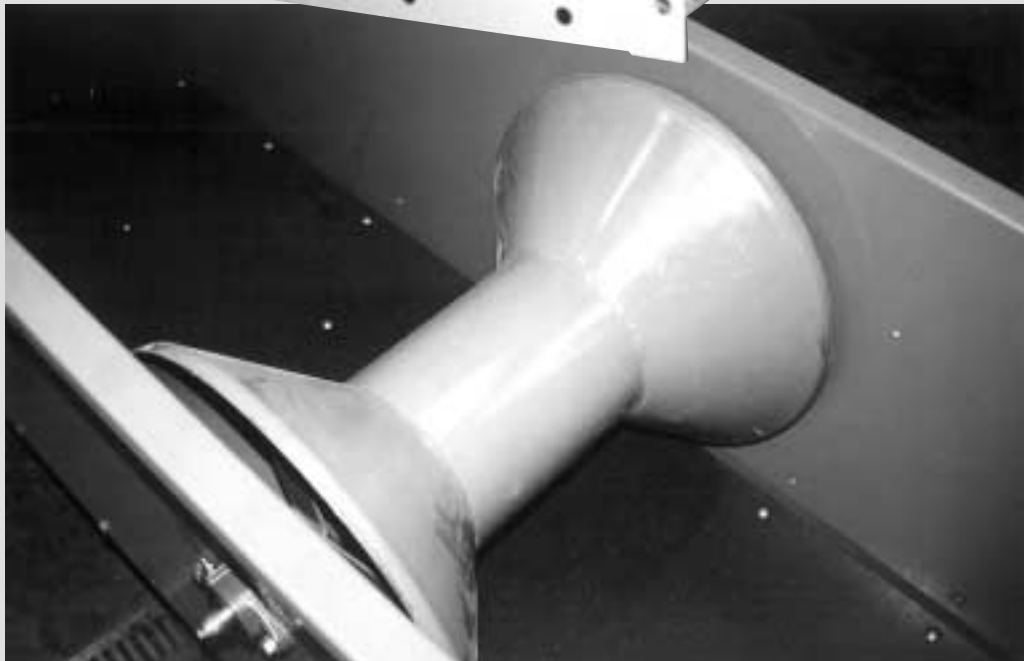
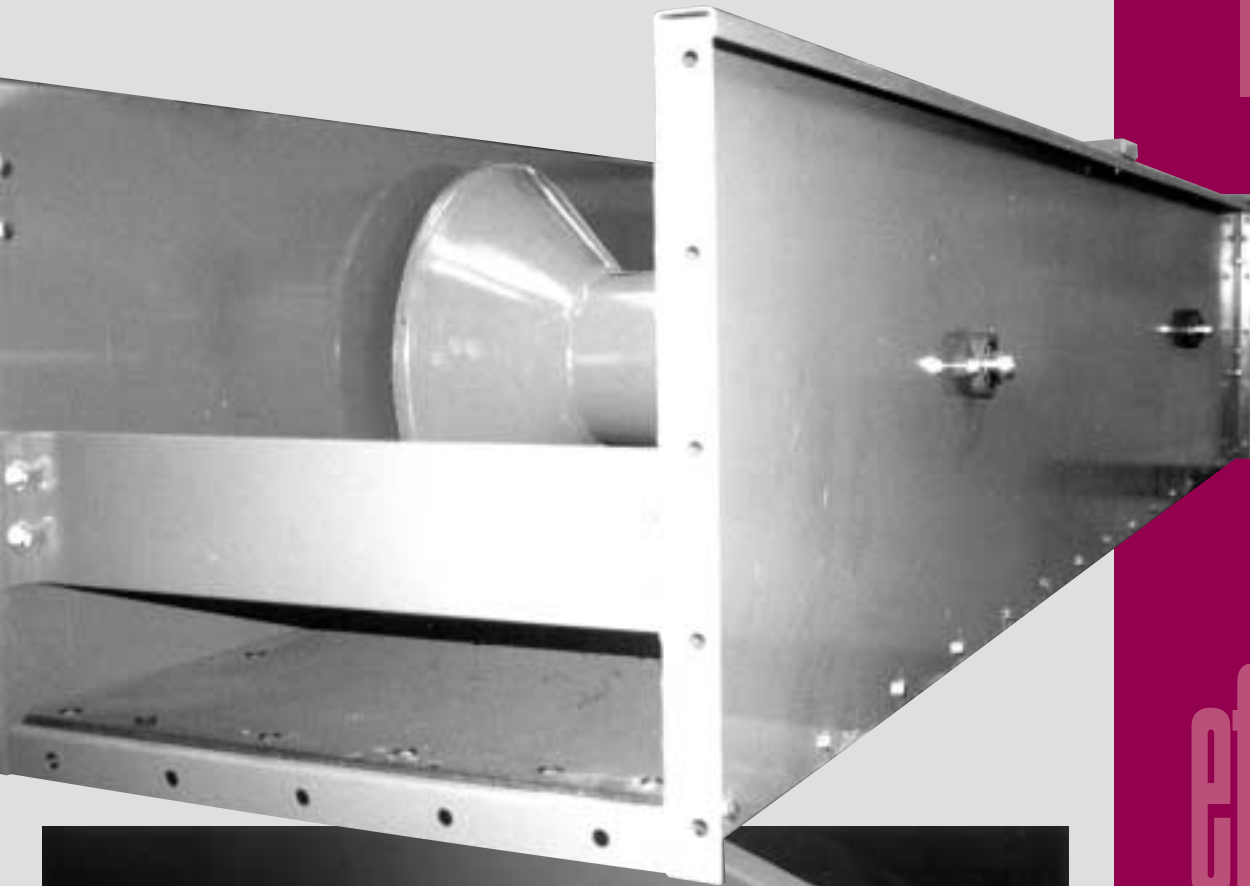


