

NBEZ

Live Roller Conveyor (Zero Pressure Accumulating Type)

The Model NBEZ is a horizontal narrow belt driven live roller conveyor, designed for applications that require accumulation of products without a build-up of line pressure while providing conveyor solutions for high-throughput, high density and utilizing 24VDC electro-magnet actuation to engage the pressure carriage to drive the narrow belt.

- EZLogic® Accumulation System
- Electro-Magnetic Actuation - 24VDC
- Singulation, Slug or Cascaded Slug Operation
- Dynamic Zone Allocation
- Endless Splice Belt
- Adjustable MS-Type Floor Supports Available



Conveyor shown with optional floor supports



EZLOGIC

U.S. Patent Numbers
7,243,781 • 7,591,366
7,905,345 • 10,081,492
Other Patents Pending.



Between Rail 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"
Base Weight	574	594	614	634	654	674	694	734	754	794	814
Weight Per Foot	18	20	22	24	26	28	30	34	36	40	42

All weights in catalog are conveyor weights only. Accessories, crating, etc., are not included.

Note: Bed sections available in the following multiples:

12" Zones—1', 2', 3', 4', 5', 6', 7', 8', 9' & 10'

24" Zones—2', 4', 6', 8' & 10'

36" Zones—3', 6', 9' & 12'

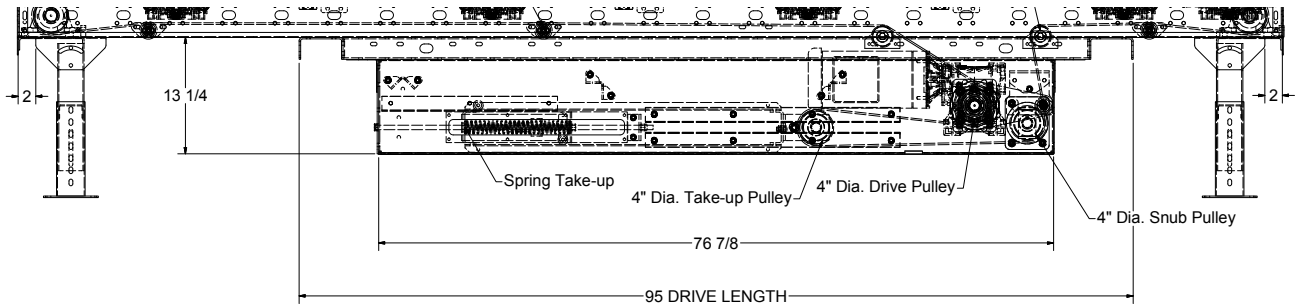
Overall length must be divisible by zone length.

Total Weight = 12' Base Weight + per foot weight x extra length

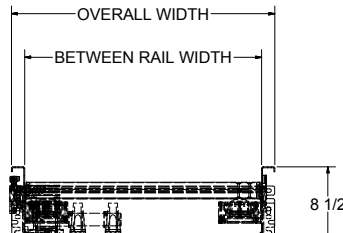
Base Weight - 12' Section w/Drive & Tails

HOW IT WORKS

The conveyor is divided into accumulation zones. Each zone extracts power from a flat drive belt that runs the entire length of the conveyor. The drive belt is electrically lowered away from the tread rollers, causing product in that zone to stop. Hytrol's EZLogic® Zone Controllers sense product presence and control the accumulation and release of product from the zones.



SET LOW SHOWN WITH STANDARD DRIVE
(Located in the First Bed Section 9' or Longer from Infeed End)
Minimum Elevation: 20" Top of roller



• STANDARD SPECIFICATIONS

BED—Roller bed with 1.9 in. dia. roller x 16 ga. galvanized tube spaced every 3 in. Mounted in 9 1/2 in. x 12 ga. powder painted formed steel channel frame bolted together with splice plates.

CROSS BRACING—Rods with turnbuckles are fastened to underside of bed to provide proper alignment of bed rollers and insure tracking. (1) supplied in first 50' of bed section lengths and (1) per 50' of bed section length thereafter. Supplied in approximate center of lengths.

DRIVE—Mounted underneath, placed near center of conveyor. **Note:** On conveyors less than 26 in. OAW, motor extends beyond frame. Chain guard located on left hand side.

DRIVE SHAFT—1 in. dia. steel shaft extends full length of conveyor. Chain coupling at bed joints. Located on left hand side.

DRIVE SPOOLS—2 in. dia. Delrin spool held in place on drive shaft with spool spacers.

DRIVE GUARD—Underside of drive shaft with spools and drive o-rings guarded full length of conveyor.

DRIVE O-RING—3/8 in. dia. polyurethane o-ring from drive spool to tread rollers.

BEARINGS—Sealed, pre-lubricated, self-aligning, ball bearings with eccentric lock collar on drive shaft. Pre-lubricated ball bearings in tread rollers.

