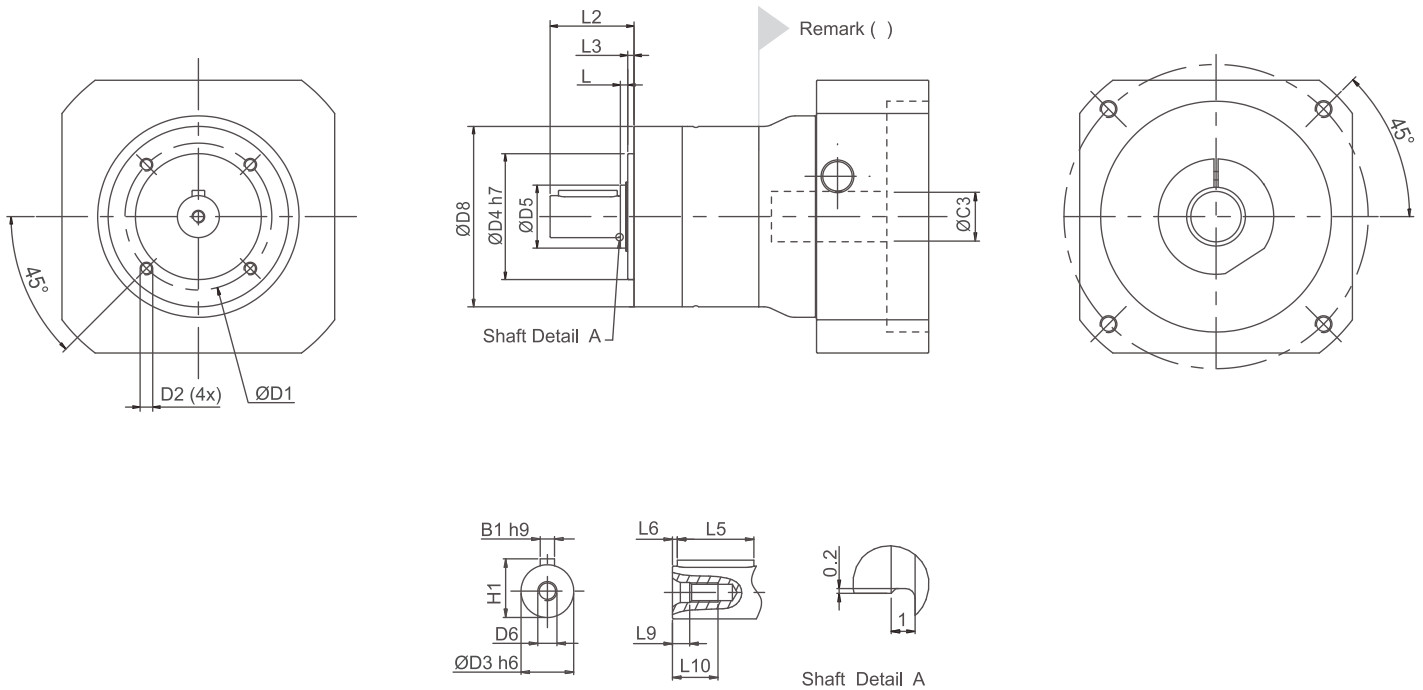
## Massenträgheitsmoment PGII

Model No.		PGII 040			PGII 060			PGII 080			PGII 120		PGII 160		
$\emptyset^{(A)}$ (C3)		1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	1-st.	2-st.	
8	kg.cm <sup>2</sup>	0.10	0.10	0.10	0.12	0.10	0.10	-	-	-	-	-	-	-	
11		0.16	0.16	0.16	0.19	0.16	0.16	-	-	-	-	-	-	-	-
14		-	-	-	0.22	0.20	0.20	0.36	0.24	0.20	-	-	-	-	-
19		-	-	-	1.53	1.51	1.51	1.70	1.58	1.54	2.20	1.73	-	-	2.18
24		-	-	-	-	-	-	2.24	2.12	2.09	2.74	2.27	4.52	2.73	-
28		-	-	-	-	-	-	2.68	2.55	2.52	3.17	2.70	4.94	3.15	-
32		-	-	-	-	-	-	-	-	-	7.77	7.30	9.70	7.91	-
35		-	-	-	-	-	-	-	-	-	10.80	10.30	12.80	11.00	-
38		-	-	-	-	-	-	-	-	-	14.00	13.50	16.00	14.20	-
42		-	-	-	-	-	-	-	-	-	-	-	24.50	-	-

