



# APM600

## 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 APM600 delivers the thrust agility to drive demanding payload UAVs and very large propellers with precise control across dynamic mission parameters in demanding thermal environments.

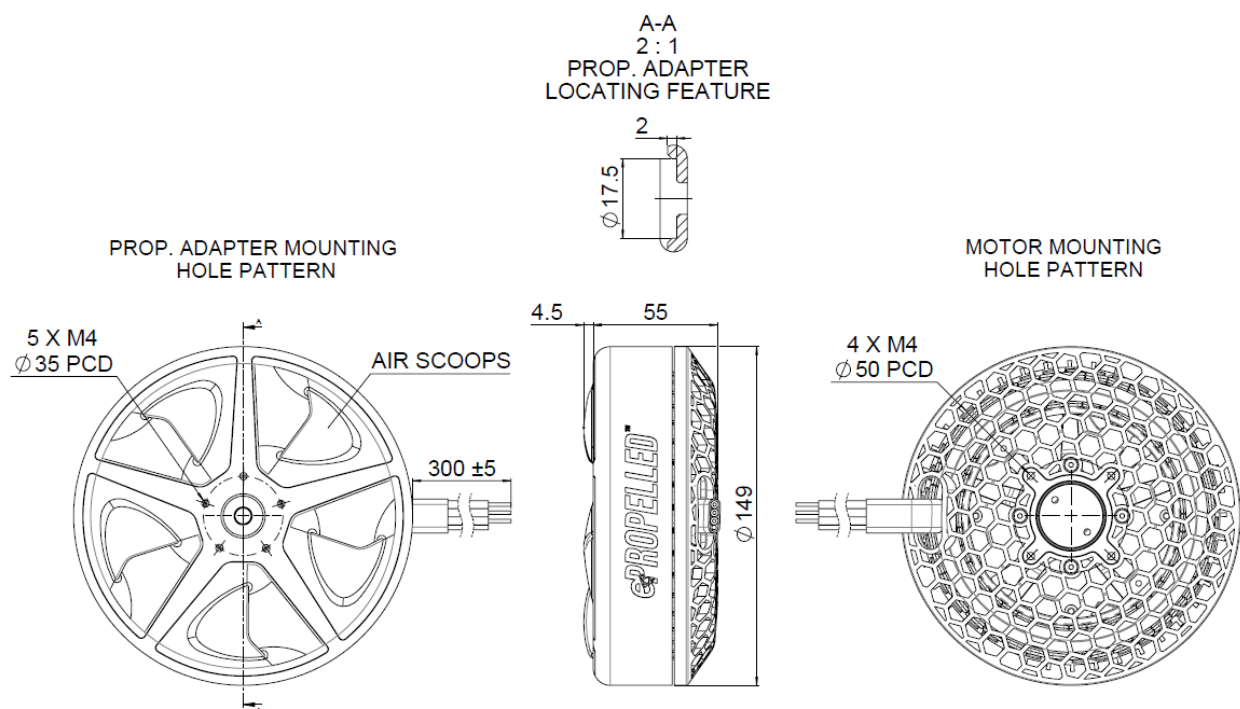
They make an excellent choice to swap out commodity PMs and attain better performance, greater life, longer range, and far higher operational integrity.

Compact and stingy on energy demand, the heavy-duty APM600s 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)	86.95 RPM/V
Rated Voltage	14s – 24s (LiPo)
Peak Current (180s)	110A
Maximum Power (180s)	10,000W
Kt (Torque Constant)	0.13 Nm/A
Nominal Operational Speed	0 to 5,000 RPM
Maximum Speed Limit	6,000 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	149mm
Motor Length	59.5 mm
Motor Weight	1840g
Motor Mounting Pitch Circle Diameter (PCD) 4 x M4	50mm
Propeller Mounting Pitch Circle Diameter (PCD)	Adapter dependent
IP Rating	IP25
Recommended Propeller	35.5 in
Recommended ESC	iAMC600
Rotation options	Counter-clockwise (CCW) and clockwise (CW) versions are available



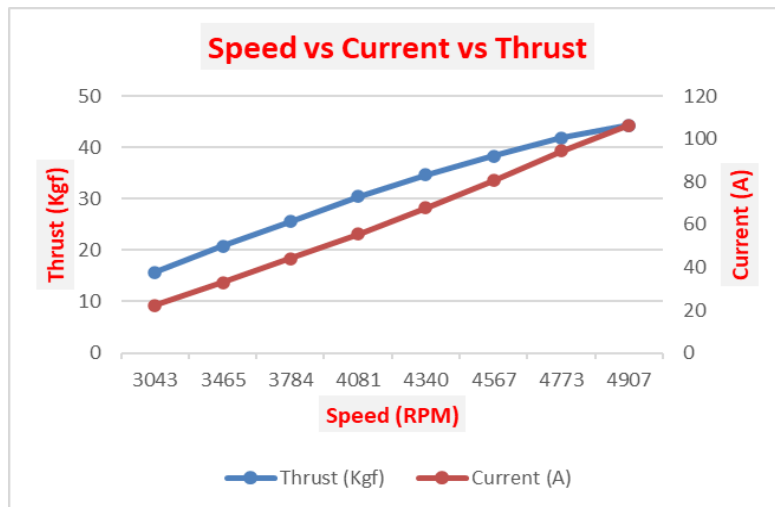
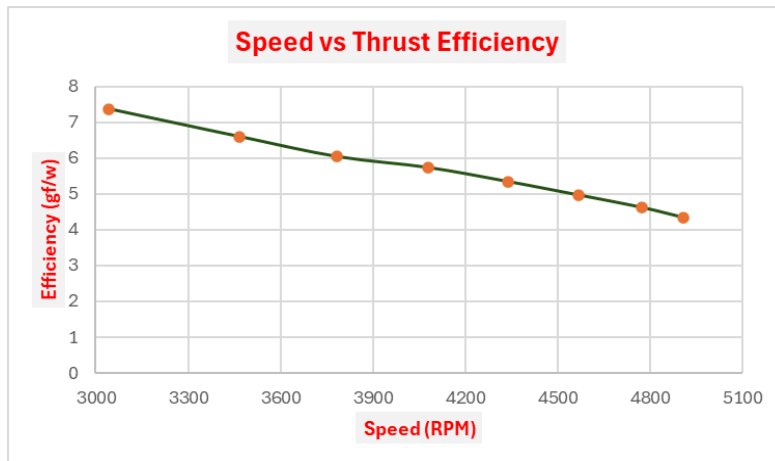
Counter-clockwise (CCW) shown

\*All Dimensions are in mm

## PERFORMANCE DATA: APM600 KV87 (35.5" x 12.1")

<b>MOTOR</b>	<b>APM600 Kv87</b>
Relative Humidity (%)	79
Ambient Temperature ©	28
Atmospheric Pressure(mB)	1013.54
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
APM600	35.5" x 12.1"	96	30	3043	22.20	2130	15.70	7.37
			40	3465	32.84	3151	20.80	6.60
			50	3784	44.17	4239	25.60	6.04
			60	4081	55.46	5322	30.50	5.73
			70	4340	67.70	6500	34.70	5.34
			80	4567	80.56	7734	38.40	4.97
			90	4773	94.50	9073	41.90	4.62
			100	4907	106.30	10205	44.30	4.34



**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