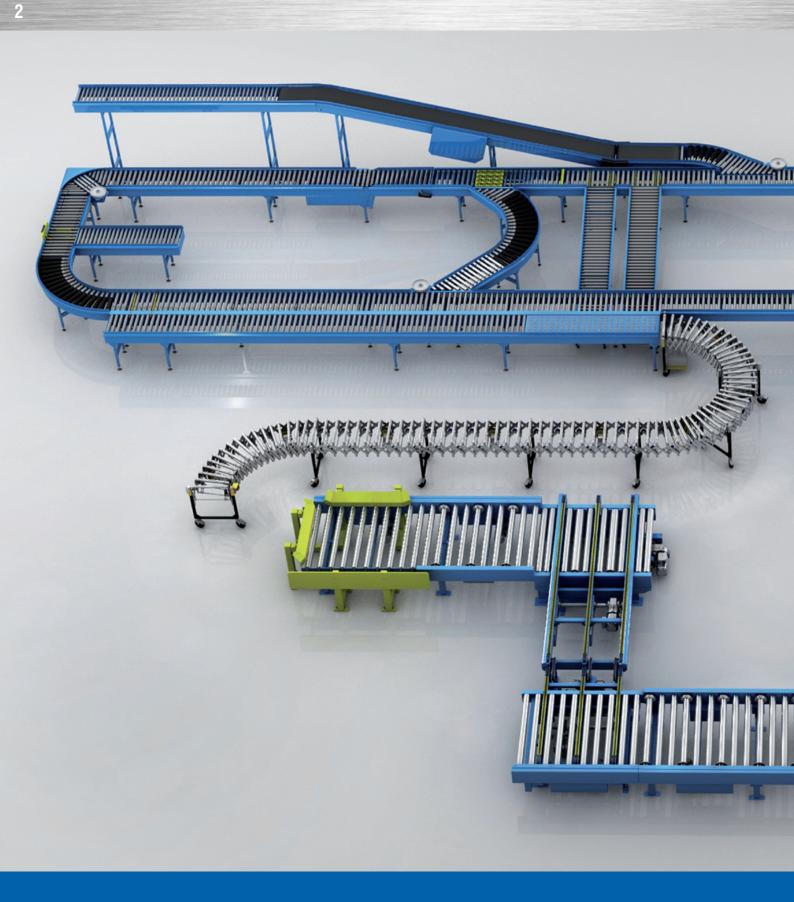


# 24V DC Powered Conveyor

**Transport & Zero Line Pressure** 

Low maintenance, Common Spares, Choice of Motor Powers, Highly Advanced Controls.



Quality	Performance	Reliability





#### Introduction

The uni-xu<sup>®</sup> range of conveyors has been integral to thousands of turnkey solutions for some of the most demanding and successful companies across Europe. It is renowned for the robustness of its design, with quality being reflected in a distinct durability in the field. Furthermore, the modularity of the uni-xu<sup>®</sup> design offers extreme flexibility and simplicity for totally integrated systems. It has been engineered and manufactured in Britain since 1963, resulting in five decades of engineering development and excellence, which today, makes it one of the best known trademarks in conveyor manufacture.

#### Facts

- UK's largest conveyor manufacturer. 150,000 sq. ft. manufacturing plant on a 7 acre site.
- In excess of a million rollers manufactured every year. Over 20 km of conveyor produced each year.
- Designed and manufactured in accordance with the current Machinery Directive and is CE Marked.
  - Over a third of conveyor orders shipped overseas.

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# Focus on UNI-XU<sup>®</sup> Zone*Logi*xPRO<sup>™</sup> - 24V DC Zero Line Pressure Conveyor

Conveyor Units UNI-XU<sup>®</sup> Zone*Logix*PRO<sup>™</sup> 24V DC conveyor system is the next leap forward in 24V zero line pressure conveying. Coming pre-wired from the factory, installation time on site is minimal. With remotely programmable control boards that each have 6 smart inputs/outputs, site cabling to other field devices is also drastically reduced, as is system commissioning time. With extensive control functionality, choices of motor power and a unique scalable controls platform this product services all applications from the most simple to the most complex.

Available with Round Belt or Poly V belt drive, the UNI-XU® 24V Powered Conveyor range offers almost silent running and the right drive solution for the application. The brushless and gearless 24V DC motors sit beneath the conveyor rollers and are thus protected from any impact loads.



