

# **TECHNICAL MANUAL**

# **ROLLER CONVEYORS**

**UNI-SERIES** 



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## 1. STRAIGHT TRACK

Frameworks manufactured from 178mm high x 32mm flanges x 2.5mm thick 'Z' section side frames. Full jig welded construction. Supplied fully assembled 300mm minimum to 3000mm maximum module lengths. Standard line speed 5 – 30 m.p.m. For higher speeds please consult with our sales department.

#### XU30 - LIGHT DUTY

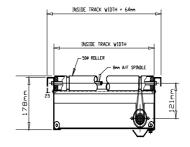
35mm dia. rollers, 4 Kg. load (3mm dia. belt), fitted at 37.5mm pitch. Available in track widths from 362mm up to 762mm. Suitable for lighter, smaller loads with a minimum length of 120mm.

#### XU60 - MEDIUM DUTY

50mm dia. rollers, 8 Kg. load (4mm dia. belt), fitted at 75mm, 100mm or 150mm pitch. Available in track widths from 362mm up to 1012mm.

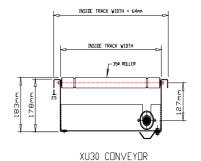
#### **XU90 – HEAVY DUTY**

50mm dia. rollers, 12 Kg. load (5mm dia. belt), fitted at 75mm, 100mm or 150mm pitch. Available in track widths from 362mm up to 1012mm.

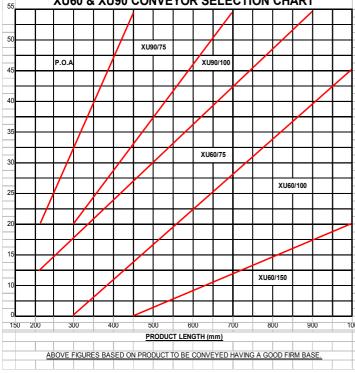


XU60/XU90 CONVEYOR





# **XU60 & XU90 CONVEYOR SELECTION CHART**



#### **EXAMPLES**

A box 400mm wide x 600mm long - weighing 20kg. XU60/100mm pitch would be selected.

A box 250mm wide x 260mm long - weighing 12kg. XU60/75mm pitch would be selected.

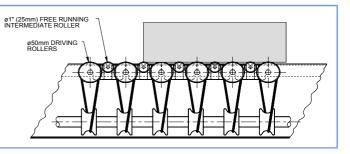
A box 400mm wide x 400mm long - weighing 35kg. XU90/75mm pitch would be selected.

### **IMPORTANT NOTE**

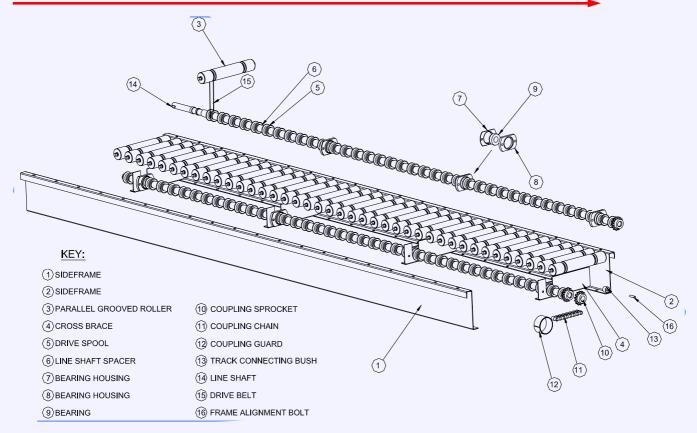
Should there be any doubt regarding the base of the product to be conveyed, always quote for budget purposes XU60/90 at 75mm pitch.

Alternatively, product trials can be arranged at our factory. Please contact our sales department to discuss.

Should smaller products be introduced into the XU60/90 system, 1" diameter intermediate gravity rollers can be fitted to straight sections, bends and merges up to a maximum 762mm frame width.



