

## **QuickGuide Gravity Skatewheel Conveyor**

### **1. Load Characteristics**

Determine the size, weight and bottom conveying surface of the load. Unit loads should have a smooth, firm surface for conveying. Watch for irregular, ribbed, broken boards and protruding nails. Smaller and irregular items can be conveyed in tote boxes or on slave boards or pallets. Empty cartons, empty totes and light loads travel better on wheel conveyor because less force is required to start the wheels in motion than for tubular rollers.

### **2. Wheel Conveyor Type**

Galvanized steel frame and wheels are heavier, higher capacity and used in more permanent applications. Aluminum frame and wheels are lighter, lower capacity and easily used in portable or temporary applications. Plastic or nylon wheels come in several styles and are usually available on flexible wheel conveyors.

### **3. Wheel Spacing**

A minimum of three (3) axles must support the smallest unit load. To determine the maximum axle spacing, divide the shortest load length by three (3). In addition, at least seven (7) wheels must support the load at all times. A variety of wheel patterns is available to provide tighter wheel spacing for smoother rolling.

### **4. Wheel Capacity**

Wheel conveyor is typically used in lighter duty applications. Steel wheels can support 30# to 50# per wheel and aluminum wheels can support 15# to 18# per wheel.

### **5. Frame Capacity**

Frame capacity is given for evenly distributed loads. Typical frame capacities with supports on 10' centers: steel frames - 26# to 38# per foot, aluminum frames - 12# to 18# per foot; with supports on 5' centers: steel frames - 200# to 250# per foot, aluminum frames - 50# to 120# per foot.

### **6. Curve Selection**

Wheel conveyor curves provide a turning action that allows the product to exit the curve with the same orientation it entered the curve, similar to a tapered roller curve.

### **7. Conveyor Width**

Wheel conveyor is available in standard widths of 12", 18", 24" and 30" overall wide (OD). For unit loads to be inside the frame or if side guards are used, allow an additional 1" clearance on each side of the product (OD = Product Width + 4"). For loads that can overhang the sides, with rollers set high above the frame, rigid unit loads can be up to 25% wider than the BF dimension (OD = Product width/1.25). For boxes longer than they are wide, going around a curve, consult with your dealer for a chart to determine the minimum curve width.

### **8. Conveyor Pitch**

For products to roll on a gravity feed conveyor line, the conveyor must be pitched down. Pitch recommendations vary from 2" to 8" in each 10' section. The amount of pitch depends on the type of unit load (carton, case, tote, drum, bag), the style and number of rollers under the product and the type of lubrication on the rollers. The actual pitch is often determined by experimentation. Powered Booster Belts may be required to reset load height in long gravity runs.

### **9. Conveyor Supports**

Selection of supports is determined by the specific conveyor application. Supports can be portable Tripod Floor Supports, Permanent "H" Stands, or Ceiling Hung Pipe & Rod Supports.

### **10. Operating Conditions**

Both aluminum and steel wheels use plain open ball bearings and should be used in areas that are clean, dry and free from dust and moisture. Heavy shock loading is not recommended.

For questions or help with Conveyor Applications:

**Call Preferred Equipment Resource at 800-711-8698,  
e-mail us at: [info@prefEQ.com](mailto:info@prefEQ.com), or visit our website: [www.prefEQ.com](http://www.prefEQ.com).**