**Episode: Palletizing & Depalletizing (Machinery category)**

Conventional Palletizers: High Level - Conventional or mechanical palletizers contain row formers, elevators and row pushers that load cases or bags in determined locations onto a pallet. High-level conventional palletizers operate at an elevated level, often on high-capacity production lines where speed and the ability to handle large volumes are paramount.

Conventional Palletizers: Floor level - Conventional or mechanical palletizers contain row formers, elevators and row pushers that load cases or bags in determined locations onto a pallet. Perfect for smaller operations or lower volume lines, floor-level palletizers keep the line moving constantly. The entire machine can be viewed from the facility floor.

Conventional Palletizers: In-line - Conventional or mechanical palletizers contain row formers, elevators and row pushers that load cases or bags in determined locations onto a pallet. Designed for medium to high-speed operations and multiline applications, they use a flow divider for precise positioning of packages on the layer forming area, ensuring accurate placement until a layer is complete and transferred onto the pallet.

Robotic: Pick and Place - Robotic palletizers use robotic arms to load cases, bags or containers onto a pallets. Pick-and-place robotic palletizers swing back and forth from a pick area to place items on a pallet, stacking row by row.

Robotic: Layer forming - Layer-forming robotic palletizers take products fed into the palletizing area on conveyors and arrange them into layers with end-of-arm tools that turn and push boxes neatly and efficiently.

Robotic: Row forming - Row forming robotic palletizers group boxes or cases together and as they accumulate are formed into a single row unit that is lifted together onto a pallet.

Robotic: Cobots & Mobile - Collaborative and mobile robots assist their human counterparts in lifting and transporting sacks and cases. Cobots are small, highly mobile, and usually handle low-volume, floor-level palletizing jobs, and with built-in safety features, are helping many emerging brands eliminate lifting injuries and accidents.

Hybrid Robotic Palletizers - Hybrid robotic palletizers combine any of the technologies above into a single, customized robotic palletizer.

**Episode: Closures, Lids, & Dispensing (Materials category)**

Threaded Closures - Closures with an internal continuous thread that screws onto the neck of a container or fitment with a matching continuous thread.

Dispensing Closures - Multifunctional closures have movable parts for opening and reclosure, such as a closure on a bottle of lotion that allows the consumer to open, dispense product, and reclose.

Pumps & Spray Nozzles - Specialized closures that allow liquid products to be dispensed and dispersed from the package by manual force from the user or some sort of internal propellant. Includes mist and trigger sprayers, aerosol pumps, foam dispensers and related closures.

Lug Closures - Flat metal or plastic closures that have indentations on the interior rim of the closure that engage with coarse, often non-continuous threads or on bottles and jars that are removed by consumers with a single twist, such as metal lug closures on jars of pickles.

Over caps - A type of closure that is placed on top of another closure, especially on dispensing closures, pumps, and spray nozzles, to cover the inner closure so it does not activate product dispersion, such as an overcap for a perfume bottle.

Lids - Any flat closure that goes on top of a canister, can or container, ranging from plastic lids for cans of peanuts to metal lids for paint cans to aluminum can lids.

Crowns - A metallic cap with ridges that is pressed onto a glass bottle that the end consumer removes with a bottle opener, such as a crown on a glass bottle of beer.

Corks and Plugs - Corks are synthetic or natural stoppers used most frequently in sealing bottles of alcoholic beverages such as wine.

Clip Closures, Ties and Staples - A wide range of specialized closure materials such as twist ties and plastic clips for bread bags and staples for large bags of potatoes.

ROPP Closures - Roll-on pilfer-proof (ROPP) closures are a type of non-threaded aluminum closure where the threads are formed in the process of applying the closure to a bottle or container by pressure rollers applying mechanical force.

**Episode: Multipacking (Machinery category)**

Sleevers - Multiple Items: A wide variety of machines that apply a sleeve, typically made of paperboard or corrugated or other materials, around multiple products or packages.

Tray Formers - Equipment that forms (but does not load products onto) durable, corrugated trays used to ship multiple items from a packaging operation, such as machines that form trays used to ship 20 cans of soup.

Handle/Carrier Applicators - Machinery that erects any type of packaging carrier apparatus, such as equipment that applies plastic carriers onto six-packs of beer cans or machines that erect paperboard flats into six-pack carrying cases for glass bottles of soda.

Banding Equipment - Equipment that applies a plastic or paper-based strip around a product.

