

# BDS19Z

## BELT DRIVEN LIVE ROLLER CONVEYOR (1.9 in. dia. x 16 ga. rollers) (Zero Pressure Accumulation)



**ProLogic  
ACCUMULATION SYSTEM**  
Patent Pending

The BDS19Z live roller conveyor is ideal for accumulating cartons, boxes or totes using a series of accumulation zones. It is designed for applications that require the accumulation of products without a buildup of line pressure. Each zone's tread rollers are controlled by a **ProLogic** zone controller.

- 11 widths
- ProLogic accumulation system
- Center drive and take-up

	CONVEYOR WEIGHT (LBS.)										
	BETWEEN FRAME WIDTH										
	15"	17"	19"	21"	23"	25"	27"	31"	33"	37"	39"
	OVERALL FRAME WIDTH										
	18"	20"	22"	24"	26"	28"	30"	34"	36"	40"	42"
<b>10' LENGTH</b>	670	693	716	739	762	785	808	854	877	923	946
<b>PER FOOT</b>	31	33	35	37	39	41	43	47	49	53	55

Notes:

- Minimum overall conveyor length = 7'-6"
- Zone length must be a multiple of roller centers
- Overall conveyor length must be a multiple of zone length

## STANDARD SPECIFICATIONS

**BED** – 6 1/2 in. deep x 1 1/2 in. flange x 12 ga. powder painted formed steel channel frame with 1.9 in. dia. x 16 ga. galvanized tread rollers spaced on 3 in. centers. Sections bolted together with butt couplings.

**GUIDE RAIL** – 2 1/2 in. deep guide rails protect photo eye and reflectors while also preventing product spillage

**COVER** – Transparent smoked Lexan covers on drive side to protect electrical components

**CROSS BRACING** – Rods with turnbuckles are fastened to underside of bed to provide squaring adjustment and ensure correct product tracking. One set of turnbuckles are supplied for every 50 ft. of conveyor.

**CENTER DRIVE** – Mounted underneath near center of conveyor

**DRIVE BELT** – Black Trackmate 120 EMB - 6 in. wide

**DRIVE PULLEY** – 8 in. dia. with 1 7/16 in. dia. shaft at bearings. Machine crowned and fully lagged.

**TAIL PULLEY** – 4 in. dia. with 1 1/8 in. dia. shaft at bearings. Machine crowned.

**TAKE-UP PULLEY** – 6 in. dia. with 1 3/16 in. dia. shaft at bearings. Machine crowned. Located in center drive, it provides 16 in. of belt take-up.

**SNUB IDLER** – Adjustable 2 1/2 in. dia. rollers with grease packed ball bearings

**RETURN IDLER** – Adjustable 1.9 in. dia. rollers with grease packed ball bearings

**CONVEYING SPEED** – Constant 65 FPM

**SPEED REDUCTION** – Sealed worm gear C-Faced speed reducer with No. 50 roller chain to drive shaft.

**MOTOR** – 1/2 HP – 230/460 – 3 Phase – 60 Hz totally enclosed fan cooled, energy efficient.

**ACCUMULATION ZONES** – 12in., 18 in., 24 in., 30 in., or 36 in. long zones. Includes pressure roller carriage, 4 brake rollers, air bags and pneumatic solenoid valve.

**POWER SUPPLY** – 5 amp DC power supply to power zone controllers and photo eyes. 115/230 VAC single phase input, 24 VDC output. Mounted near center of conveyor.

**ProLogic ZONE CONTROLLER** – Located in each zone. Controls the accumulation or release of product. See controls section.

**SENSOR** – Retro-reflective photo eye with reflector

**AIR REQUIREMENTS** – Recommended working pressure 35 PSI. Free air consumption of 0.003 cubic feet per sensor actuation at 35 PSI.

