



ECLIPSE™ PRODUCTS  
FOR THE

# ROBOTICS INDUSTRY

APPLICATION GUIDE

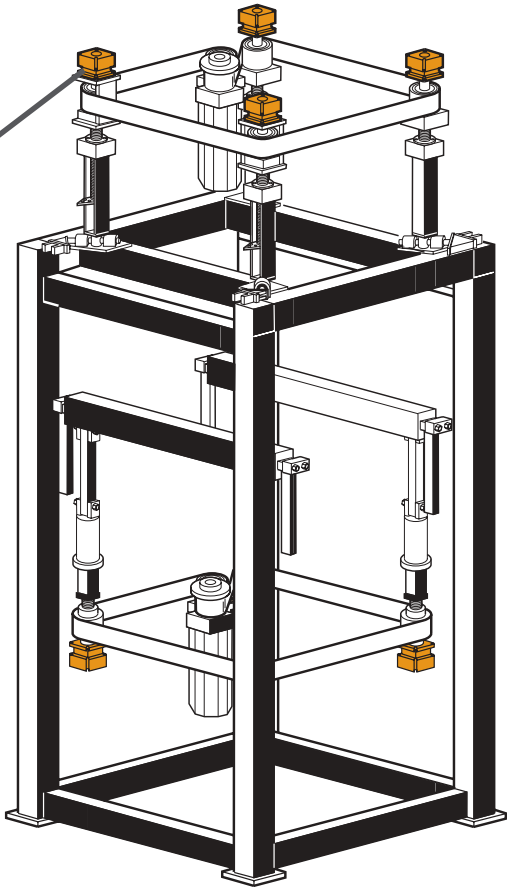
NEXEN SOLUTIONS FOR YOUR ROBOTIC SAFETY CHALLENGES

» An internationally recognized motion control leader, Nexen now offers a complete line of Eclipse™ Servomotor Brakes to protect your robotics machines and operators. These brakes engage in power-off / emergency situations with enough torque to stall a servomotor. Nexen servomotor brakes also function as limiting devices to restrict the robot envelope during operation.

Nexen's Eclipse technology features a patented braking design unmatched by the competition. Spring engaged with high torque, these low-inertia servomotor brakes fit on the front mounting face of servo and stepper motors. With a variety of sizes, mounting configurations, and torque offerings, Nexen has a servomotor brake to fit almost any motor produced. Let us help you find the right servomotor brake for your robotics applications. Start benefiting from our fail-safe technology and protect your investment.

RECTANGULAR ROBOT

**Size 3 & 4 Servomotor Brakes**  
**Function:** Able to repeatedly stop and hold in challenging cyclic operations, these servomotor brakes also offer a safety feature to this robot. If a belt breaks, the servomotor brake instantly engages to hold the load securely.



