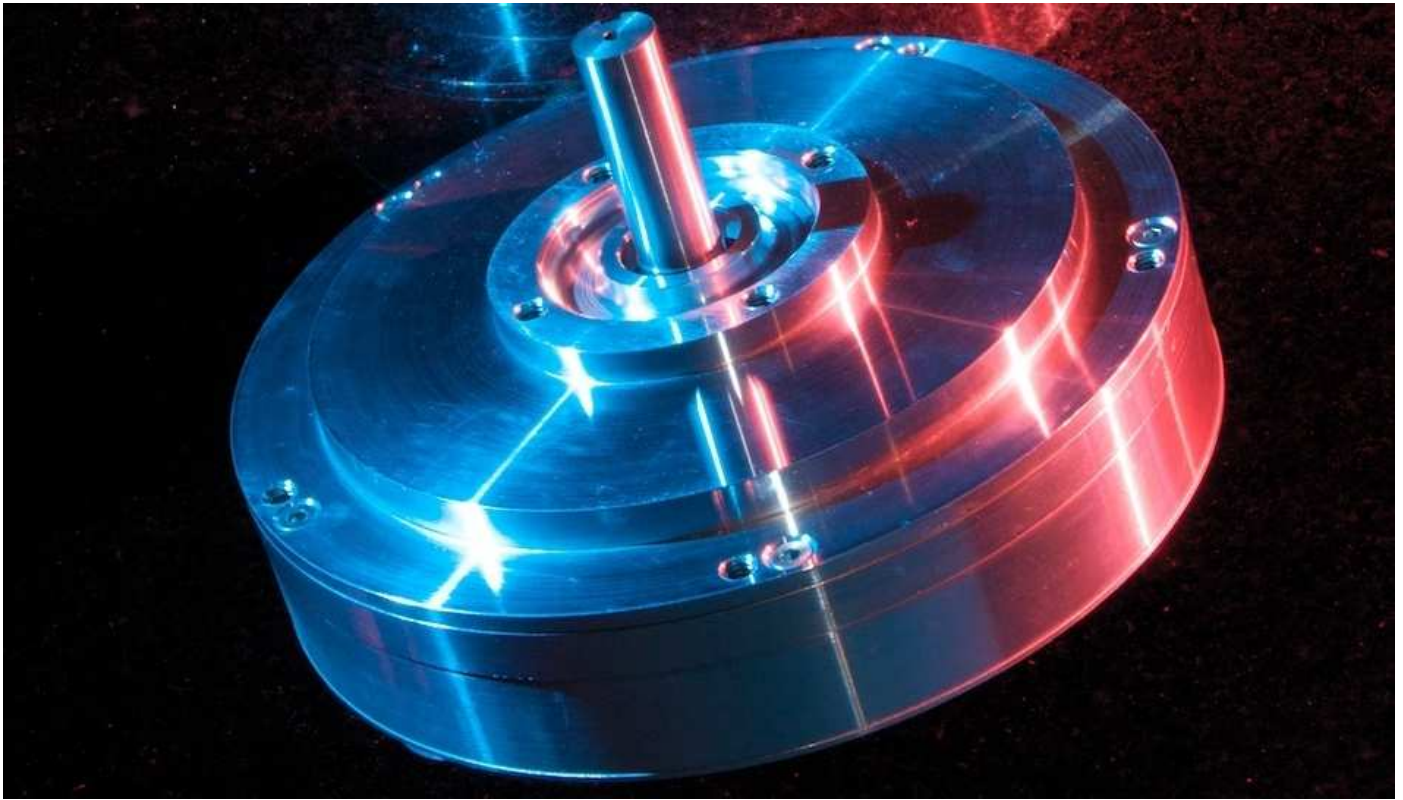


2s-158-6-100-AAC Datasheet



Rating

6.9 KW at 4,950 RPM

The 2s-158-6-100-AAC motor is a member of the 2s-158-6 family of SEMA motors and generators. It incorporates advanced air cooling techniques to achieve even higher specific power than other members of the 2s-158-6 family, which already demonstrate very high specific power. Similar motors in the 2s-158-6 SEMA family are available with different voltage and current requirements, and with different cooling options.

