



Martin

MINING

CAPABILITIES

Iron

Precious Metals

Non-Ferrous

Coal

Salt

Sand

Quarry

Aggregate

Phosphate

WWW.MARTINSPROCKET.COM



Inventory

We maintain large inventories to ensure superior service to all customers.

That Personal Touch

When you call Martin a person answers your call every time.

Complete Manufacturer

We manufacture what we sell, which means we control the quality, inventory levels, deliveries, and cost of our products.

Point-of-Sale Service

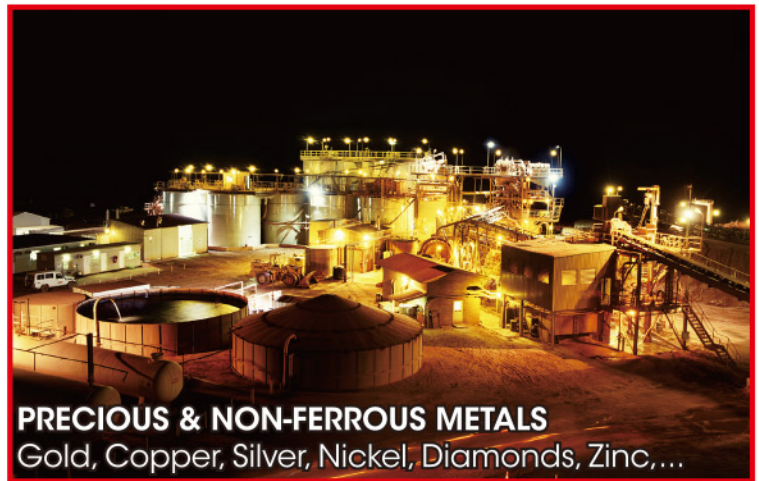
We have built our inventories, services, and capabilities to meet the demands of the market areas each of our locations serve.

After-Hour Emergencies

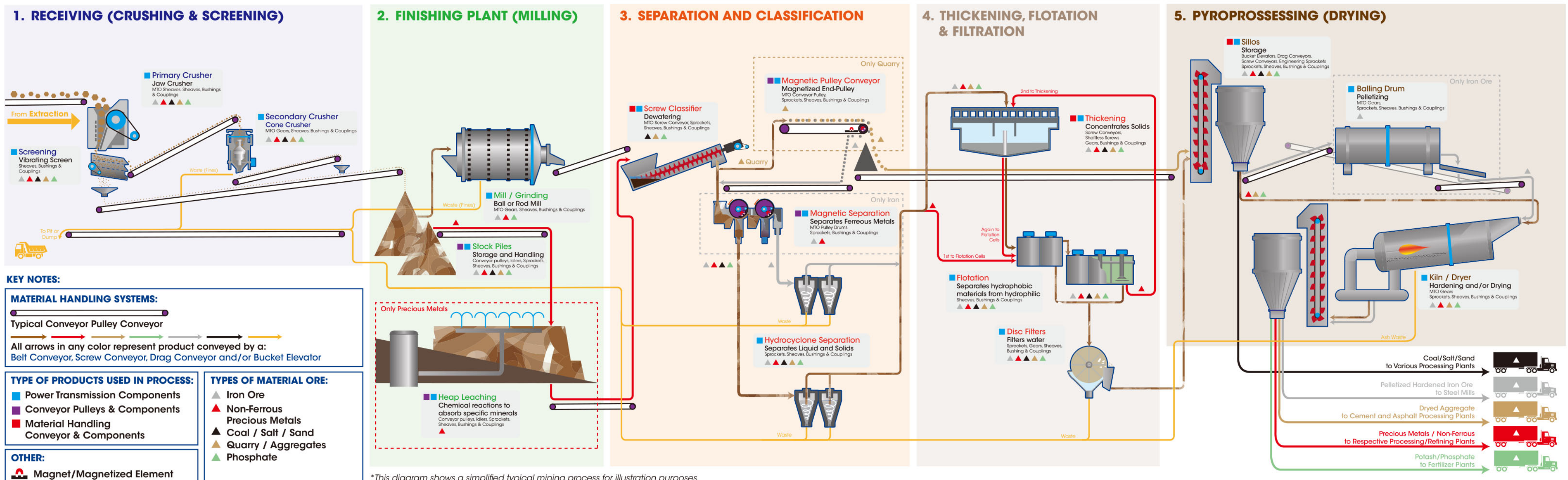
Each of our locations have people on-call for stock, altered, and made-to-order products, 24 hours a day, 7 days a week, 365 days a year.