# STRAIGHT TRACK CONTINUED...



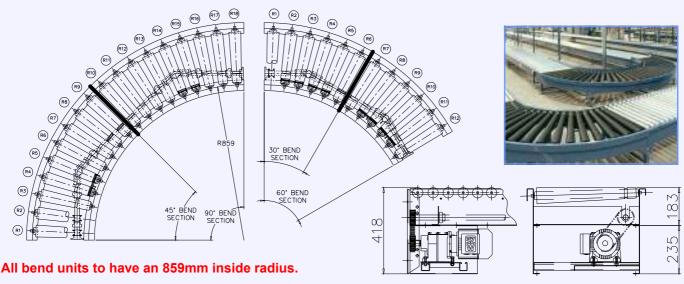
## 2. BENDS

All bends have true taper plastic sleeved rollers to ensure correct load orientation. A steel groove insert is located at the drive belt position. Heavy duty belts are used throughout. Bend units can be supplied fitted with geared motor units, (60° and 90° only).

 $90^{\circ}$  bends available in track widths 362mm - 812mm or 24 volt motorised roller for independent drive.



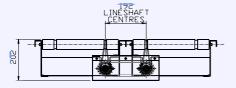




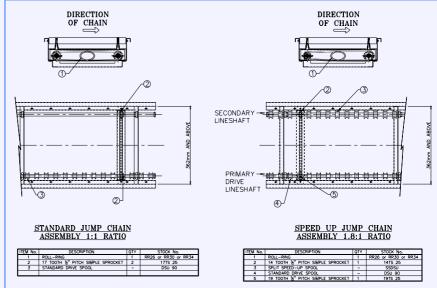
Please see 'Questions to be Asked at Enquiry Stage' for bend width calculation to suit the product to be conveyed.

## 3. JUMP CHAIN ASSEMBLIES

A jump chain assembly comprises of two sprockets and chain which is used for transferring the drive between lineshafts when they are positioned on opposite sides of the conveyor.



ADJACENT JUMP CHAIN ASSEMBLY



## 4. GUARD RAIL & UNDERGUARDING

#### **GUARD RAIL**

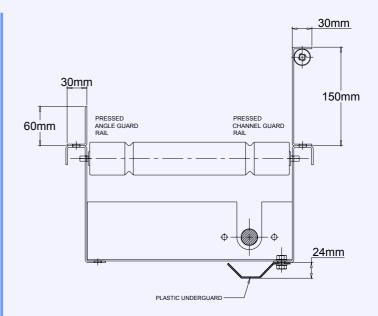
**Two types:** 60mm high pressed steel angle. 150mm high pressed channel.

Supplied in 3.0 metre lengths as standard. Should odd lengths be supplied, additional holes may need to be drilled for on site fixing.









### **UNDERGUARDING**

Lineshaft underguarding is supplied as an optional extra, this is formed from a grey plastic material, which is positioned locally to the drive shaft but does not extend fully to cover the complete underside of the conveyor.

Belt conveyors and switch units are supplied fully undersheeted as standard.

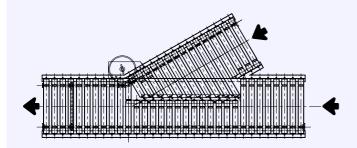
Complete, powder coated undersheeting is available if required. Please contact our Sales Team for details.

# 5. SWITCH & MERGE UNIT

### **SWITCH UNIT**

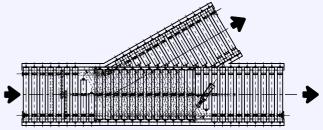
- Pneumatically or manually operated with maximum cycle of 15 operations per minute.
- 50mm stroke x 40mm bore double acting cylinder, 1/4" BSP Port size.
- Available in track widths from 362mm up to 762mm.
- Not available for XU30 conveyor.
- Not to be used with XU90 conveyor without prior consultation with our sales department.
- Maximum suitable product length is 225mm.
- Total air consumption for double stroke = 0.49 litres.





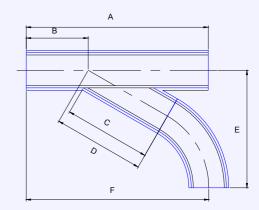
INSIDE TRACK WIDTH mm	Α	В	С	D	E	F	G	н
362	1875	803	845	893	1348	2096	586	2096
412	1875	810	845	900	1373	2122	593	2122
462	2400	817	1145	1207	1548	2407	750	2407
512	2400	824	1145	1214	1573	2433	756	2433
562	2400	830	1145	1220	1598	2457	763	2457
612	2400	837	1445	1527	1773	2742	920	2742
762	2400	857	1445	1547	1848	2817	940	2817

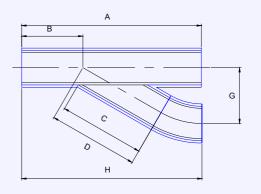




## **MERGE UNIT**

- Maximum throughput of 25 packs per minute based on conveyor speed of 50 m.p.m.
- Available in track widths from 362mm up to 762mm.
- Can be used in conjunction with XU30 conveyor, but intermediate rollers must be fitted.
- Accumulation not advisable on this unit.



