



AUTOMATED CONVEYING AND SORTING

PRODUCT INTRODUCTION

Create competitiveness for your logistics system

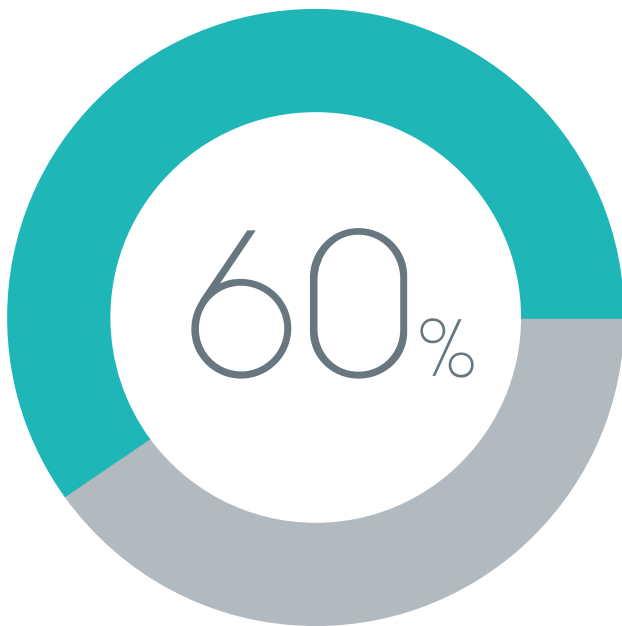


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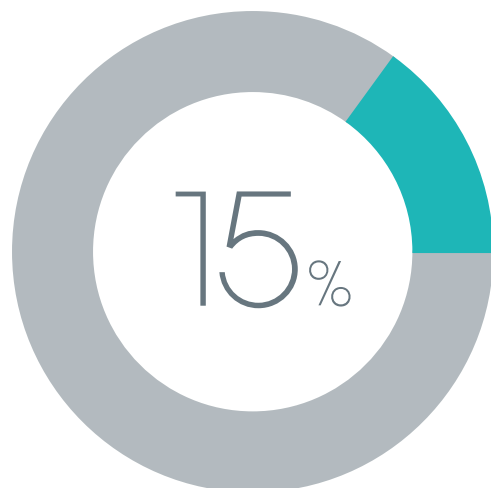
About us

01

Zhejiang Damon Science and Technology Co., Ltd., a listed company on the Beijing Stock Exchange (stock code: 830805 Damon Science and Technology), is rated as the industry leader in China as a provider of intelligent logistic systems and equipment. Damon has a large market share in the electrical industry, courier, apparel, pharmaceutical, factory automation and various other industries. Damon have installed systems in logistics centres for major, well known companies including Amazon, Vipshop, JD, Suning, Huawei, Lenovo, IBM, SF, DHL, Caterpillar, Wal-Mart as well as many other renowned companies. Damon is a key, high tech company ranked as one of the top ten brands in China's logistics equipment industry and has been recognized by Forbes Magazine as the highest growth company in China.



Damon's market share in sorting equipment of Chinese big-sized E-Commerce Logistic.



Damon's market share in China conveying & sorting equipment market.

02

Damon has its own modern Logistics Technology Research Institute which has a long term commitment to the Research & Development of cutting-edge technology in logistics automation, conveying and sorting. Damon's institute focuses on the world's leading logistics conveying and sorting technology and has established strategic cooperative relationships with many senior research institutions, universities and well known logistics equipment companies in Germany, Netherlands and Japan. The Damon Logistics Technology Research Institute is the only privately owned institute in China in the field of intelligent logistics system equipment. The institute has the largest, best equipped testing centre in the industry.



03

Damon is China's largest manufacturer of logistics conveying and sorting equipment. Our manufacturing centre is equipped with advanced processing technology and high precision measuring and testing equipment. With our manufacturing capacity ranked as number one amongst our domestic counterparts, Damon can meet all kinds of production and hardware requirements for projects ranging in scale and complexity. To date, Damon has four manufacturing bases and R&D testing centres in Shanghai China, Zhejiang China, Melbourne Australia and Romania.



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Dare CBS-I Cross Belt Sorter



Damon cross belt sorter is featuring with high efficiency, low consumption, high speed, low noise, high cost performance and low error rate. Its low consumption loop drive, cross belt servo drive and low noise loop running mechanism have already get to an international advanced level, equal to domestic leading level. With a sorting rate of 25000 p/h, it is one of the first choices by E-commerce, express, apparel industries in China for intelligent sorting equipment.

● **Low consumption loop drive technology (linear motor)**

- High performance line set.
- Small gap wheel guided bilateral solenoid drive.
- High thermal conductive aluminum thermal interface material.
- High density heat flow exhaust and cooling technology.
- Integrated module technology.

