ARB ALIGNMENT CONVEYOR FOR PRINT & APPLY

ALIGNS PACKAGES IN A FRACTION OF THE SPACE

FEATURES

- Applications that require consistent justification of multi-sized packages in a small footprint.
- Orientates and aligns packages prior to label applicators, scanners, cameras, sorters, merges and other equipment.
- Orientates and aligns packages in a single file following descrambling or depalletizing.
- Aligns packages following merges or side transfers.

SCANNING

PRINT & APPLY

VISION SYSTEMS
Activated Roller Belt™ may contain rollers set at 30º or 45º angles and may be left-hand or right-hand angled. Aligners utilizing 45º activated rollers justify packages in a significantly smaller footprint. Higher speeds and higher angles increase side velocity. For this reason, 30º is recommended where footprint allows. See special considerations below. Aligners using 30º rollers move packages at approximately 12º to the direction of belt travel. A good rule of thumb to determine trajectory is 5 units of length for every 1 unit of side travel required.

PACKAGE TYPES
Packages with rigid, uniform, flat bottoms are best. Examples of packages that work well are: corrugated boxes, lithograph packaging, tightly packed poly bags, poly bags containing flat contents, shrink-wrapped items with flat bottoms, large envelopes, CD/DVD cases, strapped bundles of magazines, books, tires, plastic trays and totes without large chines. Soft-sided packages, packages with non-uniform bottom surfaces that conform to the roller pattern, and loosely wrapped packages are not recommended. Omni has experience with a wide range of package types; contact customer service when there are questions regarding applicability or performance of a certain package type.

PACKAGE SIZES
Width
- Minimum: 4"
- Maximum: practically unlimited
Length
- Minimum: 4"
- Maximum: practically unlimited

PACKAGE ORIENTATION
Packages with length-to-width high aspect ratios (e.g., greater than 2:1) have a tendency to orient with length in the direction of flow due to friction against the side rail. If package orientation must be maintained a low friction bead rail may help to maintain orientation. Omni has experience with a wide range of package types, contact customer service for guidance on maintaining orientation with a particular package type.

ALIGNER DIMENSIONS
Length
- 1.5x the run length required to move the smallest package from the farthest point to the justification rail
- Typical Length: 8’-10’ (30º), 6’ (45º)
Belt Width
- Minimum: 8"
- Maximum: practically unlimited
- Width increments: 2"

ALIGNER SPEED/RATE
Belt Speed
- Maximum: 350 fpm
  Note: Package speed will be up to 90% higher than belt speed over active rollers depending on the application

OPERATING ENVIRONMENT
Temperature
- Minimum temperature: 32º F (0º C)
- Humidity: dry is preferred
  Note: If the belt surface is wet, the angle of package trajectory may diminish. Lubricous fluids will have a larger affect. Some chemicals may react with or weaken Activated Roller Belt™. Contact Omni Metalcraft customer service for information.

SPECIAL CONSIDERATIONS
Mitigating High Side Velocities
The side velocity of packages is a function of conveyor speed and angle. If the conveyor speed is extremely high, even 30º aligners will generate high side velocities, which may be undesirable. To mitigate this high side velocity, aligners may incorporate one or more of the following design features:

- One or more lanes of rollers near the justification rail can be disengaged by dropping out the carryway. Generally, this is done by testing in the field during start-up.
- A variable Activated Roller Belt™ or multiple parallel belts can be implemented. The angle of the rollers can be step-wise reduced as the package nears the justification side of the belt.