# Hi Roller

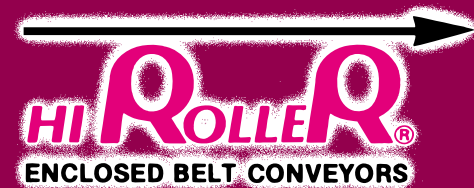
Models 18 through 54



Invest

in

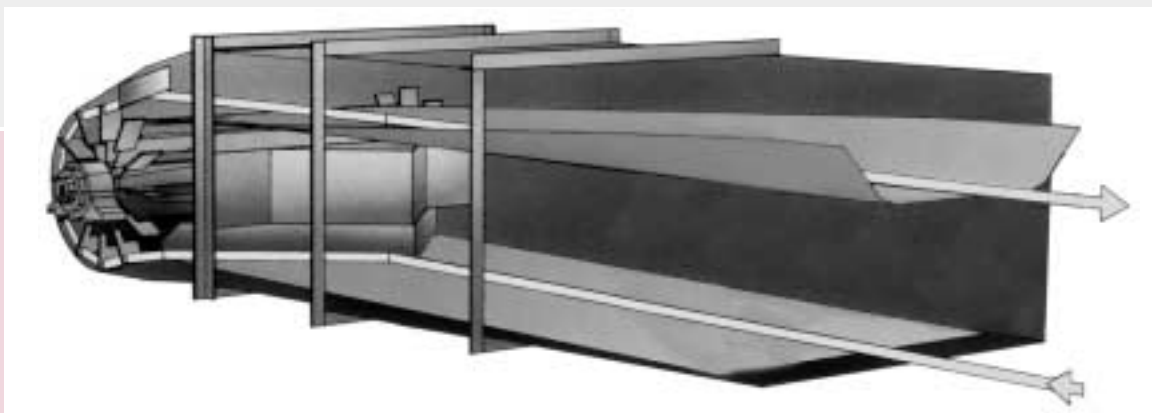
efficiency.

**HI ROLLER**  
ENCLOSED BELT CONVEYORS

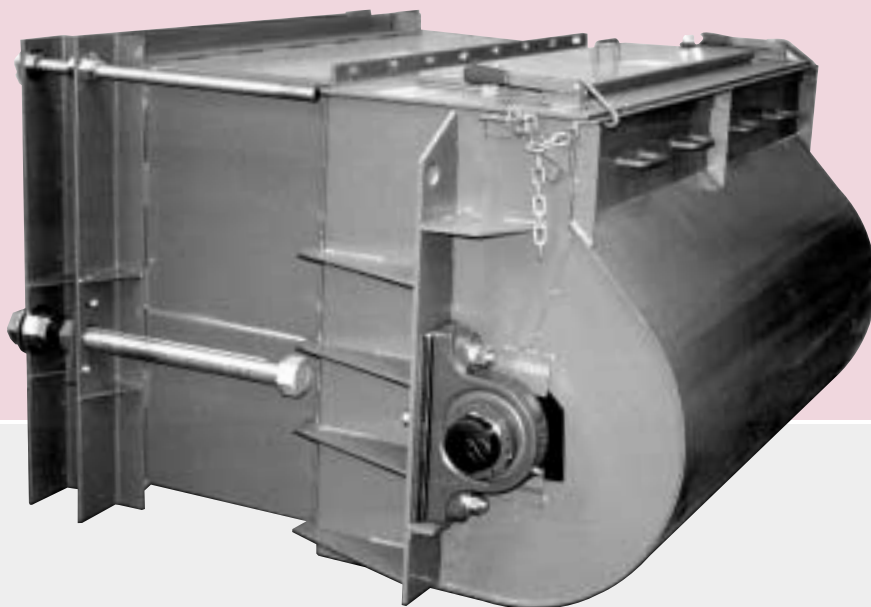
# The Problem Solver

Hi Roller Enclosed Belt Conveyors are designed for the safe, gentle, and efficient handling of dry, bulk materials. This unique, totally enclosed belt conveyor contains dust and spilled material and automatically reloads that material back on to the belt.