Superior Field Support

We have field professionals who understand our products, processes, and services. They are available to help better match our offerings with your specific needs.



Martin MINING PLANT FLOW DIAGRAM



Conveying

Mining plants mostly use Belt Conveyors because of their ability to handle bulk product and transport long distances, they also use Screw Conveyors, Drag Conveyors and Bucket Elevators depending on the plant's needs and layout.

Martin products used: Conveyor Pulleys, Conveyor Pulley Components, Screw Conveyors, Drag Conveyors, Bucket Elevators, Engineering Class Sprockets, Sprockets, Sheaves, Bushings & Couplings.

Primary Crusher

The ore is first crushed in the primary crusher (typically a jaw crusher), allowing it to be crushed into smaller sizes. This crusher typically requires a pair of large MTO sheaves.

Martin products used:
MTO Sheaves, Sheaves, Bushings & Couplings.

Screening

After the primary crushing, the ore is separated by size through a screening application. The remaining ore lumps that are too large will go back through the Belt Conveyor to the primary crusher and/or secondary crusher where the process is repeated until the ore is ideal size.

Martin products used:
Sheaves, Bushings & Couplings.

Secondary Crusher

The remaining ore lumps that are still too large to go through screening, will go through the secondary crusher consisting of: cone crushers, jaw crushers, or gyratory crushers. The cone crushers typically require large MTO gears to allow rotation of the cone, powered by sheaves and belts.

Martin products used:
MTO Gears, Sheaves, Bushings & Couplings.

Waste

Waste from the above process, known as fines, is then transported back to the mining pit by Belt Conveyors or trucks.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Mill/Grinding

Here, small ore lumps are conveyed to either the Ball or Rod mill where the lumps are milled to a dirt consistency. These mills typically require large MTO gears to allow rotation of the large cylindrical body.

Martin products used:
MTO Gears, Sheaves, Bushings & Couplings.

Stock Piles

A landing spot for product until ready for the next process.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Heap Leaching

Process where dirt is placed into a drip system and the top is soaked with chemicals used to separate precious metals that are then collected at the bottom.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Waste

The waste is returned to the mining pit or taken to a dump site/tailing.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Screw Classifier

This part of the plants function is to separate the desired product from organic or other materials. The Screw Classifier is a MTO screw conveyor, which dewater and settles the coarse particles.

Martin products used:
MTO Screw Conveyor, Sprockets, Sheaves, Bushings & Couplings.

Magnetic Pulley Conveyor

In Quarry/Aggregate plants the product is conveyed over a magnetized pulley where ferrous material particles are separated from the milled ore.

Martin products used:
MTO Magnetic Conveyor Pulleys, Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Magnetic Separator

This application typically has 2-3 magnetized conveyor pulleys that with the use of water, cleans and separates ferrous materials from the milled ore.

Martin products used:
MTO Magnetic Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Hydrocyclone Separation

Separation and sorting of particles based on density - by process of liquid suspension. This standard Hydrocyclone application requires various power transmission components.

Martin products used:
Sprockets, Sheaves, Bushings & Couplings.

Waste

The waste goes to mining pit or dump site/tailing.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Thickening

Similar to the thickening sludge tanks found in water treatment facilities, the mud is placed into a thickening tank where product sediment concentrates at the bottom.

Martin products used:
Gears, Bushings & Couplings.

Flotation

The process of selectively separating hydrophobic materials from hydrophilic materials, allowing valuable metals to be recovered. Precious metal plants have an initial flotation step before thickening.