● **Cross belt servo motorized roller direct drive technology**

- Pulse counting replace conventional synchronous drive, ensure items accurate alignment.
- Servo motorized roller drive enables more accurate infeeding and outfeeding of packages with different weights.
- Vehicle starts in millisecond, quicker reaction and more efficient
- Simple structure of vehicle body, space saving, weight reduced, energy consumption reduced, easy installation and maintenance.

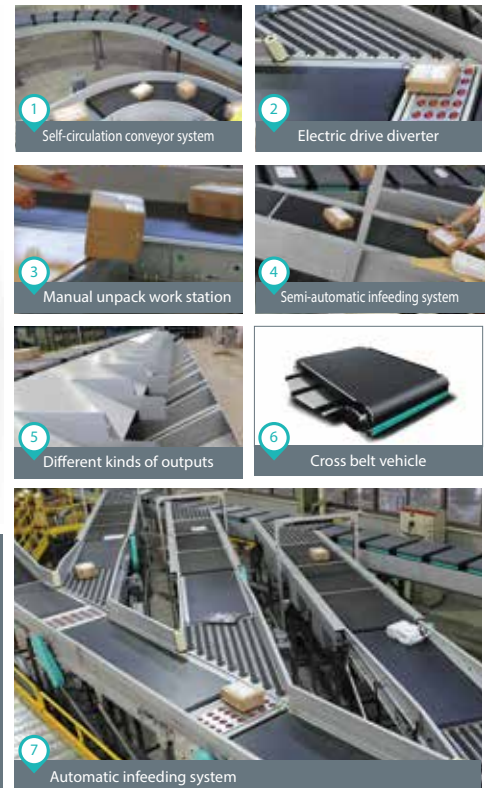
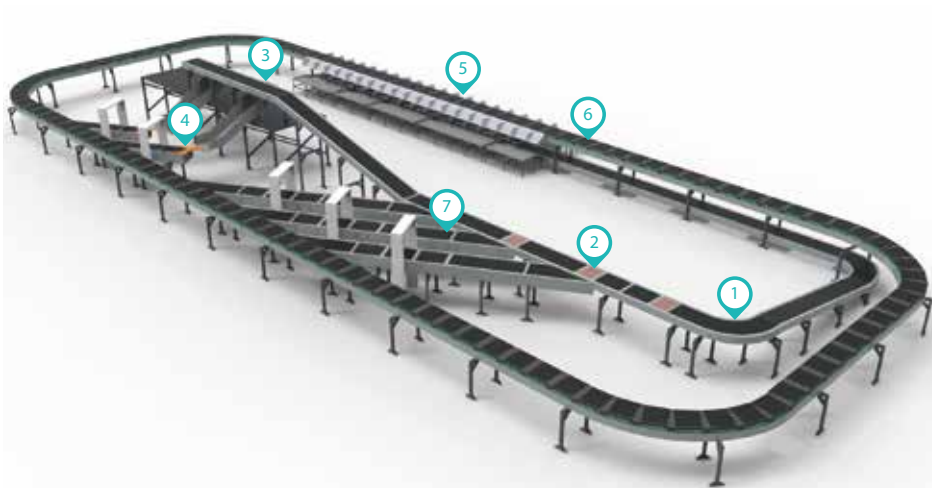
● **High speed, low noise**

Perfect mix of super light aluminum vehicle body with optimized structure and low noise running mechanism, with a noise level under 65dB.

● **Modular design for fast disassembling and maintenance**

Introduced with industrial design of modular structure and fast assembly & disassembly technology, result in changing a cross belt vehicle within only 5 minutes and extremely easy maintenance.

Dare CBS-I Cross Belt Sorter



Cross belt sorter system is composed of infeeding part, sorter host, outfeeding part and control system. Items enter sorter hose by control system from infeeding system for sorting operation. Outfeeding system will help locate items physical location and storage to achieve its sorting function.

Content	Specifications	Note
Mechanical throughput	Main line speed:2.0m/s;12000 pcs/h	Vehicle speed
Pattern of items to be handled	Express(file bag),small package, small bag, clothes	Excluding fragile items
Load unit specifications	440 x 700 mm ; pitch600mm 440 x 700 mm ; pitch600mm(two layers) 440*800*2; pitch1200mm	One vehicle with one belt One vehicle one belt/two layers One vehicle with two belts
Handling item dimension	800L*600W*350H 100L*100L*50H	Two belts occupied Occupied one belt/600*400
Effective unit loading capacity	0.1~30 kg	
Maximum throughput	2200p/h/unit	Based on400*400
Infeeding method	Semi-automatic, full-automatic	
Main line drive mode	Linear motor drive	Damon standard
Cross belt drive	Servo motorized roller	Damon standard
Cross belt power source	Get electricity from sliding wire	Panasonic
Running noise	< 65 db<65db(Excluding environmental noise and steel platform vibration noise)	Cross belt main line

