

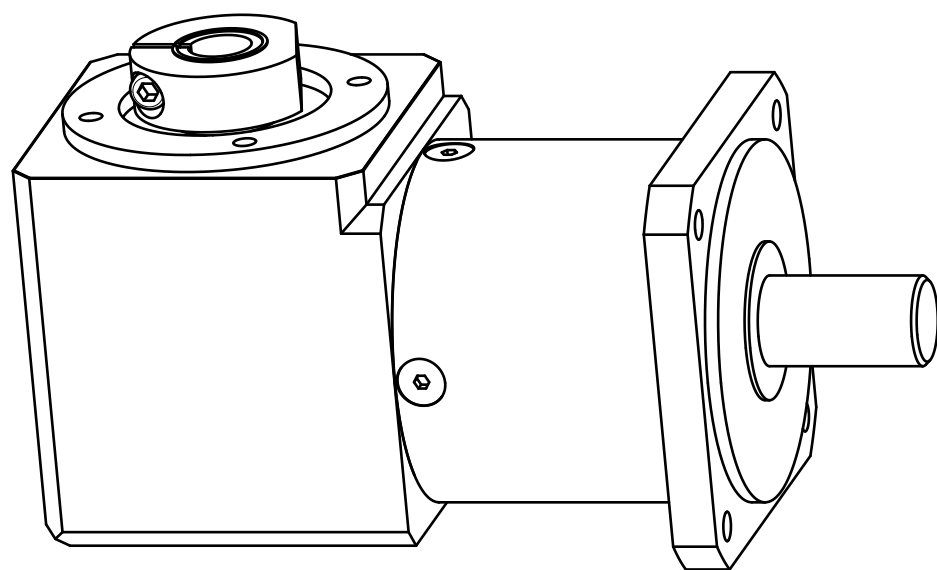
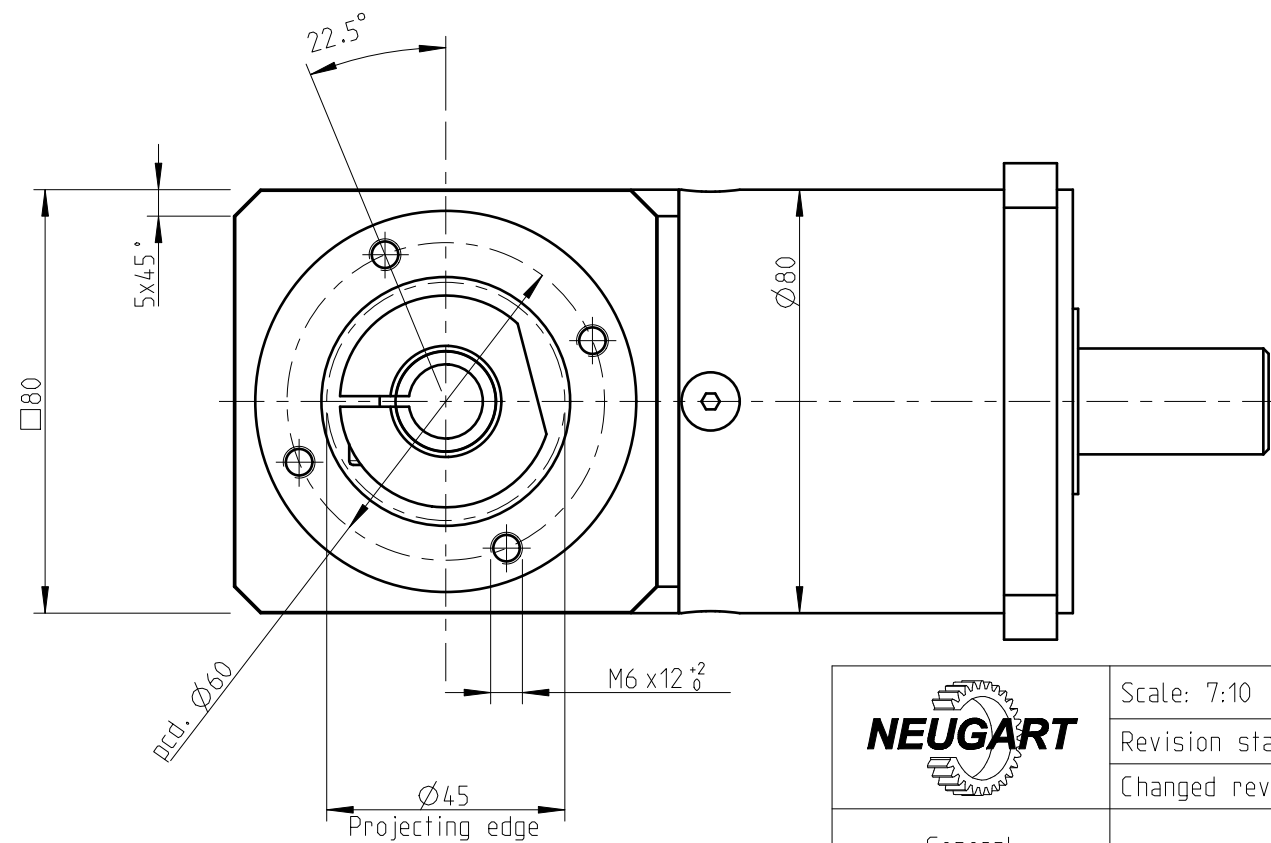
Materials / Surfaces:

