Lineshaft Roller Conveyor System

Lineshaft conveyors the effective solution for transporting unit loads.

For packages as small as 250mm in length.
Handles packages up to 30kg at speeds of up to 30m/min.

Conveyor Widths from 300mm to 800mm.
Left and right hand drive shaft systems.
Less power to perform efficiently.
Fully CE compliant.

Transport Straight
These modules are supplied as a driving straight or slave straight. With the slave straight being the most commonly used of all the modules, when using a Lineshaft Conveyor System.

- Slave and driving straights available
- Modules up to 3 metres in length
- 83mm,125mm and 167mm roller pitch

Transport Curve
Rollers are tapered and multi-grooved to facilitate the driving belts and jump belts. Each drive shaft is connected by flexible precision universal joints, fitted with needle roller bearings for smooth quiet running, governed by the length of belt itself.

- Full range of widths.
- 30, 45, 60 and 90 degree curves
- Tapered rollers

Personnel Gate
The personnel gate utilises a very simple and effective spring loaded coupling system which picks up drive from the adjacent module. Drive is lost when the gate is lifted. Gas struts give assistance during lifting and closing of the gate.

- Available in all standard widths (300 - 800 BB)
- Available in 1000mm modules for 805mm clear entry
- Left and Right handed units available

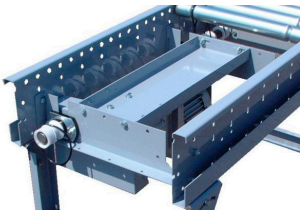
Spur
Spurs come assembled with 2 metre or 2.5 metre straights and are used where one conveyor feeds into another. The loads are 'merged' into the main line conveyor at an angle of 30 degrees.

Spurs come in two types.
1. Where module incorporates a crossdrive from straight to spur rollers.
2. Where spur section rollers are powered from an adjacent conveyor line.

- Available in all standard widths (300 - 800 BB)
- Available with or without crossdrive.

Blade Stop
The blade stop is used to hold back a queue of boxes and accumulate them. We have designed a speed up spool system that provides a localised speed increase for packages exiting the Blade Stop, enabling a gap to be generated between multiple packages.

- Full range of widths available
- Can be installed at any point on a conveyor straight
- Fast pneumatic operation



Drive Unit
Drive units are fitted to driving straights which are the same as slave straights but with a chain sprocket attached to the driveshaft. Straights fitted with a drive unit can drive up to 40 metres at 83mm pitch, 60 metres at 125mm pitch and 80 metres at 167mm pitch of straight conveyor.

- Full range of widths.
- Speeds 9, 14, 18, 24 and 30m/min
- Can drive up to 80 metres of conveyor

Crossdrive Unit
The crossdrive unit assembly may be installed into a driving straight or slave straight. Used to transfer the drive from one side of the conveyor to the other within a conveyor module. The unit features a simple chain tensioning system with a visible chain tension indicator.

- Units available in all standard widths.
- Available as kits to fit to slave or driving straights.

Corner Turn
The corner turn module allows a 90° change of direction in a space of 600mm or 900mm square; the outside rollers rotate faster than the inside rollers, to help drive the packages through the turn. Two modules may be assembled together where a 180° turn is required. A 600mm square corner turn is used for conveyors having back to back sizes of 300, 400, 450, and 500mm. A 900mm square corner turn is used for conveyors 600mm and 800mm square back to back.

- Full range of widths.
- 90 and 180 degree corner turns
- Available in 600mm² and 900mm²

Wallaby
Used as either single units to perform the function of lane diverters or coupled to other units to form a multi-lane sorter

Switch
Switches are used where one conveyor diverts into another. The loads are 'diverged' off the main line conveyor at an angle of 30 degrees.

Transfer
Lineshaft Vee Belt conveyor transfers are slave driven and suitable for all roller pitches. There are two types of transfers. One with two strands of urethane belting and the other has three strands of urethane belting, both types are at varying pitches.

Roller Stop
Similar operation to the blade stop but instead of stopping expected boxes. The roller stop would be used to stop boxes within a queue by operating from underneath.

A full range of accessories is available including:

- Facia
- Guides
- Photo Electric Cells
- Stands
- Underguards

Lineshaft Roller Conveyor System

These modules are supplied as a driving straight or slave straight. With the slave straight being the most commonly used of all the modules, when using a lineshaft conveyor system.

- **Slave and driving straights available**
- **Modules up to 3 metres in length**
- **83mm, 125mm and 167mm roller pitch**

Conveyed Loads
Loads must be dry with a smooth base, cardboard on plastic being ideal.

Max product load no greater than 10 kg. per roller.

Max product weight of any single carton is 30 kg.

