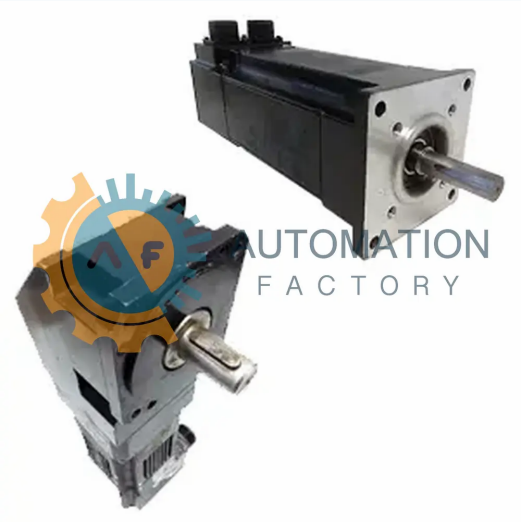
Pacific Scientific — R Servomotors

R63HEAA-R2-NS-NV-00



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Pacific Scientific's **R63HEAA-R2-NS-NV-00** belongs to the R Servomotors series and serves as a brushless servo motor for industrial automation axes that require tight speed and position control. Its 5.75-inch square frame and inch-based mounting pattern allow installation in gantries or conveyor drives without special adapters. Rare-earth samarium-cobalt magnets and a high-speed winding provide rapid response, while the standard housing protects the stator in typical industrial environments.

At rated conditions, the rotor turns at **6000 rpm** while producing **8.3 Nm of continuous stall torque** with a **27.0 A continuous stall current**. During acceleration, the motor can generate **20.5 Nm of peak torque** when the amplifier delivers a **164 A peak current**. A torque constant of 0.33 Nm/A relates terminal current to shaft torque, and static friction is limited to 0.16 Nm before movement begins. The 2.2 mH phase inductance, together with a cold resistance of 0.23 ? that rises to 0.34 ? when hot, affects current rise and copper losses. Viscous damping is 0.046 Nm/krpm, and the 3-inch stack length works with the rare-earth magnets to sustain torque at elevated speeds.

The rotor has **0.00079 kg·m² of inertia**, supporting responsive and stable motion during repeated acceleration and deceleration. The motor has an overall mass of 13 kg. Shaft holding is provided by a **24 V DC brake**, and position feedback comes from a transmitter-type Size 21 frameless resolver; no secondary feedback device is included. Because the motor does not have a shaft seal, the installation should prevent contaminants from reaching the coupling. Heat transfer to the frame is characterized by a **0.51 °C/W thermal resistance**. The motor reaches

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thermal steady state according to a **19-minute thermal time constant**, which can be used in drive-based thermal models.

Specifications

Continuous Stall Current:	27.0 A	**Continuous Stall Torque:**	8.3 Nm	**Current At Peak Torque:**	164 A
Frame Size:	5.75" Square	**Holding Brake:**	24V dc brake	**Housing Style:**	Standard
Inductance (l-l):	2.2 mH	**Inertia:**	0.81 kgm²x10?³	**Magnet Material:**	Rare earth (samarium cobalt)
Mass:	13 kg	**Mounting Type:**	English	**Peak Torque:**	20.5 Nm
Primary Feedback:	Frameless resolver, transmitter type, size 21	**Product Type:**	Servo Motor	**Rated Speed (RPM):**	6000
Resistance (l-l, Cold):	0.23 Ohm	**Resistance (l-l, Hot):**	0.34 Ohm	**Rotor Inertia:**	0.00079 kg·m²
Secondary Feedback:	No secondary	**Shaft Seal:**	No shaft seal	**Stack Length:**	3 inches
Static Friction:	0.16 Nm	**Thermal Resistance:**	0.51 °C/W	**Thermal Time Constant:**	19 min
Torque Constant (l-l, Peak):	0.33 Nm/A	**Viscous Damping coefficient:**	0.046 Nm/Krpm	**Winding Type:**	High Speed
Last Verified:	11/19/2026 10:05 AM				

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