



Direct Drive Motor Specification

Motor Model Number
MF05A

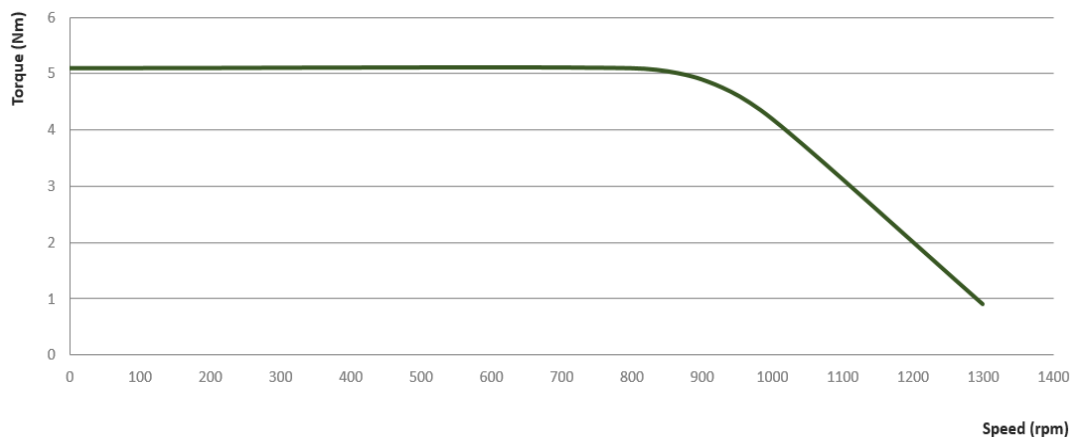
PARAMETER	VALUE	COMMENT
GENERAL		
Motor type	3-phase brushless permanent-magnet Outer rotor	15 stator poles, 20 rotor poles Sinusoidal Back-EMF wave shape Aluminium wire and Ferrite magnet
Rotor position sensor (RPS – optional)	N/A	Vector sensorless control
Ambient temperature	Operating temp: -10°C to +40°C Storage temp: -40°C to +60°C	at 85% RH
Total motor mass	1.8 kg	
MOTOR FUNDAMENTALS		
K_e - BEMF constant	0.84 $V_{rms}/rad.s^{-1}$	Line to neutral, RMS Voltage
K_t – Torque constant	2.52 Nm/A	
K_m - Motor constant	0.56 Nm / \sqrt{Watt}	
Inductance	37 mH	Line to neutral inductance (includes self and mutual inductance)
INDICATIVE PERFORMANCE * / ** AT NOMINAL 220V_{RMS}		
Speed – maximum	1,200 rpm	*
Torque at 800 rpm	5 Nm	*
Torque at 1,200 rpm	2 Nm	*
Power output – at 800 rpm	430 W	* at 5Nm torque
Power output – at 1,200 rpm	250 W	* at 2Nm torque
Efficiency at 800 rpm	77%	* at 5Nm torque
Efficiency at 1,200 rpm	86%	* at 2Nm 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.

Pull Down curve at 220V 50Hz

Reference curve using Fisher & Paykel Components and Technology control board

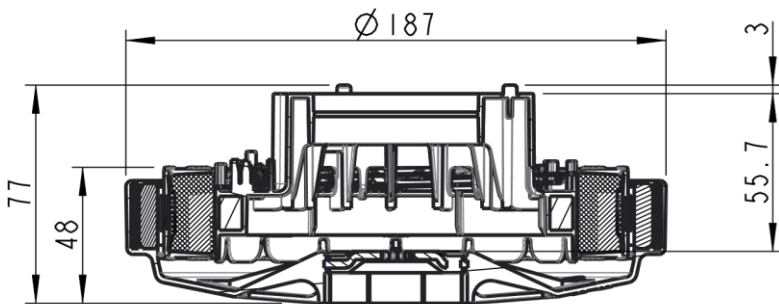
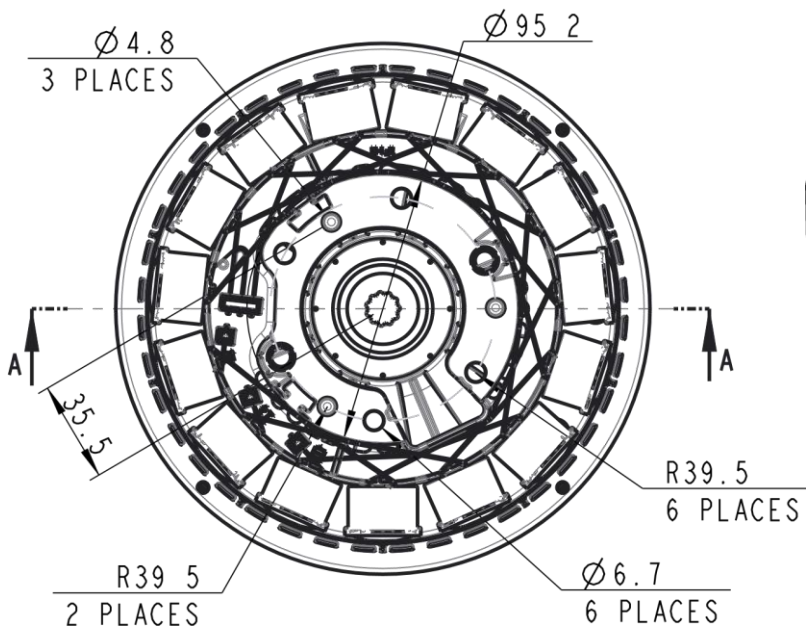




Geared Motor Specification

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MF05A

OVERALL DIMENSIONS



SECTION A - A

DIMENSIONS IN MM