The arrow shows the flow of dust and spilled material back to the tail section where it is directed into reloading vanes, then thrown and deflected back on to the top belt.



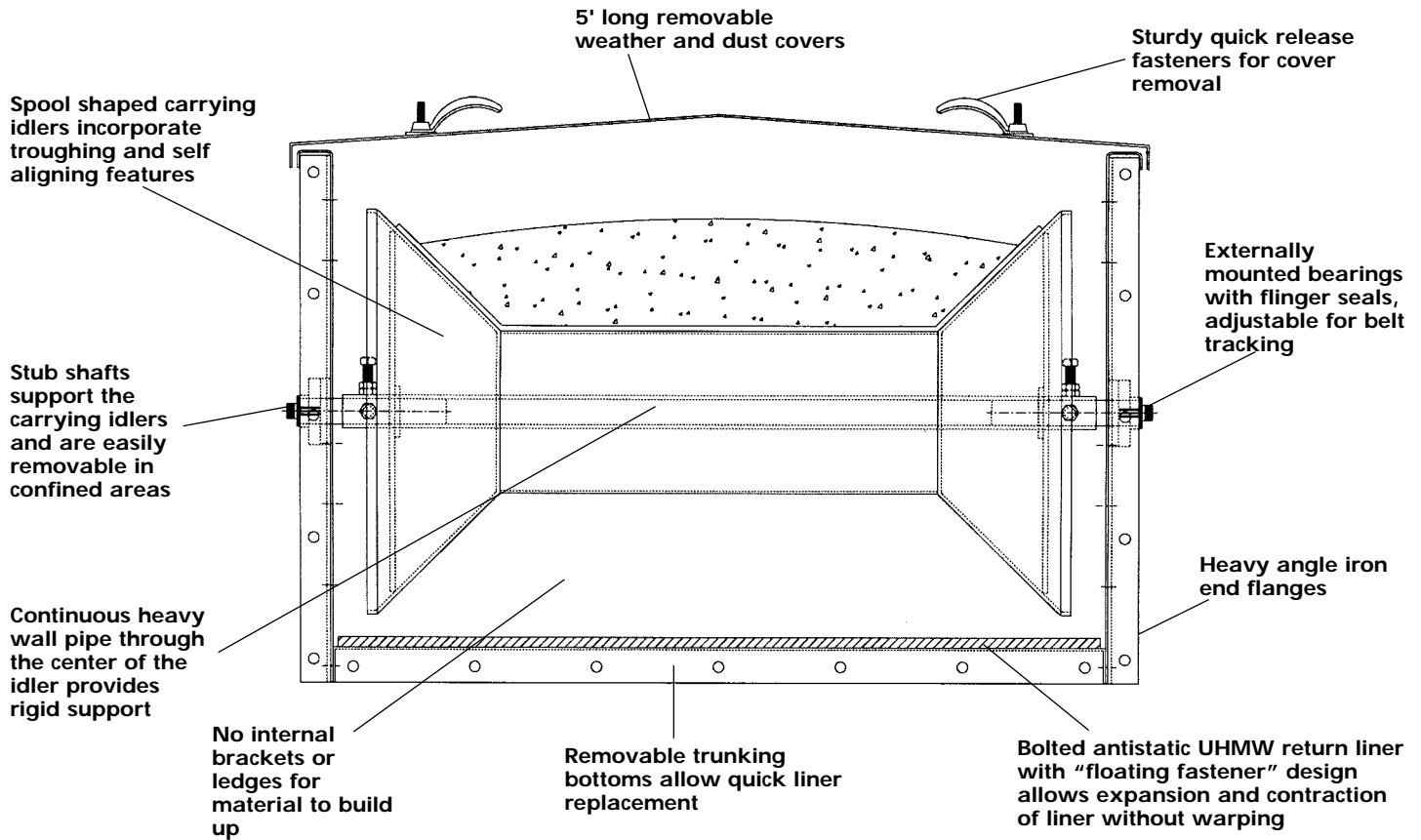
Hi Roller Enclosed Belt Conveyors are heavy duty, low maintenance, safe, gentle, and efficient. Hi Roller uses unique idlers which allow all bearings to be isolated from internal dust and contaminants. Internally, the troughing belt gently conveys bulk materials to the discharge point. The returning 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.



The heavy duty tail section incorporates a gasketed sliding box take-up with tensioning and leveling rods. The tail shaft is supported by external pillow block spherical roller bearings. The tail shroud splits at the shaft so that the pulley can be removed without cutting the belt. The shroud comes complete with safety chains and can be removed without the use of tools.