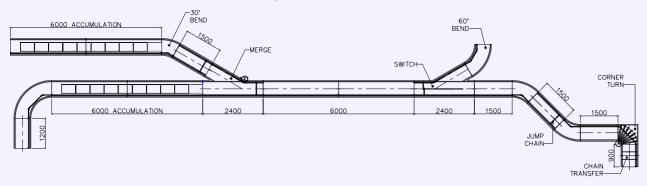


## 6. DRIVE UNIT

The system should be designed so that accumulation occurs on straight sections only. For areas of accumulation, the accumulation length should be multiplied by a factor of 2 when calculating the number of drive units required.

All drive units to be S.E.W. Eurodrive, timing belt driven as standard, where possible. Standard conveyor speeds of 12, 15, 20, 25 and 30 m.p.m. Speeds other than this will be subject to an additional cost.





#### Example based on conveyor speed of 10 m.p.m. and 75mm roller pitch.

LENGTH OF CONVEYOR NOT ACCUMULATING (metres)

STRAIGHT TRACK	14.10
1 OFF 90 BEND	4.90
1 OFF 60 BEND	3.70
2 OFF 45 BENDS	4.80
1 OFF 30 BEND	1.90
1 OFF 30 MERGE	7.60
1 OFF 30 SWITCH	7.60
1 OFF CORNER TURN	3.70
1 OFF TWIN CHAIN TRANSFER	1.00

#### LENGTH OF CONVEYOR TRACK ACCUMULATING

STRAIGHT TRACK 12 metres x 2 (Accumulation Factor) 24.00

TOTAL = 73.30

## NUMBER OF DRIVES REQUIRED

73.30 metres

= 2.036 Therefore 3 drives required @ 0.37kw

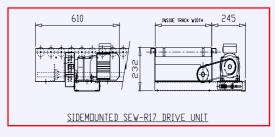
36.00 metres

ROLLER CENTRES ON	STRAIGHT TRACK LENGTH ALLOWANCE IN METRES F							
STRAIGHT TRACK	90° Bend	60° Bend	45° Bend	30° Bend	Switch & Merge	Twin Chain Transfer	Corner Turn	
37.5 & 75mm	4.90	3.70	2.40	1.90	7.60	1.00	3.70	
100mm	6.10	4.70	3.20	2.40	10.20	1.25	4.70	
150mm	9.20	7.00	4.80	3.50	15.20	2.00	7.00	

ROLLER CENTRES ON	STRAIGHT TRACK LENGTH ALLOWANCE IN METRES FOR:								
STRAIGHT TRACK	90° Bend	60° Bend	45° Bend	30° Bend	Switch & Merge	Twin Chain Transfer	Corner Turn		
37.5 & 75mm	4.90	3.70	2.40	1.90	7.60	1.00	3.70		
100mm	6.10	4.70	3.20	2.40	10.20	1.25	4.70		
150mm	9.20	7.00	4.80	3.50	15.20	2.00	7.00		

TOTAL LENGTH OF STRAIGHT TRACK DRIVEN FROM 1 DRIVE UNIT TO BE APPROX. EQUAL EITHER SIDE OF DRIVE UNIT							
ROLLER CENTRES ON	C	CONVEYOR SPEED					
STRAIGHT TRACK	10 m.p.m.	30 m.p.m.					
37.5 & 75mm	36m	18m	12m				
100mm	48m	24m	16m				
150mm	72m	36m	24m				

# $\alpha$ DRAWN SEW-R17 DRIVE UNIT SHOWN 610



## TABLE 1

Gives metre allowance to be added into total conveyor length.

#### **TABLE 2**

Maximum length of conveyor in metres that can be driven by 0.37 kW. Geared Motor for XU30 and XU60.

For XU90 use figures as shown but allow for 0.75 kW. Geared Motor units.

