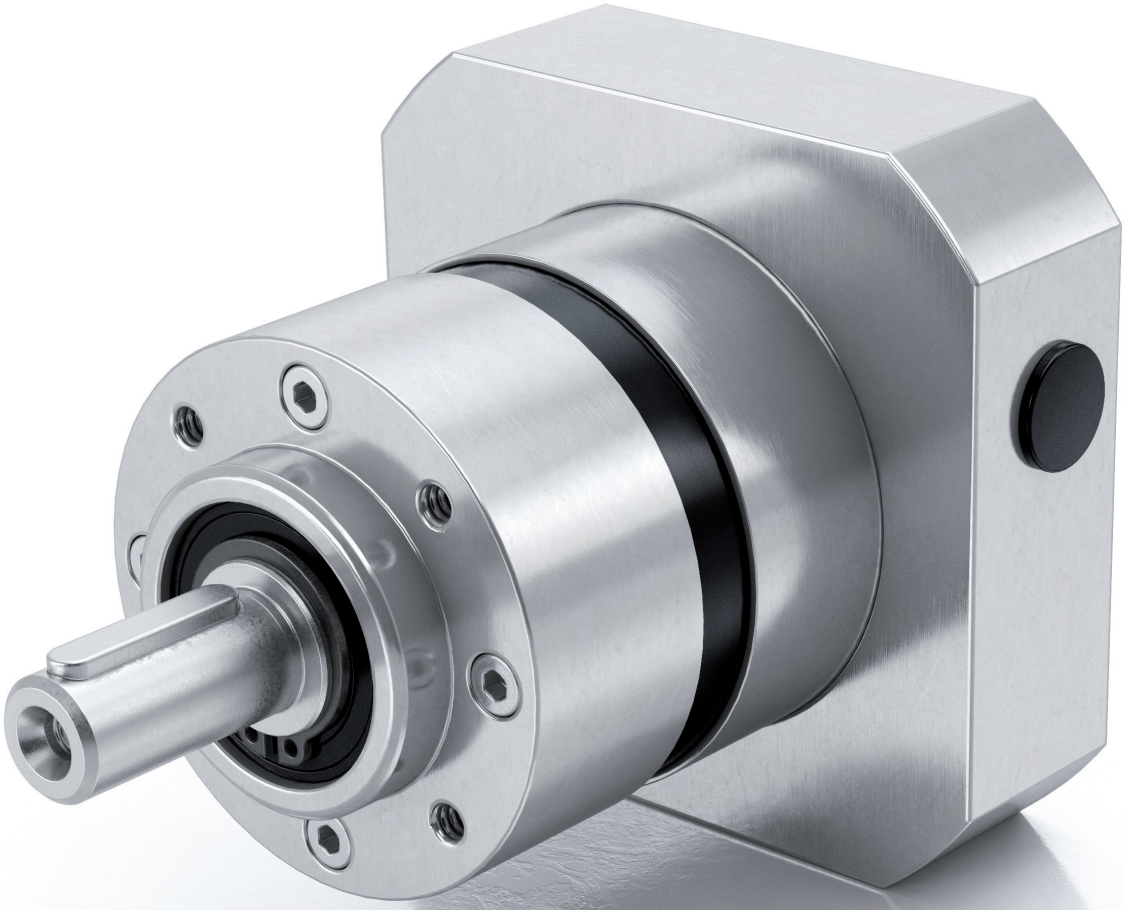
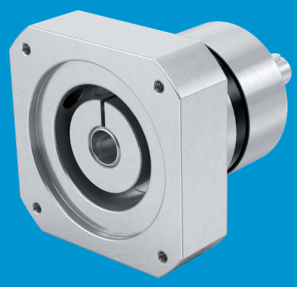
PLANETARY GEARBOX PS





success based on quality and reliability

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Technical data

T2N = Nominal output torque, T2B = Max. acceleration torque, T2S = Emergency stop torque. (max. 100 times), T0 = idle torque, J = Mass moment of inertia, VS = Torsional stiffness

