

# 190-NSPEZ

## Live Roller Conveyor (Zero Pressure Accumulating Type)

The Model 190-NSPEZ is a horizontal lineshaft driven conveyor, designed for zero pressure accumulation of product. Each zone features positive braking of each roller in the zone during accumulation. Product may be released in singulation or slug fashion.

- EZLogic® Accumulation System
- Singulation, Slug or Cascaded Slug Operation
- Dynamic Zone Allocation
- Positive Brake on All Rollers
- Adjustable MS-Type Floor Supports Available



U.S. Patent Numbers  
5,862,907 • 7,243,781 • 7,591,366  
Other Patents Pending.



### IMPORTANT NOTE

- Operating NSPEZ in sleep mode is not recommended.

## HOW IT WORKS

The conveyor is divided into accumulation zones. Each zone extracts power from a line shaft that runs the entire length of the conveyor. A brake may be pneumatically applied to the tread rollers in each zone, 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.

SIZE TO ORDER Overall Length "A"	Between Rail Width	13"	15"	17"	19"	21"	23"	25"	27"	31"	33"	37"	39"
	Overall Frame Width	16"	18"	20"	22"	24"	26"	28"	30"	34"	36"	40"	42"
6'	WEIGHTS (Lbs.) Weights Based on 3" Roller Centers	279	286	301	313	329	342	352	370	394	409	436	449
10'		406	419	443	461	486	506	523	549	588	611	653	674
16'		598	618	656	683	722	753	779	819	879	914	980	1011
20'		725	751	798	831	879	917	950	998	1073	1116	1197	1236
26'		917	950	1011	1053	1115	1164	1206	1268	1364	1419	1524	1573
30'		1044	1083	1153	1201	1272	1328	1377	1447	1558	1621	1741	1798
36'		1236	1282	1366	1423	1508	1575	1633	1717	1849	1924	2068	2135
40'		1363	1415	1508	1571	1665	1739	1804	1896	2043	2126	2285	2360
46'		1555	1614	1721	1793	1901	1986	2060	2166	2334	2429	2612	2697
50'		1682	1747	1863	1941	2058	2150	2231	2345	2528	2631	2829	2922
56'		1874	1946	2076	2163	2294	2397	2487	2615	2819	2934	3156	3259
60'		2001	2079	2218	2311	2451	2561	2658	2794	3013	3136	3373	3484
66'		2193	2278	2431	2533	2687	2808	2914	3064	3304	3439	3700	3821
70'		2320	2411	2573	2681	2844	2972	3085	3243	3498	3641	3917	4046
76'		2511	2610	2786	2903	3080	3219	3341	3512	3789	3944	4243	4383
80'		2639	2743	2928	3051	3237	3383	3512	3692	3983	4146	4461	4608
86'	2830	2942	3141	3273	3473	3630	3768	3961	4274	4449	4787	4945	
90'	2958	3075	3283	3421	3630	3794	3939	4141	4468	4651	5005	5170	

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

**Note:** Bed sections available in the following multiples:

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

18" Zones—3', 4 1/2', 6', 7 1/2' & 9'

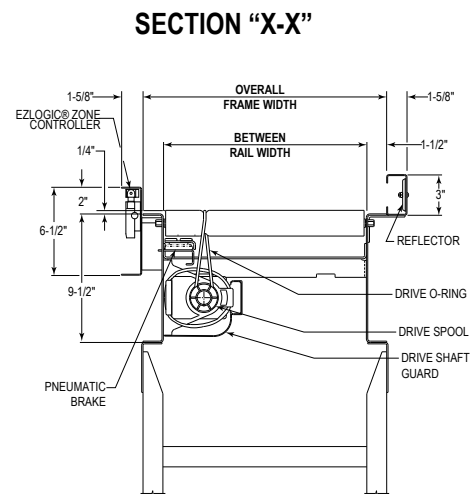
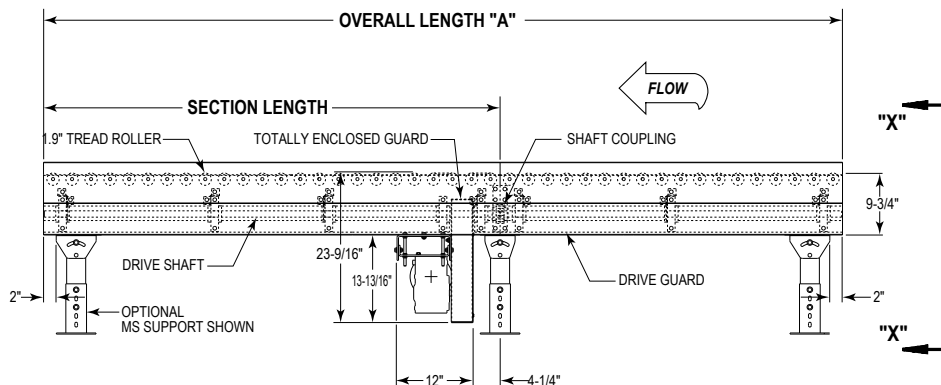
30" Zones—2 1/2', 5', 7 1/2' & 10'

24" Zones\*—2', 4', 6', 8' & 10'

36" Zones—3', 6' & 9'

\*Overall lengths in chart are for 24" zones.

Overall length must be divisible by zone length



## • 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 turnbuckle are fastened to underside of bed to provide proper alignment of bed rollers and insure correct product tracking. Supplied on every other section 30 ft. bed lengths and over.

**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<sup>®</sup> ZONE CONTROLLER**—Located in each zone. (Retro-reflective). NEMA1, 2, IP 62. UL Approved.

**IOP**—Provides 27VDC, 100 watt power for EZLogic<sup>®</sup> 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<sup>®</sup> ACCUMULATION SYSTEM

Hytrol's EZLogic<sup>®</sup>, 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup>**—See EZLogic<sup>®</sup> Components Page.