2s-158-6-100-ACC Parameters

Parameter	Symbol	Value	
Continuous Ratings 25°C ambient air 70 CFM			
Bus Voltage ¹	V_{bus}	~770 V _{DC}	
Speed	S	4,950 RPM	
Torque	T_c	13.2 N·m	9.7 lbf·ft
Current	I_c	8.6 A _{RMS}	
Power	P_{out}	6.9 KW	9.2 HP
Peak Ratings ²			
Torque	T_c	66.1 N·m	48.7 lbf·ft
Current	I_c	43.1 A _{RMS}	
Power	P_{out}	34.25 KW	45.9 HP
Motor Constants			
Torque Constant ³	K_T	1.66 N·m/A _{rms}	1.22 lbf·ft/A _{rms}
Torque Constant ⁴	K_T	1.53 N·m/A _{rms}	1.12 lbf·ft/A _{rms}
Voltage Constant (phase-phase) ³	K_E	100.3 V _{rms} /krpm	
Voltage Constant (phase-phase) ⁴	K_E	92.4 V _{rms} /krpm	
Electrical			
Resistance (phase-phase) ³	R	2.76 Ω	
Inductance (phase-phase)	L	998 μH	
Peak efficiency	e_{pk}	>92 %	
Thermal Limit			
Max. Thermocouple Temperature ⁵	T_{max_tc}	135 °C	275 °F
Mechanical			
Inertia (rotating components)	J_r	104 kg·cm ²	1.47 ozf·in·s ²
Mass	m	~5.53 kg	~12.2 lb
Pole Pairs	pp	6	
Motor diameter	AC	~220 mm	~8.66 in.
Motor length (not including shaft)	l	~71.7 mm	~2.82 in.

¹Minimum bus voltage controller dependant

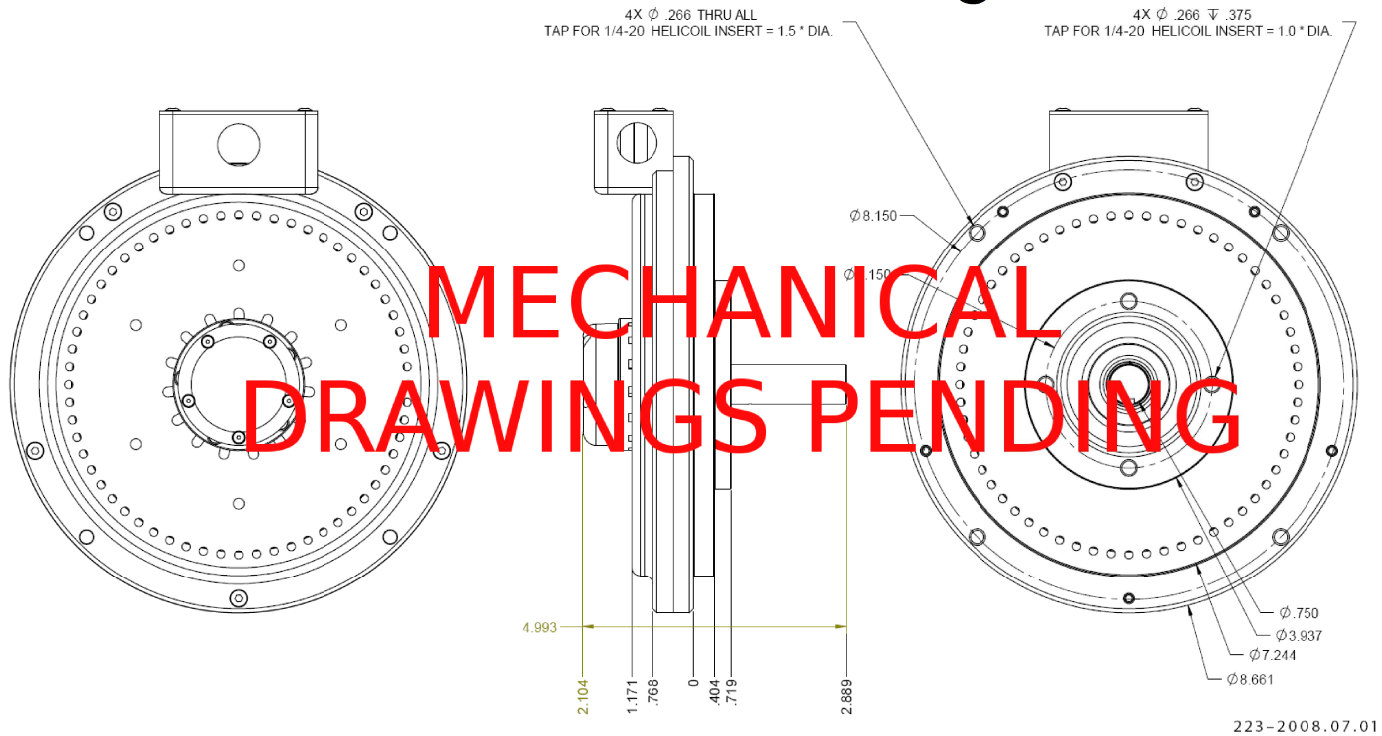
²Peak values highly time dependent. 5X rated values shown - 10x is achievable.

