



APM900

FALCON SERIES

KEY FEATURES



Superior quality insulation provides long life and high reliability of windings



Lowest weight in its class to provide outstanding power density



Built for industrial strength



100% tested with individual performance reports



Active air-cooling system operates at high temperatures



DATASHEET

Fly Higher. Fly Longer. Fly Smarter.

ePropelled brushless propulsion motors (APMs), with outstanding thrust-to-weight ratios, drive a wide range of uncrewed aerial vehicles (UAVs) applications where weight, size, energy efficiency, high heat tolerance, and rugged quality count most.

For new UAV designs or easy replacement uses, ePropelled Falcon APMs are designed from years of experience in magnetic engineering and materials science to deliver long life with ease of installation. When paired with our air motor controllers, gain high-performance, high-efficiency propulsion solutions for all manner of heavy-duty UAV designs.

Air Propulsion Motor

The frameless Falcon APM900 delivers the thrust agility to drive demanding payload UAVs and very large propellers with precise control across dynamic mission parameters in demanding thermal environments.

They make an excellent choice to swap out commodity propulsion motors and attain better performance, greater life, longer range, and far higher operational integrity.

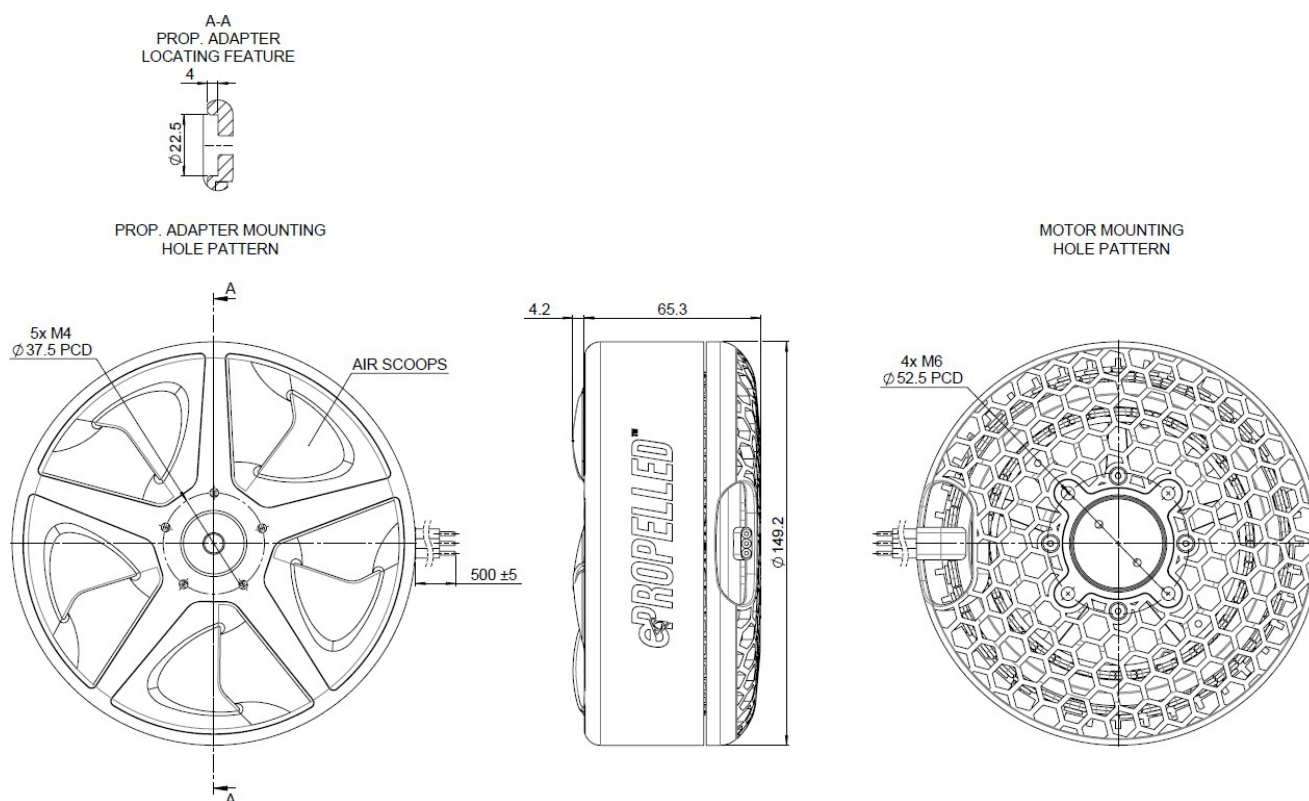
Compact and efficient on energy demand, the heavy-duty APM900s have a proven record of durability, reliability, and easily optimized performance across most mainstream heavy-lift UAV uses.



