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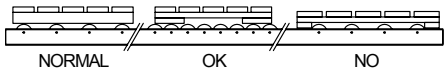
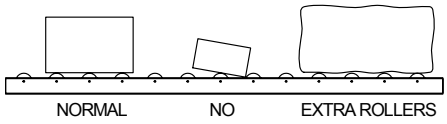
GRAVITY ROLLER CONVEYOR

QuickSpec Guidelines for Gravity Roller Conveyor Specifications

Determine the 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 or ribbed bottom, or protrusions from base of load. Smaller items can be conveyed in tote boxes or on slave boards or pallets.



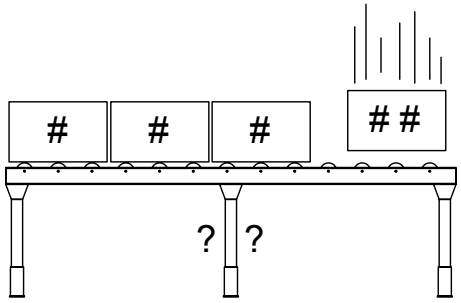


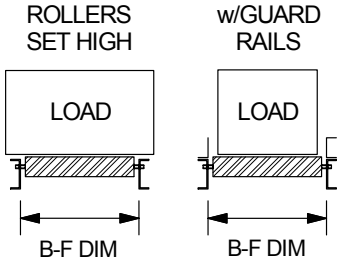
Determine the Roller Spacing & Capacity ▶

To determine the **maximum roller centers**, divide the shortest load length by three (3). A minimum of three rollers must support the smallest unit load. Typical roller spacing is 1.5" to 9" center to center.

To determine the **minimum roller capacity**, divide the weight of the heaviest load by the minimum number of rollers that will be under the load.

To determine the **minimum frame capacity**, calculate the maximum weight per foot of the unit loads, multiply by ten (10) to get the total weight per standard 10' section (Live Load). Add the weight of the conveyor section to the Live Load to get the total frame load.





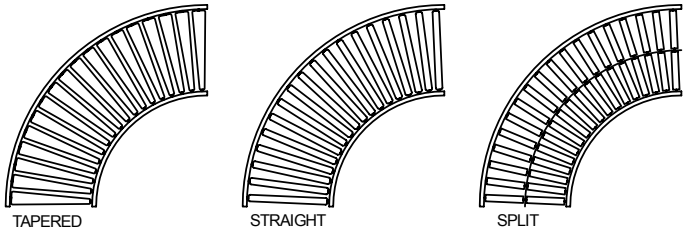
◀ Determine the Conveyor Width

Conveyor width is usually specified as a back-to-back or Between Frames (BF) dimension. For unit loads to be inside the frame, if side guards are used, or if the rollers are set low, then allow 1" clearance on each side of the product (BF = Product Width + 2"). 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 (BF = Product width/1.25).

Determine the Conveyor Pitch

For products to roll on a gravity feed conveyor line, the conveyor must be pitched downward. 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 the product height in long gravity runs.

Curve Selection ▶



Three types of curve are available. Straight roll curves are the least expensive. They require an outside edge guard, because product does not track well and will be skewed when it exits the curve. Double rollers provide a differential action to reduce the skewing of loads. Tapered roller curves are the most expensive, but provide accurate tracking so the product exits the curve with the same orientation it entered the curve. For boxes longer than they are wide and going around a curve, consult with your dealer for a chart to determine the minimum curve width.