

# Autogard Torque Limiter

## PRODUCT OVERVIEW



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# 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.

**WARNING!** Autogard Torque Limiters should not be regarded as human safety devices. Special consideration should also be given to lifting applications.



## Autogard Torque Limiter 100 Series

- Low cost, reliable protection
- Automatic single position reset
- Available in 4 sizes
- Up to 4424 lb-in (500 Nm) torque capacity
- Up to 2 inch (50.8 mm) shaft sizes



## Autogard Torque Limiter 200 Series

- Simple, cost-effective design
- Automatic or manual reset
- Up to 75,000 lb-in (8,474 Nm) torque capacity
- Up to 4 inch (102 mm) shaft sizes



## Autogard Torque Limiter 820 Series

- Modular design
- Automatic, manual, or remote reset
- Over 450,000,000 lb-in (5 MNm) torque capacity
- Unlimited shaft sizes



## Autogard Torque Limiter 400 Series

- Unique reverse-to-reset mechanism
- Up to 220,000 lb-in (24,860 Nm) torque capacity
- Up to 6 inch (152 mm) shaft sizes



## Autogard Torque Limiter XG Series

- Free running after torque overload
- Manual reset without the need of special tooling or replacement parts
- Over 61,100 lb-in (6900 Nm) torque capacity
- Up to 6.25 inch (160 mm) shaft sizes

# Redefining Reliability

Autogard 820 Series with disc coupling.

## How to Select a Torque Limiter

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 used both in shaft-to-shaft applications, in combination with a flexible coupling, and off-set applications with chain or belt drives. 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 **Figures 1 and 2**.

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.

$$\text{Torque (lb-in)} = \text{hp} \times 63025 / \text{rpm}$$
$$\text{Torque (Nm)} = \text{kW} \times 9550 / \text{rpm}$$

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.

Figure 1 – Coupling Application

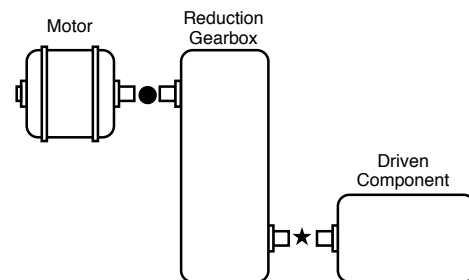
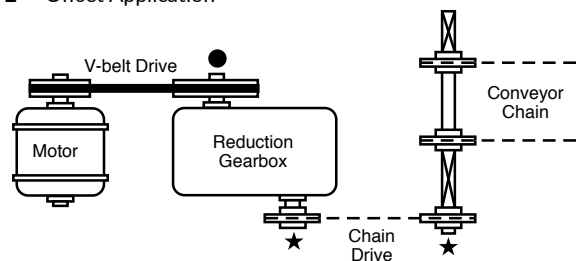


Figure 2 – Offset Application



- ★ Recommended positions for Autogard Torque Limiters.
- Alternative positions for Autogard Torque Limiters.





# 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. Also visit [www.rexnord.com/autogard](http://www.rexnord.com/autogard).

## 100 Series

- Bores up to 2 inch (50.8 mm)
- Automatic single position reset
- Up to 500 rpm

<ul style="list-style-type: none"> <li>• Bores up to 2 inch (50.8 mm)</li> <li>• Automatic single position reset</li> <li>• Up to 500 rpm</li> </ul>	Offset drives for sprockets, sheaves, pulleys or gears	103
	Shaft-to-shaft coupling	106

## 200 Series

- Bores up to 4 inch (102 mm)
- 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

