

MGM BLDC 26060



60kW
ALL ELECTRIC

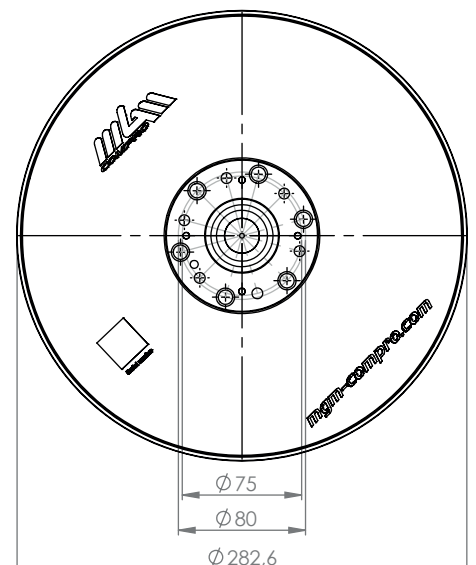
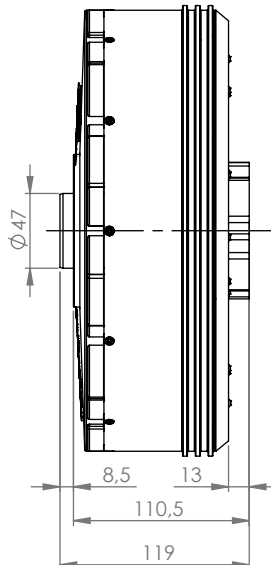
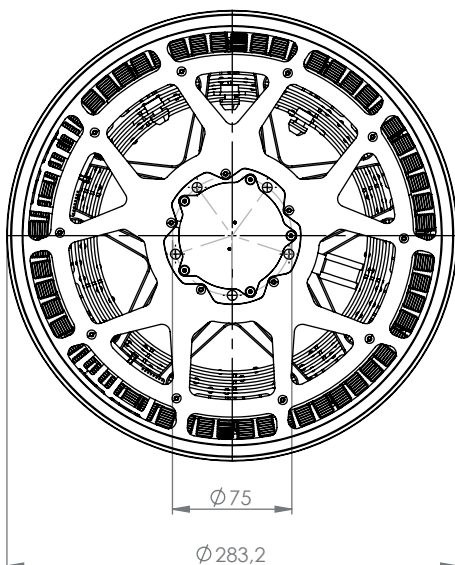
**PEAK
POWER**