Dash-Sliding Shoe Sorter 3rd type



Dash SSS-I high speed sliding shoe sorter is the third generation of new sorter dedicated and developed by Damon for many years. As a perfect mix of speed and reliability, Dash SSS-I is the crystallization by Damon's focus on sorting technology, a perfect show of a new generation of intelligent sorting system. No matter how changeable of goods weight, shape and size is, the unique sliding shoe sorter will present an accurate, flexible and fast sorting operation. The system has a proud super high speed switch capability, with a high availability of applications for many fields.

● Electromagnetic and high speed switch technology

It adopts the latest electromagnetic driven and high speed switch technology, a perfect mix of speed and curve as well as millisecond switches capability and creative shifting fork vibration elimination technology. It is safe, stable and maintenance free.

● High speed sorting rate

The sorter host can achieve a linear speed of 2.5m/s. Maximum sorting rate of one side can get to 8000 p/h. Items can be sorted at both sides at the same time.

● Modular unit integration technology

Modular unit integration technology is applied. It has a simple and reasonable structure easy for maintenance. Only two minutes is needed for removing and replacing shoes.

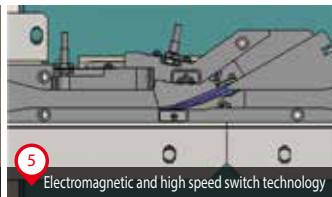
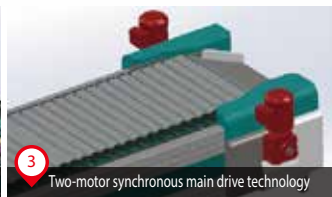
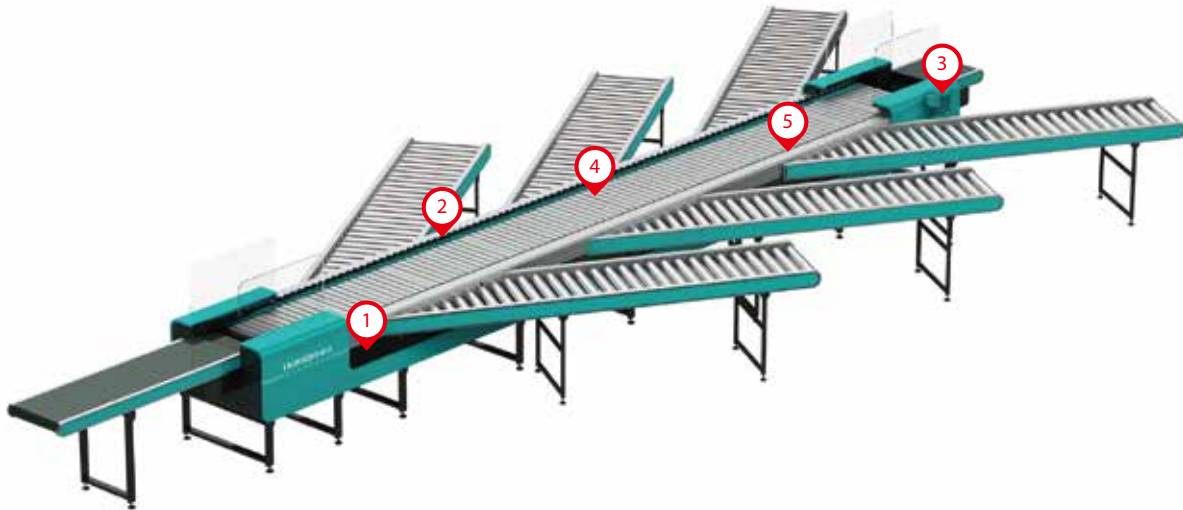
● Low noise

New equipment lowers the noise and creates a more comfortable working environment. Operating noise of main line is under 72db.

● Two-motor synchronous main drive technology

Using two sets of low power instead of a single large power motor drive technology to drive the main line, this technology has a higher control precision, a more stable and easily configured system.

Dash-Sliding Shoe Sorter 3rd type



Damon sliding shoe sorter is featuring with high speed, high efficiency, stability and reliability. Its electromagnetic high speed switch technology, modular unit integration technology and low noise running mechanism have already get to an international advanced level, equal to domestics leading level. With a sorting rate of 8000p/h, it is one of the first choices by E-commerce, express and apparel industries in China for sorting equipment.