MOTOR PARAMETERS

PARAMETERS	MEASUREMENT
Kv (Velocity Constant)	65 Kv
Rated Voltage	14S – 24S
Peak Current (10s)	130 A
Peak Power (10s)	12,500 W
Kt (Torque Constant)	0.18 Nm/A
Nominal Operational Speed	0 to 6,000 RPM
Maximum Speed Limit	8,000 RPM
Magnetic Poles	40
Stator Slots	36
Winding Operating Temperature Allowed up to	180°C/356°F
Rotor Operating Temperature Allowed up to	170°C/338°F
Motor Diameter	149.2 mm
Motor Length (With Airflow Inserts)	69.5 mm
Motor Weight (With Airflow Inserts)	2,600 g
Motor Mounting Pitch Circle Diameter (PCD) 4 x M4	52.5 mm
Propeller Mounting Pitch Circle Diameter (PCD)	Adapter dependent
IP Rating	IP23
Recommended Propeller	35" to 40" inch
Recommended ESC	iAMC1200

MECHANICAL DIMENSIONS

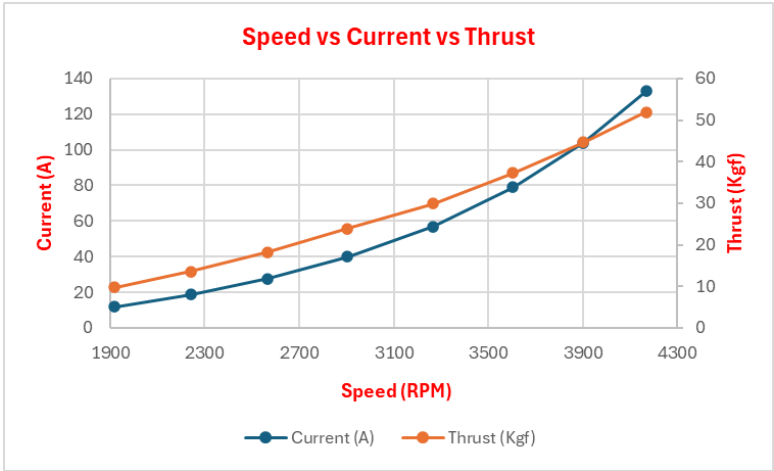
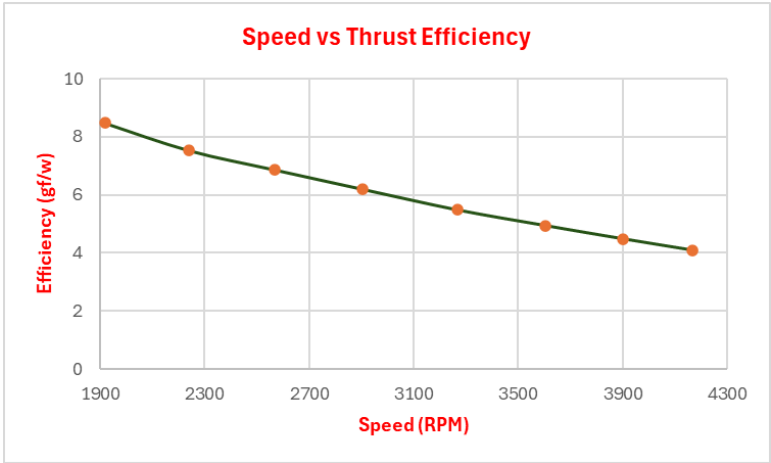


*All Dimensions are in mm

PERFORMANCE DATA: APM900 Kv65 (40" x 13.1")

MOTOR Test Conditions	APM900 Kv65
Relative Humidity (%)	97
Ambient Temperature °C	30
Atmospheric Pressure (mB)	1012
Air Density (kg/m³)	1.15

TYPE	PROPELLER	VOLTAGE	THROTTLE	MOTOR SPEED	SUPPLY CURRENT	ELECTRICAL POWER	THRUST	THRUST EFFICIENCY
		VOLTS	%	RPM	AMPS	WATT	KGF	GF/W
APM900	(40" x 13.1")	96.2	30	1919	12.0	1150	9.74	8.47
		96.2	40	2242	18.7	1802	13.55	7.52
		96.1	50	2567	27.7	2658	18.23	6.86
		96.0	60	2904	40.1	3849	23.83	6.19
		96.0	70	3267	56.9	5461	29.95	5.48
		95.9	80	3603	78.8	7561	37.34	4.94
		95.7	90	3903	104.0	9956	44.64	4.48
		95.5	100	4167	132.7	12681	51.91	4.09



Note: All specifications are subject to change without notice. For more information, including ordering products, please contact us at info@epropelled.com | Phone: +1 (603) 236 7444

