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Torque Limiter Selection Guide Overview



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.

Autogard Torque Limiter Selection Guide

Rexnord Corporation

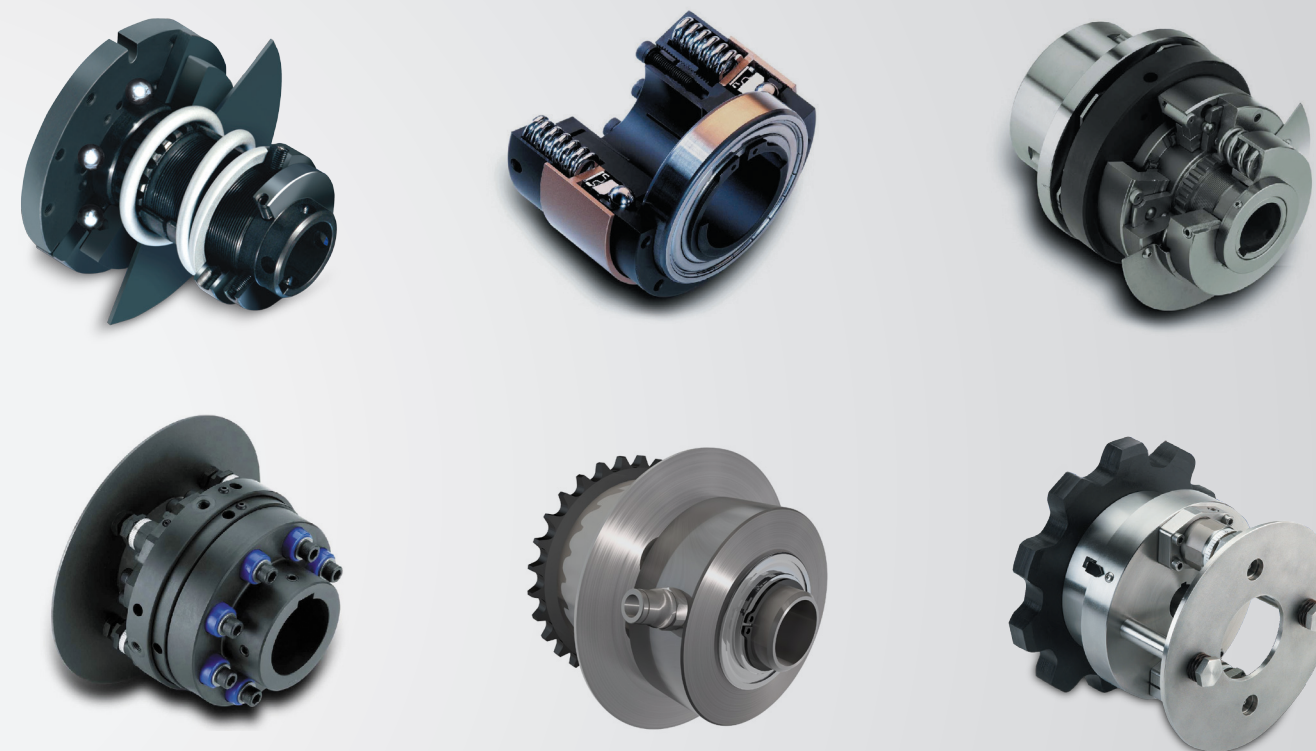
Rexnord is a growth-oriented, multi-platform industrial company with leading market shares and highly trusted brands that serve a diverse array of global end markets.

Process and Motion Control

The Rexnord Process and 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

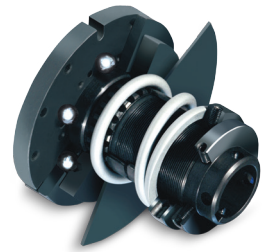
The Rexnord Water Management platform designs, procures, manufactures and markets products that provide and enhance water quality, safety, flow control and conservation.