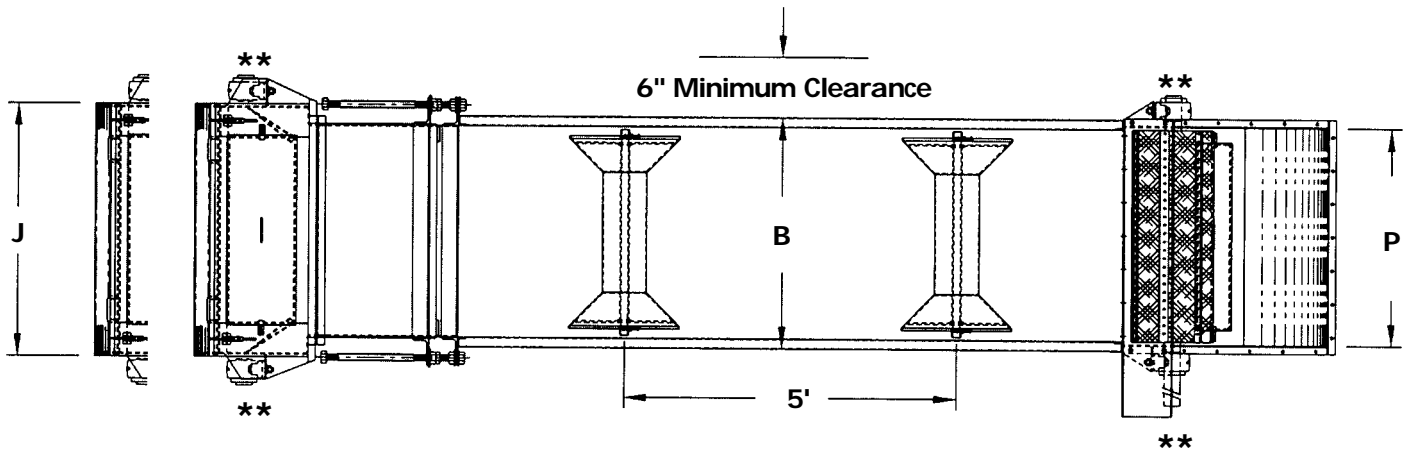
Internally, the spiral winged tail pulley provides constant belt contact for extended belt life. The patented reloading system includes a rugged plow, reloading flippers and a stationary deflector.



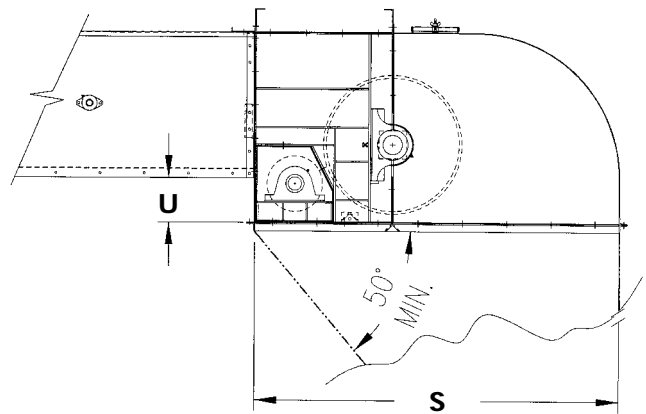
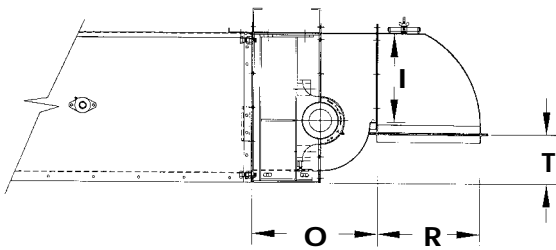
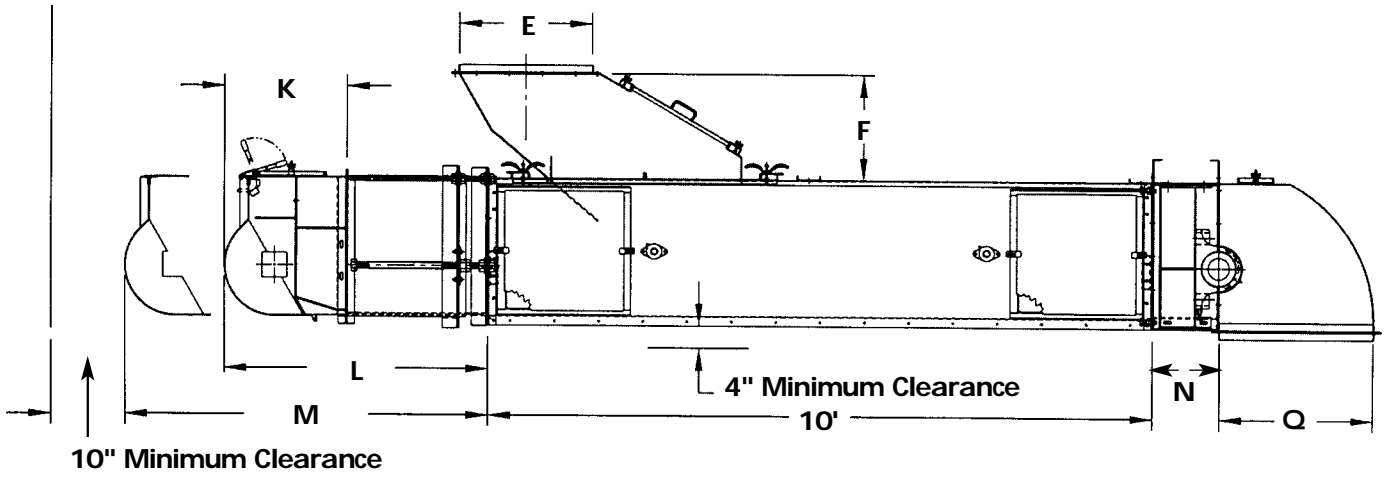
## H I R O L L E R C A P A C I T I E S