Name	Third generation / Illtype	Remark
Item type	Paper box, turnover box, pouch items, slender items and etc.	
Item specifics	Min: 200(L)×100(W)×10(H)mm Max: 1200(L)×600(W)×600(H)mm	820 type
Weight	0.5~30kg	
Line length	Lmax:80 m	
Effective width	W:820 mm	
Steady speed	60~150m/min	150/600
Efficiency	8500pcs/h	
Error rate	≤0.01%	
Running noise	≤72db	
Export setting	Two side	
Line Drive	Motor	
Switch power	Electric power	

PBS-Powerball Sorting Module



Power ball sorter (Powerball Sorter) uses a unique dynamic powerball structure, the new type of timing belt driven cone gear, belt drive powerball running mode and modular design concept which enable the power ball sorter realized the single direction, bidirectional multi-angle sorting. it improved the efficiency and stability of the sorting, variety adaptability of conveying goods, easy, quick installation and maintenance to improve the using life of the equipment, It is much advance than the similar products on domestic and overseas market in terms of performance and capacity.

Features

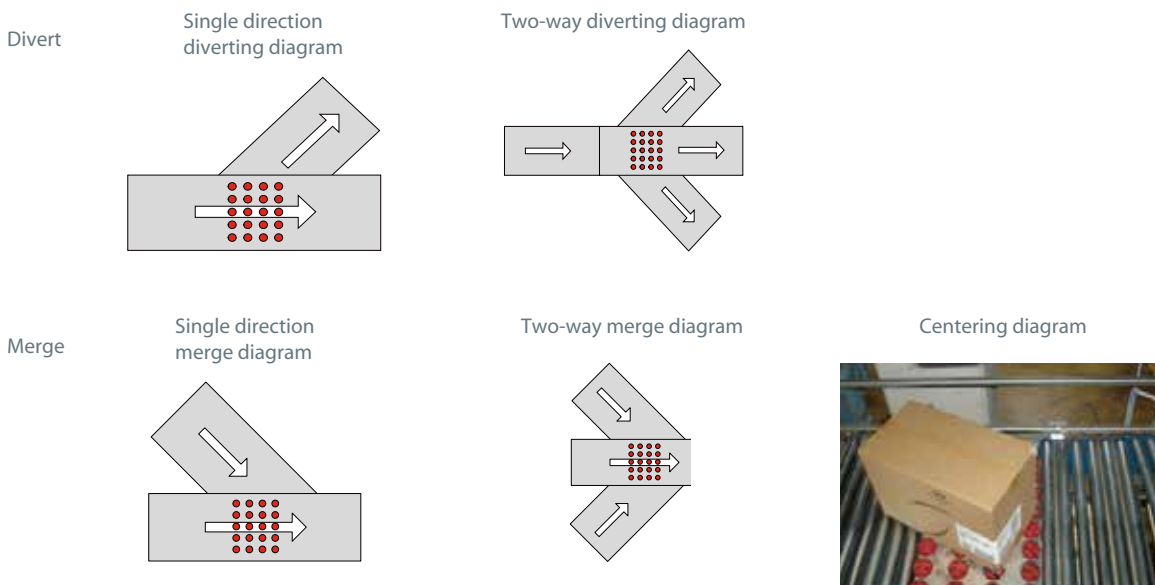
- Items packing types: Suitable for different shapes and dimensions, especially suitable for the soft package sorting.
- Round-shaped powerball handles the items gently without damaging the items.
- CE certified, high stability, extremely low maintenance costs.
- Can be used in goods diverting, merging, centering, reversing and with strong functions.
- Easy and quick in replacing because of embedded module design.
- Using high-quality European motor and gear reducer.
- No belt –twisting occur because of unique tapered roller drive.

PBS-Powerball Sorting Module

Parameters:

- Suitable for goods in size:min 210×140mm, max 600×400mm
- Suitable for single piece in weight:less than 35kg
- Suitable for items packaged in:cartons,totes

Function diagrams:



PBS分拣机参数: *A standard module including 2 row PBS

Type	450	650	850
Size (LxWxH)	715x570x319mm (height including moter)	935x770x319mm (height including motor)	1155x970x319mm (height including motor)
PBS arrangement	4	6	8
Standard modular quantity	2	3	4
Sorting angle	30°, 45°, 60°		
Sorting direction	One-direction,Two-direction sorting		
Customed	Allowed customed design increase number of modules to suit the requied length		
Speed(m/min)	30-90		
Maximum capacity	5000pcs/hour		
Power	0.37KW		0.55KW
Operating Pressure	0.4~0.6MPA		

PBS-Powerball Sorting Module

PLC connecting form:

PSB allow programmer to control the swivel direction of each row of the Powerballs, depend on the item size, sorting angle and transport speed, preference settings are easy adjustable to control the swivel spacing, flexible programming brings out best sorting efficiency and the implementation of the design.