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 “fuse” 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 8,500 Nm torque capacity
- Up to 100 mm shaft sizes



Autogard Torque Limiter 320 Series

- Compact design
- Keyless clamping options
- Large bore to torque ratio
- Automatic or manual reset
- Up to 1,500 Nm torque capacity
- Up to 65 mm shaft sizes



Autogard Torque Limiter 400 Series

- Unique reverse-to-reset mechanism
- Up to 25,000 Nm torque capacity
- Up to 250 mm shaft sizes



Autogard Torque Limiter 820 Series

- Modular design
- Automatic or manual reset
- Over 1,000,000 Nm torque capacity
- Standard and custom designs
- Unlimited shaft sizes



Autogard Torque Limiter 600 Series

- Pneumatically controlled
- Adjustable in-motion, variable torque setting
- Up to 11,300 Nm torque capacity
- Up to 150 mm shaft sizes
- Can be used as manual disengaging clutch



Autogard Torque Limiter WT Series

- Specially designed for Waste Water Treatment Industry
- Modular design
- Stainless steel construction
- Up to 6,800 Nm torque capacity
- Up to 95 mm shaft sizes

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 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 Figures 1 and 2 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) and rpm of the driver
- Bore details to suit driving and driven equipment

(1) Calculate the nominal torque.

$$\text{Torque (Nm)} = \text{Kw} \times 9550 / \text{rpm}$$

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.

- Check hub bore capacity.
- 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.

Figure 1: Coupling Application

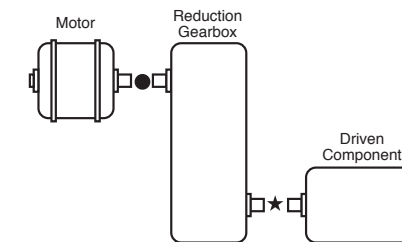
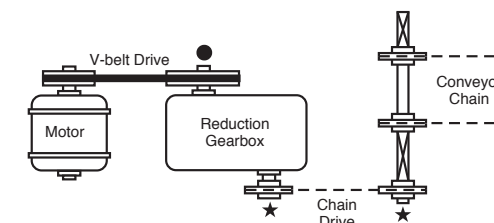


