



**TIMKEN**

# **TIMKEN AIR-COOLED HEAT EXCHANGER SOLUTION**

**YOUR SINGLE SOURCE FOR HOUSED UNITS & BELTS**

# TIMKEN AIR-COOLED HEAT EXCHANGER SOLUTION

**Timken® Housed Units** *Stronger Outside, Smarter Inside.*

**Air-Cooled Heat Exchanger Belts** *Strong. Resilient. Efficient.*

## Top Ball Bearing Housed Unit

- Multiple barrier sealing system:
  - Corrosion-resistant polymer flinger to help cast contaminants away
  - Timken patented polymer Seal Guard helps prevent pooling of water and condensation on bearing
  - Three piece nitrile rubber shroud seal helps protect bearing from contamination
- Timken Fafnir® Ball Bearing insert with super finished raceways and corrosion resistant nylon cage
- Lubrication pathway designed to allow effective grease flow from top to bottom of the bearing, helping purge away contaminants
- Locking collar with full dog point set screw to permit shaft expansion
- Allows for 3° of misalignment

## Bottom Spherical Bearing Housed Unit

- Six point barrier sealing system:
  - Steel backing plate with triple lip external nitrile rubber seal for additional protection
  - Triple lip internal nitrile rubber seal provides sealing protection for the bearing
- Timken High Performance Spherical Roller Bearing with EJ slotted steel cage for reduced temperatures and improved lubrication
- Allows for 1.5° of misalignment

## Additional features of Timken Housed Units:

- Drain slots in housings and backing plate allows water/moisture to be channeled away
- Factory filled with Timken High Performance Roller Housed Unit Grease
- Dimensionally interchangeable with existing air-cooled heat exchanger units
- Drilled and tapped holes for condition monitoring

### Timken Spherical Roller Bearings

*Run Cooler. Last longer.*

- Better Load Distribution
- More Surface Area
- Reduced Friction
- Stronger Cages
- Lower Operating Temperatures
- Better Contaminant Purging

## Panther® XT Synchronous Drive Belt

- A powerful drop-in replacement for high performance polyurethane belts
- Drive efficiency of 98%
- Advanced polymer compound and special fabric design reduce high frequency noise
- Allows for more compact drive designs and reduced overall drive costs
- Higher power ratings than conventional Air-Cooled Heat Exchanger belts
- In accelerated life tests, Panther XT outperformed competitive belts
  - HSN polymer compounds combine high elasticity and hardness for improved performance in harsh environments
    - Oil and heat resistant from -40°F to 248°F
  - Low-friction and abrasion-resistant fabric for extended belt life
  - High modulus carbon fiber cord for minimal stretch and increased durability

**CARLISLE**  
BELTS BY TIMKEN

*Please contact Timken Engineering to ensure proper drive selection when used for ACHE applications. Specific applications or environments (like those requiring static dissipating belts or explosive environments) could affect the decision.*

V-belts and banded belts along with sprockets, sheaves and bushings are also available for ACHE drives.

# Additional Belt Options

## Gold-Ribbon® Cog-Belt®

- Unique cog design for added flexibility and increased efficiency
- Raw edge construction produces a higher coefficient of friction which keeps a tighter grip on the pulley and minimizes slippage
  - 50% longer life than best-in-class wrapped belt
  - 30% higher horsepower than best-in-class wrapped belt
- High performance EPDM compound:
  - Excellent flexibility at high and low temperatures from -50F° to 248°F
  - Superior flex and load carrying capacity
- Durable and resistant to heat, hardening, and glazing
- Realize cost and space savings with more compact drive designs
- Built to Chek Mate® matching tolerances
- Static conductive to ARPM IP3-3 standards



## Air-Cooled Heat Exchanger (ACHE) Belt

- Energy efficient ACHE synchronous belt performs at 98% operating efficiency for reduced energy consumption
- Special “Z” Twist Construction
  - Built with “Z” twist cords only, providing an upward direction of lateral movement which reduces excessive wear on the bottom side of the belt
- Shrugs off shock loads by incorporating Ultra-Cord®, a non-aramid fiber tensile belt component that delivers strength and dimensional stability
- Uniquely engineered RPP profile teeth are made of high performance polychloroprene, an advanced polymer compound which increases both the strength and abrasion resistance of the teeth
- Higher power ratings than conventional rubber synchronous belts



# Interchange Guide

Product Type	Part Number	Timken/Carlisle Part Number
Top Bearing Housed Unit	Hudson® 50081	Timken® B/P13067
Bottom Spherical Bearing Housed Unit	Hudson® 50080 (7 x 7 in.)	Timken® QAAF16219SM (slotted holes adaptable for 6 x 6 in. and 7 x 7 in.)
	Hudson® 50082 (6 x 6 in.)	Timken® QAAF16219SM (slotted holes adaptable for 6 x 6 in. and 7 x 7 in.)
Extra High Torque Synchronous Belt	Gates® Poly Chain® GT® Carbon™ 14MGT-3500-37	Carlisle® Panther® XT 14MXT-3500-37
Heavy Duty V-Belt	Gates® Tri-Power® Molded Notch BX85	Carlisle® Gold-Ribbon® Cog-Belt® BX85
Air-Cooled Heat Exchanger Belt	Gates® GT® 2 PowerGrip® Belt 3150-14MGT-55F	Carlisle® ACHE 3150-14M-55F

# TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, belts, chain and related mechanical power transmission products and services.

[www.timken.com](http://www.timken.com)

**Stronger. By Design.**

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