Engineering motordata (WIN 1015)		
DC bus voltage	24	V DC
Nominal AC voltage	17	V AC (rms)
Rated voltage	15	V AC (rms)
Rated power	503	W
Rated speed	3000	rpm
Rated torque	1.60	Nm
Rated current	24.21	A (rms)
Peak torque	5.2	Nm
Peak current	110.5	A (rms)
Stall torque	1.9	Nm
Stall current	27.5	A (rms)
No load speed	4060	rpm
EMF constant ±10%	4.2	V AC (rms) / 1000rpm
Theoretical torque constant ±10%	0.07	Nm / A (rms)
Torque constant ±10% @ rated load	0.07	Nm / A (rms)
Number of poles	10	
Electrical time constant	2.38	ms
Winding terminal resistance	0.042	Ω
Rotary field terminal inductance	0.1	mH

Customs info	
HS Code	85015100

Mechanical motor data (setting 30)		
Max mechanical speed	12000	rpm
Mech. time constant	1.05	ms
Thermal time constant	30	min
Rotor inertia	0.7	kgcm²
Protection	IP67	
Color	RAL 9005	
Cooling	Convection	
Motor-only mass	2.3	kg

Sensors	
Temperature	PT1000 {PT1000}

Brake		
Braking torque	2.00	Nm
Voltage	24	V DC
Power @20°C	15.0	W
Current @20°C	0.63	A
Inertia	0.08	kgcm²
Mass	0.25	kg

Note
Preliminary

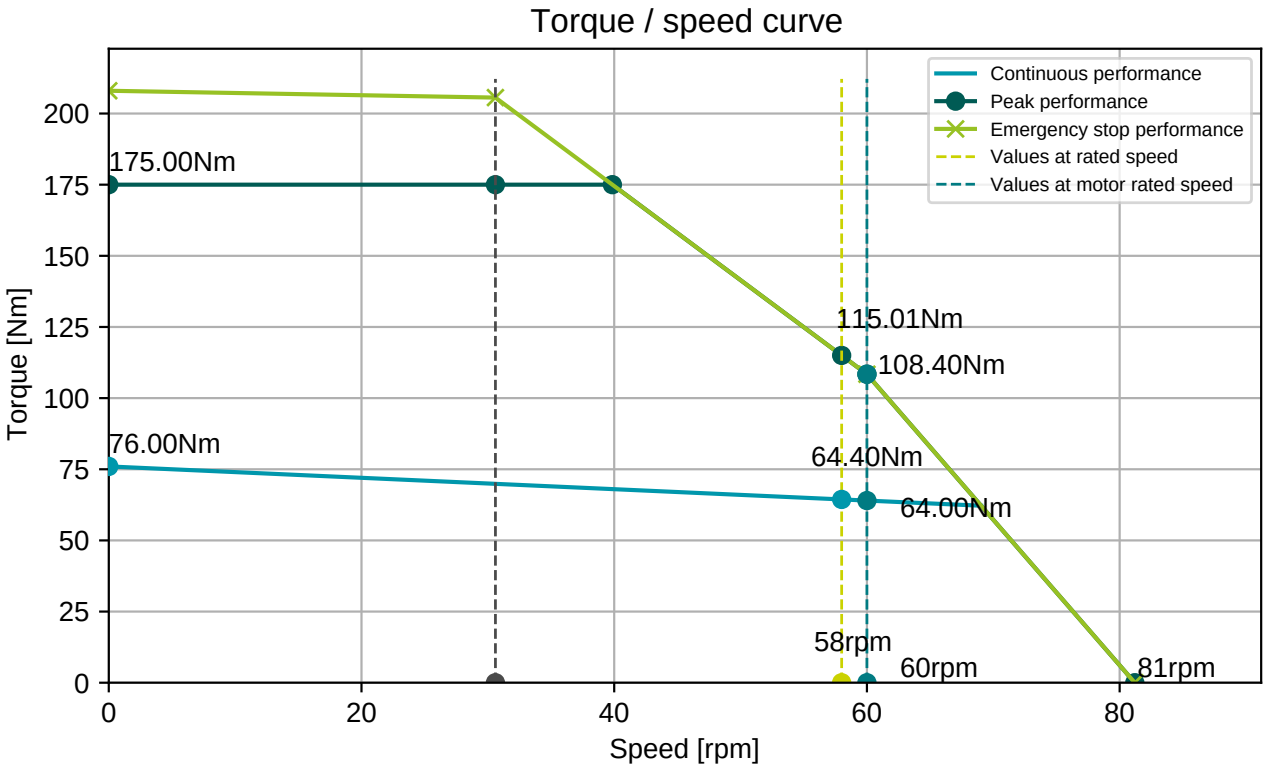
Gearbox engineering data		
Gear ratio	50	
Efficiency*	80	%
Torsional stiffness	16.6	Nm/arcmin
Number of stages	2	
Rated output torque	110	Nm
Max output torque	175	Nm
Emergency output torque	300	Nm
Rated input speed	2900	rpm
Max input speed	16000	rpm
Operating temperature	<-25; 90>	°C
Max. backlash	< 3	arcmin
Service life	20000	h

