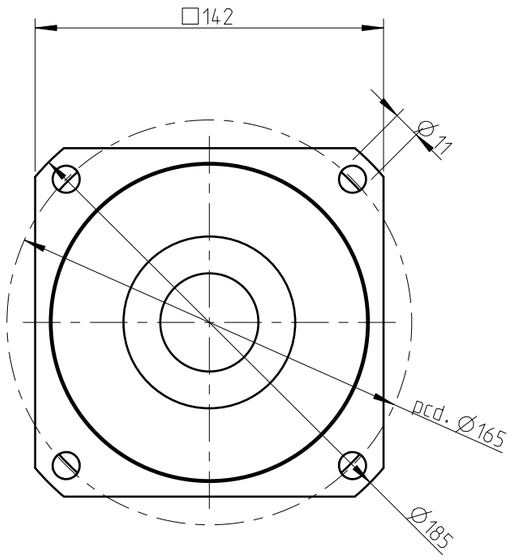
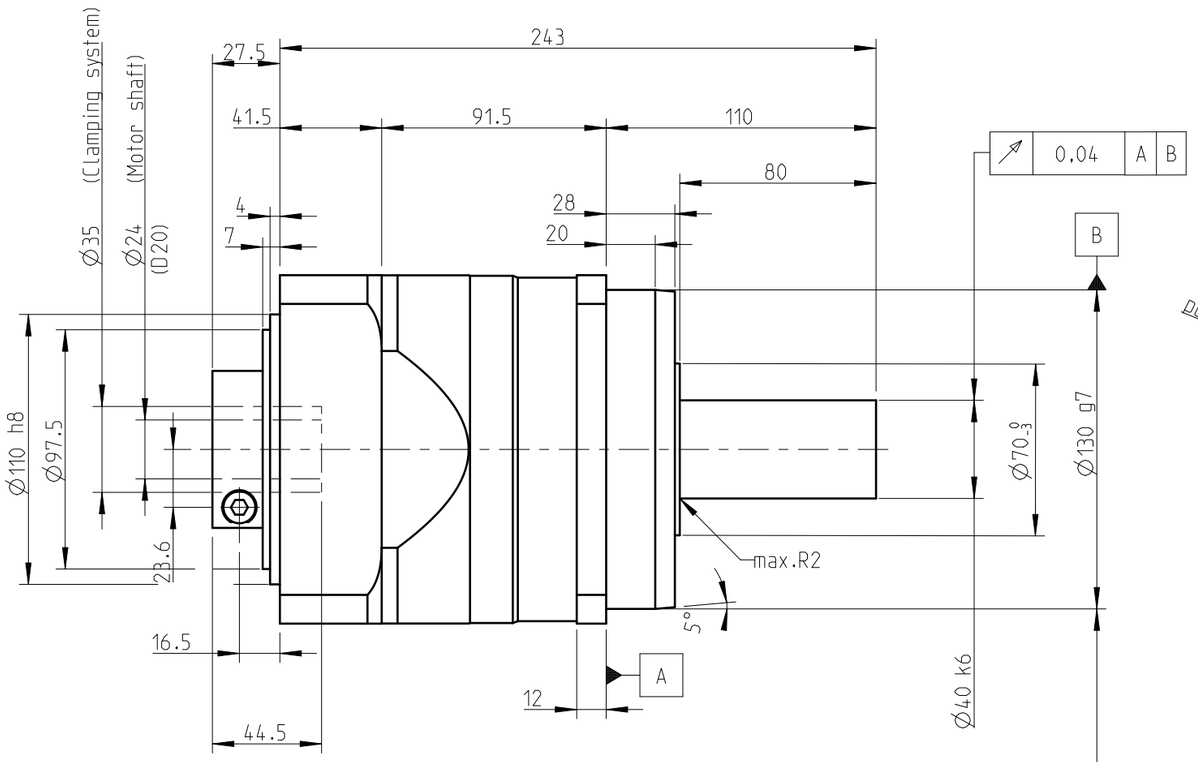
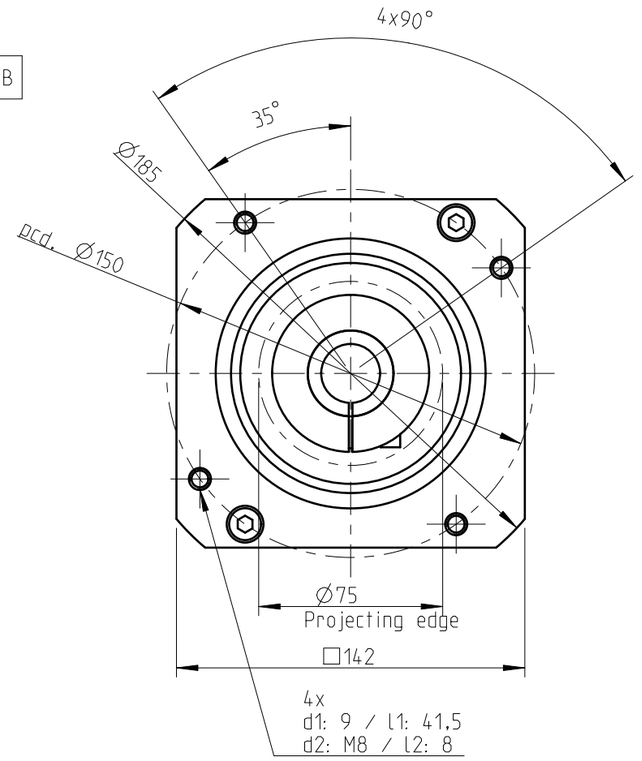
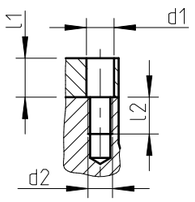








