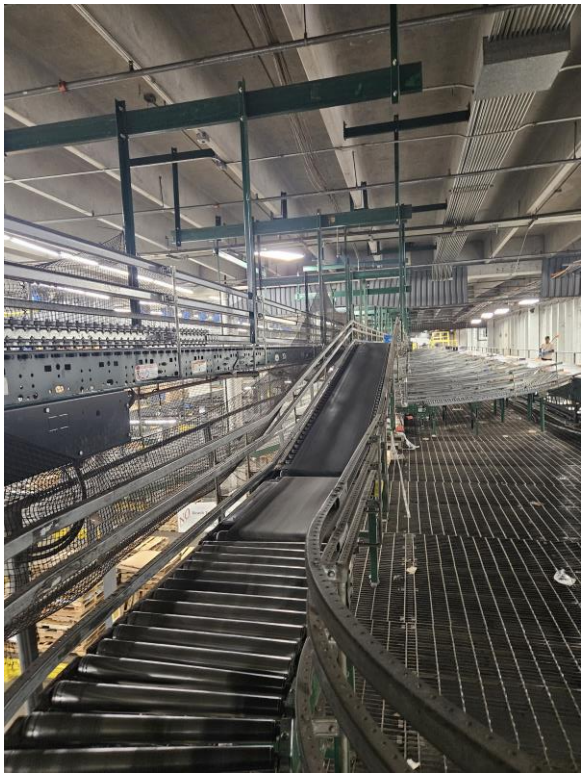


SYSTEM AUDIT REPORT

Date(s) of the Audit:

Address:

Client(s):

Site:

Approximate Age of The System:

Auditing Technician:

Table of Contents

INTRODUCTION

Thank you for the opportunity to conduct this System Audit for you! Please read your entire report. After reviewing your report, please let us know if you have any questions. If needed, we will generate a quote for the parts and services that we recommend for getting your system back to its full potential. We will be available to you throughout the process.

PURPOSE AND SCOPE

This document was prepared as a report of all visual defects noted at the time(s) and date(s) of the service. It is not all-inclusive as some items may need further investigation during downtime.

The System Audit and report are offered as the expert opinion of the items viewed during the inspection. Every effort is made to discover and correctly call out indications of earlier or ongoing issues. No guarantee of finding all issues is expressed or implied.

Our company strives to provide services with the safety of our employees and customers in mind. Our technicians inspect the visually accessible components of systems. This report has observations of those systems and components that are, in the professional opinion of the technicians, significantly deficient in the areas of safety or function. When system components are inspected, the findings will be noted. If components are present but are not inspected, the reason the item was not inspected may be reported as well.

The System Audit may be limited by accessibility to certain lines during production. In this situation, we plan to access those lines for our checks during non-production hours. This is for the safety of our employees as well as not to affect your production.

This service is conducted by our most senior technicians who have been working in the conveyor industry for several years. The untrained eye will not catch as many critical items as someone new to the industry. This report will inform you of System Mechanics, Electrical, Structural, and Safety issues. This procedure should be scheduled at regular intervals as defined by your maintenance agreement.

Accessing the lines may be difficult in certain facilities. Sometimes there are empty pallets staged near the system, cartons blocking the system, or piles of empty boxes. We will do our best to remind you at each interval to help us have access to the lines.

We are reporting on the general condition of your system. We are not delving deeply into the issues themselves in this report. The purpose of this audit is to provide an overview of the system’s functionality and to notify you of any items that need to be addressed.

We do not want you to consider this report as predictive, or as a preventative maintenance call. We want to try to limit as much downtime as we can by finding and correcting as many issues as possible. Over time, internal failures of bearings will occur, mechanical components will work their way loose, etc. We cannot prevent or predict all failures, but we will do our best. Set your expectations as to what this report is, and what it is not.

1. Visual Survey
Perform a visual inspection primarily during production to assess items that may need repair. The urgency of the repair needed will be noted.

2. Cost of Repairs
Quotes for parts and repairs will follow this service if requested. No repair costs or materials costs will be part of this review.

3. Major Projected Expenses
No estimates for major projects will be part of this review. In the event sections of equipment should be replaced, a member of our Applications Engineering Team will contact you if requested.

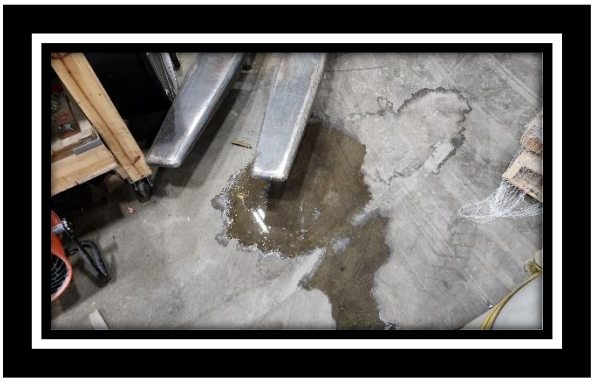
4. Intent
We intend to provide a general overview of your system. With this information, you will be able to make educated decisions and plan for potential changes that may need to be made.

