Excel Premium Components
Bucyrus® Electric Rope Shovels
495™ Models | 7495™ Models | 301M™ | 191M™
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Pendant Rope & Equalizer
A-Frame & Equalizer
Lower A-Frame Rear
Lower A-Frame Front
Boom Foot
Center Pinhole
Boom & Saddle Block
Dipper Handle & Pitch Brace

Front Idler
Drive Tumbler
Rear Idler
Lower Roller
Track Pad

Pins & Bushings

Dipper Body & Dipper Door
Dipper Snubber
Dipper & Pitch Brace
Dipper & Dipper Handle
Dipper & Padlock
Padlock Assembly
Pendant Rope & Boom
Boom & Boom Point Sheaves
**Excel Premium Components**

Bucyrus® Electric Rope Shovels

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**Track Pads**

- Features highest quality alloy steel for increased durability
- Heavy-duty and custom manganese options available
- Fully supported roll path
- Hydraulic press locations for safer removal of track pins
- Robust center rib reduces back-bending

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**Drive Tumbler**

- Track lug engagement designed to reduce backlash
- Metallurgical composition optimized to increase toughness and reduce wear

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**Front Idler**

- Features Excel's premium bronze bushings

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**Lower Rollers & Rear Idler**

- Features Excel's premium bronze bushings
- Forged one-piece roller body for optimal strength

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**Excel Bronze Bushings & Thrust Washers**

- Uniform Element Dispersion
  Unique chilling process stops migration
- Perfect Concentricity
  Simultaneous “4-Axis” turning ensures concentricity
- Porosity-Free/Uniform Grain Structure
  Centrifugal casting technique ensures alloy integrity

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Excel’s Centrifugally Cast Manganese Steel

• Strict control of melting and pouring temperatures
• Precise centrifugal force and cooling processes
• High consistency in metal grain structure and integrity
• Tighter grain boundaries with minimized pearlite

Porosities Pushed to the ID then Machined Down

Machined Down Area

Upper/Lower Pitch Brace
Pin | Bushing | Thrust Plate

Door Hinge
Pin | Bushing

Dipper Handle
Pin | Bushing

Padlock & Sheave
Pin | Bushing | Thrust Plate

Padlock Pin
Pin | Bushing | Thrust Plate

Padlock & Bucket
Pin | Bushing | Thrust Plate

Excel Pin & Bushing Sets Available

When you think about Excel Foundry & Machine, you think bucket pins & bushings for excavators, shovels, and draglines. We offer the flexibility and ease of making complete pin & bushing kits, customized for your particular bucket. Be sure to have everything on-hand that you need when it comes time for the next change out.

Talk to Excel about the efficiency and effectiveness of our variety of pin and bushing kit options.
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Excel Premium Pins
Excel is the leading supplier of high quality dipper, handle, bail, and equalizer replacement pins in the mining industry. We apply over eight decades of experience and utilize state-of-the art equipment to produce our superior products. Excel selects only the highest quality raw materials consistent with our ISO 9001 certification when manufacturing the best replacement pins on the market.

Synergy Provides Optimal Results
Take full advantage of our expertise in applied mining engineering, and use Excel mated pins and bushings together. We are supremely confident that our mated pins and bushings will stand up to the mining industry’s heaviest demands. Our pin and bushing sets can also be designed and produced specifically for custom, extreme applications using a variety of materials that maximize performance.

Application-Specific Designs
- Can be engineered specifically for custom applications
- Matched pin & bushing sets are available
- Custom dimensional tolerances
- Can be made for specific maintenance objectives

Excel’s Surface Finish Exceeds Industry Standards
- Excel applies more passes than the competition
- Fine surface finish provides extended life
- Ensures full-depth overlay application with mating contact surfaces
- 100% inspected

Excel’s Proprietary Overlay Pins
Setting New Standards Throughout the Mining Industry
Our pins are manufactured using an automated process to precisely control the depth of penetration of proprietary overlay material to the base metal. This technique allows for the application of the optimal amount of overlay material without further dilution of the base metal which is commonly found in other overlay pins on the market.

Multi-Pass Overlay Penetration is the Key
- Soft core retains toughness, adds versatility
- Excel pins stand up to extreme applications
- Up to 5 times the life of heat treated pins
- Proprietary overlay material with hardness ranged at 60+ HRC
- Surface finish exceeds industry standards

Induction Hardened Pins
- Provides outstanding service life
- Greater penetration than the competition
17% Deeper Hardening
1/2” to 5/8” (12.7-15.88mm)

Excel’s Finish
Unacceptable Finish

Porosity

Excel’s Hardening
Conventional Depth

Welded Head
Dual Collar
Machined Head

Induction Hardened Pins
- Provides outstanding service life
- Greater penetration than the competition
17% Deeper Hardening
1/2” to 5/8” (12.7-15.88mm)

Base Fit
Overlay Surface Applied
Intermediate Machining
Final Machining

Excel’s Hardening
Conventional Depth
Excel’s engineering and technical experts work directly with customers to solve problems in innovative ways. We partner with operations around the world to develop customized solutions for lasting performance in mission-critical equipment. We get our hands dirty, and spend the time needed to fully understand the issues you are facing. Once we have first-hand knowledge of the situation, our design engineering team goes to work. We bring new thinking to the table and offer application-specific solutions designed for your operation.

495HF Custom Track Pad
- Added wall thickness of the track shoe for extra strength
- Structure under roll path strengthened to prevent crushing of the internal cavity
- Debris guards added for extra protection between the track pads

Dipper Latch Bar and Replaceable Tip
- Replaceable tips and wear inserts offer longer wear life
- Reduce time for change-out of latch bar by replacing wear plates or tips in the field
- Wear inserts are available in chromium carbide and abrasion resistant materials
- Variety of configurations available for any model of dipper

Excel Bronze Bushings
- Uniform Element Dispersion
  Unique chilling process stops migration
- Perfect Concentricity
  Simultaneous “4-Axis” turning ensures concentricity
- Porosity-Free/Uniform Grain Structure
  Centrifugal casting technique ensures alloy integrity

Undercarriage Offerings
- Fully supported roll path
- Geometry modified to enable more wear before hitting side frames
- Custom pin retention hardware
- Manganese track shoes for durability in hard rock applications
Dedicated to Outstanding Customer Support

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For emergency after-hours support, call +1.309.202.8300 to speak to an Excel Professional at any time.