Enviroment
To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Weight - kg

83mm Pitch

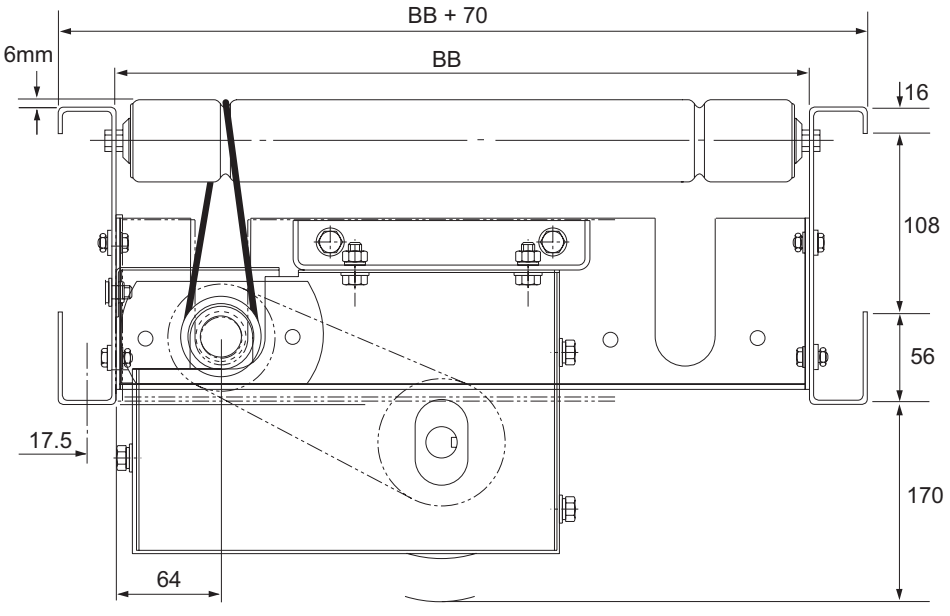
Length (mm)	Conveyor Width (mm) 300	400	450	500	600	800	No. of Rollers
500	14.3	16.2	17.0	17.8	20.1	24.0	6
1000	27.8	31.5	33.0	34.5	38.9	46.3	12
1500	40.7	46.0	48.1	50.2	56.3	66.9	18
2000	54.2	61.3	64.1	66.9	75.1	89.2	24
2500	67.8	76.6	80.1	83.6	93.9	111	30
3000	80.8	91.2	95.3	99.4	112	132	36
Single Roller Weight							
Roller	0.86	1.13	1.23	1.33	1.63	2.16	

125mm Pitch

Length (mm)	Conveyor Width (mm) 300	400	450	500	600	800	No. of Rollers
500	12.5	14.0	14.6	15.2	16.8	19.7	4
1000	24.4	27.1	28.2	29.3	32.3	37.7	8
1500	35.5	39.2	40.7	42.0	46.6	54.0	12
2000	47.4	52.3	54.3	56.3	62.1	72.0	16
2500	59.2	65.4	67.9	70.4	77.6	90.0	20
3000	70.5	77.7	80.6	83.5	91.9	106	24
Single Roller Weight							
Roller	0.86	1.13	1.23	1.33	1.63	2.13	

167mm Pitch

Length (mm)	Conveyor Width (mm) 300	400	450	500	600	800	No. of Rollers
500	11.7	12.9	13.4	13.9	15.2	17.6	3
1000	22.7	24.8	25.7	26.6	29.1	33.4	6
1500	32.9	35.9	37.1	38.3	41.7	47.6	9
2000	43.9	47.9	49.5	31.1	55.6	63.4	12
2500	54.9	59.8	61.8	63.8	69.5	79.3	15
3000	65.3	71.0	73.3	75.6	82.1	2.16	18
Single Roller Weight							
Roller	0.86	1.13	1.23	1.33	1.63	2.16	



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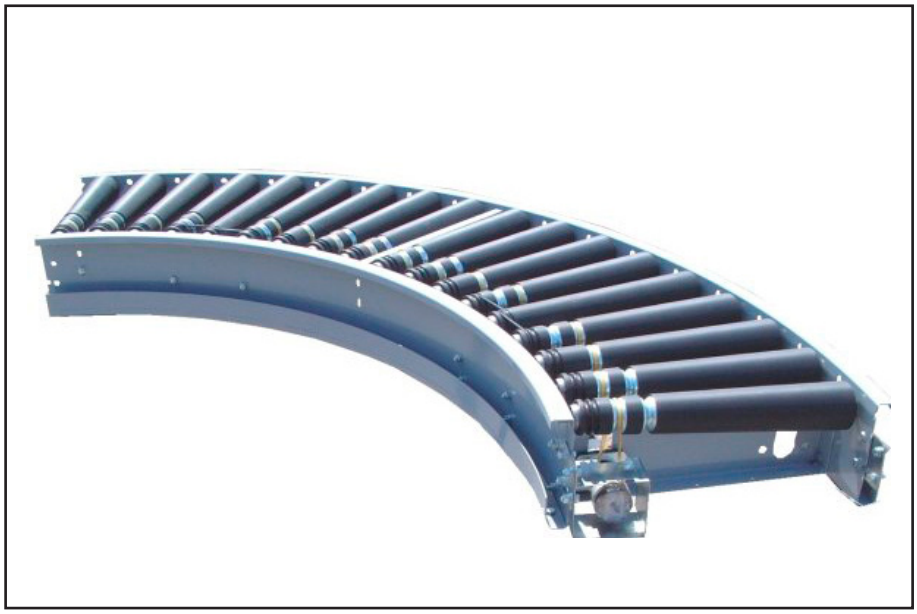


Rollers are tapered and multi-grooved to facilitate the driving belts and jump belts. Each drive shaft is connected by flexible precision universal joints, fitted with needle roller bearings for smooth quiet running, governed by the length of belt.

- **Full Range of widths**
- **30, 45, 60 and 90 degree curves**
- **Tapered rollers**

Conveyed Loads
Loads must be dry with a smooth base, cardboard on plastic being ideal.