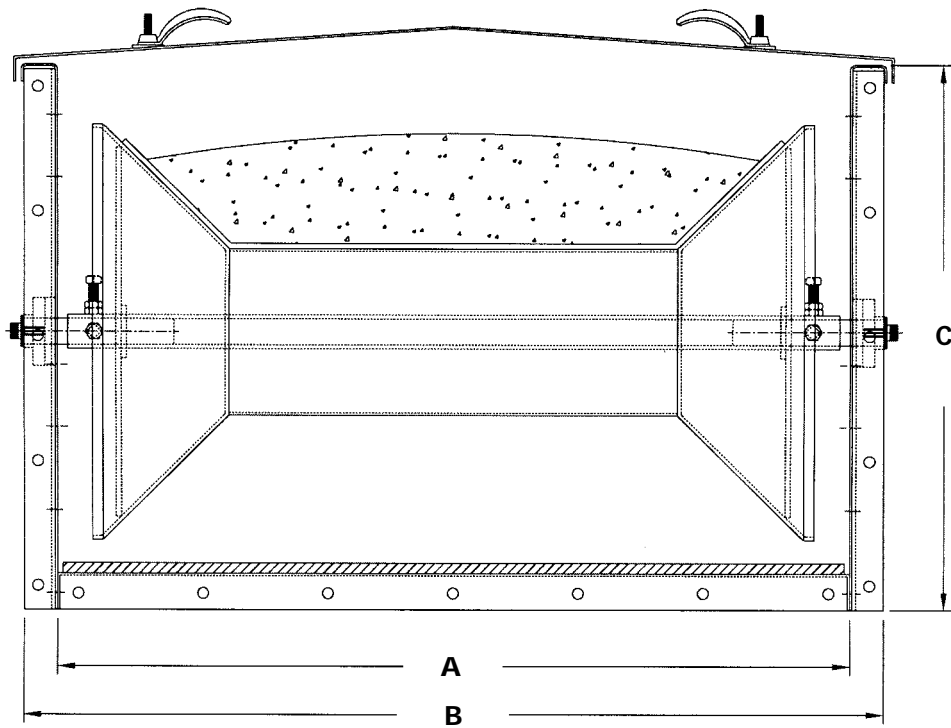
|       |       | BELT SPEED IN FEET PER MINUTE |        |        |        |        |        |        |        |
|-------|-------|-------------------------------|--------|--------|--------|--------|--------|--------|--------|
| MODEL | UNITS | 350                           | 400    | 450    | 500    | 550    | 600    | 650    | 700    |
| 18    | BU/HR | 4,100                         | 4,685  | 5,271  | 5,857  | 6,442  | 7,028  | 7,614  | 8,199  |
|       | CF/HR | 5,102                         | 5,830  | 6,559  | 7,289  | 8,017  | 8,746  | 9,475  | 10,203 |
|       | MTPH  | 111                           | 127    | 143    | 159    | 175    | 190    | 206    | 222    |
| 22    | BU/HR | 6,250                         | 7,143  | 8,036  | 8,928  | 9,821  | 10,714 | 11,607 | 12,500 |
|       | CF/HR | 7,778                         | 8,889  | 10,000 | 11,110 | 12,222 | 13,333 | 14,444 | 15,556 |
|       | MTPH  | 169                           | 194    | 218    | 242    | 266    | 290    | 314    | 339    |
| 26    | BU/HR | 9,000                         | 10,286 | 11,571 | 12,857 | 14,142 | 15,428 | 16,714 | 18,000 |
|       | CF/HR | 11,200                        | 12,800 | 14,400 | 16,000 | 17,599 | 19,199 | 20,800 | 22,400 |
|       | MTPH  | 244                           | 279    | 313    | 348    | 383    | 418    | 453    | 488    |
| 30    | BU/HR | 11,500                        | 13,143 | 14,786 | 16,428 | 18,071 | 19,714 | 21,357 | 23,000 |
|       | CF/HR | 14,311                        | 16,356 | 18,400 | 20,444 | 22,488 | 24,533 | 26,578 | 28,622 |
|       | MTPH  | 312                           | 356    | 401    | 445    | 490    | 534    | 579    | 623    |
| 36    | BU/HR | 15,000                        | 17,143 | 19,286 | 21,428 | 23,571 | 25,714 | 27,857 | 30,000 |
|       | CF/HR | 18,667                        | 21,334 | 24,000 | 26,666 | 29,333 | 32,000 | 34,667 | 37,334 |
|       | MTPH  | 406                           | 464    | 522    | 580    | 639    | 697    | 755    | 813    |
| 42    | BU/HR | 20,000                        | 22,857 | 25,715 | 28,571 | 31,429 | 34,286 | 37,143 | 40,000 |
|       | CF/HR | 24,889                        | 28,444 | 32,001 | 35,555 | 39,112 | 42,667 | 46,223 | 49,778 |
|       | MTPH  | 542                           | 619    | 697    | 774    | 851    | 929    | 1,006  | 1,084  |
| 48    | BU/HR | 24,150                        | 27,600 | 31,050 | 34,500 | 37,950 | 41,400 | 44,850 | 48,300 |
|       | CF/HR | 30,053                        | 34,347 | 38,640 | 42,934 | 47,227 | 51,520 | 55,814 | 60,107 |
|       | MTPH  | 654                           | 748    | 841    | 935    | 1,028  | 1,122  | 1,215  | 1,308  |
| 54    | BU/HR | 28,909                        | 33,039 | 37,169 | 41,299 | 45,428 | 49,558 | 53,688 | 57,818 |
|       | CF/HR | 35,976                        | 41,115 | 46,255 | 51,395 | 56,533 | 61,672 | 66,812 | 71,952 |
|       | MTPH  | 783                           | 895    | 1,007  | 1,119  | 1,231  | 1,343  | 1,454  | 1,566  |