5. Inclusions
The items in this report are for system components that are visually accessible Mechanical, Electrical, and Structural components. Proper software operation is not part of this report.

6. Confidentiality
Your report is confidential and will not be shared with anyone outside of the leadership of your organization.

WHAT WE'RE LOOKING FOR IN AN AUDIT

- **SAFETY**



WHAT WE ARE LOOKING FOR:

Work Area Is Free of Slip, Trip, and Fall Hazards. The area around the conveyor system is free of oil leaks or spills. Walkways are clear and free of totes, boxes, or other items blocking the work area. Catwalks or elevated areas are clearly marked and have railings. Guards are properly installed to prevent access to moving parts.

Work Area Is Free of Visible Electrical Hazards. Outlets, panels, motors, wiring, etcetera, are all wired correctly and properly protected.

Work area Is Free of Visible Hazardous Chemicals, or Possible Blood-borne Pathogen Risks. There are no visible chemical or biological hazards in the area.

- **START THE SYSTEM AND WATCH PRODUCTION**

WHAT WE ARE LOOKING FOR:

Proper product accumulation. Correct gapping between the cartons or totes. Improper gapping can lead to jams, mis-diverts, and damaged products.

Abnormal stopping or dead spots throughout the zone. Abnormal stopping can cause significant delays throughout the day and will compound throughout the shift, causing lost production time and potential overtime for on-site labor.

Proper justification to the correct side of the conveyor, along with smooth diverting, and no cartons or totes catching on guardrail. Improper carton position will cause mis-diverts or jams, causing downtime.

Unusual speed changes. Correct speeds in varying zones keep the proper gap as the system is designed.

- **MOTOR OVERVIEW**

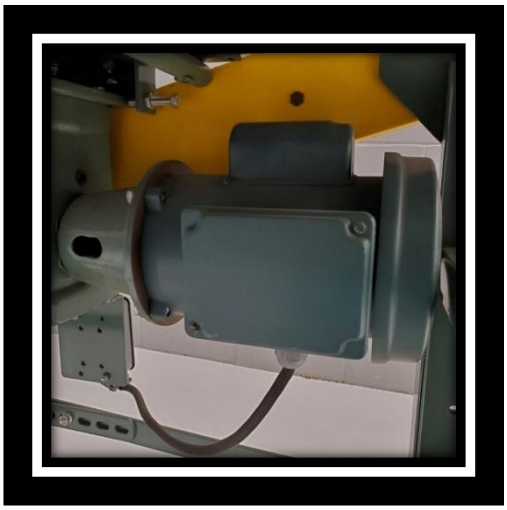
The motor is told to move once it is 'enabled' and given a 'signal' to move by the conveyor system computer (PLC). The motor may also have a manual hand or footswitch.

If all photo-eye sensors are clear of obstruction and aligned, and no safety switches are activated, the motor will run after being given the signal to run.

The motor transfers electrical power to mechanical power. The motor is usually connected to a gearbox or 'speed reducer' or 'gear reducer.' The output shaft of the gearbox will have a sprocket which will have a chain or drive belt attached from the gearbox to the drive pulley. This will run the belt carrying your product.

In the case of small electric motors, they transfer power directly to an O-ring which will drive the rollers in a zone.

Gearbox-mounted motors:



Small electric pancake motor

WHAT WE ARE LOOKING FOR:

Correct functionality - The motor is working normally.

Chain integrity, tension, and proper lubrication - A worn chain can damage your motor causing it to wear prematurely.

No unusual squeals or grinding noises - Grinding noises could be a bad chain, bearings going bad, the coupler between the motor and reducer being worn out, or the motor fan blade hitting.

Normal operating temperature. A motor will be warm but not hot to the touch. If the team auditing your system feels that the motor is abnormally hot, a temperature will be recorded, and this issue will require further investigation. An abnormally hot motor may be beginning to fail or there could be another mechanical problem somewhere in that conveyor bed section or equipment.

• GEAR REDUCER OVERVIEW

Some call it a 'Gearbox.' Some call it a 'Gear Reducer.' Some call it a 'Speed Reducer.' No matter the name used, this part connects to the motor. As the motor drives the gearbox, the speed is reduced to the output shaft by a set of internal gears. The speed is decided by the design of the system.

