



# COUPLINGS FOR GAS COMPRESSION



# REGAL REXNORD™ BRANDS FOR GAS COMPRESSION

## THOMAS® DISC COUPLINGS

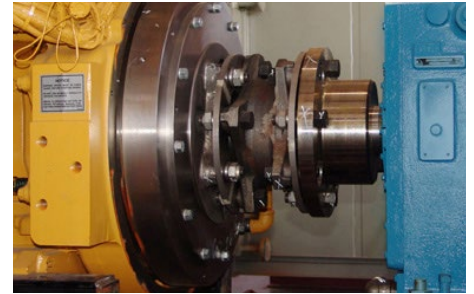
The Rexnord® Thomas Disc Coupling portfolio provides highly reliable and economical solutions for the gas compression industry. The range of torsionally-rigid, all-metal disc couplings offers the flexibility and adaptability to accommodate both the high vibratory loads of reciprocating engines and the precision and balance required for electric motor driven compressor applications.

### Thomas AMR and CMR

Thomas AMR/CMR Couplings are used in heavy-duty slow- to medium-speed applications where shock loads, torque reversals, or continuous alternating torque is present. The rugged design is industry-proven. Both AMR and CMR types offer a wide range of mounting configurations including keyed, keyless, straight bore, taper bore, and hydraulic fit shaft hubs. CMR additionally allows bolting directly to the flywheel of an engine or compressor.

#### Design features include:

- Robust and economical components with standard cast spacer and forged steel hubs
- Open lug-type spacer adds wrenching clearance for hassle-free assembly
- Flywheel adapter plate available in standard and custom bolting patterns to accommodate virtually any flange design
- Flexibility to accommodate multiple disc pack design and material options



Thomas AMR and CMR Couplings feature cast iron or steel center members engineered specifically for the continuous alternating or vibratory torque loads and slow to medium speeds required for reciprocating applications.

### Thomas XTSR52 and XTSR71

Thomas XTSR52 and XTSR71 Disc Couplings are optimized for low weight and high torque density. They are ideal for motor-driven applications with screw or centrifugal compressors. A scalloped disc profile reduces stiffness and optimizes torque transmission. Additionally, standard torque overload bushings provide protection against transient torque peaks, with reduced spark option available.

#### Design features include:

- Fully-machined design with variable spacer length
- Meets AGMA Class 9 as manufactured enabling higher speed capabilities than Thomas AMR/CMR
- Unitized stainless steel disc packs simplify installation and maintenance

## CENTA® TORSIONALLY SOFT COUPLINGS

CENTA products have a reputation for reliable performance in a wide variety of demanding industries. The range of highly flexible, torsionally soft couplings is ideally suited for gas compression applications subject to high vibratory loads or torsional vibration issues. The integral natural rubber elements damp harmful vibrations thereby extending equipment life, and can be selected to shift system resonance outside the operating speed range.

#### Design features include:

- Highly customizable including variable element shore hardness to ensure optimal torsional tuning of the system
- Low torsional stiffness with high misalignment and damping capability
- CENTAX leverages rubber-in-shear principle with single or multi-row element configuration to accommodate large torque and misalignment requirements


















CENTA Couplings are highly engineered to meet the torsional requirements of demanding applications.











# THE REGAL REXNORD™ COMPLETE COUPLING PORTFOLIO FOR GAS COMPRESSION

Regal Rexnord offers the broadest global coupling portfolio. The natural gas compression portfolio ranges from torsionally stiff style Thomas® Disc Couplings to torsionally soft CENTA® options. The breadth of designs accommodates everything from smoother electric-driven gas compression applications to higher vibration engine-driven applications.

## Regnord® Thomas Disc Coupling Range

Coupling Type	Speed	Torque	Damping	Misalignment	Key Applications
 <b>Thomas XTSR</b>					centrifugal & screw compressors
 <b>Thomas AMR &amp; CMR</b>					reciprocating compressors
 <b>Thomas Series 44</b>					reciprocating compressors

## Regnord CENTA Torsionally Soft Couplings Range

Coupling Type	Speed	Torque	Damping	Misalignment	Key Applications
 <b>CENTAX®-B/G</b>					reciprocating compressors
 <b>CENTAFLEX®-A</b>					screw compressors

# GAS COMPRESSION SOLUTIONS

Regal Rexnord manufactures reliable solutions for the vast array of rotating equipment used in natural gas and petroleum industries. Regal Rexnord products are used in every step of the process from gas exploration and gas compression to power generation. **Explore the product best suited to your application:**

### RECIPROCATING COMPRESSOR APPLICATIONS

- THOMAS AMR
- THOMAS CMR
- THOMAS SERIES 44
- CENTAX-SEC-G

### CENTRIFUGAL COMPRESSOR APPLICATIONS

- THOMAS XTSR52/71

### SCREW COMPRESSOR APPLICATIONS

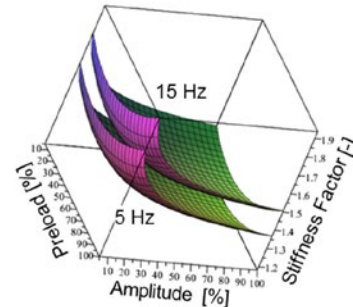
- CENTAFLEX-A
- THOMAS XTSR52/71





# TORSIONAL VIBRATION EXPERTISE

Along with extensive experience in the gas compression industry, Regal Rexnord™ engineers bring years of experience in the field of torsional vibration calculation and simulation. The coupling and shaft designs in the Regal Rexnord product portfolio are subject to extensive torsional vibration analysis, multi-mass, and finite element analyses.



Dynamic stiffness versus preload and amplitude for two frequencies.

# LOCKING DEVICES

Locking devices such as the NHR Locking Collar and Tollok® TLK 603 External Shrink Disc simplify installation by eliminating the need for a keyed connection. Instead of requiring heat to expand the coupling hub before sliding onto the shaft, they simply slides onto the shaft cold and are secured with standard tools. The NHR Locking Collar is compatible with Thomas® AMR and CMR Disc Couplings. The Tollok TLK 603 is compatible with Thomas XTSR Disc Couplings.



Thomas AMR Type Coupling with NHR locking collar



Tollok TLK 603 external shrink disc



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