

ADVANTAGES:

- **Modular Components**
- **Robust Construction**
- **Flexible Configurations**

OVERVIEW:

The pallet loop conveyor features a recirculating loop of crescent shaped pallets linked together, providing an endless, articulating conveyor surface which can be configured to many shapes. This unit is suitable for baggage claim and baggage make-up functions in airports of all sizes.

Normally operating speed of 90 feet per minute, and capable of traveling clockwise or counter-clockwise, the device can be either manually or automatically loaded.

Manufactured with durable materials, finished to the highest standards, and complimented with leading-edge mechanical and electrical components, this robust and reliable design meets or exceeds all industry standards.



GENERAL

The conveying surface is comprised of individual crescent shaped pallets that are mechanically fastened to an underlying series of carriages. Any number of carriages can be linked together to provide an endless set of linkages, completing a continuous conveying loop.

Each carriage and pallet assembly is supported by two parallel, load-carrying wheel raceways. Populated with wheels every 4" (102mm), the result is a minimum of ten wheels supporting the pallet and its load at any point along the conveyor's length. The large number of support wheels provides superior load bearing capabilities, reduced friction, and smooth, quiet operation.

The bearing and guide wheels are constructed using a high density plastic tire molded onto a precision, sealed-for-life ball bearing.

PALLETS

Each pallet contains a structural steel core that is accurately molded and suspended in black polyurethane, resulting in a consistent skin depth of 0.075" (2mm) that is finished flat and true.

The quality controlled pallets meet and exceed the dynamic and static loads specified for pallet loop conveyors, supporting a dead weight of 250 pounds (113.4 kg) and a live load of 70 pounds per foot (341.7 kg/m), while experiencing no undue deflection or damage.

The overall pallet design results in superior strength and provides the wear and abrasion resistance to withstand both known and anticipated wear and tear in modern airport terminals.

Pallets are typically manufactured with a ¼" (6mm) steel core with an overall nominal thickness, of ⅜" (10mm), after the moulding process. A 5/16" (8mm) steel core is also available.

CARRIAGES

Carriages are fabricated from mild steel, machined to the designed 19½” (495mm) pitch-length, then fitted with a self-aligning joint. A pair of drive-lugs, located on the underside and offset to one side, positively engages the drive chain. An electro-galvanized coating is applied to the finished carriage for lasting protection.

Each carriage is fashioned with a center guide wheel assembly which leads each pallet / carriage assembly along and around the pre-formed track way.

FRAMEWORK

The pallet loop framework, assembled in 10’-0” (3048mm) long straight and 90° curve modules, is manufactured from formed and structural steel sections. The center guide rails and bed rails form a continuous, fully supported frame structure. The formed unit is mounted above the floor, and supported and levelled on robust screw adjustable legs.

CONVEYOR TRIM / FINISHING

Pallet loops utilized for *baggage claim* functions are finished with 12 gauge stainless steel (type 304, # 4 brush finish) in public areas, and in areas unseen by the public, 12 gauge galvanized mild steel is used.

Pallet loops utilized for *baggage make-up*, are finished in galvanized mild steel.

An optional guard rail provides protection from baggage carts and tugs potentially causing undue damage to the device. These can be placed at strategic locations or can be fully encompassing.

Typically, baggage is prevented from spilling into the center of the pallet loop by providing a formed, 7¼” (184mm) tall, up-stand trim panel, usually forming part of an optional center infill.

CENTER INFILL

Pallet loops, intended for baggage claim functions, typically require the open center area to be enclosed and finished. This is accomplished by installing fire-rated, plywood decking material level with the top of the inner up-stand panelling, supported by a metal framework, and finished with decorative covering.

When a drive unit is installed in a public area, an access hatch is required over the motor / gearbox unit to allow for regular maintenance.

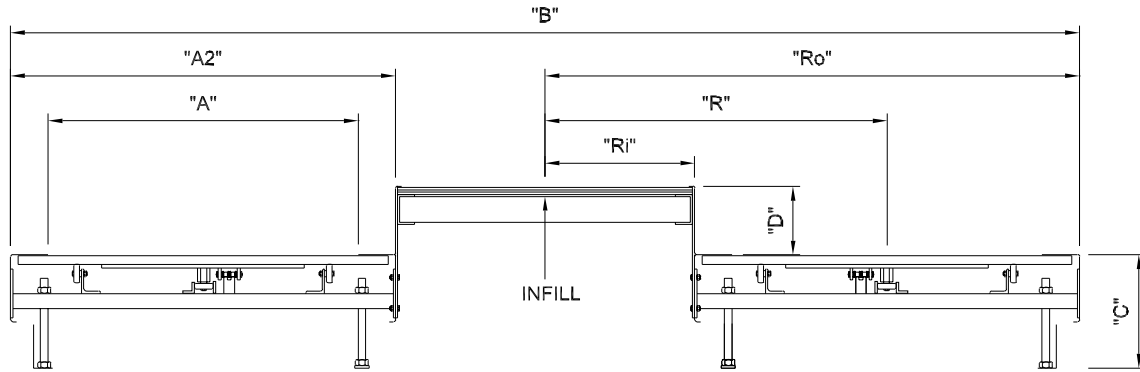
DRIVE

The pallet loop drive module incorporates the proven caterpillar drive principal, where an endless chain meshes with and drives against lugs affixed to the underside of the carriages. No less than two carriages are positively engaged at any time, resulting in a direct mechanical link between the gear motor and the conveying surface.

Powered by a direct drive motor / gearbox, assembly selected for reliability, low noise characteristics and ease of maintenance, the unit is complimented by a variable frequency drive (VFD). This combination provides the speed reduction required and an electronic soft start / stop function, allowing for smooth acceleration and deceleration, with minimal shock loading.

As an added benefit, the unit can be adjusted down to 1-2 fpm (0.005-0.010 mps) for inspection and maintenance.

The gear motor and wall mounted control cabinet are *typically* located on the non-public side of operations to accommodate regular access and maintenance. Other drive methods are available, but this is the proven and preferred method.



PALLET LOOP CONVEYOR SPECIFICATIONS	
Description	G&S Standards
Dimensions	
Exposed Moving Width ("A")	32 11/16" (830mm)
Effective Conveying Width ("A2")	40 9/16" (1030mm)
Overall Width ("B")	9'-4 5/8" (2861mm) minimum
Floor to Pallet Height ("C")	12" (305mm) minimum
Upstand Height ("D")	7 1/4" (184mm)
Centreline Radius ("R")	36" (914mm)
Inner Radius ("Ri")	15 3/4" (400mm)
Outer Radius ("Ro")	56 1/4" (1429mm)
Standard Module Length	9'-10 1/8" (3000mm)
Specifications	
Speed	90 ft/min (27.43 m/min)
Pallet Pitch	19 1/2" (495mm)
Pallet Core Material	1/4" (6mm) or 5/16" (8mm) Structural Steel
Pallet Outer Material	Black Polyurethane

Materials & Finish		
Application	Public View	Non-Public View
Trim / Finish	12 ga Stainless Steel, Type 304, #4 Brush	12 ga Mild Steel, Galvanized
Toe Kick	6" (152mm) Black Cove Base on 12 ga Mild Steel	12 ga Galvanized Mild Steel

Drive Options				
Application	Standard		Optional	
	Make	Model	Make	Model
90 Deg. Reducer	SEW Eurodrive	SA - Hollow Shaft ST - TorqLOC	Morse	
			Dodge	Ti-Gear
Belt Drive			Baldor (motor)	
			Reliance (motor)	
			Dodge (speed reducer)	TXT