

Flange output shaft with dowel hole (ISO 9409-1)

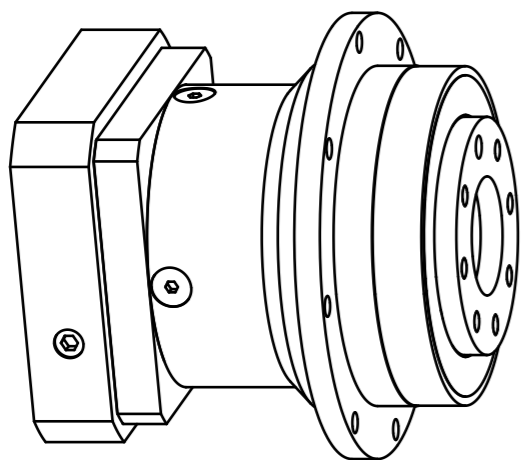
**Materials / Surfaces:**


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 givdimensions are exemplary.



	Scale: 7:10	DIN A3	ISO
	Revision status: I from: 11/2023		
	Changed revision status: H from: 06/2022		
General tolerance DIN ISO 2768-cL	PLFE090-bii-SSSE3AE-Y(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	-	-	Straight teeth
Rotation direction	-	-	Input and output in the same direction
Number of stages	p	-	2-stage
Output shaft bearing	-	-	Deep groove ball bearing
Service life (L10h)	t <sub>L</sub>	h	30.000
Max. operating temperature	T <sub>min</sub> / T <sub>max</sub>	°C	-25 / +90
Protection class	-	-	IP 54
Lubrication (lifetime lubrication)	-	-	Standard lubrication (KLübersynth GE 14-112)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	M <sub>b</sub>	Nm	16
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,04 / 0,08 (Measuring methods according to operating manual)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	L <sub>20 min</sub>	mm	19
Reference operating mode	-	-	S1
Reference operating factor	K <sub>A</sub>	-	1
Reference speed	n <sub>2</sub>	rpm	100
Reference ambient temperature	T <sub>Amb</sub>	°C	20
Radial force for output bearing based on shaft end after L10h=20,000h with Fa=0N	F <sub>r 20.000h</sub>	N	1400
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	F <sub>a 20.000h</sub>	N	3000
Radial force for output bearing based on shaft end after L10h=30,000h with Fa=0N	F <sub>r 30.000h</sub>	N	1200
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	F <sub>a 30.000h</sub>	N	3000
Maximum radial force based on shaft end and T2=0Nm	F <sub>r Max</sub>	N	2200
Maximum axial force based on gearbox axis and T2=0Nm	F <sub>a Max</sub>	N	3300

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

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

Ratio-dependent gearbox data	Character	Unit										
Ratio	bii	-	9	12	15	16	20	25	32	40	64	100
Nominal output torque	T <sub>2N</sub>	Nm	130	120	110	120	120	110	120	110	50	38
Max. output torque for 30,000 output shaft rotations	T <sub>2max</sub>	Nm	208	192	176	192	192	176	192	176	80	61
Emergency stop torque permitted 1000 times	T <sub>2Stop</sub>	Nm	260	240	220	240	240	220	240	220	190	200
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T <sub>0</sub>	Nm	0,3	0,3	0,25	0,3	0,25	0,25	0,2	0,2	0,2	0,15
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n <sub>1N 50%</sub>	rpm	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n <sub>1N 100%</sub>	rpm	2800	3450	4000	4000	4000	4000	4000	4000	4000	4000
Max. mechanical input speed Operating temperature may not be exceeded!	n <sub>1 Limit</sub>	rpm	7000	7000	7000	7000	7000	7000	7000	7000	7000	7000
Torsional backlash based on output shaft	j <sub>t</sub>	arcmin	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9	< 9
Torsional stiffness based on output shaft	c <sub>g</sub>	Nm/arcmin	20,5	37	36	39,5	39,5	37,5	38,5	36,5	20	15,9
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	97	96	96	96	96	95	95	94	88	82
Running noise at n1=3,000 rpm without load at a distance of 1m	Q <sub>g</sub>	dB(A)	60	60	60	60	60	60	60	60	60	60
Gearbox weight	m <sub>G</sub>	kg	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,7
Mass moment of inertia based on clamping system diameter input	J	kgcm <sup>2</sup>	0,666	0,624	0,606	0,465	0,418	0,412	0,371	0,368	0,367	0,356

Subject to modifications.



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