

Custom Accessories





Invest in Efficiency

Hi Roller Enclosed Belt Conveyors are heavy duty, low maintenance, safe, gentle, and efficient. Hi Roller uses unique idlers which allow all bearings to be isolated from internal dust and contaminants. Internally, the troughing belt gently conveys bulk materials to the discharge point. The returning belt slides over an antistatic return liner and continually wipes the bottom enclosure clean of any dust or spilled material. The patented reloading system is the key to a successful system. The absence of this feature can cause product build up, plugging, costly wear, and downtime.





Intermediate Discharge Trippers

By incorporating a stationary tripper, product can be discharged intermittently. As the conveyor belt passes through a series of pulleys, the conveyed material is discharged off of the belt. A valve positioned in the material trajectory diverts material around the sides of the conveyor trunking and down into the tripper discharge hopper. Using a linear actuator to pivot the tripper valve, the conveyed material can be reintroduced back on to the conveyor belt so that it can continue on to the next discharge location.

Features Available:

(Many of which come standard on all trippers)

- Electric actuator with DPDT limit switches prewired to a common junction box
- External limit switches for positive valve positioning
- Manual lever operation in case of actuator or electrical issues
- Urethane, ceramic, or other wear liners
- Tripper pulleys and bearings are designed to be easily removed without cutting the conveyor belt
- All tripper bearings and electrical components are mounted externally
- Numerous inspection doors to view belt alignment and tripper adjustment
- Optional fines carry-over valve in final discharge



Moveable Intermediate Discharges

Although our specialty is totally enclosed belt conveyors, we offer many open top, enclosed bottom belt conveyors using intermediate moveable plows or trippers to distribute product along the length of the conveyor. Incorporating a reversible, stationary winch and cable, the intermediate discharge travels along the length of the conveyor. As the conveyor belt passes through the intermediate discharge, material is diverted around the sides of the conveyor to the product pile below.

Features Available:

(Many of which come standard on all intermediate discharges)

- Enclosed bottom allows you to handle multiple commodities and fill individual bays within your building without concerns of carry-over and spillage possible with open bottom conveyors
- The conveyor idlers serve as the rolling support for the intermediate discharge
- Reversible winch with continuous loop cable and sheaves
- Urethane, ceramic, or other wear liners
- The moveable tripper incorporates easily adjustable and removable tripper pulleys
- All tripper bearings are mounted externally
- The moveable plow has three individually adjustable blades which divert the main product stream, the remaining product stream, and the fines off the surface of the conveyor belt



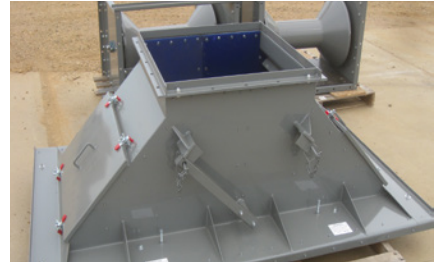
Reversible Conveyors

Product can be conveyed bi-directionally without giving up the reloading feature of Hi Roller enclosed belt conveyors. By incorporating a reloading valve on either end of the conveyor, returned product is reloaded back on to the conveyor belt. Without such a feature, product contamination could occur by allowing spilled product to discharge into incorrect spouting or storage.

Features Available:

(Many of our reversible enclosed belt conveyors incorporate but are not limited to the following features)

- Manual or electrically controlled reloading valves on either end of the conveyor. The electric option incorporates external limit switches
- A troughing idler is incorporated in to the take-up box that provides continuous belt and product support as the conveyor belt is tensioned
- A discharge hopper with sliding cover on the take-up end is dust and weather tight
- Manual or electrically controlled bi-directional inlets introduce material onto the belt in the direction of belt travel
- The return belt plow positioned on either end of the conveyor (an important reloading feature), will divert product into the reloading vanes in one conveying direction but will not trap dust or product when the conveying direction is reversed
- The reloading valve pivot is supported using independent stub shafts, bearings, and shear pins to prevent valve damage
- Large removable access panel to allow for valve inspection or replacement



