

Pop-out roller - a special load carrying roller mounted in such a manner as to pop out when foreign objects are introduced between the belt and the roller.

Pork chop - a momentary limit switch actuator that is designed to be quickly tripped and released by a trolley assembly.

Portable conveyor - any type of transportable conveyor, usually having supports which provide mobility.

Portable screening plant - a self-contained unit, consisting of equipment to screen and size bulk materials, mounted on a portable chassis capable of being towed over-the-road.

Portable surge bin - a unit which combines a gravity feed hopper and a belt conveyor on a chassis, designed to receive the continuous output of a processing plant and provide for intermittent loading into haul units.

Positioner - a mechanism used to hold a carrier at specific point on the free track for loading, unloading, etc.

Positive discharge bucket elevator - a spaced bucket type of elevator in which the buckets are inverted over the discharge chute to permit free gravity discharge of bulk materials.

Power chain dog - a pusher attachment of forged steel which is an integral part of the power chain side link. It is used to mesh with the accumulating trolley's retractable dog and holdback dog to control the movement of the carrier.

Power conveyor - any type of conveyor which requires power to move its load.

Power curve - a power driven conveyor for moving unit loads around a horizontal curve.

Power driven roller conveyor - see Live roller conveyor.

Power rail - the structural or formed member which provides the track and support for the trolleys which guide and carry the powering-chain in a power-and-free conveyor.

Power-and-free chain transfer - a device or track arrangement for transferring a carrier from one conveyor chain to another.

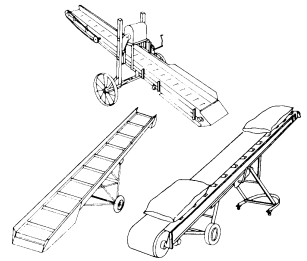
Power-and-free conveyor - a conveying system where the load is carried on a trolley or trolleys which are conveyor propelled through part of the system and may be gravity or manually propelled through another part. This arrangement provides a means of switching the free trolleys into and out of adjacent lines. The spur or subsidiary lines may or may not be powered.

Power-and-free conveyor escapement - a device to stop trolleys on a free rail and to release a single trolley upon signal.

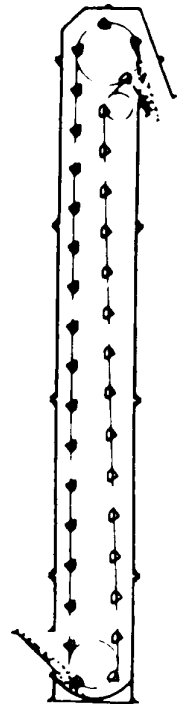
Power-and-free conveyor free rail - a non-powered section of track supporting the free trolleys.

Power-and-free conveyor free trolley stop - a device on the free rail for stopping the trolley.

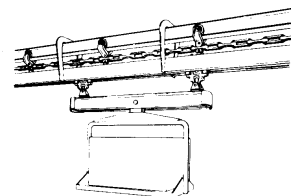
Power-and-free conveyor hoist unit - a section of free trolley track equipped with a hoisting or lowering unit for transferring a loaded trolley from one elevation to another.



Portable conveyor



**Positive discharge
bucket elevator**



Power-and-free conveyor

Power-and-free conveyor stop and feeder - a device on a free rail for stopping the trolley and then providing a positive pushing force for moving the trolley forward at a given signal.

Power-and-free conveyor track switch - see Switch.

Power-propelled truck - see Truck (1).

Powered feeder - a short power conveyor generally used for in-line transfer of unit loads from level to incline or from decline to level.

Precision roller chain - see Transmission roller chain.

Pressure lubricated rollers - rollers with integral bearings provided with a means for external lubrication.

Pressure pulley - a pulley with a resilient or pneumatic face used at a drive pulley of a belt conveyor to increase the traction between the pulley and the belt.

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

Pre-start alarm - a conveyor electrical accessory which provides an audible or visual device used to alert personnel working on (or near) a conveyor that it is about to start.

Primary sample - the original sample cut of the desired material. See Sampler.

Product stop - A mechanical barrier to interrupt the flow of product on an active conveyor without shutting down the conveyor. Typically, a product stop is pneumatically actuated. Also known as Case stop.

Production rate conveyor - a conveyor chain driven at a constant slow speed with carriers on equally fixed centers generally used for a continuous painting or assembly process.

Programmable logic controller (PLC) - a device that is pre-programmed to accept relay ladder logic instructions and perform these instructions to control the equipment operation. (Note: this replaces Programmable Controller.)