1-stage

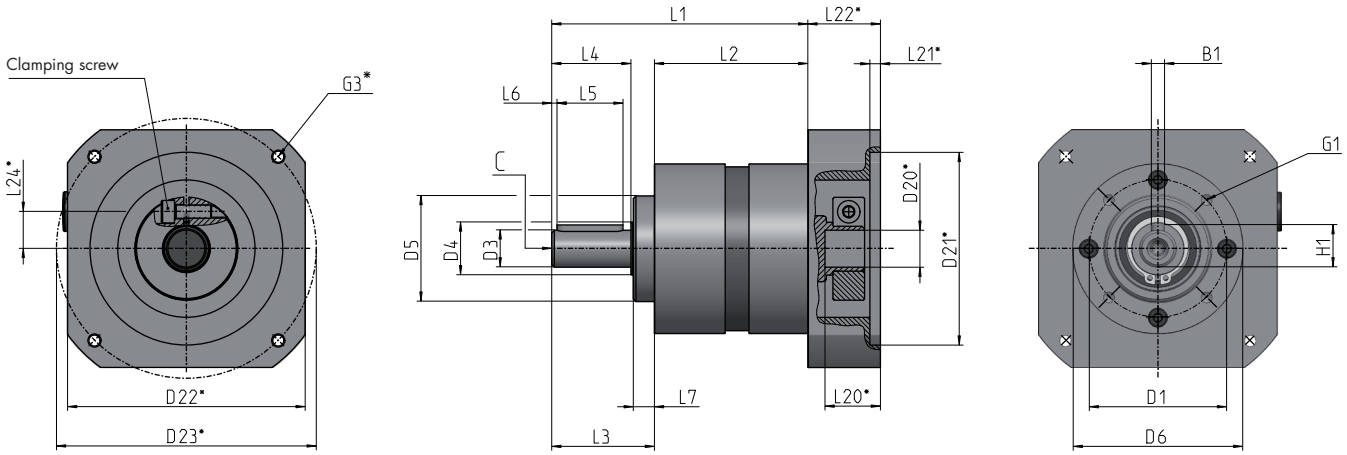
	PS104Z						PS106Z						PS108Z						PS110Z						PS130Z					
Ratio	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS
i	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin
3	5,0	10	20	0,06	0,06	0,85	30	45	72	0,18	0,45	2,4	88	120	180	0,4	1,37	7,1	150	260	350	0,95	6,54	17	405	490	860	2,40	12,3	33
4	8,5	13	26	0,06	0,04	0,85	40	62	84	0,18	0,38	2,4	120	130	216	0,35	1,14	7,1	230	300	480	0,9	4,80	17	480	500	1000	2,10	7,65	33
5	7,5	13	26	0,06	0,04	0,85	35	56	84	0,16	0,36	2,4	110	110	216	0,3	1,05	7,1	200	275	480	0,75	4,05	17	440	460	1000	1,98	6,24	33
7	7	13	26	0,06	0,04	0,65	26	44	84	0,14	0,35	1,7	66	85	216	0,23	0,97	4,8	120	200	480	0,7	3,40	14	310	460	1000	1,52	4,70	27
8	7,5	9	22	0,06	0,04	0,65	19	26	80	0,15	0,35	1,7	53	68	180	0,22	0,97	4,8	152	175	390	0,6	3,40	14	390	440	900	1,21	4,70	27
10	10	13	20	0,06	0,04	0,45	16	24	62	0,16	0,34	1,3	40	75	160	0,22	0,93	3,4	105	180	410	0,5	3,10	8,3	180	340	800	1,13	3,80	22
Torsional backlash [arcmin]																														
	< 15						< 10						< 7						< 7						< 7					
Weight approx. [kg]																														
	0,4						0,9						2,2						5,6						10,3					
Efficiency at full load [%]																														
	94																													

