# **MORE FROM YOUR MACHINE**

## Seven advances that give Sigma-7 greater automation effectiveness

Sigma-7 is engineered to bring new responsiveness, reliability and effectiveness to the automation that powers your productivity. The Sigma-7 family of rotary, direct drive and linear servo products continue the legacy of the Sigma series, which has set the standard in innovation and reliability for a quarter century.

#### IMPROVED PERFORMANCE

Nearly double the servo bandwidth of the Sigma-5 series, with increased feedback resolution and improved vibration suppression functions that maximize your machine's speed and accuracy.

#### EASIER APPLICATION

Automatic servo tuning right out of the box, plus software that makes automation commissioning faster and easier.

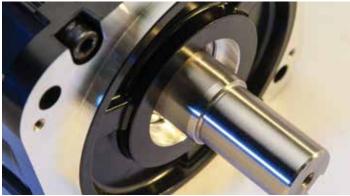
#### **MORE CHOICES**

A full range of standard, direct drive and linear servos from 50W to 15kW, ready to interface with the most indemand motion networks.

#### ENVIRONMENTALLY FRIENDLY

Able to withstand more rigorous environmental conditions, with features that conserve energy without compromising performance.









#### **SMALLER SIZE**

Dual-axis SERVOPACKs and smaller motor sizes to meet end-user demands for a more compact machine footprint.

#### SAFETY AND SECURITY

New designs which improve machine safety, temperature performance and servo motor life, simplifying machine design and maintenance.

#### EASY COMPATIBILITY

Sigma-7 directly replaces Sigma-5, offering a performance boost without the need to change any element of your system design.





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# **PERFORMANCE** FACTS

## **EXAMPRODUCT PRODUCT PORTFOLIO**

### 3.1 kHZ FREQUENCY RESPONSE

Nearly double the servo bandwidth of the Sigma-5 systems that set the industry standard in performance

#### **NEW TUNING FUNCTIONS**

Vibration suppression, anti-resonance compensation, friction model compensation and ripple compensation improve machine speed, accuracy and smoothness

#### **IMPROVED TUNING-LESS MODE**

Delivers reliable stability with inertia ratios up to 30:1. Tuning gains adjust automatically and continually to provide consistent motion despite load changes

#### 24-BIT ABSOLUTE ENCODER FEEDBACK

Provides 16 times better resolution than the industry-leading Sigma-5

### **20% REDUCTION**

Motor size and motor heating reduced for better efficiency and easier implementation

#### NEW DUAL-AXIS SERVOPACKS

Save space and reduce enclosure size





Five different sizes and six gear ratios, all factory tested for guaranteed performance.

#### SIGMA-5 COMPATIBILITY

Interchangeable mounting dimensions, parameters convert to Sigma-7 with SigmaWin+ software (included at no charge)

### NETWORK COMPATIBILITY

Includes built-in MECHATROLINK-III, EtherCAT and analog interfaces

#### **BUILT-IN SAFETY**

Features with IEC 61508, SIL 3 Safe Torque Off in Sigma-7 SERVOPACKs

#### **NEW THERMAL SENSORS**

Thermal sensors on servo motors and SERVOPACKs directly monitor machine temperatures

#### BETTER RATINGS

At higher temperature environments (60°C ambient), at higher altitudes (>2,000 meters) or in harsh motor environments (IP67 rated)

### **REGENERATIVE POWER SHARING**

Available for dual-axis SERVOPACKs or DC-Bus connections with single-axis SERVOPACKs

### SERVICE LIFE MONITORING

Offers preventive maintenance data on key SERVOPACK components



# SGMMV 3V



100/200 V Servo Motors

SGM7A 50 W - 7 kW SGM7J

**STANDARD ROTARY** 

Low Inertia

complete motion automation system.

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50 W - 750 W



**Medium Inertia** 

SGM7G 300 W - 15 kW



**Control Interface Options:** EtherCAT, MECHATROLINK (Analog 100 V SERVOPACKs available from 50-400W)

The world's largest manufacturer of servo motors brings 25 years of design innovation into each Sigma-7 rotary servo. Choose from a wide range of sizes, speeds and torque ratings, then add an amplifier and an MPiec controller to create a



 
 SGD7S
 500 W - 15 kW
 SGD7W
 750 W - 1.5 kW per axis

Control Interface Options: EtherCAT, MECHATROLINK

#### DIRECT DRIVE ROTARY

Direct drive products save space, eliminate backlash and cut component costs, adding extra mechanical strength to stiffen dynamic applications.



### DIRECT DRIVE LINEAR

Maximum speed and acceleration for linear motion. Choose from four designs to reduce compliance, replace mechanical linkages and create a better fit for your application.





Control Interface Options: EtherCAT, MECHATROLINK