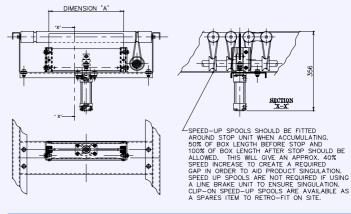
# 7. VERTICAL BLADE STOP

# Forces (Kg.) acting on vertical blade stop under various conditions as listed below.

LOAD DETAILS	LENGTH	WEIGHT (Kg)
Corrugated	300mm	15
Plastic Tote	470mm	15
Steel Tote	450mm	15
Wooden Platten	500mm	15

TRACK REFERENCE XU60/462/75	SPEED (METRES PER MINUTE)					
LOAD TYPE	10	20	30	40		
1. Corrugated One product Five products Ten products	1	2	2	2		
	7	7.5	8	9.5		
	11	16	19.5	20		
2. Plastic Tote One product Five products Ten products	1.5	2.5	3	3		
	12	12	14	15		
	26	26	28	29		
3. Steel Tote One product Five products Ten products	2	2	2	2		
	9	9	9	9		
	14	18	20	20		
4. Wooden Platten One product Five products Ten products	2	2	2	2		
	12	12	12	12		
	24	24	28	28		

N.B. We would advise that a Line Brake Unit be fitted when accumulating against a stop if forces (Kg.) exceed 6Kg.



I.T.W.	312	362	412	462	512	562	612	662	712	762
Dim 'A'	118	118	168	218	268	318	368	418	468	518

Total air consumption for double stroke = 0.70 litres.

To reduce end pressure against the stop, it may be necessary to disconnect up to 50% of the drive belts from the lineshaft in areas of accumulation.

For loads having tapered sides, an overhead guide may be required above the accumulation zone to prevent loads from rising ('jack knifing'). Alternatively a line brake unit can be fitted to prevent this and reduce end pressure against the stop.



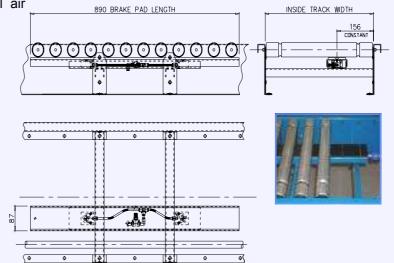
## 8. LINE BRAKE

The tables shown below offer guidance on the number of products which can be stopped and arrested by a line brake, based on gradual accumulation of loads. Total air

consumption for each operation = 0.05 litres.

concumpation of outperfacion of the field						
LOAD DETAILS	LENGTH	WEIGHT (Kg)				
Corrugated	300mm	15				
Plastic Tote	470mm	15				
Steel Tote	450mm	15				
Wooden Platten	500mm	15				

TRACK REF XU60/46		SPEED (METRES PER MINUTE)				
LOAD T	YPE	10	20	30	40	
<ol> <li>Corrugat</li> <li>Plastic T</li> <li>Steel To</li> <li>Wooden</li> </ol>	ote te	16 5 8 5	12 5 7 5	12 5 7 4	12 5 5 4	



## 9. ROTATING BLADE STOP

This stop unit has a full width blade and is designed to fit into any straight track position. The standard unit is air operated by a single-acting spring return cylinder 25mm bore x 80mm stroke, which can be fitted inside or outside the track frame.

Two off cylinders are required for widths 612mm and above and for all widths of XU90 conveyor.





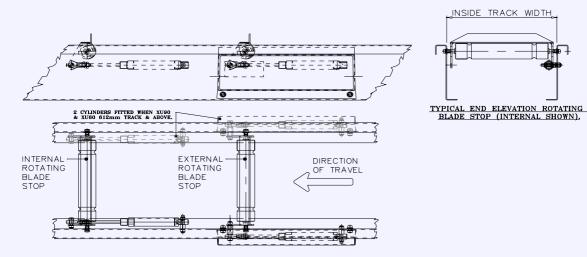
This type of stop is particularly useful where conveyor height is to be of a minimum and in two tier systems.

Total air consumption for each operation (one cylinder) = 0.24 litres.

## N.B. Maximum product weight 15Kg.

Not available for XU30 conveyor.

To reduce end pressure against the stop, it may be necessary to disconnect up to 50% of the drive belts from the lineshaft in areas of accumulation.