ACCUMULATION ZONES—12, 18, 24, 30 and 36 in. long air controlled. Section lengths change with zone lengths. (See **Note** opposite page). **Note:** 51 or more zones will require an additional IOP, isolation cable and power supply T cable.

EZLogic® ZONE CONTROLLER—Located in each zone. (Retro-reflective). NEMA1, 2, IP 62. UL Approved.

IOP—Provides 27VDC, 100 watt power for EZLogic® accumulation system - contains slots for 4 input/output boards. Operates up to 50 zones (25 each side of IOP). Requires 120VAC or 230VAC single phase input.

AIR REQUIREMENTS—Recommended working pressure 35 P.S.I. Free air consumption at 35 P.S.I.—.002 cu. ft. per sensor actuation.

FILTER, REGULATOR—Supplied for main air supply line. (3/8 in. NPT port).

SPEED REDUCTION—Sealed worm gear C-Face speed reducer. No. 50 roller chain to drive shaft.

MOTOR—1/2 HP—208/230/460/575V—3 Ph. 60 Hz. Totally Enclosed C-Face.
CONVEYING SPEED—Constant 65 FPM.

CAPACITY—Maximum load 15 lbs. per drive roller.

FLOOR SUPPORTS—Now supplied as optional equipment.

EZLOGIC® ACCUMULATION SYSTEM

Hytrol's EZLogic®, or "Electronic Zero-pressure Logic" Accumulation System, combines the sensing accuracy of photo-electronics with discrete electronic logic control without the use of a PLC or pneumatic logic components. The EZLogic® Accumulation System provides many features including:

Zero-Pressure Accumulation of Product

Zone Stop function is built in. Any zone may be transformed into a workstation by connecting a dry contact switching device to the auxiliary port of the EZLogic® Zone Controller. This feature is always used at the discharge end of the conveyor line, and may be used at any other location where a zone stop is required.

Selectable Modes of Operation

Singulation Mode — Product separates while traveling down the conveyor and when it is released from the conveyor - creating a zone-length gap between products.

Enhanced Slug Mode w/ Jam Protection — Product does not separate when traveling down the conveyor or when it is released from the conveyor. This allows higher product throughput at any given conveyor speed. Product will not separate on the conveyor even when accumulation has been activated at the discharge end.

Cascaded Slug Release — Rather than releasing all zones simultaneously, this function introduces a momentary delay in the release of each zone, from discharge upstream.

Dynamic Zone Allocation — Automatically adjusts the conveyor's zone length to accommodate the length of the product being conveyed. Improves conveyor efficiency and system flexibility.

HP/LOAD CAPACITY CHART @ 65 FPM		
CONVEYOR LENGTH OVERALL	3" CENTERS	
	HP	TOTAL LOAD (LBS.)*
10'	1/2	600
20'		1200
30'		1800
40'	1	2400
50'		3000
60'	2	3600
70'		4200
80'		4800
90'		5400
*TOTAL LOAD BASED ON 15# PER DRIVEN ROLLER		

MOTOR SELECTION CHART		
FPM	30-44	45-90
HP (MAX)	1	2

If the required horsepower exceeds the maximum horsepower shown in the chart, more than one drive is required

• OPTIONAL EQUIPMENT

FLOOR SUPPORTS—MS Type floor supports are available with a wide range of adjustment. Specify top of belt or roller elevation. One support required at every bed joint and ends of conveyor. Holes in feet for lagging to floor. Knee braces recommended above MS-6 support.

CONVEYING SPEED—Other constant and variable speeds from 30 to 120 FPM. **Note:** H.P. and conveyor length affected by speed change.

SIDE MOUNTED DRIVE—with Hytrol Reducer.

SIDE MOUNTED DRIVE—with Gearmotor.

O-RING DRIVE CHAIN—With sealed in lubricant (Recommended for applications that do not permit regular lubrication).

LOW ELEVATION DRIVE—Gearmotor mounted inside of conveyor. Minimum elevation 11 1/4 in. (Retro) or 13 1/4 in. (Diffuse).

ONE DIRECTION O-RING TRANSFER—See Accessory section.

REVERSING O-RING TRANSFER—See Accessory section.

PRESSURE SWITCH—Installed in air line after regulator unit. Kills conveyor drive when air pressure drops below minimum working requirements. Requires restart controller (not supplied).

GUARD RAILS—Adjustable Universal Channel Guard Rail. **Note:** If product comes in contact with guard rails, product flow will be affected. Fixed channel overlapping-one direction.

POLY-TIER SUPPORTS—36 in. to 120 in. support heights in 6 in. increments. Knee braces required.

CEILING HANGERS—3/8 in. dia. x 8 ft. long unplated steel rods fully threaded. Other lengths and galvanized rods available.

MOTORS—Energy efficient, single phase, other characteristics. 2 HP maximum.

ELECTRICAL MOTOR CONTROLS—Non-reversing magnetic starters and push-button stations. AC variable frequency drive.

EZLogic® — See EZLogic® Components Page.