Proportioning feeder - a feeder in which bulk materials are received from multiple inlets at set rates, not necessarily the same for each inlet, and/or discharge at multiple outlets at set rates, not necessarily the same for each outlet.

Proximity switch - a switch actuated by the presence of an object near its operating head.

Pug mill - a paddle conveyor primarily used for mixing.

Pull cord switch - a switch (or switches in a long conveyor) mounted along the conveyor stringer and manually actuated by a cord running the full length of the conveyor. The switch (or switches) may be actuated from any point along the conveyor length as an emergency stop.

Pulley - a cylindrical member, but sometimes polygonal in cross section with provision for mounting on a shaft. See types: Bare; Bend; Crown face; Dead shaft; Double arm; Drive; Head; Lagged; Magnetic; Motorized; Pressure; Single arm; Slatted; Snub; Straight face; Tail; Take-up; Wing.

Pulley lace - see Face.

Pulley scraper - a flat blade, the edge of which bears against the face of the pulley to scrape off any foreign material that may be clinging to the pulley face.

Pull-through conveyor - a packing house term applied to a type of tow conveyor for pulling hogs through a scalding tank.

Pulsation - a recurring or continuous cyclic change in speed.

Push across transfer - a means of transferring a carrier from one power chain to another. Carrier movement across a non powered area can be accomplished either by an air cylinder or by contact of a lug on the rear trolley by a pusher dog on the delivery chain.

Pusher - a powered mechanical device mounted on or adjacent to a conveyor that, when activated will transfer material handled from or to the conveyor. See also Diverter.

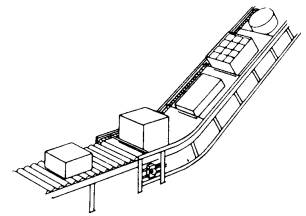
Pusher bar conveyor - two endless chains cross-connected at intervals by bars or rotatable pushers which propel the load along the bed or trough of the conveyor.

Pusher chain conveyor - one or more endless chains with attachments which propel or retard the movement of packages, objects, trucks, dollies, or cars along stationary wood, metal, or roller beds, troughs, rails, or tracks.

Pusher dog - a projecting lug type attachment which contacts the object being towed or pushed.

Pusher drive - a section of a conveyor that contains the drive unit and is located at the input side of a powered conveyor.

Push-out plate - a stationary sloping plate in an en masse conveyor opposite the discharge outlet to push the conveyed material out so as to obtain a more positive discharge.



Push bar conveyor

Q

Quadrant gate (segmental) - a type of gate in which a cylindrical segment operating through the arc of a circle forms the mechanism by which the flow of material may be controlled or shut off completely.

Quench tank conveyor - see Cooling conveyor.

Quick rise - a condition where the free track is sloped up for a short distance just before entering a vertical decline. This condition insures that the front trolley is properly engaged in a pusher dog before entering the vertical decline.

R

Rack and pinion curved slide gate - a rack and pinion gate having a curved gate plate.

Rack and pinion flat slide gate - a rack and pinion gate having a flat gate plate.

Rack and pinion gate - a gate in which the gate plate is operated by means of a rack and pinion gear set.

Rack bar conveyor - see Reciprocating beam conveyor.

Radial stacker - a conveyor which is mounted on wheels which allows the conveyor boom to pivot about the tail end and form kidney shaped stockpiles. The conveyor boom may be supported from beneath with a "V" type undercarriage or suspended by cables from a support tower. The conveyor discharge height may be fixed or adjustable. See also Stacker.

Radial wheel truck - a wheel mounted conveyor support structure which permits radial movement of the conveyor about a fixed point.

Rail - (1) one of the longitudinal members in a conveyor frame; (2) the supporting surface under the wheels or rollers of a chain conveyor; (3) the supporting track for equipment mounted on wheels such as belt tripper, weigh larry, etc.

Rail chair - a pedestal used to support the track rails of a conveyor or tripper.

Rail clamp - an attachment or device for clamping a movable conveyor or belt conveyor tripper to the rail to hold it in a fixed location.

Rail stop - a device mounted at the ends of rails to limit the travel of transversing machinery.

Raised center (Belt) - a type of belt cover in which the portion along the center line of the belt, the area of greatest wear, is raised by increasing its thickness above the plane of the edges of the cover.

Ramp conveyor - see Pusher chain conveyor; Slat conveyor.