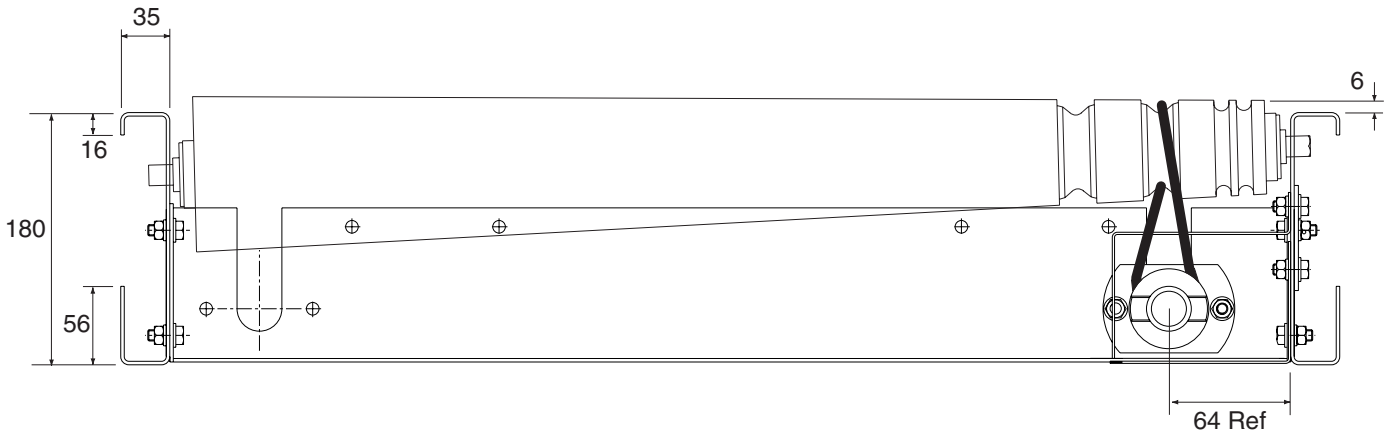
Max product load no greater than 10 kg. per roller.

Max product weight of any single carton is 30 kg.

Enviroment
To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Weight - kg

Angle	Conveyor Width (mm)					
	300	400	450	500	600	800
90	61	70	74	79	88	110
60	43	49	52	55	62	77
45	32	36	38	41	46	57
30	24	27	29	31	34	42
Tapered Rollers	1.10	1.46	1.65	1.84	2.25	3.2



3401 01

The personnel gate utilises a very simple and effective spring loaded coupling system which picks up drive from the adjacent module. Drive is lost when the gate is lifted. Gas struts give assistance during lifting and closing of the gate.

- **Conveyor widths up to 800mm**
- **Available in 1000mm modules for 805mm clear entry**
- **Left and right handed units available**

Conveyed Loads
Loads must be dry with a smooth base, cardboard on plastic being ideal.

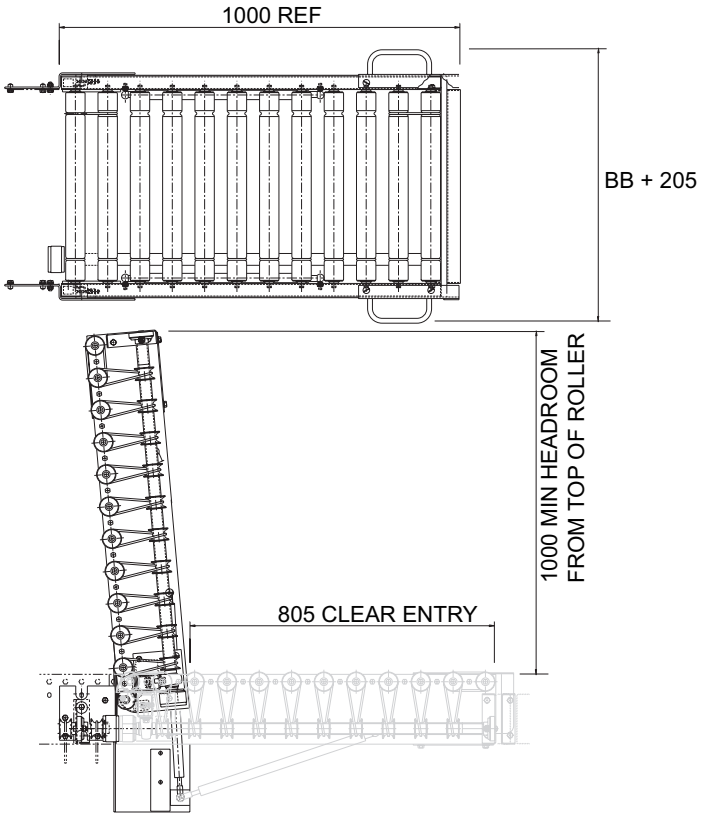
Max product load no greater than 10 kg. per roller.

Max product weight of any single carton is 30 kg.

Enviroment
To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Weight - kg

Conveyor Width (mm)					
300	400	450	500	600	800
36	40	41	42	46	54



3401 05

Spurs come assembled with 2 metre or 2.5 metre straights and are used where one conveyor feeds into another. Loads are ‘merged’ into the main line conveyor at an angle of 30 degrees.

Spurs - come in two types.
1. Where module incorporates a crossdrive from straight to spur rollers.
2. Where spur section rollers are powered from an adjacent conveyor line.

- **Available in all standard widths (300 - 800BB)**
- **Available with or without crossdrives**

Conveyed Loads

Loads must be dry with a smooth base, cardboard on plastic being ideal.

Max product load no greater than 10 kg. per roller.