Key Features	Benefits	
Pre-wired with 35 Amp capacity cables.	Number of locations where power is to be supplied is reduced to just 1 in every 20 zones. (based on the UD035 motor).	
Six 'Smart' Inputs/Outputs per card.	Integration of field devices with no extra wiring.	
Self-Learning Control Cards means quick and simple replacements.	Cards, if replaced, will automatically adopt the settings for that zone. No need to re-program.	
Just two motors cover all conveyor widths and the entire speed range.	Minimal spare parts to keep in stock.	
Two motors to choose from: The UD035 which gives 12-35W of output power. The UD060 which gives 12-60W of output power.	The ability to use the power you need and no more. Lowers energy use and power supply size requirements.	
Plug Connections.	Minimal cable preparations required on site. Robust and reliable connections. Wiring fault elimination. Installation cost savings. System reliability.	
Single point programming.	Plug in 'Branch Monitor' permits easy and intuitive system set up. It can remain on the system for monitoring or be an Ethernet IP gateway to a PLC; or simply be used to set up the conveyor and then be removed.	

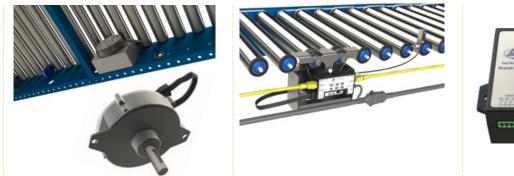




## **Advantages**

This system has many advantages over Motorised Roller Systems – mechanically, electrically and functionally.







#### **Mechanical Advantages:**

- From just two motors, this system offers a range of powers far exceeding that of most motorised roller systems. Making this suitable for almost all conveying requirements.
- No gears mean longer life, greater efficiency and almost silent running.
- Common motor external dimensions mean the two motors can be exchanged with ease.
- Motors are not specific to a track width or conveyor speed. Hence much reduced spares stock required.
- Round Belt and Poly V drive options for optimum drive selection.
- Motors sit within the conveyor width and beneath the rollers. They are hence protected from external damage and impact loads.

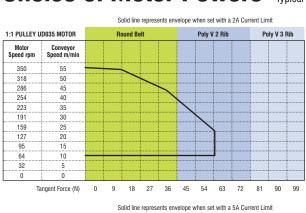
#### **Electrical Advantages:**

- Fully wired up at the factory to save time on installation.
- 35A capacity of power cables means fewer points to introduce power.
- Use of the 'Branch Monitor' allows single point programming meaning access to control cards isn't even necessary to set up, re-configure and control the conveyor.
- A truly scalable control platform. From the simplest system requiring just a few cards, to single point control and programming with a 'Branch Monitor' to a full PLC interface with an Ethernet IP connected 'Fieldbus Branch Monitor'. All using the same parts, so no obsolescence if upgrading/expanding a system.
- Six smart inputs and outputs per card allow ancillary devices to be connected.

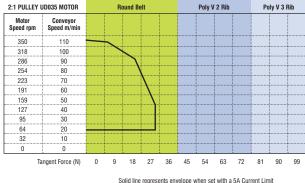
#### **Functional Advantages:**

- Remote single point programming for all zone functions and speeds.
- Upgradable firmware so future releases and new features can be added to existing conveyor systems.
- Up to 255 zones in a single 'branch'.
- Extensive set of features allow functions such as speed control, single/slug release, fast single release, long box detection, jam timers, missing load detection, half speed at rear of queue, transfer location control and dual speed zones.
- Capable of zero line pressure accumulation in both directions.

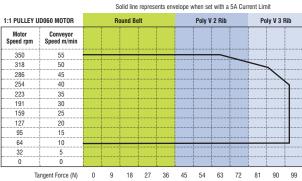


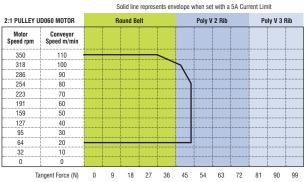


# Choice of Motor Powers Typical force and speed envelope for each is:



Solid line represents envelope when set with a 2A Current Limit

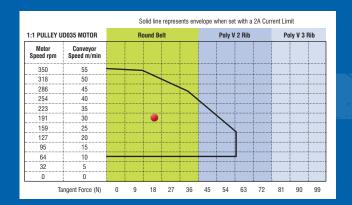




#### The UNI-XU® ZoneLogixPRO<sup>™</sup> system offer two motor power options.

Selection of which motor power best suits the application depends on the load being conveyed, the speed at which it is to be moved, how many rollers the motor has to drive in the 'zone' and the drive transmission between rollers.