WHAT WE ARE LOOKING FOR:

No Leaks - If there is a leak, the reducer is at risk of the internal gears failing, causing downtime.

• BELT OVERVIEW

Belts either carry your product or drive the rollers that carry your product.

WHAT WE ARE LOOKING FOR:

Correct tracking - We want to make sure that the position of the belt in the direction of flow is not rubbing the side frames. We check it on each end, and in the middle to be sure the belt is traveling freely and is not getting damaged.

Belt surface condition - Depending on the conditions in the facility belts can dry rot sooner than they should. Dry rot will eventually cause the belt to snap at the lacing causing downtime, and a need to schedule a service call.

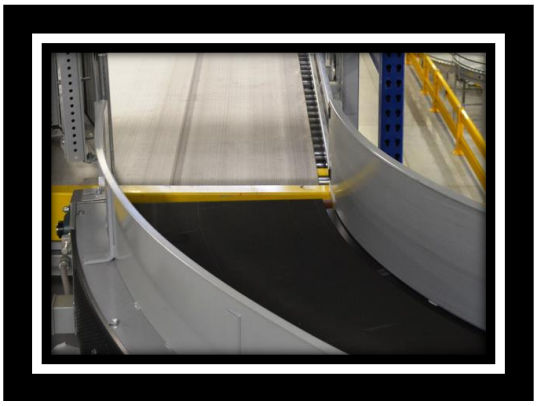
Lacing condition - Is the belt seam between the two ends intact? We want to be sure the lacing is present, and not in danger of failing.

V-belts do not appear loose - V-belt-driven zones have v-belts underneath the rollers. We look for fraying, misalignment, and damage.

Flat belts do not appear to be loose - Loose belts can be damaged. They can cause damage to the rubber-coated drive pulley. Loose belts can cause unnecessary expense and downtime.

Belts are not slipping - Any belt that is loose enough to slip should be taken care of at once. This can cause damage, mis-diverts, jams, and wasted time.

- **GUARDRAIL OVERVIEW**



WHAT WE ARE LOOKING FOR:

Guardrails should be present not only to protect your product from damage but also for safety reasons. We want to see that all guard rails are present where needed, properly spaced, and have a 'waterfall' overlap to prevent catch points.

- **GUARDS & COVERS OVERVIEW**

WHAT WE ARE LOOKING FOR:

All safety guards need to be present and properly secured to protect your workers from accidental injury while being near moving equipment.

- **SORTER AND SORTATION DEVICES OVERVIEW**

WHAT WE ARE LOOKING FOR:

The sorter sounds normal - The sorter can be louder than other conveyors but there should be no abnormal noises like grinding or popping.

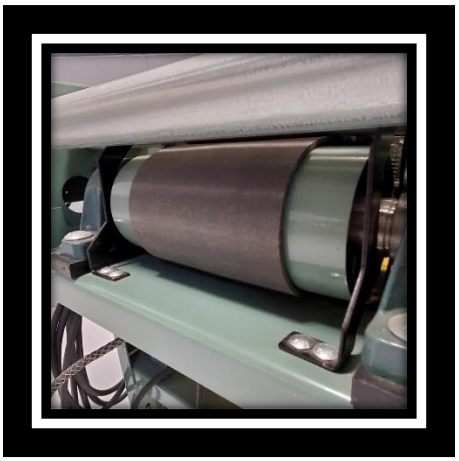
All shoes and bands are present - For a shoe sorter, all shoes must be present and not damaged. Damaged shoes are a sign of a deeper mechanical issue.

All the bands are present - For divert bucket sorters it is necessary to have all divert bucket O-rings and bands in place to prevent mis-diverts and jams.

Proper diverting - Mis-diverts can cause issues overall. Mis-diverts can cause jams, products getting damaged, or falling from elevation.

- **PULLEYS OVERVIEW**

Pulleys drive the belt, tension the belt, and help keep it running straight. Pulleys are different than rollers. The belt is wrapped AROUND the pulley. The belt only rides on the top or the bottom of rollers. The pulley can be any diameter, and it will be held in place by a bearing mounted to the frame on each side of the conveyor. A shaft goes through the pulley from side to side and has more length to go through the bearings mounted to the frame.



Tail Pulley

Shaft and Bearing

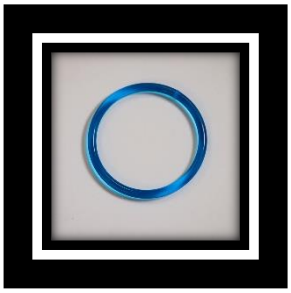
WHAT WE ARE LOOKING FOR:

Pulleys need to be square, and the rubber coating on the drive pulley cannot be worn out or missing. We inspect the tail, drive, and take-up pulleys. We look at the bearings, and shafts for wear. Any wear on the shafts will cause belt tracking problems.

