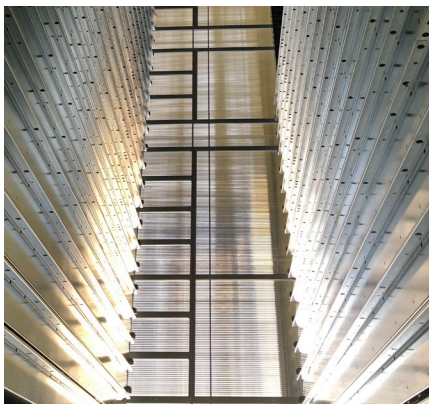


INDUSTRY
MATERIAL HANDLING

APPLICATION
AUTOMATIC WAREHOUSE

PRODUCT
MEGALINEAR QST



SITUATION/APPLICATION

In the logistics field continuous improvement is important as the amount of goods handled in distribution centers is ever increasing. The ability to quickly process goods while maximizing storage space is a key initiative. Minimizing labor and reducing cost is another common motivation. Increasingly, automated storage and retrieval systems (AS/RS) are the solution chosen by supply chain managers to achieve these goals.

An AS/RS system consists of a variety of computer-controlled systems for automatically placing and retrieving loads from defined storage locations. They are typically used where a very high volume of product is moved in and out of storage and maximizing storage density is important due to space constraints. An efficient AS/RS system reduces warehousing expenses by minimizing the amount of unnecessary products in storage, and improving organization of the warehouse contents. It maximizes available storage space with a high-density storage process. Accuracy is critical because of the potential for damage to expensive products and safety is also a high priority with heavy loads being lifted to great heights.

THE PROBLEM

A manufacturer of AS/RS systems contacted the Megadyne application engineering team for assistance with their drive system. They needed a clean, economical, quiet and lightweight system that guaranteed smooth, precise movement in a compact space with a minimum amount of componentry. Chain drives were the solution in the past but in testing they proved unable to achieve the demanding high performance requirements of the customers' new modern equipment.

THE SOLUTION

An extensive analysis of the drive by Megadyne engineers revealed that Megalinear QST14 with XHP steel cords was the best solution. QST (quiet self-tracking) belts possess an advanced double helical tooth design ensuring accurate product movement and low noise with precise meshing between belt and pulley. It also addresses the need for a compact drive width without excessive componentry as the self-tracking properties of QST eliminate the need for pulley flanges. The wear-resistant 92 Shore A hardness thermoplastic polyurethane belt body adds the advantage of lighter weight and lower inertia than chain drives while the XHP (extra high power) steel cord tensile members move heavy loads with a high safety factor.

THE RESULT

With precise and continuous mesh between belt and pulley, the Megadyne QST System delivers an improved reduction in noise level versus chain or traditional types of toothed belt designs. The dimensional stability and high torque capacity of QST guarantees a reliable trouble-free system that is compatible for fabrication with other thermoplastic materials, allowing the customer to customize the system to move any type of product required. Megadyne provided their complete drive with the QST system of belts, pulleys and clamping plates, all designed to work together in unison for a drive solution meeting all the performance requirements of a modern AS/RS system.