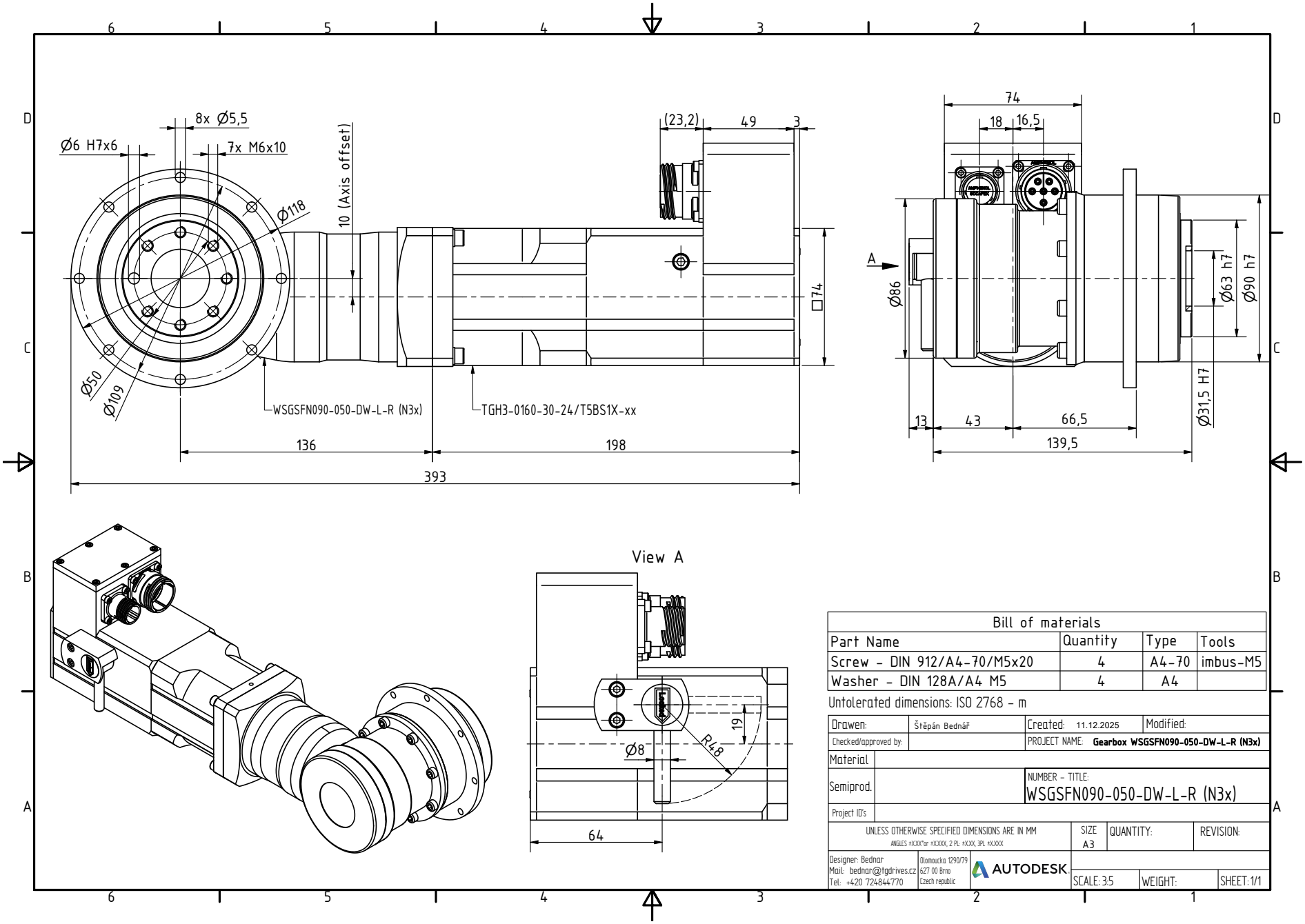
** at rated speed & torque*

Lubrication	
Type	Standard
Lubricant	Oil (lifetime lubrication)

Gearbox mechanical data		
Radial force for 20'000h	3950	N
Axial force for 20'000h	8200	N
Output shaft design	Flange with dowel hole	
Mass	5.45	kg
Input inertia	0.499	kgcm²
Protection	IP65	

Actuator data		
Rated speed	58	rpm
Rated torque	64.40	Nm
Peak torque	175.00	Nm
Emergency stop torque	260.00	Nm
EMF constant ±10%	210.0	V AC (rms) / 1000rpm
Torque constant ±10% @ rated load	2.64	Nm / A (rms)
Total mass	8.00	kg
Output inertia	2997.5	kgcm²


Torque / speed curve
Continuous performance
Peak performance
Emergency stop performance
Values at rated speed
Values at motor rated speed
175.00Nm
115.01Nm
108.40Nm
76.00Nm
64.40Nm
64.00Nm
58rpm
60rpm
81rpm
Torque [Nm]
Speed [rpm]
0
25
50
75
100
125
150
175
200
0
20
40
60
80

