

# 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 2¼" low.

**Floor Supports** - Adjustable 18¾" to 23¾" (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** - ¾ 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.

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Bed Length	Conveying Surface		34"	40"	46"	52"	58"
	Between Frame Width		37"	43"	49"	55"	61"
	Overall Frame Width		48"	54"	60"	66"	72"
10'	Weight (lbs.) Based On 4" Roller Centers		1137	1227	1317	1407	1497
15'			1632	1767	1902	2037	2172
20'			2127	2307	2487	2667	2847
25'			2622	2847	3072	3297	3522
30'			3117	3387	3657	3927	4197
40'			4107	4467	4827	5187	5547
50'			5097	5547	5997	6447	6897
60'			6087	6627	7167	7707	8247
70'			7077	7707	8337	8967	9597
80'			8067	8787	9507	10227	10947
90'	9057	9867	10677	11487	12297		
100'	10047	10947	11847	12747	13647		

## 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.

## Load Capacity Charts

Accumulated			Moving		
Conveyor Speed @ 30 FPM			Conveyor Speed @ 30 FPM		
HP	Total Load (lbs.)		HP	Total Load (lbs.)	
	Up to 50'	Up to 100'		Up to 50'	Up to 100'
<sup>3</sup> / <sub>4</sub>	12000	7500	<sup>3</sup> / <sub>4</sub>	6000	3750
1	18000	13000	1	9000	6500
1½	30000	25000	1½	15000	12500
2	42000	37000	2	21000	18500

