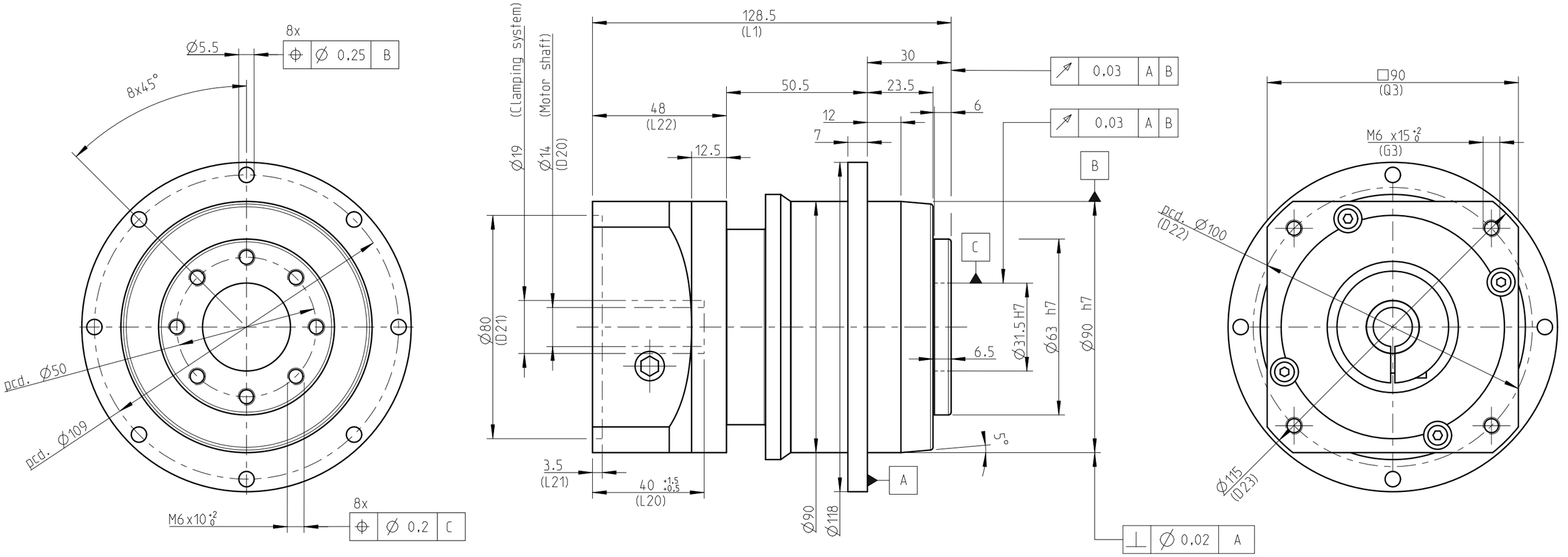


Flange output shaft (similar ISO 9409-1)

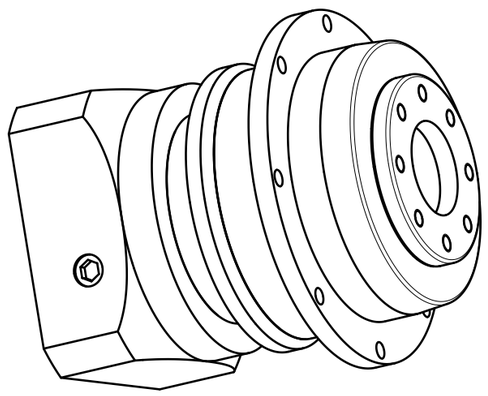
Materials / Surfaces:

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: 7:10	DIN A3	ISO
	Revision status: Q from: 05/2022		
	Changed revision status: P from: 01/2021		
General tolerance DIN ISO 2768-cL	PLFN090-bii-SSSD3AE-Z(D20) /(L20)/(D21)/(D22)/B5/(G3)		
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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	-	-	Inclined roller bearings
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	18
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	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	3950
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	$F_{a\ 20.000h}$	N	8200
Radial force for output bearing based on shaft end after L10h=30,000h with Fa=0N	$F_{r\ 30.000h}$	N	3500
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	$F_{a\ 30.000h}$	N	7200
Maximum radial force based on shaft end and T2=0Nm	$F_{r\ Max}$	N	3950
Maximum axial force based on gearbox axis and T2=0Nm	$F_{a\ Max}$	N	8200

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

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

Ratio-dependent gearbox data	Character	Unit								
Ratio	bii	-	16	20	25	32	40	50	64	100
Nominal output torque	T_{2N}	Nm	150	150	140	150	140	130	80	60
Max. output torque for 30,000 output shaft rotations	T_{2max}	Nm	240	240	224	240	224	208	128	96
Emergency stop torque permitted 1000 times	T_{2Stop}	Nm	300	300	300	300	300	300	200	200
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T_0	Nm	0,4	0,35	0,3	0,25	0,25	0,2	0,2	0,25
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 50\%}$	rpm	3850	4450	4500	4500	4500	4500	4500	4500
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	$n_{1N\ 100\%}$	rpm	2950	3450	4000	4500	4500	4500	4500	4500
Max. mechanical input speed Operating temperature may not be exceeded!	$n_{1\ Limit}$	rpm	14000	14000	14000	14000	14000	14000	14000	14000
Torsional backlash based on output shaft	j_t	arcmin	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Torsional stiffness based on output shaft	c_g	Nm/arcmin	32,5	33	38	31,5	37	35	26,5	18,5
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	95	95	94	94	93	92	88	80
Running noise at n1=3,000 rpm without load at a distance of 1m	Q_g	dB(A)	62	62	62	62	62	62	62	62
Gearbox weight	m_G	kg	3,9	3,9	3,9	3,9	3,9	4	4	4
Mass moment of inertia based on clamping system diameter input	J	kgcm²	0,622	0,578	0,572	0,544	0,536	0,535	0,539	0,533

Subject to modifications.

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PLFN090-bii-SSSD3AE-Z(D20)/(L20)/(D21)/(D22)/B5/(G3)

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