Rapping device - a pendant operating in the path of a conveying medium such as buckets or pans for the purpose of cleaning by repeated blows after discharge.

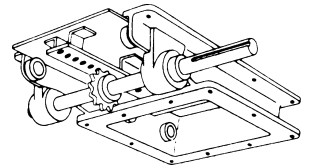
Rated capacity - the rated or design capacity of the conveying equipment as stated by vendor. This is the continuous uniform capacity the conveyor can handle.

Rear trolley - normally attached to the back end of the product load bar incorporates the beaver tail cam which provides the means to disengage the front trolley from the pusher dog.

Receiving hopper - a hopper used to receive and direct material to a conveyor or feeder.

Receiving plate - a flat surface for receiving bulk material or objects prior to advancing the load to a conveyor. See Loading plate.

Receiving station - the location or device on a conveyor or system where bulk material or objects are loaded or otherwise received onto the conveyor.



Rack and pinion gate

Reciprocating beam conveyor - one or more parallel reciprocating beams with tilting dogs or pushers arranged to progressively advance objects.

Reciprocating beam feeder - one which separates and delivers objects by means of pushing dogs or flights attached to one or more reciprocating beams.

Reciprocating conveyor - any conveyor that progressively advances material by a back and forth motion of its conveying medium. It may be equipped with hinged flights or tilting dogs or pushers.

Reciprocating conveyor, vertical - see Vertical reciprocating conveyor.

Reciprocating feeder - a reciprocally driven plate or pan operating under a head of bulk material.

Reciprocating flight conveyor - a reciprocating beam or beams with hinged flights arranged to advance bulk material along a trough.

Reciprocating hoist - see Vertical reciprocating conveyor.

Reciprocating lift - see Vertical reciprocating conveyor.

Reciprocating tray - see Vertical reciprocating conveyor.

Recirculating load - see Circulating load.

Reclaimer - any machine used to recover material from a stockpile, or other storage.

Reclaiming conveyor - any of several types of conveyors used to reclaim bulk materials from storage.

Reduced voltage starting - the method for accelerating a motor from rest to normal speed by means of a starting device which applies less than full voltage to the motor or terminals for a given interval or intervals before application of full voltage. Typical reduced voltage starting devices are primary resistance, auto-transformer, or reactor starters.

Reducer - see Speed reducer.

Regenerative drive - a conveyor drive which produces rather than consumes power. See Electric braking.

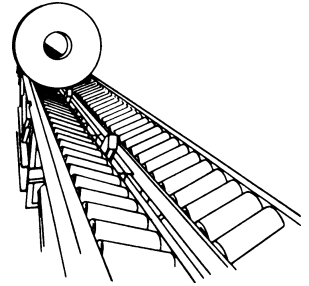
Regulating gate - a gate used to vary size opening to control the flow of material through the opening. See Bin gate.

Regulating plate - a plate which is adjustable or movable to permit varying the size of an opening through which material passes.

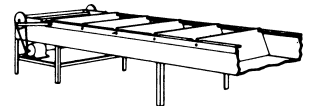
Reinforced cover - see Step pad.

Reject conveyor - see Reject system.

Reject system - (1) in a Palletizer, the system that removes the odd row of containers from the pattern and returns them to the accumulation bed. (2) the term may also apply to a conveyor system that handles defective or reject product that has been isolated at a device such as an inspection station, in which case it is also called a Reject conveyor.



Reciprocating beam conveyor



Reciprocating flight conveyor

Reliability - the ability of equipment to function repeatedly or continuously without unpredictable failure. Relative to safety in conjunction with reliability, see current ASME/ANSI Safety Standard for Conveyors and Related Equipment B20. 1.

Reliability factor - the measurement of the actual number of part failures at predetermined life relative to the total quantity of measured parts as expressed in percentage.

Remote control - any system of controls in which the actuator is situated in a remote location.

Remote indicator - any type of indicator which is located away from the signal source.

Remote location - any location, with respect to the conveyor, from which the presence or position of personnel relative to the conveyor cannot be readily determined from the operator's control station.

Remote key conveyor screw - removable key conveyor screws are designed for easy removal of screw sections from the conveyor trough. Each section of screw is provided with a removable key located at one end of its pipe shaft. By removing this key a screw conveyor section with coupling and hanger can be quickly removed from the trough without disturbing other components.

Renewable rim wheel - a wheel having a removable rim that can be changed without disturbing the hub portion.

Reserve storage - see Dead storage.

