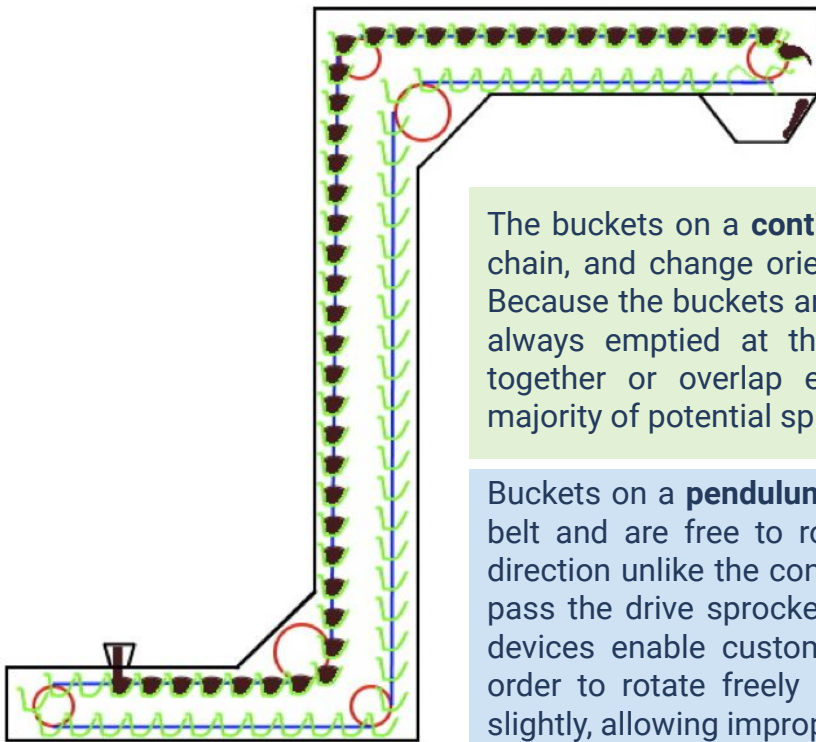
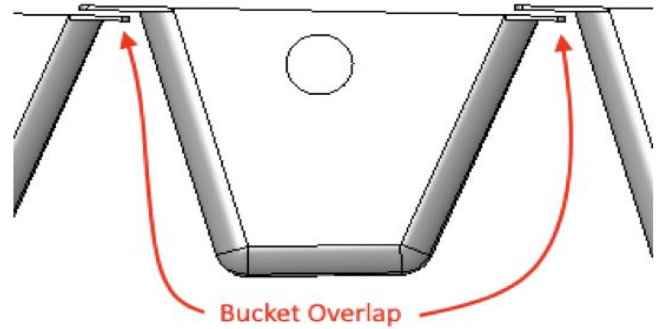


Continuous & Pendulum Bucket Conveyors vs Cable Conveyors

The construction of bucket conveyors has a lot to do with their capabilities. One type has advantages with reduced spillage, while the other is more flexible as it fits into a facility's process.

Construction

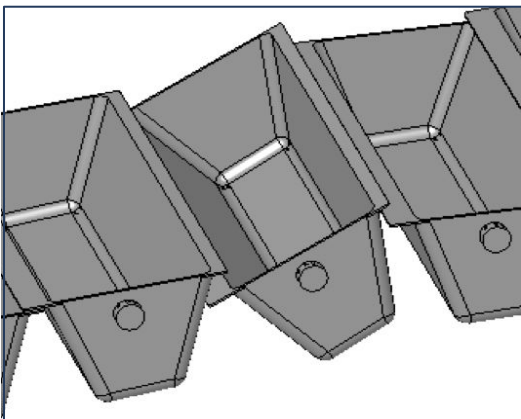
At the core, bucket conveyors use buckets attached to belts or chains to carry product on horizontal and vertical paths. There are two different styles of buckets, and each has its own pros and cons.



