



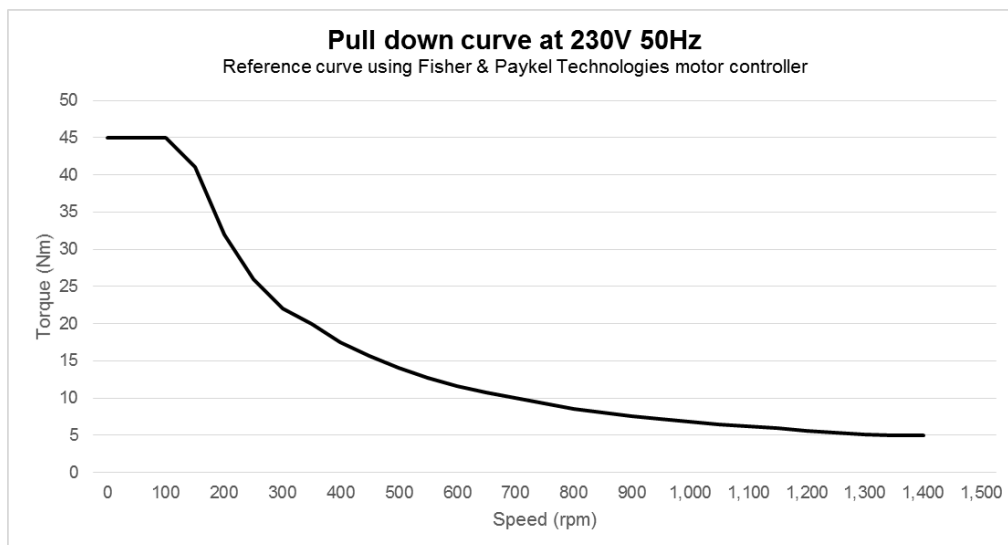
## Direct Drive Motor Specification

Motor Model Number  
**MB45T59**

PARAMETER	VALUE	COMMENT
<b>GENERAL</b>		
Type	3-phase brushless permanent-magnet Outer rotor	27 stator poles, 36 rotor poles Sinusoidal Back-EMF wave shape Aluminium wire and Ferrite magnet
Rotor position sensor (RPS – optional)	N/A	Vector sensorless control
Ambient temperature	Operating temp > -10°C to +40°C Storage temp > -40°C to +60°C	At 85% RH
Total motor mass	7.1 kg	
<b>MOTOR FUNDAMENTALS</b>		
$K_e$ - BEMF constant	3.11 V/rad.s-1	Line to neutral, RMS Voltage
$K_t$ – Torque constant	9.33 Nm/A	
$K_m$ - Motor constant	2.40 Nm / $\sqrt{\text{Watt}}$	
Inductance	62.82 mH	Line to neutral inductance (includes self and mutual inductance)
<b>INDICATIVE PERFORMANCE * / ** AT NOMINAL 230V<sub>RMS</sub></b>		
Speed – maximum	1,400 rpm	*
Torque at 50 rpm	45 Nm	*
Torque at 1,400 rpm	4.5 Nm	*
Power output – at 50 rpm	240 W	* at 45 Nm torque
Power output – at 1,400 rpm	660 W	* at 4.5 Nm torque
Efficiency at 1,400 rpm	79%	* at 4.5 Nm torque

\* Reference values using Fisher & Paykel motor control at 22 °C. Values may vary using different control board and different tests conditions

\*\* Different performance levels might be achieved through motor customization to other applications.

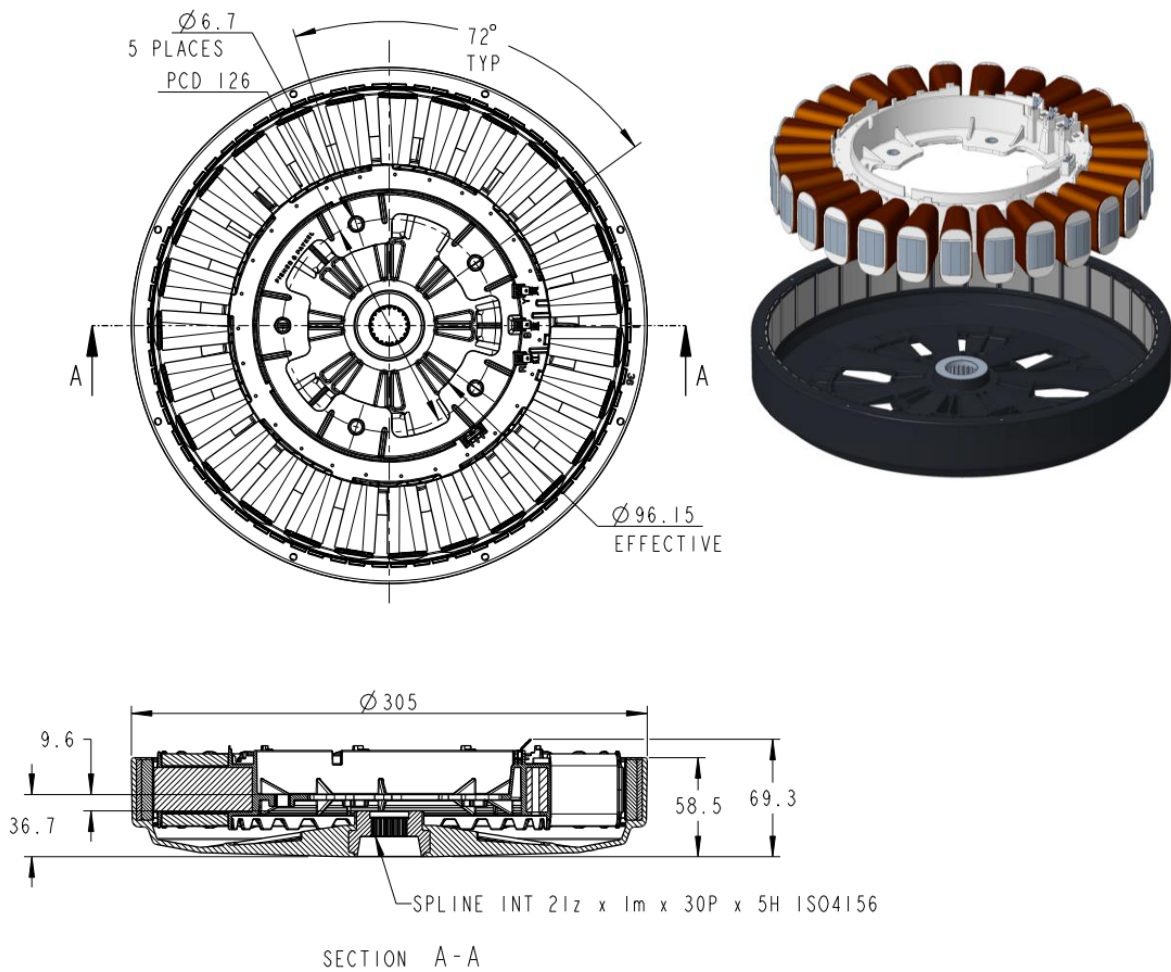




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**OVERALL DIMENSIONS \*\*\***



\*\*\* All dimensions in mm