



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.

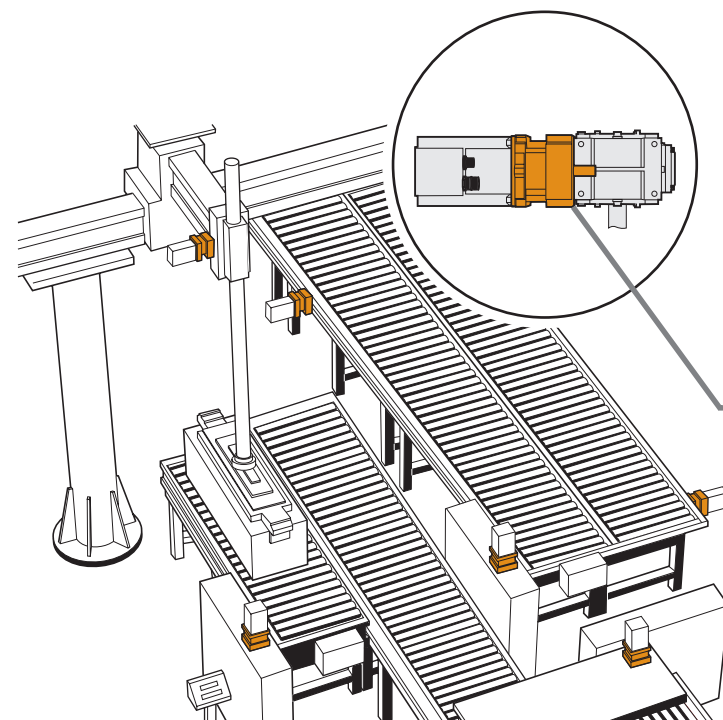
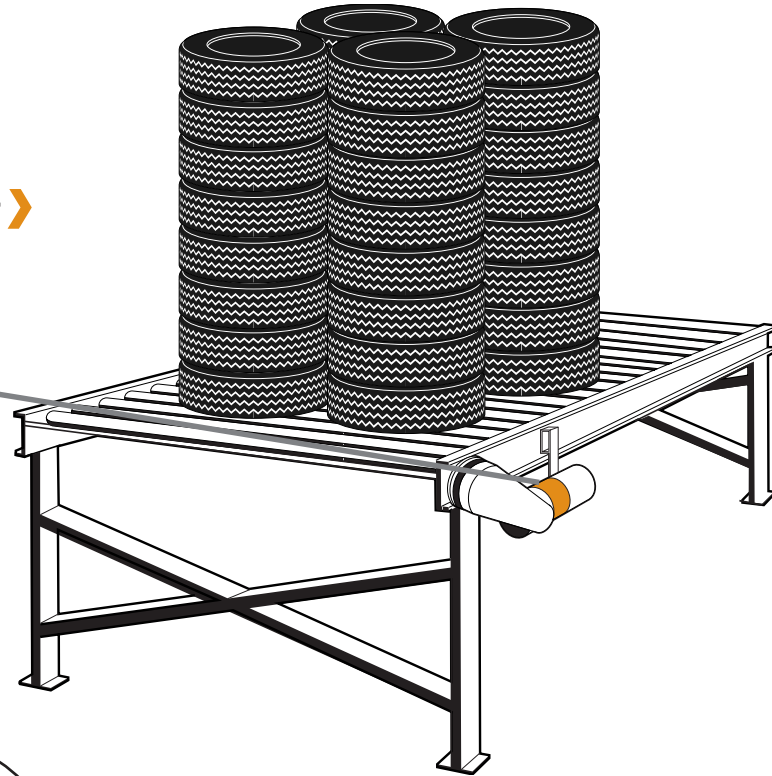
Nexen has been proving for years that our spring or air-engaged products last longer, respond faster, provide more torque and thermal horsepower, and consume less energy than comparable electric units. Find out for yourself. We guarantee your satisfaction.