Retarder - any device used to slow the rate of travel of bulk material or objects on a conveyor.

Retarding conveyor - a declining conveyor used to retard the rate of movement of bulk materials, packages or objects where the slope is such that the conveyed material tends to propel the conveying medium.

Retractable - a conveyor component that can be moved from an active position to an inactive out of the way position.

Retractable dog - the dog on the accumulating trolley which is engaged by the power chain dog in order to power the carrier along the conveyor path. Mechanically the dog may be moved away from engagement with the power chain dog by the accumulating action of two carriers or the similar action of the power-and-free stop.

Return belt - the belt, strand, or run return to the loading point.

Return belt plow - A conveyor accessory used to remove refuse material from the inner surface of the return side of the conveyor belt, either in a Vee shape or diagonal across the belt.

Return belt training idler - see Belt training idler.

Return crack - see Serpentine return.

Return idler - an idler or roller supporting the return run of the belt.

Return idler sprocket - a sprocket propelled by the chain.

Return roller - see Return idler.

Return run - that portion of the conveying medium that returns from the discharge to the loading end of a conveyor.

Return track - the strips or track supporting the conveying medium on the return run.

Reverse step ply - a construction of rubber conveyor belt of uniform thickness which has a thicker top cover at the edges. This is accomplished by stepping down the top plies from the center to each side, and filling in the extra spaces at the edges with cover stock.

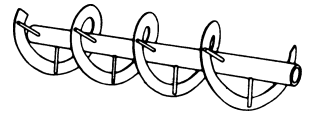
Reversing - (1) under operating design load, the load will move in either direction; (2) for maintenance purposes only, the definition does not imply the ability to run continuously in the opposite direction (sometimes called reverse jog).

Reversing chain - a conveying chain that runs in the direction opposite to the primary flow of product, as for example in an in-line accumulator conveyor module. Accumulated product, upon reaching the reversing chain, is returned to the inlet end of the accumulator.

Ribbon belt conveyor - see Multiple ribbon belt conveyor.

Ribbon flight - a conveyor screw flight proportioned to provide space between it and the internal supporting pipe or shaft when mounted thereon.

Ribbon flight conveyor screw - a conveyor screw in which the conveyor screw flight is of the ribbon flight type.



**Ribbon flight conveyor
screw**

Ribbon flight screw conveyor - a screw conveyor having a ribbon flight conveyor screw. See Screw conveyor.

Rider plate - a flat plate attached to the chain and supporting it from the track.

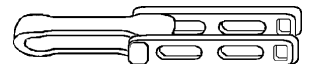
Right hand - see Hand.

Rigid coupling - a mechanical connector between two shafts which transmits torque but does not provide for misalignment.

Rigid wheel truck - a portable conveyor truck with a fixed wheel axle.

Ring pin - a forged chain pin having a ring arrangement on one end. Usually placed adjacent to a trolley for towing floor trucks by means of a chain hitch.

Riveted chain - a chain in which the ends of the pins are headed and/or swaged so that the chain cannot be disassembled without cutting off the pin.



Rivetless chain

Rivetless chain - a series of pins, side links and center links which can be assembled or disassembled without the use of tools.

Robot - a programmable, multifunctional manipulator designed to move material, parts, tools, or specialized devices, through variable programmed motions for the performance of a variety of tasks. Also known as Industrial robot.

Rocking feeder - one which employs a rocking motion to effect separation and delivery of objects.

Roll - a rotating component of a belt conveying idler. See Roller.

Roll feeder - a smooth, fluted, or cleated roller or drum which rotates to deliver packages, objects, or bulk materials. See Magnetic feeder.

Roller - (1) a round part free to revolve about its outer surface. The face may be straight, tapered, crowned, concave or flanged, corrugated, ribbed or fluted; (2) a component part of a roller chain in which it may serve only to reduce frictional loss occurring as the chain passes over the sprockets. Rollers may also serve as the rolling support for the chain and the load being conveyed; (3) the rotating element upon which a conveyor belt or chain or the object being transported is carried. See Belt idler.

Roller apron conveyor - see Roller slat conveyor.

Roller bearing end thrust - see End thrust bearing.

Roller bearing pillow block - a pillow block using rollers as a bearing element.

Roller bed - a series of rollers used to support a conveying medium.

Roller centers - distance between centerlines of adjacent rollers. For curves, roller centers are measured at the inside radius.

Roller chain - a chain having a roller encircling the barrel or bushing of each link joint. See Steel side bar bushed roller chain; Transmission roller chain.