PBS powerball sorter working environment

- Ambient temperature: $-5^{\circ}\text{C} \sim 45^{\circ}\text{C}$
- Relative humidity: $\leq 85\%$ (No condensation)
- Power line: Three-phase five-wire system, 380V, 50HZ, 100A.
- Security protection ground connection resistance $\leq 4\ \Omega$
- Voltage change rate: AC $380 \pm 10\%$
- Frequency: $50\text{Hz} \pm 1\%$
- Ground connection: AC power supply ground resistance $\leq 4\ \Omega$

PBS Powerball sorter application projects

PBS power ball sorter have been widely used in various projects, such as JD Asia NO.1 project(Shanghai), Zhengzhou Tobacco factory project, Ningbo Tobacco, Tianjing VIP Project and Suzhou IRG project.



PBS domestic case introduction

An E-commerce logistics center



A tobacco logistic



PBS oversea cases introduction

Philip Morris



E-commerce in Britain



D30-SW Swivel Wheel Sorter(Electrical)



Swivel Wheel Sorter is a widely used automatic sorting system and this system is now becoming an inseparable part in large and middle sized logistic center in developed countries.

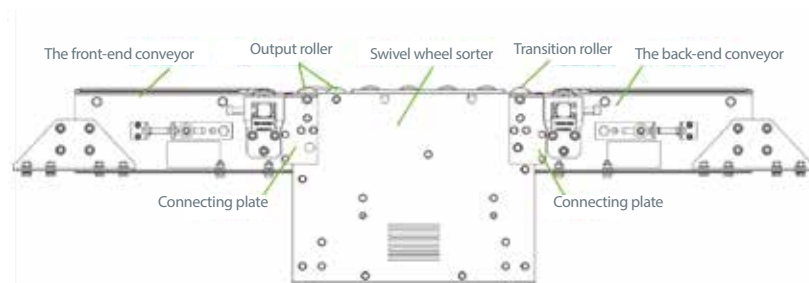
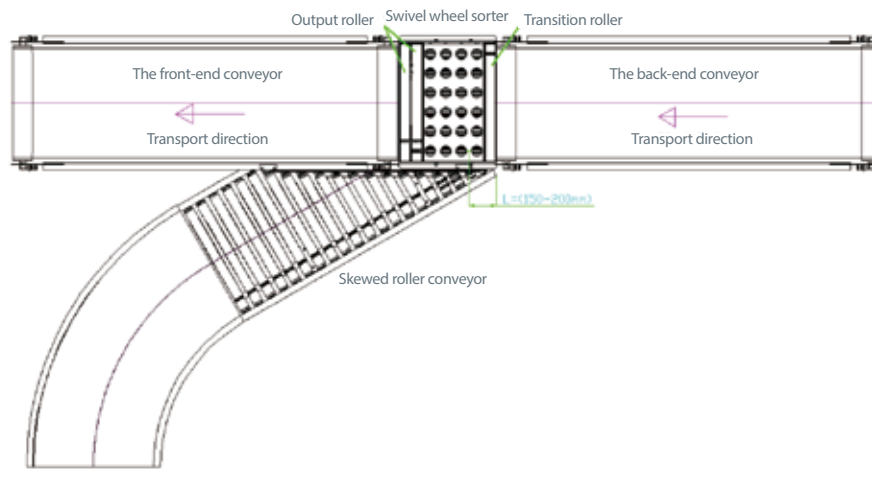
The main line of swivel wheel sorter normally goes with the belt conveyor or roller conveyor. Swivel Wheel Sorter can be divided into separate embedding type, active drive type as well as the stepper motor driven direction turning type. Features of this design is enable to track conveying goods accurately and stably and set up sorting positions conveniently at any place on both sides of conveying lines so as to meet the different demands of customer. This will not only get the maximum sorting capacity, but also achieve the best economical purpose.

Technical Features

- **High efficiency sorting capacity**
Swivel wheel Institute is designed for high speed and bidirectional sorting operation to both sides at the same time. Maximum rate can be 4200pcs/h.
- **Electrical driven direction turning**
Requires no air resource ,low noise ,excellent site adaptation.
- **Flexible and stable sorting**
Double-row swivel wheel technology protects conveying goods from vibration and damage. Stable and flexible sortation of goods from light duty to heavy duty range of maximum 35KG.
- **Easy layout and maintenance**
Uses modular unit design and embedding combination structure ,easy for sorting positions to be placed at any position along both sides of the conveyor line .Product is practical, simple ,convenient and easily maintained.
- **Energy saving and environmental protection**
Utilizes light weight material with low energy consumption structure ,Use low drive power.

