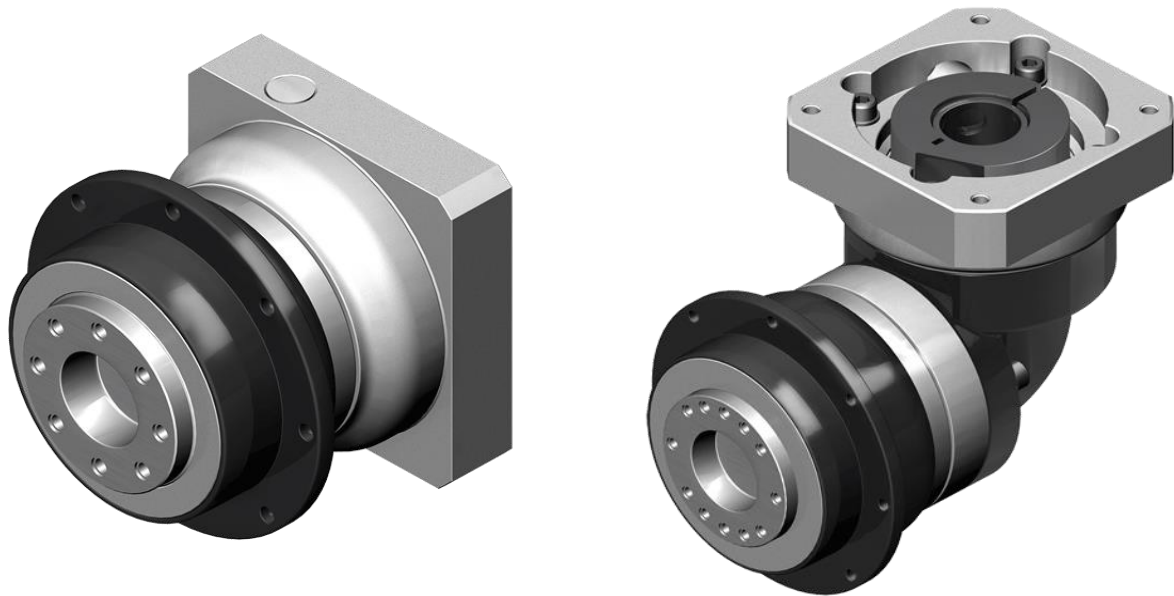




# PD und PDR-Serie Planetengetriebe



## PD Planetengetriebe

### Technische Daten

---

Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte und steife Bauweise

Ausführung Standard mit ISO9409 Abgangsflansch

Aufnahme hoher Axial- und Radialkräfte möglich

---

### Nenn-Abtriebsdrehmoment

T2N: 10 – 232 Nm

---

### Untersetzungen

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

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

---

### Geringes Verdrehspiel

1-stufig: 6 – 8 Winkelminuten

2-stufig: 8 – 10 Winkelminuten

---

### Hoher Wirkungsgrad

1-stufig:  $\geq 97\%$

2-stufig:  $\geq 94\%$

---

### Arbeitstemperatur

0°C bis 90°C mit Standardfett

---

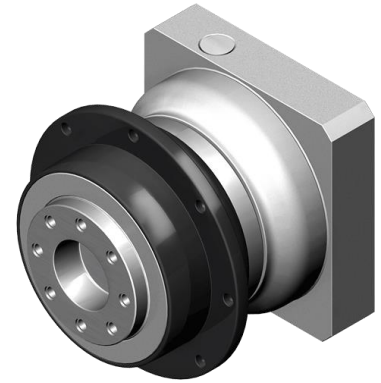
### Baugrößen

PD 053 / PD 064 / PD 090 / PD 110

---

### Verwendung

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



## PDR Winkelplanetengetriebe

### Technische Daten

---

Einfache Montage

Geringes Laufgeräusch

Schutzklasse IP 65

Kompakte und steife Bauweise

Ausführung Standard mit ISO9409 Abgangsflansch

Aufnahme hoher Axial- und Radialkräfte möglich

---

### Nenn-Abtriebsdrehmoment

T2N: 10 – 232 Nm

---

### Untersetzungen

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

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

---

### Geringes Verdrehspiel

1-stufig: 10 – 12 Winkelminuten

2-stufig: 12 – 14 Winkelminuten

---

### Hoher Wirkungsgrad

1-stufig:  $\geq 93\%$

2-stufig:  $\geq 90\%$

---

### Arbeitstemperatur

0°C bis 90°C mit Standardfett

---

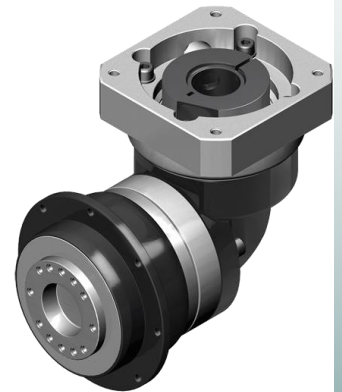
### Baugrößen

PDR 053 / PDR 064 / PDR 110

---

### Verwendung

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



# PD / PDR Spezifikationen

Model No.		Stages	Ratio <sup>(1)</sup>	Type	PD 053	PD 064	PD 090	PD 110
					PDR 053	PDR 064	PDR 090	PDR 110
Nominal Output Torque T <sub>2N</sub>	Nm	1	3	All	16	42	110	217
