Tenmat

Advanced materials.
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Feroform T814 & Feroform PR18

Bearing bands, spherical bearings, pivoting bearings, guide rings, and wear rings for high-pressure hydraulic cylinders

Feroform composites are self-lubricating, wear-resistant bearing materials which withstand even the most aggressive working conditions. These non-metallic Feroform bearings are well suited for use within high-pressure hydraulic cylinders at extreme low and high temperatures, where they help to extend the ultimate working life of the unit.

Wear Components

Product Description

Feroform bearings offer key technical advantages for hydraulic cylinders and the corresponding machinery. As such, Feroform bearings have established themselves as the superior choice thanks to their market-leading wear performance and friction levels.

These low-friction parts have quick reaction times, giving a smoother and more controlled movement of the piston, in order to give safer and more reliable machinery. At the same time, the tighter running clearances of durable Feroform bearings gives better support and guiding to the piston, further improving movement performance.

Increased uptime of the hydraulic cylinder is a key benefit when using Feroform bearings, whose main feature is a longer work life. Machinery works for longer periods before repair stops because Feroform bearings outlast typical bearing materials like inferior plastic or cotton-based parts.

Independent field testing by the world's leading mining equipment manufacturer proves a 2,000-hour work bonus before the first maintenance stop to replace wear parts. This is especially vital for mining or offshore operations, which are often remote and hard to access.

Feroform helps solve the problem of expensive standstill periods and costly repairs, by avoiding unplanned downtime. Feroform's longer bearing life delivers on this, so machinery works for longer before servicing and these stops can be better predicted.

The commercial benefit of Feroform material is better profit and lower OpEx cost per ton of product. The rising productivity targets within industry places a higher requirement on hydraulic cylinders, which Feroform bearings fulfil.

The superior performance-to-weight ratio of Feroform bearings allows cylinders to become lighter, so bigger loads can be moved each lift, and profit increases. Profit is further improved thanks to reduced energy usage of a smoother running Feroform cylinder, the lower ownership cost of longer life bearings, and less time spent on maintenance stops. Feroform material is anti-corrosive, and specially designed to work with all typical shaft metals and coatings. This protects costly internal parts from damage and further reduces costs on-site.

Product Advantages

- Increased lifetime of hydraulic cylinder
- Better uptime and fewer, quicker repair stops
- Improved performance of hydraulic cylinders
- Smooth and reliable movement of the cylinder piston
- Excel even at extreme temperatures, with negligible expansion or swell
- Reduced cost of ownership and operation
- Material with all major marine society classification

Physical Properties

For all technical data, please view the Tenmat Advanced Composite Laminates Datasheet.

Approved Applications

Spherical Bearings, Bearing bands, Guide Rings (solid body or clip-on) Wear Rings.

Sizes

Feroform bearings are manufactured to the tightest tolerances and highest quality standards. This gives manufacturing capability in excess of 1500mm diameter and 500mm length, whilst also making smaller and thin walled parts for specific applications.

Packaging

Tenmat materials are packaged in such a way as to protect their high performance, and ensure they suffer no damage before installation. Keep Tenmat materials in the packaging until you are ready to directly use them.

Fitting Instructions

Tenmat composite bearings can be fitted by various methods, to best suit customer needs. This includes interference fit, clip fit, freeze fit. Tenmat also creates tailor-made component designs which give mechanical locking exactly for the unit.

Intended use

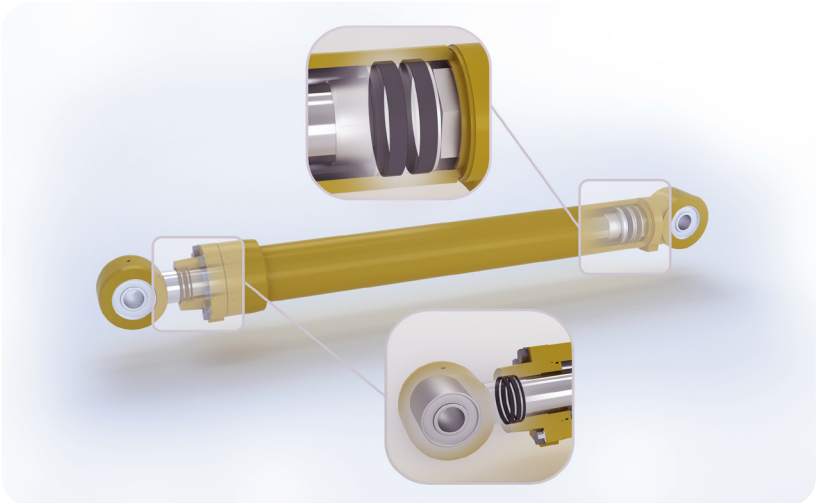
Feroform materials are intended for use as various load bearing and wear protection components in dual action hydraulic cylinders. This includes spherical bearings in the cylinder eye, and various guide rings / bearing bands within the piston cylinder.

Storage

- Keep in packaging and do not open until ready to install
- To be stored in dry location
- Take care not to exceed safe working loads and heights for storage shelves and racks

Working Life

When used correctly, Tenmat bearing components are proven to fulfil long service cycles, which can be in excess of several years. Feroform components do not typically require replacement before scheduled maintenance periods.



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Tenmat warrants the materials it produces will conform to Tenmat specifications and approved drawings where applicable. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application, carrying out testing where required. For construction projects, all products which the customer is intending to use on a particular project must be approved in writing by the customer's building designer, system designer or design control professional, to ensure compliance with the latest regulations.

The information contained in Tenmat data sheets is presented in good faith. The values are "typical only" and are based on test results generally in accordance with BS2782, ASTM, a variety of other main test bodies along with Tenmat internal test methods. These values should not be relied upon for specification purposes or the primary selection of materials. As the data sheet values are typical only, Tenmat does not warrant the conformity of its materials to these properties or the suitability of its materials for any particular purpose. It is the responsibility of the customer to do the necessary testing and satisfy themselves the product is suitable for the intended application.

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