

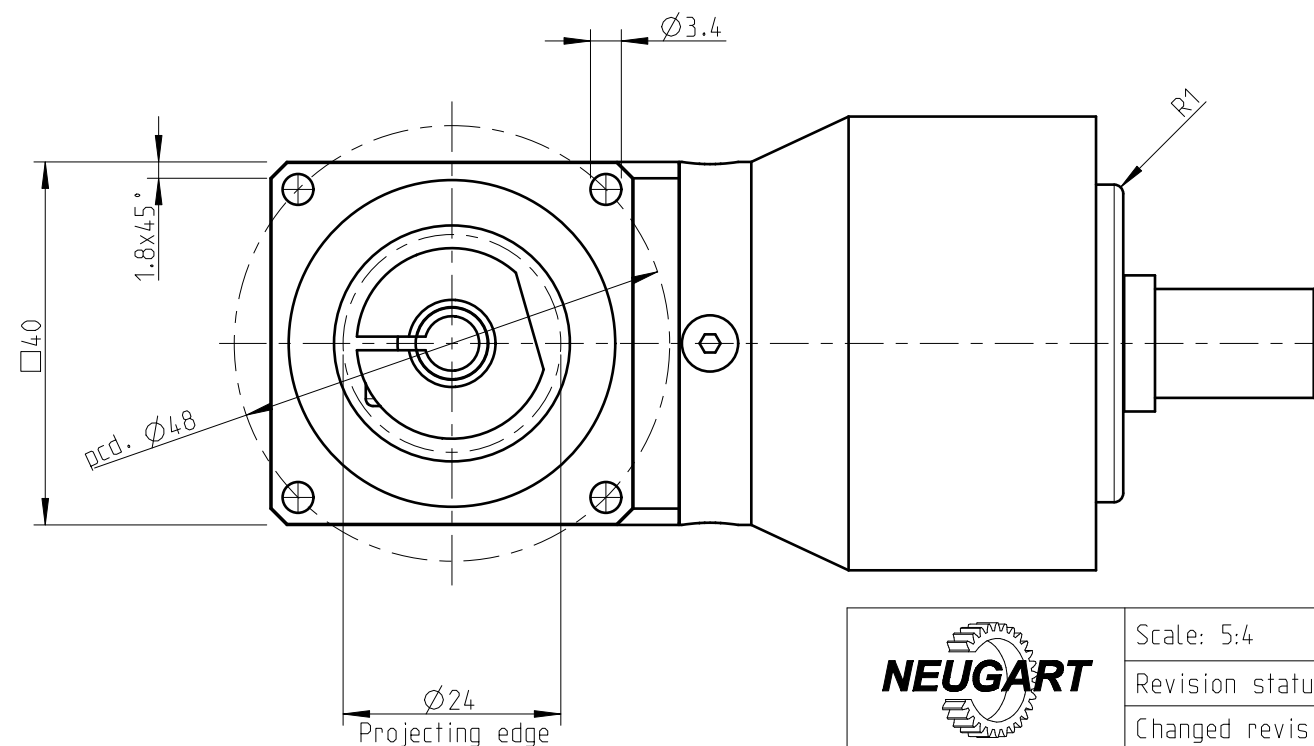
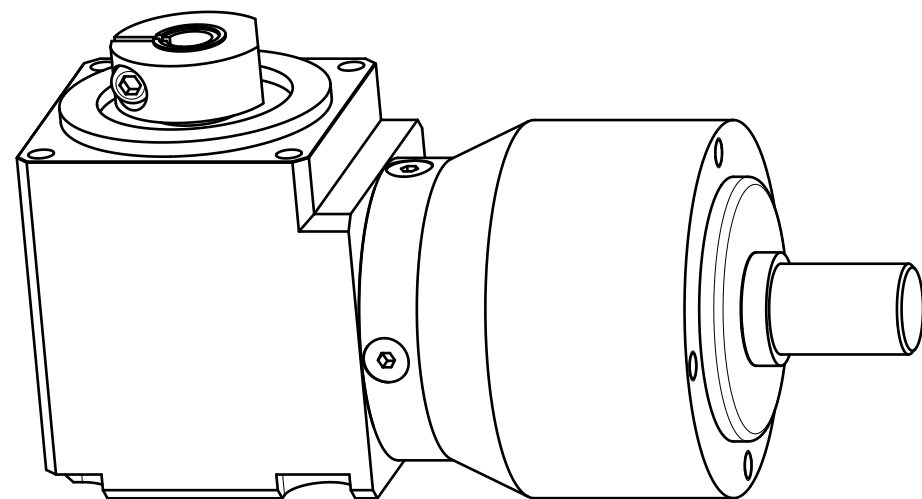
Materials / Surfaces:

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.



Scale: 5:4	DIN A3	ISO
Revision status: F from: 02/2022		
Changed revision status: E from: 04/2021		

General
tolerance
DIN ISO 2768-cl

W PLPE050-aii-SSSB3AA-T(D20)

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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	2
Motor flange precision	-	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

Ratio-dependent gearbox data	Character	Unit						
Ratio	aii	-	3	4	5	7	8	10
Nominal output torque	T _{2N}	Nm	4,5	6	7,5	8,5	6	5
Max. output torque for 30,000 output shaft rotations	T _{2max}	Nm	7	10	12	13	10	8
Emergency stop torque permitted 1000 times	T _{2Stop}	Nm	22,5	28	35	26	27	25
Average idle torque for n1=3,000 rpm and 20 °C gearbox temperature	T ₀	Nm	0,05	0,05	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	< 21	< 21	< 21	< 21	< 21	< 21
Torsional stiffness based on output shaft	c _g	Nm/arcmin	0,45	0,65	0,75	0,8	0,8	0,75
Efficiency at T2N, gearbox temperature 70 °C and n1=1,000rpm	η	%	94	94	94	94	92	90
Running noise at n1=3,000 rpm without load at a distance of 1m	Q _g	dB(A)	68	68	68	68	68	68
Gearbox weight	m _G	kg	0,8	0,8	0,8	0,8	0,8	0,8
Mass moment of inertia based on clamping system diameter input	J	kgcm²	0,052	0,04	0,035	0,033	0,033	0,032

(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

Subject to modifications.



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