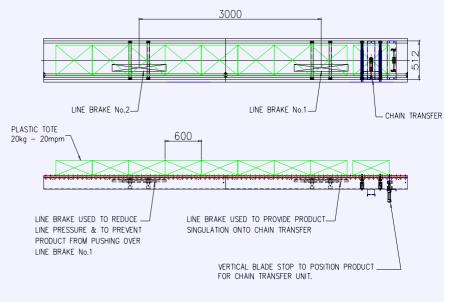


## 10. STOP & LINE BRAKE APPLICATIONS

#### **FEATURES INCLUDE:**

- Fast operation, capable of picking up minimum spaces between cartons.
- Small bore/stroke cylinder ensures low usage of compressed air.
- Standardised components ensure quality stops, at low cost, quickly manufactured to fit any track width.
- Easily repositioned on site if system requirements change.

Spring return on rotating blade stop cylinder ensures safety features.



CHAIN CENTRES

## 11. CHAIN TRANSFER

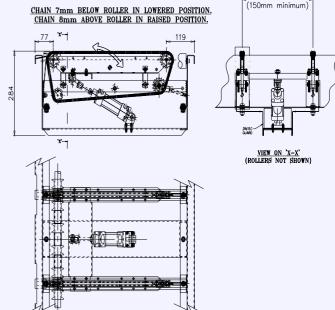


Maximum Cycle time 15 operations per minute.

Maximum lift twin chain 50Kgs. Maximum lift triple chain 100Kgs.

Vertical lift chain transfer up to 512mm. Maximum cycle time 20 operations per minute. Maximum lift

50kgs.



Chain transfer units can be fitted to straight sections of track on minimum centres of 150mm. The transfer chains are driven from sprockets on the main drive line shaft. The assembly is actuated to the transfer position by a double acting 40mm bore x 35mm stroke pneumatic cylinder.

One off cylinder is required for twin chain transfers. Two off cylinders are required for triple chain transfers.

## 12. PUSHER UNIT

Maximum cycle 25 per minute up to 612mm. 20 per minute 612mm -1012mm.

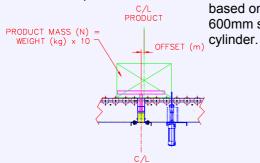
Maximum weight pushing on centre 25Kgs., 32mm bore cylinder.

Off centre loads (MV) must be calculated using the following formula.

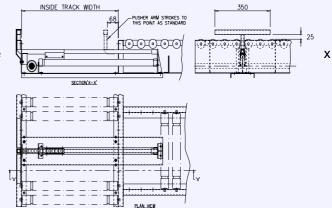
 $Mv = mass(N) x offset(METRES) x 0.25 \le 5.$ 

Please contact Conveyor Units Technical Department if result is greater than 5, as our standard pusher unit would be unsuitable. As an alternative, we may be able to offer a guided cylinder, dependant upon the application.

Total air consumption for double stroke = 7.76 litres,



based on 32mm bore 600mm stroke cylinder.



## 13. SWITCH SORTER



45° divert unit capable of switching up to 50 packs per minute.

Please contact our Sales Department at enquiry stage, to further discuss your requirements.



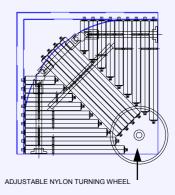
## 14. CORNER TURN UNIT

Two types are available, one for use with the XU30 conveyor and one for use with the XU60/90 conveyor. Both are used where space is restricted. However, they are only a substitute for bends and have limitations with respect to maintaining correct product orientation. This is determined by the product length to width dimension ratio.

Two 90° turns should not be directly coupled to form a 180°. It is recommended that a straight length of conveyor is fitted between two 90° corner turns and the length of this conveyor should be equal to, or greater than the largest product length.



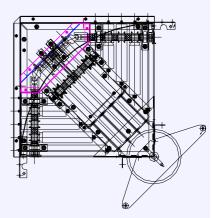
The XU30 design is manufactured as a 612mm square unit which is suitable for use with 362, 412 and 462mm inside track widths.





The XU60 design is manufactured in two different sizes:

- 612mm square for 362, 412 and 462mm inside track widths.
- 912mm square for 512, 562, 612 and 762mm inside track widths.



N.B. If possible it is better to use a bend to ensure product orientation.

Accumulation is not advisable on this unit.

IMPORTANT: The units are unsuitable when there are variable product sizes being conveyed through them, since the turning of the product is reliant on the positioning of the nylon turning wheel to suit a particular product size.

## 15. LIFT UP GATE



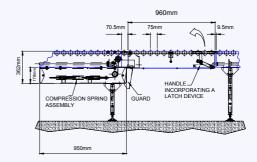
Maximum standard width 762mm. For wider units please consult with Conveyor Units Sales Department.

