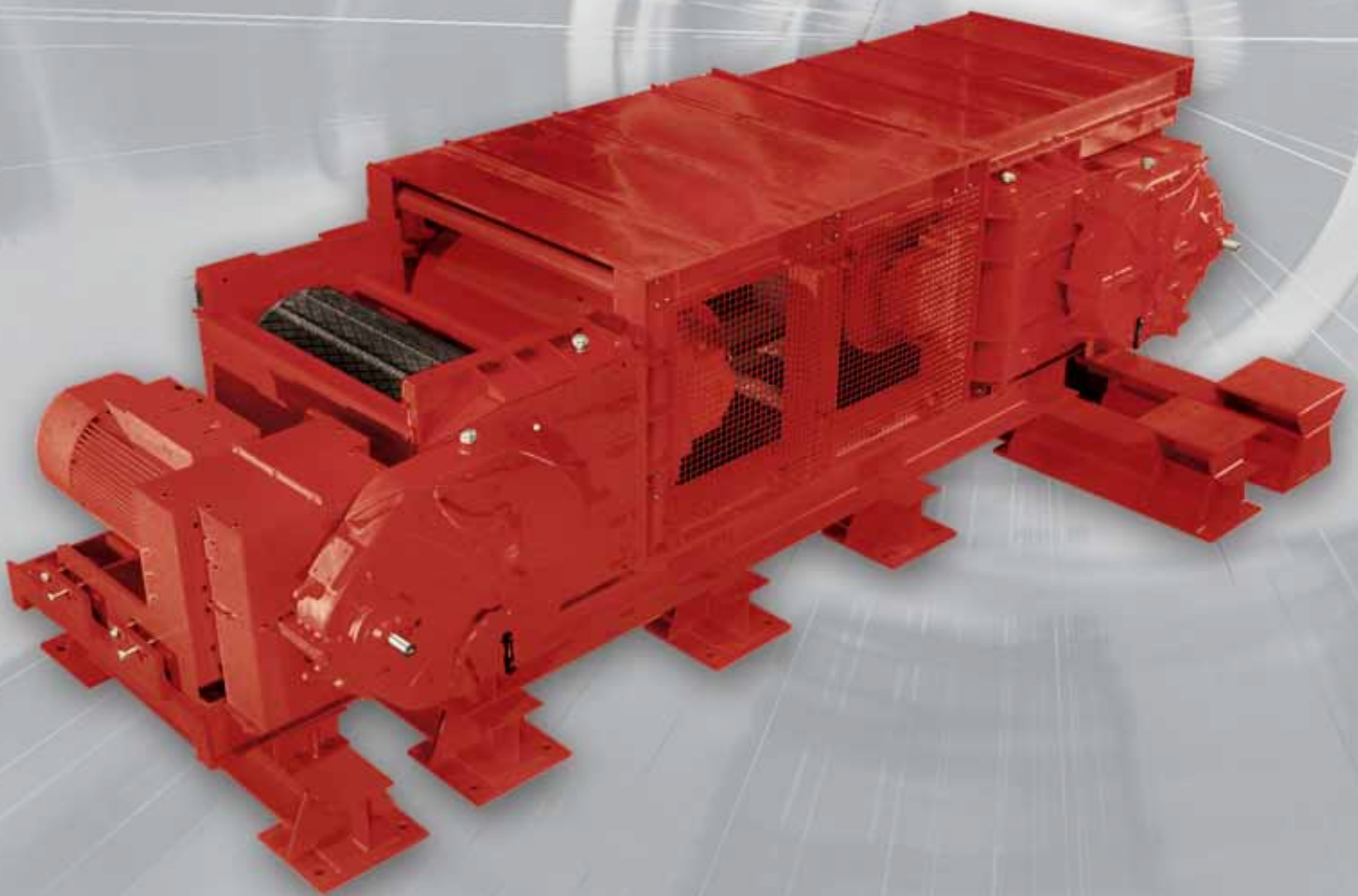


JOYGLOBAL



Underground Conveyor Systems

Product Overview



Underground Conveyor Systems



Joy conveyor equipment is utilised in some of the most productive material handling applications worldwide. Our equipment is designed for optimum availability and reliability. Equipment can be custom designed for individual mining applications, resulting in increased efficiency and productivity.

A material handling system, simple or complex, will perform only as well as its component parts, the engineering that went into its design and its installation. At Joy Global, we strive to make sure that all products work together at the highest levels. We are committed to manufacturing technologically advanced equipment backed by dedicated service.



Belt Tensioning

Durable, Reliable and Compact

Joy Global offers a range of belt tensioning systems suitable for the mining industry. We select the most appropriate tensioning unit to match specific conveyor applications. Belt tensioning units can be fitted with high speed hydraulic or electrical winches complete with the necessary software to match the conveyor system's exact tensioning requirements.



Terminals – Proven Performance

Joy conveyor terminals are designed and manufactured for the most gruelling mining conditions. Critical items such as pulleys, shafts and bearings are designed for each application by experienced Joy Global engineers. Power train components, such as motors, gear reducers and couplings are sized with ample service factors.