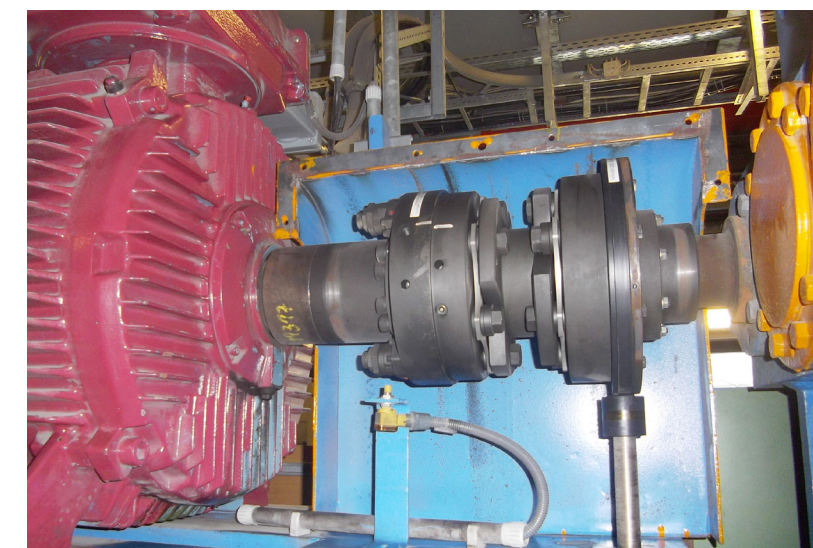
Figure 2: Offset Application



★ Recommended Positions for Autogard torque limiters

● Alternative Positions for Autogard torque limiters

Autogard 820 Series with Autoflex coupling

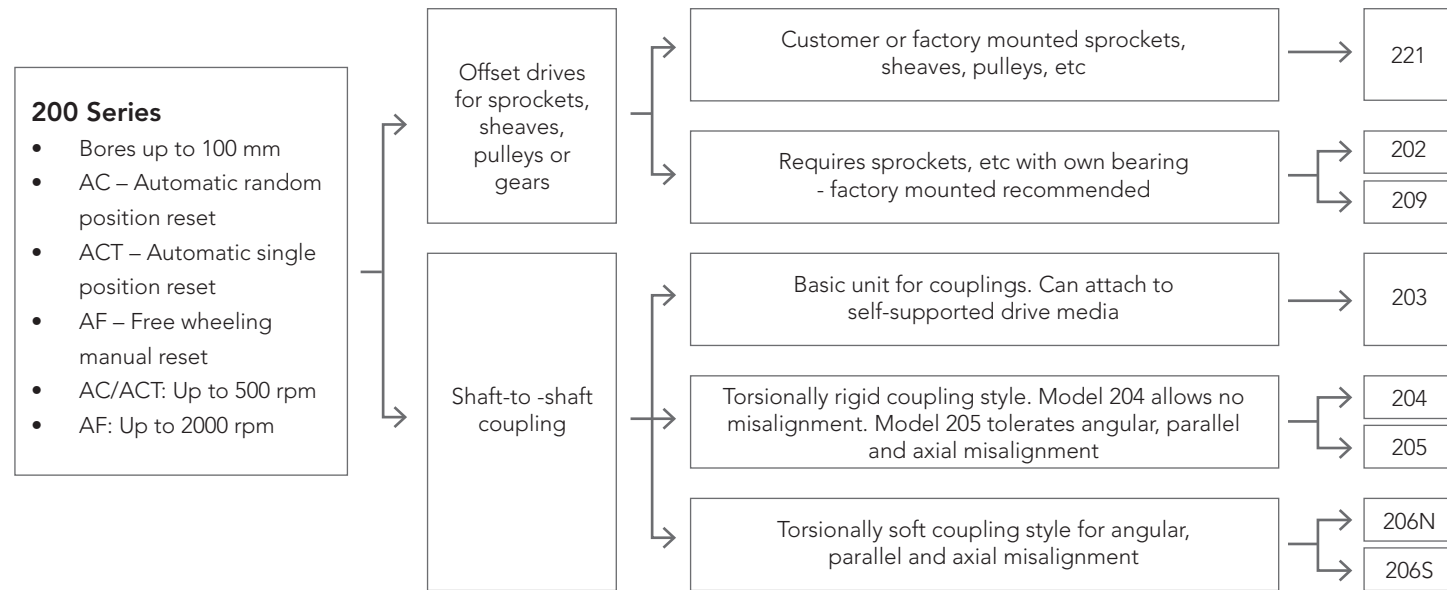


Warning! Autogard torque limiters should not be regarded as human safety devices. Special consideration should also be given to lifting applications.

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.

