Ameridrives Couplings

Bauer Gear Motor

Bibby Turboflex

Boston Gear

Delroyd Worm Gear

Formsprag Clutch

Guardian Couplings

Huco

Industrial Clutch

Inertia Dynamics

Kilian

Lamiflex Couplings

Marland Clutch

Matrix

Nuttall Gear

Stieber Clutch

Stromag

Svendborg Brakes

TB Wood's

Twiflex Limited

Warner Electric

Warner Linear

Wichita Clutch

Precision Servomotor Brake for Tight Spaces

Matrix® International

An Altra Industrial Motion Company

Precision Servomotor Brake for Tight Spaces

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The 1EB from Matrix International provides up to 500 Nm of braking torque from a compact housing without creating excessive heat build-up.

Servomotors provide power and precision to a wide range of industrial applications such as automation and material handling. Being incorporated into process machinery requires the motors and their ancillary components to be compact and reliable. This is especially true for the braking system, which is required to provide a holding force even in the event of power loss. Matrix International offers a solution that provides high torque ratings, almost zero backlash, low power consumption and a design that can be well suited for retrofitting existing machinery.

The most common and cost-effective brake for the majority of servomotor applications is the spring-applied design. These brakes operate by applying the force of a spring to a friction plate mounted on the motor shaft. In operation, DC voltage applied to a coil disengages the brake. In turn, if the voltage is removed, the brake activates. The Matrix 1EB Series is an example of this brake type. Over the past three decades, the company has produced more than 700 different variants of the design.

Matrix International, part of Altra Industrial Motion, supplies the leading servomotor manufacturers in Europe and America. An experienced design and development team is continuously developing the 1EB product range and evaluating new and alternative materials. Design engineers use a finite element analysis package to optimize the magnetic path within the brakes, to maximize torque and minimize power consumption, while keeping costs to a minimum.

With such a wide range of applications, servomotors and their associated brakes are used by original equipment manufacturers (OEMs) throughout the world. Meeting the demands of these varied applications requires flexible design and the expertise to meet all challenges as they're presented. Providing up to 500 Nm of braking torque from a compact housing without creating excessive heat build-up is a considerable achievement accomplished by the 1EB Series of servomotor brakes.

While meeting the design requirements is critical, it is also important to achieve a cost-effective solution that will be attractive to the very cost-conscious servomotor market. To this end, Matrix has implemented lean manufacturing and supply chain procedures, which have significantly reduced costs as well as lead times, especially on custom products.

However, the ability to adapt such a versatile design also needs to be matched by the support for these products, which is provided by the extensive international sales, logistics and service capabilities of the broader Altra group. As the world's largest manufacturer of industrial clutches, brakes and couplings, Altra ensures that its customers receive ongoing support, wherever the final destination of its products.

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P-8216-MX 3/17 Printed in USA