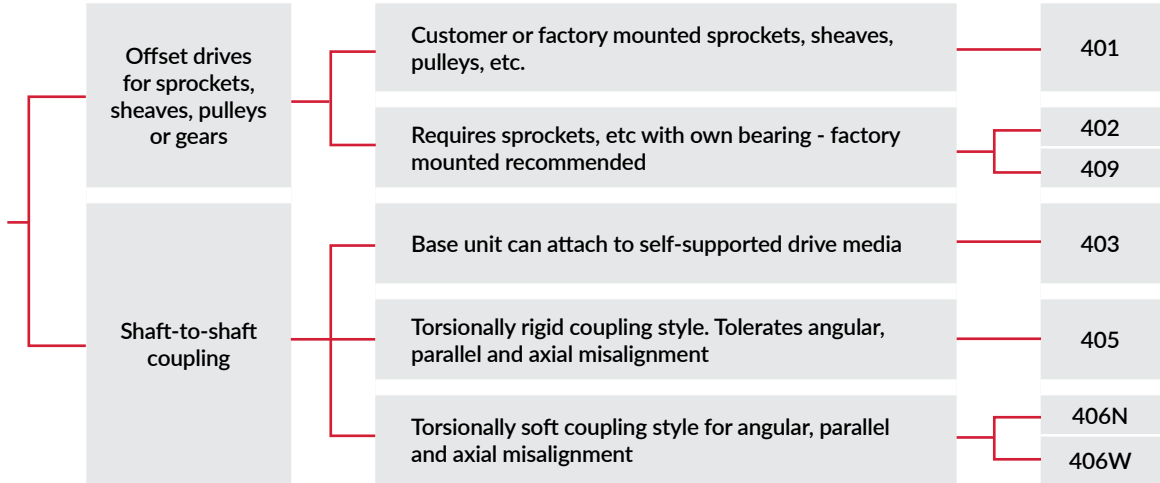
<ul style="list-style-type: none"> <li>• Bores up to 4 inch (102 mm)</li> <li>• AC: Automatic random position reset</li> <li>• ACT: Automatic single position reset</li> <li>• AF: Free wheeling manual reset</li> <li>• AC/ACT: Up to 500 rpm</li> <li>• AF: Up to 2000 rpm</li> </ul>	Offset drives for sprockets, sheaves, pulleys or gears	Customer or factory mounted sprockets, sheaves, pulleys, etc.	201
		Requires sprockets, etc with own bearing - factory mounted recommended	202
			209
<ul style="list-style-type: none"> <li>• Bores up to 4 inch (102 mm)</li> <li>• AC: Automatic random position reset</li> <li>• ACT: Automatic single position reset</li> <li>• AF: Free wheeling manual reset</li> <li>• AC/ACT: Up to 500 rpm</li> <li>• AF: Up to 2000 rpm</li> </ul>	Shaft-to-shaft coupling	Base unit can attach to self-supported drive media	203
		Torsionally rigid coupling style tolerates angular, parallel and axial misalignment	205
		Torsionally soft coupling style for angular, parallel and axial misalignment	206N

# Product Selection

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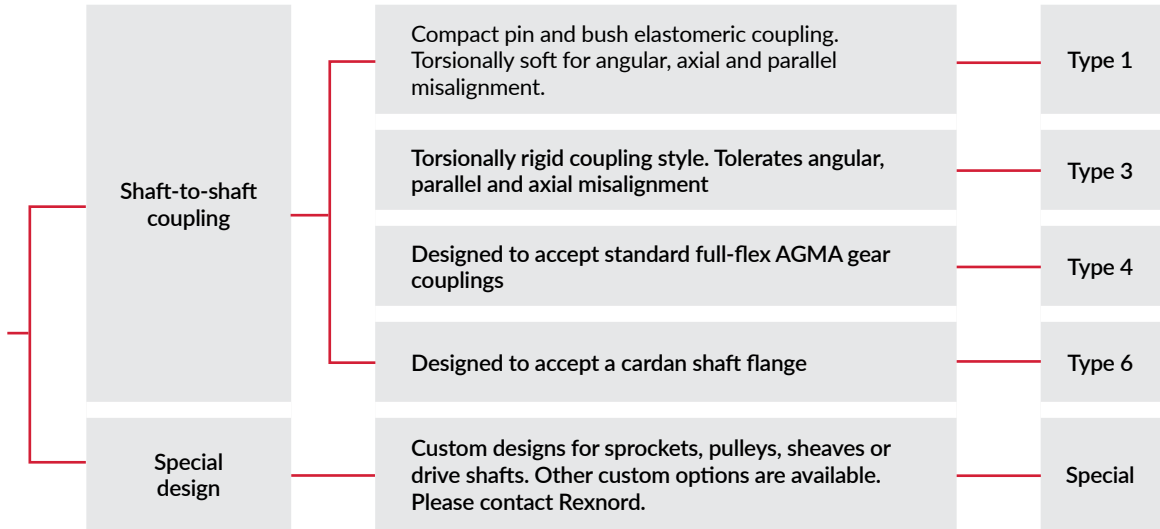
## 400 Series

