

Boxley Switches to Timken® Type E Housed Units for Greater Uptime and Reliability

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Case Study 78 • Case Study 78



Customer

Boxley
Mill Point, W.Va., U.S.A.

Market

Aggregate

Product

Type E Tapered Roller Bearing
Housed Units

The Timken Advantage

Type E tapered roller bearing housed units are designed for rugged applications. Compared to industry-leading designs with standard Timken bearings, Type E housed units offer:

- Greater uptime due to longer bearing life and greater reliability
- Improved grease retention that helps extended maintenance intervals
- Lower overall cost of ownership

As the superintendent at Boxley's aggregate quarry in Mill Point, W.Va., Howard Walker starts each work day knowing that his team won't have to worry about unexpected conveyor stoppages caused by premature bearing failures.

That's because the conveyors now run on Timken® Type E tapered roller bearing housed units, which help reduce downtime, extend maintenance intervals and lower overall cost of ownership.

The Mill Point quarry, one of nine Boxley quarries, recently switched to Type E housed units at the suggestion of its distributor, Applied Industrial Technologies.

"When I learned Timken was launching these new housed units, Mill Point was the first place I came," said Nick Lasure, account manager with Applied. "This quarry operates under harsh conditions and the unique Type E housed unit design seemed better able to stand up to the application challenge."

According to Walker, those challenges included occasional bearing failures in plant conveyors, as well as two to three hours of lost productivity every time a housed unit needs replaced.

"We were having some trouble predicting the failures and when they happened, it would catch us off guard," said Walker. "The old housed units were lasting an average of six to nine months in our tougher applications. We wanted to lengthen that time and also reduce the amount of unplanned downtime we were experiencing."

The Mill Point maintenance team installed two Type E housed units in the positions experiencing the most frequent failures. The conversion was easy since Type E housed units are interchangeable with other brands for all key characteristics, including bolt hole and shaft centerline dimensions.

Timken designed its Type E tapered roller bearing housed units for rugged applications like process and material handling equipment. This product is available as pillow blocks in two- and four-bolt designs, wide slot and top angle take ups, and four-bolt and piloted flange units.

All configurations feature:

- *Enhanced tapered roller bearings that yield a 55 percent increase in design life over standard Timken bearings and 14 percent more load capacity.*
- *Optimized bearing profiles and improved surface textures for improved lubrication flow when compared to standard Timken bearings.*
- *Double-lip seals that optimize lip contact for improved grease retention and significantly reduce contaminant ingress over the seal design of a leading competitor.*
- *Electro-deposition coating on both the housings and locking collars that helps protect exposed surfaces and provides better corrosion resistance than powder coating used on competing designs.*
- *Type E housing made with ASTM-A48 Grade 30 cast iron.*
- *Timken® Premium All Purpose Industrial Grease, which contains corrosion inhibitors, and extreme pressure and anti-wear additives.*

For Walker, the housed units' improved sealing and premium Timken® tapered roller bearings were "standouts." After testing the two initial housed units, the quarry has switched exclusively to Type E housed units for its entire conveyor lineup.

"We started out using the units in our toughest applications to prove their abilities and have been happy with the results," he said. "Based on our location's success, Boxley quarries in Beckley and Lewisburg, W.Va., are also converting to Timken Type E housed units."

According to Jim Huck, senior sales engineer at Timken, the Type E housed units were an ideal choice for Mill Point due to their tolerance in harsh operating environments.

"Mining in a West Virginia quarry definitely qualifies as a tough environment," said Huck. "Temperatures run from extreme hot to extreme cold. Dust, mud and grime are prevalent. All these considerations went into the Type E housed unit design, which features optimal bearing designs, sealing, lubrication and coatings that all work together to ward against contamination and corrosion."

This isn't the first time Timken products and services delighted Mill Point quarry personnel. The quarry also uses Timken bearings in its shaker screens and has utilized Timken's industrial repair services as a lower-cost alternative to buying new bearings.

With primary locations in Roanoke and Lynchburg, Va., Boxley supplies quality construction materials for communities in central and western Virginia and West Virginia. The company produces aggregate, asphalt, block and concrete products used in residential, institutional, commercial and infrastructure building projects.



Conveyors at Boxley's aggregate quarry mill now run on Timken Type E tapered roller bearing housed units, resulting in greater uptime and reliability.

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