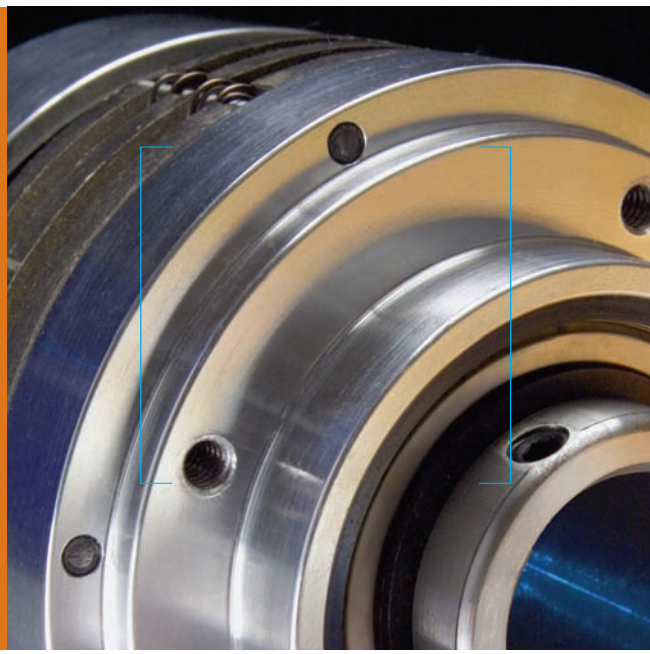
nexen

TAKE IT TO THE NEXEN LEVEL



INDUSTRIES SERVED

Aerospace
Automation Equipment
Automotive
Bottling
CNC Machining
Commercial Laundry Equipment
Converting
Conveying
Food Processing
Machine Tool
Material Handling
Packaging
Printing
Robotics
Semi-Conductor
Textile Machinery
Tire Manufacturing
Wood Processing

INDUSTRIAL MOTION CONTROL

Nexen Group, Inc. has been producing industrial clutches, brakes and web tension control products for over 50 years, and remains the leader in pneumatic power transmission components worldwide. Each day, millions of people see, touch, or use items produced with equipment that requires one or more Nexen products.

Customers span every industry – from multi-national corporations to small businesses – and range from design engineers to plant maintenance personnel. Regardless of industry or profession, the reason for using Nexen products remains the same: they are simple, durable, high-quality products our customers can trust.

Nexen has its headquarters in Vadnais Heights, Minnesota, with the manufacturing facility in Webster, Wisconsin. The company also has more than 40 worldwide sales offices and over 1,500 distributor sales outlets.

THE NEXEN ADVANTAGE

At Nexen, our heritage is built on producing technically superior products while providing the highest level of customer support. This is also our commitment to tomorrow as Nexen continues to set new standards and build award winning products. For more information on all Nexen products, visit our website at **www.nexengroup.com**

- Long product life
- Minimal downtime
- Inexpensive to operate
- Easy to understand, install and maintain
- High efficiency and productivity
- Operational versatility
- Mounting flexibility
- Custom design services available

