Autogard Torque Limiters

For more than 80 years, Autogard® products have led the industry in overload protection with high-quality products, design innovation and production. Autogard products are manufactured to meet ISO 9001 using the latest machine tools and high-quality materials.

Autogard torque limiters are disconnecting type torque limiters that act like a mechanical “circuit breaker” to protect the weakest member of the drive train and reduce or eliminate downtime as a result of overloads or jams.

**Autogard Torque Limiter 200 Series**
- Simple, cost-effective design
- Automatic or manual reset
- Up to 75,000 in-lbs torque capacity
- Up to 4-inch shaft sizes

**Autogard Torque Limiter 320 Series**
- Compact design
- Automatic or manual reset
- Up to 13,000 in-lbs torque capacity
- Up to 2.5-inch shaft sizes

**Autogard Torque Limiter 400 Series**
- Unique reverse-to-reset mechanism
- Up to 1,800,000 in-lbs torque capacity
- Up to 10-inch shaft sizes

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**Autogard Torque Limiter 600 Series**
- Pneumatically controlled
- Adjustable in-motion, variable torque setting
- Up to 100,000 in-lbs torque capacity
- Up to 6-inch shaft sizes
- Can be used as manual disengaging clutch

**Autogard Torque Limiter 820 Series**
- Modular design
- Automatic or manual reset
- Over 15,000,000 in-lbs torque capacity
- Unlimited shaft sizes

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**Autogard Torque Limiter WT Series**
- Modular design
- Stainless steel construction
- Up to 60,000 in-lbs torque capacity
- Up to 3.75-inch shaft sizes

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Warning! Autogard torque limiters should not be regarded as human safety devices. Special consideration should also be given to lifting applications.
Autogard's wide range of mounting configurations makes it easy to fit a standard unit into any new and many existing drives without having to re-engineer the drive train. Autogard torque limiters are suitable for chain, belt and gear drives, and are available with rigid or flexible couplings. The most effective location for an Autogard torque limiter is as close as possible to the component being protected. Recommended and alternative locations are shown in Figure 1, 2 and 3 below. Drive trains that have large reduction ratios should be given special consideration when mounting at a high speed location. To provide maximum protection in these locations, the reduction between the Autogard torque limiters and the final drive must be less than 300:1.

Data required for torque limiter selection:
- Application details for service factors
- Kilowatt (kW) or horsepower (hp) and rpm of the driver
- Shaft details of the driving and driven equipment

(1) Calculate the nominal torque.
\[ \text{Torque (in-lbs)} = \text{hp} \times \frac{63025}{\text{rpm}} \]
Consideration should then be given to start torque or other special circumstances depending on the position chosen in the drive system. Choose a set torque with a suitable margin over nominal. Select the torque limiter which has a higher torque rating.

(2) Check limiting conditions.
   a. Check hub bore capacity.
   b. Check the torque limiter dimensions such as the overall length and outside diameter.

(3) Select and specify the appropriate drive medium or coupling
All Autogard units may be supplied from the factory at a pre-set torque and with the required drive medium assembled to the unit.

Autogard 820 Series with Autoflex coupling

[Images of coupling applications]
Product Selection

Please check with Autogard or your local representative for pricing, verification of selection or to discuss any of the many special adaptations and custom designs that are possible.

200 Series

- Bores up to 4”
- AC – Automatic random position reset
- ACT – Automatic single position reset
- AF – Free wheeling manual reset
- AC/ACT: Up to 500 rpm
- AF: Up to 2000 rpm

Offset drives for sprockets, sheaves, pulleys or gears

Customer or factory mounted sprockets, sheaves, pulleys, etc

Requires sprockets, etc with own bearing - factory mounted recommended

Basic unit for couplings. Can attach to self-supported drive media

Torsionally rigid coupling style. Model 204 allows no misalignment. Model 205 tolerates angular, parallel and axial misalignment

Torsionally soft coupling style for angular, parallel and axial misalignment

201 202 203 204 205

206N 206S

320 Series

- Bores up to 2.5”
- Single position reset
- Random position reset
- Automatic reset
- Manual reset
- Automatic reset under 300 rpm
- Manual reset up to 8000 rpm