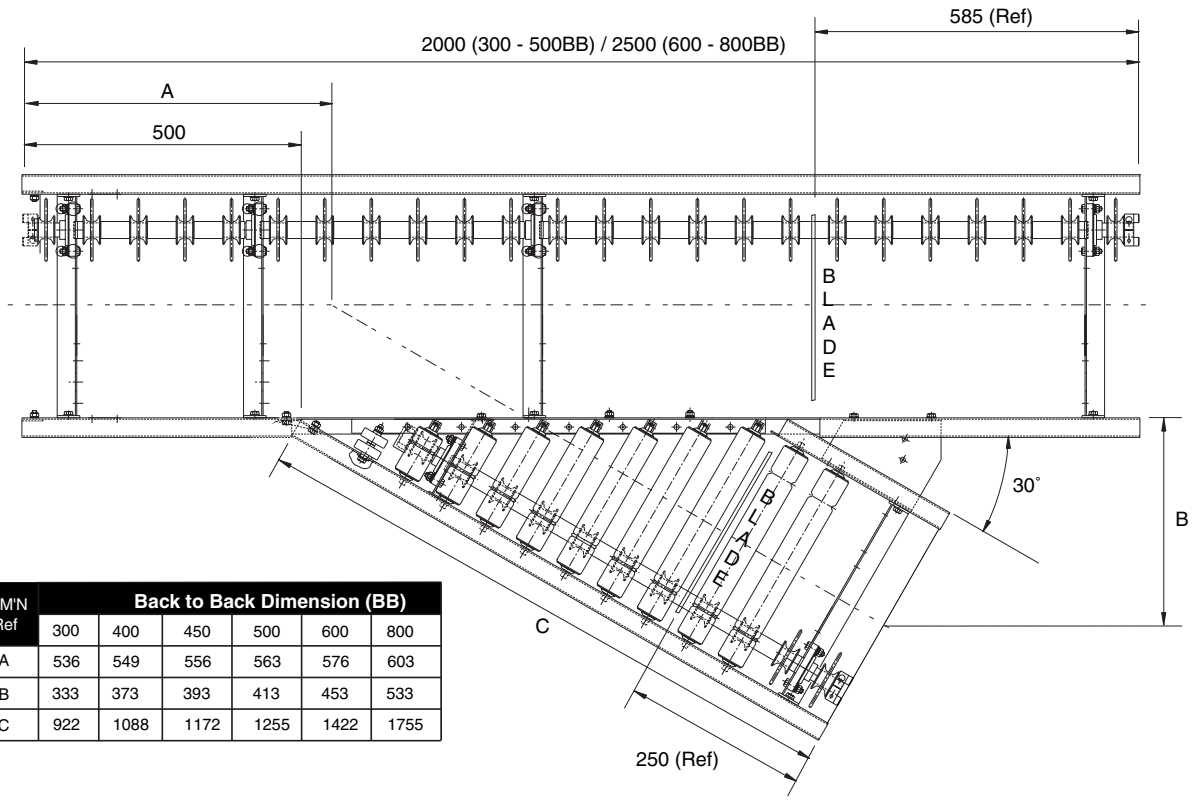
Max product weight of any single carton is 30 kg.

Enviroment

To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Weight - kg

Conveyor Width (mm)					
Spur with crossdrive					
300	**400**	**450**	**500**	**600**	**800**
80	91	95	99	135	160
Spur without crossdrive					
300	**400**	**450**	**500**	**600**	**800**
71	81	84	88	123	146



DIM'N Ref	Back to Back Dimension (BB)					
	300	400	450	500	600	800
A	536	549	556	563	576	603
B	333	373	393	413	453	533
C	922	1088	1172	1255	1422	1755

3401 04

The blade stop is used to hold back a queue of boxes and accumulate them. We have designed a speed up spool system that provides a localised speed increase for packages exiting the blade stop, enabling a gap to be generated between multiple packages.

- **Full range of standard widths available (300 - 800BB)**
- **Can be installed at any point on a conveyor straight**
- **Fast pneumatic operation**

Conveyed Loads
Loads must be dry with a smooth base, cardboard on plastic being ideal.

Max product load no greater than 10 kg. per roller.

Max product weight of any single carton is 30 kg.

Horizontal Force
Must not exceed 290N for conveyor width up to and including 450 BB.

Must not exceed 580N for conveyor widths of 500 BB and above.

Air Supply
To be supplied with dry, unlubricated at 6 bar.

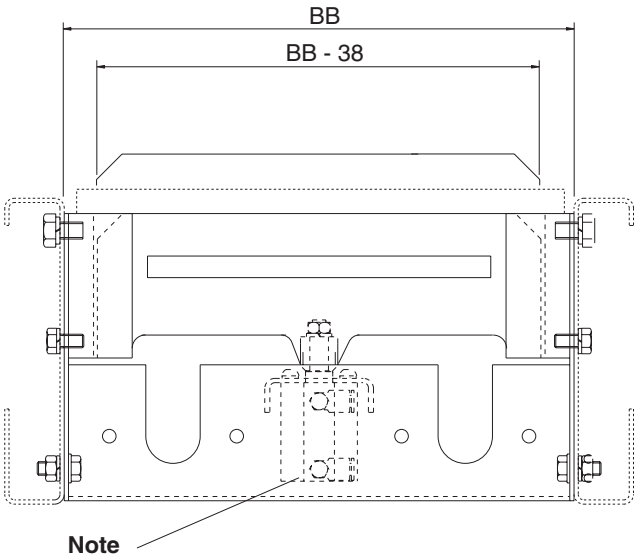
Air Consumption
300 BB to 450 BB = 0.364 Litres of free air per divert.

