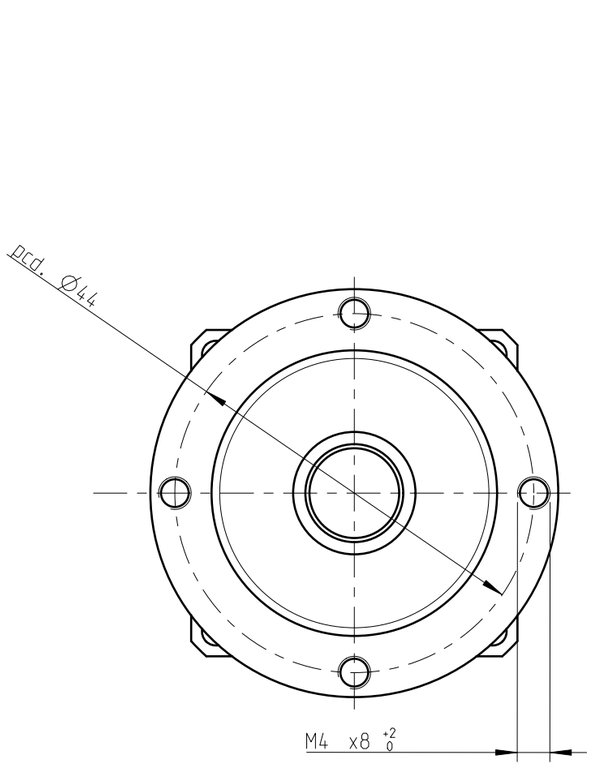
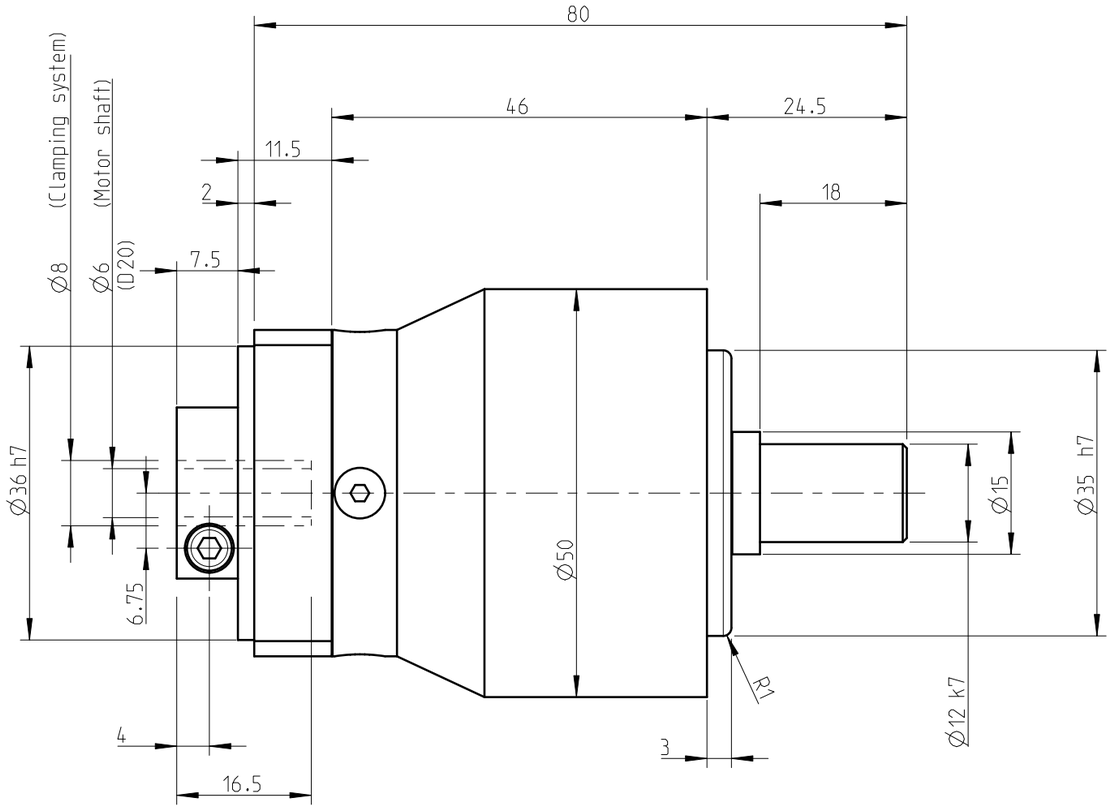
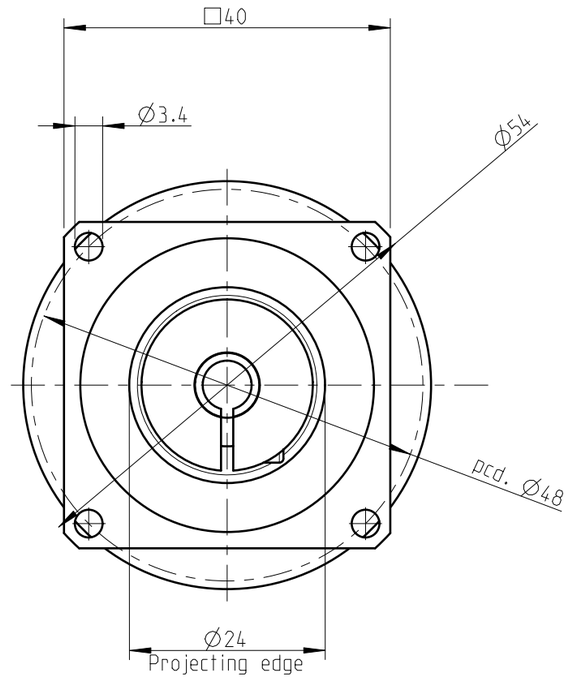






