

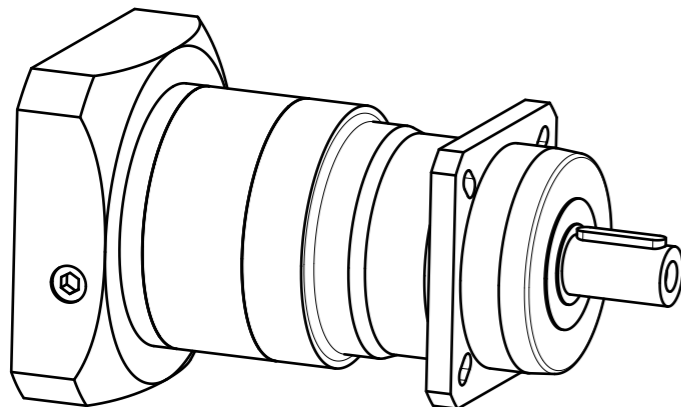
**Materials / Surfaces:**


Input flange: Aluminum / untreated  
 Housing: Steel / heat-treated and post-oxidized (black)  
 Output flange: Steel / untreated

**Hints:**

Please pay attention to the operating and mounting instructions.  
 Subject to modifications.

Variables on the drawing are dependent upon the motor.  
 The given dimensions are exemplary.

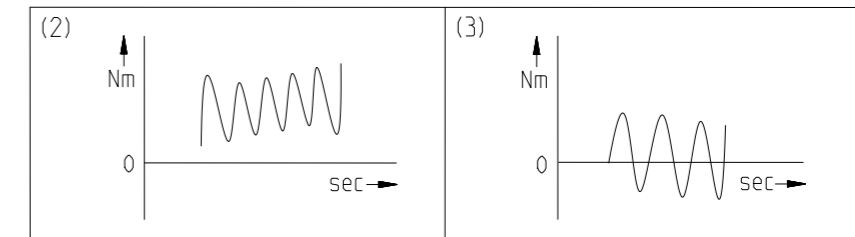


	Scale: 7:10	DIN A3	ISO
	Revision status: E from: 04/2022		
	Changed revision status: D from: 03/2020		
General tolerance DIN ISO 2768-cL	PSN070-bii-SSSA3AD-Z(D20) /(L20)/(D21)/(D22)/B5/(G3)		
Neugart GmbH Keltenstr. 16 D-77971 Kippenheim			Sheet 1/2

General gearbox data	Character	Unit	
Planetary gearbox - gearing type	-	-	Helical teeth
Rotation direction	-	-	Input and output in the same direction
Number of stages	p	-	2-stage
Output shaft bearing	-	-	Tapered roller bearing
Service life (L10h)	$t_L$	h	20.000
Max. operating temperature	$T_{min} / T_{max}$	°C	-25 / +90
Protection class	-	-	IP 65
Lubrication (Lifetime lubrication)	-	-	Standard lubrication (Castrol Optigear Synthetic 800/220)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	$M_b$	Nm	18
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	-	0,02 / 0,04 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20 \text{ min}}$	mm	22
Reference operating mode	-	-	S1
Reference operating factor	$K_A$	-	1
Reference speed	$n_2$	rpm	100
Reference ambient temperature	$T_{Amb}$	°C	20
Radial force for output bearing based on shaft center after L10h=20,000h with Fa=0N	$F_r 20.000h$	N	3200
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	$F_a 20.000h$	N	4400
Radial force for output bearing based on shaft center after L10h=30,000h with Fa=0N	$F_r 30.000h$	N	3200
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	$F_a 30.000h$	N	3900
Maximum radial force based on shaft center and T2=0Nm	$F_r \text{ Max}$	N	3200
Maximum axial force based on gearbox axis and T2=0Nm	$F_a \text{ Max}$	N	4400

$$(1) \text{ Max. motor weight* in kg} = \frac{0.2 \times M_b}{\text{motor length in m}}$$

\* with symmetrically distributed motor weight  
\* with horizontal and stationary mounting



Ratio-dependent gearbox data	Character	Unit										
Ratio	bii	-	12	15	16	20	25	35	40	50	70	100
Nominal output torque No alternating torque (2)	$T_{2N}$	Nm	29	29	39	39	40	40	39	40	37	28
Nominal output torque Alternating torque permitted for 10,000,000 load changes (3)	$T_{2N 10Mio}$	Nm	29	29	37	37	37	37	37	37	37	28
Nominal output torque Alternating torque permitted for 100,000,000 load changes (3)	$T_{2N 100Mio}$	Nm	29	29	29	29	29	29	29	29	29	28
Max. output torque for 30,000 output shaft rotations (2)	$T_{2max}$	Nm	46	46	62	62	64	64	62	64	59	45
Emergency stop torque permitted 1000 times	$T_{2Stop}$	Nm	135	135	150	150	150	150	150	150	80	80
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	$T_0$	Nm	0,45	0,3	0,4	0,3	0,3	0,2	0,15	0,15	0,15	0,15
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N 50\%}$	rpm	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N 100\%}$	rpm	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1 \text{ Limit}}$	rpm	14000	14000	14000	14000	14000	14000	14000	14000	14000	14000
Torsional backlash based on output shaft	$j_t$	arcmin	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Torsional stiffness based on output shaft	$c_g$	Nm/arcmin	4,3	4,3	4,5	4,5	4,6	4,6	4,5	4,5	4	3,8
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	$\eta$	%	94	93	94	94	93	92	91	90	87	79
Running noise at n1=3,000 rpm without load at a distance of 1m	$Q_g$	dB(A)	57	57	57	57	57	57	57	57	57	57
Gearbox weight	$m_G$	kg	2,9	2,9	2,9	2,9	2,9	2,9	2,9	2,9	2,9	2,9
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	0,199	0,176	0,197	0,173	0,172	0,154	0,146	0,146	0,146	0,146

Subject to modifications.



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