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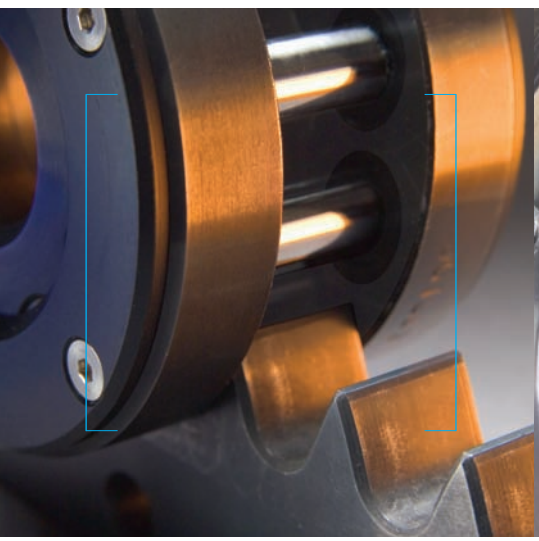
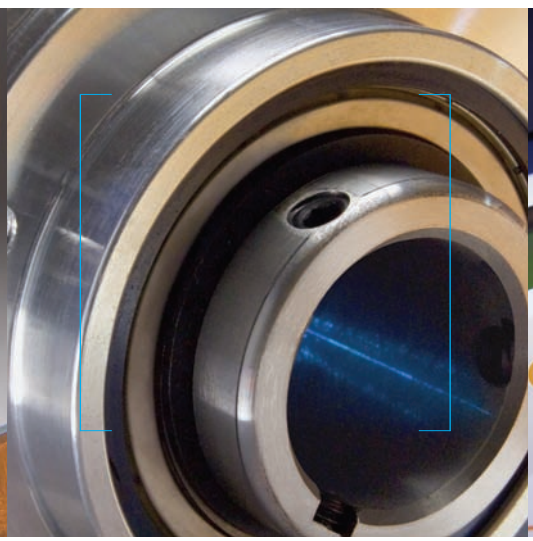
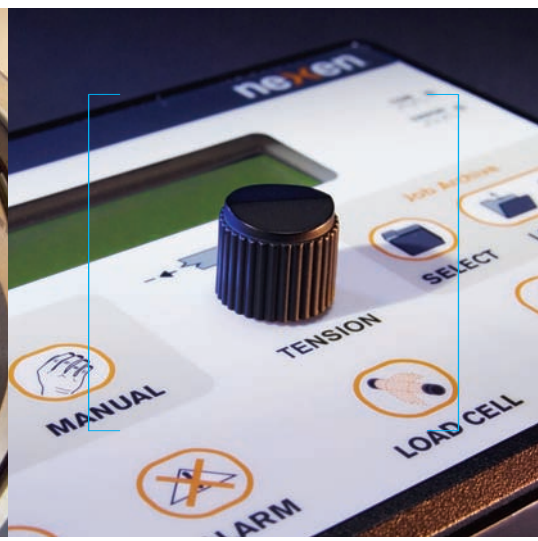
pages: 5-10

WEB CONTROL
pages: 11-13







LINEAR MOTION CONTROL

ROLLER PINION SYSTEM

- Alternative to ball screws and rack and pinion
- No cumulative errors
- Zero backlash
- High-speed – up to 11 m/sec. [36 ft./sec.]
- Unlimited length

LINEAR COUPLING

- Zero backlash in axial direction
- Absorbs parallel misalignment up to 0.7 mm [0.003 in.]
- Ideal for angular misalignment up to 1.5 degrees
- Low inertia
- Compact design
- Designed for high-tensile and compressive forces in high-dynamic applications

ROD LOCKS:

used on pneumatic cylinders and precision guide rods

- Backlash less than 0.076 mm [0.003 in.]
- Holding force: up to 22240 N [5000 lb.]
- E-stop and holding

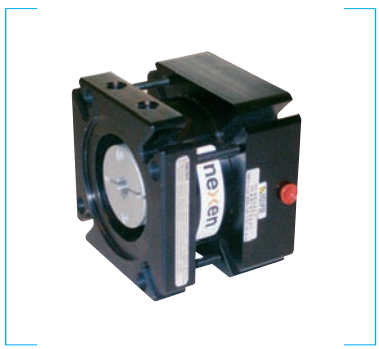
GUIDE RAIL BRAKES:

for profile guide rails

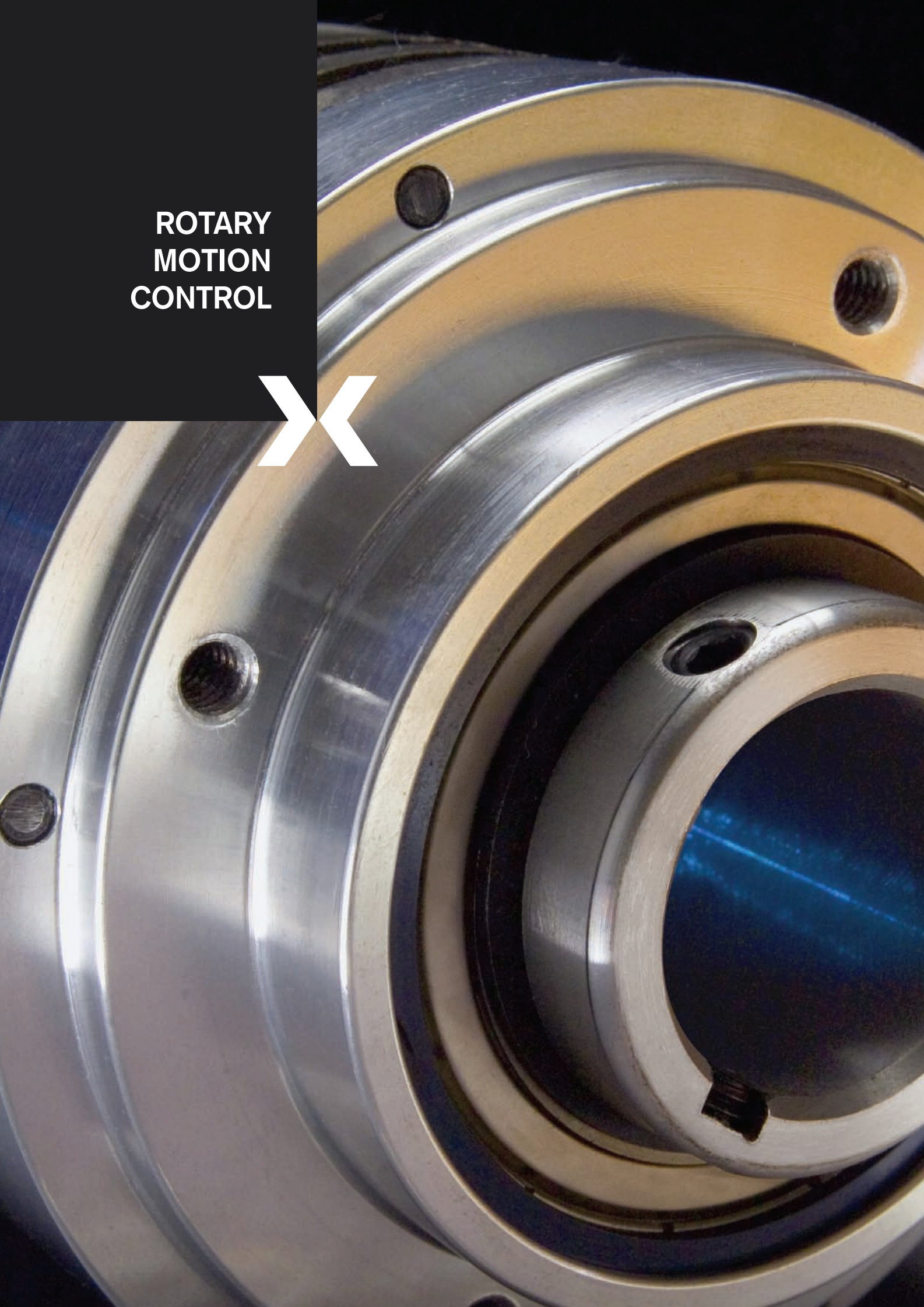
- Fit most profile guide rail systems
- Braking force: 445–2670 N [100–600 lb.]
- E-stop and holding

SERVOMOTOR/STAGE/BALL SCREW BRAKES:

- Torque: 2.25–124 Nm [20–1100 in.-lb.]
- Mounting flange to match servomotors up to 14.9 Kw [20 HP]
- E-stop and holding



ROTARY MOTION CONTROL



FRICTION CLUTCHES

- Torque: 0.6–34,128 Nm [5–302,000 in.-lb.]
- Bore: 10–165 mm [0.375–6.5 in.]
- Air-engaged/spring-released models
- High heat dissipation
- High dynamic torque
- Long friction facing life
- Self-adjusting for friction facing wear
- Single or multi-plate clutch models
- Accurately adjustable torque
- Variable mounting options on either the motor or driven shaft with a pulley, sprocket or flexible coupling on the pilot