Roller conveyor - a series of rollers supported in a frame over which objects are advanced manually, by gravity, or by power. See types: Controlled velocity; Herringbone; Hydrostatic; Live; Skewed; Spring mounted; Troughed.

Roller conveyor curve - a circular section of roller conveyor.

Roller conveyor differential curve - see Differential curve.

Roller flight conveyor - see Roller slat conveyor.

Roller link - a chain link having rollers mounted on the bushings.

Roller rack - a storage rack having tiered load supporting surfaces of roller. See Flow rack.

Roller slat conveyor - a slat conveyor using rollers for slats.

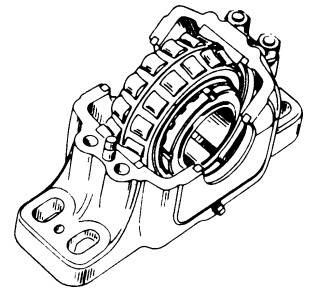
Roller spiral - an assembly of curved sections of roller conveyor arranged helically and over which objects are lowered by gravity.

Roller table - a table with a surface consisting of a series of rollers.

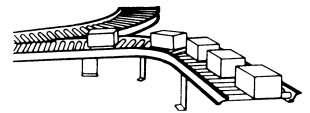
Roller track - see Roller bed.

Roller turn - a series of vertical rollers mounted in a frame to guide a conveyor chain around a horizontal curve.

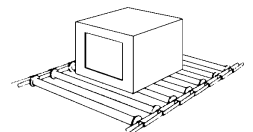
Roller turn roller - the vertical roller with integral bearings as used in the roller turn.



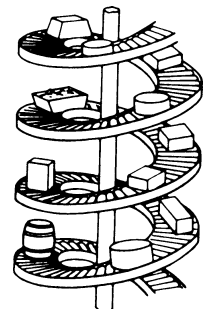
Roller bearing pillow block



Roller conveyor



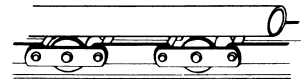
Roller slat conveyor



Roller spiral

Rolling apron bin gate - a gate in which the flow controlling medium consists of an endless belt supported on closely spaced rollers which substitute rolling effort for sliding effort while being opened or closed. In principle, it operates similarly to an inverted crawler tread.

Rolling chain conveyor - a conveyor consisting of one or more endless roller chains on which packages or objects are carried on the chain rollers. The speed of transportation is double that of the chain speed.



Rolling chain conveyor

Rolling roll conveyor - see Roller slat conveyor.

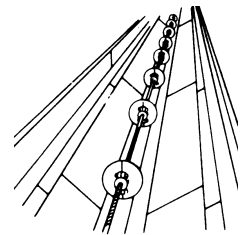
Rolling roll inspection table - see Roller slat conveyor.

Roll-over - a device used to rotate an object about its axis of travel for repositioning or inspection.

Roll-over feeder - one which up-ends or positions objects during the separation and delivery operations.

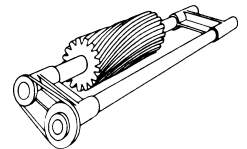
Room conveyor - see Underground mine conveyor.

Rope and button conveyor - a series of buttons or flights attached to an endless wire rope or cable for the purpose of conveying or retarding the movement of bulk material or objects along a stationary trough.



Rope and button conveyor

Rotary belt cleaner - a series of straight or spiral blades symmetrically spaced about the axis of rotation and caused to scrape or beat against the belt for the purpose of cleaning. See Brush cleaner.



Rotary belt cleaner

Rotary bin check valve - a rotary valve, manual or power-operated, designed to deliver a constant flow of fine material. May be used as a "volumetric feeder" and may be equipped with a totalizer calibrated in cubic feet (volume) or in pounds (weight).

Rotary cut-off valve - a gate or valve having a closely fitted, slotted cylindrical rotor operating in the slotted bore of the gate body.

Rotary feeder - a rotating device used to place an object on (or remove it from) a conveyor. See Roll feeder.

Rotary plate feeder - see Rotary table feeder.

Rotary plow feeder - a self-propelled carriage traveling parallel to and above a conveyor on which is mounted power-operated rotating arms that plow material from a continuous shelf onto a conveyor below.

Rotary table feeder - a rotating horizontal, circular table to which material flows from a round bin or hopper opening and from which it is discharged by a plow.