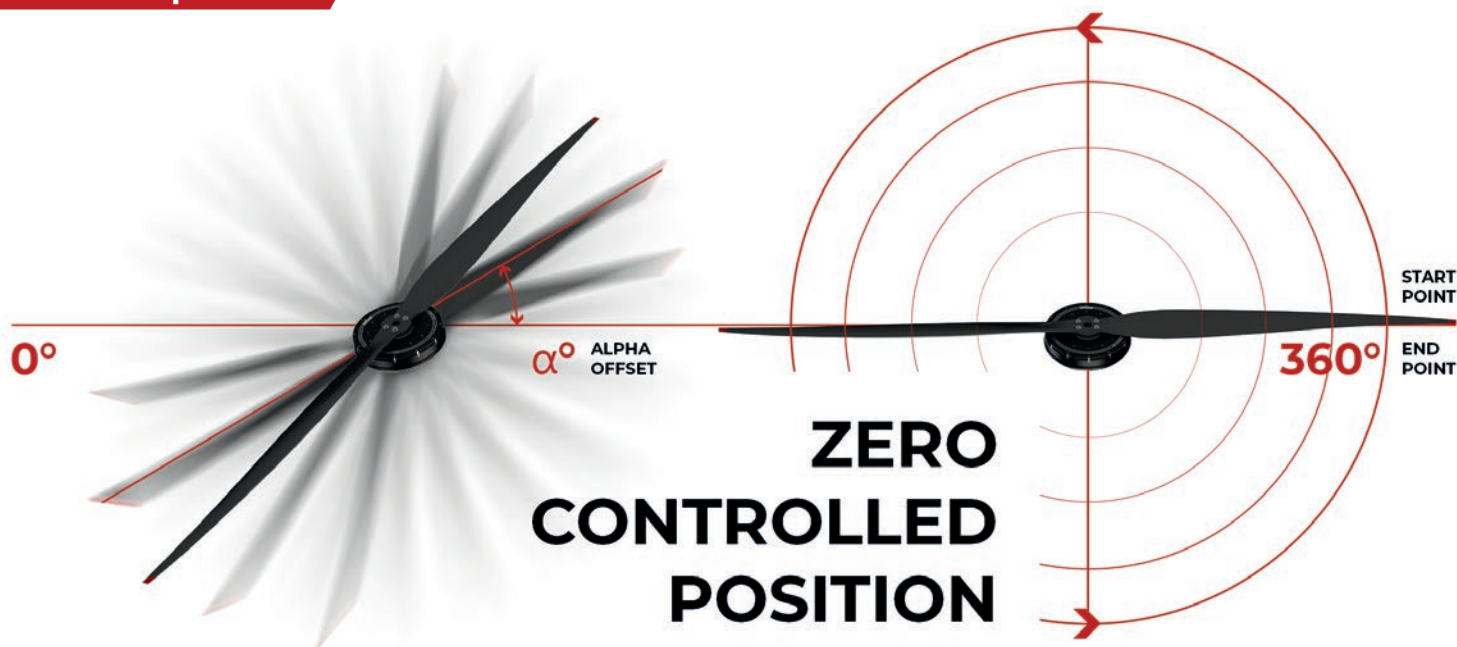
Technical specifications

The all new generation of MGM COMPRO electric motors (BLDC / PMSM) brings enhanced potential to electric applications. Based on the innovative topology of the motor magnetic field and winding design, we have achieved higher power density than ever before. The structural mechanical solution includes only high-quality selected materials, together with optimised geometric aspects, providing perfect efficiency, reliability and sustainability of the motors. This progressive approach enables the use of electric drives for an even wider range of aviation applications.

- **Single-core** topology
- AIR cooling solution based on the centrifugal FAN
- Unique topology of the coils connection
- Single strand winding design
- Removable phase cable connection
- Sensored operating mode – commutation output U,V,W
- Absolute rotor position – **Encoder optional feature**
- **Zero cogging** from initial angular speed
- Thermal behavior control state on deployed temperature sensors
- Unique design of the cooling system with structure integrated diffusers



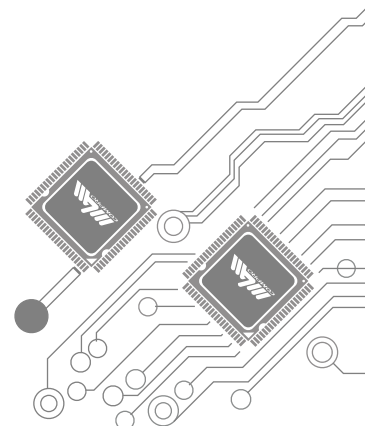
Absolute position



Outstanding parameters

KV customizable on demand*

400 V		
DATA	VALUE	UNIT
KV constant (no-load)	12	RPM/VDC
Motor peak efficiency	up to 96	%
Peak torque	310	Nm
Continuous torque	150	Nm
Peak power	60	kW
Continuous power	40	kW
Phase current MAX	550	A
Torque constant KT	0.802862	Nm/ARMS
Internal phase resistance	18,8	mOhm
Phase inductance	29	μH
No-load current	TBD	A (20Vdc/1000RPM)
Number of poles	70	pcs.
Winding configuration	star	
Rotor outer diameter	283,2	mm
Motor length	110,5	mm
Rotor inertia	0,07	kgm ²
Limiting speed	3 000	RPM
Sensored operation mode	U,V,W	
Absolute position	Encoder (U,V,W)	Optional
Temperature sensor	PT 1 000	
Maximal operation temperature	130	°C
Cable cross-section recommendation	min 16	mm ²
Maximal mechanical radial load	TBD	Nm
Maximal mechanical axial load	3 000	N
Bearing configuration	6208 2RS1 _ 6206 2Z	
Weight (excl. encoder)	13 130	g
Weight - additional encoder	65	g