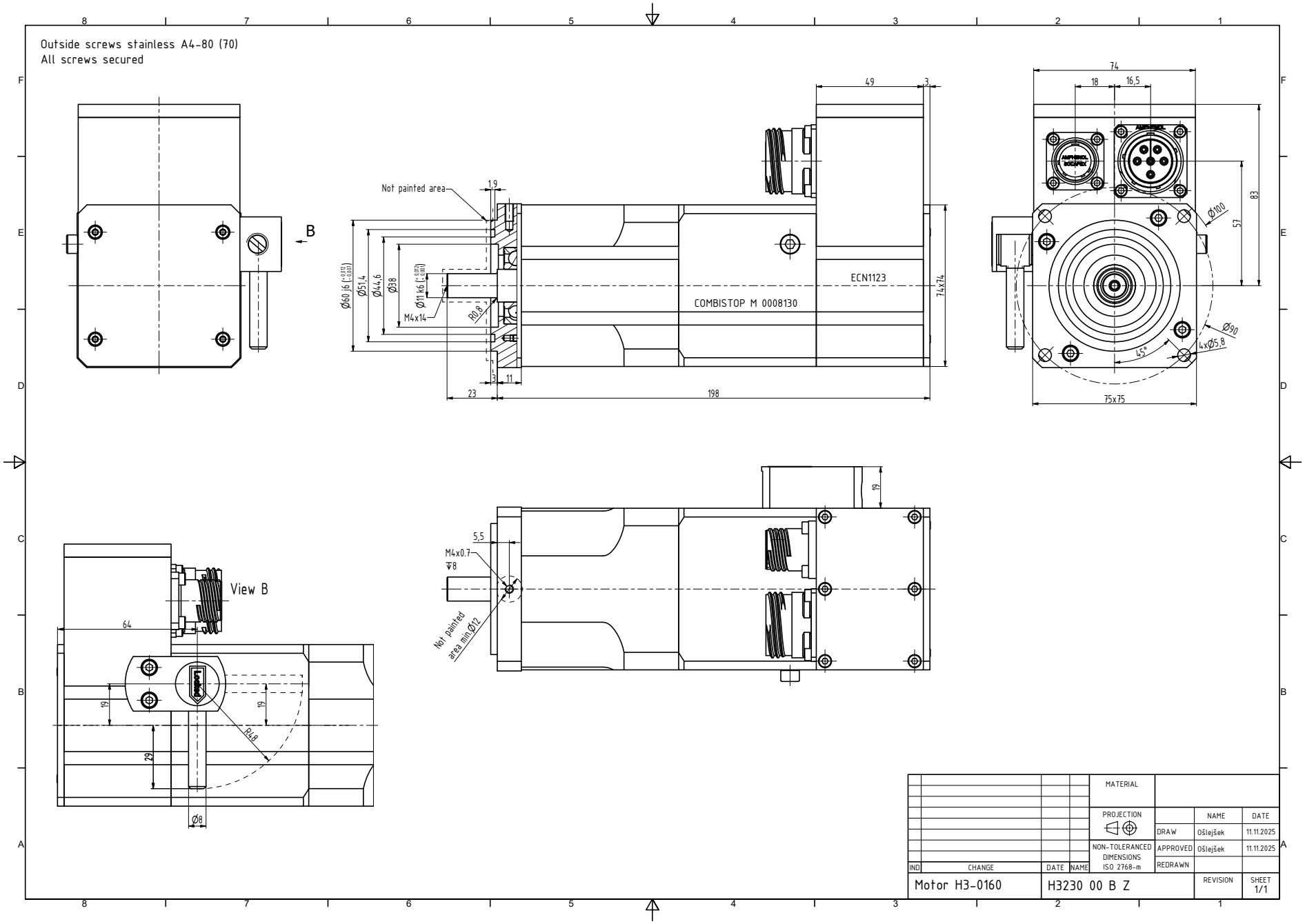


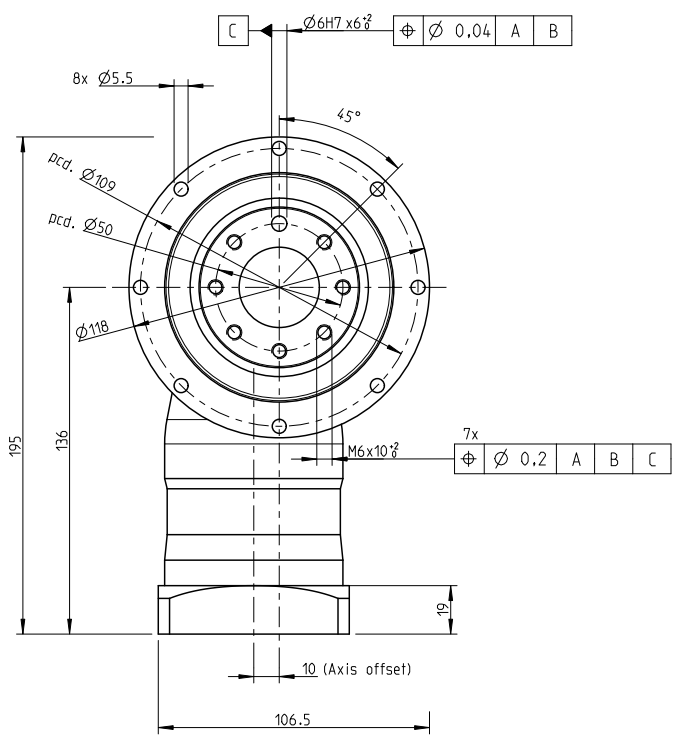
Bill of materials			
Part Name	Quantity	Type	Tools
Screw - DIN 912/A4-70/M5x20	4	A4-70	imbus-M5
Washer - DIN 128A/A4 M5	4	A4	

