

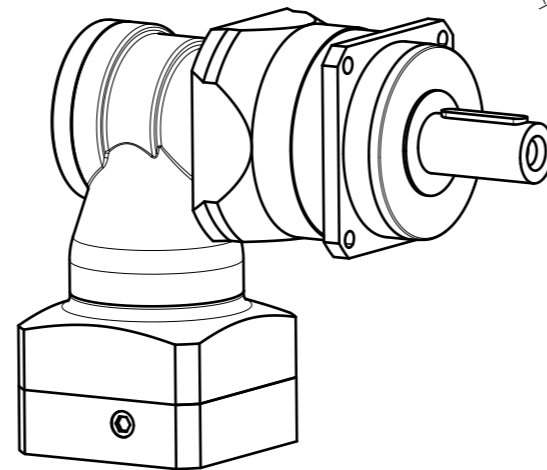
**Materials / Surfaces:**


Input flange: Aluminum / untreated  
 Angle housing: Aluminum / Anodized (black)  
 Intermediate flange: Aluminum / untreated  
 Enclosure planetary stage: 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.

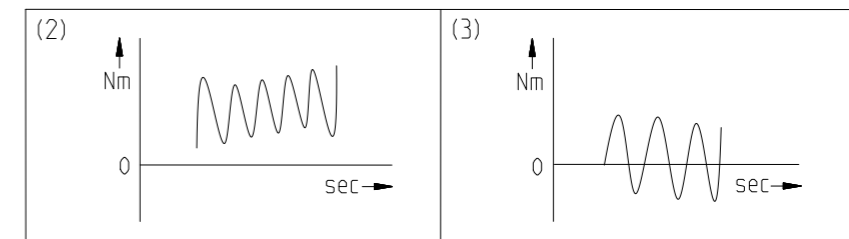


	Scale: 2:5	DIN A3	ISO
	Revision status: P from: 08/2023		
Changed revision status: 0 from: 09/2022			
General tolerance DIN ISO 2768-cl	WPLN142-bii-SSSA3AG-Y(D20) /(L20)/(D21)/(D22)/B5/(G3)		
Neugart GmbH Keltenstr. 16 D-77971 Kippenheim	Sheet 1/2		

General gearbox data	Character	Unit	
Bevel gearbox - gearing type	-	-	Hypoid teeth
Planetary gearbox - gearing type	-	-	Straight teeth
Rotation direction	-	-	Input and output in opposite directions
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)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	$M_b$	Nm	53
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	-	0,015 / 0,03 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20min}$	mm	37
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	12500
Axial force for output bearing based on gearbox axis after L10h=20.000h with Fr=0N	$F_a 20.000h$	N	15000
Radial force for output bearing based on shaft center after L10h=30.000h with Fa=0N	$F_r 30.000h$	N	11400
Axial force for output bearing based on gearbox axis after L10h=30.000h with Fr=0N	$F_a 30.000h$	N	13200
Maximum radial force based on shaft center and T2=0Nm	$F_r Max$	N	12500
Maximum axial force based on gearbox axis and T2=0Nm	$F_a Max$	N	15000


$$(1) \text{ Max. motor weight* in kg} = \frac{0,2 \times M_b}{\text{motor length in m}}$$

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



Ratio-dependent gearbox data	Character	Unit										
Ratio	bii	-	16	20	25	28	32	35	40	50	64	100
Nominal output torque No alternating torque (2)	$T_{2N}$	Nm	640	800	700	364	360	455	450	375	450	305
Nominal output torque Alternating torque permitted for 10.000.000 load changes (3)	$T_{2N 10Mio}$	Nm	401	401	401	364	360	401	401	375	401	305
Nominal output torque Alternating torque permitted for 100.000.000 load changes (3)	$T_{2N 100Mio}$	Nm	319	319	319	319	319	319	319	319	319	305
Max. output torque for 30.000 output shaft rotations (2)	$T_{2max}$	Nm	1024	1280	1120	580	576	725	720	600	720	488
Emergency stop torque permitted 1000 times	$T_{2stop}$	Nm	1600	1600	1600	1200	1200	1500	1500	1200	1000	750
Average idle torque for $n_1=3.000$ rpm and 20 °C gearbox temperature	$T_0$	Nm	7,7	7,15	6,95	6,6	6,4	6,4	6,35	6,15	4,05	3,95
Average thermal input speed at 50% $T_{2N}$ , S1, and $T_{Amb}$ Operating temperature may not be exceeded!	$n_{1N 50\%}$	rpm	1000	1050	1150	1400	1400	1400	1450	1550	1750	1900
Average thermal input speed at 100% $T_{2N}$ , S1, and $T_{Amb}$ Operating temperature may not be exceeded!	$n_{1N 100\%}$	rpm	750	750	900	1250	1250	1250	1250	1400	1600	1800
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1 Limit}$	rpm	9500	9500	9500	9500	9500	9500	9500	9500	9500	9500
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	42,5	42,5	40,5	39	37,5	37	36	35,5	34,5	32,5
Efficiency at $T_{2N}$ , gearbox temperature 70 °C and $n_1=1.000$ rpm	$\eta$	%	93	93	92	88	87	88	87	84	86	78
Running noise at $n_1=3.000$ rpm without load at a distance of 1m	$Q_g$	dB(A)	70	70	70	70	70	70	70	70	70	70
Gearbox weight	$m_G$	kg	27,2	27,3	27,2	27,1	27,1	27,1	27,2	27,2	27,6	27,5
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	8.091	7.915	7.286	6.791	6.685	6.766	6.667	6.527	6.651	6.511

Subject to modifications.



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/(L20)/(D21)/(D22)/B5/(G3)

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