### 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.

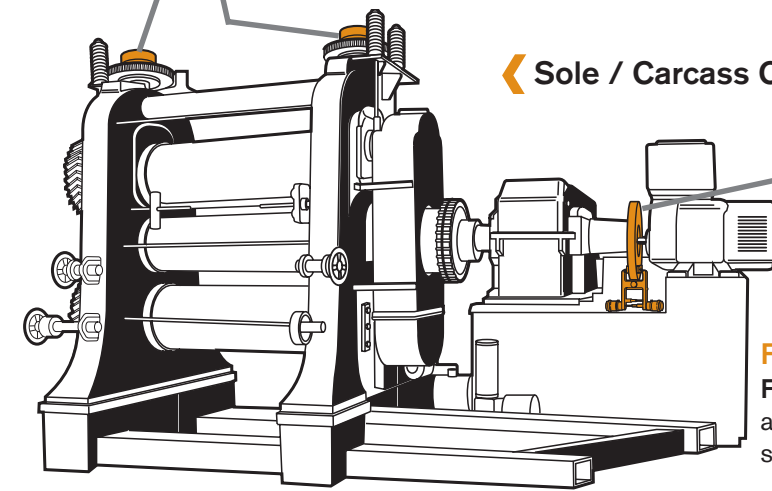
### CALENDER OPERATIONS

#### 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)

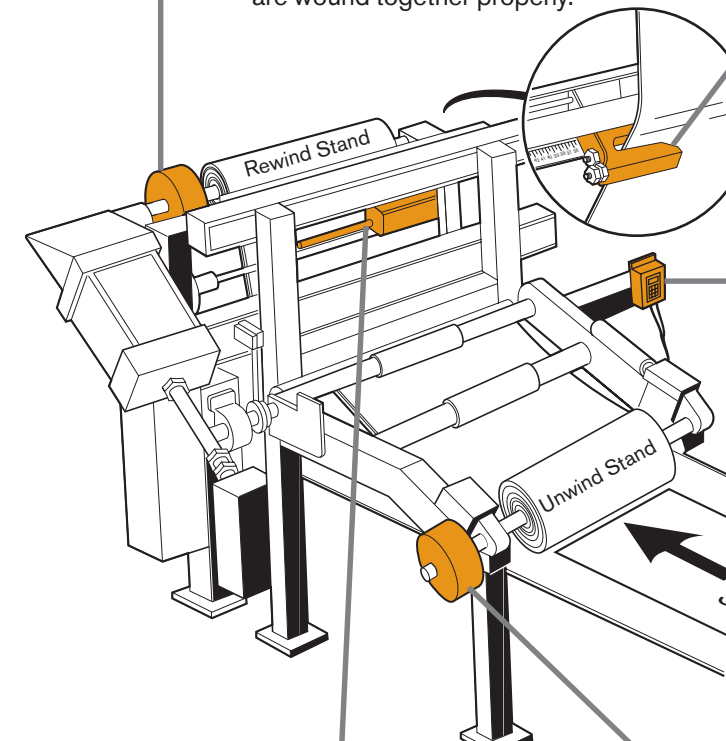
**Function:** Used in place of a caliper brake, Nexen's FMBES and EMB spring-engaged brakes provide the same emergency stopping capabilities with standard c-faced motors.

#### 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®

[www.nexengroup.com](http://www.nexengroup.com)

### Headquarters/The Americas

Nexen Group, Inc.  
 560 Oak Grove Parkway  
 Vadnais Heights, MN 55127-8509  
 Phone: 1-800-843-7445  
 or 651-484-5800  
 Fax: 651-286-1099

### Australia

Norman G. Clark (A/Asia) PTY. LTD.  
 44 Kylta Road  
 West Hiedelberg, Victoria 3081 Australia  
 Phone: 61-3-9457-5833  
 Fax: 61-3-9457-5781

### Europe

Nexen Europe Group  
 Koningin Astridlaan 59, B12  
 1780 Wemmel,  
 Brussels, Belgium  
 Phone: (32) 2 461-0260  
 Fax: (32) 2 461-0248

### Japan

Nexen Japan Group  
 3-3-1-403, Midori-Cho  
 Fuchu-City, Tokyo 183 Japan  
 Phone: 81-423-36-3533  
 Fax: 81-423-36-6534

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