

PREMIUM BEARINGS FOR COAL MINING EQUIPMENT





UNDERGROUND COAL MINING

Underground coal mining presents its own set of maintenance challenges. Of course it's a dirty, harsh environment where uptime is critical – we've all heard that before. But no one wants to descend hundreds of feet into the earth worrying about whether or not their equipment will make it through the day. Space is tight and light is low, making access to repairs difficult.

At the core of every mining operation is a complex array of mining machines from compact, yet powerful, continuous miners in underground mining to the larger than life draglines found in surface mining. Even with some of the most complex equipment in the industry today, mining is still, at its core, a fairly simple process. Specifically, underground coal mining can be broken down into three basic components: mining, transport and removal.

First, using a continuous miner, the coal must be removed or mined from the coal seam. Next, it's loaded onto shuttle cars for transport and finally, it's loaded onto conveyors for removal to the surface. These three basic processes are critical for the success of every underground coal mining operation. Preventative maintenance on these processes is crucial or failures can occur- especially bearing failures.

Fortunately, NTN has bearings for each of these processes. With experience in mining, construction, agriculture and heavy-duty truck markets, NTN has the products capable of performing in the dirty, harsh environments of mines as well as exceeding reliability and life requirements.



- Domestically produced case-carburized tapered and cylindrical roller bearings
- E-type spherical roller bearings with the highest dynamic and static load ratings in the industry
- Ultra-Class™ and heavy-duty spherical roller bearing mounted units, with exclusive design features for the harshest of conditions
- As one of the world's largest manufactures of constant velocity joints (CVJs), NTN offers a line of both custom and off-the-shelf CVJs as well as extensive technical support
- Complete wheel bearing kits for the 10SC and 21SC shuttle cars

CONTINUOUS MINER

Cutter Head Drum
Planetary Gearing
Gathering Pots
Crawler Unit

FEEDER BREAKER

Breaker Head
Conveyor Drive
Tail Pulley
Crawler Unit

SHUTTLE CAR

Wheel & Drive Units
Conveyor drive

HIGHWALL MINER

Cable Reel
Crawler Drives
Auger System
Cutter Head

LONGWALL MINER

Cutter Head
Ranging Arm
Conveyor drive

ROOF BOLTER

Crawler Unit
Drill Heads
Cylinders

21SC Wheel Unit Kit

| NTN PN | Joy PN | Quantity Per Kit |
|---------|---------------|---------------------|
| 39520 | 00960110 0001 | 1 |
| 39590 | 00950110 0002 | 1 |
| 46176 | 00950213 0001 | 1 |
| 46792 | 00950116 0003 | 1 |
| 46368 | 00960213 0001 | 1 |
| 46790 | 00950116 0001 | 1 |
| 46720 | 00960116 0001 | 2 |
| 47420 | 00960117 0001 | 1 |
| 47490 | 00950117 0001 | 1 |
| 22780 | 00950089 0001 | 1 |
| 22720 | 00960089 0001 | 1 |
| M1307EL | - | 1 |

10SC Wheel Unit Kit

| NTN PN | Joy PN | Quantity Per Kit |
|----------|---------------|---------------------|
| 47890 | 00950119 0001 | 1 |
| 47820 | 00960119 0001 | 2 |
| 47896 | 00950119 0002 | 1 |
| 66212 | 00950028 0001 | 1 |
| 66225 | 00950132 0003 | 1 |
| 66462 | 00960132 0001 | 2 |
| LM742710 | 00960195 0001 | 2 |
| LM742745 | 00950195 0002 | 1 |
| LM742749 | 00950195 0001 | 1 |
| M1309EL | - | 1 |

* Metric kits also available upon request

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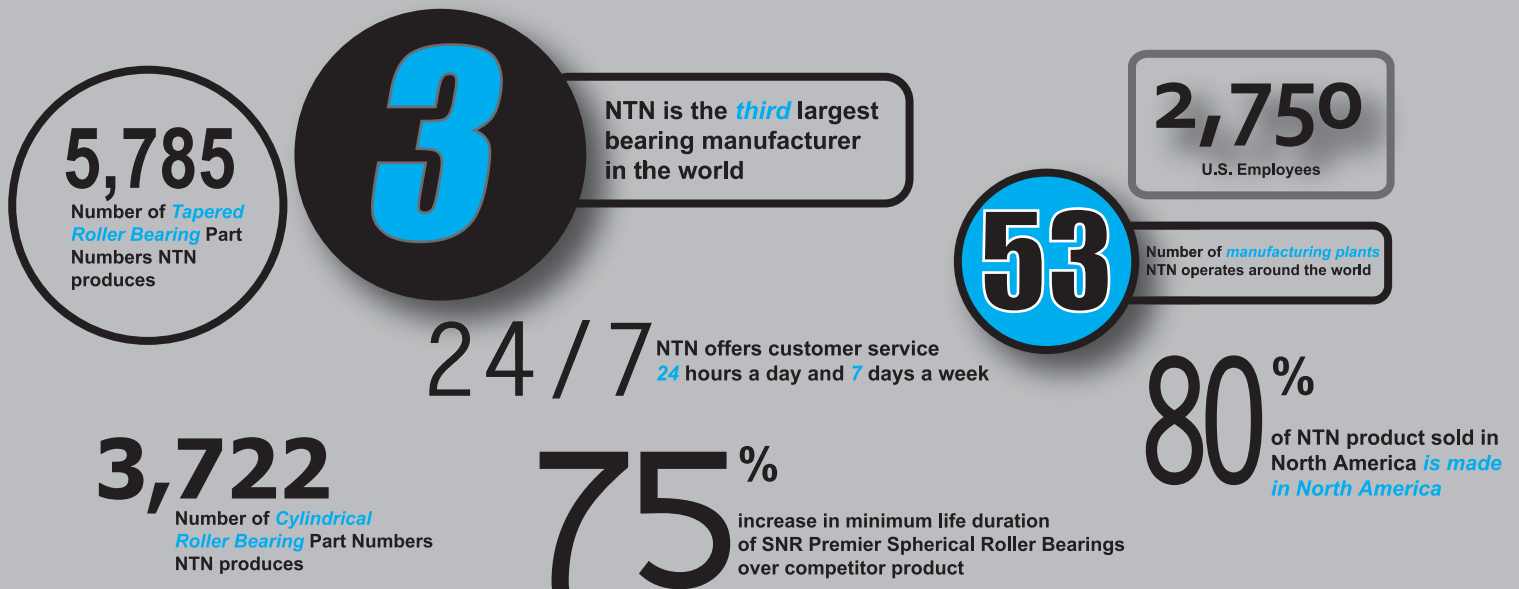


ABOUT NTN

Founded in 1918, NTN is one of the world's largest producers of premium quality ball and roller bearings, long recognized for the most stringent quality standards in the industry. With plants around the globe and a strong domestic manufacturing network, over 80% of the products sold by NTN in North America are made by one of the seven plants the company operates in the USA and Canada. In addition, NTN's strategically located warehouses and Verified Value Added™ Program ensures its customers continually receive the best value in quality bearing solutions.

For more information on NTN, please visit www.ntnamerica.com.

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