The standard length of all lift-up gate sections is 960mm, this provides 900mm clear pedestrian access.

The lift-up section comprises of a standard straight section of conveyor fitted with plastic rollers, driven by a 24 volt motorised roller.

The lifting process is spring assisted from the preceding straight track. This length must have a minimum length of 950mm to house the spring assistance assembly.





N.B. The lift-up gate section is not recommended for continuous use, but for positioning at Fire Exits and for occasional access.

Not available for XU30 conveyors.

Fixed section of track must be 75mm roller pitch.

## 16. POSITIONING UNIT & PACK TURN UNIT

#### **PACK POSITIONING UNIT**

Supplied as left or right hand, the positioning unit is fitted with angled driven rollers set at 60mm pitch, which guide the product to the left or right hand side of the conveyor track to give a fixed product position for infeed into various

1200



types of machinery and within the scanning distance of bar code readers and labelling machines etc.

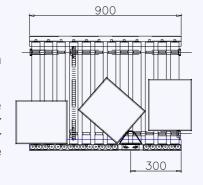
The unit is manufactured in two standard widths of: 462mm for inside straight track widths of 362 up to 462mm and 612mm for inside straight track widths of 512 up to 612mm. Subject to product trials.

### **PACK TURN UNIT**

Use for XU60 conveyor only.

The unit includes a plastic wheel type guide on one side only.

We would recommend that product trials are carried out at our works. This unit is suitable for product weights up to a maximum 8 Kgs. For weights greater than this, we would advise the use of a belt conveyor.





## 17. ZERO PRESSURE ACCUMULATION

Zero pressure accumulation can be achieved either pneumatically or electrically. If pneumatic accumulation is required, please consult Conveyor Units Sales Department for further details.

Electrical accumulation is achieved using 24V D.C. motorised rollers. These systems can be supplied with a proven electronic control package, please contact Conveyor Units Sales Department for details.





roller speed, minute track



n



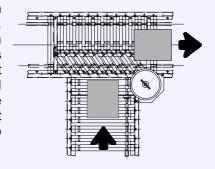
Motorised maximum metres per straight bends.



## 18. OTHER ANCILLARY ITEMS AVAILABLE

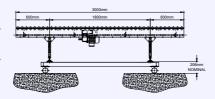
#### 90° JUNCTIONS

Manufactured for use with XU60 conveyors only. Consideration should be given to track widths when using this Junction, taking into account that the product has to cord through the unit. Please contact our Sales Department to discuss this unit prior to placing an order.



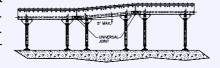
## **MOBILE UNIT**

Supplied complete with lockable / swivel castors. For conveyor lengths greater than 3.0 metres, please contact our Sales Department.



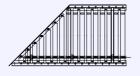
## **INCLINE/DECLINE SECTION**

Always use XU90 conveyor at 75mm pitch for incline section. Allow for the fitting of 1" dia. Intermediate rollers at 'nosein' point.



## **MITRE SECTIONS**

Available to suit 30° and 45° sections. Can be fitted with S.E.W. motor unit or 24 volt motorised roller.



### **LIFT AND TURN**

This product orientation unit precisely orientates a variety of tote containers to enable



identification by bar code scanner. This orientates the tote and places the bar code to one pre-determined position prior to turning. Throughput rates can vary up to 900 totes per hour. Minimum inside track width 612mm. Contact our Sales Department for more information.

#### 90° PRODUCT TURNOVER UNIT

Inverts products through 90° so that a larger face can be utilised for ease of transportation throughout a conveyor system.

