



# APM900

## FALCON SERIES

### KEY FEATURES



Superior quality insulation provides long life and high reliability of windings



Light weight with high power density



Built for industrial strength



Fully Tested



Self-Cooling by design



## DATASHEET

### Fly Higher. Fly Longer. Fly Smarter.

ePropelled USA-made brushless propulsion motors (PMs), 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 PMs 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 PMs and attain better performance, greater life, longer range, and far higher operational integrity.

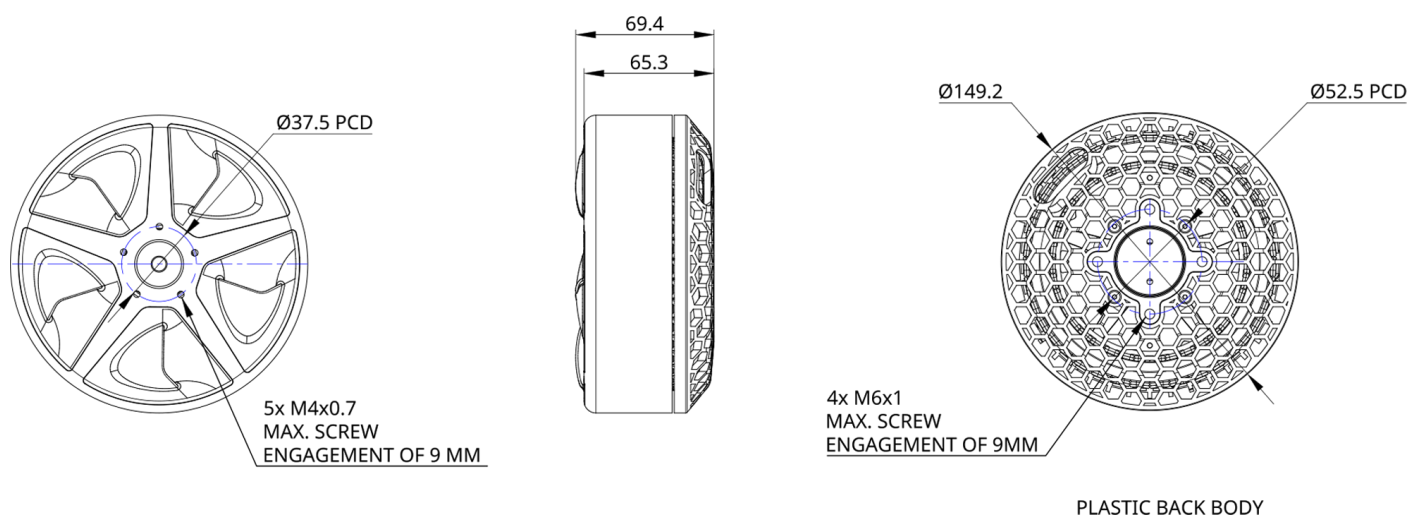
Compact and stingy on energy demand, the heavy-duty APM900s have a proven record of durability, reliability, and easily optimized performance across most mainstream heavy-lift UAV uses.



## MOTOR PARAMETERS

PARAMETER	MEASUREMENT
Kv (Velocity Constant)	65 RPM/V
Rated Voltage	14s – 24s (LiPo)
Peak Current (180s)	120A
Peak Power (180s)	12,000 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	149.2mm
Motor Length	69.4mm
Motor Weight	2,600g
Motor Mounting Pitch Circle Diameter (PCD) 4 x M4	52.5mm
Propeller Mounting Pitch Circle Diameter (PCD)	Adapter dependent
IP Rating	IP20
Recommended Propeller	35.5 inch to 40 inch
Recommended ESC	iAMC900

## MECHANICAL DIMENSIONS

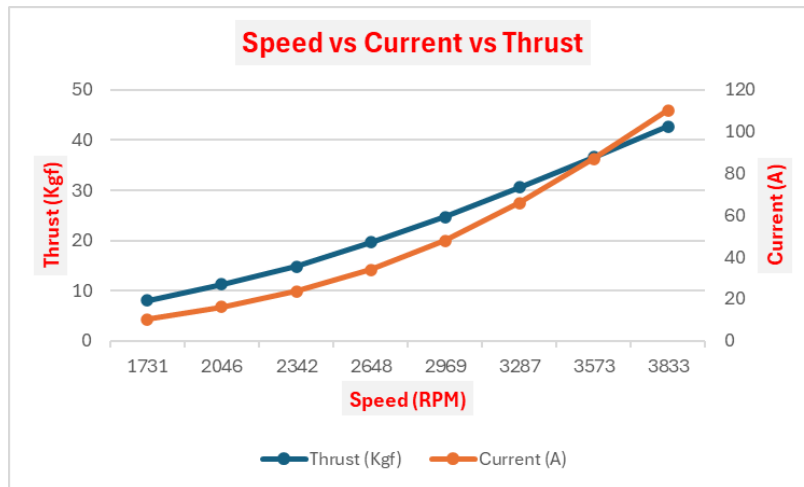
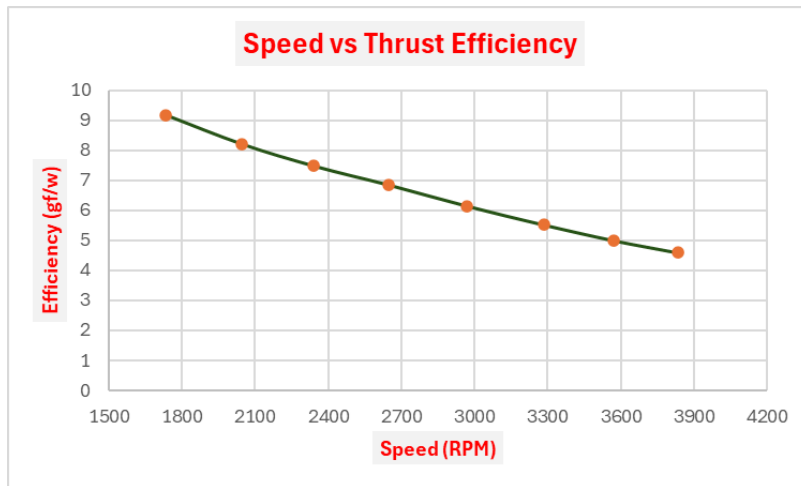


\*All Dimensions are in mm

## PERFORMANCE DATA: APM900 KV65 (40" x 13.1")

<b>MOTOR</b>	APM900 Kv65
Relative Humidity (%)	97
Ambient Temperature ©	30
Atmospheric Pressure(mB)	1012.432
Air Density (kg/m <sup>3</sup> )	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"	84	30	1731	10.36	870	7.99	9.18
			40	2046	16.30	1369	11.24	8.21
			50	2342	23.62	1984	14.85	7.48
			60	2648	34.10	2864	19.61	6.85
			70	2969	47.78	4013	24.66	6.15
			80	3287	66.01	5545	30.59	5.52
			90	3573	87.13	7319	36.62	5.00
			100	3833	110.37	9271	42.68	4.60



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