³At 21°C

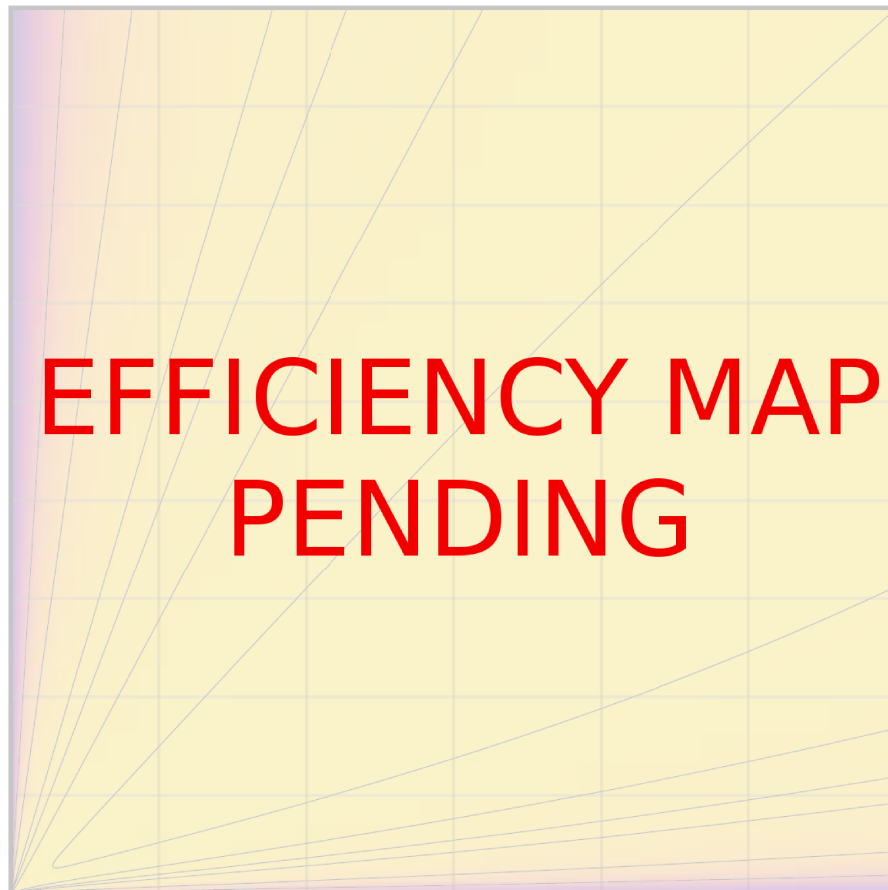
⁴With 100°C magnets.

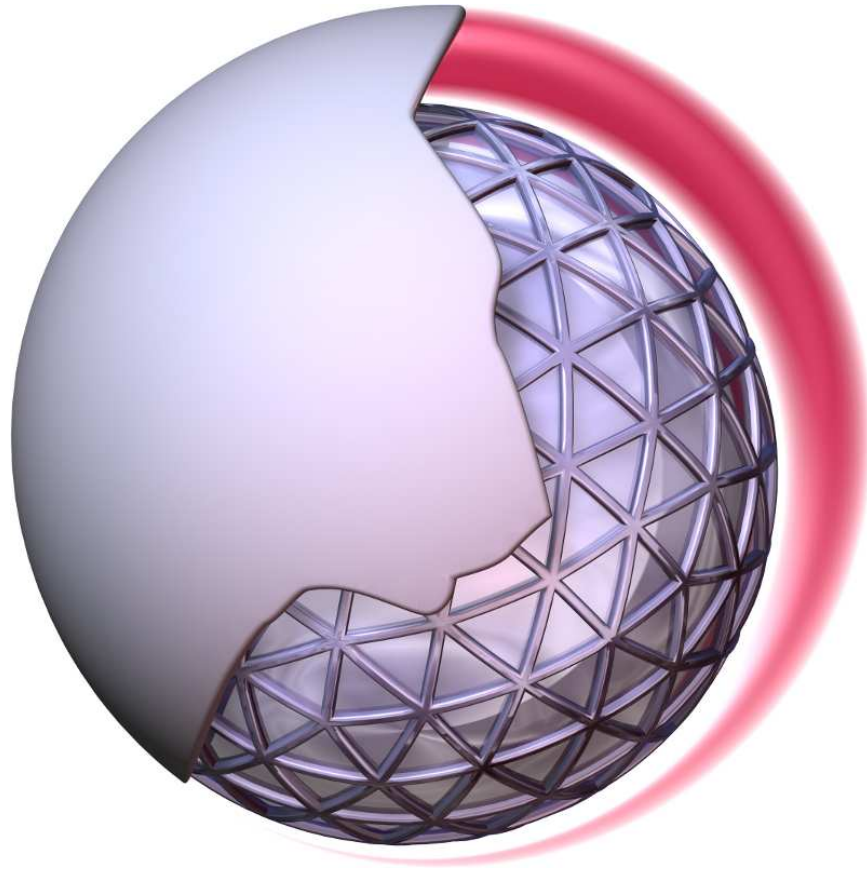
⁵Never exceed this value.

Mechanical Drawings



Efficiency Map





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