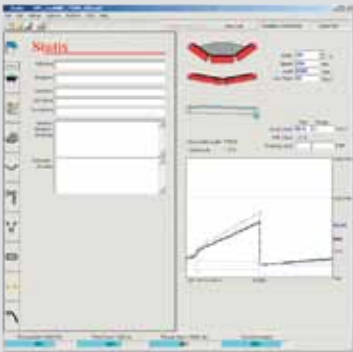


Typical Conveyor Structure Arrangements

Engineering Expertise

Conveyor System Simulation Software...

Successful underground conveyor system installations start with proper engineering. Joy Global utilizes proprietary conveyor simulation software to model system behavior under a wide variety of loading conditions before your conveyor is installed.



Track Record

Tradition in Quality & Pride...

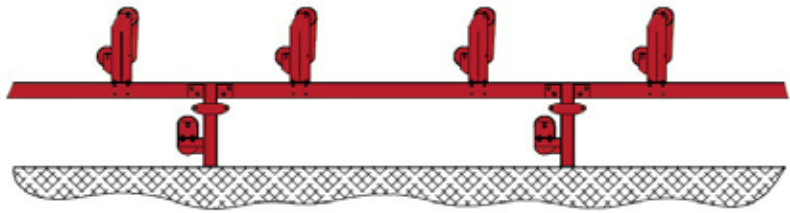
Joy Global, a leader in the materials handling industry for decades, has incorporated progressive design, dependability and ruggedness into our complete line of mining conveyor equipment. Each year, hundreds of miles of intermediate structure are installed in mining applications. These types of mining conveyors are easily installed and can be quickly extended or retracted.



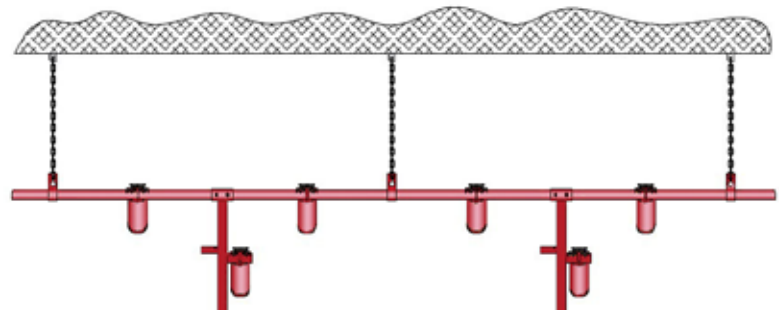
Fixed Trough Conveyor Structure

The Joy fixed trough structure was developed to keep pace with the output from modern high production longwall faces. It has been designed so the structure can be roof slung or floor mounted.

Floor Mounted Fixed Trough Structure

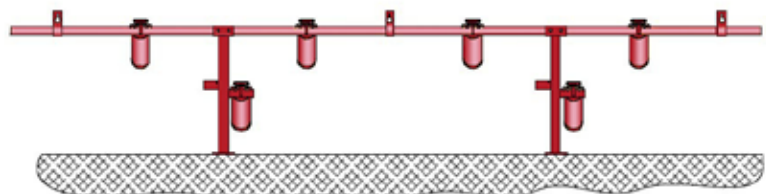


Roof Mounted Rigid Structure



Garland Idler Conveyor Structure

Longwall mining requires conveyor structure that is extremely portable due to rapid rate of extraction during the longwall retreat. This structure must be very rugged in order to withstand the heavy loading encountered in longwall mining. The Joy hinged handle garland structure is designed to meet this need. The design uses rigid side frames made of round tubing. By having fewer parts, losses are kept to a minimum while moving from one mining site to another.



Conveyor Structure



Idlers – Uncompromised Quality

Years of experience and a manufacturing capability second-to-none have ensured that Joy conveyor products have kept the minerals of the underground mining industry moving.

Constant reassessment and innovation through the use of computer aided design have helped to make Joy Global a leading manufacturer of rollers and idler sets. We offer a comprehensive range of rollers and idler sets to satisfy the world of mining.



Sectioned view of roller



Pin lock idler set



Impact idler set



Sectioned view of roller

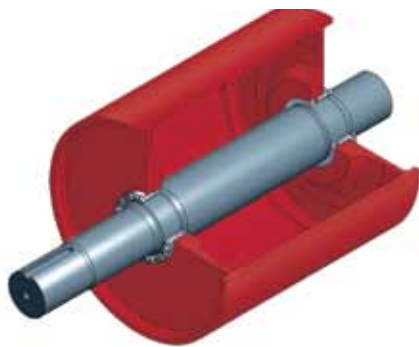


Pin lock idler set



Impact idler set

Pulleys – Proven Designs



Sectioned view of pulley

Joy Global designs and manufactures both internal and external bearing pulleys. Internal bearing pulleys can be supplied sealed for life and tend to be used in applications where space is limited. External bearing pulleys are more commonly used because they are easier to maintain, monitor and mount.

