Engineering motordata (WIN 732)		
DC bus voltage	320	V DC
Nominal AC voltage	220	V AC (rms)
Rated voltage	165	V AC (rms)
Rated power	2.8	kW
Rated speed	1500	rpm
Rated torque	18.00	Nm
Rated current	11.81	A (rms)
Peak torque	60	Nm
Peak current	39.8	A (rms)
Stall torque	20	Nm
Stall current	11.6	A (rms)
No load speed	2110	rpm
EMF constant ±10%	104	V AC (rms) / 1000rpm
Theoretical torque constant ±10%	1.72	Nm / A (rms)
Torque constant ±10% @ rated load	1.52	Nm / A (rms)
Number of poles	10	
Electrical time constant	8.75	ms
Winding terminal resistance	0.72	Ω
Rotary field terminal inductance	6.3	mH

Customs info	
HS Code	85015220

Mechanical motor data (setting 48)		
Max mechanical speed	9000	rpm
Mech. time constant	0.64	ms
Thermal time constant	65	min
Rotor inertia	15.1	kgcm²
Protection	IP64	
Color	RAL 9005	
Cooling	Convection	
Motor-only mass	11.2	kg
Max. axial force 20kh	179	N
Max. radial force 20kh*	940	N
Max. axial force 100kh	104	N
Max. radial force 100kh*	550	N

** Defined for point of action at ½ output shaft length*

Sensors	
Temperature	PT1000 {PT1000}
Feedback	EDS35 (HDSL) single-turn, 24 bits

Gearbox engineering data		
Gear ratio	40	
Efficiency*	95	%
Torsional stiffness	223	Nm/arcmin
Number of stages	2	
Rated output torque	375	Nm
Cycling output torque	750	Nm
Max output torque	1200	Nm
Emergency output torque	1500	Nm
Rated input speed	3500	rpm
Max input speed	8500	rpm
Operating temperature	<-25; 90>	°C
Max. backlash	< 5	arcmin
Service life	20000	h