			4		16	42	113	223
			5		15	40	118	220
			7		12	35	96	198
			10		10	27	68	155
		2	15		15	40	109	213
			16		16	42	116	228
			20		16	42	116	230
			25		15	40	123	228
			30		15	40	108	212
			35		12	35	100	206
			40		16	43	117	232
			50		15	40	123	228
			70		12	35	100	206
100	10	27	70	162				
Emergency Stop Torque T <sub>2NOT</sub>	Nm	1,2	3~100	All	3 times T <sub>2N</sub>			
Max. Acceleration Torque T <sub>2B</sub>	Nm	1,2	3~100	All	T <sub>2B</sub> = 60% of T <sub>2NOT</sub>			
No Load Running Torque <sup>(4)</sup>	Nm	1	3~10	PD	0.05	0.10	0.40	0.80
				PDR	0.10	0.15	0.45	0.85
		2	15~100	PD	0.05	0.10	0.30	0.40
				PDR	0.10	0.15	0.35	0.45
Backlash <sup>(2)</sup>	arcmin	1	3~10	PD	≤ 8	≤ 7	≤ 6	≤ 6
				PDR	≤ 12	≤ 11	≤ 10	≤ 10
		2	15~100	PD	≤ 10	≤ 9	≤ 8	≤ 8
				PDR	≤ 14	≤ 13	≤ 12	≤ 12
Torsional Rigidity	Nm/arcmin	1,2	3~100	All	1.2	3	10.8	16.2
Nominal Input Speed n <sub>1N</sub>	rpm	1,2	3~100	All	4,500	4,000	3,600	3,600
Max. Input Speed n <sub>1B</sub>	rpm	1,2	3~100	All	8,000	6,000	6,000	4,800
Max. Radial Load F <sub>2rB</sub> <sup>(3)</sup>	N	1,2	3~100	All	1,045	880	1,615	3,675
Max. Axial Load F <sub>2aB</sub> <sup>(3)</sup>	N	1,2	3~100	All	523	440	808	1,838
Max. Tilting Torque M <sub>2K</sub>	Nm	1,2	3~100	All	22	17	44	140
Service Life <sup>(5)</sup>	hr	1,2	3~100	All	20,000			
Operating Temp	°C	1,2	3~100	All	0° C~ +90° C			
Degree of Gearbox Protection		1,2	3~100	All	IP65			
Lubrication		1,2	3~100	All	Synthetic lubrication grease			
Mounting Position		1,2	3~100	All	All directions			
Running Noise <sup>(4)</sup>	dB(A)	1,2	3~100	PD	≤ 60	≤ 62	≤ 64	≤ 66
				PDR	≤ 70	≤ 72	≤ 74	≤ 75
Max. bending moment based on the gearbox input flange Mb <sup>(6)</sup>	Nm	1,2	3~100	PD	7	16	31	56
				PDR	4	9	16	25
Efficiency η	%	1	3~10	PD	≥ 97%			
				PDR	≥ 93%			
		2	15~100	PD	≥ 94%			
				PDR	≥ 90%			

(1) Ratio (i = N<sub>in</sub> / N<sub>out</sub>).

(2) Backlash is measured at 2% of Nominal Output Torque T<sub>2N</sub>.