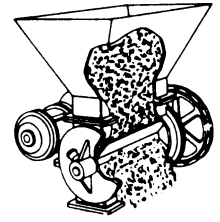


Rotary table feeder

Rotary unloader - see Rotary feeder.

Rotary valve - see Rotary cut-off valve.

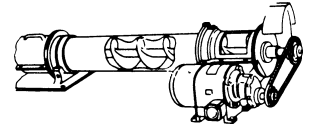
Rotary vane bin valve - a type of valve or gate in which radially spaced vanes form pockets or containers for a measured amount of material in each pocket which can be discharged as a batch or series of batches. Usually power operated, but can be operated manually. See Rotary vane feeder.



Rotary vane feeder

Rotary vane feeder - a rotor of cylindrical outline with radial, spaced plates or vanes rotating on a horizontal axis for controlling the flow of bulk materials.

Rotating casing screw conveyor - a screw conveyor in which a tubular casing rotates. See Screw conveyor.



Rotating casing screw conveyor

Rough top belt - a belt cover intentionally made with irregular ridges or projections to produce a broken surface for greater traction or carrying abilities. Used for inclined service.

Run - the distance or route covered by a conveyor.

Run-around - see Closed circuit.

Run-in - includes final alignment of components, distribution of lubricants by the relative movement of parts and the initial wear between mating surfaces resulting in free running.

Run-in table - see Entry table.

Run-out table - any conveyor handling material from the discharge end of a processing machine, such as metal from a rolling mill.

S

Saddle - a screw conveyor trough support.

Safety cage - a physical structure which restricts personnel access; a guard built around a ladder above a specified elevation.

Safety devices - see American National Standard ASME/ANS1 B20.1 current edition, "Safety Standard for Conveyors & Related Equipment."

Safety dog - see Holdback dog.

Safety ladder - a ladder with a safety cage.

Sag - the amount of vertical deflection of a conveyor belt from a straight line between idlers, usually expressed as a percentage of the spacing between idlers.

Sag belt tension - the minimum tension in any portion of the carrying run of belt necessary to prevent excessive sag of the belt between idlers.

Sag factor - see Belt sag factor.

Sample crusher - a small crusher which receives the sample and reduces it to particle size for further sampling or analysis.

Sample cut - a single pass of the sample cutter through the stream of material.

Sample cutter - the portion of an automatic sampler that moves through the stream of material to intercept and isolate the sample quantity.

Sample splitter - a device used to secure a small representative sample from a bulk sample.

Sampler - a device for periodically selecting a portion of the material being handled.

Sample carriage - the portion of an automatic sampler that supports and moves the sample cutter through the stream of material to be sampled. The carriage is usually mounted on wheels that operate over a track.

Sampler chute seal - a device for closing off the opening in the sample chute to prevent accidental contamination from the main conveyor stream, i.e., only the sampled portion is allowed to pass into the sample chute.

Sampling - the removal of a small representative quantity of material from the total quantity being transported. The small quantity or sample is then used for analysis. Accepted sampling must follow specifications published by ASTM.

Sandwich belt conveyor - see Hugger belt conveyor.

Scale - see types: Bagging; Batching; Conveyor; Packing.

Scale idler - see Weigh idler.

Scalping - the process of removing oversize lumps on a continuous basis from a stream of bulk material.

Scraper conveyor - see Flight conveyor.

Screen - a perforated or meshed surface used to separate the coarser from the finer parts.

Screen chute - a discharge chute equipped with a screen portion, either stationary or vibrating, to remove the finer portions of the material being handled from the major line of flow.

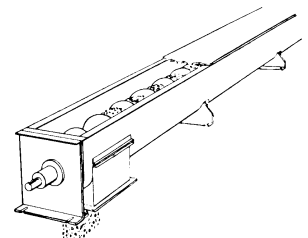
Screen guard - a structure mounted around an overhead conveyor to protect personnel and equipment from falling product or components. Generally a structural frame with welded fabric mesh or synthetic material mesh.

Screen loading chute - a type of chute with a bar screen or grizzly bottom which permits fines to fall onto the conveyor belt first to provide a cushion for the larger material that passes over the screen.

Screw - see Conveyor screw.

Screw conveyor - a conveyor screw revolving in a suitably shaped stationary trough or casing which may be fitted with hangers, through ends or other auxiliary accessories. See types: Internal ribbon; Rotating casing; Vertical.

Screw conveyor drives - screw conveyor drive equipment normally consists of an electric motor, speed reduction machinery and drive shaft, together with the necessary means to transmit power from one unit to the next.



Screw conveyor