## Massenträgheitsmoment PGIIR

Model No.		PGIIR 040			PGIIR 060			PGIIR 080			PGIIR 120		PGIIR 160		
$\emptyset^{(A)}$ (C3)		1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	1-st.	2-st.	
8	kg.cm <sup>2</sup>	0.18	0.18	0.18	0.36	0.36	0.36	-	-	-	-	-	-	-	
11		0.20	0.20	0.20	0.39	0.39	0.39	-	-	-	-	-	-	-	-
14		-	-	-	0.43	0.43	0.43	1.87	1.87	1.87	-	-	-	-	-
19		-	-	-	1.24	1.24	1.24	2.67	2.67	2.67	6.80	6.80	-	-	13.57
24		-	-	-	-	-	-	2.97	2.97	2.97	7.10	7.10	13.87	13.87	-
28		-	-	-	-	-	-	3.47	3.47	3.47	7.59	7.59	14.36	14.36	-
32		-	-	-	-	-	-	-	-	-	10.56	10.56	17.33	17.33	-
35		-	-	-	-	-	-	-	-	-	11.97	11.97	18.74	18.74	-
38		-	-	-	-	-	-	-	-	-	13.95	13.95	20.79	20.79	-
42		-	-	-	-	-	-	-	-	-	-	-	26.54	-	-