Strapping Equipment – Banders, strapping and tying equipment are related machines that apply a plastic or paper-based strip around a product.

Shrink Bundlers – Shrink wrap equipment, also known shrink bundlers, that wraps two or more single packages in film that is then passed through a shrink tunnel to form a tightly bound single unit for sale.

Heat Tunnels (address steam and electric versions in the script) - Equipment, also known shrink bundlers, that wraps two or more single packages in film that is then passed through a shrink tunnel to form a tightly bound single unit for sale.

**Episode: Labeling Machines (Machinery category)**

Printer/Applicator - Printer/applicators, also known as print-and-apply labeling systems, combine the functions of label printing and dispensing into a single machine and can be used in a wide variety of applications, from barcode label printing to stickers and warning labels.

Pressure-Sensitive Label Applicators - Labeling machines that apply light pressure to labels coated with an adhesive backing on one side to separate the label from the face stock before adhering it to the package.

Roll-Fed Labelers - Machines that remove a continuous roll of labels and separates and applies labels onto a container or package that is rotated while going through the label application head.

Pre-Cut Label Applicators - Also known as cut-and-stack labelers, these machines run stacks of labels that have been die cut with incisions, separate the labels from the stack and apply them to containers or

packages.

Shrink Sleeve Labelers, Neck Banders & Heat Tunnels - Machines that use heat to apply plastic film material so that when cooled, it conforms to the body of the container for a snug fit, such as a full-body shrink sleeve label for a single-serve bottle of chocolate milk. Included here are neck banders, which employ similar heat application technology to apply neck bands for tamper-evidence in applications such as a neck band on a bottle of aspirin. Includes any equipment related to these technologies such as heat tunnels.

Stretch Sleeve Labelers - Stretch sleeve labelers apply plastics with sufficient elasticity to maintain positioning, such as a wraparound sleeve label that is stretched and applied to a plastic container of cat litter.

RFID Encoders, Applicators & Readers - Any machine related to applying, encoding or reading Radio-frequency identification (RFID) label systems.

Electronic Article Surveillance Applicators - Electronic article surveillance (EAS) tag applicators are dedicated machines that apply security or anti-theft tags to a variety of packages most commonly after packages are filled and sealed.

Specialty Promotional & Decorative System - A wide range of equipment for specialty promotion and decorating including silk screening on bottles, foil hood decorating systems, colored band machines, decorative strips on pillow bags, and other specialty labeling equipment.

**Episode: Wrapping Equipment (Machinery category)**

Flow Wrapper - Flow wrappers are a specialized type of horizontal form/fill/seal (hf/f/s) machine that features a film reel mounted above the operating level, whereby the product is loaded horizontally, and a longitudinal seal is formed below the pack.

Overwrapper - Machinery that applies a layer of paper or plastic wrapping over a primary package or another form of packaging, often for cylindrical or cubical products, such as an overwrap for a sealed carton of perfume.

Shrink Wrappers & Heat Tunnels (Single Item) - Equipment that shrinks thermoplastic film tightly around the surface of an individual product or group of products, where the shrink is activated by heat.

Twist Wrapper (Bunch Wrapper) - Also known as bunch wrappers, twist wrappers cut and wrap pieces of film via a twisting mechanism, usually around small, individual products such as candies.

**Episode: Product & Package Handling (Machinery category)**

Lane Dividers, Merge & Transfers - Also known as lane combiners and laners, these systems that sort, separate, merge or relocate outfed packages or containers, such as finished cases, often integrated into conveying operations.

Diverters & Rejects - Devices integrated with conveyors to remove, divert and stage for collection packages or containers considered rejects, such as unlabeled or otherwise defective items, or to otherwise separate products from a packaging line, such as in quality checks.

Elevators & Lowerators - Product and package handling equipment that raises or lowers containers or product from one elevation to another before feeding them into the next operation, such as elevators used for palletizing and depalletizing bottles.

Puck/Carrier Systems - Any equipment or packages or containers associated with the molded plastic or food grade stainless steel components that hold containers such as bottles, cans, and tube during conveyance through a line, including puckers, depuckers and the pucks themselves.

Timing Screws - Screws that help regulate the infeed of packages so they align with a later process, such as timing the infeed of a package into a packaging machine.

Leaflet & Outsert Machines - Machinery that prepares, folds and attaches specialty leaflets or expanded content labels, often for pharmaceutical, law care products and chemical bottling operations.