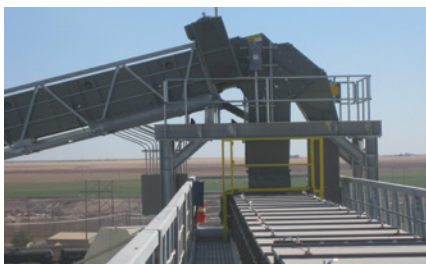
Two-Way Discharge Valve

Designed based upon the product trajectory of your specific conveyor, our two-way flop valves allow you to discharge product into two separate spouts utilizing minimal height. Unlike a conventional two-way valve positioned under the conveyor discharge, our valve is a part of the discharge. The individual output spouts can be designed to meet your specific spouting dimensions and angles.

Features Available:

(Many of which come standard on all two-way valves)

- Electric actuator with DPDT limit switches prewired to a common junction box
- External limit switches for positive valve positioning
- Urethane or ceramic lined impact and wear areas
- The two-way valve incorporates replaceable AR side liners and an adjustable felt seal to prevent product leakage
- The two-way valve pivot is supported using independent stub shafts, bearings, and shear pins to prevent valve damage
- Large removable access panel to allow for valve inspection or replacement



Proportioning Gates

Many types of gates can be incorporated into our conveyor inlets. This eliminates the need to coordinate sizing amongst multiple vendors. Along with the customization of our conveyor inlets, we will design, manufacture, and mount the gate directly to our conveyor inlet. Our inlet will capture any dust that may escape the underside of the gate and drop that dust on to the conveyor belt.

Features Available:

(Many of which come standard on all proportioning gates)

- Roller supported gates utilize greaseable cam followers
- Abrasion resistant slide plates (optional ceramic or other liners)
- Can be controlled utilizing a linear electric actuator complete with DPDT limit switches and potentiometer
- Can be operated utilizing a right angle gear motor and rack and pinion gear
- Manually adjustable gates incorporate a hand wheel
- Smaller cleanout slide gates are supported by UHMW lined angle iron side slides
- Optional stainless steel control rod for external limit switches
- Ladder gates incorporate multiple openings with matching back plates incorporated into an extended length conveyor inlet



Worm Gear Reduction Manual Belt Tensioner

Conveyors requiring higher belt tensions or longer take-ups can be equipped with a worm gear reduction manual belt tensioner. Utilizing a simple hand crank or hand drill, the conveyor belt can be tensioned with more ease than the standard acme threaded rod take-up.

Features Available:

- V-wheels which support and guide the tail assembly as the belt is tensioned
- Optional load cell to monitor belt tension
- Optional display to be used in conjunction with load cells (alternatively, load cell signals may be sent directly to you PLC)



Consignor Automated, Enclosed Moveable Discharge Tripper

Conventional open type belt conveyors utilizing moveable trippers can be dirty as well as dangerous. Hi Roller has developed a totally enclosed moveable tripper that can be remotely controlled. As the conveyor travels along the conveyor, a flexible cover allows it to pass under – providing a constant dust-tight seal.

Features Available:

- The consignor moves via a variable speed electric winch
 - Discharge gates & seals are incorporated into the design to assure clean and safe conveyor galleries
 - An onboard generator and batteries provide power for the electric motors and electronics of the consignor
 - Position is confirmed and verified by card readers
 - The dust tight enclosure nearly eliminates the need for housekeeping in enclosed galleries
 - The controls and bearings are isolated to the exterior of the housing – away from dust
 - The consignor is fully automated and can be integrated into the customer's existing automation system. It is also available with a stand-alone computer or totally manual system
- The onboard PLC is capable of monitoring bearing heat sensors, gate positioning, bin floor door openings and many other required functions. The onboard PLC communicates with the wall mounted hard wired PLC
 - Consignment is verified in triplicate. First, the encoder determines the position of the movement of the consignor winch system. Second, the mechanical lock pivots into position. Third, the tag reader verifies the exact position and bin/silo number
 - The encoder is automatically recalibrated each time the consignment position is verified
 - Aspiration costs are minimized. A slight negative pressure is all that is required on the system. The conveyor trunking acts as the ductwork for the aspiration system
 - Troubleshooting can be done remotely with a computer link