2-stage

	PS204Z						PS206Z						PS208Z						PS210Z						PS230Z					
Ratio	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS
i	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm²	Nm/arcmin
9	10	12,5	20	0,06	0,04	0,85	35	52	72	0,16	0,38	2,4	105	140	160	0,35	1,14	7,1	210	260	400	0,75	4,80	17	450	500	860	1,95	12,3	33
12	10	12,5	20	0,06	0,04	0,85	43	57	72	0,17	0,38	2,4	110	160	160	0,35	1,14	7,1	260	310	500	0,85	4,80	17	500	500	1000	1,93	12,3	33
15	10	12,5	20	0,06	0,04	0,85	44	55	84	0,17	0,38	2,4	118	150	216	0,35	1,14	7,1	230	350	400	0,80	4,80	17	470	460	1000	1,82	7,65	33
16	14	17,5	26	0,06	0,04	0,85	52	71	84	0,16	0,38	2,4	139	163	216	0,30	1,14	7,1	320	380	500	0,80	4,80	17	500	500	1000	1,95	7,65	33
20	14	17,5	26	0,06	0,04	0,85	52	71	84	0,16	0,36	2,4	139	163	216	0,28	1,05	7,1	320	380	500	0,75	4,80	17	500	500	1000	1,43	6,24	33
25	12	14	26	0,06	0,04	0,85	47	62	84	0,15	0,36	2,4	118	138	216	0,27	1,05	7,1	260	350	500	0,70	4,80	17	460	460	1000	1,38	6,25	33
32	13	18	26	0,06	0,04	0,85	52	71	84	0,15	0,35	2,4	139	163	216	0,22	1,05	7,1	320	380	500	0,70	4,80	17	500	500	1000	0,94	4,70	33
35	12	14	26	0,06	0,04	0,85	44	62	84	0,14	0,35	2,4	118	138	216	0,21	0,97	7,1	260	350	480	0,65	3,40	17	460	460	1000	0,90	4,70	33
40	14	17,5	26	0,06	0,04	0,85	42	71	84	0,15	0,34	2,4	139	163	216	0,20	0,93	7,1	320	380	480	0,75	4,80	17	500	500	1000	0,94	3,80	33
50	12	14	26	0,06	0,04	0,85	44	62	84	0,15	0,34	2,4	118	138	216	0,20	0,93	7,1	260	350	480	0,65	4,80	17	460	460	1000	0,91	3,80	33
64	10	14	27	0,06	0,04	0,85	21	29	80	0,13	0,34	2,4	66	75	180	0,20	0,93	7,1	155	175	390	0,50	4,80	17	420	480	900	0,88	3,80	27
70	14	17,5	26	0,06	0,04	0,85	42	52	84	0,13	0,34	1,7	100	125	216	0,20	0,93	4,8	210	255	480	0,50	4,80	14	340	460	1000	0,85	3,80	27
80	20	24	27	0,06	0,04	0,85	21	30	80	013	0,34	1,7	65	75	180	0,20	0,93	4,8	155	175	390	0,50	4,80	14	420	480	900	0,83	3,80	27
100	17	24	20	0,06	0,04	0,45	18	28	62	0,14	0,34	1,3	64	80	160	0,20	0,93	3,4	165	180	410	0,50	4,80	8,3	190	340	800	0,80	3,80	22
Torsional backlash [arcmin]																														
	<19						< 12						< 9						< 9						< 10					
Weight approx. [kg]																														
	0,5						1,2						3,0						7,7						12,8					
Efficiency at full load [%]																														
	92																													

Radial force / Axial force [N] at n2 = 100 1/ min, Lh Lager > 10,000 hours				
400 / 300	450 / 550	800 / 1200	1600 / 2000	6500 / 7500
Noise emission (dbA) at n1= 3000 1/min, Measuring point 1m distance, without load				
< 62	< 62	< 64	< 67	< 70
Nominal input speed / max. input speed [1/min] – allowed operation temperature must not be exceeded				
3500 / 6000	3500 / 6000	3000 / 6000	2500 / 5000	2500 / 4500
Life time [h]				
> 30.000				
Lubrication				
Lifetime lubrication				
Protection class				
IP54				
Installation position				
universal				
Operation temperature				
-20°C to +90°C				