Denesters - Machines that unhinge and separate a stack of containers, such as tray, clamshell and blister denesters, before placing them onto a conveyor, one by one, for a separate operation such as filling.

Stacking Machines - Machines that collect and stack products such as flat products and place them onto a pallet.

Tray/Crate Handling Machines - Any machinery associated with moving trays or crates, such as tray stackers.

Case Unloaders - Also known as decasers, this machinery is specifically dedicated to automatically unloading containers such as glass or plastic bottles from a reshipping case so that they are single file and upright for a later process.

Air/Vacuum Transport - Systems that use air or vacuum pressure to move and control empty containers that are suspended by their necks toward the neck of the container or bottle.

Dumpers & Bulk Unloading - Dumpers, tilts and other bulk unloaders used to discharge the contents of a material handling operation into another.

Tilters & Shakers - Also includes product settling conveyors, this equipment is used to vibrate the container so that the product inside settles or is more evenly distributed, such as shaking sticky ingredient powder in a bag.

**Episode: Coding & Marking (Machinery category)**

Inkjet (Small Character) - Coders that use liquid ink and spray it onto a package or product in a controlled pattern to create/add text and/or graphics

Inkjet (Large Character) - Coders that use liquid ink and spray it onto a package or product in a controlled pattern to create/add text and/or graphics.

Laser - Machines that emit laser beams to produce codes text, and/or graphics in a controlled pattern directly onto a container.

Embossing/Debossing – Equipment that imprints a code on substrates including metal, paper, or plastic so that it raises the type, such as embossing the end of a tube of toothpaste with raised type listing a best by date. Includes related technology such as 2D barcodes.

Thermal Transfer Coders - Coders that use heat to transfer an image onto a label or another form of packaging.

Stamping Machines (Hot or Cold) - Hot foil stamping machines heat metallic foils to form packaging features such as holograms, security features and other packaging features on paperboard, plastics and other substrates. Cold foil stamping applies metallic graphic features to paperboard and other substances using processes similar to ink printing. Included here are reciprocating ink coders and contact coders.

**Episode: Flexible Packaging (Materials Category)**

Pre-Made Bags - Pouches or bags that have already been converted and often pre-cut or formed into individual units for loading by machine or hand. A variety of bag and pouch sealing equipment is available for sealing pre-made bags, usually different from form/fill/and seal equipment, which also forms the bag inline before filling and sealing.

Finished Rollstock - Rolls of flexible packaging or labels that have already been converted from large webs and arrive from the converter preprinted with finished package graphics. These rolls are designed to be mounted onto either vertical or horizontal form/fill/seal equipment, flow wrappers, labelers and related equipment.

Films for Converting - Basic plastic or blown film that has not yet been converted, for later converting processes such as printing, laminating, slitting, or for multi-layer laminating with other webs.

Overwrap Films and Papers - A wide range of plastic and paper materials that serve to protect or envelop products. These materials can consist of clear films or unprinted papers, but they can also be printed. Overwrap films are considered to be distinct from shrink films.

Flexible Tubes - Any flexible, cylindrical tube, made of plastic or metal, that can be squeezed by the consumer or end user to force product out, such as tubes for toothpaste or hair gel, or pharmaceutical ointments. These tubes come from the manufacturer with a threaded opening on one end and are open at the other.

Zippers, Easy Open, & Reseal - Features, most often on flexible bags or pouches, that include a liner and zipper feature so that the consumer can open the package by pulling on a thin string liner and/or reseal packages once opened, to maintain freshness.

Membranes and Seals - Any peelable foil, plastic, or other material used specifically in induction or conduction sealing machines, such as a membrane placed on the mouth of a bottle of nutraceuticals, or a foil seal over a can of potato crisps.

Thermoforming Films - Any film that is used on a flexible or semi-rigid thermoforming machine, either as part of a thermoform/fill/seal process or during package manufacturing, where a blister or clamshell is created through thermoforming.

**Episode: Pre-made Bag Loading & Sealing Types (Machinery category)**

Modified Atmosphere - Modified Atmosphere Packaging, or MAP, is used in the food industry to extend the shelf-life of perishable food products by modifying the air inside the packaging. MAP machines flush out oxygen in a bag and replace it with a mixture of other gases, such as nitrogen and carbon dioxide.

Bag Loading, Filling & Sealing - Machinery that enables manual, semi-automatic or fully automatic loading of product into pre-made bags, and then seals them. Note: form/fill/seal machines are not included here.