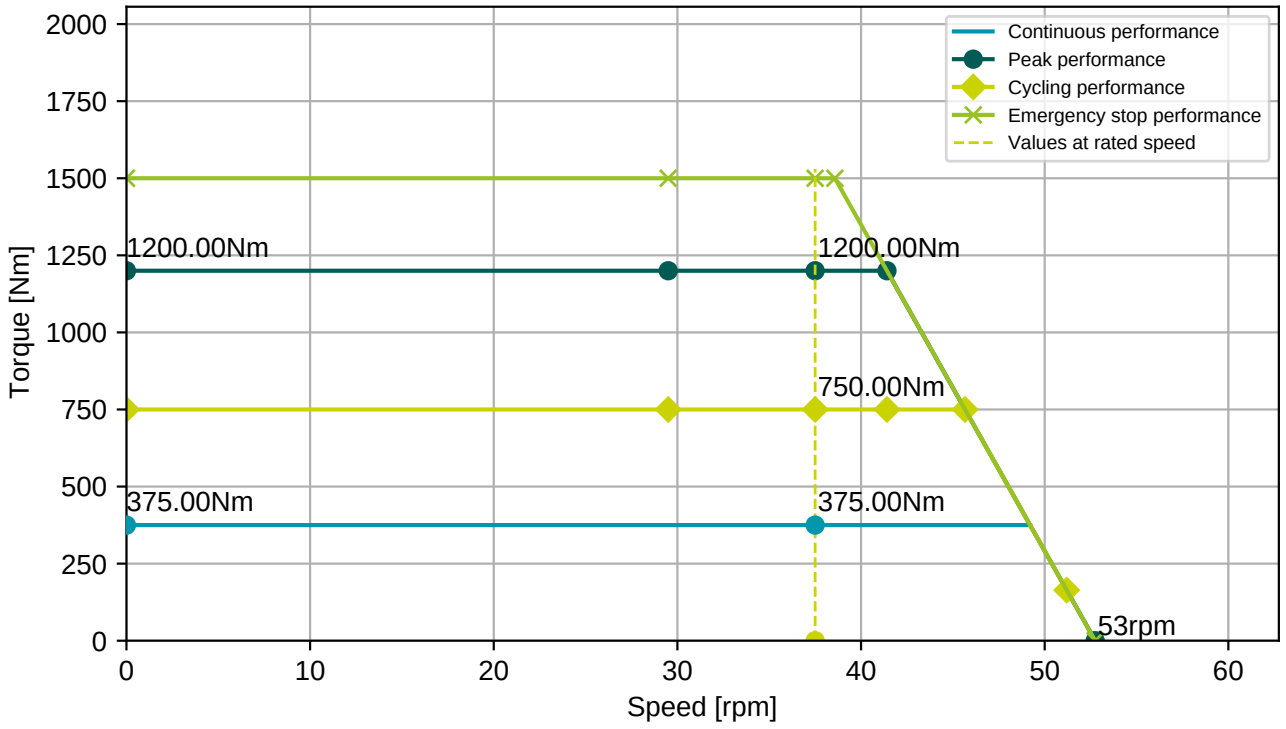
** at rated speed & torque*

Gearbox mechanical data		
Radial force for 20'000h	12000	N
Radial force for 30'000h	11000	N
Max. radial force	12000	N
Axial force for 20'000h	8500	N
Axial force for 30'000h	7500	N
Max. axial force	8500	N
Tilting moment for 20'000h	1219	Nm
Tilting moment for 30'000h	1117	Nm
Max. bending moment	80	Nm
Output shaft design	Flange	
Mass	14.88	kg
Input inertia	1.992	kgcm²
Protection	IP65	

Lubrication	
Type	Standard
Lubricant	Castrol Optigear Synthetic 800/150

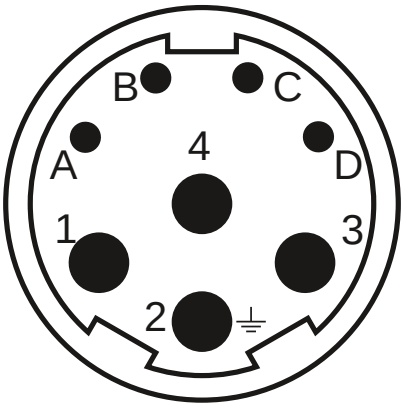
Actuator data		
Rated speed	38	rpm
Rated torque	375.00	Nm
Cycling torque	750.00	Nm
Peak torque	1200.00	Nm
Emergency stop torque	1500.00	Nm
EMF constant ±10%	4160.0	V AC (rms) / 1000rpm
Torque constant ±10% @ rated load	57.92	Nm / A (rms)
Total mass	26.08	kg
Output inertia	27347.2	kgcm²

