



# Omega® Coupling Maintenance Instructions

Regal Rexnord

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**FORM**

**CP3-011E**

**Revised**

**December 2023**

**⚠ WARNING** Indicates a hazard which, if not avoided, could result in serious injury or death.

**⚠ CAUTION** Indicates a hazard which, if not avoided, could result in minor or moderate personal injury.

**NOTICE** Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

## GENERAL SAFETY INSTRUCTIONS

### ⚠ WARNING

- Read and follow all instructions carefully.
- Disconnect and lock out power before installation and maintenance. Working on or near energized equipment can result in severe injury.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.
- Read and understand the information in this section and in this manual completely before installing, operating or maintaining this equipment. Failure to follow this instruction could result in severe injury or death.

### ⚠ CAUTION

- Perform periodic inspections. Equipment may fail prematurely and could become unsafe if not properly inspected and maintained. Failure to follow this instruction could result in mild or moderate personal injury.

The Rexnord® Omega® Coupling is a high quality elastomer type flexible coupling designed to accommodate shock loads, vibration and other reaction forces inherent to rotating equipment. The engineering grade polyurethane material used for the Omega flex element is formulated specifically to absorb these destructive forces resulting in smooth operation, longer component life and lower overall maintenance costs of connected equipment. As the sacrificial component of the drive system, finite flex element life can be expected (requiring replacement of the flex element). The Omega Coupling's split-in-half bonded flex element design allows for quick and inexpensive replacement of the flex element with no need to disturb the hubs on the shaft or to move connected equipment.

the application and environmental conditions. A properly sized element which is stored and operated under normal conditions (i.e. under 85% humidity and 85°F) should obtain a minimum of 6 to 8 years of service life after the date of manufacture. A production date sticker is applied to all elements for ease of inspection (I.E. 1Q19 indicates the element was manufactured in the 1st quarter of 2019).

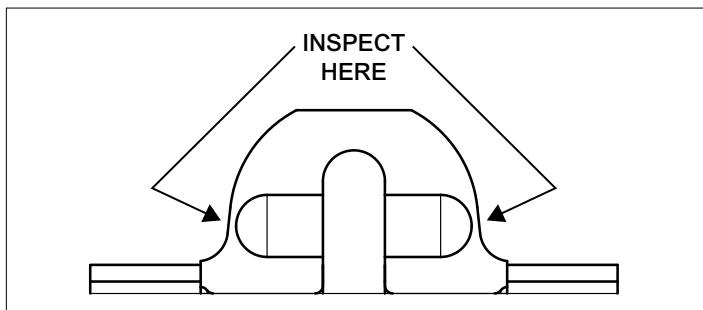
After the coupling has been in operation for some time, a "torsional set" may develop in the flex element (e.g. ~1/4" on a size E40, more on larger sizes). This does not affect the performance of the coupling, as it is simply the material creeping under the applied stress. A very large torsional windup may suggest an undersized coupling or excessive temperature and warrants a close review of the coupling selection and environment. For ease of assembly/ disassembly, elements should be re-installed in the same "position of rotation" in which they were originally installed.

## PREVENTATIVE MAINTENANCE

**WARNING!** Disconnect and lock out power before installation and maintenance. Working on or near energized equipment can result in severe injury.

Many Omega Couplings have been in operation for 10 years or more with the original flex elements in place. Where feasible, a periodic visual inspection may be all that is necessary to evaluate the condition of the flex element.

When inspecting the element, look for fatigue cracks (over 1/2") originating near the stress relief grooves (approximately 1/4" - 1/2"



above the metal shoe), discoloration (a darker faded orange color signals possible material degradation) or surface cracking if used in adverse conditions such as cooling towers or severe environments (4 > pH > 10).

In critical applications, the probability of unexpected downtime can be greatly diminished by scheduling flexible element replacement at regular intervals. The frequency of replacement will depend upon the severity of

## PREMATURE FAILURES

Should the Omega Coupling fail to provide a reasonable service life, review the application and verify the coupling selection before replacing the flex element. Other factors that may contribute to decreased service life include:

- Severe environmental conditions
- Severe torsional variations
- Excessive misalignment of connected equipment
- Excessive axial movement of connected equipment
- Shock loads/peak torque loads above catalogued rating
- Drive system critical speed/components incompatibility

Experienced technical assistance is available from Rexnord to answer questions and/or provide failure analysis.

## LIMITATIONS

**NOTICE:** Although the Omega Coupling is designed for most general purpose coupling applications, certain limitations should be considered:

- **Temperature** — Maximum 200°F, Minimum -40°F. A combination of high temperature and high humidity will reduce coupling life. Contact Rexnord for specific application analysis.
- **Chemical Environment** — "Rule of Thumb" — Urethane resists most chemicals better than rubber. Refer to chemical resistance chart (Important Information Letter dated 3/12/92 available from Rexnord) or contact the factory for a review of specific chemical exposure in application.

- **Space Limitations** — Larger O.D. compared to all-metal couplings.
- **Reciprocating Equipment** — Higher service factors required (refer to Service Factor Table and footnotes in [Omega Catalog #4000](#)). Avoid applications where both driver and driven equipment are reciprocating.
- **Axial Thrust Consideration** — If installing Omega® Couplings on equipment sensitive to axial thrust, such as sleeve bearing motors or herringbone gear sets, proper motor shaft axial positioning, limited end float ring or compressive preloading of the coupling may be required. Consult Rexnord.
- **Turbines** — Omega Couplings are not recommended if the coupling cannot be protected from steam leakage or from speeds in excess of the coupling's published rating (see [Omega Catalog #4000](#)).

## STORAGE CONDITIONS

As with any elastomer or rubber material, it is subject to aging effects. Flex elements exposed to continuous elevated temperature and humidity (average of both above 85°F and 85% RH; i.e. tropical climates), may experience some material degradation (hydrolysis). If these conditions cannot be avoided, the HSU element alternative can be considered which will double the 6-8 year shelf life of the standard Omega formulation.

With proper application, the Rex Omega Coupling will provide many years of service driving and protecting your machinery. Prompt, technical assistance is available from your Rexnord representative or direct from the factory at 414-796-4060 or visit our website [www.regalrexnord.com/rexnord](http://www.regalrexnord.com/rexnord).