Vacuum Packaging - Specialized equipment that wraps a preformed bag tightly around a food product such as meat, poultry or cheese, by placing it into a vacuum chamber that seals by flushing gas and air from the chamber to eliminate oxygen for preservation and prevent air pockets.

Bag/Pouch Sealer - Machinery dedicated solely to the function of sealing premade bags or pouches.

Bag Sewing Equipment - Equipment that seals a preformed bag by sewing threads (in contrast to most heat sealing methods), such as for a bag of fertilizer.

Bag Closing Equipment - Machinery used to close any preformed bag, that is closed by a method usually other than heat sealing or sewing. Note: form/fill/seal machines are not included here.

**Episode: Feeding & Inserting (Machinery category)**

Pick-and-Place - Automated systems that use robots that pick objects or products as part of a product or package handling operation.

Orienting/Unscrambling - Machines that take containers and sometimes products and correctly orient or organize them prior to packaging, such as unscrambling and orienting empty plastic bottles into a single-file, mouth-up position before filling.

Placement/Feeder Systems - Placement or inserter machines and friction feeders that deposit items, such as product literature or desiccant sacks, into a package.

Handle/Hanger Applications - Any machinery that applies a type of hanger to assist consumers in carrying a package, such as machines that attach a carry case plastic hanger for a two-gallon multipack of joined water jugs. Also, machines that apply hanger or display tab systems onto a package for retail display.

Protective Packaging Feeders - Systems for inserting protective packaging such as paper cushioning, rolls of corrugated wrap, or cellulose wadding into a package such as a shipping case.

Vibratory Feeders - A feeding system usually for small or lightweight products such as screws that gently shakes and rotates materials or products inside a bowl to move them onto a narrow track to be counted and fed into a package, single-file.

**Episode: Cartoning Equipment (Machinery category)**

Carton Erector/Former - Equipment that forms cartons by erecting and forming flat blanks into a primary package.

Sleevers - Single Item - A wide variety of machines that apply a sleeve, typically made of paperboard or corrugated or other materials, around a single item or package.

Carton Sealer - Equipment that closes and seals carton flaps into a finished primary package after the carton has been loaded with product.

Vertical Cartoner (Integrated erect/load/seal) - Machines that perform the cartoning functions of erecting, closing, folding, side seaming, and sealing, on a single machine (in a vertical orientation.)

Top Load Cartoner- Top load cartoners form and erect cartons that usually feature hinged flaps. This family of related packages – such as lock trays, cake boxes, and one-piece tuck tops – that all feature a wider opening that allows products to be easily loaded vertically over the top of the package, hence the name “top load.”

Horizontal Cartoner – Cartoning equipment that load products by pushing them through while the box is flat on its side. Boxes of frozen pizza are a typical example of products that use the horizontal load technique.

**Episode: Package Inspection (Machinery category)**

Checkweighers - Machines that weigh the amount of a package to verify its weight is within designated limits, such as a checkweigher for cases.

Metal Detectors - Machines that inspect packaging for metallic foreign matter.

X-Ray Systems - Machines that emit x-rays in a variety of applications to detect the presence of a foreign substance or object.

Vision Inspection Systems -Also known as machine vision (MV), vision inspection systems use cameras and other imaging technologies to detect defects.

Thermal Scanners - Infrared and other thermal scanners that measure heat emitted from an area of a package, often used to detect seal integrity of heat-sealed packages and containers.

Package Integrity Testing - A wide range of equipment and systems used to test packaging integrity properties including test compression, seal integrity, and leaks.

Fill Level Inspection - Quality control systems that use cameras and other devices to detect uniform fill level.

Cap Torque Testing - Inspection equipment used on bottling lines to test the torque of a screw cap to define machine tolerances so the capping equipment can be properly calibrated to avoid destruction of bottles during the operation.

Cap, Lid, & Flap Detection - Quality and safety inspection equipment that uses machine vision and other technologies to detect the presence of a cap or lid on a finished package. Also included here are flap detection systems that check that carton and case flaps are properly closed during sealing.

**Episode: Robotics (Machinery category)**

Articulated Arm Robots/SCARA - Articulated arm or SCARA robots feature rotary joints that allow them to rotate, bend, swivel, revolve, and move forward or backward on multiple axes, capable of handling a variety of payloads.

