

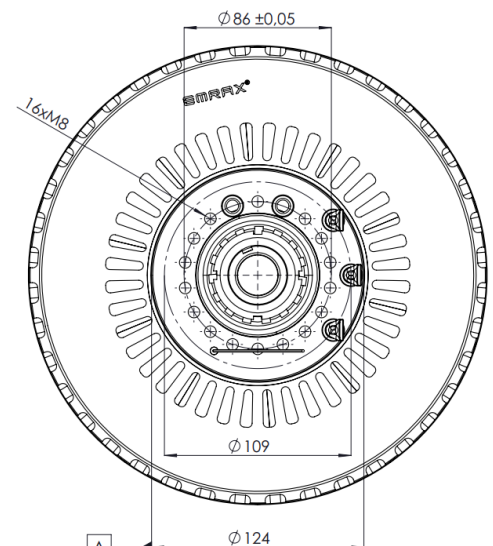
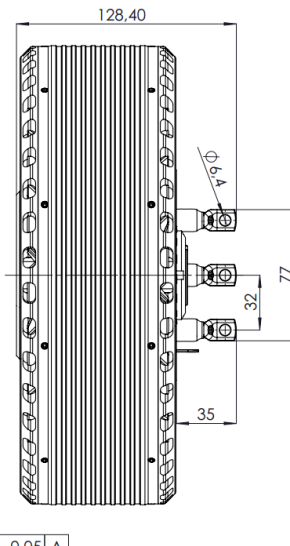
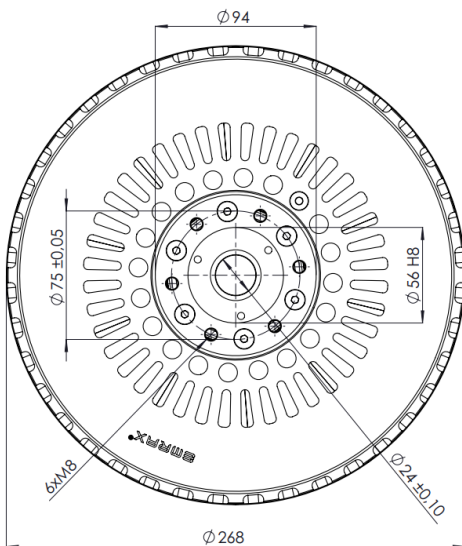
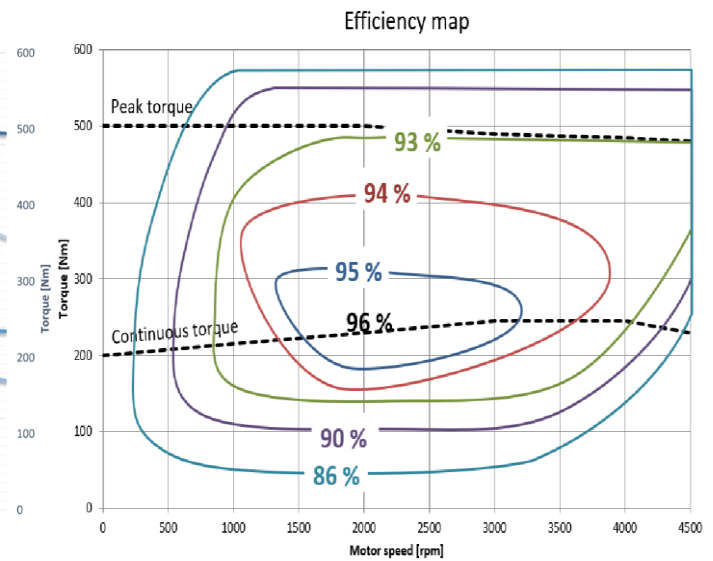
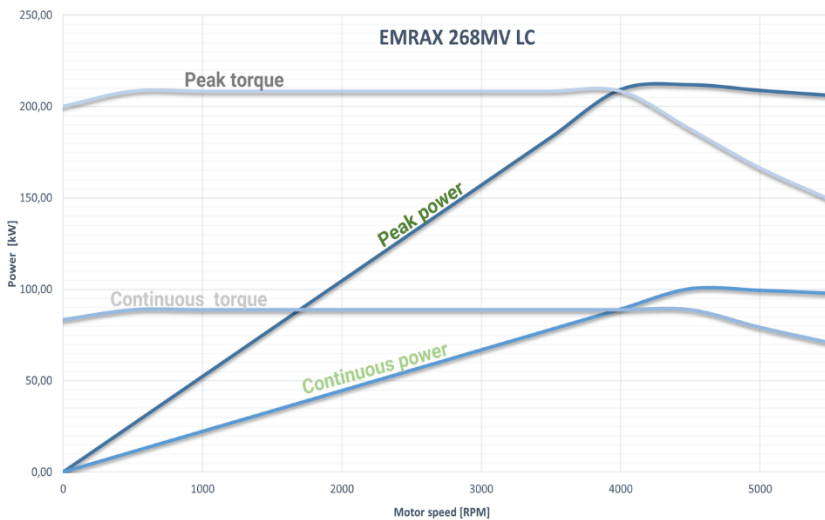
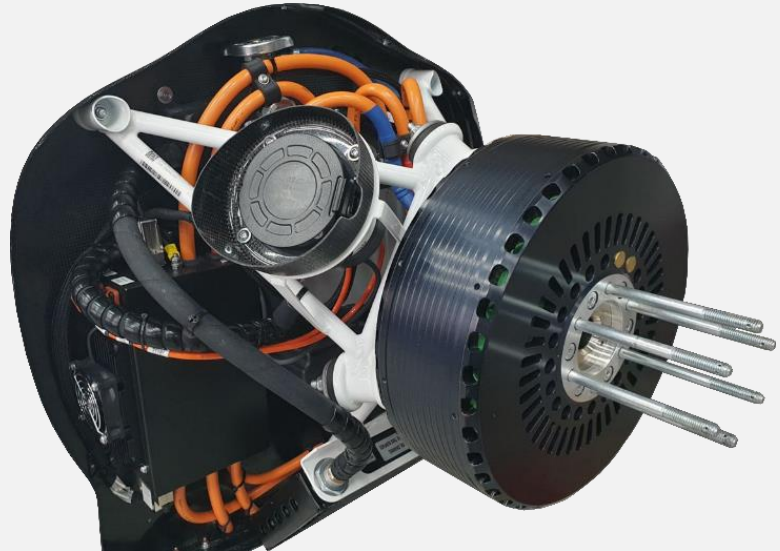
EMRAX 268 is a compact axial flux permanent magnet synchronous electric motor with high power/torque density.