SHUTTLE CONVEYORS

Hi Roller has manufactured open-top as well as enclosed-top shuttle conveyors for filling truck, rail, or stationary storage structures. Single or bi-directional and reloading, we can custom design a system to meet your needs.



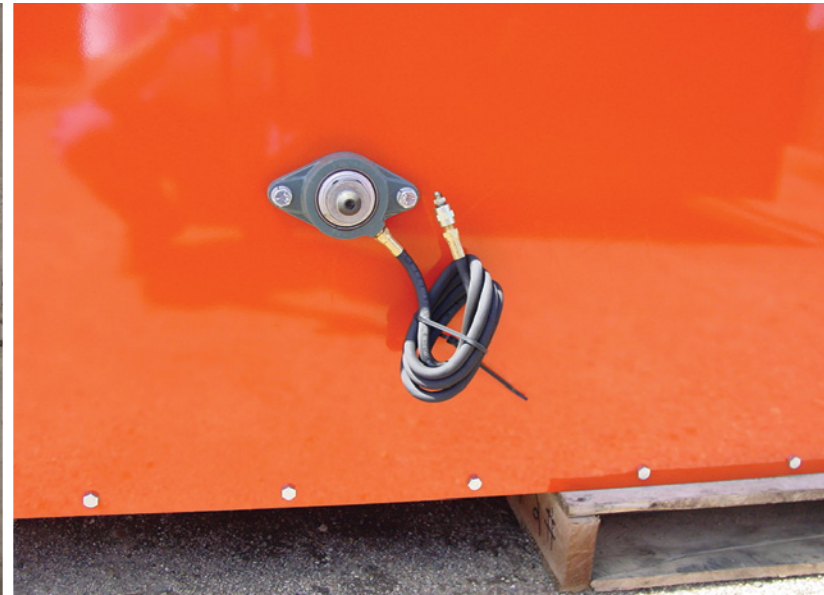
SPLIT TRUNKING

As higher capacity conveyor trunking increases in size and depth, mechanical or vulcanized belt splicing can be facilitated by incorporating a section of split conveyor trunking. Rather than lifting the slack conveyor belt above the trunking, the conveyor sides and troughing idler can be removed – allowing you to splice the belt in place. This allows you to obtain a high tension on the belt prior to splicing, saving you take-up adjustment.



QUICK DRAW IDLERS

In many retrofit applications large equipment is being installed within limited space or tight against walls or columns. Our designers will work with you to determine any obstructions that would impede access to bearing removal. Our quick draw idlers incorporate a bearing and frame on the inaccessible side of the conveyor and a large inspection door on the walkway side of the conveyor. The complete idler, shafts, and bearings can be removed out one side of the conveyor for replacement.



GREASE TUBES

When installing conveyor trunking along a wall or on a catwalk utilizing a single walkway, Hi Roller can incorporate grease tubes and brackets so that all bearings can be lubricated from one side of the conveyor.



CONVEYOR SUPPORTS

Various installations will require different types of conveyor supports. Hi Roller will custom design conveyor supports to compliment your installation. Whether welded or clamped to catwalk cross members, anchored to the floor, or incorporated with ceiling hangers. Our customized supports will facilitate a swift, proper installation of conveyor trunking (additional rigid support of the head and tail assembly is required by Hi Roller).



CUT-OUTS FOR BELT MISALIGNMENT SENSORS

The proper installation, operation, maintenance, and safety of our equipment are of the utmost importance. During the approval drawing process we will identify the proper placement of rub blocks, touch switches, or other monitoring devices of your preference and provide the cut-outs and/or mounting brackets for these devices.



