



PRODUCTS
FOR THE

TIRE INDUSTRY

APPLICATION GUIDE

NEXEN SOLUTIONS FOR YOUR TIRE PROCESSING CHALLENGES

As an internationally recognized industry leader offering a full range of motion control products as well as comprehensive custom engineering services, Nexen prides itself in producing the best brakes, clutches, clutch-brakes, and torque limiters in the industry. Simple designs with limited parts make these units easy to install and maintain. Nexen offers low-cost motion control products for sole and carcass calenders, belt preparation, carcass molding, sole bonding, tire building, and tire trimming processes. We also have a wide range of products suited for post-processing operations such as material handling, packaging and labeling. Nexen has been proving for years that our spring or air-engaged products last longer, respond faster, provide more torque and thermal horsepower, and consume less energy than comparable electric units. Find out for yourself. We guarantee your satisfaction.

MATERIAL HANDLING SYSTEMS

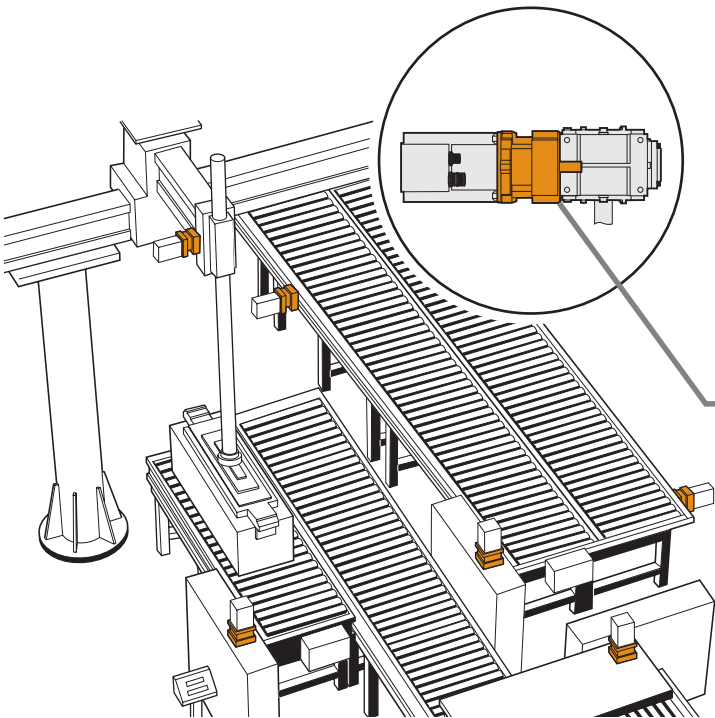
Live Roller Powered Conveyor

Clutch-Brake
Function: Used to start and stop conveyors, Nexen offers an extensive line of rugged clutch-brakes with a wide range of torque offerings.



Gantry System

Spring-Engaged Brakes
Function: Nexen's SE, FMCBES and Eclipse Servo Motor brakes are used on gantry conveying systems for holding and emergency stopping.



CALENDER OPERATIONS

Tooth Clutches
Function: Nexen's tooth clutches provide positive engagement and disengagement for accurate positioning of the nip rolls on the calender.

Caliper Brake
Function: Often found in a coupling mounted disc arrangement between the motor and reducer, spring-engaged caliper brakes provide emergency stopping capabilities.

Sole / Carcass Calender

Flange-Mounted Brakes Or Motor Brakes (not shown)
Function: Used in place of a caliper brake, Nexen's FMBES and EMB spring-engaged brakes provide the same emergency stopping capabilities with standard c-faced motors.

Tension Clutch
Function: These clutches provide tension on the rewind stand to ensure rubber and liner are wound together properly.

Edge Guide Sensor
Function: Nexen's line follower sensors monitor the position of web material and communicate misalignment to the web control.

Web Tension Control
Function: Using feedback from line sensors, Nexen web controls monitor tension on the rubber and fabric rolls and communicate with linear actuators or tension brakes to compensate for any tension disturbances.

Post-Calender Winding (Rubber with nonstick fabric liner)

Linear Actuator
Function: The linear actuator provided the thrust needed to move the unwind stand.

Tension Brake
Function: These brakes provide tension on the fabric unwind stand.

Nexen Product Briefs



Designed to dissipate heat away from the unit, Nexen's **tension control brakes and clutches** have high thermal capacities and long operating lives. Multiple actuators allow for versatile, precise tension control. Installation and maintenance are made easy by simple connections.

Offering complete **tension control systems** for open-loop/diameter compensating and closed-loop/load-cell (sensor) based tension control, Nexen's **web controls and sensors** work together to maintain the perfect tension. The load cell system produces accuracy of 1-2%; open-loop is about 8-10% accurate. Our **linear actuators** feature a built-in limit switch and positive thrust on wind and unwind stands.



Nexen offers both flange and shaft-mounted **clutch-brakes** for consistent control and accurate positioning on conveyor systems. A variety of designs and torque offerings for each mounting style provide a low-cost solution ensuring dependable motion control.

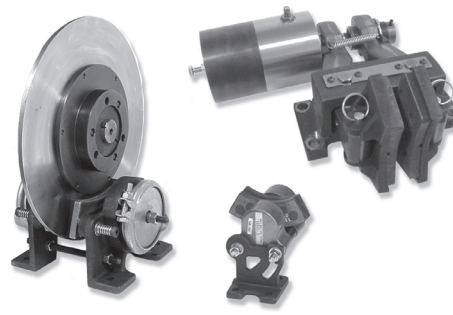
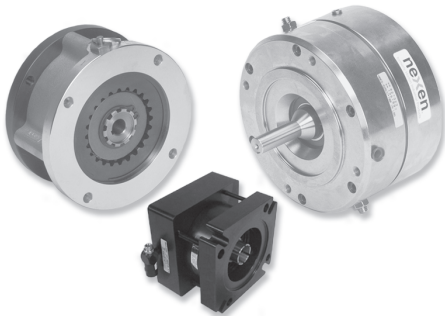


Nexen's **tooth clutches** provide fast, nonslip engagement in high torque applications. Inexpensive to operate and maintain, these clutches provide all the torque you need in a small package.

- Torque: 2.3-6214.1 Nm [20-55,000 in-lb]
- Multi-position and single position
- Positive engagement
- Flange or pilot mount

Designed for use in e-stop, controlled deceleration and holding applications Nexen's **spring-engaged brakes** have a high dynamic torque capacity that insures fast load response time.

- Torque: 2.3-6214.1 Nm [20-55,000 in-lb]
- Straight and tapered-bore shaft mounting
- NEMA C-faced mounting
- Servomotor brakes available



Nexen carries a variety of **caliper brakes** ideal for holding, e-stop, and controlled deceleration situations. Choose from ten standard models or we will custom design to fit your application.

- Torque: 2.3-5649.2 Nm [20-50,000 in-lb]
- Detent pins for quick facing changes
- Simple Design, easy to maintain
- Disc diameters: 203-620 mm [8-24 in]

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.