- **CARRYING ROLLERS & SNUB ROLLERS OVERVIEW**

Top ‘tread’ or ‘carrying’ rollers help move your product through the system. Snub rollers are INSIDE the conveyor and are used to steer, or track, a belt.

Top carrying or ‘tread’ rollers



O-ring

Position of a 'snub roller' The roller is inside the conveyor between the side frames

WHAT WE ARE LOOKING FOR:

When rollers are worn, the bearings will squeal. When a roller fails it needs to be replaced entirely. Snub rollers are more vital than top rollers because they steer the belt. When a snub

roller fails it can cause belt damage and downtime. We want to make sure all O-rings are in place and functional.

- **FRAMES AND SUPPORTS OVERVIEW**

WHAT WE ARE LOOKING FOR:

We want to make sure that there are no obvious signs of damage, and that the conveyor bed is sitting on a sturdy base. An unsteady conveyor bed can be dangerous and cause potential severe injury.

- **CONVEYOR PERIPHERALS OVERVIEW**

WHAT WE ARE LOOKING FOR:

Crossovers, stairs, and ladders all need to be safe and dependable for people passing over them. We want to make sure there is no clear damage. It is important for all involved.

- **ELECTRICAL OVERVIEW**

WHAT WE ARE LOOKING FOR:

Note motors running hot - We want to try to point out abnormally hot motors. We can potentially diagnose an underlying mechanical issue or motor that may begin to fail.

Electrical panel filters are clean (all panels) - We want to make sure the filters are clean on your electrical panels. This allows the panels to vent properly, which is especially important in hot environments.

No electrical damage - Make sure there are no exposed wires or damaged conduit that we can see during our path through your system. Both can create an unsafe situation.

No button or VFD damage - We want to make sure your workers are not in an unsafe situation by touching a broken button or accidentally touching a device with exposed wiring.

- **E-STOPS AND CABLES OVERVIEW**

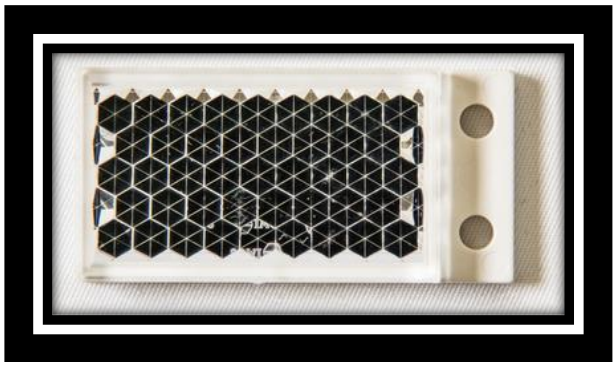
WHAT WE ARE LOOKING FOR:

The red safety cables that are attached to the e-stop need to be tensioned properly for quick reaction. If there is a situation where this cable needs to be pulled triggering an emergency stop, it needs to work quickly and properly.

• PHOTOEYES AND REFLECTORS OVERVIEW

Photo eyes and reflectors may be installed throughout your system. They are used to tell the zones on the conveyor to stop and go and are also used as jam-detect eyes. The photo eye may have an emitter and receiver in the head. The emitter sends a beam out to the reflector, which bounces it back to the receiver side of the eye. Once that connection is interrupted, the run signal is stopped or started depending on the system design.

Photo Eye



Reflector

WHAT WE ARE LOOKING FOR:

Sensors are aligned properly - if an eye is not aligned, the beam will not bounce back to the receiver side of the eye. This will simulate an obstruction and will stop or start the run command as previously said.

- ## AIR REGULATORS OVERVIEW

Air regulators set the air pressure that they receive from the compressor. Different sections of the conveyor have different air requirements. Regulators make sure that the proper air supply is given.

WHAT WE ARE LOOKING FOR:

We check for damage to the regulator frame and gauge.

- ## AIR LEAKS OVERVIEW

WHAT WE ARE LOOKING FOR:

We go through your system and listen for leaks. It is best if we come in BEFORE you run and start the compressor but not the conveyor. Air leaks are easier to hear without any added noise. We'll be able to hear if the leak is coming from airbags, valves, or hoses.

• AIR BRAKES AND STOPS OVERVIEW

WHAT WE ARE LOOKING FOR:

Certain conveyor models will have brakes or stops depending on the design. We make sure that the brakes act when they are supposed to with minimal hesitation. Hesitation can be indicative of another issue. For efficient stopping, brakes need to be fast-acting.

