



CARTER CONTROL SYSTEMS

ISO 9001:2000 CERTIFIED

PRODUCT CATALOG

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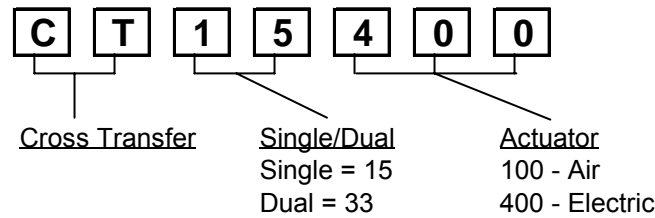
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Cross Transfer – “CT” Series

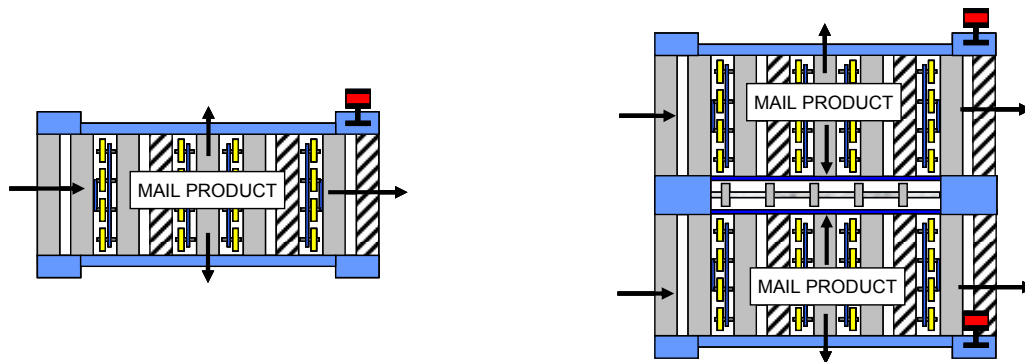
The Cross Transfer section of conveyor allows mail product to continue along the current path of flow or to divert to the right or the left at a 90° angle. When a transfer is required and the desired mail product enters the cross transfer, a Tray Present Sensor identifies that the mail tray is in position and, in this case, a pop-up mechanism is energized. The cross transfer is raised and the bands rotated in the proper direction for the mail product to move left or right from the line of flow. The pop-up will lower once the mail product has moved off the transfer and blocked another sensor located at the input to the diverted lane. Jam detection is included that will stop this conveyor if mail product has not cleared the transfer in a predetermined amount of time, as defined by the control system. A red jam lantern is provided (one for single and two for double versions) for visual indication of a jam event. Malfunctions at the local control level also will stop the conveyor for personnel interaction. Standard features include:

- Throughput: Up to 40 trays per minute
- Maximum Mailtray Weight: 70 pounds
- Layout: Zones (1 effective) – Motorized power roller driving idler rollers using O-rings
- Frame: 12 Ga. steel with 2.75" flanges
- Frame Finish: Powder coated per Fed-Std-595 USPS Mail Tray Blue color #25230
- Roller Mounting: TOR 2" below top of frame, modified spacing
- Expansion: Butt couplings to join adjacent sections
- Power Requirement: 24VDC
- Mail Product Detection: photoelectric sensor/reflector configuration
- Red JAM Lantern – One (1) for CT15 and two (2) for CT33
- Local Maintenance Control Panel: NEMA Type 12 with the following components:
 - Green READY push-to-test pilot light
 - NORMAL/TEST mode switch
 - CLEAR/CYCLE pushbutton
 - DeviceNet Control card for communications with next level of controls
 - Electric lift motor control card
 - Termination points for system supplied 24VDC
- Wiring/Controls Containment: Within conveyor frames and local control panel
- I/O Control: DeviceNet
- Mounting Capabilities: Overhead and floor

Model Configuration



The Electric Cross Transfer comes in four (4) basic configurations: left, right, and bi-directional single versions; and a dual version. Two configurations are shown in the following representations.



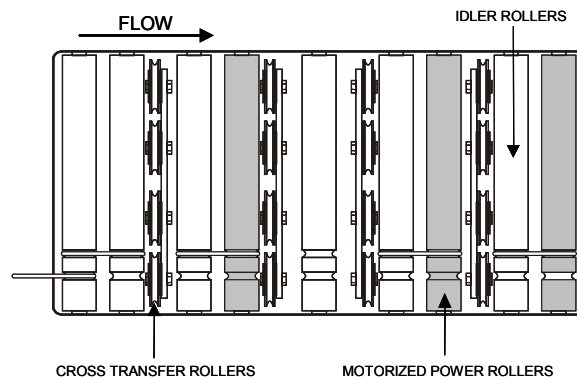
**MAXIMUM MAIL PRODUCT FLOW POSSIBILITIES
(SINGLE & DUAL MODELS MULTI-PATH VERSIONS)**

The single model is normally used where a reject runout is desired in the system. This model can move mail product in either two or three possible directions, depending on the configuration. A left-hand or right-hand only is the more commonly required model. The cross transfer input and straight-through output are 15" back-to-back, while the crossover areas are 30" back-to-back conveyance widths. The dual model is normally used as a "lane changer" mechanism, where conveyor lines meet in parallel with each other. This dual cross transfer is basically a modular combination of two single units with a modified common center frame. The single model comes with a control panel, while the dual model comes with a control panel for each half of the unit. This allows for independent maintenance testing on each cross transfer as required.