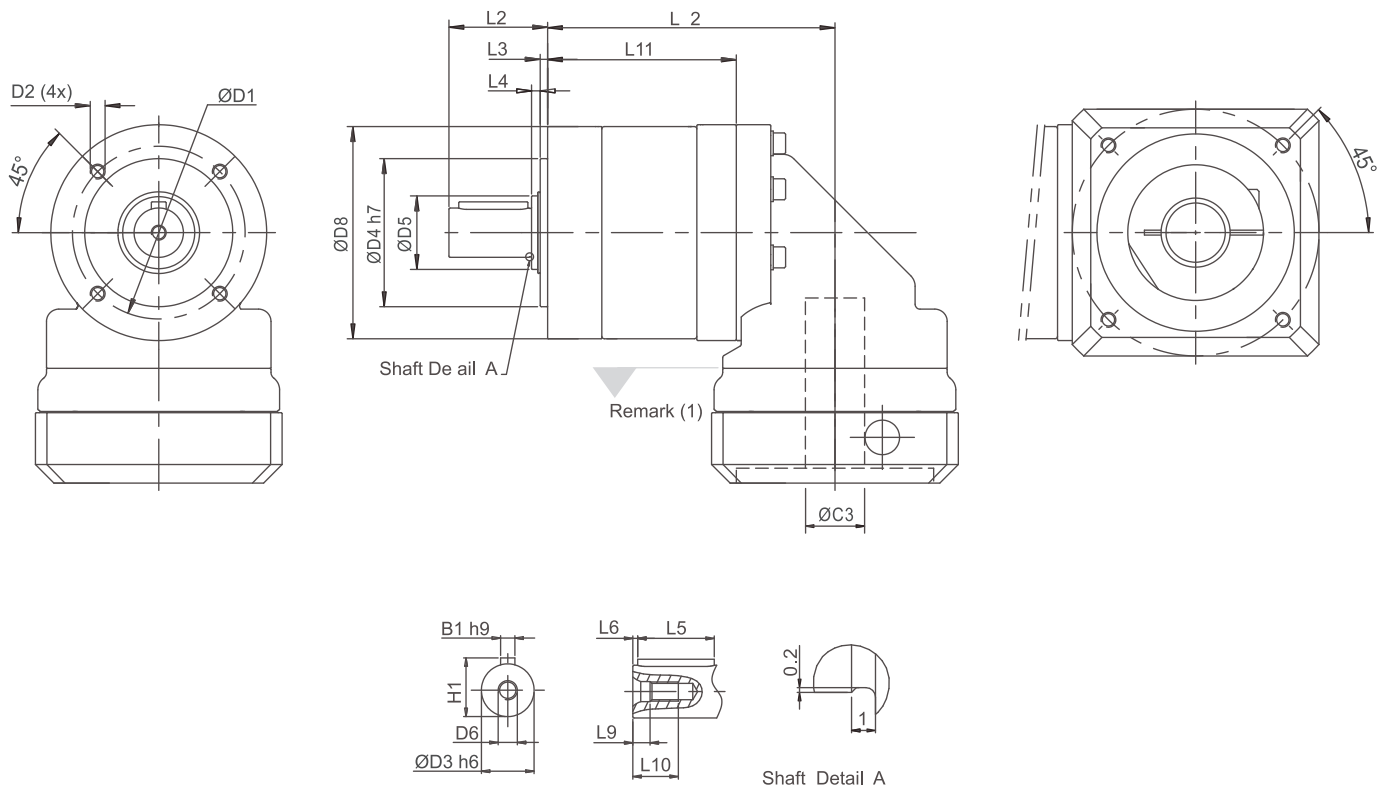
# PGII Abmessungen



Dimension	PGII 040			PGII 060			PGII 080			PGII 120			PGII 160		
	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	-	1-st.	2-st.	-
D1	34			52			70			100			145		
D2	M4X9			M5X10			M6X12			M10X18			M12X22		
D3	h6	10		14		20		25		40		55			
D4	h7	26		40		60		80		130		130			
D5	17			17			30			40			55		
D6	M3X0.5P			M5X0.8P			M6X1P			M10X1.5P			M16X2P		
D8	44			60			86			114			160		
L2	26			35			40			55			87		
L3	2			3			3			4			5		
L4	1			2			3.5			5			5.5		
L5	18			25			28			40			65		
L6	2.5			2.5			4			5			8		
L9	2.6			4.8			5			7.5			12		
L10	9			12.5			16.5			22			36		
B1	h9	3		5		6		8		12		12			
H1	11.2			16			22.5			28			43		

(1) Dimensions are related to motor interface.

# PGIIR Abmessungen



Dimension	PGIIR 040			PGIIR 060			PGIIR 080			PGIIR 120			PGIIR 160			
	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	3-st.	1-st.	2-st.	-	1-st.	2-st.	-	
D1	34			52			70			100			145			
D2	M4X9			M5X10			M6X12			M10X18			M12X22			
D3	h6	10			14			20			25			40		
D4	h7	26			40			60			80			130		
D5	17			17			30			40			55			
D6	M3X0.5P			M5X0.8P			M6X1P			M10X1.5P			M16X2P			
D8	44			60			86			114			160			
L2	26			35			40			55			87			
L3	2			3			3			4			5			
L4	1			2			3.5			5			5.5			
L5	18			25			28			40			65			
L6	2.5			2.5			4			5			8			
L9	2.6			4.8			5			7.5			12			
L10	9			12.5			16.5			22			36			
L11	53	68	82	66.5	86.5	105.5	76.5	103	128.5	104	140	-	125.5	173	-	
L12	78	93	107	96	116	135	116.5	143	168.5	155	191	-	182.5	230	-	
B1	h9	3			5			6			8			12		
H1	11.2			16			22.5			28			43			

(1) Dimensions are related to motor interface.