



# REXNORD® EUROFLEX™ DISC COUPLINGS

OVERVIEW BROCHURE



# Optimized and Engineered for Your Applications



As part of the Rexnord Coupling portfolio, high-performance Rexnord Euroflex Disc Couplings are uniquely designed and manufactured for each and every application they encounter in the energy industry. Whether for a gas turbine driving a power generator on an offshore drilling platform, a steam turbine driving a centrifugal gas compressor in a refinery, or a motor driving a boiler feedwater pump in a thermal power plant, customers can trust their Rexnord Euroflex Disc Couplings have been optimized to ensure reliable operation for the lifetime of the drive train when connecting their critical rotating equipment.



## Applications for the energy industry:

- Gas turbine drivers coupled to power generators and compressors
- Steam turbine and motor drivers coupled to gearboxes and pumps
- Turbo expanders coupled to power generators
- Motors coupled to variable speed planetary gearboxes, boiler feedwater pumps, booster pumps, induced draft, forced draft and cooling tower fans, and compressors
- Hydraulic couplings coupled to boiler feedwater pumps
- Steam turbine drivers coupled to power generators, blowers and compressors
- Gearboxes coupled to power generators and blowers
- Gas turbine, steam turbine and motor drivers coupled to dynamometers (high-speed and high-torque test benches)

# Choose Rexnord **Euroflex Disc Couplings**

## **CUSTOMIZED AND OPTIMIZED FOR YOUR APPLICATION**

Unlike a traditional engineered to order (ETO) disc coupling selected from standard sizes, each Rexnord Euroflex Disc Coupling is custom designed and individually produced through a highly efficient, industry-leading engineering and manufacturing process. The result is a true engineered and optimized coupling. The advantage to the customer is they receive a high-performance coupling that is competitive in design with traditional coupling suppliers, and provides an economical solution. By adhering to strict guidelines that specify the components of the coupling, including hardware and disc packs, each Rexnord Euroflex Disc Coupling is customized to fit each customer's application. Our coupling designs are not constrained by a fixed bolt circle diameter or a set number of bolts. This allows Rexnord to truly optimize the coupling for the application.

## **Highly engineered designs and custom configurations**

Ideal for applications with higher-than-normal speed requirements and misalignment needs, Rexnord Euroflex Disc Couplings can be designed to meet weight restrictions and alignment conditions. This is accomplished through advanced engineering techniques, and if necessary, by incorporating exotic materials such as titanium, composite or aluminum. Additionally, the geometry of the flexible disc membranes may be further customized to fine-tune coupling performance. Reduced moment configurations, torsional tuning, composite center members, high-misalignment designs, and more, are also available.

## **In-house manufacturing of disc pack and hardware**

The disc packs and assembly hardware of all Rexnord Euroflex Disc Couplings are designed and manufactured in-house, contributing to our industry-leading turnaround times in quoting, designing and manufacturing.

## **Superior quality controls**

Certified to ISO 9001:2015 and supported by our highly-controlled quality management system, each critical dimension of a Rexnord Euroflex Disc Coupling is thoroughly checked before it's shipped to the customer. Additionally, we work with reputable third party inspection agencies when required, including the **American Bureau of Shipping (ABS)**, **American Petroleum Institute (API)**, **Bureau Veritas Group**, **DNV Business Assurance**, **Lloyd's Register Quality Assurance (LRQA)** and **TÜV SÜD America Product Service**.

## **FEATURES AND BENEFITS THAT HELP PROMOTE UPTIME:**

- Designed and manufactured to meet the specific requirements of the application
- Optimized disc coupling design for high-speed and turbine-driven applications
- Rapid response turnaround and quote generation
- Low-mass and reduced moment coupling designs for high torque and speed capacities
- Capable of producing couplings with peak torque capacities greater than 17 million in-lbs (2,000,000 Nm)
- Highly engineered disc coupling components, including bolts and disc packs
- Torsionally tuned coupling center member tubes for specific drive train operating conditions
- Close partnership with industry-leading torque measuring and monitoring manufacturers
- Ability to transmit over 120,000 hp (90 MW)
- Designs that meet API 671, ISO 10441, ATEX, DNV, ABS, and other specifications
- Manufacturing facility certified to ISO 9001:2015





# High-Performance Coupling Design Options

**You'll find Rexnord Euroflex Disc Couplings** with unique design features to optimize all your gas and steam turbine-driven, high-speed motor-driven, gas compression and test bench applications.



## Reduced Moment Models

- Feature reverse hubs to offer the lowest possible overhung moments, increasing system efficiency
- Weight optimized flanges and spacers enable the couplings to achieve the lowest possible inertia and weight
- Have a low-windage design with shrouded flanges
- Include axial adjustment shims
- Fully API Std 671 compliant and ATEX certified
- Component and assembly balanced to ISO 21940 or in compliance with API Std 671



## Transmission Unit Models

- Available with standard hubs or marine-style large hubs
- Anti-fly retention spacer helps ensure safe operation
- Fully API Std 671 compliant and ATEX certified
- Component and assembly balanced to ISO 21940 or in compliance with API Std 671



## Interlocking Models

All the benefits of the reduced moment design with the addition of:

- Co-planar coupling flanges to offer the lowest possible overhung moments
- Interlocking feature maintains load in the event of a disc pack failure, protecting connected equipment

# A look at our **optimized solutions** for customer applications

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Rexnord Euroflex Disc Couplings are ideal for your power generation and high-speed compressor needs, providing higher misalignment capacities and higher torque ratings. See examples of optimized customer applications below.