Torque / speed curve

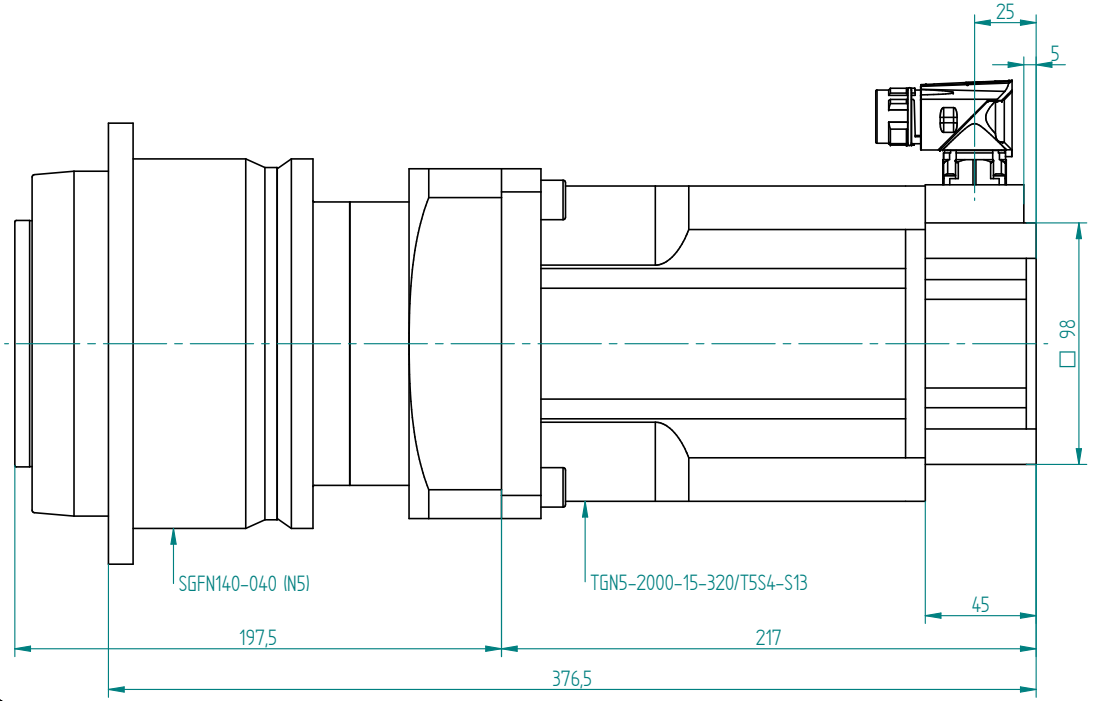


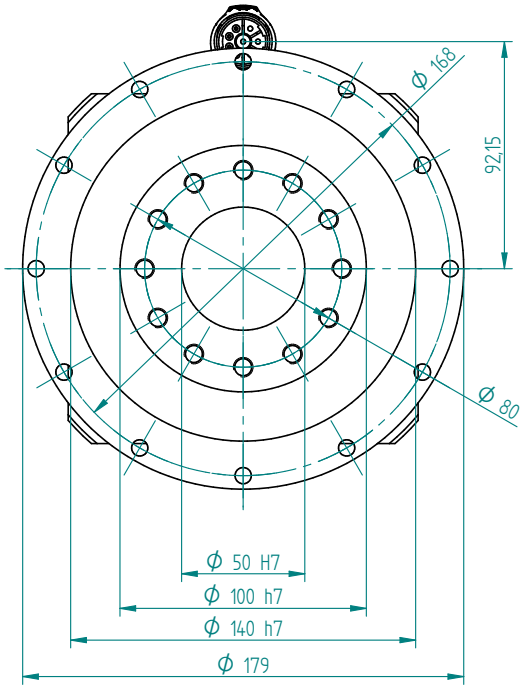
BGC110N00001216000

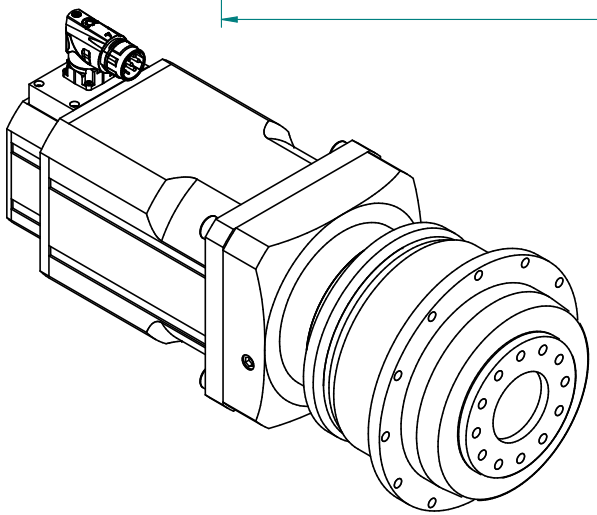
M23, 8 poles, rotary



Connector 1 (283)	
1	U
4	V
3	W
2	PE
A	Brake+
B	Brake-
C	GND/DSL-
D	+Us/DSL+







Bill of materials			
Part Name	Quantity	Type	Tools
Screw_DIN 912_A4 - 70_M10x40	4	A4 - 70	inbus - M10