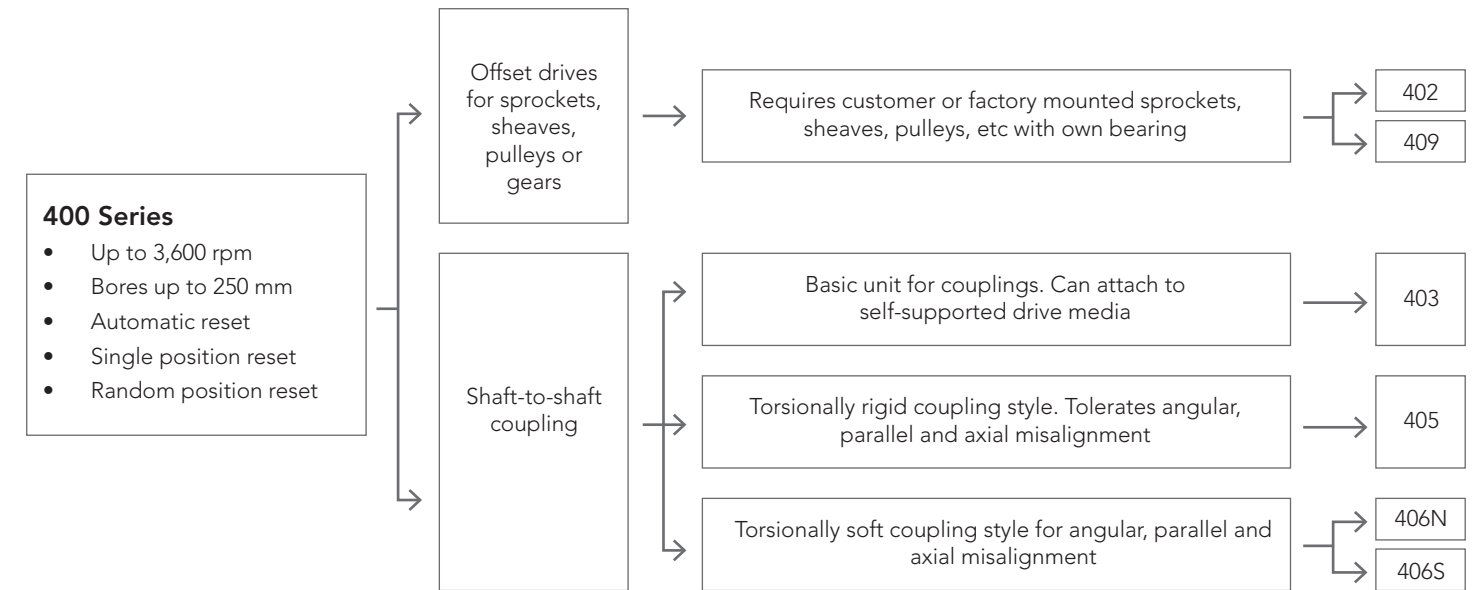
200 Series



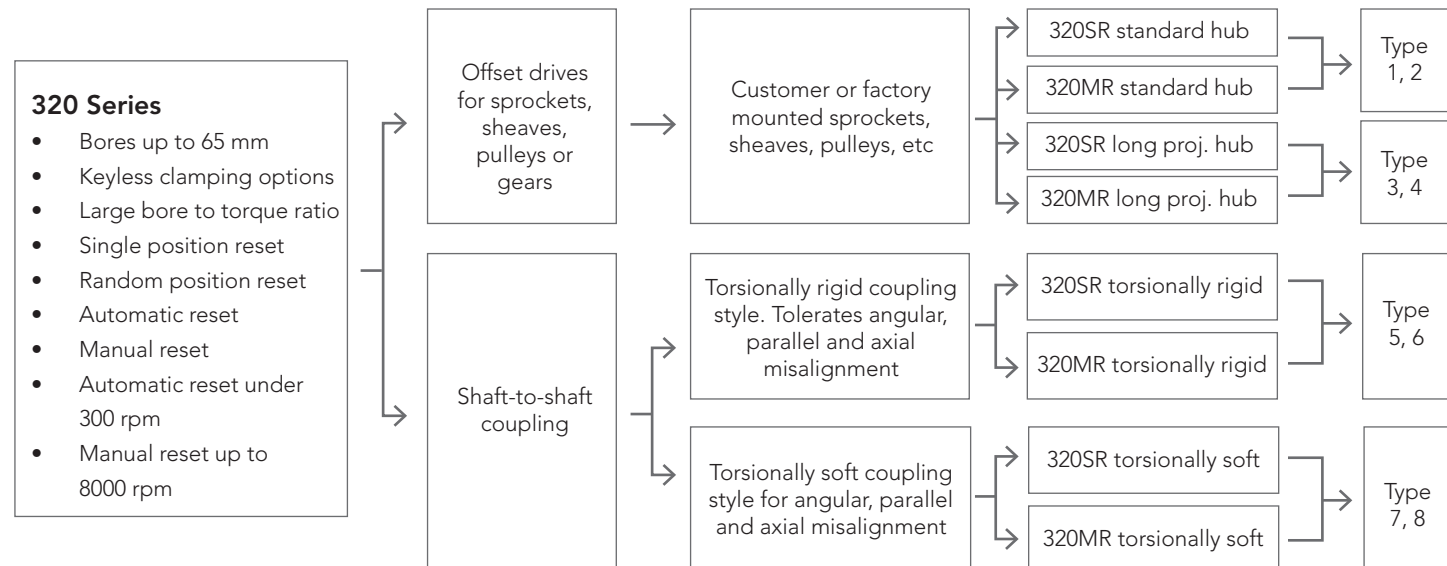
