

Warner Electric

Boston Gear

TB Wood's

Formsprag Clutch

Wichita Clutch

Marland Clutch

Industrial Clutch

Bauer Gear Motor

Svendborg Brakes

Nuttall Gear

Warner Linear

Delroyd Worm Gear

Stieber Clutch

Ameridrives Couplings

Inertia Dynamics

Matrix International

Huco Dynatork

Bibby Turboflex

Twiflex Limited

Lamiflex Couplings

Kilian Manufacturing

Guardian Couplings

Ameridrives Power
Transmission

Bauer: Gearing Up For Industry 4.0



 **Bauer**[®]
Gear Motor

An Altra Industrial Motion Company

Bauer: Gearing Up For Industry 4.0



Bauer Gear Motor's "Connected Factory" concept can reduce lead times for both standard and engineered gear motor solutions.



Bauer Gear Motor's production concept works with localized service centers to ensure that replacement parts are made available quickly.

As one of the world's leading manufacturers of reliable, efficient and solution-oriented gear motor technology, Bauer Gear Motor is able to supply engineered solutions to end-users in almost any industry around the world. To ensure that every order is satisfied with the shortest possible lead time, Bauer has invested in a new production concept. A video overview can be viewed on the Bauer Gear Motors website at www.bauergears.com.

Karl-Peter Simon, Managing Director of Bauer Gear Motor, explains how a "Connected Factory" can reduce lead times for both standard and engineered gear motor solutions.

In today's changing world, where global communication is instant and competition is tougher than ever, it's important that manufacturers listen to their end-users to learn how best to service their needs. While many customers are still looking for products which are quick and simple to specify, many more are expecting a greater level of service during the design phase – looking for engineered gear motor solutions which will eke out every last bit of performance available for their applications.

Bauer has traditionally worked on a modular design basis, which allowed customers to specify individual components that would integrate seamlessly with one another. As a result, standardized gear motors have always been available with a degree of flexibility and extremely quick lead times. However, custom solutions would require greater logistical efforts, which could lead to extended waiting times.

These customized variants are becoming increasingly popular as more companies than ever are setting efficiency targets which must be met. For example, most standard IE3 motors are efficient at their rated performance and speed, but they may not be suited for partial-load operations. End users who actually want to reap the benefits of improved efficiency – rather than simply meeting the legislation requirements placed in front of them – are approaching manufacturers such as Bauer and requesting optimized solutions including permanent magnetic motors and asynchronous motors with inverter drives. These variants must be made available quickly and reliably.

The key to developing a process that improves flexibility toward a wider variety of specialized demands is communication. Communication with our customers; communication with ourselves; and communication between our production lines. In Bauer's case, the decision was made to undergo a process of investment in the production facilities in Zlaté Moravce, Slovakia and in Esslingen, Germany, to create a "Connected Factory", which would facilitate lean manufacturing through One-Piece-Flow assembly.

By completely stripping back the production process – from specification to delivery – and analyzing each step, it's possible to see where there is inefficiency and develop new processes. Once the inefficiencies have been eliminated, you build the processes back up, this time ensuring that each production step is connected so that there is minimal downtime between them.

With the new production concept, we are able to reduce lead times for nearly all of our orders by 50% - configurable motors can now be delivered just five days after the original order is processed. This doesn't just benefit the end-user in the short term; it allows them to run their warehouses in accordance with just-in-time (JIT) principles, which in turn, reduces stock requirements.

Of course, lean manufacturing is nothing new. What is new is the ability to utilize the principles for high-value, engineered components – like industrial gear motors – and deliver the benefits on a global scale. In order to achieve this, logistics and deliveries need to be involved in the communication process.

Bauer operates regional assembly factories which communicate with the production facility. For example, the assembly plant at Esslingen communicates with Slovakia as though it were simply next door. Components are sent from Slovakia with the travel time factored in so that they arrive on the day they are needed. This allows us to keep production centralized while assembly and order satisfaction is localized to our customer without internal logistics extending the ultimate lead time.

This level of integration between facilities is only possible now that we have the technology that enables machines to communicate reliably and continuously over long distances. It's the next step in the industrial process which allows us as manufacturers to improve our service and further benefit our customers.

For Bauer to adopt an entirely new production process took a few years of planning, as well as investment in our European production and assembly facilities. However, since it's been up and running, we've reduced lead times on all orders and material waste and energy costs were also decreased. This means we've seen direct benefits for us and our customers since the first month of operation.

As part of Altra Industrial Motion, Bauer Gear Motor has a global footprint with customers in almost every country in the world. The new production concept will be rolled out into our regional factories in the USA, China and Brazil, and our global sales team will be available to offer specification support for custom solutions, which can be delivered worldwide.



The new production concept allows Bauer Gear Motor to reduce lead times for nearly all orders by 50%.

About Altra Industrial Motion

Altra Industrial Motion (NASDAQ:AIMC) is a leading multi-national designer, producer and marketer of a wide range of electromechanical power transmission products. The company brings together strong brands covering more than 40 product lines with production facilities in nine countries.

Altra's leading brands include Boston Gear, Warner Electric, TB Wood's, Formsprag Clutch, Wichita Clutch, Industrial Clutch, Ameridrives Couplings, Kilian Manufacturing, Marland Clutch, Nuttall Gear, Bauer Gear Motor, Svendborg Brakes, Stieber Clutch, Twiflex Limited, Bibby Turboflex, Matrix International, Inertia Dynamics, Huco Dynatork, Lamiflex Couplings, Ameridrives Power Transmission, Guardian Couplings, Delroyd Worm Gear and Warner Linear. For information on any of these technology leaders, visit www.AltraMotion.com or call 815-389-3771.



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