The buckets on a **continuous bucket conveyor** are fixed to the belt or chain, and change orientation as the belt or chain changes direction. Because the buckets are inverted at the drive sprocket, the buckets are always emptied at the drive end. Continuous buckets often link together or overlap each other significantly, containing a greater majority of potential spillage.

Buckets on a **pendulum bucket conveyor** hang upright on the chain or belt and are free to rotate, remaining upright as the chain changes direction unlike the continuous conveyor buckets. This allows them to pass the drive sprocket without emptying. On the return path tripper devices enable customers to have multiple discharge locations. In order to rotate freely and avoid spillage, pendulum buckets overlap slightly, allowing improper overlap and more spillage.

Spillage



Because the buckets are open, product can bounce out of the buckets or bounce off the edges during filling. To overcome this, the buckets are designed with overlap or interconnection to reduce the amount of spillage. **If buckets don't overlap properly, this can cause a misalignment that allows for more spillage.**

Cablevey conveyors do not experience spillage within the conveyor. Because the tube is a functional part of the conveyor itself, there's no spillage. There's a small amount of clearance between the discs and the tube, and any product that falls through this gap doesn't exit the product stream as it is still contained within the conveyor.

Continuous & Pendulum Bucket Conveyors vs Cable Conveyors

Downtime

To avoid spillage, buckets have to overlap as described earlier. Pendulum buckets may swing with vibration and from going around the sprockets and idlers at higher speeds. If they get out-of-place, a bucket may tip improperly as shown earlier. A bucket tipped out of place may make contact with internal structures of the conveyor or may not properly engage with tripping devices. Such collisions may cause the buckets to break, spill product, or potentially cause a misalignment of the chain or belt.

If the product is dusty and the system is enclosed, dust will settle on all the internal surfaces of the conveyor. The undersides of buckets, the sidewalls, the chains and belts, etc. Chains with such buildup can lose engagement with the sprockets and become misaligned, potentially damaging buckets and shutting down the system.

Damaged buckets can cause many problems depending on the type of damage. If a bucket is broken, the broken bits can make their way into the product stream. With cracked, broken, or worn buckets spillage can occur. The buckets may not properly engage with adjacent buckets (potentially causing further damage), they may not tip properly, spilling product at undesired locations or carrying product in a continuous loop.

Cablevey conveyors use solid molded discs. The discs are fixed to the cable and do not contact one another, and so cannot make contact incorrectly. Damage can not happen due to such misalignment.

Cleaning

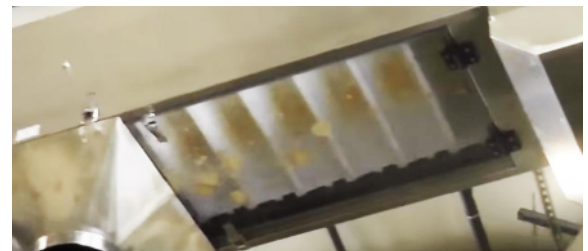
The interior surfaces of an enclosed conveyor collect dust. This dust can build up over time, break off, and enter the product stream. Further, it can collect on sprockets and chains, leading to potential loss of proper engagement causing downtime to correct and potential damage to buckets, chains, and sprockets. For these reasons, frequent cleaning is necessary.

Cleaning a bucket conveyor requires a wipe or wash-down of every surface within an enclosed conveyor. This includes every bucket, the sprockets and idlers, and the chains. Buckets are removed and taken out of place for washing or wiping down, while the rest of the conveyor is wiped down manually. Alternatively, the entire system is power washed in place with hot water or steam. Each of these options is expensive or problematic for different reasons.

Cablevey Conveyors offer both wet and dry CIP options, with attachments to scrub and scrape the tubing, water fill fittings, drain locations, and air-drying options. Depending upon the product, very little if any manual wiping is required.



(Manual removal of bucket for cleaning out of place. Removing and replacing the buckets alone could take an hour or more as the conveyor must be jugged to get access to all the buckets)



(Image illustrates product that by-passed the discharge location and fell onto interior surface, also shows product which remains in bucket reducing conveyor efficiency and capacity)



The Gentle Way to Convey