**FILTER/REGULATOR** – One filter/regulator is provided for main line supply line. 3/8" NPT port.

**CAPACITY** – Maximum load per linear foot of conveyor 150 lbs. Total load NOT TO EXCEED capacity in chart.

LOAD CAPACITY CHART - SINGULATION MODE (LBS.)						
FPM	HP	BETWEEN FRAME	OVERALL LENGTH			
			10'	25'	50'	100'
35	1/2	13"-23"	1,500*	3,750*	4,300	2,000
		25"-39"	1,500*	3,750*	2,800	N/A
	1	13"-23"	1,500*	3,750*	7,500*	8,600
		25"-39"	1,500*	3,750*	7,500*	6,200
65	1/2	13"-23"	1,500*	2,400	1,200	N/A
		25"-39"	1,500*	1,600	N/A	N/A
	1	13"-23"	1,500*	3,750*	4,800	2,500
		25"-39"	1,500*	3,750*	3,300	N/A
	2	13"-23"	1,500*	3,750*	7,500*	9,600
		25"-39"	1,500*	3,750*	7,500*	6,800
120	1	13"-23"	1,500*	2,700	1,500	N/A
		25"-39"	1,500*	1,900	200	N/A
	2	13"-23"	1,500*	3,750*	5,410	3,100
		25"-39"	1,500*	3,750*	4,000	200

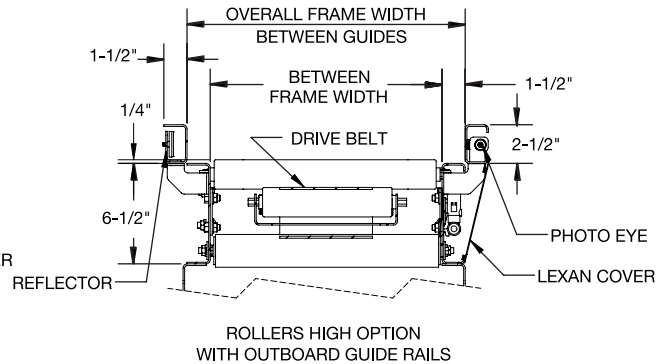
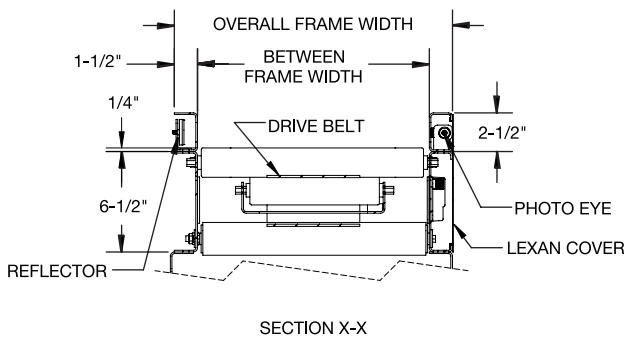
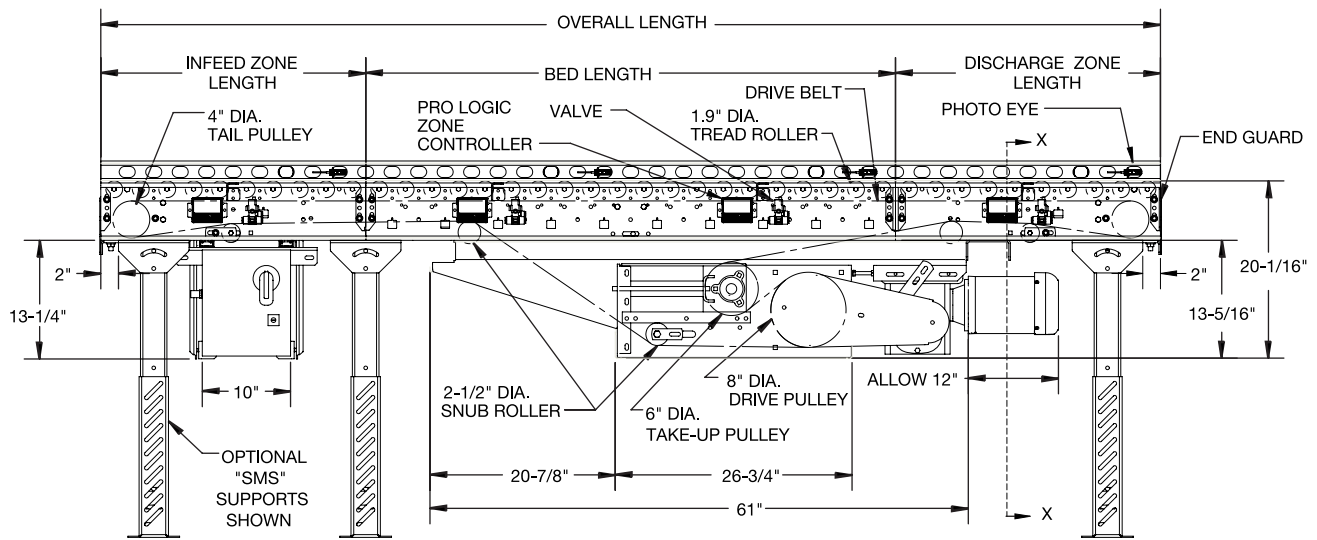
\* Limited by conveyor capacity