D30-SW Swivel Wheel Sorter(Electrical)

Product Structure-Standard Modules



General specifications

No.	Item	Specification
1	Sorting type	Independent modular,Electrical driven direction turning;
2	Conveyor type	Belt conveyor,Roller conveyor
3	Sorting capacity	max 4200pcs/h;
4	Conveying speed V	36-90m/min ;
5	Sorting angle	30°,45°,60°;
6	Sorting direction	single direction sorting ,double directions sorting
7	Dimension of items	250-700 (L) ; 180-600 (W) ; 30-500 (H) ;
8	Weight of items	0.5-30kg;
9	Equipment specification	500 (L) x400 (H) ;
10	Effective width(mm)	517、 617、 717、 817

D30-SW Swivel Wheel Sorter(Pneumatic)



The main line of D30-SW swivel wheel sorter is belt conveyor or roller conveyor. There are two sorting types for swivel wheel sorting devices. The first is separate embedding sorting and the second is online bidirectional sorting. Drive and driven are used for power drive. Options include pneumatic or electromagnetic actuation for the swivel wheel drive. Features of this design is to track conveyed goods accurately and stably. Set sorting positions may be conveniently located at any position along both sides of the conveyor line to satisfy customers with different sorting requirements. Achieves both maximum sorting rates and best economic efficiency.

Product features:

● High sorting capacity

Swivel wheel device is designed for high speed and bidirectional sorting operation to both sides at the same time. Maximum rate can be 4200 pieces/hour.

● Energy saving and environmental protection

Utilizes light weight material with low energy consumption structure as well as low power and source power (conveyor) drive to achieve successful operation.

● Multiple modes and applications

Swivel wheel device uses unique online bidirectional sorting technology and is self-powered or conveyor source powered for its drive. Drive for the swivel wheels can be pneumatic or electromagnetic dependent on the availability of air supply at the customer's site. These all ensure the product is economical and practical.

● Flexible and stable sorting

Online double-row swivel wheel technology protects conveyed goods from vibration and damage. Stable and flexible sortation of goods from light duty to heavy duty range of maximum 35kg.

● Low noise

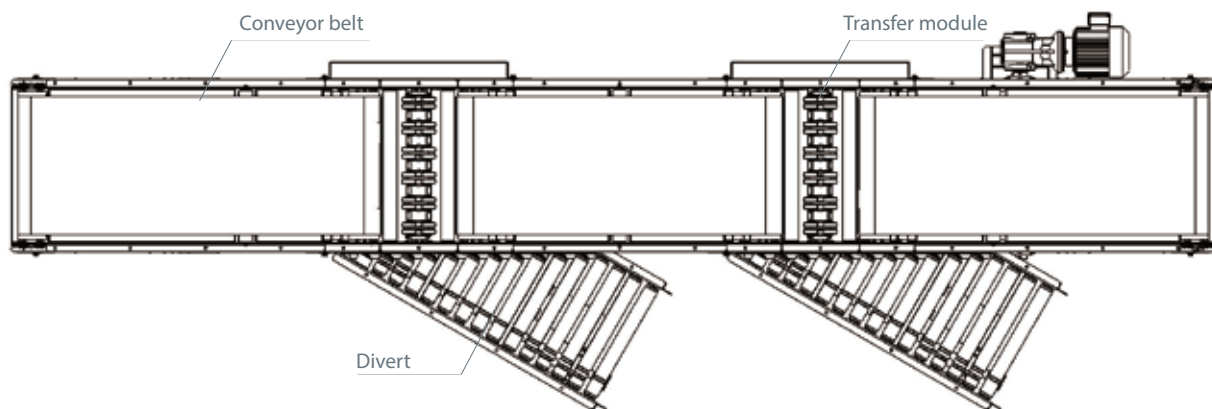
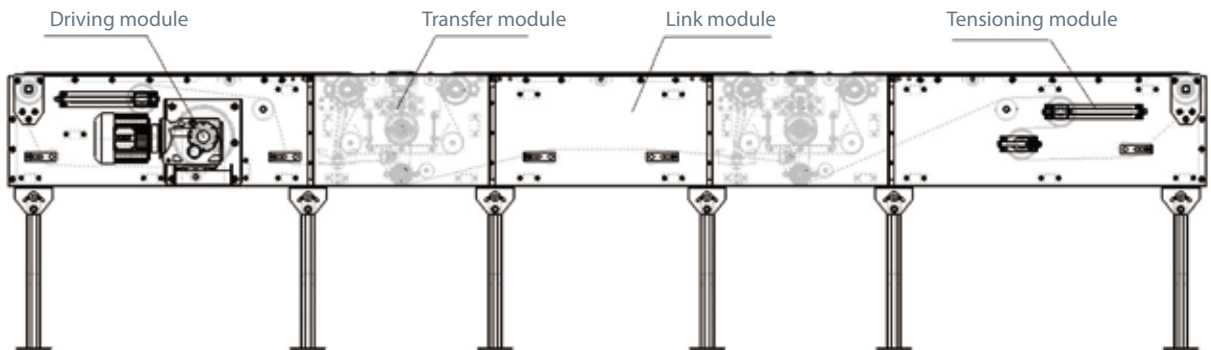
Utilizes new materials and noise elimination technology which make the environment more comfortable (electromagnetic steering type).