Typically a 20kg good quality cardboard box travelling on roller conveyor at 30m/min in a zone of 10 rollers with Round Belt drive would require 18.7 N tangential force. This would be powered using a 1:1 ratio drive pulley and the UD035 Motor. This falling here on the above charts.







# <section-header>

#### **Roller Straights - Zero Line Pressure or Transport**

- Roller Diameter: 50mm.
- Roller Pitches: 60mm, 75mm, 100mm and 150mm.
- Drive Options: Round Belt Drive or Poly V Drive.
- Motor Options: 24V DC: 12-35W or 12-60W.
- Speed: Adjustable up to 110 m/min (1.84 m/sec).
- Frame Options: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 412mm, 462mm, 512mm, 612mm, 762mm, 912mm inside track width.
- Lengths Available: Up to and including 3 metres (in roller pitch increments).
- Photocells included in Zero Line Pressure variant.

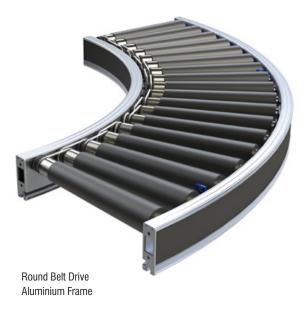
#### **Belt Over Roller - Zero Line Pressure**

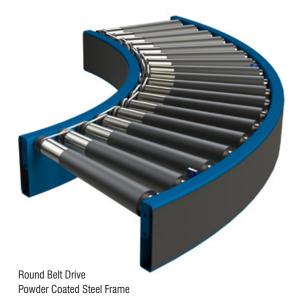
• Head/Tail Roller Diameter: 50mm.

Powder Coated Steel Frame

- Self-Tracking Longitudinally Grooved PVC topped Belts.
- Belt Width: Inside track width minus 24mm.
- Side skid decks eliminate any gaps at belts sides.
- Rollers beneath belts for low energy consumption.
- Motor Options: 24V DC: 12-60W.
- Speed: Up to 110 m/min (1.84 m/sec).
- Frame: Powder Coated Steel only.
- Widths Available: 412mm, 462mm, 512mm, 612mm, 762mm, 912mm inside track width.
- Lengths Available: Up to and including 3 metres (in roller pitch increments).
- Zone Lengths: 500mm, 600mm, 750mm, 1000mm and 1500mm.
- Photocells not included.







#### **Curves - Zero Line Pressure or Transport**

- Curve Radius: 859mm to inner track width face.
- Rollers: 50mm x 1.5mm steel zinc plated. Polymer taper sections.
- Roller Pitches: 60mm, 75mm.
- Drive: Round Belt Drive.
- Motor Options: 12-35W or 12-60W.
- Speed: Adjustable up to 110 m/min (1.84 m/sec).
- Frame Options: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 412mm, 462mm, 512mm, 612mm, 762mm, 912mm inside track width.
- Angles Available: 30°, 45°, 60° and 90°.
- Photocells included in Zero Line Pressure variant.







#### Lift Up Gates - Zero Line Pressure or Transport

- Assisted Lift: Two gas struts assist with lifting/lowering action.
- Rollers: 50mm x 1.5mm steel zinc plated.
- Roller Pitches: 60mm, 75mm.
- Drive Options: Round Belt or Poly V drive.
- Motor Options: 24V DC: 12-35W or 12-60W
- Speed: Adjustable up to 110 m/min (1.84 m/sec).
- Frame Options: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 412mm, 462mm, 512mm, 612mm, 762mm, 912mm inside track width.
- Dimensions: Gives a clear entry of 953mm when lifted.
- Photocells included in Zero Line Pressure variant.



# **Electric Ancillaries**

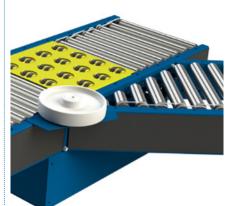
24V DC Transfers, Switch Sorters and Blade Stops to complete your system:

#### **Transfer**

#### **Switch Sorter**

#### **Vertical Blade Stop**





#### Transfer

- Belts: 16mm wide.
- Lift: 24V DC: 40W.
- Belt Drive: 24V DC: 12-60W.
- Belt Speed: Adjustable up to 110 m/min (1.84 m/sec).
- Transfer Rate: Up to 25 cases per minute = 1500 cases per hour.
- Frame Options: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 462mm, 512mm, 612mm, 762mm, 912mm inside track width (other widths available on request).
- Variants Available: 2, 3, and 4 strand.
- Ease of Maintenance: Clever design means a wing/belt change is possible in just minutes.