Untolerated dimensions: ISO 2768 - m

Drawn:	Stepan Bednar	Created: 25.08.2025	Modified: 25.08.2025
Checked / approved by:	- - -	PROJECT NAME: Gearbox SGFN140-040 (N5)	
Material:	-		
Semiprod.	- -	NUMBER - TITLE: SGFN140-040 (N5)	
Project ID's			

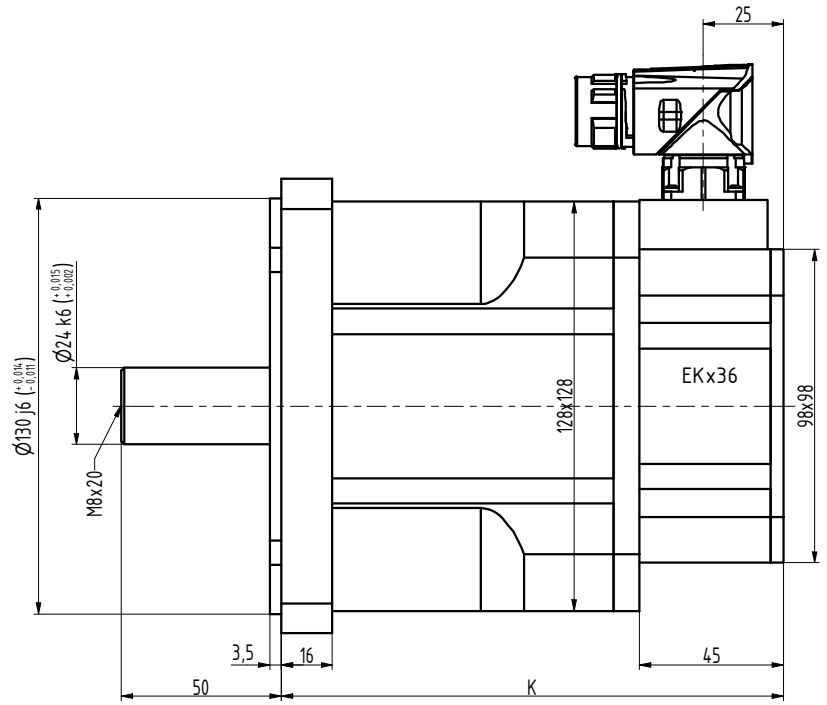
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MM
ANGLES ±X.XX° or ±X.XXX", 2 PL ±X.XX, 3 PL ±X.XXX