## Gas turbine applications

We have extensive experience designing couplings for gas turbine applications with couplings approved for numerous original equipment manufacturer (OEM) customer frames, including:

- **Fertilizer plant:** gas turbine to compressor, 23,767 hp (17,730 kW) at 10,973 rpm
- **Floating production, storage and off-loading (FPSO) ship:** gas turbine to generator, 30,161 hp (22,500 kW) at 13,192 rpm
- **Liquefied natural gas (LNG) upstream facility:** gas turbine to gearbox, 18,633 hp (13,900 kW) at 9,500 rpm

## Steam turbine-driven applications

- **Pipeline:** steam turbine to generator, 160,858 hp (120,000 kW) at 3,000 rpm
- **Petrochemical refinery:** steam turbine to compressor, 69,705 hp (52,000 kW) at 3,021 rpm
- **FPSO vessel:** steam turbine to compressor, 10,295 hp (7,680 kW) at 12,075 rpm



## Compressor applications

- **Pipeline compressor:** gas turbine to compressor, 38,874 hp (29,000 kW) at 7,700 rpm
- **Purified Terephthalic Acid (PTA) plant:** steam turbine to compressor, 71,662 hp (53,460 kW) at 3,021 rpm
- **LNG ship:** gearbox to compressor, 22,015 hp (16,423 kW) at 8,242 rpm

## Test bench applications

- **Turbine to gearbox:** 670 hp (500 kW) at 50,000 rpm with an overall length of 10.40 inches (264 mm)
- **Turbine to gearbox:** 536 hp (400 kW) at 45,000 rpm with an overall length of 4.72 inches (120 mm)
- **Race car:** 2,681 hp (2,000 kW) at 28,000 rpm; combination of titanium, aluminum and alloy steel to meet the weight requirements of 9.25 pounds (4.2 kg), over 50 percent lighter than a traditional test bench coupling



## Count on Regal Rexnord to support you from specification to post installation

Do you have a breakdown or emergency situation forcing you to shut down your critical drive train? Is the coupling the problem and you can't get the answers or solutions you need? Call Regal Rexnord. View the example below to see how Regal Rexnord supports customers in emergency situations.

### **URGENT CUSTOMER EXAMPLE:**

Regal Rexnord received a call from a large refinery customer in a breakdown situation that had a different coupling manufacturer's coupling installed. The customer couldn't accept the lead time quoted by the other manufacturer. As a result, the customer turned to Regal Rexnord and we were able to engineer an interchange, and deliver a Rexnord Euroflex Disc Coupling within 48 hours.

## Frequently Asked Questions

### **Are Rexnord Euroflex Disc Couplings offered and serviced globally?**

Yes, they are offered to customers around the world. Additionally, we have global service and technical support capabilities.

### **What sizes are available?**

Because we design and manufacture couplings to best meet the requirements of the application, there are theoretically no restrictions to the size of the coupling.

### **Why do Rexnord Euroflex Disc Couplings stand out above the competition?**

We provide a unique ability to provide a highly engineered solution designed to meet the specific application requirements with best-in-class turnaround times and customer value.

### **How long have Rexnord Euroflex Disc Couplings been on the market?**

More than 75 years.

### **How can I order?**

Contact your local Regal Rexnord representative or contact us at [highperformance@rexnord.com](mailto:highperformance@rexnord.com) for support.

### **Why don't Rexnord Euroflex Disc Couplings use scalloped disc packs?**

The Rexnord Euroflex Disc Pack is designed and optimized for engineered solutions as well as providing the greatest strength and torque transmission for high-performance applications in the industry. This allows us infinite flexibility in our design, providing the quickest turnaround and most optimization for our customers.

# The complete **Rexnord Disc Coupling** offering

The Rexnord Disc Coupling portfolio provides customers with a range of solutions to choose from for any specific application, including low or high speeds, torques or misalignments. With four disc coupling product lines, we ensure an optimized solution for your specific need.



## **Rexnord Euroflex Disc Couplings**

- High-torque and high-speed capabilities with low mass
- Engineered and made-to-order, optimized for the application
- Best-in-class customer value and lowest total cost of ownership
- In-house manufacturing of hardware
- Disc packs designed and manufactured per order
- Can meet API 671 and ISO 10441 specifications as required. ATEX and TR CU 012/2011 certified



## **Rexnord Addax® Composite Disc Couplings**

- Niche applications of long-span fans in cooling towers, and long-span vertical pumps
- Composite and lightweight
- Corrosion-resistant
- Torsional dampening and tuning capability
- ATEX-certified



## **Rexnord Thomas® Disc Couplings**

- Low-torque and low-speed capabilities
- Standard stock components
- Configured to order
- Standard stocked hardware
- Flywheel adapters for reciprocating gas compressor applications
- Modularized components
- Can meet API 610 and API 671 specifications as required, ATEX-certified



## **Rexnord Modulflex® Disc Couplings**

- Niche applications of high-shock load presses, engine-driven reversing loads and marine propulsion drives
- Standard disc modules
- Interference fit bolts
- Modular design – configured to order
- ABS-, DNV-, and ATEX-certified

## **Solutions for your specific speed and power needs.**

**HIGH Speed**



**POWER**



— Euroflex



— Thomas XTSR71



— Thomas XTSR52



— Thomas Series 44



— Thomas CMR



— Thomas AMR

**LOW Speed**

Rexnord Addax Composite Disc Couplings and Rexnord Modulflex Disc Couplings are designed for niche applications. Learn more by reading the product information to the left.



**TO LEARN MORE** about Rexnord Euroflex Disc Couplings and how Regal Rexnord can support your application, contact your local Regal Rexnord representative, or email us at [highperformance@rexnord.com](mailto:highperformance@rexnord.com)

All other inquiries: 866-REXNORD/866-739-6673 (toll-free within the U.S.) or 414-643-2366 (outside the U.S.)



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