Input flange: Aluminum / Untreated
 Angle housing: 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.



General
tolerance
DIN ISO 2768-cl

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Scale: 7:10	DIN A3	ISO
Revision status: G from: 01/2022		
Changed revision status: F from: 03/2021		
W PLQE080-aii-SSSB3AE-T(D20)		
Sheet 1/2		

General gearbox data	Character	Unit	
Bevel 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	20.000
Max. operating temperature	T _{min} / T _{max}	°C	-25 / +90
Protection class	-	-	IP 54
Lubrication (lifetime lubrication)	-	-	Standard lubrication (grease)
Installation position	-	-	Any
Max. bending moment based on the gearbox input flange (for motor weight) (1)	M _b	Nm	10,5
Motor flange precision	-	mm	0,04 / 0,08 (Measuring methods according to DIN EN 50347)
Required motor shaft tolerance	-	-	j6; k6
Min. permissible motor shaft length	L _{20 min}	mm	14
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	2050
Axial force for output bearing based on gearbox axis after L10h=20,000h with Fr=0N	F _a 20.000h	N	2500
Radial force for output bearing based on shaft center after L10h=30,000h with Fa=0N	F _r 30.000h	N	1700
Axial force for output bearing based on gearbox axis after L10h=30,000h with Fr=0N	F _a 30.000h	N	2000
Maximum radial force based on shaft center and T2=0Nm	F _r Max	N	2500
Maximum axial force based on gearbox axis and T2=0Nm	F _a Max	N	3800

Ratio-dependent gearbox data	Character	Unit						
Ratio	aii	-	3	4	5	7	8	10
Nominal output torque	T _{2N}	Nm	40 ⁽⁵⁾	53 ⁽⁵⁾	67 ⁽⁵⁾	65	50	38
Max. output torque for 30,000 output shaft rotations	T _{2max}	Nm	64	85	107	104	80	61
Emergency stop torque permitted 1000 times	T _{2Stop}	Nm	180	240	220	178	190	170
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T ₀	Nm	0,65	0,5	0,4	0,3	0,3	0,25
Average thermal input speed at 50% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n _{1N} 50%	rpm	3100	3250	3350	4000	4000	4000
Average thermal input speed at 100% T2N, S1, and T_Amb Operating temperature may not be exceeded!	n _{1N} 100%	rpm	2300	2300	2350	3000	3650	4000
Max. mechanical input speed Operating temperature may not be exceeded!	n ₁ Limit	rpm	7000	7000	7000	7000	7000	7000
Torsional backlash based on output shaft	j _t	arcmin	< 13	< 13	< 13	< 13	< 13	< 13
Torsional stiffness based on output shaft	c _g	Nm/arcmin	4,5	7	8,4	9,1	9,2	9,4
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	95	95	95	95	94	92
Running noise at n1=3,000 rpm without load at a distance of 1m	Q _g	dB(A)	73	73	73	73	73	73
Gearbox weight	m _G	kg	4,2	4,2	4,2	4,2	4,2	3,9
Mass moment of inertia based on clamping system diameter input	J	kgcm ²	1,402	1,094	1,019	0,953	0,939	0,921

(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

(5) Different Lifetime: 10,000h at T2N

Subject to modifications.



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