CUSTOMIZATION OF INLETS AND DISCHARGES

When we place our name on our conveyors, we take on the responsibility of the proper application and operation of the equipment. The easy way out would be to supply a standard inlet and standard discharge – allowing the customer to alter it to suit their needs. We do the opposite. At the risk of upsetting our customer, our designers will push yours for as much information as possible about the installation. It is in both our best interests that we take the time prior to manufacturing to customize the inlet and discharge to suit your specific needs. We take into consideration all spouting slopes and angles, assuring even loading and belt tracking as well as proper discharge without product build-up or the boiling and backing up of material.

V-WHEEL TAIL ASSEMBLY SUPPORT

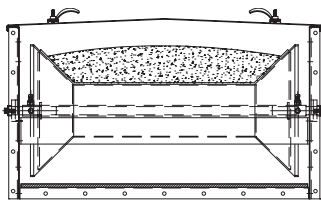
Our reloading tail pulley is extremely rugged and extremely heavy. The optional V-wheel tail assembly support used in conjunction with the customer-supplied inverted angle iron track keeps the tail assembly level as the conveyor belt is tensioned.

Product Line

Belt Conveyors have long been known as the most gentle, efficient and durable means of conveying materials.

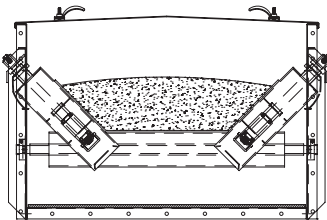
HI ROLLER CONVEYORS

are custom built to your specific requirements. Some of our more popular models include:



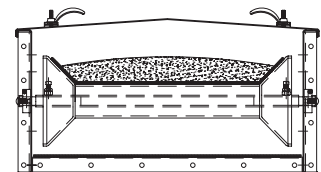
Hi Roller

Available in belt widths from 18" to 54", this is our original model. The unique bell-shaped carrying idler provides the trough for the belt and utilizes two external bearings as opposed to the six internal bearings associated with a conventional idler. The bell-shaped idler also has built-in self-aligning characteristics for both single and bi-directional conveyors.



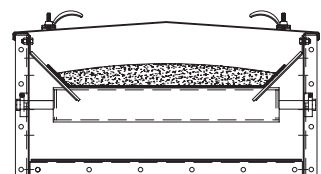
Hi Life

Available in belt widths from 18" to 72", the Hi Life utilizes possibly the heaviest, longest life, most reliable conveyor idler available. Resembling a conventional conveyor idler, the Hi Life idler is much thicker, the bearings are much larger, and there are no brackets or bearings exposed to the internal atmosphere of the conveyor housing.



Mini Roller

Available in belt widths from 16" to 36", the Mini Roller includes all the benefits of the Hi Roller in a lower profile design. The bell shaped carrying idler, head, and tail pulleys all have a smaller diameter. This conveyor is well suited for low capacities.



Lo Roller

Available in belt widths from 16" to 36", the Lo Roller utilizes a flat carrying idler to support the loaded weight of the belt and relies on the UHMW side slides to form a trough for the belt. The design provides continuous belt support and creates a seal at the edges.

Hi Roller specializes in the custom design of enclosed belt conveyors to match your specific application. In addition to our standard models, we can also customize conveyors for your most unique applications. The Hi Bulk is an enmasse belt conveyor designed to move large quantities of material in a limited space. The Consignor is a belt conveyor with a totally enclosed, fully automated moveable discharge tripper. We look forward to helping you solve your most difficult material handling problems.



Hi Roller is an AGI Brand.

AGI is a leading provider of equipment solutions for agriculture bulk commodities including seed, fertilizer, grain, and feed systems with a growing platform in providing equipment and solutions for food processing facilities. AGI has manufacturing facilities in Canada, the United States, the United Kingdom, Brazil, South Africa and Italy and distributes its products globally.

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