Gantry - Robots that are mounted on an overhead system that usually cover a large area and handle a wide range of payloads and functions from pick-and-place to assembly. Also known as Cartesian, toploaders or linear robots.

Delta - Robots that consist of three linked arms, usually connected to an overhead base, typically used for lighter payloads at higher speeds such as pick-and-place operations.

Collaborative - Collaborative robots or cobots are engineered to work in tandem and interact with human workers that are in close proximity.

Mobile (AMRs) - Also known as AGV robots or autonomous mobile robots, these devices are designed for locomotion within a plant, typically in material handling applications such as picking from shelves, warehousing and other mobile jobs.

**Episode: VFFS (Machinery category)**

Standard Pillow Pouch – VFFS machines that create bags that have seals on the top, bottom and back of the package. A pocket of air inside the flexible bag puffs up the flexible film, adding a layer of protection to the precious cargo that's inside the bag, such as pretzels or chips.

Stick Pack – VFFS machines that form packs in a long, tubular shape that carry small portions of products perfect for the on-the-go lifestyle.

Quad-Seal Bag -VFFS machines that form quad-seal bags, which feature four seals.

Sachets & Portion Packs – VFFS machines that form portion pack bags, or sachets in small package sizes. With sachets, the roll stock will be cut into small strips, filled, and sealed on four corners to form square- or rectangular-shaped bags for items such as condiment and sugar packets used in food service applications.

Liquid – VFFS machines that form bags that hold liquids.

Solid - VFFS machines that form bags that hold solids such as powders.

**Episode: Accumulators (Machinery category)**

Accumulation Table - Devices that accumulate and offload containers and packages on a single, often horizontal level, such as a bi-directional accumulation table for aluminum cans.

Rotary Accumulators - Also known as turntable accumulators, these buffering machines store containers or packages on a flat rotating disk, for example, filled pharmaceutical vials.

Spiral/Helical Accumulators - Buffering system that accumulates and conveys containers or packages by elevating them in a spiral or helical formation above the line, as an example, buffering containers on high-volume bottle filling line.

Vertical Accumulators - A buffering system that aligns horizontal rows of containers or packages through indexing and then elevates the indexed rows in a vertical fashion as a stack, often used for high-volume lines.

**Episode: Liquid Filling Equipment (Machinery category)**

Aerosol & Dispensing Filling - Machines that fill liquid substances into a container so that the substance can be released as a spray using an actuator that is mechanically primed or uses compressed gas as the propellant.

Piston Fillers- Volumetric fillers that dispense products of various viscosities with a piston that draws liquid from a hopper and pushes it through a nozzle to fill a container.

Gravity Fillers - Also called gravimetric fillers, these liquid filling machines dispense typically water-thin or low viscosity liquids from an upper chamber by dropping the product into a container, such as a bottle.

Pressure Fillers - Used in applications for filling highly viscous and pasty products such as cream cheese or yogurt, these liquid filling machines use a rotary valve pump that creates a vacuum to suck product down into a chamber above the container.

Vacuum Fillers - Used in applications for filling highly viscous and pasty products such as cream cheese or yogurt, these liquid filling machines use a rotary valve pump that creates a vacuum to suck product down into a chamber above the container.

In-line Flow Meter Fillers - Flow meter fillers that handle products inline to dispense product from an elevated storage tank at a consistent rate. The product is measured by a flow meter and the valve is opened or closed to maintain the desired flow rate. This type of filler is well-suited for products that have a predictable flow rate, such as water or oil.

Rotary Flow Meter Fillers - Flow meter fillers that handle products rotary configuration to dispense product from an elevated storage tank at a consistent rate. The product is measured by a flow meter and the valve is opened or closed to maintain the desired flow rate. This type of filler is well-suited for products that have a predictable flow rate, such as water or oil.

Net Weight Fillers (Liquid) - Machines employ load cells – a unit that converts force or weight into an electrical signal – that are placed directly beneath each filling station. The machine then doses (or dispenses) liquid products by its weight.

**Episode: Wrapping & Thermoforming for Proteins (Machinery category)**

Vacuum Shrink Pack – Machines that run vacuum shrink pack materials, which are a type of package using shrink film, formed on flow wrappers, chamber- and rotary-chamber machine style bag sealers, steam tunnels and shrink tunnels that wraps tightly around the product (i.e., a lamb shank) and during the vacuum sealing process.