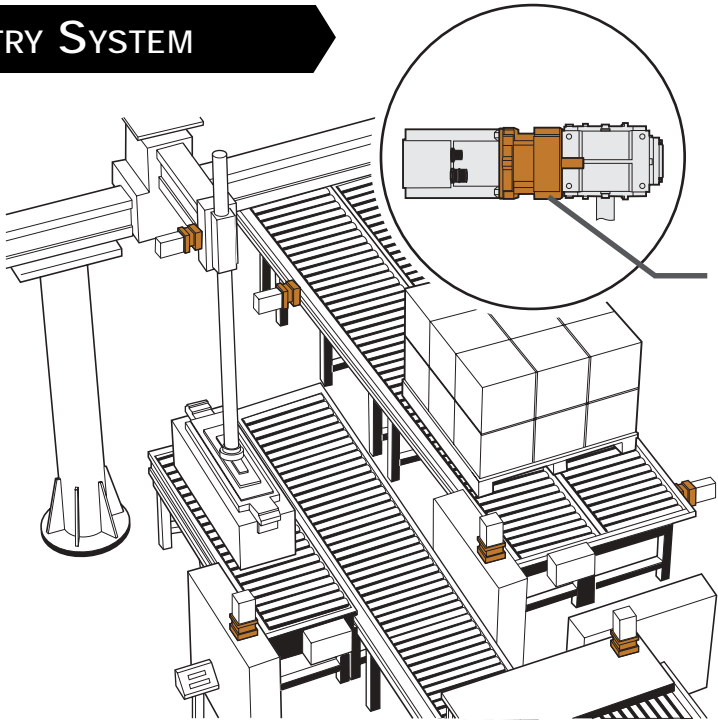
HIGH TORQUE

Eclipse servomotor brakes deliver up to 40% more torque than the highest rated continuous stall servomotor. This completely eliminates the possibility of overrunning the brake, making them safer, stronger and more efficient than any other braking option.

DESIGN FLEXIBILITY

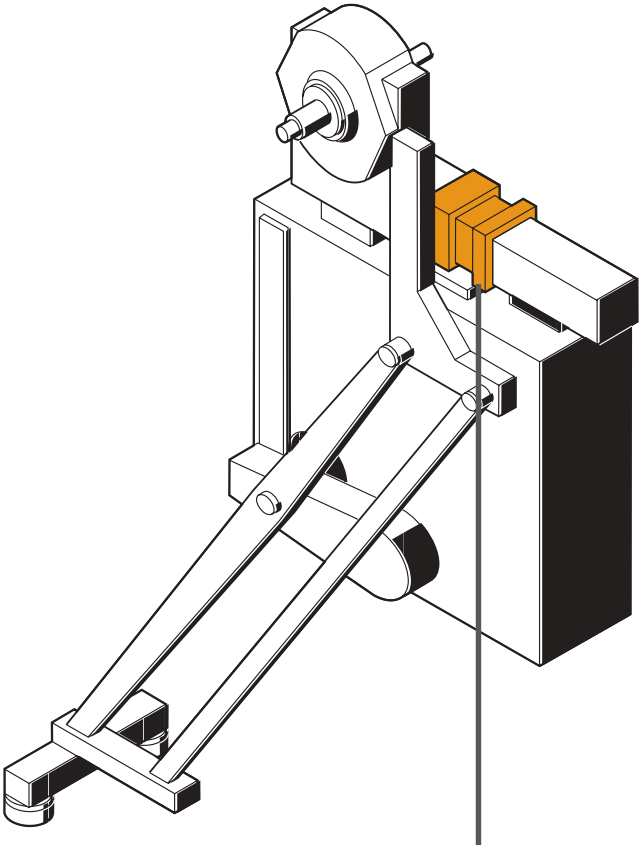
Eclipse servomotor brakes feature a flange-mounted design that includes so many configurations it can fit virtually every servomotor. The brake flange replicates the servomotor flange, making retrofits on existing designs quick and easy across the board. This vast array of flange options, transforms what was once custom design into Eclipse standard. No special ordering, no lengthy waiting: Eclipse saves you time, consolidates resources, and lowers inventory costs.