A proven pulley design is essential for the successful operation of any belt conveyor. With years of experience in the mining industry we have developed and refined our design procedures and manufacturing techniques resulting in a range of pulleys that meets the demands of today's high productivity mining industry.

Conveyor Drives



Drives – Proven Reliability

Conveyor Drives

The drive unit is probably one of the most important components in a conveyor system and it's imperative that the correct drive unit is selected to meet the conveyor duty.

Joy Global offers a range of compact mining drives suitable for one, two, three or four motor combinations, developing up to 1000kW. These compact drives offer the following benefits:

Geared Tandem Drive Pulleys

Require lower slack side tension resulting in the option to select a belt with a lower rating and/or an increase in belt and joint life.

Compact Size

Unrivalled for ease of transportation and installation. Minimises the amount of mining work required to accommodate the drive.

Flexibility

Drives can be re-handed to suit different mine roadways. Used extensively throughout the world.

Joy Global also designs and manufactures a range of open drive units for the mining industry. These drives incorporate bevel helical gearboxes which result in a narrow drive width. Drive units can be supplied in virtually any combination to suit the mining application such as head drives, tail drives, and booster drives.

Service & Support

Unequaled in our industry...

We strive to ensure that all of our products work together and perform at the highest levels. We are committed to manufacturing technologically advanced equipment backed by a dedication to service that is unequalled in our industry.



Drives – A Variety Of Options

Drive selection varies depending on many factors including the mining environment, mine maintenance expertise (hydraulic vs. electrical), overall horsepower requirements, and the investment required to make the system perform at the highest level. The goal when selecting a particular drive option is to provide a conveyor drive that is controllable and friendly to the system from a starting and load sharing standpoint, thereby protecting the conveyor belt and the many components that make up the conveyor system. Too much stress on either can result in extended downtime and lost production. A system that allows a repeatable, linear time ramp during start-up and can balance load distribution during operation (regardless of load) offers the most protection for the conveyor system.

A Joy Global representative can assist you in determining the best technology for your mine application and provide unparalleled expertise in helping you to select conveyor components. A Joy Global representative can also assist you with complete system design.

Additional Conveyor Equipment



Additional Joy conveyor equipment is available to allow the conveyor system to perform at its highest level. Controllers designed for your specific application are available, along with all-electric winches and hydraulic take ups that are designed to allow a smooth conveyor start, regardless of loading conditions. Loading sections, both intermediate and tail, are designed to withstand harsh conditions encountered in conveyor loading. Belt reelers and belt maintenance stations simplify and improve the operation of adding belt to, or removing belt from, your system. Belt storage units to assist in the shortening or lengthening of your conveyor system are available in single or multiple lap configurations. In addition, hydraulic and electric tensioning units provide an accurate, reliable system for correctly tensioning the belt system.

These items and other conveyor equipment are available and are at work in some of the most productive mining operations.



Joy Certified Rebuild Program

Make Your Used Equipment Like New Again...

When your Joy conveyor equipment begins to age and wear out, it can be refurbished enabling it once again to become a highly reliable item of your conveyor system.

Plus, if your Joy conveyor equipment needs a new technology retrofit, this can be accomplished during the refurbishment process. Your equipment will be evaluated as part of our rebuild program. If new components are available for your specific unit, we will give you the option to upgrade to the latest design.

Here's How it works

After an initial evaluation of your existing equipment and a review of your individual requirements, additions, and available technology retrofits, Joy Global will provide you with a specific rebuild quotation. Upon approval of the rebuild quotation, the work on your equipment commences and proceeds along a designated schedule. You can maintain single source responsibility on original equipment, and get the benefit of technological advancement. This approach eliminates guesswork and confusion, and keeps you from getting caught in the middle, between vendors. Not only will you get like-new performance out of your equipment, you will get a like-new warranty on replaced components.



Training, Service & Support

Joy Global is the world's largest producer of high productivity underground mining machinery for the extraction of coal and other bedded materials. Joy Global has major manufacturing, service and parts distribution facilities in Australia, China, South Africa, the United Kingdom, Poland, Russia and the United States, as well as sales offices and service facilities in India, Poland and Russia.

Joy Global maintains an extensive network of service and replacement parts distribution centers to rebuild and service equipment, and to provide replacement parts to customers in support of their installed equipment base. This network includes five service centers in the United States and eight outside of the United States, all of which are strategically located in major underground mining regions.



Customized Training



- Training schools
- Computer-based training
- Electronic parts books

Personalized Service



- Field service representatives
- Field sales engineers
- Engineering specialists

Comprehensive Support



- Quality OEM parts
- Scheduled and special deliveries
- 24-hour, 7-days-a-week customer service
- Terminal rebuilds
- Machine and parts warranties
- Computerized inventory system
- Repair and return program

Safety First

The Safest Mines in the World

Joy Global strives to provide equipment that meets the highest standard of safety. Employee safety is always taken into consideration when designing equipment.





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