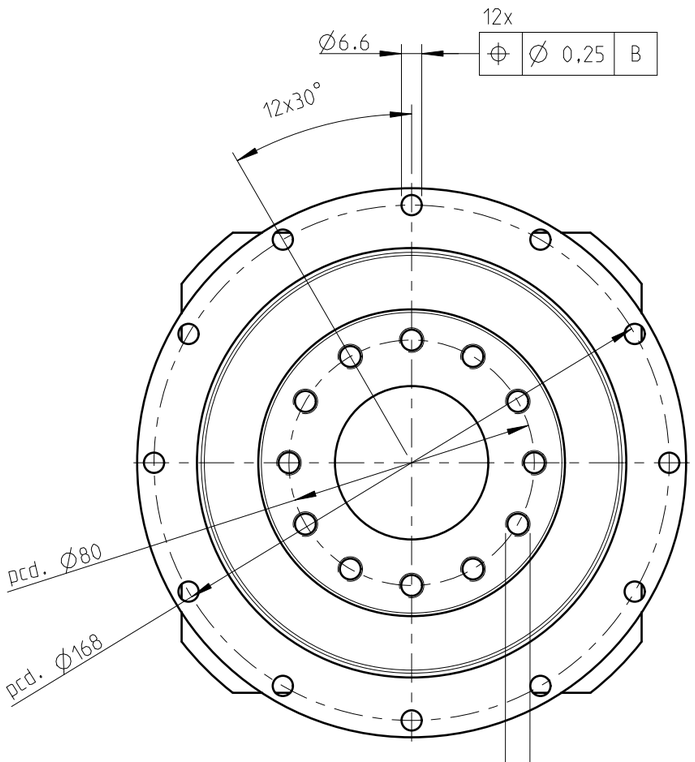
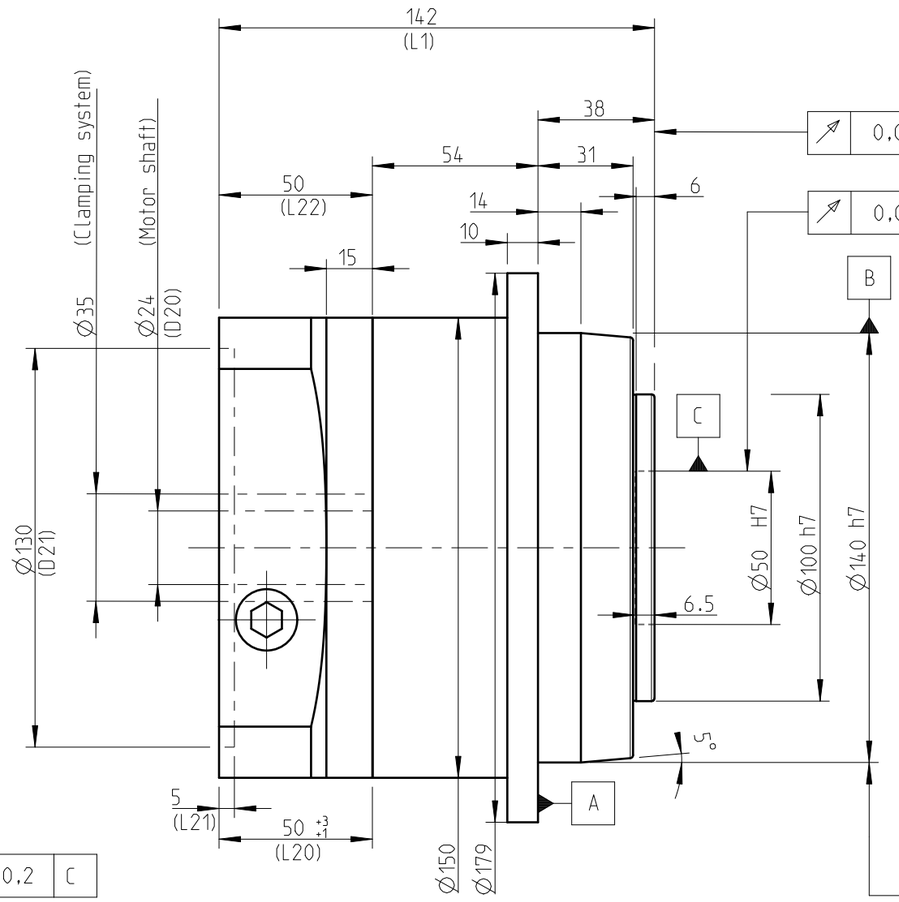
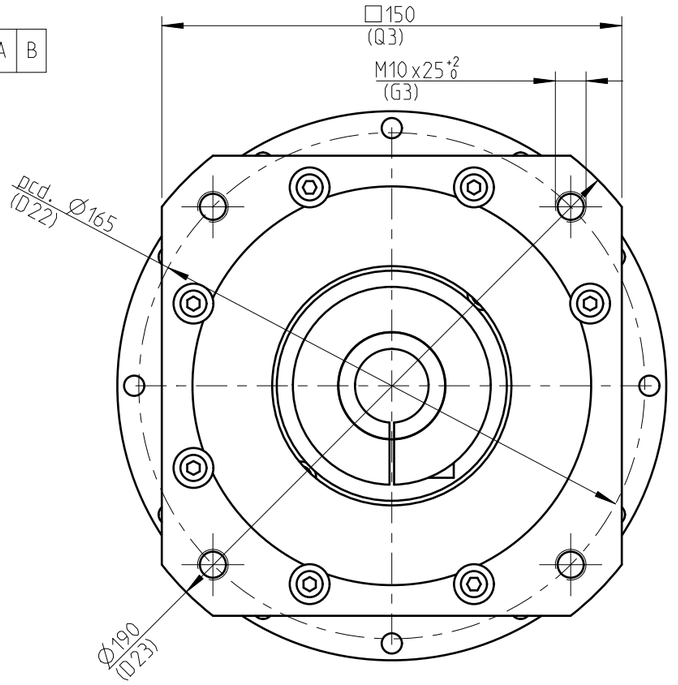