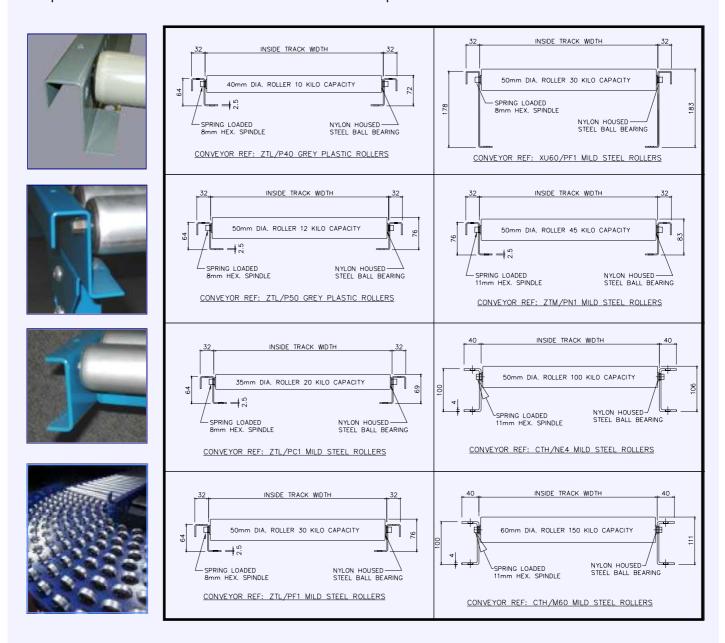


The unit comprises a split roller bed to facilitate the fitting of arms which rotate inbetween the rollers. Arm rotation is provided by a 0.25 kW. foot mounted helical worm geared motor, having an electrically operated brake unit, which includes a fast acting internally wired relay to reduce the brake reaction time and provide an accurate stopping position. The brake is also fitted with a manual release to override the power supply in case of a 'jam-up' condition. Minimum inside track width of 612mm.

Contact our Sales Department for more information.

## 19. GRAVITY ROLLER CONVEYORS

All frameworks manufactured with full jig welded construction, supplied fully assembled. Full range of ancillary items available include ball transfer tables, bends, lift-up gate, mobile units, turn tables, support stands, end stops, guide rails and skate wheel bends. Rollers supplied either grey rigid PVC, mild steel self colour or bright zinc plated as standard. Also available in stainless steel if required.



## **GRAVITY CONVEYOR BRAKING DEVICE**

This device is as standard, incorporated into XU30 and XU60 conveyor frameworks when used for a gravity application. It gives control of product descent by means of a rubber covered full brake pad which contacts the underside of the carrying rollers. Operation is by means of a pneumatic cylinder which can be operated to 'pulse' products down the decline and avoid jam-up's and damage.





## 21. XU1500 PALLET HANDLING CONVEYOR

Sideframes are manufactured from 4mm thick mild steel angle to form a box section 70mm wide x 130mm deep, which incorporates integral sideguide.

Drive to the rollers is obtained by inter-connecting roller sprockets with precision 1/2" pitch chains. The sprockets and chains are situated inside the box section structure, which forms the required safety guarding. Each track length is supplied complete with connecting link to continue the drive at joint position and all required fixing points.

## **SPECIFICATION:**

- Three standard widths to suit 800mm, 1000mm and 1200mm pallets.
- Loads up to 1500kgs. per metre.
- Standard module lengths of 1587.5mm.
- Minimum top of roller height available is 110mm, (straight track only).
- 10 m.p.m. standard linespeed utilising SEW Eurodrive geared motors.

0.25 kW. motor for individual zone accumulation.

0.55 kW. motor for transportation to drive up to four zones.

Please contact our sales team to discuss your requirements.



#### **ROLLER SPECIFICATION**

- 63.5mm dia. x 3.2mm wall thickness.
- Fitted with 21 tooth, 1/2" pitch sprockets.
- Sealed for life precision bearings.
- Bright zinc plated finish as standard.
- Fitted with guide discs.



### **OTHER ANCILLARY ITEMS TO SUIT:**

#### **MOTORISED TURNTABLE UNIT**

1953mm long straight section, minimum 350mm top of roller height.



## **CHAIN TRANSFER UNIT**

1587.5mm long straight section, minimum 350mm top of roller height.





## 22. SUPPORT STANDS

To suit XU60/90 and 'Z' section gravity conveyors.

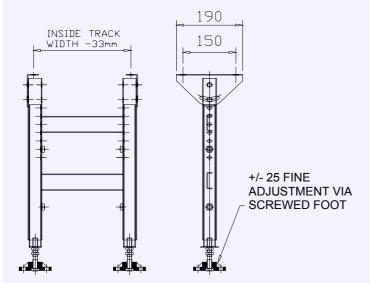
There are two standard types of standard support stands, these are as follows:

#### **INFINITE HEIGHT ADJUSTABLE TYPE**

Having rectangular hollow section telescopic legs with screwed foot to give infinite adjustment between the minimum and maximum support height ranges shown below:

Top of stand heights: 310 to 420mm.

565 to 880mm. 1040 to 1330mm. 420 to 565mm. 800 to 1080mm.