#### **Switch Sorter**

- Roller Motors: 24V DC: 12-35W or 12-60W.
- Sorter Wheel Motor: 0.37kW 400V A.C (inverter control advised).
- Wheel Actuation: 24V DC: 106W (max) 50W (nominal).
- Operation: Single and Bidirectional available.
- Sort Rate: Up to 50 cases per minute = 3000 cases per hour.
- Minimum Package Size: 200mm x 200mm.
- Supplied with electric actuator control box – ready to connect to and run.
- Speed: Up to 110 m/min (1.84 m/sec).
- Frame: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 462mm, 612mm, 762mm, 912mm inside track width.

#### **Vertical Blade Stop**

- Blade Drive: 106W (max) 50W (nominal) 24V DC.
- Operations: Up to 33 times per minute = 2000 cases per hour.
- To Suit Conveyor Frame: Powder Coated Steel or Anodised Aluminium.
- Widths Available: 412mm, 462mm, 512mm, 612mm, 762mm, 912mm inside track width.





#### Optimise Your Operating Efficiency with our Rollers and Parts Service Guarantee

We have also gained a reputation for supplying high quality competitively priced rollers and spares to all aspects of the material handling industry. Our products are used by blue-chip companies in the UK and throughout Europe.

#### Rollers

We are not only the largest conveyor manufacturer in the UK, but also the largest roller manufacturer, producing in excess of a million rollers every year.

We source and purchase only the best raw materials directly from the mills, and in vast quantities - in excess of 200km of 50mm diameter steel tubing every year. This means that not only does it allow us to constantly meet order commitments, but it also makes our pricing extremely competitive. Our range of rollers includes: Gravity Rollers, Plastic Rollers, Stainless Steel

Rollers, Grooved Rollers, Poly V Rollers, Tapered Rollers, Sprocketed Rollers, Belt Conveyor Rollers, as well as an extensive range of specialised rollers. We have a high degree of standardisation in our systems which means we can guarantee a particularly rapid and reliable spare parts service to meet the end-users' needs with speed and ease.

Furthermore, by buying replacement parts from the original equipment manufacturer you are helping to ensure that the equipment stays in prime condition, optimizing the operating efficiency of your system.

#### **Spares**

We also produce an extensive range of stock components, again competitively priced, for Powered Roller Conveyors, Motorised Roller Conveyors, Belt Under Roller Conveyors, Post & Parcel Conveyors, Belt Conveyors, Pallet Conveyors, Gravity Conveyors and Flexible Conveyors, with all plastic conveyor components injection moulded here on site.

Please give us the opportunity to quote all your roller and spares requirements. We can guarantee: -

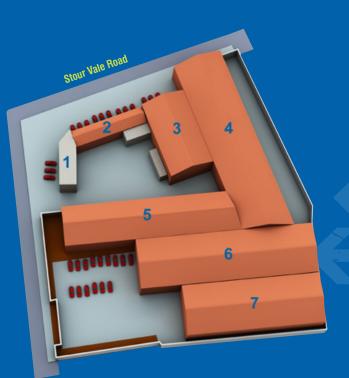
- Competitive prices.
- Fast turnaround.
- Extensive product range.
- Excellent customer service.



#### LYE SITE

- 1 Reception / Sales Office
- 2 Spray Area & Tool Room
- **3** Fabrication Area
- 4 Roller Department
- 5 Press Department / Component Manufacture
- 6 Flexible Conveyor Assembly
- 7 Bearing Assembly & Stores





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Sandy Lane



- Main Reception / Sales Office
- 2 Despatch
- 3 Ancillary Assembly
- 4 Press Brake
- Powder Coating Plant / Curing Oven
- 6 Production Welding
- 7 Bend Fabrication
- 8 Press / Laser Processing
- 9 General Assembly
- **10** Belt Conveyor Assembly
- 11 Stores

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- 12 Goods Inwards
- **13** Accounts / Purchasing Departments
- 14 Principal Roller Department
- 15 Tapered Roller Assembly
- **16** Pallet Conveyor & Special Product Assembly
- **17** Injection Moulding
- 18 Punch Press / Laser Department
- **19** Aluminium Conveyor Assembly
- 20 Product Development
- 21 Showroom / Demonstration Area
- 22 Storage Warehouse



#### conveyor solutions