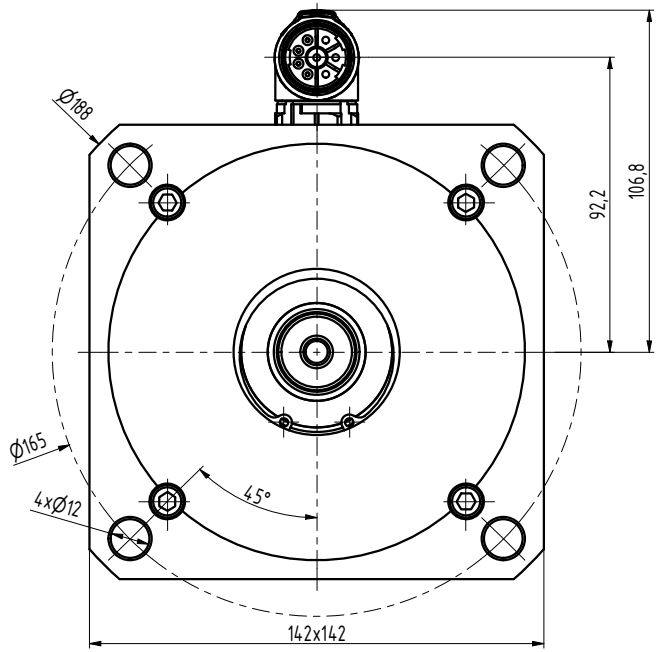
SIZE A3 | QUANTITY: - | REVISION: - - -

Designer: Bednar
Mail bednar@tgdrives.cz
Tel. +420 724 844 770

TG drives
Olomoucka 1290/79
627 00 Brno
Czech republic

SCALE : - | WEIGHT: - | SHEET 1 OF 3





TYP	K
N5-0650	127
N5-1200	157
N5-1600	187
N5-2000	217
N5-2400	247

INDEX	ZMĚNA	DATUM	PODPIS

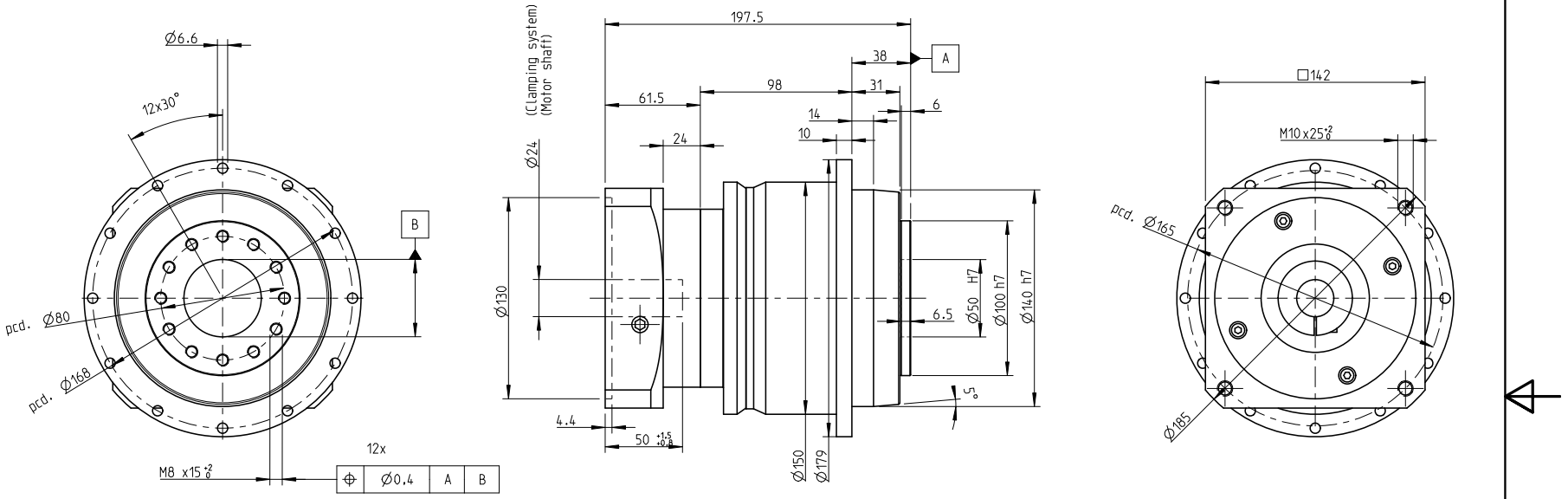
ZN.MAT.		T.O.	HMOTNOST kg	MĚŘ.
ROZM.-POLOT.				
POM. ZAŘ.			ČSN	TŘ.Č.
VYPR. Ošlejšek	NORM.REF.		POZN.	Č. KUSOVNÍKU
PŘEKR.				
TECHNOL.	SCHVÁLIL Ošlejšek	10.09.2021	STARÝ V.	Č.V.

NÁZEV

Motor N5

N5087 10 Z_S4_S1

Listů List



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 SGFN140			TGN5, TGH5, TGT5	
			Listů	List