Dimensions (in mm):



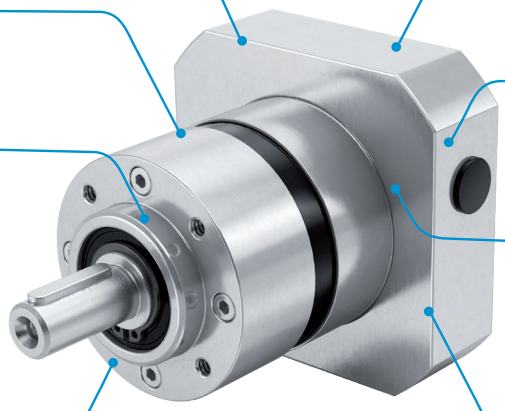
Type of gearbox		PS104Z 1-stage	PS204Z 2-stage	PS106Z 1-stage	PS206Z 2-stage	PS108Z 1-stage	PS208Z 2-stage	PS110Z 1-stage	PS210Z 2-stage	PS130Z 1-stage	PS230Z 2-stage
D1	Pitch circle Ø	34		52		70		100		145	
D3 $_{h7}$	Output shaft Ø	10		14		20		25		40	
D4	Shaft collar Ø	12		17		25		35		50	
D5 $_{h7}$	Centering Ø	26		40		60		80		130	
D6	Housing Ø	40		60		80		115		160	
G1	Thread / depth (4x)	M4/6,5		M5/12		M6/14		M10/16		M12/22	
C	center thread / depth	M3/9		M5/12		M6/16		M10/22		M16/36	
L1	Length without drive flange	75,7	91,3	98,2	120,3	113,5	138	155,1	187,1	248,5	290
L2	Housing length	49,7	65,3	63,3	85,4	73,5	98	100,1	132,1	161,5	203
L3	Installation dimension	26		35		40		55		87	
L4	Shaft length	23		30		36		50		80	
L7	Centering collar length	2		4		3		4		5	
L5	Feather key length	18		25		28		40		65	
L6	Feather key position	2,5		2		4,5		5		8	
B1	Feather key width	3		5		6		8		12	
H1	Height including feather key	11,2		16		22,5		28		43	
Drive flange / motor shaft											
	Standard drill hole clamping system	11		14		19		24		32	
	Max. drill hole clamping system	14		19		24		35		38	
D20*	Diameter drill drive	***Motor-specific flange and motor shaft geometries. For motor shafts without feather key. Dimensions vary.**									
D21 G7*	Inner diameter centering										
D22*	☐ - Drive flange										
D23*	Bolt circle thread drive flange										
L20*	Length diameter drive										
L21*	Length Inner centering										
L22*	Length of drive flange										
L24*	Position clamping screw										
G3*	Mounting thread										

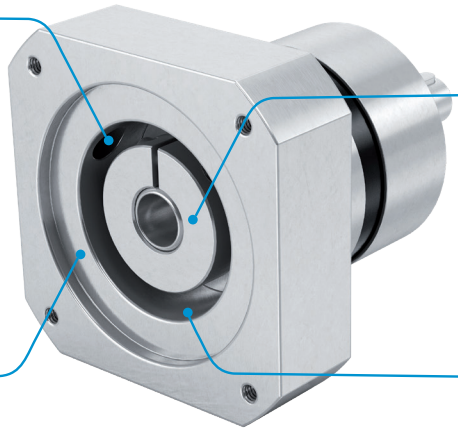
Order key:

PS106Z-0005-MF-XXXXXX

Model series | Stage | Size | with centering collar | Reduction | Motor flange | Motor shaft code | Motor flange code

Highlights





Options:

- Can be combined with all of our motors as well as other motor connections
- Suitable for applications in almost all industries
- Flange options for synchronous servo motors

Characteristics:

- Robust and compact
- Lifetime lubrication
- Aluminum housing
- Any mounting position

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