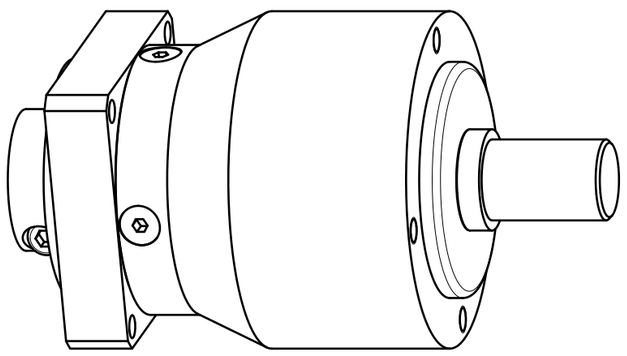
Materials / Surfaces:

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

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.



NEUGART	Scale: 4:3	DIN A3	ISO
	Revision status: G from: 12/2021		
	Changed revision status: F from: 01/2021		
General tolerance DIN ISO 2768-cL	PLPE050-aii-SSSB3AA-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	-	-	Deep groove ball bearing
Service life (L10h)	t_L	h	30.000
Max. operating temperature	T_{min} / T_{max}	°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_b	Nm	4,5
Motor shaft concentricity / Coaxiality and axial runout Motor flange	-	mm	0,03 / 0,06 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20\ min}$	mm	8
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	800
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	$F_{a\ 20.000h}$	N	1000
Radial force for output bearing based on shaft center after L10h=30,000h with Fa=0N	$F_{r\ 30.000h}$	N	700
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	$F_{a\ 30.000h}$	N	800
Maximum radial force based on shaft center and T2=0Nm	$F_{r\ Max}$	N	1300
Maximum axial force based on gearbox axis and T2=0Nm	$F_{a\ Max}$	N	1000

(1) 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	aii	-	3	4	5	7	8	10
Nominal output torque	T_{2N}	Nm	11	15	13	8,5	6	5
Max. output torque for 30,000 output shaft rotations	T_{2max}	Nm	17,5	24	21	13,5	9,5	8
Emergency stop torque permitted 1000 times	T_{2Stop}	Nm	22,5	30	36	26	27	27
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T_0	Nm	0,1	0,1	0,05	0,05	0,05	0,05
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 50\%}$	rpm	5000	5000	5000	5000	5000	5000
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 100\%}$	rpm	5000	5000	5000	5000	5000	5000
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1\ Limit}$	rpm	18000	18000	18000	18000	18000	18000
Torsional backlash based on output shaft	j_t	arcmin	< 15	< 15	< 15	< 15	< 15	< 15
Torsional stiffness based on output shaft	c_g	Nm/arcmin	0,75	0,95	1	0,85	0,85	0,8
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	98	98	98	97	96	95
Running noise at n1=3,000 rpm without load at a distance of 1m	Q_g	dB(A)	58	58	58	58	58	58
Gearbox weight	m_G	kg	0,55	0,55	0,55	0,55	0,55	0,6
Mass moment of inertia based on clamping system diameter input	J	kgcm²	0,03	0,022	0,02	0,016	0,015	0,015

Subject to modifications.

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PLPE050-aii-SSSB3AA-T(D20)

Revision status: G from: 12/2021