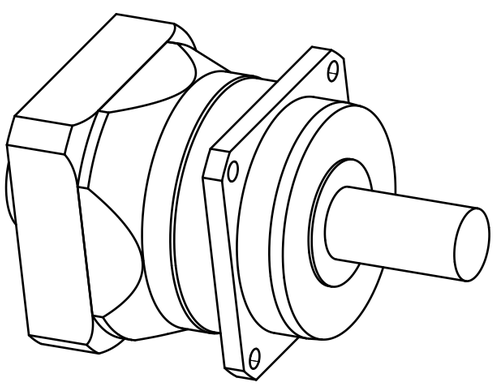
Materials / Surfaces:

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: 2:5	DIN A3	ISO
	Revision status: K from: 07/2020		
	Changed revision status: J from: 02/2017		
General tolerance DIN ISO 2768-cL	PLN142-aii-SSSB3AG-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	-	-	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 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 end and T2=0Nm	$F_{r\ Max}$	N	12500
Maximum axial force based on gearbox axis and T2=0Nm	$F_{a\ Max}$	N	15000

(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	450	600	750	530	450	305
Max. output torque for 30,000 output shaft rotations	T_{2max}	Nm	720	960	1200	848	720	488
Emergency stop torque permitted 1000 times	T_{2Stop}	Nm	975	1300	1500	1300	1000	750
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T_0	Nm	7,95	6,65	4,45	2,75	2,35	1,85
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 50\%}$	rpm	850	950	1050	1550	1800	2250
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 100\%}$	rpm	700	700	750	1150	1400	1900
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1\ Limit}$	rpm	6500	6500	6500	6500	6500	6500
Torsional backlash based on output shaft	j_t	arcmin	< 3	< 3	< 3	< 3	< 3	< 3
Torsional stiffness based on output shaft	c_g	Nm/arcmin	65	70	74	68	66	63
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	97	97	98	97	97	96
Running noise at n1=3,000 rpm without load at a distance of 1m	Q_g	dB(A)	75	72	70	70	70	70
Gearbox weight	m_G	kg	15,1	15,1	15,1	15,1	15,1	15,1
Mass moment of inertia based on clamping system diameter input	J	kgcm²	15,27	10,502	8,538	7,623	7,337	7,008

Subject to modifications.

NEUGART

PLN142-aii-SSSB3AG-T(D20)

Revision status: K from: 07/2020