* In case of a change request, do not hesitate to contact us

Main Characteristics

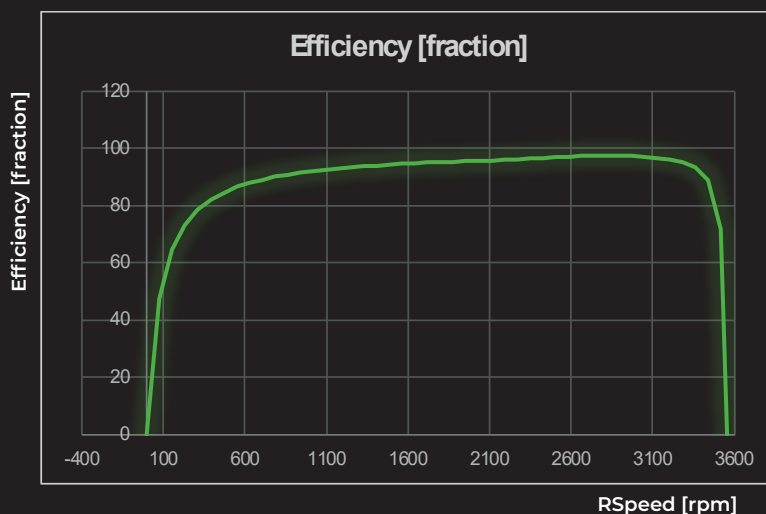
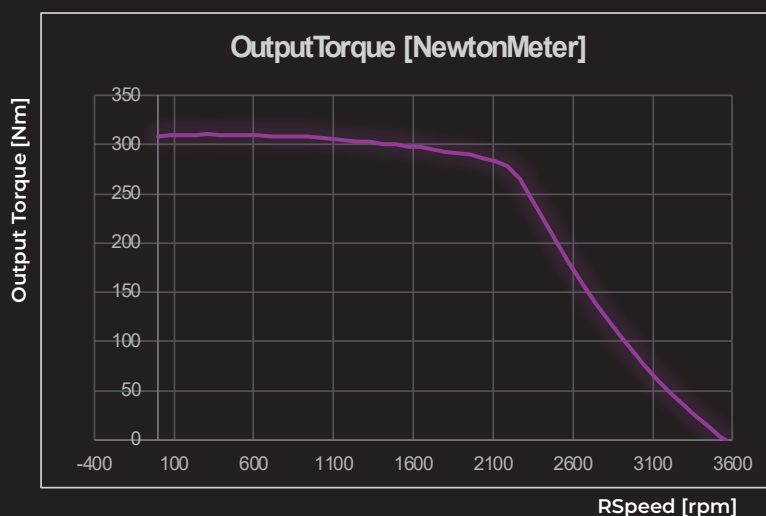
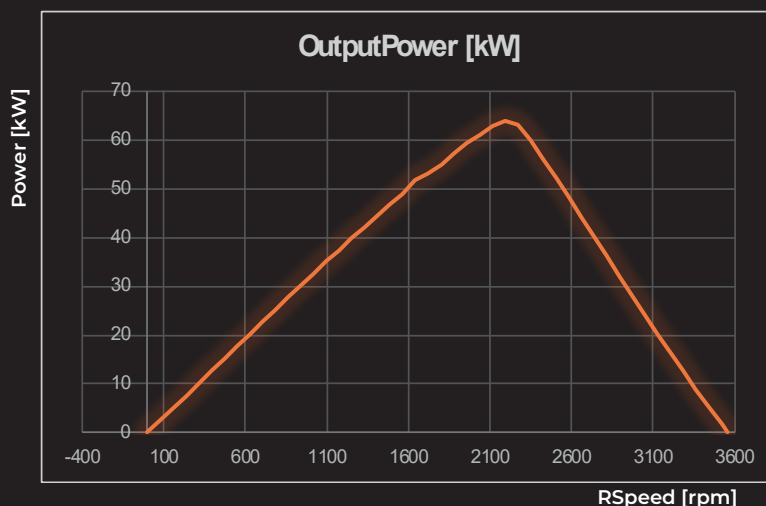
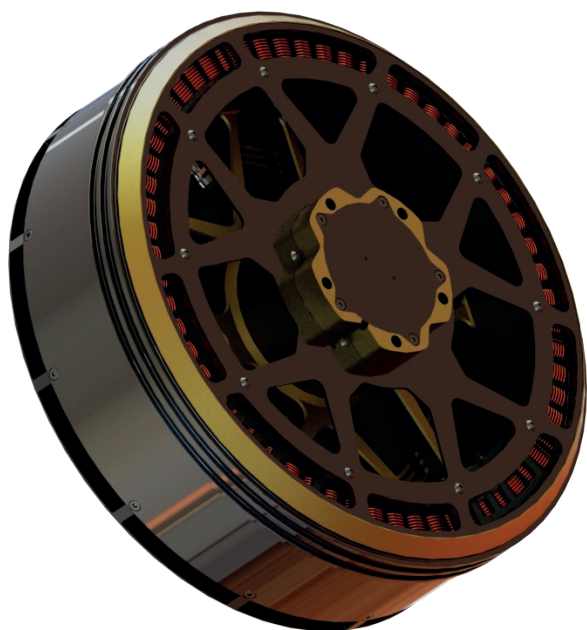
Hall sensor connection