FPM = Feet Per Minute    BPH = Bushels Per Hour    CFPH = Cubic Feet Per Hour    MTPH = Metric Ton Per Hour (Based upon 769 Kg per cubic meter)  
 Capacities are based upon horizontal installation and even belt loading.



\*\*Overall width determined by bearing and drive size.





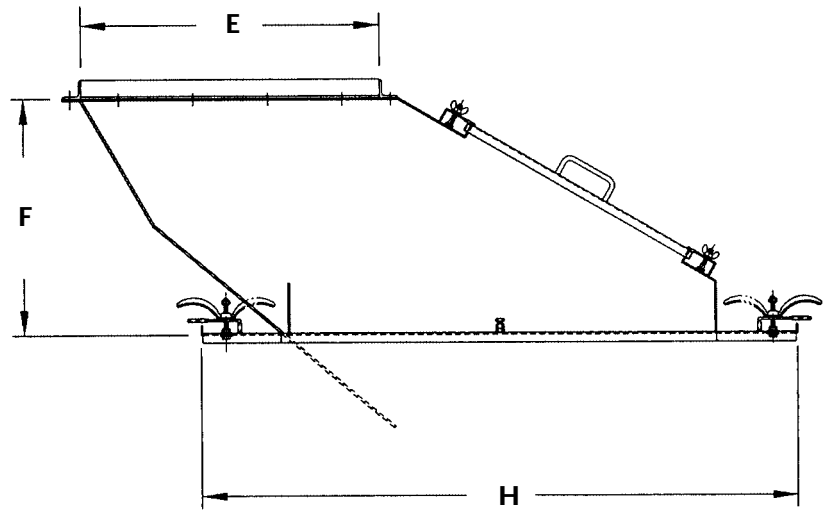
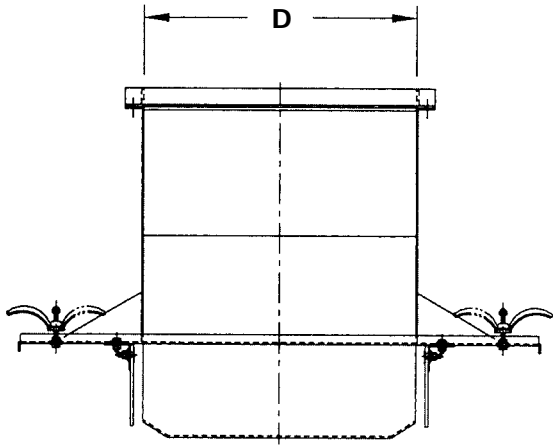
## H I R O L L E R D I M E N S I O N S