500 BB to 800 BB = 0.728 Litres of free air per divert.

Enviroment
To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

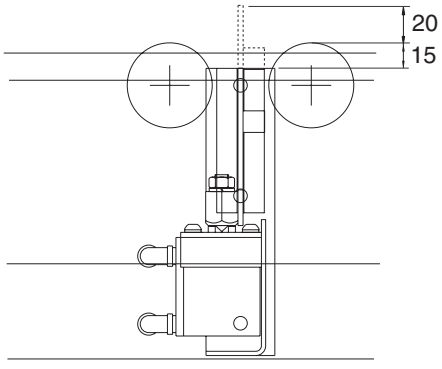
Weight - kg

Conveyor Width (mm)					
300	400	450	500	600	800
1.6	2.1	2.3	2.6	3.0	4.0



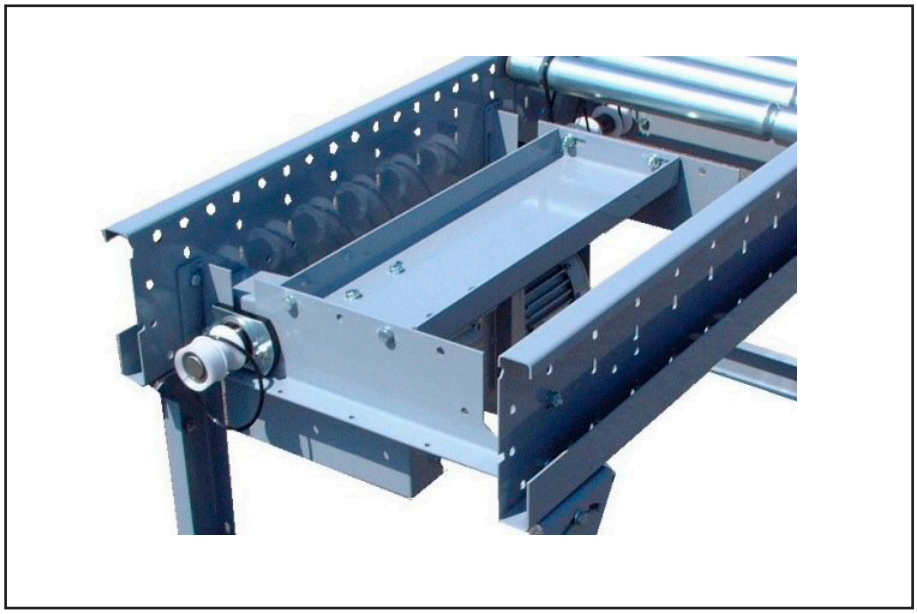
Note

There are two cylinders on 500, 600 and 800BB stop



VIEW OF BLADE STOP IN POSITION

3401 12



Drive units are fitted to driving straights which are the same as slave straights but with a chain sprocket attached to the driveshaft. Straights fitted with a drive unit can drive up to 40 metres at 83mm pitch, 60 metres at 125mm pitch and 80metres at 167mm pitch of straight conveyor.

- **Conveyor widths up to 800mm**
- **Speeds 9, 14, 18, 24 and 30m/min**
- **Can drive up to 80 metres of straight conveyor**

Geared Motor

The geared motor is fixed to a motor mounting plate complete with a pliable noise reduction pad and fastened beneath the conveyor between the two crossties. The motor mounting plate may be moved transversely to adjust drive chain tension.