SENS-A	Blue
SENS-B	Green
SENS-C	Yellow
TEMP + (PT1000)	White
TEMP - (PT1000)	Grey
Power supply	Red (4 - 24 Vdc)
GND	Brown
Shielding	
Output signals	U,V,W
Cable specification	LIYCY 8 x 0,14 mm ²

Encoder absolute position - parking connection

Signal ABS POS	Green
Power supply	5 Vdc (+/-5%)
GND	Brown
Output signals	U,V,W
Cable specification	LIYCY 4 x 0,14 mm ²

The unique structure of motor design includes an optional rotor stoping at absolute position. This feature can be used e.g. to optimise propeller drag and overall aerodynamics behaviour during cruise flight eVTOL conditions. Additional encoders provide advanced rotor position information that can be used in wide range of applications.

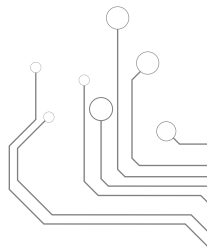


* Feel free to contact us to learn more about your choosen KV of motor.

YOUR TRUSTED PARTNER ACROSS AEROSPACE, AUTOMOTIVE, MARINE AND MILITARY



Version: Rev 01 preliminary



ELECTRIC PROPULSION SYSTEMS

DESIGN | DEVELOPMENT | MANUFACTURING



MOTORS / INVERTERS / BATTERY / BMS

MGM COMPRO is one of the most renowned, innovative designer and manufacturer of Electronics and EPS (Electric Propulsion Systems) and ESS (Energy Storage Systems) in E-Aviation, where as an absolute pioneer of the field introduced the original electric airplanes from the AIRBUS Group and over the years electrified countless Airplanes, eVTOLs, UAVs, etc. Nowadays, electric powertrains from MGM COMPRO (in power ranges from 3kW up to 400kW continuous power) are implemented in many major projects of future air mobility, i.e. countless eVTOL type aircrafts, UAVs, drones and Electric Airplanes, etc.

MGM COMPRO electric propulsion systems/units (drives) are also widely applied in the Marine industry, Defence industry, Medical and wide range of other sectors. MGM COMPRO electronic speed controllers/inverters (ESCs), electric motors, battery systems (ESS), BMSs, electronic contactors and complex EPS are known for its innovative design, unrivalled performance, power density ratio, redundancy, safety (EPS architecture based on using multi-winding electric motors together with 2 or even 4 controllers/inverters (ESCs)) and innovation throughout the features and parameters.

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