

Ameridrives

Bauer Gear Motor

Bibby Turboflex

Boston Gear

Delevan

Delroyd Worm Gear

Deltran

Formsprag Clutch

Guardian Couplings

Huco

Jacobs Vehicle Systems

Kilian

Kollmorgen

Lamiflex Couplings

Marland Clutch

Matrix

Nuttall Gear

Portescap

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Warner Electric

Warner Linear

Wichita Clutch

Four Questions to Ask Before Choosing a Drivetrain for Heavy Industries



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When it comes to performance and durability, not all power and motion transmission solutions are created equal. Harsh environmental conditions in certain markets, such as the metallurgical and marine sectors, can heavily damage the drivetrain. In these cases, exceptional performance, durability and reliability are essential.

Patrice Devoulon and Stefan Koesfeld, from Altra Industrial Motion Corp., look at the aspects to consider when selecting couplings, clutches and brakes for challenging industrial applications.

Power transmission components are critical pieces of equipment, thus choosing the right equipment can be daunting. To avoid early breakdowns that can result in failures, it is important to opt for solutions that satisfy the specific needs of the industry. This can be achieved by asking some basic questions prior to specification.

What Conditions Should the Drivetrains Withstand?

One of the main aspects to consider is the environment where the equipment is going to be used. Many industries present particular environmental challenges that can take a toll on the equipment. In these cases, the service life of drivetrain parts can be heavily compromised unless they have been designed to meet these specific challenges.

For example, splashes or immersion in saltwater, as often occurs in marine environments, can cause gradual corrosion of metal components. Similarly, the metallurgical industry is characterized by bulk material handling in dirty environments under extremely high-pressure, high-temperature conditions. In fact, the rolling equipment in steel mills is exposed to hot, semi-molten

metal slabs. Finally, metal shredding machines features high misalignment angles, vibrations and movements when grinding large metalworks, such as cars, into small pieces.

Experienced drivetrain suppliers are able to support and direct their clients towards the solutions that offer protection against such conditions. Often a manufacturer with experience in such industries will have developed custom technologies with the sole intention of offering end users improved performance. For example, if mooring and anchor winches in offshore platforms are exposed to particularly corrosive environments, Wichita Clutch can provide clutches and brakes with enhanced corrosion resistance. In this way, it is possible to improve the equipment's service life.

Are Standard Solutions Good Enough for the Intended Application?

It's always worth investigating standard solutions that are available on the market. If a component from a manufacturer's standard catalogue meets all of the application's demands then this will often be favorable as it is likely to be more cost-effective, offer better availability and better access to spare parts. However, for many specialized applications a degree of modification – or even custom design – may be necessary to ensure maximum performance.

By identifying the conditions that the power transmission equipment should withstand, as well as the properties that the equipment should exhibit, power transmission specialists will develop engineered solutions that provide optimal performance and durability for specific applications.



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For example, Svendborg Brakes can design, prototype and test innovative solutions that meet the needs of its customers and their industrial applications. In particular, its engineers are able to develop brake solutions suitable for corrosive marine environments. Similarly, Bibby Turboflex provides floating shaft couplings that are designed for use in applications where the coupling shaft needs to span lengths of 10 meters or more. By using carbon fiber construction, the couplings weigh up to 80% less than steel counterparts and do not need any bearing supports or similar structures.

Are Maintenance Services Included?

Before investing in drivetrain solutions, it is also important to consider who will conduct maintenance operations and how simple the process is. While specifying the most appropriate component designs will greatly improve the product's service life, the challenging conditions experienced in heavy industries means the maintenance and repair work will remain a certain necessity for optimum performance.

When preventative or responsive maintenance activities are required, responsiveness, expertise, time- and cost-efficiency are key parameters to consider. If the original equipment supplier is able to include maintenance and repair services with a local field service team, then the likelihood of a component being maintained to the correct standards increases. In addition, having a single point of contact for the supply and maintenance can be highly beneficial.

Svendborg Brakes understands that it is ongoing support that makes the difference between a supplier and a partner. With support offices located around the world, it has invested in a service infrastructure that is available to all of its end-users. It even offers specialized service contracts for specific industries, such as offshore maintenance service for wind turbines.

What Experience Does the Supplier Have?

The harsh conditions found within many heavy-duty industries require power transmission solutions with high performance, durability and reliability. Highly skilled drivetrain specialists should be able to assess the sector- and location-specific features to identify the most suitable solution. This also means being able to develop custom products and provide effective maintenance service.

All Altra Industrial Motion Corp. brands are committed to supporting customers with state-of-the-art drivetrain solutions. With decades of experience in delivering innovative, high-quality, long-lasting power transmission components such as couplings, heavy-duty clutches and brakes, as well as belted drives for a wide variety of industries.

With the combined expertise and experience of all its individual brands, Altra can tackle any industry-specific challenge and offer a turnkey service, from initial investigation to design, manufacture, maintenance and support. Thanks to its global network, customers in Europe, Russia, Africa and the Middle East can benefit from extensive supply and maintenance services.

About Altra Industrial Motion

Altra is a leading global designer and manufacturer of quality power transmission and motion control products utilized on a wide variety of industrial drivetrain applications. Altra clutches and brakes, couplings, gearing and PT component product lines are marketed under the industries' most well known manufacturing brands. Each brand is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction. Highly engineered Altra solutions are sold in over 70 countries and utilized in a variety of major industrial markets, including food processing, material handling, packaging machinery, mining, energy, automotive, primary metals, turf and garden and many others.

Altra's leading brands include Ameridrives, Bauer Gear Motor, Bibby Turboflex, Boston Gear, Delevan, Delroyd Worm Gear, Deltran, Formsprag Clutch, Guardian Couplings, Huco, Jacobs Vehicle Systems, Kilian, Kollmorgen, Lamiflex Couplings, Marland Clutch, Matrix, Nuttall Gear, Portescap, Stieber, Stromag, Svendborg Brakes, TB Wood's, Thomson, Twiflex, Warner Electric, Warner Linear and Wichita Clutch.



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