| SPECIFICATIONS |                              | HI ROLLER MODEL           |     |     |     |     |     |     |     |
|----------------|------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|
|                | DESCRIPTIONS                 | 18                        | 22  | 26  | 30  | 36  | 42  | 48  | 54  |
| A              | Trunking Width (inside)      | 20                        | 24  | 28  | 32  | 38  | 44  | 50  | 56  |
| B              | Trunking Width (outside)     | 23½                       | 27½ | 31½ | 35½ | 41½ | 47½ | 53½ | 59½ |
| C              | Trunking Height (outside)    | 22¾                       | 22¾ | 26¼ | 26¼ | 26¼ | 26¼ | 26¼ | 27¼ |
| D              | Inlet Opening Width          | 8                         | 10  | 12  | 16  | 22  | 28  | 34  | 40  |
| E              | Inlet Opening Length         | 24                        | 24  | 24  | 24  | 24  | 24  | 24  | 24  |
| F              | Standard Inlet Height        | 19                        | 19  | 19  | 19  | 19  | 19  | 19  | 19  |
| G              | Cleanout Inlet Height        | 1¾                        | 1¾  | 1¾  | 1¾  | 1¾  | 1¾  | 1¾  | 1¾  |
| H              | Inlet Cover Length           | 48                        | 48  | 48  | 48  | 48  | 48  | 48  | 48  |
| I              | Lo Profile Opening Height    | 12                        | 12  | 15½ | 15½ | 15½ | 15½ | 15½ | 15½ |
| J              | Tail Width (less bearings)   | 27½                       | 31½ | 35½ | 39½ | 45½ | 51½ | 57½ | 63½ |
| K              | Stub Tail Length             | 22½                       | 22½ | 22½ | 22½ | 22½ | 22½ | 22½ | 22½ |
| L              | Take-up Length Retracted     | Take-up Length + 29½"     |     |     |     |     |     |     |     |
| M              | Take-up Length Extended      | Take-up Length x 2 + 29½" |     |     |     |     |     |     |     |
| N              | Standard Head Length         | 12                        | 12  | 12  | 12  | 12  | 12  | 12  | 12  |
| O              | Lo Profile Head Length       | 22¾                       | 22¾ | 22¾ | 22¾ | 22¾ | 22¾ | 22¾ | 22¾ |
| P              | Discharge Opening Width      | 21½                       | 25½ | 29½ | 33½ | 39½ | 45½ | 51½ | 57½ |
| Q              | 90 Degree Discharge Length   | 28                        | 28  | 28  | 28  | 28  | 28  | 28  | 28  |
| R              | Lo Profile Discharge Length  | 18                        | 18  | 18  | 18  | 18  | 18  | 18  | 18  |
| S              | Snubber Discharge Length     | 54¾                       | 54¾ | 65¾ | 65¾ | 65¾ | 65¾ | 65¾ | 65¾ |
| T              | Discharge to Trunking Bottom | 8¾                        | 8¾  | 8¾  | 8¾  | 8¾  | 8¾  | 8¾  | 8¾  |
| U              | Discharge to Trunking Bottom | 8                         | 8   | 8   | 8   | 8   | 8   | 8   | 8   |

The above dimensions are stated in inches.

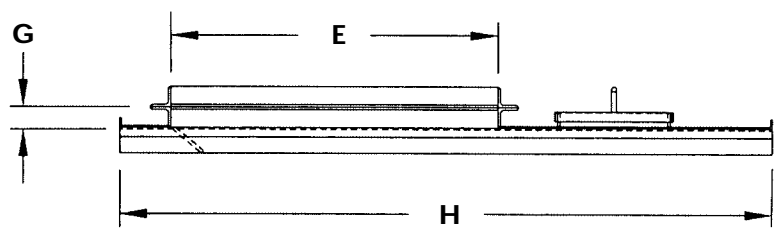
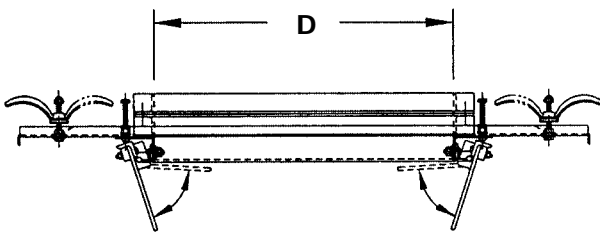
Designs and specifications are subject to change without notice.

Hi Roller Conveyors are manufactured under several Patents and Pending Patents.



Above: Typical initial inlet with fixed skirts

Below: Typical cleanout inlet with swing-down skirts



**Inlet heights and lengths can be customized to your specific applications**

The Hi Roller Conveyor incorporates a unique spool shaped idler to provide a troughed support for the conveyor belt. The spool shaped idler utilizes two external bearings as opposed to six internal bearings on more conventional idlers.

The idler is constructed with a heavy wall pipe that passes through the center of the idler. This provides rigid support. The center pipe is then reamed to just the right tolerance to accept the turned and polished stub shaft that passes through the external bearings.

This design is superior to a single continuous shaft for obvious reasons. First, installation clearances

do not always permit the removal of a single continuous shaft. Second, more generous tolerances are needed to pass a continuous shaft through the complete idler. This permits shaft deflection through the idler and bearing. Third, over a period of time a continuous shaft is more apt to become seized to the internal idler which would require cutting the shaft for idler removal.

