

Centurion™ Servo Systems



G & L Motion Control Inc.

Centurion – Robust, Easy-to-Apply, High Performance Servo Systems

Motion application engineers look to Centurion servo amplifiers and motors for ease of application, exceptional reliability and best value.

Centurion Servo Systems Offer:

- Fully digital amplifiers delivering 500W to 22kW continuous power.
- Amplifiers with integral power supplies to simplify installation.
- Five motor families:
 - XSM – low inertia/high torque; very compact
 - HSM – low inertia/high performance
 - FSM – robust medium inertia
 - YSM – high power density package
 - NSM – NEMA mount servo motors
- Windows®-based software for simple point-and-click system configuration.
- A versatile choice of command source:
 - SERCOS digital fiber optic
 - +/- 10 volt analog velocity, position or torque
 - Step/direction input with electronic gearing
 - Electronic gearing to auxiliary encoder
 - RS232/RS485 host command language
- Self-protection to prevent failure:
 - Short circuit (phase-to-phase, phase-to-ground)
 - Over voltage, over current and over temperature
- Fully digital current, velocity and position loop control.
- Extremely smooth sinusoidal commutation.
- Wide voltage supply range 100 to 528 VAC single and three phase.
- High-quality, plug-and-play cable sets for easy installation, 360 shielding for superior noise immunity.
- Oscilloscope function for easy troubleshooting.
- Built-in positioning capability for stand-alone applications.

Centurion Amplifiers

Centurion offers exceptional versatility. Whether you need a stand-alone position control solution, a digitally interfaced SERCOS drive, a stepper motor replacement, or a traditional analog interfaced servo amplifier, Centurion meets your needs.

Using fully digital control, Centurion provides high performance in a robust system that will install, start-up and run reliably.

With UL, cUL and CE markings, the Centurion family is ready for application worldwide.



Designed and tested for the ultimate in reliability, Centurion offers the best value in servo control.

Micro DSA	DSA 230	DSA 460
0.5 kW	3.0 kW	3.0 kW
1.0 kW	7.5 kW	5.0 kW
2.0 kW	15 kW	10 kW
		15 kW
		22 kW

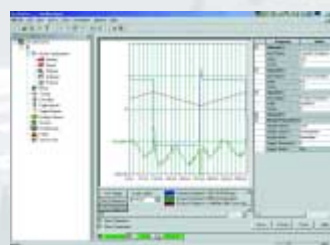
DSAPro Configuration Software



DSAPro Windows-based configuration software makes the set-up, commissioning and maintenance of the Centurion system an intuitive point-and-click exercise. From motor selection to configuration to autotuning to control integration, DSAPro addresses all aspects of Centurion system start-up, application and maintenance.

DSAPro is loaded with

features to simplify start-up and maintenance. The on-screen digital oscilloscope aids in tuning and diagnostics. You can access the drive status display for current system status or check the fault history to see the non-volatile list of error messages. With features ranging from on-line help to on-screen meters, DSAPro makes application and maintenance of Centurion systems easy.

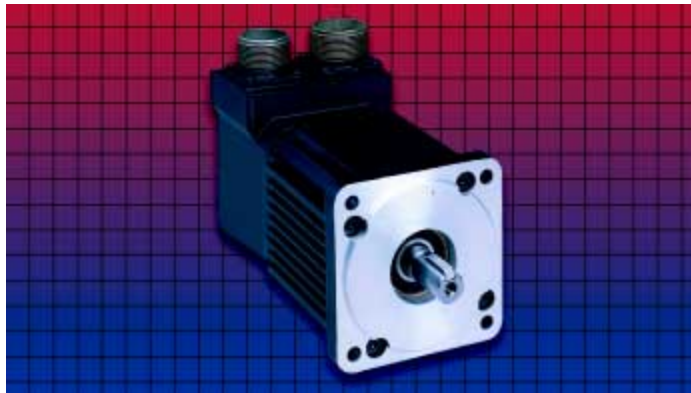


Get The Performance You Want and the Reliability You Need



XSM Servo Motors

The XSM family provides high torque in a small package. A very low inertia rotor combined with high torque provides the fastest accelerations possible for the package size. There are several IEC mounting flanges available. The broad continuous power range from 4 to 900 in-lb (.5 to 100 Nm) and multiple speed windings offer very cost effective solutions. Multi-turn absolute, and high resolution feedback are options as well as integral 24 VDC brakes. Typical applications include indexing, palletizing, robotics, label heads, and many other applications requiring high accelerations.

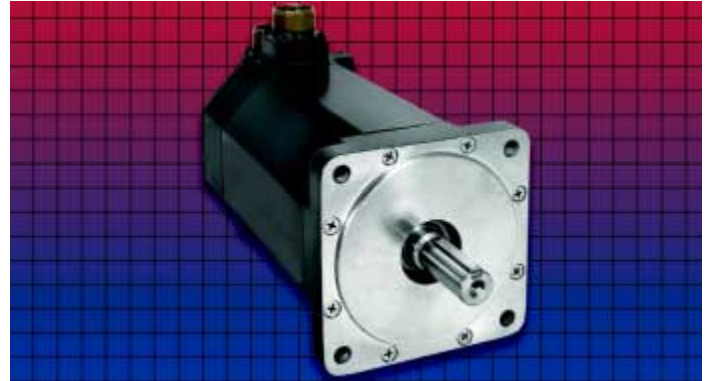


HSM Servo Motors

The HSM family of servo motors is ideal for applications that require high acceleration and peak torque. With their IP65 environmental rating, they're built to last in harsh industrial applications. HSM motors deliver continuous torque of 5 to in-lb (0.5 to 50 Nm) and speeds to 6000 RPM. They are ideal for high hit rate applications including packaging machinery, label applicators, feed-to-length machinery and smart conveyors.