● Easy layout and maintenance

Uses modular unit design and embedding combination structure, easy for sorting positions to be placed at any position along both sides of the conveyor line. Product is practical, simple, convenient and easily maintained.

D30-SW Swivel Wheel Sorter(Pneumatic)

Structure diagram



General specifications

No.	Item	Specification
1	Sorter type	Online swivel wheel
2	Sorting capacity (part/h)	Max: 4,200 parts/h
3	Max conveying speed (m/min)	90 m/min
4	Effective width (mm)	517, 617, 717, 817
5	Number of divert	Depends on length of conveyor and dimension of goods to be sorted
6	Sorting direction	Single side sorting and dual sided sorting
7	Conveyor type	belt conveyor, roller conveyor
8	Dimension of item (mm)	250-700 (L); 180-600 (W); 30-500 (H)
9	Weight (kg)	0.5-30kg

1ST06 Narrow-belt Sorter



D30-NB90 Sorting technology employing multiple parallel narrow belts as a conveying surface and pop-up roller transfers as diverters.

It is designed to handle and sort a variety of products into high-density after-sort divert lanes or workstations, minimizing the footprint on your floor.

It is used for sorting products to palletize area at the end of production line , sorting products to package area for order picking and checking, sorting products to storage area for wave order.

Features & Benefits

- Product is continuously carried on multiple belts for smooth bump-free conveying and excellent tracking accuracy.
- Belts glide along low-friction, flanged UHMW guides resulting in reduced noise, so there are no belt tracking requirements.
- Take-ups are individual and auto-tensioned for each belt, minimizing maintenance
- High tensional belts are easy to assemble or replace.
- Roller transfer is powered by a poly-v belt for a more positive drive and can transfer in bi-direction.
- Compact modular design of modules allows closer transfer lane center distances.
- Modularity and universal mounting of modules allows easy repositioning or reconfiguration in the field.
- High friction, sleeved rollers are pneumatically raised and lowered in the transfer table.
- Simple user-friendly design allows ease of installation and maintenance.