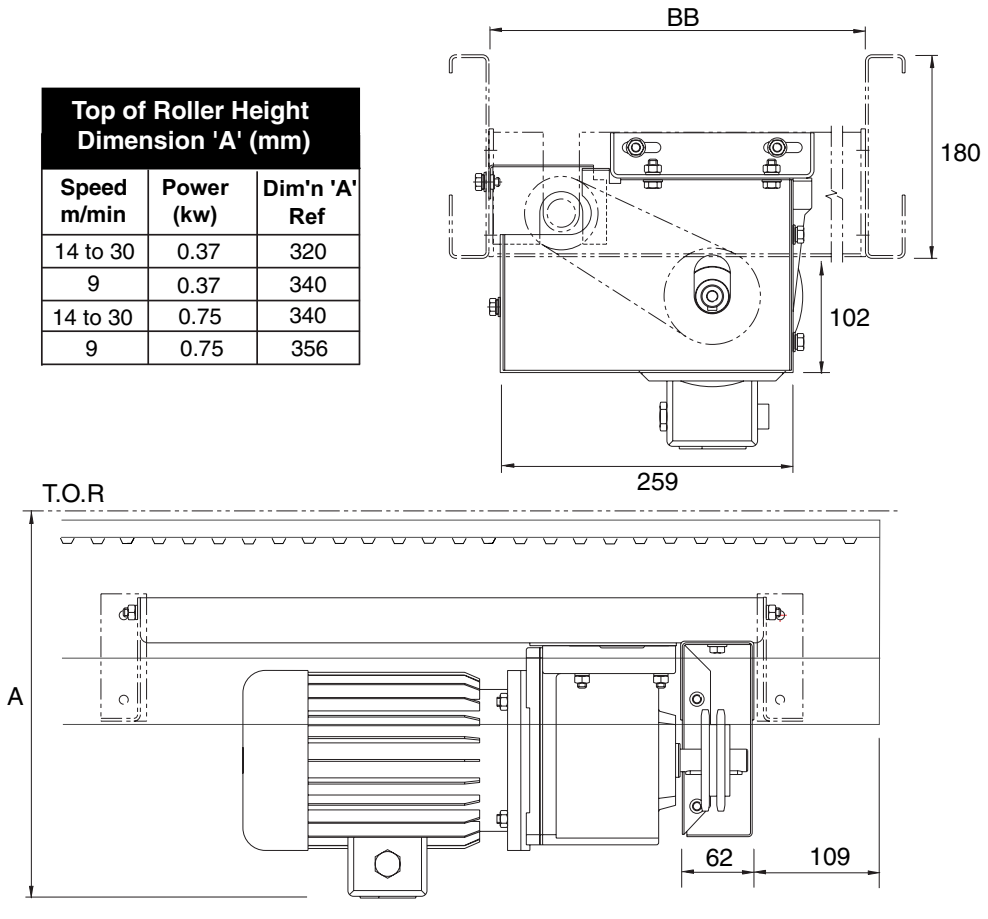
Guards

The 1/2” pitch duplex chain drive is covered by three guards. The guard back plate and main cover are fitted to the motor mounting plate and move with it when the chain is adjusted. The third guard covers the sprocket on the driveshaft and is fitted to the conveyor side channel.

Weight - kg

Motor Power (kW	
0.37	23kg
0.75	26kg

Top of Roller Height Dimension 'A' (mm)		
Speed m/min	**Power (kw)**	**Dim'n 'A' Ref**
14 to 30	0.37	320
9	0.37	340
14 to 30	0.75	340
9	0.75	356



3401 08

The crossdrive unit assembly may be installed into a driving straight or slave straight. Used to transfer the drive from one side of the conveyor to the other within a conveyor module. The unit features a simple chain tensioning system with a visible chain tension indicator.

- **Units available in all standard widths (300 - 800BB)**
- **Available as kits to fit to slave or driving straights**

Conveyed Loads
Loads must be dry with a smooth base, cardboard on plastic being ideal.

Max product load no greater than 10 kg. per roller.

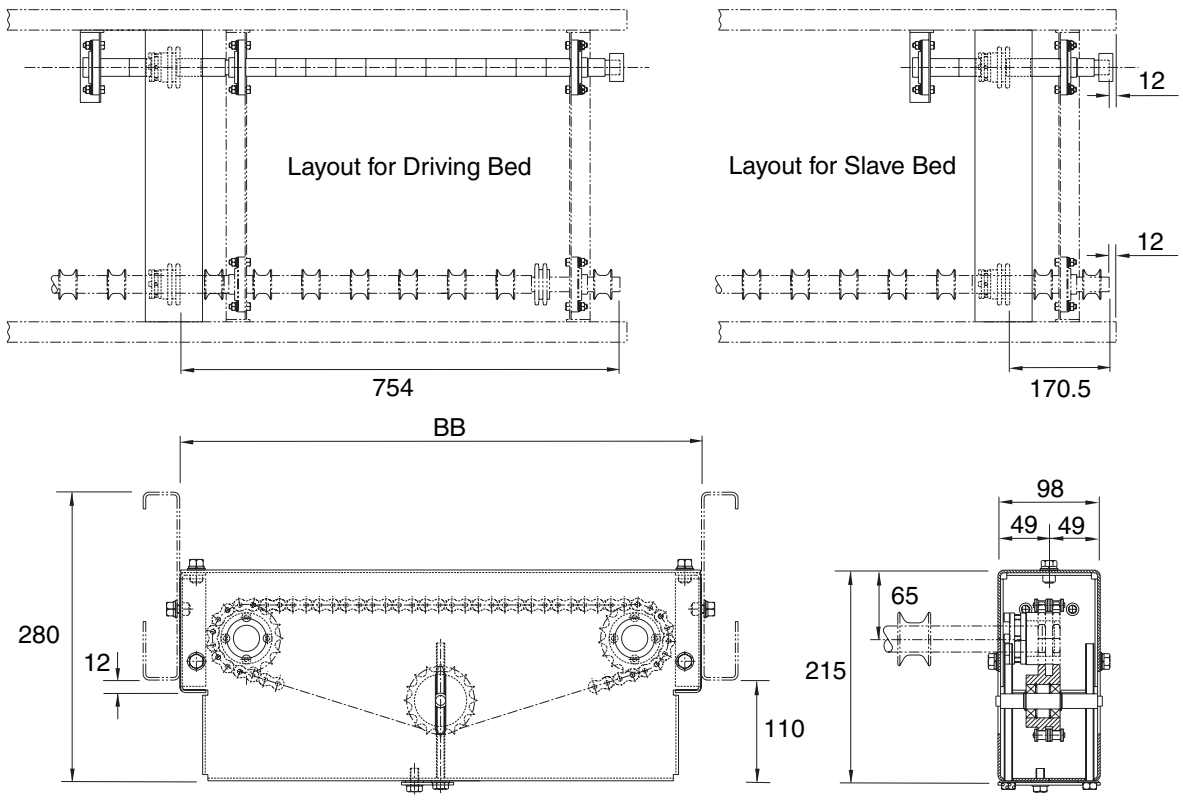
Max product weight of any single carton is 30 kg.

