



# UNIVERSITY ARENA BOOSTS ENERGY EFFICIENCY, IMPROVES RELIABILITY AND CUTS COSTS WITH TIMKEN® PANTHER® XT BELTS

## CHALLENGE ▼

A university encountered reliability issues with the chiller units in their ice arena. The units ran 24/7 year-round to maintain a constant flow of coolant and were equipped with a competitor’s belt. The belts had to be changed every two months and required monthly tensioning to ensure constant RPMs and efficient operation. The frequent maintenance caused significant downtime and was costly, amounting to \$750 per hour with a minimum downtime of two hours per drive.

## TIMKEN BELTS SOLUTION ▼

To address these challenges, the university’s belt distributor proposed switching the belts in the chillers to Timken’s Panther® XT 14MXT-2800-20 belts. These belts were chosen for their ability to maintain RPM, efficiency and reliability over extended periods. The construction of the Panther XT belt provides high thermal stability and the carbon fiber cord resists stretch, maintaining belt tension.

## RESULTS THAT MATTER ▼

The implementation of Panther XT belts provided remarkable results. Data loggers revealed a 10% increase in energy efficiency across all drives, leading to substantial energy savings. The Panther XT belts also showcased impressive operational reliability by running for nine months without requiring any maintenance or replacement, significantly reducing downtime and maintenance efforts.

The success of this initiative led to the endorsement of the project by the university’s Reliability, Purchasing and Administration departments. The university recognized the project as a green initiative and expressed interest in pursuing additional Timken applications across the campus.

Financially, the annual energy savings per belt drive amounted to \$8,500. With eight drives in operation, the total annual energy savings was \$68,000. The local utility company also provided a stipend of \$500 per drive, totaling \$4,000 for the eight drives. Finally, downtime costs were reduced by \$48,000, bringing the total cost savings for this project to \$120,000.



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Belt Life	Total Savings
<b>+7 Months</b>	<b>\$120,000</b>



Timken Belts is part of The Timken Company’s growing portfolio of engineering bearings and industrial motion products. Timken Belts manufactures premium-performance power transmission belts that help keep industry in motion and the world more productive.

Performance Driven. **Performance Proven.**

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