

Overload Protection For:

Packaging Machinery

Food Processing

Bottling

Material Handling

Newspaper Presses



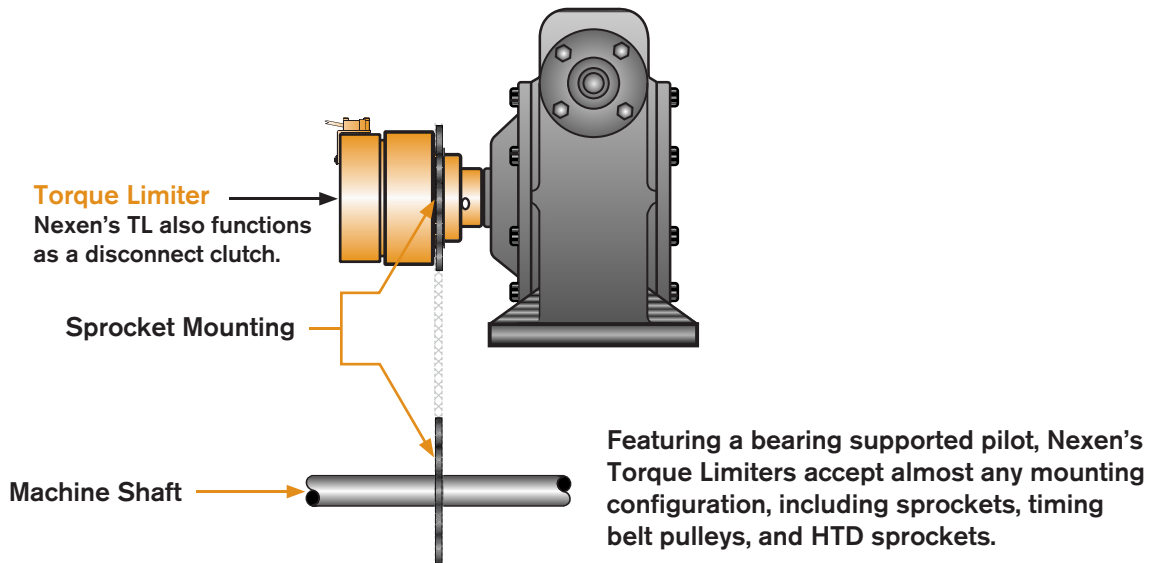
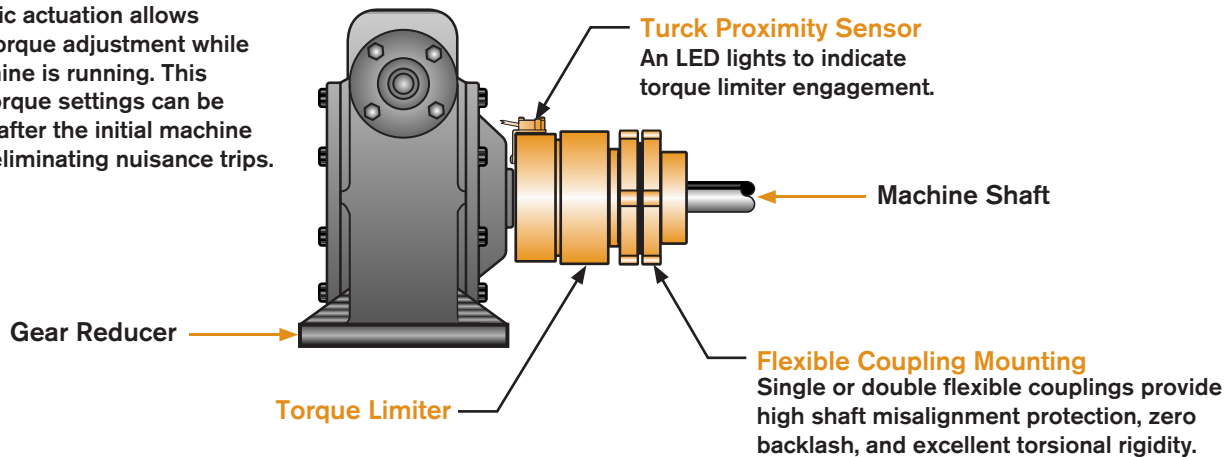
## **TORQUE LIMITERS**

## Protecting Your Equipment With Nexen's Torque Limiter System

Nexen's pneumatically-engaged, single-position torque limiters are the highest quality and most efficient overload protection devices for industrial machinery on the market today. They protect your equipment by immediately disengaging the machine shaft when excessive torque or a machine jam occurs. Each unit now comes with a Turck® Proximity Sensor to detect torque overloads. When the sensor detects an overload, it instantly sends a signal to the control valve, exhausting the air and disengaging the Torque Limiter. Releasing the Torque Limiter effectively protects downstream equipment from damage and decreases downtime.