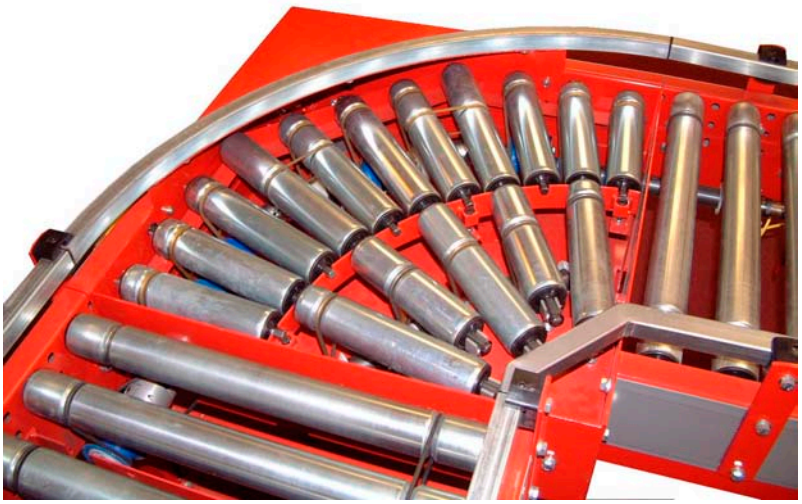
Operation
Used to transfer the drive from one side of the conveyor to the other on adjacent conveyor modules. The unit features a simple chain tensioning system with a visible chain tension indicator. Crossdrives are fitted in to conveyor straights.

Enviroment
To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Weight - kg

Coveyor Width (mm)					
Crossdrive Assembly (slave bed)					
300	400	450	500	600	800
11	12	12.5	13	14	15
Crossdrive Assembly (driven bed)					
300	400	450	500	600	800
13	14	14.5	15	16	18





The Corner turn can be used for either of two applications. It can be used as a tight radius corner turn or as a means of merging in to a main conveyor line. The angled rollers on a corner turn run faster than the main line roller set. This will ensure a positive turning force is imparted on to the packages as they enter the unit.

- **Full range of widths available**
- **90 and 180 degree corner turns**
- **Available in 600mm² and 900mm²**

Conveyed Loads

Loads must be dry with a smooth base, cardboard on plastic being ideal.

Max product weight of any single carton is 30 kg.

Weight - kg

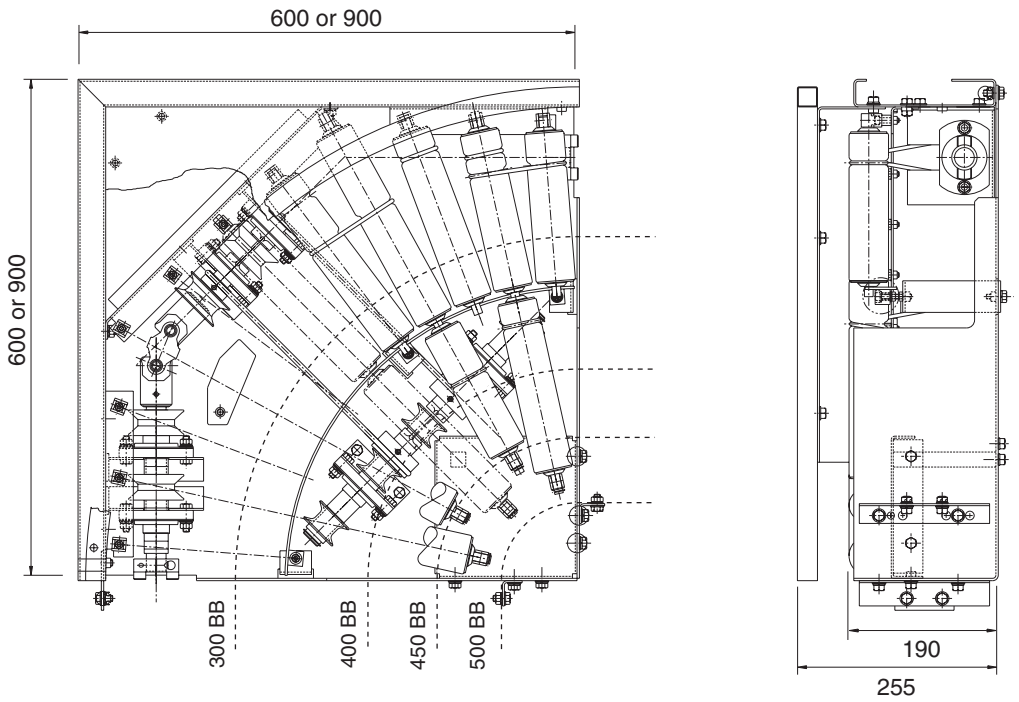
Size in mm²	
600	900
46	91

Enviroment

To be used indoors in a dry environment only between 5°C and 40°C ambient temperature.