The Cross Transfer consists of a modified powered roller conveyor that is supplemented with additional rollers and a raising/lower assembly, which raises and diverts mail trays from the normal line of flow as needed. A red lantern is provided to indicate the presence of a JAM at the unit. The dual model has two lanterns, one on each unit.

The modified power roller conveyor assembly is the straight-line conveyor portion of the mechanism. It is considered as a single zone that consists of three powered rollers, six idler rollers, five O-rings, and a pair of Tray Present Sensors (TPS), either retro-reflective or proximity type depending on the configuration. The TPS pair for the right or left-hand versions consists of retro-reflective sensors looking across the width of the conveyor. The TPS pair for the bi-directional version consists of proximity sensors looking up from below the conveyor. The fifth O-ring is used

to tie into the previous zone that drives the first two (2) idlers on the cross transfer. The set of Nine (9) rollers provide for the continued straight through movement of mail trays down the conveyor line.



BI-DIRECTIONAL REPRESENTATION

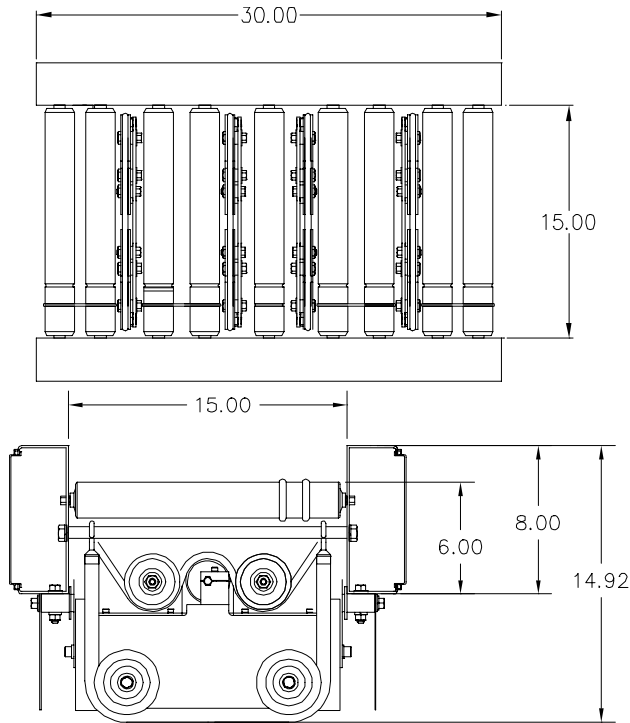
The cross transfer portion performs the function of moving the mail product off of the conveyor at a right angle from the direction of flow. This is accomplished by a powered drive roller coupled to a series of cross-transfer rollers (sheeves) with larger drive belt O-rings. A set of sheeves is mounted to each of the transfer uprights. The sheeves, which are coupled to a long drive roller with four (4) larger O-rings, will turn when the drive roller is activated. The drive roller can be turned on in either direction, which allows left or right diverts. When a transfer is required the transfer assembly will raise and the drive roller is turned on, driving the bands, thereby allowing the transfer to be accomplished. The assembly will then lower when the transfer is completed. The pop-up mechanism in the electric model utilizes a 24VDC high-torque brushless motor with clutch assembly and a series of pulley, belts and other components to raise and lower the mechanism. The pop-up mechanism in the air model utilizes an air bag and solenoid configuration to raise and lower the divert rollers. The air bag has an exhaust port to regulate the drop rate of the assembly. The design and images within this section relate directly to the electric model, with some portions applicable to the air actuated model.

Options

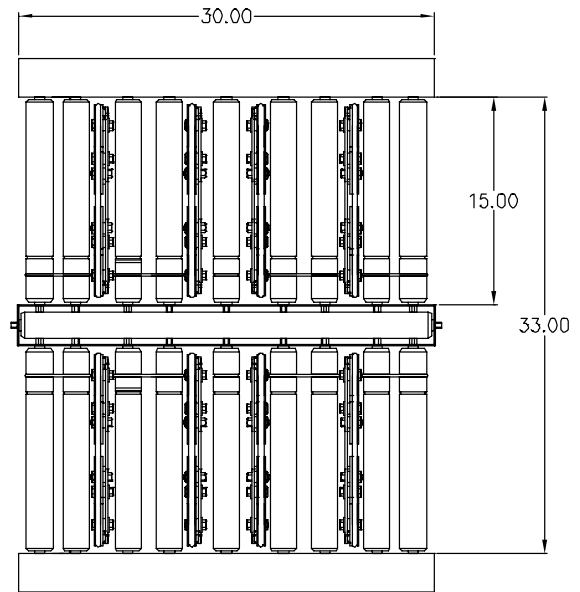
- Single: Left-Hand, Right-Hand, 3-Way mail flow
- Dual: Various mail product flow paths
- Actuator: Electric or Air
- Controls – I/O Configurations (Master/Slave)

Dimensions

The single version width is the 15" Back-to-Back dimension for one lane plus the 5.50" due to the two side frame flanges. Add an additional 5.50" to the 33" dimension ($2 \times 2.75"$ for the flange of each side frame) to obtain the total conveyor width for the dual version.



TOP & END & VIEWS – SINGLE VERSION



TOP VIEW – DUAL VERSION