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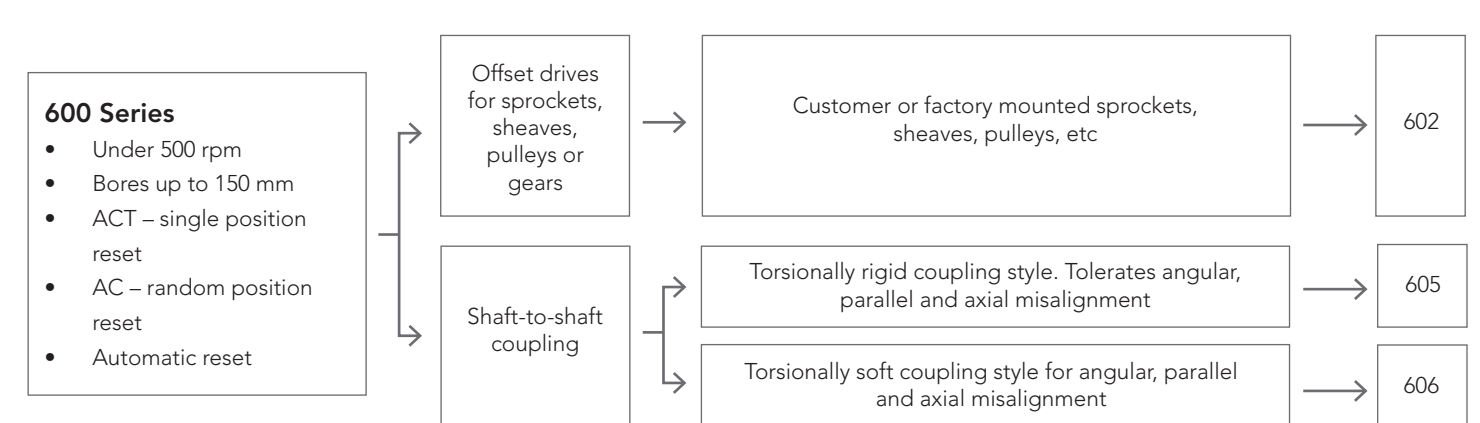
400 Series