Offset drives for sprockets, sheaves, pulleys or gears

Customer or factory mounted sprockets, sheaves, pulleys, etc

Torsionally rigid coupling style. Tolerates angular, parallel and axial misalignment

Torsionally soft coupling style for angular, parallel and axial misalignment

320SR standard hub 320MR standard hub
320SR long proj. hub 320MR long proj. hub
320SR torsionally rigid 320MR torsionally rigid
320SR torsionally soft 320MR torsionally soft

Type 1, 2 Type 3, 4 Type 5, 6 Type 7, 8
Product Selection

Please check with Autogard or your local representative for pricing, verification of selection or to discuss any of the many special adaptations and custom designs that are possible.

400 Series

- Up to 3,600 rpm
- Bores up to 10”
- Automatic reset
- Single position reset
- Random position reset

Offset drives for sprockets, sheaves, pulleys or gears
Customer or factory mounted sprockets, sheaves, pulleys, etc
Requires sprockets, etc with own bearing - factory mounted recommended
Basic unit for couplings. Can attach to self-supported drive media
Torsionally rigid coupling style. Tolerates angular, parallel and axial misalignment
Torsionally soft coupling style for angular, parallel and axial misalignment

C-face motor
Double C-face for motor to gearbox coupling

400 Series

401
402
409
403
405
406N
406S
408

600 Series

- Under 500 rpm
- Bores up to 6”
- ACT – single position reset
- AC – random position reset
- Automatic reset

Offset drives for sprockets, sheaves, pulleys or gears
Customer or factory mounted sprockets, sheaves, pulleys, etc
Torsionally rigid coupling style. Tolerates angular, parallel and axial misalignment
Torsionally soft coupling style for angular, parallel and axial misalignment

Shaft-to-shaft coupling

600 Series

602
605
606
To learn more about the Autogard Torque Limiter offering and how it can provide you with high-quality overload protection, go to www.rexnord.com, where you’ll find:

• Product information • Brochures • Manuals

866-REXNORD/866-739-6673 (toll-free within the U.S.) or 414-643-2366 (Outside the U.S.)
To best serve your needs, please have the information below available when contacting Rexnord. We look forward to speaking with you.

<table>
<thead>
<tr>
<th>Type of machine or application</th>
<th>Environmental conditions</th>
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<tr>
<td>Reduction ratio</td>
<td>Service factor</td>
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<tr>
<td>Driven equipment</td>
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<td>Driven shaft diameter</td>
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<td>Coupling shaft size</td>
<td>Motor HP maximum</td>
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<td>Motor HP continuous</td>
<td>Torque (HP x 63025/rpm)</td>
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<td>Operating speed (rpm)</td>
<td>Required reset type</td>
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<tr>
<td>Drive media</td>
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</table>

**Selection:**

**How to calculate maximum continuous torque (MCT):**

\[
\text{MCT in-lbs} = \left( \frac{\text{HP} \times 63,025}{\text{speed}} \right)
\]

Standard electric motor start up is 2-3X MCT

* Ball detent torque limiters disconnect equipment, therefore lifting applications will also require a backstop or brake.
Why Choose Rexnord?
When it comes to providing highly engineered products that improve productivity and efficiency for industrial applications worldwide, Rexnord is the most reliable in the industry. Commitment to customer satisfaction and superior value extend across every business function.

Delivering Lowest Total Cost of Ownership
The highest quality products are designed to help prevent equipment downtime and increase productivity and dependable operation.

Valuable Expertise
An extensive product offering is accompanied by global sales specialists, customer service and maintenance support teams, available anytime.

Solutions to Enhance Ease of Doing Business
Commitment to operational excellence ensures the right products at the right place at the right time.

Rexnord Company Overview
Rexnord is a growth-oriented, multi-platform industrial company with leading market shares and highly trusted brands that serve a diverse array of global end markets.

Process & Motion Control
The Rexnord Process & Motion Control platform designs, manufactures, markets and services specified, highly engineered mechanical components used within complex systems where our customers’ reliability requirements and the cost of failure or downtime are extremely high.

Water Management
The Rexnord Water Management platform designs, procures, manufactures and markets products that provide and enhance water quality, safety, flow control and conservation.