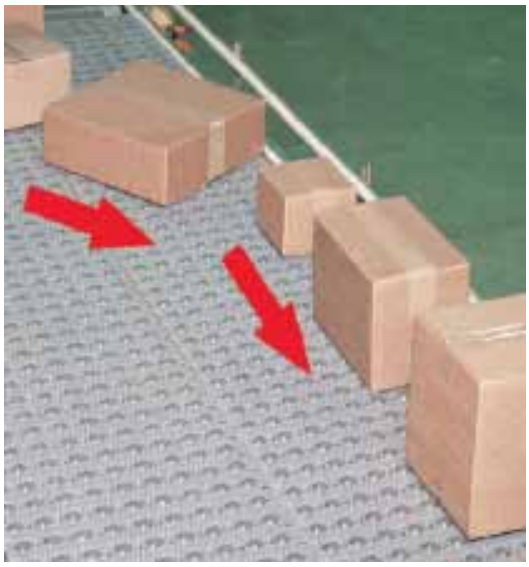
Omni Metalcraft corp.

ACTIVATED ROLLER BELT™ ALIGNER - FACT SHEET

DEFINITION

A low to high-speed aligner employing Intralox's patented Activated Roller Belting™, a modular plastic belt with embedded rollers that are spaced 2" apart and extend above and below the surface of the belt. As the belt moves forward, the angled rollers rotate, causing packages to justify against a side rail as they move forward.



Particularly well suited for:

- Alignment applications that require reliable, consistent justification of multi-sized packages in a small footprint.
- Orienting and aligning packages prior to print and apply label applicators, scanners, cameras, sorters, merges and other equipment.
- Orienting and aligning packages in a single file following descrambling or depalletizing.
- Aligning packages following merges or side transfers.

STYLES

Activated Roller Belt™ may contain rollers set at 30° or 45° angles. Aligners may be left-hand or right-hand Aligners utilizing 45° angled rollers justify packages in a significantly smaller footprint. Higher speeds and higher angles increase side velocity. For this reason, 30° is recommended where footprint allows. See **Special Considerations**.

Aligners using 30° rollers move packages at approximately 12° to the direction of belt travel. A good rule of thumb determine trajectory is 5 units of length for every 1 unit of side travel required.

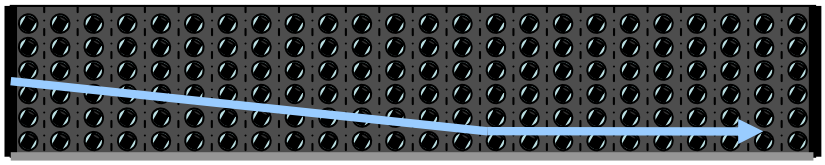


Figure 1: 30° Activated Roller Belt™ Aligner

Aligners using 45° rollers move packages at approximately 26° to the direction of belt travel. A good rule of thumb determine trajectory is 2.5 units of length for every 1 unit of side travel required.

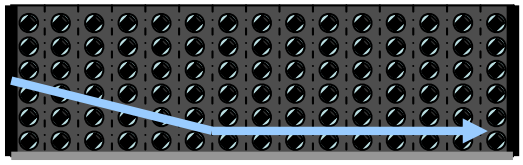


Figure 2: 45° Activated Roller Belt™ Aligner

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PACKAGE TYPES

Packages with rigid, uniform, flat bottoms are best. Examples of packages that work well are: corrugated boxes; lithograph packaging; tightly packed polybags; polybags 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 Metalcraft Corp. has experience with a wide range of package types, contact customer service if there are questions regarding applicability or performance of a certain package type.

PACKAGE SIZES

Minimum package width = 4”
Maximum package width = practically unlimited
Minimum package length = 4”
Maximum package length = 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, low friction bead rail may help to maintain orientation. Intralox 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 = 1.5 times the run length required to move the smallest package from the farthest point to the justification rail
Typical length: 8’-10’ (30º); 6’ (45º)
Minimum belt width = 8”
Maximum belt width = practically unlimited, e.g., 60” is possible
Width increments = 2”

ALIGNER SPEED/RATE

Maximum belt speed = 350 fpm
Note: *Package speed will be up to 90% higher than belt speed over active rollers depending on the application.*

OPERATING ENVIRONMENT

Minimum Temperature = 32º F (0º C)
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 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 actual testing in the field during start-up testing.

- 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.

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