

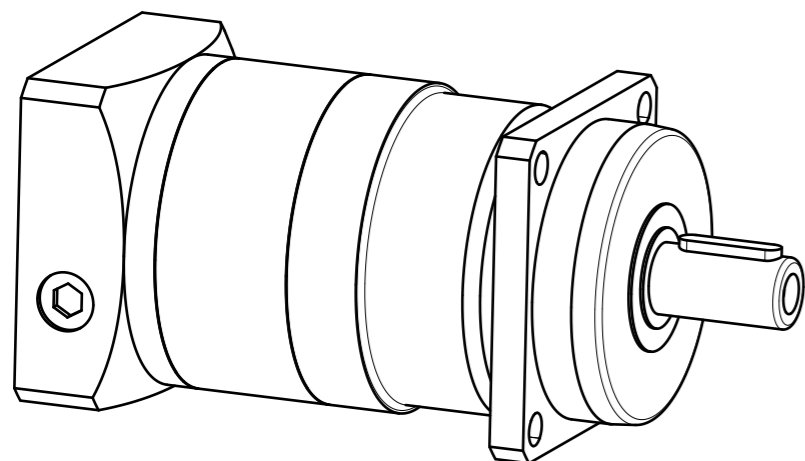
**Materials / Surfaces:**


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.

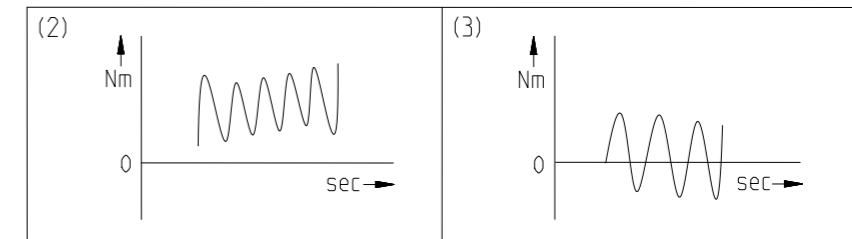


	Scale: 1:1	DIN A3	ISO
	Revision status: F from: 10/2024		
General tolerance DIN ISO 2768-cL	PSN055-bii-SSSA3AC-Z(D20) /(L20)/(D21)/(D22)/B5/(G3)		
Neugart GmbH Keltenstr. 16 D-77971 Kippenheim			Sheet 1/2

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	-	-	Angular contact ball bearings
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	10
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,015 / 0,03 (Measuring methods according to operating manual)
Concentricity output shaft	-	mm	0,03 (Measuring methods according to operating manual)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20 min}$	mm	15
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	950
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	$F_a 20.000h$	N	2200
Radial force for output bearing based on shaft center after L10h=30,000h with Fa=0N	$F_r 30.000h$	N	830
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	$F_a 30.000h$	N	2200
Maximum radial force based on shaft center and T2=0Nm	$F_r Max$	N	950
Maximum axial force based on gearbox axis and T2=0Nm	$F_a Max$	N	2200

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

\* 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	16	18	18	18	18	18	18	18	18	13.5
Nominal output torque Alternating torque permitted for 10,000,000 load changes (3)	$T_{2N 10Mio}$	Nm	16	17	17	17	17	17	17	17	17	13.5
Nominal output torque Alternating torque permitted for 100,000,000 load changes (3)	$T_{2N 100Mio}$	Nm	14	14	14	14	14	14	14	14	14	13.5
Max. output torque for 30,000 output shaft rotations (2)	$T_{2max}$	Nm	26	29	29	29	29	29	29	29	29	22
Emergency stop torque permitted 1000 times	$T_{2stop}$	Nm	48	48	48	48	48	48	48	48	48	24
Average idle torque for $n_1=3,000$ rpm and 20 °C gearbox temperature	$T_0$	Nm	0.25	0.2	0.25	0.2	0.2	0.15	0.15	0.15	0.15	0.15
Average thermal input speed at 50% $T_{2N}$ , S1, and $T_{Amb}$ Operating temperature may not be exceeded!	$n_{1N 50\%}$	rpm	4600	5000	4650	5000	5000	5000	5000	5000	5000	5000
Average thermal input speed at 100% $T_{2N}$ , S1, and $T_{Amb}$ Operating temperature may not be exceeded!	$n_{1N 100\%}$	rpm	3900	4300	4050	4600	4700	5000	5000	5000	5000	5000
Max. mechanical input speed Operating temperature may not be exceeded!	$n_1 Limit$	rpm	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000
Torsional backlash based on output shaft	$j_t$	arcmin	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
Torsional stiffness based on output shaft	$c_g$	Nm/arcmin	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.25
Efficiency at $T_{2N}$ , gearbox temperature 70 °C and $n_1=1,000$ rpm	$\eta$	%	92	92	92	91	90	88	87	86	83	74
Running noise at $n_1=3,000$ rpm without load at a distance of 1m	$Q_g$	dB(A)	56	56	56	56	56	56	56	56	56	56
Gearbox weight	$m_G$	kg	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.15
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	0.109	0.103	0.109	0.103	0.103	0.098	0.095	0.095	0.095	0.095

Subject to modifications.



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