• COMPRESSOR OVERVIEW

Depending on your system design, your air compressor is essential to the operation of your conveyor.

WHAT WE ARE LOOKING FOR:

Alarms - Your compressor should be checked daily for any alarms it may show.

Operating temperature/air filter - Your compressor should not be running hot. We check the temperature and make sure the filter is clean for airflow.

Open the door and check for leaks - It is especially important to check this daily as well. No oil leaks should be seen.

SUMMARY OF NEEDED REPAIRS

Unit Number	Repairs Needed	Budget
100001	Belt replacement, end pulley replacement	$1,000
100002	None	$0
100003	Guard rail replacement & adjustment	$150
100004	Reducer replacement	$2,500
100005	Air leaks	$250
100006	None	$0
100007	None	$0

CONVEYOR TERMINOLOGY

A-B

Accumulating Conveyor
Any conveyor is designed to allow the collection (accumulation) of material. May be roller, live roller, belt, and gravity conveyors.

Alligator Lacing
Lacing attached to the belt with a hammer.

Axle
A non-rotating shaft on which wheels or rollers are mounted.

Bag Flattener
A mounting assembly that is used to hold one conveyor upside down over another conveyor to squeeze or flatten the product.

Ball Table
A group of ball transfers over which flat surface objects may be moved in any direction.

Ball Transfer
A device in which a larger ball is mounted and kept on a hemispherical face of small balls.

Bare Pulley
A pulley that does not have the surface of its face covered (or lagged).

Bearing
A machine part in or on which a shaft, axle, pin, or other part rotates.

Bed
That part of a conveyor upon which the load rests or slides while being conveyed.

Bed Length
Length of bed sections only needed to make up conveyor excluding pulleys, etc., that may be assembled at ends.

Bed Width
Refers to the overall width of the bed section.

Belt
A flexible band placed around two or more pulleys to transmit motion, power, or materials from one point to another.

Belt Scraper
A blade or brush that scrapes the conveyor belt to remove any fugitive material sticking to the belt.

Belt Speed
The length of belt which passes a fixed point within a given time. It is usually expressed in terms of "feet per minute."

Between Rail Width
(BR) referred to as the distance between the conveyor frame rails on a roller bed, live roller, or gravity-type conveyor. Also referred to as (BF) Between Frame.

Booster Conveyor
Any type of powered conveyor used to regain elevation lost in gravity roller or wheel conveyor lines.

Bestway
An order will be marked "Bestway" if no carrier is specified; Hytrol will pick the carrier.

Brake Motor
A device usually mounted on a motor shaft between the motor and reducer with means to engage automatically when the electric current is cut off or fails.

Brake Rollers
Air or mechanically operated brakes are used underneath roller conveyors to slow down or stop packages being conveyed.

Butt Coupling
Angles or plates designed to join conveyor sections together.

C Face Drive
A motor and reducer combination where the two units are flanged and are coupled for connection to each other and have one output shaft.

Capacity
The number of pieces, volume, or weight of material that can be managed by a conveyor in a unit of time when running at a given speed.

Casters
Wheels mounted in a fork (either rigid or swivel) are used to support and make conveyors portable.

Ceiling Hangers
Lengths of steel rod, attached to the ceiling, from which conveyors may be supported to provide maximum use of floor space or when needed height exceeds floor support capability.

Center Drive
A drive assembly mounted underneath the conveyor. It is normally near the center of the conveyor but may be placed anywhere in the conveyor length. Normally used in reversing or incline applications.

Chain
A series of links pivotally joined together to form a medium for conveying or transmitting motion or power.

Chain Conveyor
Any type of conveyor in which one or more chains function as the conveying element.

Chain Drive
A power transmission device employing a drive chain and sprockets.

Chain Guard
A covering or protection for drive or conveyor chains for safety purposes.

Chain Roller Conveyor
A conveyor in which the tread rollers have attached sprockets that are driven by a chain.

Chute
A trough through which objects are lowered by gravity. Can either be a slider bed or a roller/wheel bed.

Cleat
An attachment fastened to the conveying surface to function as a pusher, support, check, trip, etc. to help propel material, parts, or packages along the normal path of conveyor travel.

Cleated Belt
A belt having raised sections spaced uniformly to stabilize the flow of material on belts running on inclines. Cleats may be a part of the belt or fastened on.

Clipper Lacing
Lacing attached to the belt with a clipper lacing machine.

Clutch Drive
The drive used to disengage the motor from the reducer without stopping the motor or cutting the power.

Clutch-Brake Drive
The drive used to disengage the motor from the reducer and stop the conveyor at once without stopping the motor or cutting the power.