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

\*with symmetrically distributed motor weight

\*with horizontal and stationary mounting



## Massenträgheitsmoment PD

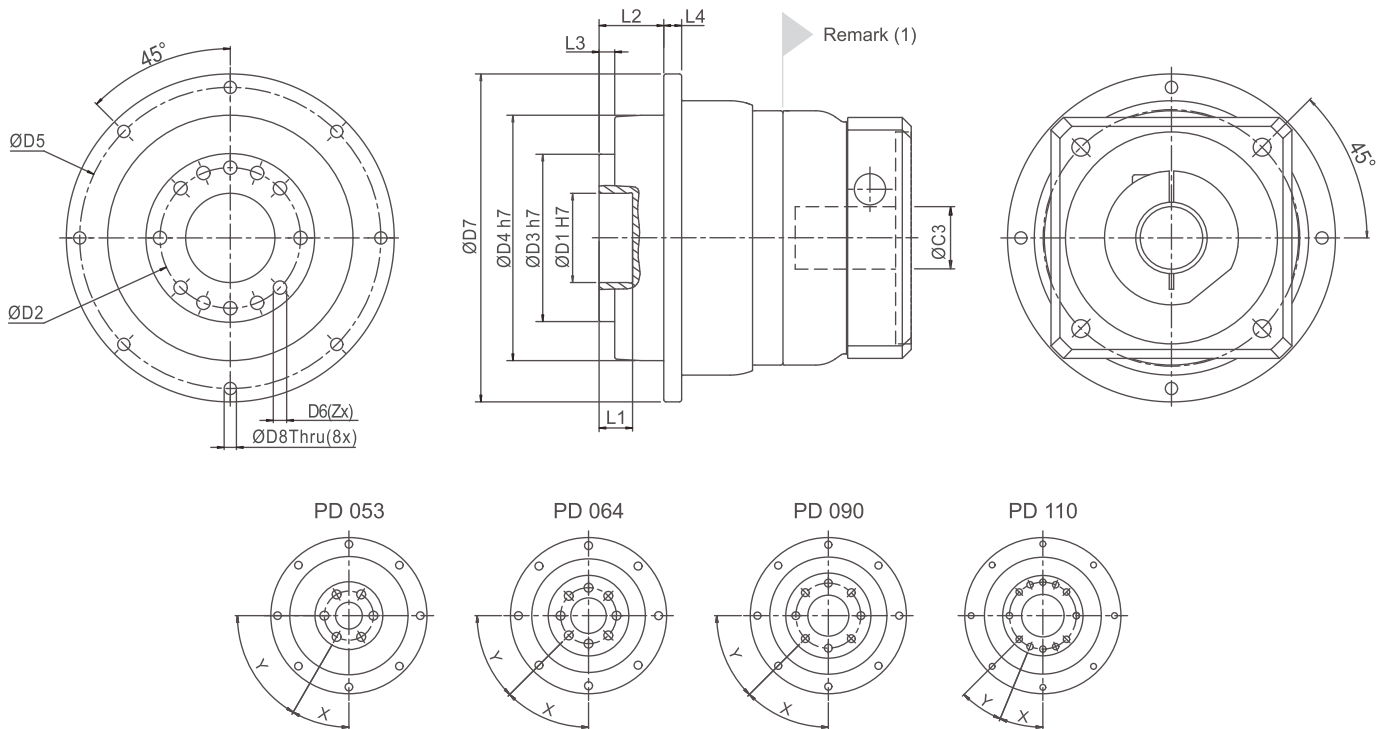
Model No.		PD 053		PD 064		PD 090		PD 110	
$\varnothing^{(A)}$ (c3)		1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
8	kg.cm <sup>2</sup>	0.10	0.10	0.12	0.10	-	-	-	-
11		0.16	0.16	0.19	0.16	-	-	-	-
14		-	-	0.22	0.20	0.36	0.24	-	-
19		-	-	1.53	1.51	1.70	1.58	2.20	1.73
24		-	-	-	-	2.24	2.12	2.74	2.27
28		-	-	-	-	2.68	2.55	3.17	2.70
32		-	-	-	-	-	-	7.77	7.30
35		-	-	-	-	-	-	10.80	10.30
38		-	-	-	-	-	-	14.00	13.50
42		-	-	-	-	-	-	-	-

## Massenträgheitsmoment PDR

Model No.		PDR 053		PDR 064		PDR 090		PDR 110	
$\varnothing^{(A)}$ (c3)		1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
8	kg.cm <sup>2</sup>	0.18	0.18	0.36	0.36	-	-	-	-
11		0.20	0.20	0.39	0.39	-	-	-	-
14		-	-	0.43	0.43	1.87	1.87	-	-
19		-	-	1.24	1.24	2.67	2.67	6.80	6.80
24		-	-	-	-	2.97	2.97	7.10	7.10
28		-	-	-	-	3.47	3.47	7.59	7.59
32		-	-	-	-	-	-	10.56	10.56
35		-	-	-	-	-	-	11.97	11.97
38		-	-	-	-	-	-	13.95	13.95
42		-	-	-	-	-	-	-	-

(A)  $\varnothing$  = Input shaft diameter.