### THE ADVANTAGE OF AIR

Pneumatic actuation allows remote torque adjustment while the machine is running. This means torque settings can be reduced after the initial machine startup, eliminating nuisance trips.



**TL-A**  
Open Design

### Totally Enclosed Models

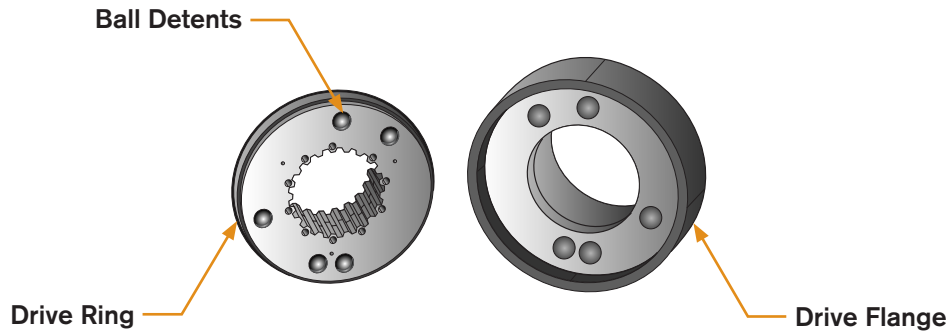
Nexen offers totally enclosed models with all the same features as the standard unit. The TL-A-E models are nickel plated and sealed to keep contaminants out of critical areas. These torque limiters can be used in wash-down environments and other areas where liquids may be present.



**TL-A-E**  
Enclosed Design

## Drive Ring / Drive Flange Assembly

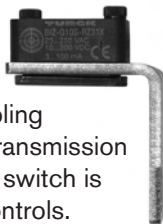
The torque limiter's hard-chrome detent interface decreases drive-ring deterioration when the balls are pressed against the face during the jog-to-position engagement function. The ball and detent interface prevent facing wear and increase product life. This design also ensures complete disengagement every time, without premature re-engagement, to lengthen product performance with a long life.



**The asymmetric ball/detent design ensures synchronized engagement after an overload occurs.**

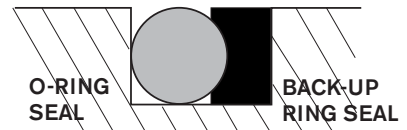
### Turck Proximity Sensors

The mounting configuration of the Turck Sensor allows full gear reducer shaft insertion into the bore for inline shaft coupling installations. This ensures proper torque transmission and easy mounting. The 24VDC proximity switch is easy to setup and works well with PLC controls.



### Sealed Air Chamber

The air chamber is sealed with o-rings and backup rings to prevent air leakages and limit repair costs. The backup rings effectively prevent o-ring dislocation, decreasing wear and extending the life of the o-ring.