The stub shaft and bearing are supplied by Hi Roller as an assembly to assure that the shaft cannot rotate independently of the bearing and that the shaft cannot move in or out within the bearing. The bearing itself is easily adjustable for belt tracking.

# Features & Options



Shown is a Snubber head with a Lo Profile Adapter and 45 Degree Discharge. Head Sections split at the shaft so that the pulley and shaft can be removed without cutting the belt. Snubber pulleys are also mounted in a removable framework.

Return liner is pattern punched and countersunk. The slotted bottom pan allows for expansion and contraction of the bottom liner. The slots also assure that replacement liner sent from the factory will match the existing hole pattern.

- Gradual Inclines
- Sharp Upbends
- Intermediate Discharge Trippers
- Enclosed Movable Trippers
- Reversing and Reloading in both directions
- Built-in Two Way Discharges
- Bi-Directional Inlets
- Internal Gravity Take-ups
- Galvanized Exterior Housing

- Stainless Steel Exterior Housing
- Metric Components
- Outboard Bearing Mounts with Shaft Seals
- Intermediate Sidewall Inspection Doors
- Support Legs
- Integrated Truss and Walkways
- High Span Trunking
- Abrasion Resistant Bottom Liners
- Belt Scales



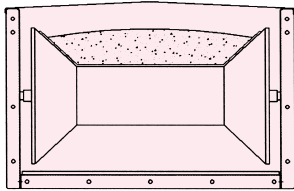
Inlets are designed to direct the material with the travel of the belt. Counterweighted swing down skirts on intermediate inlets come down with the weight of the product and automatically retract as product stream stops. Multiple Inlets can be used at the same time. Inlet liners can be replaced through the large inspection doors.

Shown is a Standard head with a 90 Degree Discharge. Head Bearings are easily adjustable for belt tracking. All inlets and discharges are supplied with matching flanges.

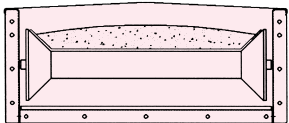
Hi Roller is more than a manufacturer. We can review your project on-site, make recommendations, prepare proposal drawings, and provide start-up assistance. We have found that a successful installation relies upon a clear understanding of the process, from the spouting and placement of the material on to the belt to the discharge and spouting out the other end. Put our design experience to work for you.

# ProductLine

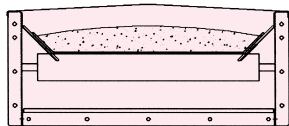
**Hi Roller Conveyors** are custom built to your specific requirements. Some of our more popular models include:



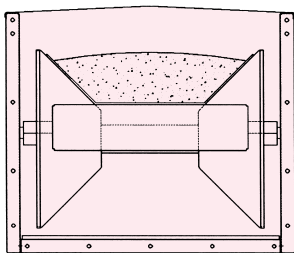
**Hi Roller:** Available in belt widths from 18" to 60," this is our original and most popular model. The unique bell-shaped carrying idler provides the trough for the belt and utilizes two external bearings as opposed to the six internal bearings associated with a conventional idler. The bell-shaped idler also has built-in self-aligning characteristics for both single and bi-directional conveyors.



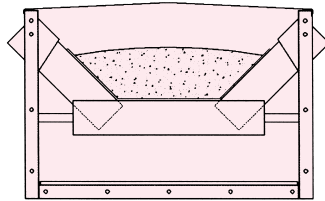
**Mini Roller:** Available in belt widths from 16" to 36", the Mini Roller includes all the benefits of the Hi Roller in a lower profile design.



**Lo Roller:** Available in belt widths from 12" to 36", the Low 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. This design provides continuous belt support and creates a seal at the edges.



**Super Roller:** Available in belt widths from 36" and up, the Super Roller combines a larger bell-shaped idler and a flat idler turning independently. This design provides a deeper trough than the Hi Roller Conveyor and reduces the slippage between the belt and the idler.



**Hi Life:** Our newest development, 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.

**Specials:** Tailored to your specific application, we can customize conveyors such as the V Roller (two idlers mounted in a V configuration), Hi Bulk (an enmasse belt conveyor designed to move large quantities of material in limited space), Hi Lift (a steeply inclined conveyor utilizing cleats or buckets fastened to the belt). The Consignor is a belt conveyor with a totally enclosed, moveable discharge tripper to discharge material off at any location along the conveyor.

  
**HI ROLLER®**  
**ENCLOSED BELT CONVEYORS**

5100 West 12th Street  
Sioux Falls, South Dakota 57107-0514 USA  
Phone: (605) 332-3200  
Toll Free (US and Canada): 800-328-1785  
Fax: (605) 332-1107  
E-Mail: [sales@hiroller.com](mailto:sales@hiroller.com)  
Website: [www.hiroller.com](http://www.hiroller.com)

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