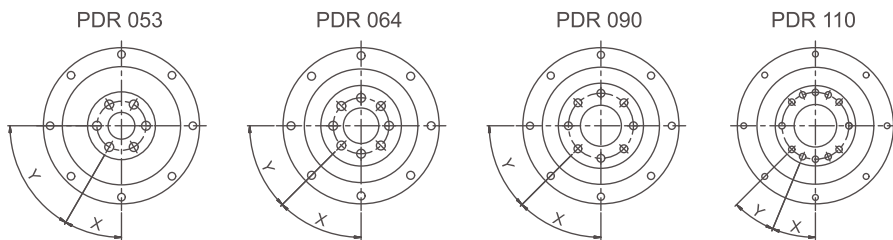
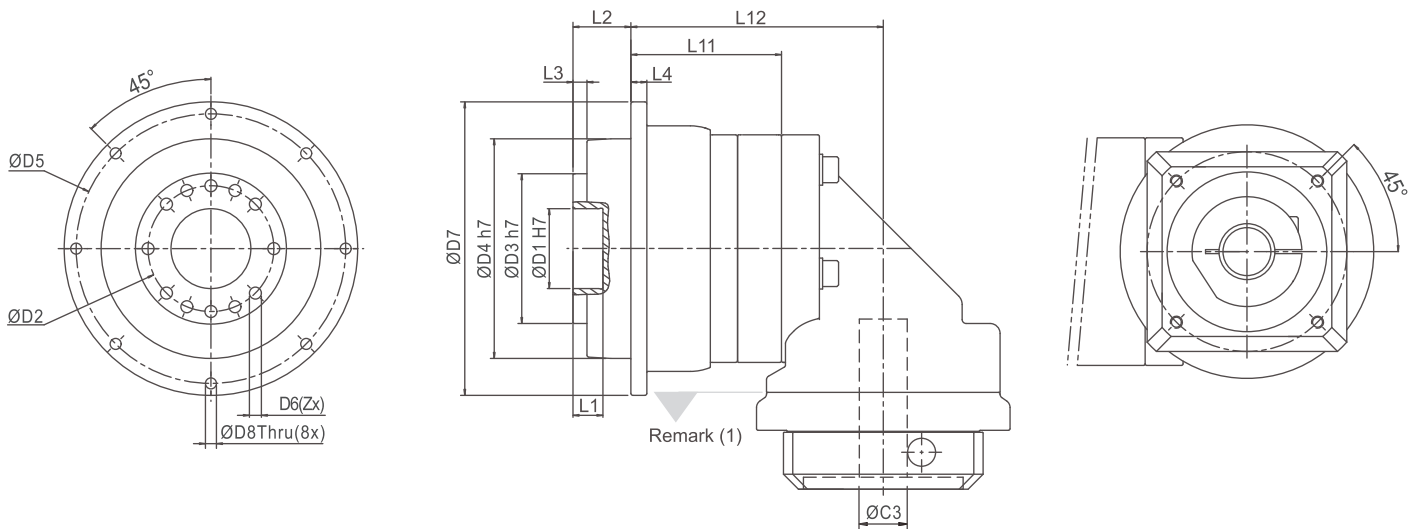
# PD Abmessungen



Dimension	PD 053		PD 064		PD 090		PD 110	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
D1 H7	12		20		31.5		40	
D2	22		31.5		50		63	
D3 h7	28		40		63		75	
D4 h7	53		64		90		110	
D5	64		79		109		135	
D6	M4x0.7Px8L		M5xX0.8Px8L		M6x1Px13.5L		M6x1Px13.5L	
D7	70		88		120		147	
D8	3.4		4.5		5.5		5.5	
L1	4		8		15		15	
L2	14.5		19.5		30		29	
L3	3		4		7		7	
L4	5		5		7		8	
X in Degree	30°		45°		45°		22.5°	
Y in Degree	60°		45°		45°		22.5°	
Z	6		8		8		12	

(1) Dimensions are related to motor interface.

# PDR Abmessungen



Dimension	PDR 053		PDR 064		PDR 090		PDR 110	
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
D1 H7	12		20		31.5		40	
D2	22		31.5		50		63	
D3 h7	28		40		63		75	
D4 h7	53		64		90		110	
D5	64		79		109		135	
D6	M4x0.7Px8L		M5X0.8Px8L		M6x1Px13.5L		M6X1Px13.5L	
D7	70		88		120		147	
D8	3.4		4.5		5.5		5.5	
L1	4		8		15		15	
L2	14.5		19.5		30		29	
L3	3		4		7		7	
L4	5		5		7		8	
L11	42.8	57.8	39.5	59.5	49.6	76.1	75.4	111.4
L12	67.8	82.8	69	89	89.6	116.1	126.4	162.4
X in Degree	30°		45°		45°		22.5°	
Y in Degree	60°		45°		45°		22.5°	
Z	6		8		8		12	

(1) Dimensions are related to motor interface.