

EMRAX 268 Technical Data Table

Type	EMRAX 268 High Voltage			EMRAX 268 Medium Voltage			EMRAX 268 Low Voltage		
Technical data									
Air cooling = AC Liquid cooling = LC Combined cooling = Air + Liquid cooling = CC	AC	LC	CC	AC	LC	CC	AC	LC	CC
Ingress protection	IP21	IP65	IP21	IP21	IP65	IP21	IP21	IP65	IP21
Cooling medium specification (Air Flow = AF; Water Flow = WF – if inlet water temperature and/or ambient temperature are lower, then continuous power is higher)	AF speed 25 m/s; 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C	AF speed 25 m/s; 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C	AF speed 25 m/s; 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C	inlet WF 8 l/min - 40°C; ambient air 25°C
Weight [kg]	19,9	20,3	20,3	19,9	20,3	20,3	19,9	20,3	20,3
Diameter ø / width [mm]	268 / 91								
Battery voltage range [Vdc]	50 – 600 (*700 – to get 3400 RPMp)			50 – 400 (*700 - to get 5000 RPMp)			24 – 130 Vdc (*240 to get 5000 RPMp)		
Peak motor power (for few min at cold start / few seconds at hot start) [kW]	160			200			160		
Continuous motor power (depends on the motor RPM 2000 - 4000) [kW]	40 - 75	40 – 75	50 - 90	40 - 80	40 – 80	50 - 100	40 - 75	40 – 75	50 - 90
Maximal rotation speed [RPM]	4000 RPM (*5000 RPM peak)								
Maximal motor current (for 2 min if cooled as described in Manual) [Arms]	240			360			1000		
Continuous motor current [Arms]	125			180			500		
Maximal motor torque (for a few seconds) [Nm]	500								
Continuous motor torque [Nm]	250								
Torque / motor current [Nm/1Aph rms]	2,0			1,4			0,5		
Maximal temperature of the copper windings in the stator and also max. temp. of the magnets [°C]	120								
Motor efficiency [%]	93 - 98								
Internal phase resistance at 25 °C [mΩ]	26			11,5			1,7		
Input phase wire cross-section [mm ²]	10,2			15,2			38		
Induction in Ld/Lq [μH]	350/370			150/160			19/21		
Controller / motor signal	sine wave								
Specific idle speed (no load RPM) [RPM/1Vdc]	5,4			8,2			22,2		
Specific load speed (depends on the controller settings) [RPM/1Vdc]	4,5 – 5,4			7 – 8,2			18 - 22,2		
Magnetic field weakening (for higher RPM at lower torque) [%]	up to 100								
Magnetic flux – axial [Vs]	0,1014			0,0664			0,0245		
Temperature sensor in the motor	kty 81/210								
Number of pole pairs	10								
Rotor inertia (mass dia=195mm, m=9,8kg) [kg*cm ²]	932								
Bearings SKF _ FAG	R/R 6206/6206 or R/AR 6206/7206 or AR/AR 7206/7206 (»O« orientation)								

*For a few seconds.

Maximal battery voltage is 700 Vdc (EMRAX 268 High Voltage). Maximal RPM must not be exceeded.

It is possible to weaken the magnetic field (up to 100%) to get higher RPM at existing battery voltage. Maximal RPM must not be exceeded.

These data are valid for the motors, which were sold after January 2014.

EMRAX motors that had been made before May 2012 have 30% lower power/torque and RPM than new generation of EMRAX motors.