APPLICATIONS

- Connect/Disconnect
- Controlled Acceleration
- Cycling/Indexing
- Inching/Jogging
- Overload Protection
- Positioning
- Soft Starts
- Tension Control

TOOTH CLUTCHES

- Torque: 3–6779 Nm [20–60,000 in.-lb.]
- Bore: 13–100 mm [0.625–3.938 in.]
- Air-engaged/spring-released models
- Spring-engaged/air-released models
- Single- or multi-position models
- Inch and metric sizes available
- Totally enclosed (IP65) models available
- Positive engagement: no slipping
- Fast response time
- Variable mounting options on either the motor or driven shaft with a pulley, sprocket or flexible coupling on the pilot

APPLICATIONS

- Accurate Positioning
- Disconnect
- Positive Drive
- Reversing/Multi-speed
- Stopping/Holding

TORQUE LIMITERS

- Torque: 6–3390 Nm [53–30,000 in.-lb.]
- Bore: 13–75 mm [0.625–2.938 in.]
- Air-engaged/spring-released models
- Torque adjustable during process
- Inch and metric models available
- Enclosed, nickel-plated (IP65) models
- Crisp and complete disconnect
- Ball-detent interface for synchronized reengagement at customer specified intervals
- Solid-state proximity sensor detects overload conditions quickly
- Variable mounting options on either the motor or driven shaft with a pulley, sprocket, or flexible coupling on the pilot

APPLICATIONS

- Disconnecting
- Overload Protection
- Positioning
- Positive Drive

MECHANICAL TORQUE LIMITER

- Torque: 5–2800 Nm [44–24777 in.-lb.]
- Bore: 12.7–100 mm [0.500–3.937 in.]
- Single-/multiple-position re-engagement or full disengagement
- Patented preload for zero backlash
- Adjustable without removal from the application
- Large bores possible

APPLICATIONS

- Compact spaces
- Fail-safe mechanical disconnection
- Low inertia
- Maximum uptime
- Overload protection
- Positioning
- Zero backlash

AIR-ENGAGED FRICTION BRAKES

- Torque: 2–33,900 Nm [18–300,000 in.-lb.]
- Bore: 10–165 mm [0.375–6.500 in.]
- Air-engaged/spring-released models
- High heat dissipation
- Straight or tapered (QD bushing) bore
- Inch and metric models available
- Self-adjusting for friction facing wear
- Four types of friction material available
- High friction work capacity
- Split friction facings for fast replacement
- Variable mounting options: horizontal and vertical mounting in a range of shaft sizes

APPLICATIONS

- Accurate Positioning
- Controlled Deceleration
- Cycling/Indexing
- Stopping/Holding
- Unwind Tension Control

SPRING-ENGAGED BRAKES

- Torque: 6–18,642 Nm [50–165,000 in.-lb.]
- Spring-engaged/air-released models
- Inch and metric models available
- Shaft mounting, straight or tapered bores
- NEMA C-faced or IEC B5 flange mounting
- Totally enclosed (IC65) models available
- Split friction facing for easy replacement
- Self-cooling design for high thermal rating
- High dynamic torque for fast load response
- Manual release for power-off situations

APPLICATIONS

- Holding
- Stopping

SHAFT-MOUNTED CLUTCH-BRAKES

- Torque: 1–316 Nm [10–2800 in.-lb.]
- Shaft diameters: 12–46 mm [½–1⅞ in.]
- Air-engaged/spring-released models
- Through-shaft mounting on driven shaft
- Pilot mounting: sprocket, pulley or coupling
- Single piston design eliminates over-lap
- Maintains torque without manual adjustment
- High cycling rates and long life
- Inexpensive to operate and maintain
- Friction brake and clutch combined into one low cost, compact unit

APPLICATIONS

- Controlled Acceleration
- Controlled Deceleration
- Cycling/Positioning
- Disconnect
- Inching/Jogging
- Stopping/Holding
- Tension Control