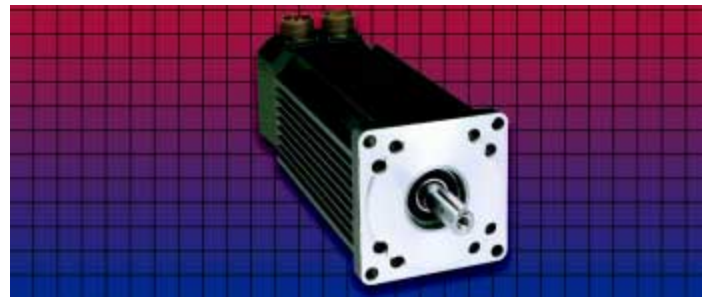
Custom Servo Motor Capabilities

The Centurion amplifier family can be configured to operate any brushless AC servo. If your application has special requirements, we can meet the challenge with our broad range of custom servo motor solutions.



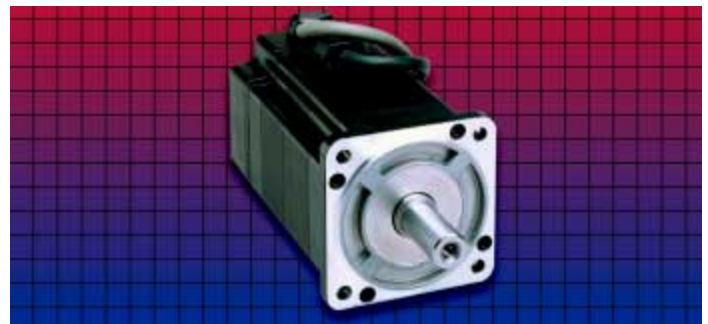
FSM Servo Motors

The FSM motor family provides a robust medium rotor inertia solution. The higher inertia is ideal for heavy machinery. Continuous torque of 31 to 245 in-lb (3.5 to 28 Nm) and speeds to 4000 RPM are available. Applications range from metal cutting to converting machinery.



YSM Servo Motors

The YSM family provides small, low inertia servo motors in three metric frame sizes. Continuous torque capability of 1.5 to 22 lb-in (0.17 to 2.5 Nm) and speeds to 4500 RPM are available. Typical applications include robotics, material handling, X-Y tables and specialty machinery.



NSM Servo Motors

NEMA 23, 34, 42 and 56 frame sizes allow easy integration of NSMs with other NEMA format components. Also, the NSM family provides an ideal servo alternative to stepper motors. Continuous torque of 1.6 to 52 lb-in (0.18 to 5.9 Nm) with speeds of up to 6000 RPM are available. Typical applications range from semiconductor manufacturing to web processing.

Centurion Positioning Drives

Servo amplifiers with built-in motion control

Use the built-in motion control capability found in Centurion positioning drives for a cost-effective solution to simple applications. Initiate moves simply using discrete I/O commands. Since no external motion control is required, you can automate applications previously considered too cost-sensitive for servo control.

The positioning drives support three types of index moves:

- **Incremental** – distance move which executes relative to present position
- **Registration** – distance move which executes relative to the registration sensor digital input
- **Absolute** – position move executed in reference to the home position.



Model	Package	Continuous Output	Dimensions: inches (mm) W x H x D
DSA 007-230	Micro	0.5 kW	6.5 (165) x 2.8 (71) x 5.2 (132)
DSA 015-230	Micro	1.0 kW	6.5 (165) x 3.8 (97) x 5.2 (132)
DSA 030-230	Micro	2.0 kW	6.5 (165) x 3.8 (97) x 5.2 (132)
DSA 130-230	Standard	3.0 kW	13.2 (335) x 3.6 (91) x 8.9 (226)
DSA 175-230	Standard	7.5 kW-3	13.2 (335) x 5.4 (139) x 8.9 (226)
DSA 1150-230	Standard	15.0 kW-3	13.2 (335) x 7.4 (189) x 8.9 (226)
DSA 014-460	Standard	3.0 kW-3	13.2 (335) x 5.5 (139) x 8.9 (226)
DSA 022-460	Standard	5.0 kW-3	13.2 (335) x 5.5 (139) x 8.9 (226)
DSA 046-460	Standard	10.0 kW-3	13.2 (335) x 6.0 (157) x 8.9 (226)
DSA 068-460	Standard	15.0 kW-3	13.2 (335) x 6.0 (157) x 8.9 (226)
DSA 094-460	Standard	22.0 kW-3	14.3 (363) x 8.0 (203) x 8.9 (226)

Centurion Feature	Model	
	Micro DSA	Standard DSA
Programmable Digital Inputs	8	8
Programmable Digital Outputs	4	4
Programmable Relay Output	1	1
Analog Inputs	2	2
Analog Outputs	1	1
Encoder Feedback	AB Quad/SinCos Abs.	AB Quad/SinCos Abs.
Master Encoder Input	AB Quad	AB Quad
Peak Current	3 times rated current	2 times rated current
Internal Shunt	No; external shunt available	Yes
Internal I/O Power Supply	No; separate 24V required	Yes
Positioning Drive Option	Yes, optional	Yes, optional
SERCOS Interface Option	Yes	Yes

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