

INDUSTRY
 RECYCLING

APPLICATION
 GLASS BREAKER

PRODUCT
 PLATINUM

SITUATION/APPLICATION

Recycling converts waste materials into new materials while reducing the consumption of fresh raw materials. It also benefits the environment by reducing energy usage, air pollution (from incineration), and water pollution (from landfilling).

A key process in recycling is the reclamation of food and beverage glass containers. They are 100% recyclable and can be recycled endlessly without loss in quality or purity. They can substitute up to 95% of fresh raw materials and over a ton of natural resources are saved for every ton of glass recycled.

Glass Breakers are an essential piece of equipment used in the glass recycling process. They crush the glass and reduce it to a uniform size acceptable to the recycling process. These units require a very strong, compact and reliable drive system that guarantees long life. They must withstand years of punishing use with minimal maintenance.

THE PROBLEM

A manufacturer contacted Megadyne with the challenge of designing a cost effective, compact drive system to actuate the rotating, glass-crushing drums of a glass breaker. They required a durable light weight system with low maintenance requirements. Due to the great amount of torque required to rotate the drums, a very strong drive system was required.

THE SOLUTION

Megadyne application engineers supplied the solution with Platinum, ultra-high torque rubber synchronous belt. Platinum's "Dual Core" Hybrid Tensile Cord Technology, combined with a nitrile-based HNBR compound body gave an alternative to the use of roller chains which are loud, dirty and require frequent tensioning and lubrication. It also provided an alternative to metal gears which are heavy and expensive. Platinum's "DualCore" Hybrid Tensile Cord technology allowed the highest power transmission capability granting a narrow, compact design while easily handling the high torque and ensures minimum elongation for consistent, precise synchronization and low maintenance. Its' nitrile-based HNBR compound body with a wide range of operating temperature ensured the drive withstood the tough conditions while the parabolic tooth profile contributes the advantage of being fully interchangeable with all commonly used deep-tooth pulley profiles in the marketplace.

THE RESULT

Productivity and reliability were optimized with the application of Platinum Ultra-High Torque synchronous belt from Megadyne. Platinum provided high power capacity to handle the torque and allow reduced belt and pulley width, ensuring an economical, compact drive with less weight and lower bearing loads. Platinum's status as a standard off-the-shelf ultra-high torque product combined with its unmatched pulley interchangeability assured the convenience of a readily available parts supply.

