

Absolute Flight Control Authority



Northwest UAV
A GLOBAL COMPANY
EXCLUSIVE US DISTRIBUTOR

Pegasus
Actuators GmbH

PRECISION CONTROL FOR MISSION-CRITICAL UAS HIGH-PERFORMANCE ACTUATORS BUILT FOR RELIABILITY AND ENDURANCE

Pegasus builds high-performance actuators for unmanned systems. Our hardware ensures stable flight control and precise positioning. We build tools for operators who value mechanical certainty. These servos thrive in harsh environments where failure is simply not an option.

01. Zero-Backlash Gears Ensure Absolute Precision for Every Movement
02. Fail-Safe Redundancy Maintains Control During Component Failures
03. In-house German Manufacturing Ensures Total Quality and Delivery

MILITARY PROVEN PROPULSION SOLUTIONS!



ENGINEERING UNFAILING PRECISION

HIGH-PERFORMANCE ACTUATORS FOR UNCOMPROMISING ENVIRONMENTS

Pegasus builds actuators for drones where failure is not an option. Our hardware delivers high torque and minimal weight to maximize flight endurance. Reliability is the only metric that matters.

01. INDUSTRIAL SERVO ACTUATORS



- PA-R-135-4:** The smallest professional actuator in its class. Its micro-low-profile design fits where others cannot.
- PA-R-135-6:** A high-torque variant of the 135-4. We optimized the software and increased the gear reduction to deliver more power in the same footprint.
- PA-R-146-4:** Is our smallest servo actuator. It delivers precision and power in cramped spaces. Trust
- this unit for missions where reliability is mandatory and every millimeter counts.
- PA-R-205-4:** Built for endurance. This compact unit handles industrial-grade cycles with high reliability.
- PA-R-205-5:** The high-altitude specialist. This brushless model is engineered to operate reliably at 60,000 feet.
- PA-R-205-6:** A performance-tuned version of the 205-4. It uses a more powerful motor and refined software to manage heavier loads.
- PA-R-250-8:** Precision meets speed. Brushless technology and contactless sensors eliminate wear and ensure repeatable accuracy.
- PA-R-250-9:** The industry leader in power-to-weight ratio. We upgraded the motor and reinforced the housing for maximum output with minimal mass.
- R-340-7:** Field-proven for speed. It responds instantly even under significant torque.
- PA-R-340-9:** A heavy-duty workhorse. This model provides 50% more continuous torque than the 340-7 for sustained, high-load operations.
- PA-R-440-7:** Our most powerful unit. It delivers 35 Nm of torque through hardened steel gears and ten precision bearings, limiting backlash to just 0.4°.

Servo Actuator	Continuous Torque	Maximum Torque	Operating Voltage	No Load Speed		
PA-R-135-4	30 Ncm	60 Ncm	6, 12 or 24VDC	410°/sec @ 6VDC	405°/sec @ 12VDC	405°/sec @ 24VDC
PA-R-135-6	45 Ncm	90 Ncm	6, 12 or 24VDC	145°/sec @ 12VDC		
PA-R-146-4	30 Ncm	—	6 or 12VDC	190.05°/sec @ 6VDC 209°/sec @ 12VDC		
PA-R-205-4	80 Ncm	200 Ncm	6, 12 or 24VDC	255°/sec @ 12VDC 245°/sec @ 24VDC		
PA-R-205-5	145 Ncm	350 Ncm	12 or 24VDC	150°/sec @ 24VDC		
PA-R-205-6	180 Ncm	350 Ncm	6, 12 or 24VDC	180°/sec @ 12VDC 175°/sec @ 24VDC		
PA-R-250-8	300 Ncm	500 Ncm	12 or 24VDC	195°/sec @ 12VDC 210°/sec @ 24VDC		
PA-R-250-9	400 Ncm	700 Ncm	24VDC	185°/sec @ 24VDC		
PA-R-340-7	850 Ncm	1800 Ncm	12 or 24VDC	210°/sec @ 12VDC 210°/sec @ 24VDC		
PA-R-340-9	1200 Ncm	2100 Ncm	24VDC	205°/sec @ 24VDC		
PA-R-440-7	2000 Ncm	3500 Ncm	24VDC	90°/sec @ 24VDC		

02. REDUNDANT SERVO ACTUATORS



- PA-RR-260-8:** The first small-scale redundant actuator designed for unmanned systems. It sets a new standard for reliability by eliminating single points of failure in compact airframes.
- PA-RR-260-9:** Built for missions requiring higher output than the 260-8. It provides the same fail-safe redundancy with significantly more mechanical force.
- PA-RR-340-7:** This unit utilizes the proven architecture of our industrial-grade PA-R-340-7. We integrated dual-channel redundancy into a flight-tested platform you already trust.
- PA-RR-340-9:** A high-torque version of the 340-7 series. It combines industrial durability with the multi-layered safety protocols necessary for heavy-lift or long-endurance operations.
- PA-RR-720-7:** The most capable redundant actuator in our lineup. Delivering 35 Nm of torque, it provides the massive power required for primary flight controls on large-scale platforms.