Note: Capacities shown assume a constant speed and maximum of 6 starts/stops per minute with no more than 30 starts/stops per hour.

LOAD CAPACITY CHART - SLUG MODE (LBS.)						
FPM	HP	BETWEEN FRAME	OVERALL LENGTH			
			10'	25'	50'	100'
35	1/2	13"-23"	1500*	2700	2150	1000
		25"-39"	1500*	2350	1400	N/A
	1	13"-23"	1500*	3750*	5500	4300
		25"-39"	1500*	3750*	4800	3100
65	1/2	13"-23"	1500*	1200	600	N/A
		25"-39"	1500*	800	N/A	N/A
	1	13"-23"	1500*	3000	2400	1250
		25"-39"	1500*	2600	1650	N/A
	2	13"-23"	1500*	3750*	6100	4800
		25"-39"	1500*	3750*	5300	3400
120	1	13"-23"	1500*	1350	750	N/A
		25"-39"	1500*	950	100	N/A
	2	13"-23"	1500*	3300	2705	1550
		25"-39"	1500*	2950	2000	100

\* Limited by conveyor capacity

Note: Capacities shown assume a constant speed and maximum of 6 starts/stops per minute with no more than 30 starts/stops per hour.



## OPTIONAL EQUIPMENT

**FLOOR SUPPORTS** – SMS type floor supports are available with a wide range of adjustment. Specify top of roller elevation. One support required at every bed joint and ends of conveyor. Holes in feet for lagging to floor. Knee braces included on SMS-7 support and above.

**CONVEYING SPEED** – Other constant and variable speeds are available: 25 – 120 FPM in any increment. Contact factory for speeds not listed. Note: Capacity and accumulation feature affected with speed change.

**MOTORS** – Inverter duty, premium energy efficient, single phase, brake motor and other characteristics. 2 HP maximum.

**SIDE MOUNTED CENTER DRIVE** – Motor reducer unit mounted to side of conveyor. 18 7/8 in. minimum elevation.

**ROLLER CENTERS** – Tread rollers spaced every 2 in.

**ROLLERS HIGH** – Outboard guiderails to allow 1 1/2 in. of product overhang per side

**POWER SUPPLY** – 5 amp power supply with 460 V three phase input

**SENSOR** – Diffuse photo eye

**LONGER ZONE LENGTHS** – 48 in., 60 in., 72 in., 84 in., 96 in. and 120 in. available.

**SLAVE KIT** – To slave VBC19 curve from system end of this conveyor

**ADDITIONAL GUIDE RAILS** – Adjustable channel guide rail. Note: If product comes into contact with guide rails, product flow may be affected.

**OTHER ACCESSORIES** – Poly-tier supports, ceiling hangers. See accessory section.

**PRESSURE SWITCH** – Installed in air line after the filter/regulator to kill power to motor when air pressure drops below minimum working requirements. Manual restart required.

## HOW IT WORKS:

The conveyor consists of multiple accumulation zones. Each zone's tread rollers are driven from underneath by the top surface of a drive belt running the length of the conveyor. Pressure rollers located under the belt push upward providing friction between the drive belt and the tread rollers. Each zone includes a pressure roller carriage, roller brake, air bags and pneumatic valve. **ProLogic** zone controllers sense the presence of products in each zone and control the accumulation or release of the product. If downstream zone is full, the pressure roller carriage in preceding zone drops away from the belt and applies roller brake to stop the product. Once downstream zone is empty, pressure roller carriage raises, roller brake drops away and product will continue down the conveyor.