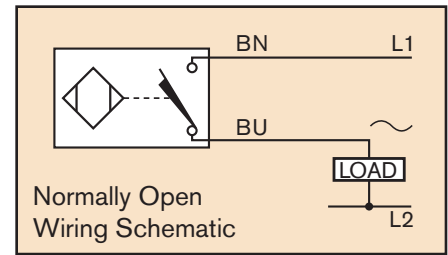
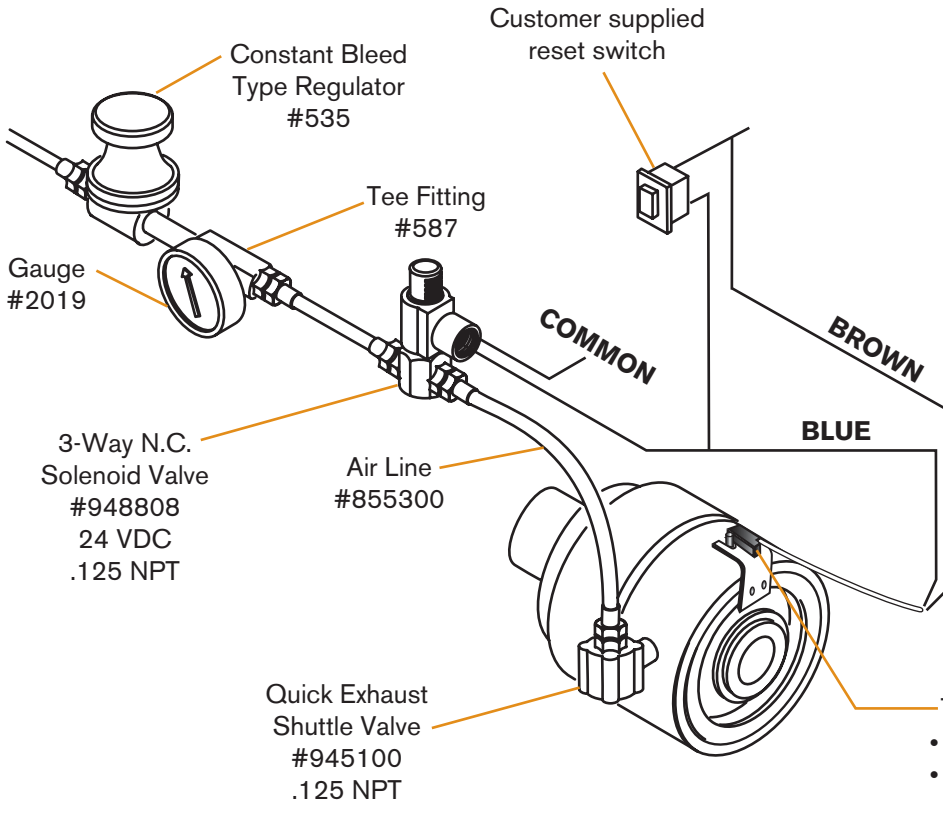
## Specifications<sup>1</sup>

Model	Description	Torque Range at 5.5 bar [80 psi]	Maximum Speed	Bore Range
TL-A	Set screw mounted, open design, 16 models available in either high or low torque versions	21–3130 Nm [185 – 27,700 in-lb]	2000 rpm	15.88–74.63 mm [0.625–2.938 in]
TL-A-E	Set screw mounted, totally enclosed, 10 models available in either high or low torque versions	90–1222 Nm [800–10,820 in-lb]	1650 rpm	22.23–49.23 [0.875–1.938 in]
TL-AC	Set collar mounted, open design, 14 models available with either high or low torque versions	45–3130 Nm [400–27,700 in-lb]	2000 rpm	22.23–61.53 [0.875–2.438 in]
TL-AE Metric	Set screw mounted, totally enclosed, 10 models available in either high or low torque versions	100–1350 Nm	2000 rpm	20–45 mm
TL-A Metric	Set screw mounted, open design, 16 models available in either high or low torque versions	21–1350 Nm	2000 rpm	15–31.8 mm

<sup>1</sup>For complete product specifications on all Torque Limiter models, refer to the Nexen product catalog or [www.nexengroup.com](http://www.nexengroup.com).

## Torque Limiter Air Connections

(Single air pressure system shown)



### Turck Sensor Specifications

Voltage	20-250 VAC, 10-300 VDC
Line Frequency	40-60 Hz
Voltage Drop Across Conducting Sensor	<6.0 V at 100 mA
Continuous Load Current	<100 mA
Off-State (Leakage) Current	<1.7 mA
Minimum Load Current	3.0 mA
Maximum Inrush Current	1.0 A (<30 ms, 15% Duty Cycle)

- Turck Proximity Sensor
- Nexen Part #170172
- Conversion kit with mounting hardware, #801757

## Accessories

- Nexen offers single-flex or double-flex couplings to match the drive flange pilot surface and bolt circles. Use these couplings to connect companion shafts in-line and provide ultimate misalignment protection for the Torque Limiter drive flange bearings.
- Single air pressure system provides basic pressure control.  
**Product #801578**
- Dual air pressure system provides basic air pressure control along with a separate line for higher, timed-out, start-up torque air pressure.  
**Product #801579**
- Smart Valve controller is a microprocessor for multiple air pressure settings to one or more torque limiters.  
**Smart Valve controller Product #964508**  
**Power Supply, Product #964509**

# nexen®

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

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