The 268 is a favorite motor choice amongst light aviation, marine and traction applications. It can also be utilized as a hydraulic replacement unit or as a lightweight high power output generator. 268 is the first electric engine certified for use in General Aviation by EASA. Contact us to learn more!

EMRAX 268

DIAMETER LENGTH	268 mm 94 mm
WEIGHT	21,4-22,3 kg
COOLING	air / water / combined
PEAK CONTINUOUS POWER	210 kW 117 kW*
PEAK CONTINUOUS TORQUE	500 Nm 250 Nm*
MAXIMUM SPEED	4500 RPM
OPERATING VOLTAGE	100 - 830 V
EFFICIENCY	up to 96%*
POSITION SENSOR	resolver / encoder

*Subject to motor configuration, drive cycle, thermal conditions, and controller capability.



**EMRAX 268
High Voltage**
**EMRAX 268
Medium Voltage**
**EMRAX 268
Low Voltage**

	AC	LC	CC	AC	LC	CC	AC	LC	CC
AC = Air cooled LC = Liquid cooled CC = Combined cooled (Air + liquid)	AC	LC	CC	AC	LC	CC	AC	LC	CC
Ingress protection	IP21	IP66	IP21	IP21	IP66	IP21	IP21	IP66	IP21
Cooling specifications	ambient air 20°C 20 m/s	min. 6 l/min, max. 50°C	AC+LC*	ambient air 20°C 20 m/s	min. 6 l/min, max. 50°C	AC+LC*	ambient air 20°C 20 m/s	min. 6 l/min, max. 50°C	AC+LC*
Maximum motor temperature [°C]	120								
Motor connection type	UVW or 2x UVW			UVW or 2x UVW			UVW or 2x UVW		
Voltage required for peak power [V _{DC}]**	830 Vdc			830 Vdc			340 Vdc		
Motor peak efficiency [%]	96%								
Peak power S2 2min [kW]	135 kW at 2600 RPM			210 kW at 4500 RPM			210 kW at 4500 RPM		
Continuous power S1 (kW)	80	85	100	94	100	117	94	100	117
Peak torque [Nm]	500								
Continuous torque [Nm]	200	213	250	200	213	250	200	213	250
Limiting speed [RPM]	4500								
K _V constant at no load [rpm/V _{DC}]	5,85			9,39			24,09		
K _V constant at nominal load [rpm/V _{DC}]	4,72			7,59			19,48		
K _V constant at peak load [rpm/V _{DC}]	3,20			5,17			13,26		
K _T constant [Nm/A _{RMS}]	1,61			1,00			0,39		
Peak motor current [A _{RMS}]	320			500			1300		
Continuous motor current [A _{RMS}]	130			220			550		
Internal phase resistance at 25 °C [mΩ]***	21,87			9,85			1,65		
L _D induction of 1 phase [μH]	330,5			140,0			22,5		
Induced voltage [V _{RMS} /RPM]	0,12531			0,07823			0,03045		
Magnetic flux – axial [Vs]	0,09769			0,06099			0,02374		
Temperature sensor on the stator windings	KTY 81/210								
Number of pole pairs	10								
Winding configuration	star								
Rotor Inertia [kg*m ²]	0,05769								
Bearing configuration	6208 3207								
Weight [kg]	21,4	22,3	21,9	21,4	22,3	21,9	21,4	22,3	21,9

*Combined cooled motor (CC) requires cooling specifications from air and liquid cooled motors, to reach its specifications. It cannot only be cooled as an air-cooled motor. Every EMRAX motor requires sufficient air circulation. The motors should not be completely enclosed in any condition. Please check EMRAX motor manual to learn more. Performance in your application will depend on your installation details and boundary conditions. Please contact us to learn more.

**All motors are tested for 833V maximum voltage.

***Measured Phase to Phase, then divided by 2.

HV option is operating at speeds lower than its limiting, due to 830 V voltage limitations.

All values given are for a standard 3 phase UVW version, please consult EMRAX on 2x UVW values. $R_{1UVW}=2 \cdot R_{2UVW}$