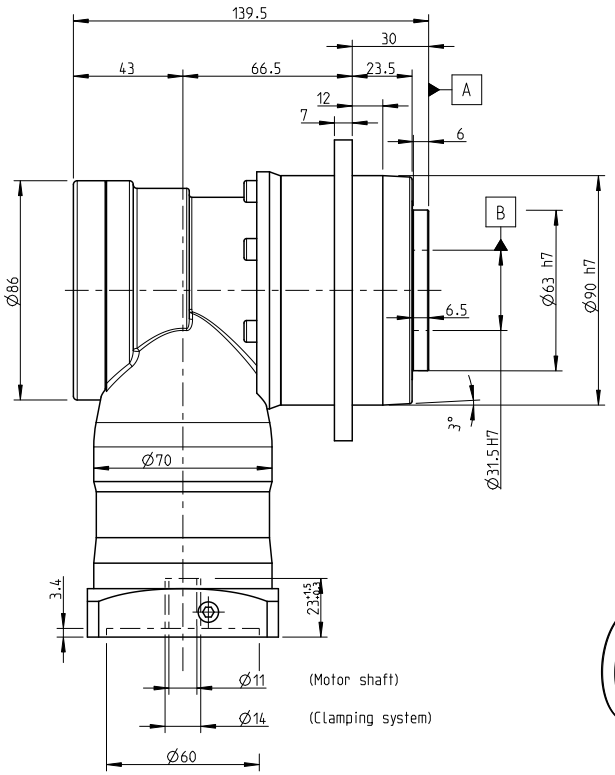
Untolerated dimensions: ISO 2768 - m

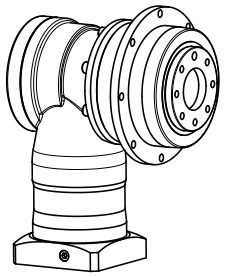
Drawen:	Štěpán Bednář	Created: 11.12.2025	Modified:
Checked/approved by:		PROJECT NAME: **Gearbox WSGSFN090-050-DW-L-R (N3x)**	
Material			
Semiprod.		NUMBER - TITLE: WSGSFN090-050-DW-L-R (N3x)	
Project ID's			

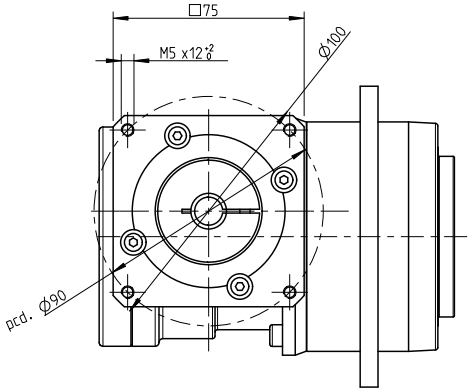
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM ANGLES ±X,XX°or ±X,XXX, 2 PL ±X,XX, 3PL ±X,XXX	SIZE A3	QUANTITY:	REVISION:
Designer: Bednar Mail: bednar@tgdrives.cz Tel: +420 724844770	Olomoucka 1290/79 627 00 Brno Czech republic	AUTODESK	SCALE: 3:5 / WEIGHT: / SHEET: 1/1


Outside screws stainless A4-80 (70)
All screws secured
B
Not painted area
1.9
49
3
Ø60 j6
Ø51.4
Ø44.6
Ø38
Ø11 k6
M4x14
R0.8
ECN1123
COMBISTOP M 0008130
74x74
3
11
23
198
74
18
16,5
Ø100
83
57
Ø90
4xØ5.8
45°
75x75
19
5.5
M4x0.7
↧8
Not painted area min Ø12
View B
64
19
19
29
R48
Ø8
MATERIAL
PROJECTION
NON-TOLERANCED DIMENSIONS ISO 2768-m
IND
CHANGE
DATE
NAME
DRAW
APPROVED
REDRAWN
NAME
DATE
Ošlejšek
11.11.2025
Ošlejšek
11.11.2025
Motor H3-0160
H3230 00 B Z
REVISION
SHEET 1/1









INDEX	ZMĚNA	DATUM	PODPIS		
ZM.MAT.			T.O.	HMOTNOST kg	MĚŘ.
ROZM.-POLOT.					
ROZM. ZAŘ.				ČSN	TŘ.Č.
VYPR.	NORM. REF.			POZN.	Č. KUSOVNÍKU
PŘEKR.					
TECHNOL.	**SCHVÁLIL.**		12.9.2020	STARÝ V.	Č.V.
NÁZEV					
Gearbox WSGSFN090				TGN3x, TGT3x, TGH3x	
				Listů	List