COD
Cash On Delivery

Constant Speed Drive
A drive with no provisions for variable speed or a drive with the characteristics necessary to keep a constant speed.

Converging
A section of roller or wheel conveyor where two conveyors meet and merge into one conveyor.

Conveying Surface
The normal working surface of the conveyor.

Cross Bracing
Rods and turnbuckles placed diagonally across roller bed or live roller type conveyors to aid in squaring frames, necessary for tracking purposes.

Crossover
A short section of conveyor that is placed within a conveyor when the drive is switched to the opposite side of the conveyor.

Crowned Pulley
A pulley that tapers equally from both ends toward the center, the diameter being the greatest at the center.

Curve Conveyor
Any skate wheel, roller, or belt conveyor that is produced with a degree of bend to convey products away from the straight flow.

D-F

Decline Conveyor
A conveyor transporting down a slope.

Degree of Incline
The angle of slope (in degrees) that a conveyor is installed.

Differential Curve
A curved section of roller conveyor having a conveying surface of two or more concentric rows of rollers. Also referred to as a Split Roller Design.

Discharge End
Location at which objects are removed from the conveyor.

Diverging
A section of roller or wheel conveying that makes a connection for diverting articles from a main line to a branch.

Drive
An assembly of the necessary structural, mechanical, and electrical parts which provide the motive power for a conveyor. Usually consisting of motor/reducer, chain, sprockets, guards, mounting base, and hardware.

Drive Pulley
A pulley mounted on the drive shaft that transmits power to the belt with which it is in contact. Pulley is normally positive crowned and lagged.

Dutchman
A short section of belt, provided with lacing, in a conveyor belt that can be removed when the take-up provision has been exceeded.

Emergency Pull Cord
A vinyl-coated cord that runs along the side of the conveyor that can be pulled at any time to stop the conveyor. Used with an Emergency Stop Switch.

Emergency Stop Switch
An electrical device used to stop the conveyor in an emergency. Used with an Emergency Pull Cord.

Extendable Conveyor
Roller or wheel conveyor that may be lengthened or shortened within limits to suit operating needs. Standard extended lengths are 20 ft., 30 ft., and 40 ft.

EZLogic®
Electronic Zero Pressure Logic-See Hytrol's EZLogic Components Manual.

Feeder
A conveyor adapted to control the rate of delivery of packages or objects.

Flapper Gate
A hinged or pivoted plate used for selectively directing material managed.

Flat Face Pulley
A pulley on which the face is a straight cylindrical drum, i.e., uncrowned.

Floor Supports
Supporting members with vertical adjustments for leveling the conveyor.

Flow
The direction of travel of the product on the conveyor.

FOB
Freight moves collect; the Customer is responsible for the freight bill.

FPM
Feet per minute.

Frame
The structure which supports the machinery components of a conveyor.

Frame Spacer
Cross members to keep frame rail spacing. Also referred to as a Bed Spacer.

G-I

Gate
A section of conveyor equipped with a hinge mechanism to provide an opening for a walkway, etc. (Manual or Spring Loaded)

Gravity Bracket
Brackets designed to allow gravity conveyors to be attached to the ends of a powered conveyor.

Gravity Conveyor
Roller or wheel conveyor over which objects are advanced manually by gravity.

Guard Rail
Members paralleling the path of a conveyor and limiting the objects or carriers to movement in a defined path.

HH
Prepaid with Hytrol paying the freight bill.

HTP
Hytrol pays freight.

Hog Rings
Rings used to hold the shaft in a roller.

Horizontal Floor Space
Floor space needed for a conveyor.

Horsepower
(HP) A measure of the time rate of doing work defined as the equivalent of raising 33,000 pounds one foot in one minute. Electrically, one horsepower is 746 watts.

HZ
HERTZ - Electrical terminology, a unit of frequency equal to one cycle per second. The most common cycle time is 60 Hertz.

Incline Conveyor Length
Decided by the elevation change from infeed to discharge versus the degree of incline. See Hytrol General Catalog.

Incline Conveyor
A conveyor transporting up a slope.

Infeed End
The end of a conveyor nearest the loading point.

Intermediate Bed
A middle section of the conveyor that does not have the drive or tail assemblies.

Interpolate
To compute intermediate values.

K-M

Knee Braces
A structural brace at an angular position to another structural part to provide vertical support.

Knurled Thumb Adjustment Nut
A nut used on accumulating conveyors to adjust the pressure needed to drive the product may be turned without the use of tools.

Lacing
Means used to attach the ends of a belt segment.

Lagged Pulley
A pulley that has the surface of its face crowned with a material to provide greater friction with the belt.

Limit Switch
Electrical devices are used to sense product location.

