MODEL “251ACDE”
Air Operated Photo Eye Controlled
Pallet Accumulator

- Zero pressure accumulation
- Air operated
- Heavy duty construction
- Chain driven rollers
- Zone connections outside frame for easy installation
- Photo eye controlled with built-in time delay

STANDARD SPECIFICATIONS
Frame - Heavy duty 7” deep x 4 gauge powder painted formed steel channel with heavy duty cross braces. Frames are bolted together with splice plates and floor supports.
Rollers - 2½” diameter x 11 gauge steel rollers, grease packed and labyrinth sealed bearings, 11⁄16” hex shaft. Rollers are spaced on 4” or 6” centers, set 2½” low.
Floor Supports - Adjustable 18¾” to 23½” (HD-4) from floor to top of roller, for each end of conveyor and at each bed joint along with knee braces for each support. Supports on 5 foot centers, changes with zone length.
Drive - Located near center of conveyor length, shaft mount motor and reducer.
Drive Chain - RC 40 chain used for roller-to-roller connections, RC 60 chain drive each zone. Chains are totally enclosed by metal guards.
Accumulation Zones - Standard zones are 60” long with a maximum of 30 zones per single drive. Each zone is driven by an air clutch and controlled by a photo eye.
Motor - ¼ HP 230/460-3-60 TE motor.
Electrical Controls - 120 VAC input to power supply.
Conveyor Speed - 30 FPM constant roller speed.
Capacity - 4,000 lbs. Maximum unit load. Total conveyor live load not to exceed Load Capacity Chart.
Speed Reducer - Heavy duty, sealed worm gear, C-Face.
Bearings - Sealed prelubricated with cast iron housings.
Sensing Device - Photoelectric sensor in each zone detects presence of product and activates accumulation feature in the trailing zone if upstream zone is occupied.
Power Supply - 120 VAC power supply controls accumulation feature with 24 VDC output. Power supply will control 30 accumulation zones.

Air Requirements - Operating pressure is 20-35 psi on main trunk line.
Filter/Regulator - Supplied loose for mounting to conveyor side frame, with ¾”NPT ports. 35 to 40 psi recommended operating pressure with free air consumption of .0062 cu. ft. per sensor operation.

OPTIONAL EQUIPMENT
Accumulation Zones - 4” roller centers - 36”, 40”, 44”, 48”, 52”, 56” and 72” long. 6” roller centers 36”, 42”, 48”, 54” and 72” long. Frame lengths change with zone lengths.
Tread Rollers - 2½” diameter x 7 gauge steel, 11⁄16” hex shaft.
Floor Supports - Higher or lower supports available, adjustable or fixed type.
Conveyor Speed - Constant and variable speeds (Contact Factory).
Limit Switch - to provide signal for customers infeed equipment.
Motor - Single phase, energy efficient, explosion proof, etc. Other HP available.
Diffused Photo Eyes - To be used when retro-reflective photo eyes can’t be used due to product interference.
Electrical Controls - Magnetic starters and push button stations; Manual motor starters with overload protection, others. 24V DC solenoid can be supplied in discharge zone.
Optional Loads - Larger capacity clutch is available for 6000 lb. unit loads.
Reversible - can be supplied with reversing feature to allow accumulation in both directions.
OPERATIONAL SEQUENCE

1) Model “251ACDE” is loaded at the infeed end of conveyor. The first load travels the entire length of the conveyor to Zone #1. If the photoelectric sensor in Zone #1 has been activated by an external signal (normally open contact, not supplied) the product will stop in Zone #1.

2) The second load travels the length of the conveyor until it reaches Zone #2. If Zone #1 is occupied, the second load will stop in Zone #2. Load #3 will stop in Zone #3 and continue to accumulate at “zero pressure” until fully loaded.

3) To unload, an external signal (normally open contact, not supplied) to the photoelectric sensor in Zone #1 will release the accumulation feature and allow the product in Zone #1 to leave the conveyor. The load in Zone #2 will not advance into Zone #1 until the load in Zone #1 has completely cleared Zone #1’s photoelectric sensor; the third load will not advance into Zone #2 until the second load clears the photoelectric sensor in Zone #2. Once the first load clears the photoelectric sensor in Zone #1, the external signal must be restored to Zone #1’s photoelectric sensor for the accumulation process to continue.

LOADING FLOW

LOAD #3
LOAD #2
LOAD #1

PHOTO EYE ZONE 3
PHOTO EYE ZONE 2
PHOTO EYE ZONE 1

LOADING FLOW

LOAD #3
LOAD #2
LOAD #1

GAP

PHOTO EYE ZONE 3
PHOTO EYE ZONE 2
PHOTO EYE ZONE 1

Conveyor Systems, Inc.

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LOADING FLOW

LOAD #3
LOAD #2
LOAD #1

PHOTO EYE ZONE 3
PHOTO EYE ZONE 2
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Load Capacity Charts

<table>
<thead>
<tr>
<th>Accumulated</th>
<th>Moving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conveyor Speed @ 30 FPM</td>
<td>Conveyor Speed @ 30 FPM</td>
</tr>
<tr>
<td>HP</td>
<td>Total Load (lbs.)</td>
</tr>
<tr>
<td>Up to 50'</td>
<td>Up to 100'</td>
</tr>
<tr>
<td>1/4</td>
<td>12000</td>
</tr>
<tr>
<td>1</td>
<td>18000</td>
</tr>
<tr>
<td>1 1/2</td>
<td>30000</td>
</tr>
<tr>
<td>2</td>
<td>42000</td>
</tr>
</tbody>
</table>

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