Thermoformed Flexible Vacuum Pack - Machines that run any package that is made with thermoform/fill/seal equipment whereby a vacuum removes air in packaging so that it conforms to the shape of the product, such as a thermoformed vacuum pack of dates.

Thermoformed Semi-Rigid Pack - Horizontal form/fill/seal equipment capable of running flat flexible trays such as a thermoformed semi-rigid pack of salami.

Tray – Machines that form, fill and seal trays, which are shallow, rigid or semi-rigid containers made from a variety of materials that support and contain food as well as non-food products. Examples include microwavable polypropylene trays for frozen dinners, clear trays for rows of cookies or crackers. Baskets (sometimes known as punnets) refer to open or mesh containers, typically plastic, that are designed for holding fresh fruit or vegetables.

Vacuum Skin Pack – Equipment such as flow wrappers, chamber- and rotary-chamber machine style bag sealers, steam tunnels and shrink tunnels that run a type of package using shrink film that wraps tightly around the product (i.e., a lamb shank) during the vacuum sealing process.

**Episode: Load Stabilizing (Machinery category)**

Stretch Wrappers - Semi-automatic and automatic machines that wrap highly elastic plastic film around finished pallet loads to protect and contain them during shipping and warehousing; includes rotary towers, turntable systems, orbital wrappers and other types of stretch wrapping systems.

Stretch Hooders - Machinery that vertically covers a pallet load from top to bottom with a hood of stretch film.

Load Stabilizing Adhesive Systems - Systems that apply non-destructive adhesives to individual cases or bags as they are loaded onto a pallet so that they grip the next layer above or below.

Corner Post & Edge Applicators - Corner posts, corner boards, edge protectors and related protective material and systems that provide corner protection and load stabilization to pallet loads during shipment and storage.

Strapping - Transport Packaging - Any machine or manual tool that wraps and seals one or more plastic or metal straps around a load pallet to secure and stabilize it, ranging from manual strapping tensioners to automatic machines.

**Episode: HFFS (Machinery category)**

Flat Pouch- HFFS machines that form bags that have no gussets (are flat).

Stand-up Pouch – HFFS machines that form bags that are called stand-up pouches (or doypacks), which are flexible packages that have gussets allowing them to stand vertically erect on a store shelf.

Four-sided Seal Bags – Machines that run four-side seal bags, or quad seal bags, which are bags or pouches sealed at four points.

Tri-seal bags- HFFS equipment that runs a bag or pouch sealed in three places.

**Episode: Conveyors* (Machinery category)**

Bucket - Also known as bucket elevators and grain legs, these conveyors lift products vertically and separate them into troughs before discharging the product.

Cable - Also known as cable track conveyors, cable conveyors for package conveyance are typically used in transporting empty cans.

Modular - Modular conveyors, also known as modular belt conveyors, consist of attachable modules, often of plastic, that can be quickly linked together via joint rods and pins for quick reconfiguration on a conveying line as needed.

Air/Vacuum Tabletop Style - Air conveyors refer to flat top conveyor systems that uses compressed air to move packages or materials, similar to air hockey tables. Vacuum conveyors pull a vacuum through the conveyor belt to hold down packages or materials to the conveyor belt.

Tabletop - Any flat conveyor system in a variety of formats and sizes that runs products horizontally, usually on a belt or belted system.

Flighted - Conveyors that use a fin divider (also called flights or scrapers) that separate and hold product during conveyance, often at steep vertical angles.

Magnetic - Systems that use magnets embedded beneath a belt to retain ferrous pieces during conveyance.

Roller - Lineshaft or roller conveyors feature cylindrical rollers that move primary cartons or secondary packaging such as cases, through a production line.

Screw - Specialty conveyors often used in processing applications that feature a rotating helical screw blade to move bulk materials or products along a defined path within a casing or trough.

Vibratory Conveyor/Feeder - Conveying systems that use vibration to move light parts, pieces and powders horizontally through a production line.

Infeed & Discharge- Infeed and discharge conveyors move containers and packages into or out of a packaging machine. Often specific timing or back-pressure considerations apply to these conveyors.

Components & Accessories - Parts, accessories and tools related to any type of conveyor such as plastic, metal or rubber belting, rollers, pins, hoods, take-ups, nosers and gears specific to conveyors.

Guides, Rails & Adjustment Systems - Adjustable or fixed guide rail systems and related components are used to protect, guide, and control containers to avoid jams, product spillage, bottle shingling and other problems during conveyance.