Live Roller Conveyor
A series of rollers over which objects are moved by the application of power to all or some of the rollers. The power transmitting medium is usually belting or chain.

Machine Crowded Pulley
A pulley in which the crown or vertex has been produced by an automatic, usually computer-driven, machine.

Magnetic Starter
An electrical device that controls the motor and provides overload protection to the motor.

Manual Start Switch
A simple one-direction switch is used to turn the conveyor on or off.

Minimum Pressure Accumulating Conveyor
A type of conveyor designed to minimize build-up of pressure between adjacent packages or cartons. (138-ACC - 190-ACC)

Motor
A machine that transforms electric energy into mechanical energy. Standard motors are dual voltage and run at 1725 RPM.

N-P

Negative Crowned Pulley
A pulley with raised areas set equally in from each end. This crown is used on tail pulleys 24 in. OAW and wider and aids in belt tracking.

Net Lift
The net vertical distance through which material is moved against gravity by a conveyor.

Nip Point Guard
A guard was placed to cut points or areas on the conveyor where injuries might occur.

Nose Roller
A small roller, used on power belt curve conveyors, to reduce the gap at the transfer points.

Nose Over
A section of conveyor with transition rollers placed in the conveyor to provide transition from incline to horizontal or horizontal to incline.

O-Ring
Polyurethane bands are used to send drive power from roller to roller or spool to roller. (138-NSP, 190-NSP, E24,138-NSPEZ, 190-NSPEZ)

Overall Length (OAL)
The dimensions outside of pulley to outside of pulley including belting or lagging, of any conveyor lengthwise.

Overall Width (OAW)
The dimension outside to outside of frame rails.

Overhead Drive
A drive assembly mounted over a conveyor which allows clearance for the product.

Package Stop
Any of various devices, either manual or mechanical, used to stop flow on a conveyor.

Parts Conveyor
A conveyor used to catch and transport small parts, stampings, or scrap away from production machinery to hoppers, drums, or other operations. (PC, PCA, PCX, PCH)

Photocell
Electrical devices are used to sense product location.

Pivot Plate
The gusset that attaches the conveyor to the support leg.

Plastisol Coating
Polyvinyl chloride (PVC) covers roller tubes to prevent product damage or marking. Usually (#70 durometer) green or (#90 durometer) red in color.

Plow
A device positioned across the path of a conveyor at the correct angle to discharge or deflect objects.

Poly-Tier Support
Supporting members capable of supporting more than one level of conveyor at a time. Each tier has vertical adjustment for leveling the conveyor.

Pop-Out Roller
A roller, normally placed on the ends of a belt conveyor, is used to aid in transfer, and set in a wide groove to allow it to eject if an object comes between it and the belt.

Portable Conveyor
Any type of transportable conveyor usually has support that provides mobility.

Portable Support
Supporting members that provide conveyor mobility by use of casters or wheels.

Positive Crowned Pulley
A pulley that tapers equally from both ends toward the center, the diameter being the greatest at the center. The crown aids in belt tracking.

Power Belt Curve
A curved conveyor which uses a belt, driven by tapered pulleys.

Power Conveyor
Any type of conveyor which requires power to move its load.

Powered Feeder
A driven length of belt conveyor, normally used to move product horizontally onto an incline conveyor.

Prepaid
Freight moves prepaid.

Pressure Roller
A roller used for holding the driving belt in contact with the load-carrying rollers in a belt-driven live roller conveyor.

Product Footprint
The surface of the product that meets the belt, rollers, or wheels of the conveyor.

Pulley
A wheel, usually cylindrical, but polygonal in cross-section with its center bored for mounting on a shaft.

Push Button Station
An electrical device that runs a magnetic starter.

Pusher
A device, normally air powered, for diverting product 90° from one conveyor line to another line, chute, etc.

R-T

Return Idler
A roller that supports the return run of the belt.

Reversible
A conveyor which is designed to move products in either direction.

Roller
A round part free to revolve about its outer surface. The face may be straight, tapered, or crowned. Rollers may also serve as the rolling support for the load being conveyed.

Roller Bed
A series of rollers used to support a conveying medium.

Roller Centers
The distance measured along the carrying run of a conveyor from the center of one roller to the center of the next roller.

Roller Conveyor
A series of rollers supported in a frame over which objects are advanced manually, by gravity, or by power.

Set High
Vertical spacing which allows the rollers to be mounted above the frame rails.

Set Low
Vertical spacing which allows the roller to be mounted below the top of the frame rails.

Shaft
A bar is usually made of steel, to support rotating parts or to send power.

Sheave
A grooved pulley wheel for carrying a V-belt.