FLANGE-MOUNTED CLUTCH-BRAKES

- Torque: 9.6–226.0 Nm [85–2000 in.-lb.]
- Air-engaged/spring-released models
- Spring-engaged brake models available
- Fits NEMA frame sizes 48Y to 256TC
- Fits IEC frame sizes from D71C–160M
- Use with 0.09–14.6 Kw [1/8–20 HP] motors
- Self-adjusting for friction material wear
- Flange or foot mount capability
- Single piston design eliminates over-lap
- Enclosed, nickel-plated (IP65) models
- Optional locking key eliminates key roll-over

APPLICATIONS

- Accurate Positioning
- Connect/Disconnect
- Controlled Acceleration
- Controlled Deceleration
- High Inertia Start/Stop
- Inching/Jogging
- Stopping/Holding

CALIPER BRAKES

- Torque: 2.3–5649 Nm [20–50,000 in.-lb.]
- Disc diameters: 152–610 mm [6–24 in.]
- Air-engaged/spring-released models
- Spring-engaged/air-released models
- Spring-engaged/hydraulically released
- Adjustable caliper spacing
- Fast/easy friction facing replacement
- Simple design: easy-to-use and maintain
- Ten standard models
- Custom designs available

APPLICATIONS

- Controlled Deceleration
- Cycling/Indexing
- Positioning
- Stopping/Holding
- Tension Control

WEB CONTROL

TENSION CONTROL SYSTEMS

- Complete systems for easy integration
- Closed-loop controls
  - Adaptive or PID logic
  - LVDT or stain gauge sensors
  - Flying splice or auto pasting control
  - DIN rack mounting available
  - Unwind, winding or mid process control
- Dancer Controls
  - Adaptive or PID logic
  - Hall effect dancer position sensor
  - Unwind, winding or mid process control
- Open Loop Controls
  - PID logic
  - Ultrasonic, optical or proximity control
  - Unwind or winding control
- All systems feature
  - 4–20 ma or 0–10 VDC outputs
  - PC/PLC based set-up available
  - Control the torque output of brakes, clutches and AC or DC drives

APPLICATIONS

- Converting
- Printing
- Unwinding
- Winding

TENSION BRAKES & CLUTCHES

- Use for wind, unwind and intermediate stages
- Torque: 9–4049 Nm [80–35,840 in.-lb.]
- Air-engaged
- Multiple actuators for wide torque range
- Self-cooling for high thermal capacity
- Integrated fan available on some models
- Low rotational inertia
- Long operating life
- Simple connections
- Quick change friction facings

APPLICATIONS

- Converting
- Printing
- Unwinding
- Winding

SAFETY CHUCKS

- Redundant safety mechanisms securely lock shaft in place
- Foot or flange mounting
- Long, maintenance-free life
- Manual unlock for most models
- Free-turning precision ball bearings
- Finger guards on all models
- Shaft extension with keyway
- Metric size sockets available upon request
- Available in ready-to-assemble brake packages

APPLICATIONS

- Converting
- Printing
- Unwinding
- Winding

WEB GUIDING SYSTEMS

- Self contained units for easy mounting
- Separate components for customer mounting
- Edge guide or center guide
- Variety of sensors available

APPLICATIONS

- Converting
- Printing
- Unwinding
- Winding

WEB SPLICE AND BREAK DETECTION

- Ultrasonic or optical sensing
- Self-adjusting for web thickness
- Relay outputs for web break and splice
- Automatic or manual reset

APPLICATIONS

- Converting
- Printing
- Unwinding
- Winding

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In accordance with Nexen's established policy of constant product improvement, the specifications contained in this document are subject to change without notice. Technical data listed in this document are based on the latest information available at the time of printing and are also subject to change without notice. For current information, please consult www.nexengroup.com.

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Nexen Group, Inc.
560 Oak Grove Parkway
Vadnais Heights, MN 55127
800.843.7445
Fax: 651.286.1099
www.nexengroup.com

Nexen has sales offices throughout the United States, Europe, Japan and Australia.

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21189-B-0506