GANTRY SYSTEM

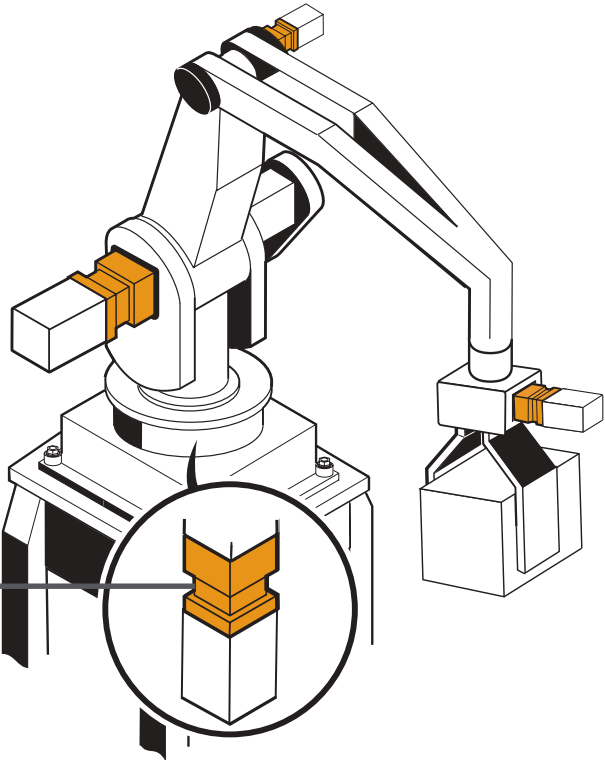


**Size 4 & 5 Servomotor Brakes**  
**Function:** In emergency stop situations, these brakes stop the loads quickly and safely.

ARTICULATING ARM



**Size 3-11 Servomotor Brakes**  
**Function:** The servomotor brake holds each joint securely to prevent any arm movement during power-off situations.



# Eclipse™ Design Specifications

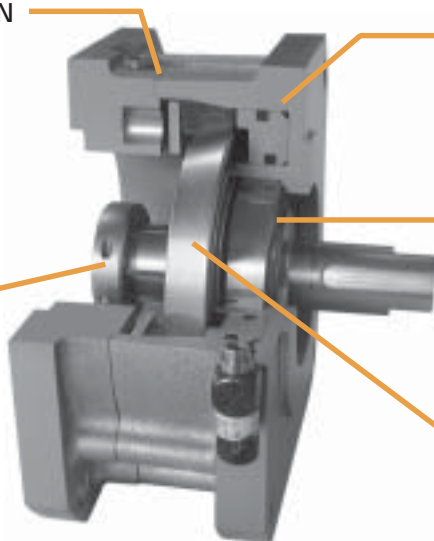
Frame Size	Horsepower	Shaft Diameter	Pilot Diameter	Bolt Circle Diameter	Maximum Continuous Torque	Eclipse Size
NEMA 23, 2.25	0.40–0.53	0.250, 0.375	1.500	2.625	2.25 Nm [20 in-lb]	SBP 2
NEMA 34, 3.25	0.27–1.01	0.375, 0.500	2.875	3.875	8 Nm [70 in-lb]	SBP 3
NEMA 42, 4.25	1.01–2.00	0.500, 0.625	2.187	4.950	22 Nm [200 in-lb]	SBP 4
60 mm	0.40–0.53	11, 14 mm	50, 60 mm	70–90 mm	2.25 Nm [20 in-lb]	SBP 2
80 mm	0.27–1.01	14, 16 mm	70, 80 mm	90–109 mm	8 Nm [70 in-lb]	SBP 3
120 mm	1.01–2.00	16, 19, 22, 24 mm	95, 110 mm	126–150 mm	22 Nm [200 in-lb]	SBP 4
130 mm	0.60–1.70	24, 28, 32 mm	110, 131 mm	150–186 mm	45 Nm [400 in-lb]	SBP 5
180 mm	2.40–10	32, 35 mm	130, 180 mm	200, 215 mm	125 Nm [1100 in-lb]	SBP 7
220 mm	15	38, 42 mm	180 mm	215 mm	125 Nm [1100 in-lb]	SBP 9
220 mm	20	35, 48 mm	250 mm	300 mm	125 Nm [1100 in-lb]	SBP 11

## WASH-DOWN PROTECTION

Sealed or optional nickel plated iron anodized aluminum housing offers wash-down protection and meets IP67 standards.

## ZERO-BACKLASH

Keyless split-hub shaft collar prevents backlash.



## ZERO HEAT

Air chamber adds virtually no heat, providing a cooler operation and longer life.

## EXTRA STRENGTH

Large ball bearings increase the capability for handling overhung loads.

## LOW INERTIA

One-piece rotor/shaft assembly lowers inertia and eliminates spline for zero backlash.

**nexen**®

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For additional information and product specifications, please contact your local Nexen sales representative. Consult the Nexen website listed above for an office near you.