Packages

Width : Length Ratio	Maximum Package Sizes for Conveyor Back to Back					
	300	400	450	500	600	800
1 : 1	260 x 260	350 x 350	390 x 390	430 x 430	530 x 530	710 x 710
1 : 1.5	250 x 370	330 x 460	370 x 550	400 x 600	490 x 740	650 x 970
1 : 2	240 x 460	290 x 590	320 x 650	350 x 700	430 x 860	570 x 1140
1 : 3	210 x 630	260 x 800	280 x 850	300 x 900	340 x 1020	460 x 1400
1 : 4	180 x 740	220 x 900	230 x 940	240 x 1000	280 x 1120	380 x 1500



Note: 600mm Square Corner Turn shown
900mm Square Corner Turn accomodates 600mm to 800mm Back to Back

3401 13

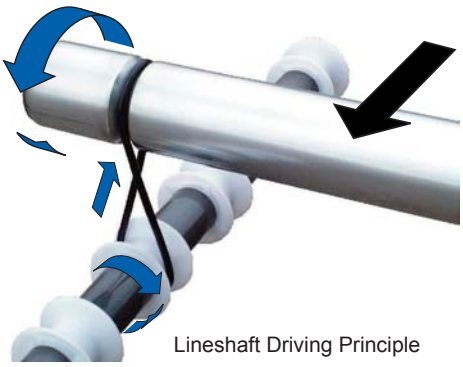
Lineshaft Roller Conveyor System

A Simple Design with few moving Parts

Lineshaft conveyors are the optimum solution for mid-range loads requiring only the smallest number of moving parts thereby reducing cost and complexity. This makes it a very quiet running system needing little power. One drive unit is suitable for up to 80m of conveyor in some circumstances and can power both straights and bends. Lineshaft conveyors are fully supported by a wide range of accessories and can be used alone or as an integrated element of a conveyor system.

Lineshaft Driving Principle

The lineshaft driving principle has been used in package handling conveyors for almost 20 years. A rotating shaft mounted beneath the rollers transfers motive power to the conveying rollers above by a series of urethane bands. These bands run in grooves in the conveying rollers so that they do not contact the load being conveyed. The shaft is populated with a series of spools which the bands run on. These provide the ability for the conveyor roller to stop and the shaft continue to rotate. Thus providing accumulation on the conveyor whilst maintaining drive. Cross-drives transfer drive from one shaft to another on the other side of the conveyor where necessary and universal joints are used to transfer the drive around curves. Elastomeric moulded drive bands as opposed to extruded then welded drive band ensure strength and reliability.

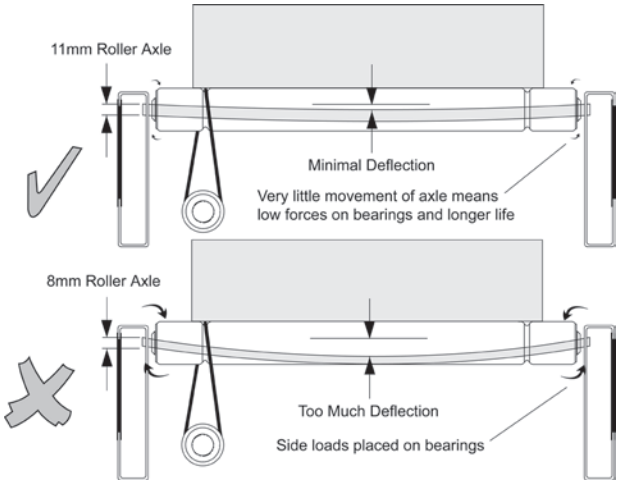


Lineshaft Driving Principle

Key features of Lineshaft Conveyor.

Roller Axles

only use 11mm roller axles on all lineshaft rollers to minimise deflection caused when handling heavy loads. Roller axles with a smaller thickness will deflect more causing a reduction in load carrying capacity and also shorten bearing life.



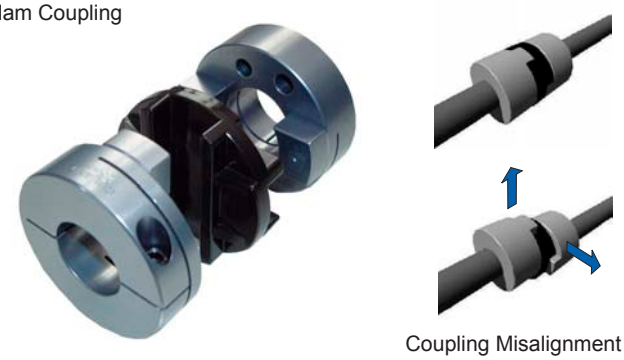
Channels

Channels are of a 'C' Section design which allow for cable runs within the enclosed channels saving on additional trunking runs and adding a clean appearance. The channels can be closed off with a plastic facia to create a clean and tidy appearance. A strong 2.5mm channel thickness ensures a robust construction with a high quality powder coating finish.

Coupling

The coupling between shafts is probably the most important component of any Lineshaft conveyor system. conveyors, use the highest quality 'oldham' style coupling of the most modern materials. The coupling performs silently without lubrication or any maintenance and can accommodate radial and angular misalignment. The only wearing part is a plastic element that can be replaced in seconds without shaft removal or dis-assembly. It is fair to say that this coupling has enhanced the well proven and established lineshaft drive principle and brought it to modern day cleanliness and maintenance free expectations.

Oldam Coupling



Coupling Misalignment

Bolted Construction

Lineshaft conveyor is a bolted construction. This allows for the ability to move crossties in the field therefore creating a more versatile product for installation and on site modifications.

Spools and Spacers

The entire length of all shafts are populated with spools and spacers. The spools allow accumulation on the conveyor and the spacers permit different options on conveyor roller pitch. They also totally enclose the rotating shaft making the product inherently safe for personnel to work with. Spools and spacers are made from the latest polymer materials ensuring a very long and maintenance free life. With clip on Speed Up Spools that are supplied in two halves for ease of installation localised speed variation can be obtained.

Clip on Speed Up Spool