



schenckprocess



**Belt Conveyor**

## Belt Conveyor

Schenck Process Belt Conveyors are used throughout the world for various industries to convey bulk materials. They are capable of carrying a variety of products in large and small capacities at required speeds for the application. The most common materials handled include coal, stone, chemicals, and grain. Specific distance and site geography can normally be accommodated.

Selection of the proper Belt Conveyor for an installation will ensure the lowest possible cost per ton of material handled. Because the belt is the only part of the conveyor to come in direct contact with the material being handled, it is of great importance to select the proper belt for each individual installation. By doing so efficiency and dependability throughout the life of the belt is maximized. Schenck Process provides accurate conveyor designs and corresponding mechanical equipment to promote long belt life.

To select the proper belt, the size and character of the material to be handled is determined first along with the hourly capacity. Next, the width of the belt is calculated based on material size and capacity desired. When handling fine materials, only capacity must be considered. However, when handling lumpy material, a wider belt may be required based on lump size.

Speeds can also be altered to accommodate larger lump sizes. Schenck Process takes all of these factors into consideration when choosing the appropriate belt for each individual application.

For longer belt life, it is advisable to operate at speeds that insure a full load. Conveyors handling friable materials should be run slower because of the breakage at discharge. Belts using trippers should operate at least 250 feet per minute, while flat belts using plows should not exceed 150 feet per minute. Proper angle of inclination, vertical lift, horse power, and loading and discharge requirements are all taken into consideration to guarantee maximum efficiency. Type, ply, and weight of the belt must be carefully selected, as well as the type and diameter of idlers to be used.

Belt Conveyors operate in a variety of positions. Four of the most common paths of travel include horizontal, inclined, horizontal-inclined, and inclined-horizontal. The capacity of an inclined conveyor is 5 to 10% less than a horizontal conveyor. Various materials may be handled at different angles of the inclination because of the shape or consistency of the material. Fine or mixed materials can be conveyed at greater inclines than those which are sized.

**For more information, please contact us at 262-473-2441 or Fax: 262-473-6884  
E-mail: [mktg@schenckamericas.com](mailto:mktg@schenckamericas.com) Web site: [www.schenckamericas.com](http://www.schenckamericas.com)**

**Product Information**



## Schenck Process Design Details for Belt Conveyor Types

- **Type 1** is a very simple frame commonly used where an economical installation is desired. The frame consists of channels securely tied and braced while including a steel deck plate between the top and bottom run of belt. A walkway may be provided if desired.

- **Type 2** is used where the unsupported spans are greater than may be carried by channels. The frame is a well braced steel truss of various depths and weights according to the maximum spans required. A removable curved cover may be provided for the protection of the belt and to help keep wind from blowing material off the belt. Lubrication fittings are carried to one side. A walkway and handrail are furnished on one side only.



- **Type 3** is a totally enclosed frame built of solid steel plates properly reinforced and tied together. Lubrication fittings are

extended to one side through the casing. A walkway and handrail are furnished on one side only. Removable panels are provided for inspection.



- **Type 4**, shown above, is a single walkway gallery frame. The sides of the gallery form a well braced steel truss for long spans and provide complete enclosure for the conveyor and walkway. Enclosure may be of galvanized corrugated iron, aluminum, or other desired materials. Lubrication fittings are extended to one side. The floor may be plank, steel grating, steel checkered plate, or concrete slab.

- **Type 5** is the double walkway gallery type frame providing maximum accessibility to the conveyor. The frame and enclosure are similar in construction to Type 4, except the walkway is provided on both sides of the conveyor.

### Schenck Process

746 E. Milwaukee Street  
Whitewater, WI 53190  
262-473-2441 or Fax: 262-473-6884  
E-mail: [mktg@schenckamericas.com](mailto:mktg@schenckamericas.com)  
Web site: [www.schenckamericas.com](http://www.schenckamericas.com)

schenckprocess



we make processes work