DAIFUKU LOGAN



Always an Edge Ahead

Vertical

Model 595MS

Short Vertical Sortation Unit

The Model 595MS Vertical Sortation Unit is made up of two moving and one fixed belt conveyors mounted within a support frame. The conveyors can pitch up and down to change the conveyor route through the VSU. This enables it to split the baggage flow from one conveyor line into two separate conveyor lines. The switching action is precise and fast enough to reliably remove a single bag from a continuous stream of bags.

It can also be used in reverse to combine the baggage flow from two separate conveyor lines into one.

The Vertical Sortation Unit has been designed to handle a wide range of products and will operate without disrupting the baggage flow. As the VSU does not exert any external force on the bag as it is being diverted the risk of damage to that bag is minimised.

Two different variants of VSU are available:

Model 595MS (short) where bag 'tracking' is only possible through the upper conveyor route. And.

Model 595ML (long) where the shallow conveyor angles throughout the VSU allow bags to be tracked on both the upper and lower conveyor routes. (See separate data sheet)

Typical applications:

- Separating an individual bag from a stream of bags.
- Dividing a stream of bags from one conveyor line onto two separate conveyor lines.
- · Merging two conveyor lines into one.

Working examples include:

- Diverting a single 'suspect' bag within a screening system.
- Sorting bags to different make-up carousels.
- Load sharing bags between different x-ray screening machines.
- · Re-routing the flow of bags in a fall back scenario.

Features Application Benefits

Conveyor Drives

Inverter Controlled Switching Drive

High Sort Rate

Integral Jam Detection

Sorting Drive Removal 'slide

Integral Maintenance Beam Struts

Standard Conveyor Width

2 Pulley Conveyor Configuration

Short Faced End Pulleys

Lagged Drive Pulleys **Crowned Tail Pulleys**

External Bearings on Pulleys

High Bearing Life

Head and Tail Snubber Roller

Fire Retardant Belting to ISO 340

Quiet Running

Integral sliding door guards. (Electrically interlocked)

Offered with two controls options

Shaft Mounted Gear Box on Drive reliability and ease of maintenance

> Gives smooth operation and longevity of mechanical components

Unit capable of singulating upto 2700 sorts per hour

Anti-jam PEC fitted to prevent damage to bags

The motor mounting plate doubles as a slide plate to aid drive motor removal

Allows conveyors to be securely during supported maintenance

1000mm wide belt, 1025mm between sidewalls

Reduces conveyor inertia, improves motor/gearbox life

Eliminates trap points

Minimises belt tensions

Assists with belt tracking

Ease of maintenance

Unit designed to 50,000 hour bearing life

Eliminates tracking problems on short conveyors

Reduces the spread of fire.

Noise level below 70dBa

Reduces overall VSU footprint and provides a safe clean line appearance.

1) Includes all sensors. C/W with remote I/O interface on an industrial Field Bus mounted in a control panel.

2) C/W all sensors wired to a local junction box for control by external controls system.







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Design Features:

Unit Length
Belt Speeds
Conveyor Drive Size
Main Actuation Drive Size
Incline / Decline
Incline / Decline
Sidewall Height
Guarding

Belt Joint

Comments:

Nom. 2.4m long. 0.5, 0.6, 0.8, 1.0 or 1.2 m/s 0.75 kw 1.5kw 7° (Upper Conveyor Line) 18° (Lower Conveyor Line) 200 mm Main access via Integral Sliding mesh doors. Electrically interlocked

Clipper type or vulcanised endless

Additional Design Options:

- Alternative Geared Motor Manufacturer.
- · Alternative Belt Manufacturer.

Controls Options:

 Supplied with all sensors. C/W with remote I/O interface on an industrial Field Bus mounted in a control panel.

OR

 Supplied with all sensors and a junction box instead of an I/O control panel, so device can be operated by external controls system.

General Description



Vertical Sortation Unit – Conveyor Bed Sections

The fabrication is press formed in 2.5mm thick painted mild steel or galvanised and comprises a formed bed plate bolted between two flanged sideframes. The bed plate is reinforced by stiffeners across the width of the conveyor.

Both the head and tail pulleys are of a fully welded construction and are machine turned for concentricity. All pulleys are mounted between external bearings which can be suitably adjusted to align the pulleys and provide easy access for routine maintenance. Snubber Rollers with less than 450 of belt wrap are fitted with internal "sealed for life" bearings.

Typical pulley diameters are:

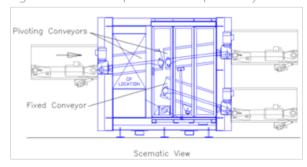
Head / Tail and Central Drive Pulley Snubber Roller 100mm O/D 76mm O/D 40mm Bearing Dia
30mm Internal Bearing

Drive is imparted to the head/tail pulleys via shaft mounted helical geared motors. The geared motors are supplied with integral brakes for rapid stop/start functionality.



Vertical Sortation Unit – Main Drive

The pivoting motion is imparted to the conveyors via "connecting rods and rocker arms". The connecting rods are positioned close to vertical and are fixed to the conveyor bed sections and rocker arms with "sealed for life" rose type bearings. The rocker arm shaft is supported at both ends by plummer block bearings and is connected to the main drive motor via a crank arm which is fixed to the helical bevel geared motor output shaft using a shrink disc adaptor. The movement and positioning of the pivoting conveyors is controlled by a cam attached to the geared motor output shaft and proximity censors.



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