Side Channels
Members who support the rollers on the side of the conveyor.

Side Mounted Drive
A drive assembly mounted to the side of the conveyor, normally used when minimum elevations are needed.

Side Tables
Steel tables attached to either side of the conveyor bed to provide working surfaces close to the conveyor.

Singulation Mode
Mode where packages are automatically separated while traveling down the conveyor.

Skate wheel Conveyor.
A type of wheel conveyor that uses a series of skate wheels mounted on common shafts or axles, or mounted on parallel spaced bars, on individual axles.

Slate Conveyor
A conveyor which uses steel or wooden slats mounted on roller chains to transport the product.

Slave Drive
A conveyor drive powered from another conveyor instead of having its own prime power source.

Slider Bed
A stationary surface on which the carrying run of a belt conveyor slides.

Slug Mode
Allows all packages to be released simultaneously.

Snub Idler
Rollers are used to increase the arc of contact between a belt and drive pulley.

Sortation Conveyor
A conveyor that can sort different packages or products to specific takeaway lines. (SC, Prosort)

Speed Reducer
A power transmission mechanism designed to provide a speed for the driven equipment less than that of the prime mover. They are totally enclosed to keep lubricant and prevent the entry of foreign material.

Spool Conveyor
A conveyor where power to the rollers is conducted by O-rings driven by spools on a rotating shaft. (138-NSP, 190-NSP, 138-NSPEZ, 190-NSPEZ)

Spur
A conveyor section to switch unit loads to and from the mainline.

Support
Arrangement of members used to keep the elevation or alignment of the conveyors. Supports can take the form of hangers, floor supports, or brackets and can be either stationary or portable.

Switch
Any device for connecting two or more contiguous package conveyor lines, or an electrical control device.

Tail End
Usually, the end of a conveyor is closest to the loading point.

Tail Pulley
A pulley mounted at the tail end of a conveyor; its purpose is to return the belt.

Take-Up
The assembly of the necessary structural and mechanical parts which provide the means to adjust the length of belt and chain to compensate for stretching, shrinkage or wear and to keep proper tension.

Tangent
Straight part after a curve conveyor.

Tapered Roller
A conical conveyor roller for use in a curve with end and intermediate diameter proportional to their distance from center of curve.

Tapered Roller Curve
A curved section of roller conveyor has tapered rollers.

Throughput
The quantity or amount of product moved on a conveyor at a given time.

Total Load
Amount of weight distributed over the entire length of a conveyor.

Tracking
Steering the belt to hold or keep a desired path.

Traffic Cop
A mechanical or electrical mechanism to prevent collision of objects as they merge from two conveyor lines into a single line.

Transfer
A device or series of devices, usually mounted inside a conveyor section, which uses belts, chains, O-rings, rollers, or skate wheels, to move products at right angles to adjacent or parallel conveyor lines.

Trash Conveyor
A conveyor, normally a belt conveyor, equipped with high side guards, is used in transporting empty cardboard boxes and paper trash away from working areas. (TH)

Thread Plates
Diamond top steel filler plates are used to fill the gap between rollers on roller conveyor.

Tripod Support
Three-legged stand for small roller and skate wheel conveyor. Usually easily moved or aligned to keep elevation of the conveyor.

Troughed Bed
A conveyor designed with a deep trough used for carrying broken glass, cans, wood chips, stampings, etc. Also used in recycling operations. (TR, CRB)

Troughing Attachments
Angles are used on belt conveyors to cut the edge of the belt.

Turnbuckle
A link with a screw thread at both ends, used for tightening the rod, normally used in cross-bracing.

Turning Wheel
Wheel mounted on an adjustable bracket to help insure proper package orientation.

Turntable
A horizontal, rotatable conveyor mechanism used for transferring objects between conveyors which are in angular relation to one another. (90°, 180°, 360°)

Two-Pulley Hitch
A special transition section for moving products from horizontal to incline. (TH)

U-Z

Underside Bed Cover
Sheet metal used to cover the underneath side of a conveyor.

Underside Take-Up
A take-up section is found beneath the bed of a belt conveyor.

Under trussing
Members forming a rigid framework underneath the conveyor, used for supporting the conveyor.

Variable Speed
A drive or power transmission mechanism that includes a speed changing device. A.C. electrical variable speed ratio 10:1

V-Belt
A belt with a trapezoidal cross section for operation in grooved sheaves permitting wedging contact between the belt sides and groove sides.

Zero Pressure Accumulating Conveyor
A type of conveyor designed to have zero build-up of pressure between adjacent packages or cartons. (NSPEZ, ABEZ, PREZ, LREZ, CREZD, CCEZ, CCAC, DCEZ, PLEZD, E24)