

## DATASHEET



## Turntide Axial Flux Motor 140 (AF140)

## Features

- Short motor length resulting from axial flux design
- Very high power density of 4.6 kW/kg\*
- Peak Efficiency >95%
- Low cogging and low ripple torque gives smooth, quiet operation in direct drive applications
- Compact design with flat front and back faces for mounting
- IP67 rated shaft seals (optional)
- Low inertia composite rotor with excellent dynamic stability
- Suitable for inverter supply voltages up to 800V<sub>DC</sub>
- Liquid cooling using water / glycol for enhanced performance
- Integrated PT100 winding temperature sensors
- Sin/Cos resolver compatible with most commercially available inverters



Stator Coolant Path

Specifications (600V<sub>DC</sub> ††)

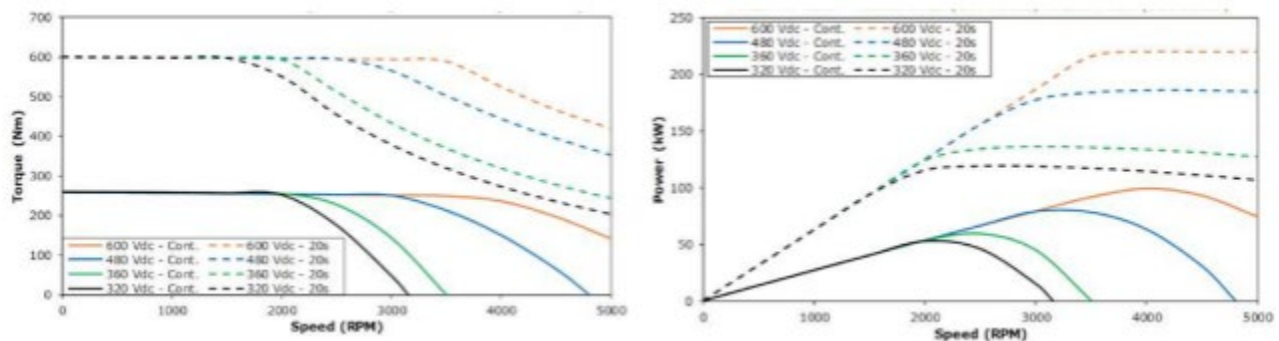
## Characteristics

<b>Maximum Speed (rpm)</b>	5000	<b>Nominal Output Power (kW)</b>	94
<b>Continuous Torque (Nm)</b>	260	<b>Peak Output Power** (kW)</b>	220
<b>Peak Torque** (Nm)</b>	600	<b>Recommended Coolant Flow Rate (LPM)</b>	8

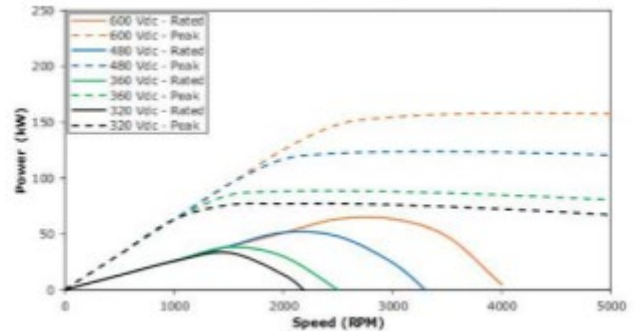
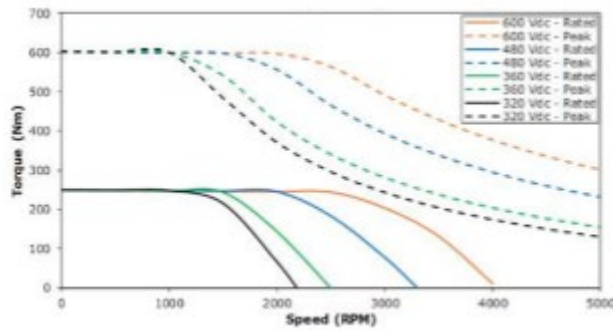
\*\* For up to 20s test conditions

†† All values in table are quoted for 45°C ambient with coolant at 55°C inlet temperature and 8 LPM flow rate. Contact Turntide for higher coolant temperatures.

## 4 Turn – Continuous (145 Arms) and 20s Peak (350 Arms)



### 6 Turn - Continuous (95 Arms) and 20s Peak (240 Arms)



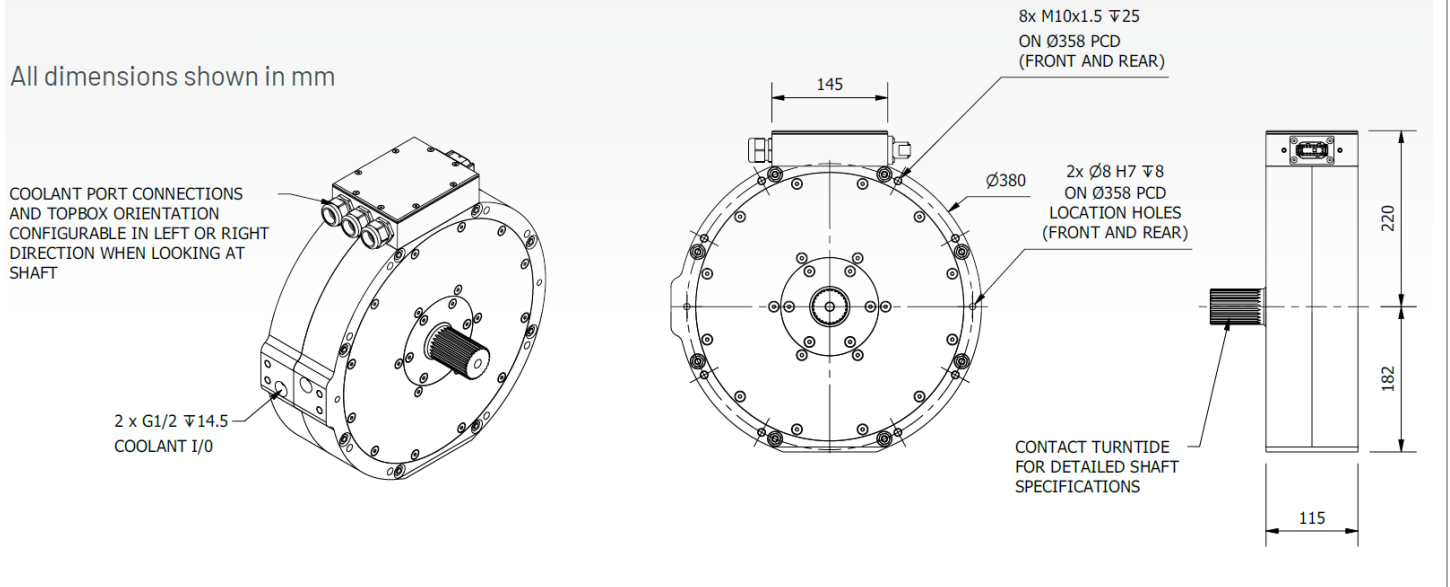
All values in graphs are quoted for 45°C ambient with coolant at 55°C inlet temperature and 8 LPM flow rate. Efficiency will vary based on Voltages and Turn count

### Weight and Dimensions

<b>Weight (kg)</b>	43	<b>Height (mm)</b>	402
<b>Depth (mm)</b>	115	<b>Diameter (mm)</b>	380

\*Weight as delivered dry

All dimensions shown in mm



For further information please contact our team of experts at [electrificationsales@turntide.com](mailto:electrificationsales@turntide.com)

### TURNTIDE TECHNOLOGIES

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