Incline Conveyors - Incline conveyors permit products to be moved from one height to another. Examples include adjustable conveyors, slider bed incline conveyors, roller bed incline conveyors, continuous and reciprocating vertical conveyors, and spiral conveyors.

**Episode: Case Packing (Machinery category)**

Case Erector - Equipment that assembles and readies paper-based cases on a packaging line for later product filling or loading processes.

Tray Former - Equipment that assembles and readies paper-based and corrugated trays on a packaging line for later product filling or loading processes.

Case or Tray Loader- Equipment that places primary packages into shipping trays.

Case Sealer - Machinery that closes flaps of a case before sealing it using tape or other adhesives.

Vertical Case Packer (Integrated erect/load/seal) - Machines that form, fill or load, and seal a case or tray on a single machine in a continuous, vertical operation.

Horizontal Case Packer (Integrated erect/load/seal) - Machines that form, fill or load, and seal a case or tray on a single machine in a continuous, horizontal operation.

Top Load Case Packer - Top load packers load product into the case through a pick-and-place method through the open top flaps of a shipper case.

**Episode: Dry Fillers (Machinery category)**

Net Weight Fillers (Dry) - This dry filling equipment, also called net weighers, loads cells beneath each filling station to dispense dry products by exact tare weight.

Auger Fillers - Auger fillers employ a rotating screw to dispense product through a tube for even, volumetric distribution, such as powdered milk or granulated sugar.

Gross Weight Fillers -

Vibratory Fillers - Equipment that vibrates to dispense small, dry or granular items whereby multiple lanes distribute products from a bulk hopper to a container to reach a specific weight or count, such as in peanut packaging applications.

Pocket Fillers - Volumetric fillers that are also known as cup fillers. This packaging machine dispenses dry products such as cat treats or nuts by moving products from a hopper to a defined-size chamber that drops products during filling.

Loss-in-Weight Fillers - Systems that measure how much product has been dispensed by detecting the reduction in weight of a scale-mounted hopper as product exits the hopper.

Combination Scales - Also known as combination weighers and weigh scalers, this equipment uses multiple weighing heads that, during simultaneous filling, combine the total product weight in each head to determine that a specified weight has been reached before discharging to a container, such as on a potato chip bag line.

Piece Counters - Machinery that dispenses parts or pieces to precise specifications, such as a 50-count screw bag or box.

Tablet Counters - Often used in pharmaceutical and nutraceutical packaging operations, these counters dispense a set quantity of tablets into a container. Slat counters are part of this family of products.

**Episode: Labels & Leaflets (Materials category)**

Pressure-Sensitive - Labels that have adhesive backing that adhere to packaging materials or containers when pressure is applied.

Pre-Gummed - Also known as wet or water-activated labels, these labels feature a dried adhesive that activates adhesive properties after water is applied. Examples include labels for wine bottles.

Non-adhesive - Any type of label such as linerless or static cling that does not involve an adhesive.

In-Mold - Labels that are placed onto the container during blow molding or injection molding so that they are an integral part of the container, such as an in-mold label on a plastic laundry bottle.

Extended Text - Folded labels that are expanded after removing a peel to include information such as consumer health and safety information, usage instructions, legal disclaimers, or nutritional information.

Shrink Sleeve Labels and Bands - Plastic-based shrink film that is enveloped tightly around a product for its label, such as a full body label around a single-serve bottle of orange juice. Neck bands are shrink sleeves applied to the neck of a glass or plastic bottle to form a semi-rigid tamper-evident feature, such as bands around the neck of a bottle of salad dressing. Shrink bands can also be applied over the top of a closure to provide tamper deterrence and tamper evidence, such as a shrink sleeve over a bottle of aspirin or a bottle of water with a pop-up sport closure.

Stretch Sleeve - Plastic labels with sufficient elasticity to maintain positioning, such as a wraparound sleeve label that is stretched and applied to a plastic container of cat litter.

Blank Labelstock - Unprinted labels sold on a roll for companies to print their own labeling information as part of a print-and-apply labeling operation.

Smart Tags - Radio-frequency identification (RFID) tags and “smart labels” may include lot, barcode, identification and tracking systems into a single label, with or without an embedded battery. Electronic Article Surveillance (EAS) tags are used in shoplifting deterrence applications.

Leaflets, Inserts & Outserts - Informational material such as bandoliers, coupons, instruction manuals and other printed material that is placed into a container.