

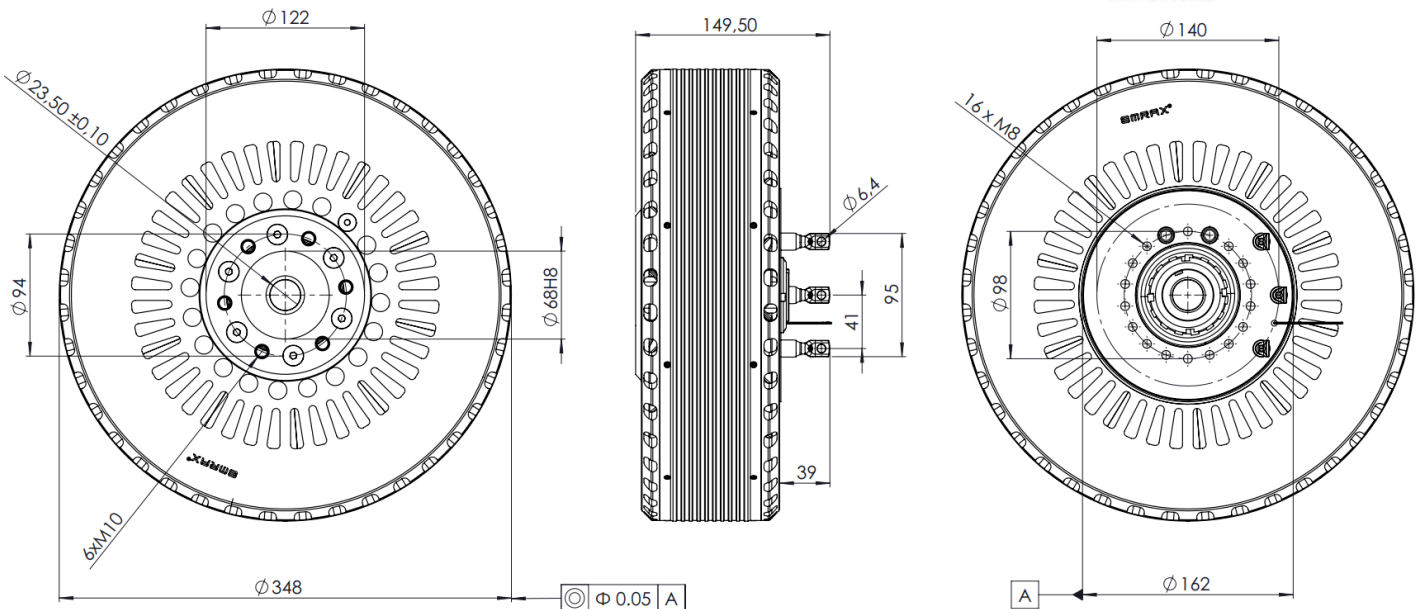
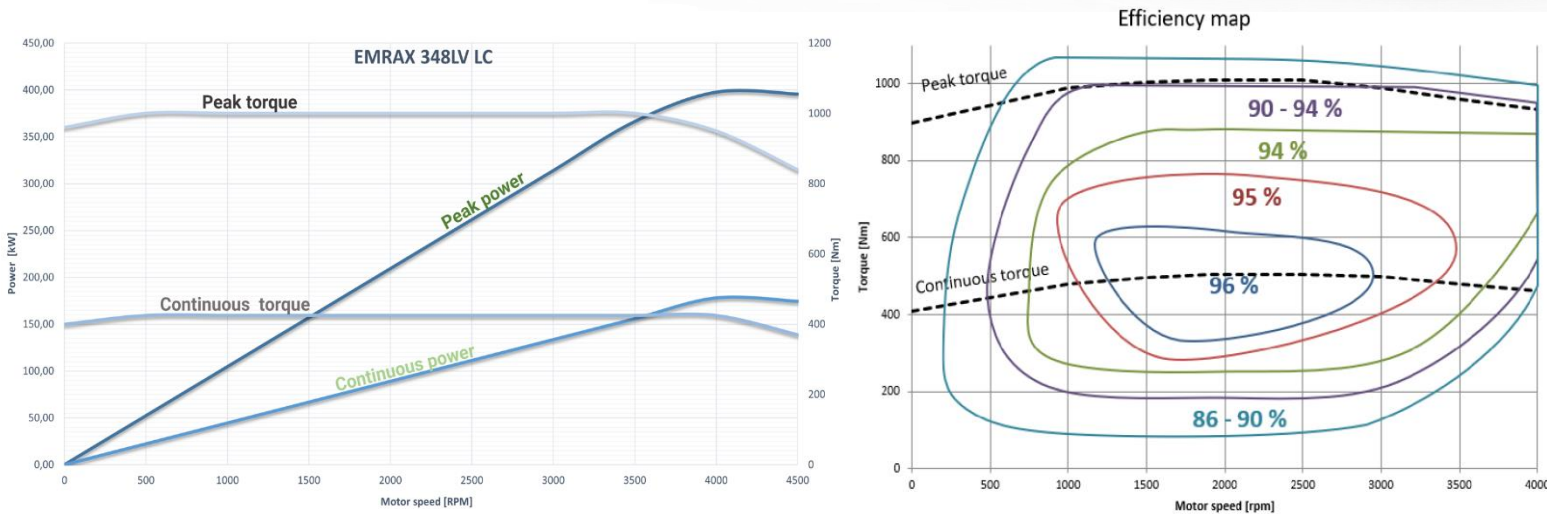
EMRAX 348 is a compact axial flux permanent magnet synchronous electric motor with high power/torque density.