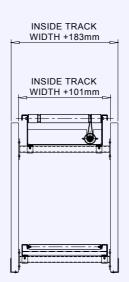


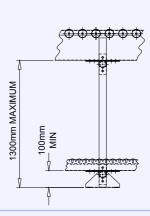


#### **TWO TIER TYPE**

The upright legs are of 'UNI-STRUT' type section, which gives the facility for infinite height and adjustment throughout the length of the leg. The foot plate is fixed and has no screw adjustment. The crossbrace is manufactured from circular hollow section and fitted with a special clamp plate to provide a change of angle if necessary.

- Support stands should be fitted at each joint for XU30 and XU60 conveyor and at mid-point of 90° bends.
- For XU90, ZTL and ZTM gravity conveyors, supports should be fitted at maximum 1.5 metre centres.
  - For CTH gravity conveyor, supports should be fitted with a heavy duty support (not shown).







For high level support stands or multi-tier stands, please contact our Sales Office.

Heavier duty high level supports are available as a made to order item.

Please contact our sales team to discuss your requirements.

## **MONK Conveyors**

# QUESTIONS TO BE ASKED AT ENQUIRY STAGE & HOW TO QUOTE A BUDGET SYSTEM

What is the largest product size to	be conveyed? L	W	H	Wt
What is the smallest product size	to be conveyed? L	W	H	Wt
What is the type of product?	Cardboard box	_ Plastic tote	Other	<del></del>
	If	other please co	ntact our Sales	Team for clarification.
What is the conveyor speed reque	ested or throughput requi	red per hour?		<del></del>
<ul> <li>The lineshaft system is norm.</li> <li>Should the customer request clarification.</li> <li>If the customer requests a line</li> </ul>	a throughput higher than th	nis, please conta	act our Sales D	epartment for
If the working conditions for the contact our sales team for				
Hot □/ Wet □/ Oily □/ Lov	w Temperature □/ Dusty	/ Chemicals	☐ / Cleaning	fluids □.
Working out the conveyor line spe	eed that will be required			
Take the longest product length	and the throughput/hour ÷ t	by 60 to give you	u the throughpu	ut/minute.
Example: Speed required = 600 x 21.66 (1		g product, at 13 0 = 13 m.p.m.	00 products/ho	ur.
13 m.p.m. is the speed you will r product gap in-between, you will move to the nearest standard of	need to quote the conveyo			
Selecting the track to be quoted				
Consideration should be given to	the following before quoting	ng a lineshaft sy	stem:	
<ul> <li>There should always be a mi</li> <li>Loads should have a firm base</li> <li>Lineshaft conveyor should not</li> <li>Operating temperatures above</li> <li>Elevation changes should be</li> <li>Special radius bends other the</li> </ul>	se and be of regular shape.  of the considered in oily or work  of 60° and below 0° Centigr  of restricted to a maximum 5°	et conditions. rade should be r	eferred back fo	or advice.

• Should there be any doubts regarding the conveyor to be selected, product trials can be arranged at our

The conveyor should not be exposed to abrasive or wet conditions.

factory at short notice.

Always quote a braked motor for incline/decline belt conveyors that may be stopped with product still on the

## What frame width should you quote if there are bends, merges and switches in the system?

I.F.W. =  $\sqrt{\text{(inside radius + box width)}^2 + (0.5 \text{ x box length)}^2 + 100.}$ 

Take the largest box. Example 350mm wide x 600mm long.

X = 859 (inside radius) + 350 (box width) = 1209 x 1209 = 1461681.

Y = 600 (box length) divided by  $2 = 300 \times 300 = 90000$ .

conveyor.

Square root of 1461681(x) + 90000(y) = 1246 - 859 (inside radius) + 100mm clearance = 487.

Therefore a minimum track width of 512mm will be required.



## Equipment and machines supplied by MONK

### **CONVEYORS**

**Flat Belt Conveyors** 

**Belt Bends & Transfers** 

**Knife Edge Conveyors** 

**Small Conveyors** 

**Indexing Conveyors** 

**Multi-lane Conveyors** 

**Roller Conveyors** 

**Modular Link Belt Conveyors** 

**Conveyor Systems** 

## HANDLING EQUIPMENT

**Manual Assembly Workstations** 

**End Of Line Auto-Stacking Machines** 

**Automatic Box Changers** 

**Pinch Belt Transfer Systems** 

**Pick & Place Transfers** 

**Handling Solutions** 

**Rotating Tables for End Of Line Packaging** 

**Packing Stations**