320 Series



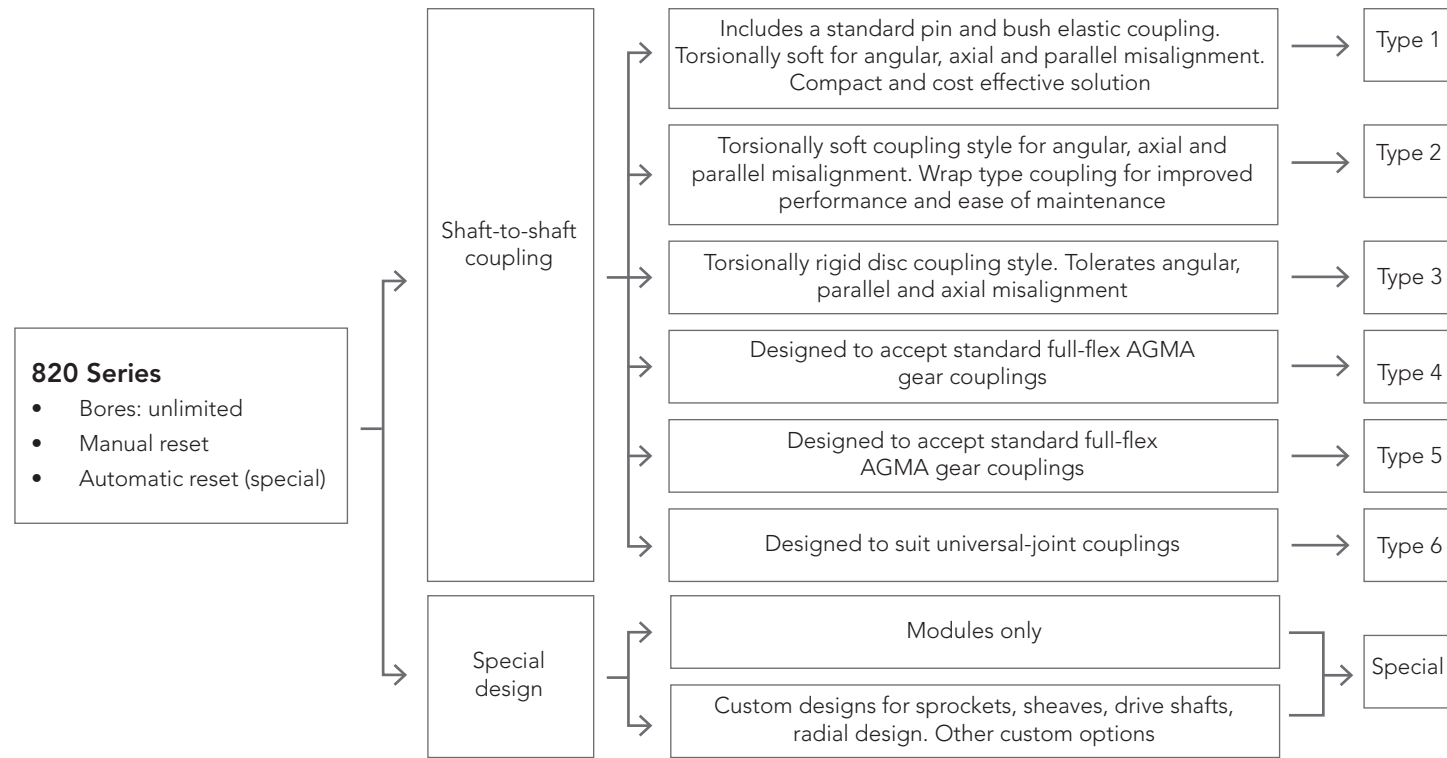
600 Series



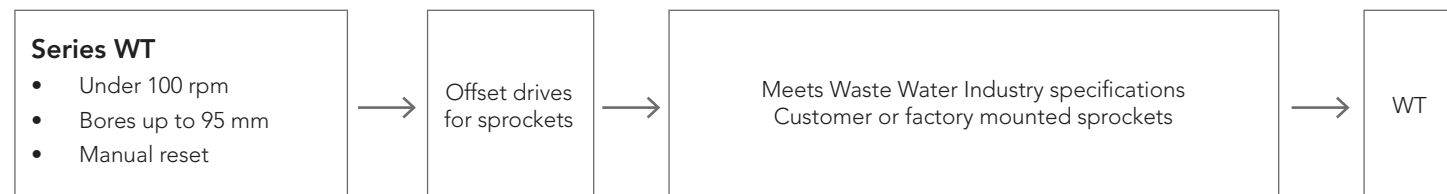
Product Selection

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820 Series



Series WT



Application Data Sheet

To best serve your needs, please have the information below available when contacting Rexnord. We look forward to speaking with you.

Type of machine or application	_____	Environmental conditions	_____
Driver equipment	_____	Required normal setting torque	_____
Driven equipment	_____	Maximum setting torque	_____
Reduction ratio	_____	Shaft lengths	_____
Torque limiter input bore size and tolerance	_____	Distance Between Shaft Ends (DBSE)	_____
Torque limiter output bore size and tolerance	_____	Length constraints	_____
Diameter constraints	_____	Sprocket/pulley size	_____
Input Kw continuous	_____	Input Kw maximum	_____
Torque limiter operating speed (rpm)	_____	Required reset type	_____

Selection:

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

• Product information • Brochures • Manuals

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How to calculate maximum continuous torque (MCT):

$$MCT \text{ Nm} = Kw \times 9550/\text{rpm}$$

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.