The 348 is the biggest motor in our offering. It can output impressive torque figures directly on the driveshaft. It has found its uses in aviation sector, marine, heavy machinery as well as a traction motor for some impressive vehicles. Contact us to find out more!

EMRAX 208

DIAMETER LENGTH	348 mm 112 mm
WEIGHT	43,1-43,9 kg
COOLING	air / water / combined
PEAK CONTINUOUS POWER	400 kW 210 kW*
PEAK CONTINUOUS TORQUE	1000 Nm 500 Nm*
MAXIMUM SPEED	4500 RPM
OPERATING VOLTAGE	100 - 800 V
EFFICIENCY	up to 96%*
POSITION SENSOR	resolver / encoder

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



**EMRAX 348
High Voltage**
**EMRAX 348
Medium Voltage**
**EMRAX 348
Low Voltage**

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		
Design voltage - nominal [V_{DC}]	800 Vdc			800 Vdc			480 Vdc		
Motor peak efficiency [%]	96%								
Peak power S2 2min [kW]	165 kW at 1600 RPM			250 kW at 2400 RPM			400 kW at 4000 RPM		
Continuous power S1 (kW)	67	72	84	100	106	125	168	178	210
Peak torque [Nm]	1000								
Continuous torque [Nm]	400	425	500	400	425	500	400	425	500
Limiting speed [RPM]	4500								
Motor constant K_v [RPM/VDC]	3,23			4,95			13,29		
Motor constant K_T [Nm/Arms]	2,94			1,92			0,72		
Peak motor current [A_{RMS}]	340			520			1400		
Continuous motor current [A_{RMS}]	150			230			600		
Internal phase resistance at 25 °C [mΩ]	29,41			13,15			4,2		
Induction between two phases [μH]	425,2			185,3			28,5		
Induced voltage [V_{RMS}/RPM]	0,22982			0,15024			0,05605		
Magnetic flux – axial [V_s]	0,17918			0,11714			0,04366		
Temperature sensor on the stator windings	KTY 81/210								
Number of pole pairs	10								
Winding configuration	star								
Rotor Inertia [kg*m²]	0,22042								
Bearing configuration	6210 3208								
Weight [kg]	43,1	43,9	43,5	43,1	43,9	43,5	43,1	43,9	43,5

*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.

Values given are for a standard 3 phase UVW version, please consult EMRAX on 2x UVW values.

High and medium voltage options are operating at speeds lower than its limiting, due to voltage limitations.