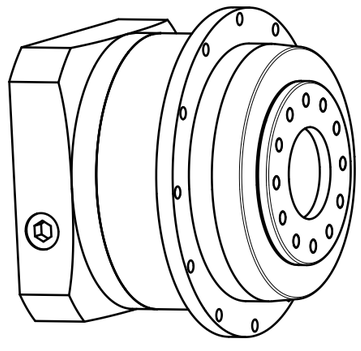


Flange output shaft (similar ISO 9409-1)

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.



NEUGART	Scale: 1:2	DIN A3	ISO
	Revision status: H from: 04/2022		
	Changed revision status: G from: 02/2020		
General tolerance DIN ISO 2768-cL	PSFN140-aii-SSSD3AG-Z(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	-	-	Helical 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 800/220)
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	0,02 / 0,05 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	$L_{20\ min}$	mm	28
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 = $\frac{0,2 \times M_b}{\text{motor length in m}}$

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

Ratio-dependent gearbox data	Character	Unit					
Ratio	aii	-	4	5	7	8	10
Nominal output torque	T_{2N}	Nm	470	405	355	350	305
Max. output torque for 30,000 output shaft rotations	T_{2max}	Nm	752	648	568	560	488
Emergency stop torque permitted 1000 times	T_{2Stop}	Nm	1650	1650	1300	1100	600
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T_0	Nm	9,1	6,3	4	3,5	2,6
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 50\%}$	rpm	1100	1350	1800	1950	2300
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 100\%}$	rpm	1000	1250	1650	1850	2150
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	215	218	166	155	129
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	97	97	97	96	96
Running noise at n1=3,000 rpm without load at a distance of 1m	Q_g	dB(A)	66	66	66	66	66
Gearbox weight	m_G	kg	11,7	11,8	11,9	11,9	12
Mass moment of inertia based on clamping system diameter input	J	kgcm²	9,67	8,261	7,114	6,919	6,526

Subject to modifications.

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PSFN140-aii-SSSD3AG-Z(D20)/(L20)/(D21)/(D22)/B5/(G3)

Revision status: H from: 04/2022