02. REDUNDANT SERVO ACTUATORS (continued)

Servo Actuator	Continuous Torque	Maximum Torque	Operating Voltage	No Load Speed
PA-RR-260-8-OPV	300 Ncm	500 Ncm	24VDC	210°/sec @ 24VDC
PA-RR-260-9-OPV	400 Ncm	700 Ncm	24VDC	170°/sec @ 24VDC
PA-RR-340-7-OPV	850 Ncm	1800 Ncm	24VDC	200°/sec @ 24VDC
PA-RR-340-9-OPV	1200 Ncm	2100 Ncm	24VDC	200°/sec @ 24VDC
PA-RR-720-7-OPV	2000 Ncm	3500 Ncm	24VDC	90°/sec @ 24VDC



OPTIONALLY PILOTED VEHICLES (OPV) SERVO ACTUATORS FOR SAFETY-CRITICAL (UN)MANNED SYSTEMS

The clutch output is directly coupled to the internal deflection angle sensor of the actuator – the OPV servo will not lose position if the clutch is disengaged. The clutch can be engaged or disengaged in any position.



03. INDUSTRIAL OPV SERVO ACTUATORS

- PA-R-250-8 OPV¹:** Engineered for high-speed positioning and high-torque demands. It delivers rapid, precise response times in heavy-load environments.
- PA-R-250-9 OPV¹:** The high-output evolution of the 250-8. Use this model when your mission requires the same proven reliability with significantly more mechanical force.
- PA-R-340-7²:** A foundational component of our lineup. This actuator has spent years proving its durability through consistent, long-term field performance.
- PA-R-340-9²:** The power-optimized version of the 340-7. It provides an aggressive torque increase for applications that outpace standard industrial limits.
- PA-R-440-7-OPV²:** Our highest-capacity industrial unit. Based on the rugged 440-7 architecture, it generates a massive 35 Nm of torque for the most demanding flight surfaces.

Servo Actuator	Continuous Torque	Maximum Torque	Operating Voltage	No Load Speed
PA-R-250-8-OPV	300 Ncm	500 Ncm	12 or 24VDC	195°/sec @ 12VDC 210°/sec @ 24VDC
PA-R-250-9-OPV	400 Ncm	700 Ncm	24VDC	185°/sec @ 24VDC
PA-R-340-7-OPV	850 Ncm	1800 Ncm	12 or 24VDC	210°/sec @ 12VDC 210°/sec @ 24VDC
PA-R-340-9-OPV	1200 Ncm	2100 Ncm	24VDC	205°/sec @ 24VDC
PA-R-440-7-OPV	2000 Ncm	3500 Ncm	24VDC	95°/sec @ 24VDC

04. REDUNDANT SERVO OPV ACTUATORS

- PA-RR-260-8¹:** The first compact redundant actuator designed specifically for unmanned systems. It eliminates single points of failure to protect your aircraft and its payload.
- PA-RR-260-9¹, 340-7², & 340-9²:** High-reliability redundant servos for safety-critical platforms. These units provide the fail-safe security necessary for operating in restricted or sensitive airspace.
- PA-RR-720-7²:** The ultimate powerhouse for redundant systems. By combining the 340-9 architecture with reinforced bearings and specialized software, it achieves 35 Nm of sheer, fail-safe torque.

Servo Actuator	Continuous Torque	Maximum Torque	Operating Voltage	No Load Speed
PA-RR-260-8	300 Ncm	500 Ncm	24VDC	210°/sec @ 24VDC
PA-RR-260-9	400 Ncm	700 Ncm	24VDC	170°/sec @ 24VDC
PA-RR-340-7	850 Ncm	1800 Ncm	24VDC	200°/sec @ 24VDC
PA-RR-340-9	1200 Ncm	2100 Ncm	24VDC	200°/sec @ 24VDC
PA-RR-720-7	2000 Ncm	3500 Ncm	24VDC	90°/sec @ 24VDC

¹ In conjunction with our PA-RA-3 electromagnetic OPV clutch-assembly this makes a perfect OPV-servo. | ² In conjunction with our PA-RA-4 electromagnetic OPV clutch-assembly this makes an outstanding OPV-servo.

IH ACTUATORS

REDUNDANT SERVO ACTUATORS WITH INTERNAL HEATING

Pegasus PA-RR-xxx-IH actuators thrive at -84°C. Redundant internal heaters ensure high-altitude UAVs start and fly safely. Expect reliable performance for critical systems. These units operate where standard hardware fails.

- **Dual-redundant heating architecture** – Two independent heating units with independent power supplies keep the internal mechanics and electronics within their operational window.
- **Field-proven across generations** – Pegasus has delivered redundant servo actuators with integrated heating for more than ten years, with reliable operation across multiple platform generations – from early demonstrators to current production aircraft.

SPECIAL DEVELOPMENTS & PRODUCTS

CUSTOM PEGASUS ACTUATORS BUILT TO YOUR EXACT SPECIFICATIONS

Pegasus offers OEM (COTS) made versions of the actuators. They will work with you to develop an actuator solution that meets or exceeds your system's requirements.

- **PA-R-800-9-C-24-180-00 OPV Servo Actuator:** An integrated version of the PA-R-340-9 and the PS-R-4 electromagnetic clutch assembly with a compact weight and space saving case.
- **HALE Redundant Servo Actuators:** With an integrated (redundant) heating system. The case is designed to keep all internal components to environmental/temperature specifications.
- **PA-R-340-7 Simplex Duplex :** The PA-R-340-7 with PA-RA-7 magnetic clutch assembly, a simple way to add security. Fully redundant, simple duplex configuration.



CANopen OPTION AVAILABLE

CANopen AN ALTERNATIVE COMMUNICATION PROTOCOL

In addition to the standard redundant RS485 data protocol, Pegasus offers CANopen as an alternative communication protocol for all redundant servo types and most industrial servo types. This allows easier integration into existing CANopen-based system architectures. Please contact Northwest UAV for details.

For Questions on Pegasus Product Prices, Capabilities, Custom Integration, Training & Support contact David Jackson 503.434-6845 x185 customerservice@nwuav.com