Martin products used:
Sheaves, Bushings & Couplings.

Disc Filters

Specially designed disc filters dewater the product.

Martin products used:
Sprockets, Gears, Sheaves, Bushings & Couplings.

Waste

The waste is returned to the mining pit or taken to a dump site/tailing.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

Silos

Similar to the thickening sludge tanks found in water treatment facilities, the mud is placed into a thickening tank where product sediment concentrates at the bottom.

Martin products used:
Bucket Elevators, Drag Conveyors, Screw Conveyors, Engineering Class Sprockets, Sprockets, Sheaves, Gears, Bushings & Couplings.

Balling Drum / Pelletizing

The iron ore is fed to balling discs or drums and produces green pellets ranging in size from 9-16mm. The green pellets are then fed to the induration machine.

Martin products used:
MTO Gears, Sheaves, Bushings & Couplings.

Kiln / Dryer

Here the product is dried, the kiln has large MTO gears that allows the rotation of the cylinder body of the kiln. The dried and hot products are later cooled in cylinders and later stored and distributed to their respective processing/refining plant.

Martin products used:
MTO Gears, Sheaves, Bushings & Couplings.

Waste

Ashes are taken to the dump site/tailing.

Martin products used:
Conveyor Pulleys, Conveyor Pulley Components, Sprockets, Sheaves, Bushings & Couplings.

PRODUCTS

Roller Chain Sprockets
Engineering Class Chain Sprockets
Gears
MTO Gears
Sheaves
MTO Sheaves
Bushings
Couplings
Bucket Elevators
Screw Conveyors
Drag Conveyors
Conveyor Pulleys & Idlers
MTO Conveyor Pulleys

Conveying

Primary Crusher

Screening

Secondary Crusher

Mill/Grinding

Stock Piles

Heap Leaching

Screw Classifier

Magnetic Pulley Conveyor

Magnetic Separator

Hydrocyclone Separation

Thickening

Flotation

Disc Filters

Silos

Balling Drum / Pelletizing

Kiln / Dryer

Waste Handling

Mineral

- Iron
- Precious Metals
- Coal / Salt
- Quarry / Aggregate
- Potash / Phosphate

APPLICATIONS

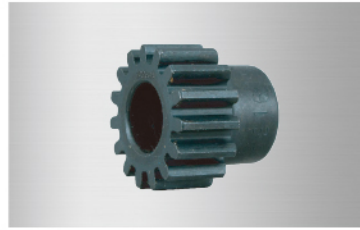
Martin Products at Work in the Mining Industry



Roller Chain Sprockets



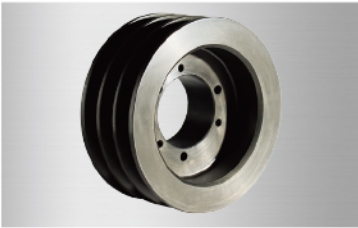
Engineering Class Sprockets



Gears



MTO Gears



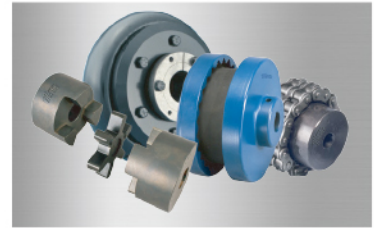
Sheaves



MTO Sheaves



Bushings



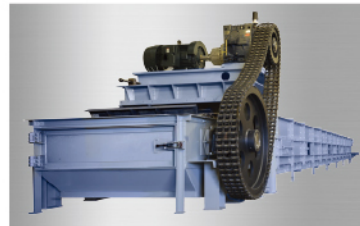
Couplings



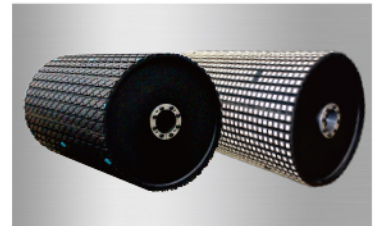
Bucket Elevators



Screw Conveyors



Drag Conveyors



Conveyor Pulleys



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