



## Vyخالon™ Motors for Drones | UAV | UAS

### PRELIMINARY RELEASE

Minimized weight and high torque motors from 37 mm to 87 mm in diameter.

Allient brings decades of engineering expertise and high-volume United States manufacturing to the forefront of drone propulsion. We are expanding our robust technology foundation to deliver advanced motion controls and power solutions.



### KEY FEATURES & BENEFITS

#### Performance:

Engineered for maximum torque density and high efficiency, providing extended flight times without compromising payload capacity.

#### Durability:

Featuring rugged bearing assemblies optimized for consistent performance in demanding environments.

#### Electromagnetic Design:

Each frame size is available in two winding configurations (KV ratings) to provide seamless compatibility with a range of battery voltages (4S-12S) and propellers.

#### Integration:

Designed for streamlined architecture and rapid deployment, this motor series supports an integrated ESC configuration. This setup minimizes wiring complexity and reduces overall system weight.

*Note: ESC is currently under development. Please contact an Allient representative for availability.*

### OPTIONS & ACCESSORIES

#### Tailored Solutions:

Our engineering team provides comprehensive customization, including mechanical housing and mounting feature adjustments, electrical winding optimization, and specialized material modifications to meet unique application requirements.

### TYPICAL APPLICATIONS

Designed, built, and supported in the USA, our NDAA-compliant drone motors meet the demanding requirements of high-performance unmanned aerial systems (UAS).



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| SPECIFICATIONS                 | Units | 3115     |      | 4014     |       | 5008     |       | 6007     |       | 8110     |       |
|--------------------------------|-------|----------|------|----------|-------|----------|-------|----------|-------|----------|-------|
| Winding Options                | KV    | 900      | 1050 | 330      | 400   | 170      | 340   | 160      | 320   | 100      | 220   |
| Motor Dimensions (OD x H)      | mm    | Φ37 x 28 |      | Φ45 x 35 |       | Φ56 x 32 |       | Φ69 x 30 |       | Φ87 x 27 |       |
| Motor Configuration            | -     | 12N14P   |      | 18N24P   |       | 24N28P   |       | 24N28P   |       | 36N42P   |       |
| Peak Thrust*                   | kg    | 4.7      | 4.8  | 2.6      | 3.3   | 4.8      | 3.9   | 6.4      | 5.5   | 11.6     | 12.0  |
| Internal Resistance            | mΩ    | 38.0     | 24.0 | 85.0     | 67.0  | 195.0    | 67.0  | 178.0    | 48.0  | 110.0    | 31.0  |
| Peak Current                   | A     | 84       | 77   | 25       | 30    | 21       | 28    | 24       | 44    | 45       | 90    |
| Maximum Input Power            | W     | 1865     | 1140 | 555      | 666   | 932      | 622   | 1066     | 977   | 1998     | 1820  |
| Magnet Wire Temperature Rating | °C    | 200      | 200  | 200      | 200   | 200      | 200   | 200      | 200   | 200      | 200   |
| Propeller Recommendation       | in    | 9-11     | 8-10 | 16-17    | 15-16 | 17-18    | 17-18 | 20-22    | 20-22 | 29-32    | 28-30 |
| Battery Voltage                | -     | 6S       | 4S   | 6S       | 6S    | 12S      | 6S    | 12S      | 6S    | 12S      | 12S   |

\* Assumes forced air with typical propeller.