- Up to 3,600 rpm
- Bores up to 6 inch (152 mm)
- Reverse to reset (or manual)
- Random or single position reset



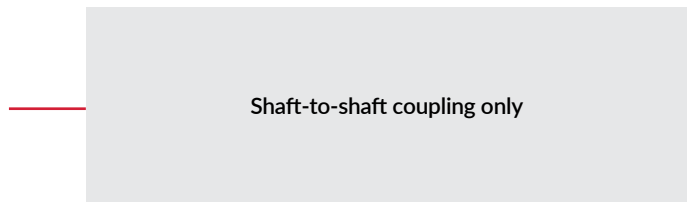
## 820 Series

- Bores: unlimited
- Manual reset
- Automatic reset (special)



## XG Series

- Bores up to 6.25 inch (160 mm)
- Manual re-engagement
- Up to 4500 rpm





Trusted,  
dependable  
torque overload  
protection



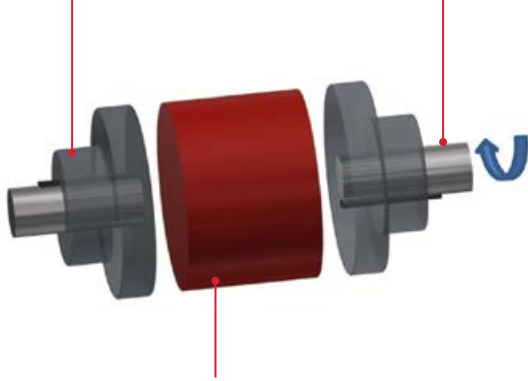


# Torque Limiter Questionnaire

## INLINE TORQUE LIMITER

S2 Ø bore: \_\_\_\_\_ (tol H7)

S1 Ø bore: \_\_\_\_\_ (tol H7)  
Speed: \_\_\_\_\_ rpm

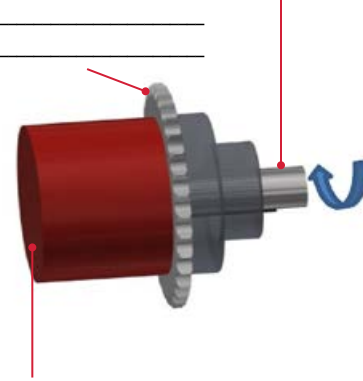


Disengagement torque: \_\_\_\_\_  
Reset method (select one): Manual/Automatic/Reverse-drive  
Engagement type (select one): Synchronous/Non-synchronous  
Environment conditions: \_\_\_\_\_

## OFFSET TORQUE LIMITER

DRIVE MEDIA DETAILS: e.g. belt type, No of belts, No of chain, PCD, etc.? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

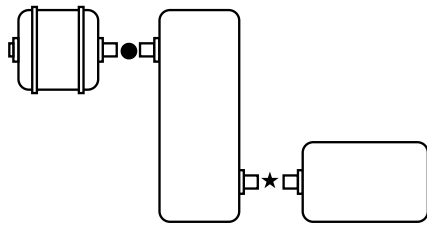
S1 Ø bore: \_\_\_\_\_ (tol H7)  
Speed: \_\_\_\_\_ rpm



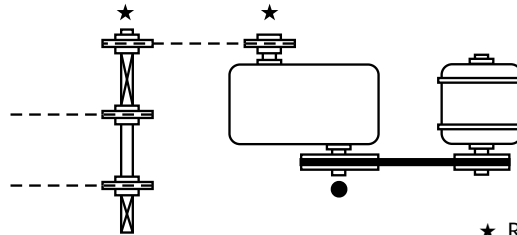
Disengagement torque: \_\_\_\_\_  
Reset method (select one): Manual/Automatic/Reverse-drive  
Engagement type (select one): Synchronous/Non-synchronous  
Environment conditions: \_\_\_\_\_

## APPLICATION DETAIL AND MACHINE LAYOUT

Please provide a simple sketch below see examples.



In line Application



Offset Application

★ Recommended  
● Alternative

ALL AROUND  
THE GLOBE,

CUSTOMERS TRUST  
OUR PROVEN BRANDS.

#### 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.