

Flange output shaft (similar EN ISO 9409-1)

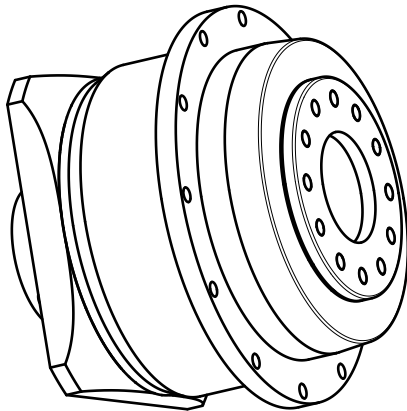
Materials / Surfaces:

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: 1:2	DIN A3	ISO
Revision status: P from: 01/2021		
Changed revision status: 0 from: 10/2019		
PLFN140-aii-SSSD3AG-T(D20)		
Neugart GmbH Keltenstr. 16 D-77971 Kippenheim		Sheet 1/2

General gearbox data	Character	Unit	
Planetary gearbox - gearing type	-	-	Straight teeth
Rotation direction	-	-	Input and output in the same direction
Number of stages	p	-	1-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 800/150)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	M _b	Nm	180
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,015 / 0,03 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	L _{20 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 end after L10h=20,000h with Fa=0N	F _{r 20.000h}	N	12000
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	F _{a 20.000h}	N	8500
Radial force for output bearing based on shaft end after L10h=30,000h with Fa=0N	F _{r 30.000h}	N	11000
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	F _{a 30.000h}	N	7500
Maximum radial force based on shaft end and T2=0Nm	F _{r Max}	N	12000
Maximum axial force based on gearbox axis and T2=0Nm	F _{a Max}	N	8500

(1) Max. motor weight* in kg =

0,2 x M_b

motor length in m

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

Ratio-dependent gearbox data	Character	Unit					
Ratio	aii	-	4	5	7	8	10
Nominal output torque	T _{2N}	Nm	600	750	530	450	305
Max. output torque for 30.000 output shaft rotations	T _{2max}	Nm	960	1200	848	720	488
Emergency stop torque permitted 1000 times	T _{2Stop}	Nm	1300	1500	1300	1000	750
Average idle torque for n1=3.000 rpm and 20 °C gearbox temperature	T ₀	Nm	9,4	6,4	3,9	3,3	2,6
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n _{1N 50%}	rpm	850	950	1400	1650	2050
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n _{1N 100%}	rpm	650	700	1100	1350	1800
Max. mechanical input speed Operating temperature may not be exceeded!	n _{1 Limit}	rpm	6500	6500	6500	6500	6500
Torsional backlash based on output shaft	j _t	arcmin	< 3	< 3	< 3	< 3	< 3
Torsional stiffness based on output shaft	c _g	Nm/arcmin	211	255	190	173	156
Efficiency at T2N, gearbox temperature 70 °C and n1=1.000rpm	η	%	97	97	97	96	95
Running noise at n1=3.000 rpm without load at a distance of 1m	Q _g	dB(A)	70	70	70	70	70
Gearbox weight	m _G	kg	12,9	12,9	12,9	12,9	12,9
Mass moment of inertia based on clamping system diameter input	J	kgcm ²	12,365	9,728	8,242	7,81	7,313



PLFN140-aii-SSSD3AG-T(D20)