1ST06 NB90 Narrow-belt Sorter

Product Structure-Standard Modules



End Section



Intermediate bed



Take-up Section



Drive Section

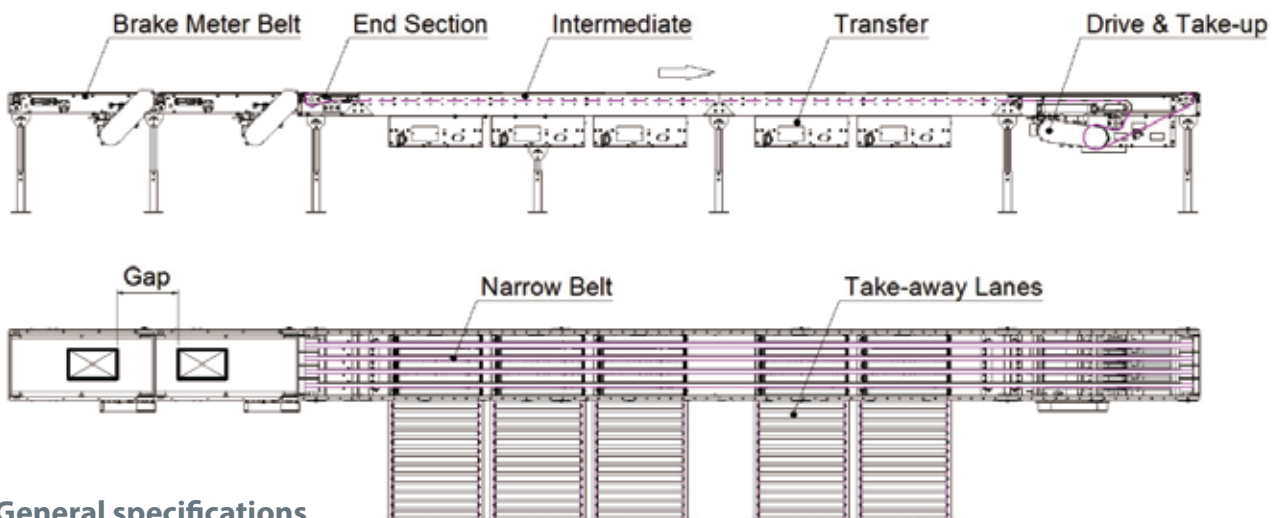


Auxiliary Take-up



Roller Transfer

Product Assembling and Application



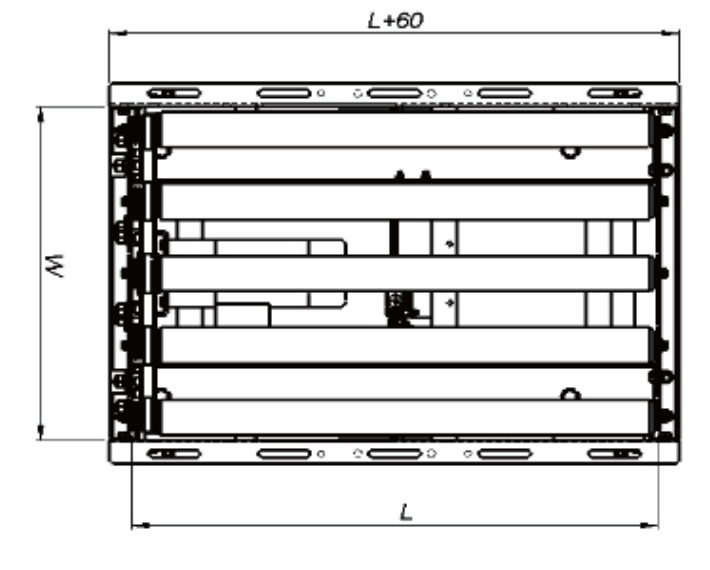
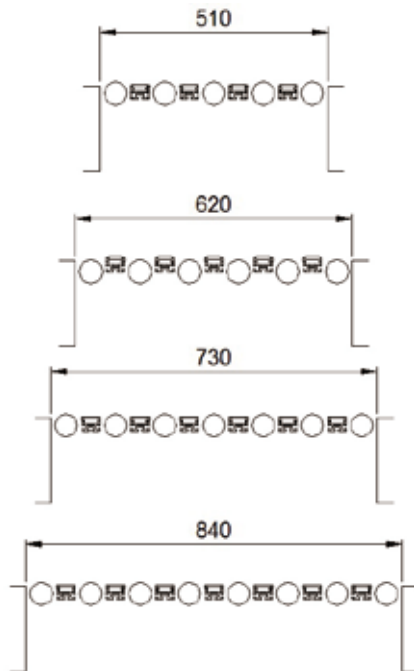
General specifications

No.		
1	Rate: 1200Pcs/H ~ 3000Pcs/H	Length: max 30m
2	Product size: min 150X150mm, max 700X700mm	Height: min 750mm
3	Product weight: max 35Kg/Pcs	Conveyor width B/B: 510、620、730、840;
4	Host conveyor speed: 40-75m/min;	Transfer width B/B: 617、717、817、917;
5	Transfer speed: 50-90m/min	Narrow belt size: 32mm

1ST06 Narrow-belt Sorter

Sorter Size Types

W \ L	L617	L717	L817	L917
W510	A30-BS0009-01	A30-BS0009-02	A30-BS0009-03	A30-BS0009-04
W620	A30-BS0010-01	A30-BS0010-02	A30-BS0010-03	A30-BS0010-04
W730	A30-BS0011-01	A30-BS0011-02	A30-BS0011-03	A30-BS0011-04
W840	A30-BS0012-01	A30-BS0012-02	A30-BS0012-03	A30-BS0012-04



Typical Use



Single piece High Speed Sorter



EuroSort high speed sorters can meet requirements for high rate sorting distribution in many industries. By connecting to WCS (warehouse control system), goods to be sorted are lead to the sorter by conveying equipment automatically or manually by an operator. Sorter control is through software, which sorts goods to a given exit by free fall or chute to the corresponding transport box. Through continuous innovation, the EuroSort high speed sorter can achieve rates of 5,000~30,000p/h. Components are designed for an optimized, easy to operate system which is cost effective with simple installation and maintenance.

Service industries and markets

Media: books, multimedia and magazines.

Fashion: clothing, shoes, laundry, accessories and ladies lingerie.

E-commerce: order sorting, return sorting.

Pharmaceutical: inspection process, pharmacy, personal care.

Daily consumer goods: 3PL, personal care supplies, manufacturing industry.

Mail/package: common mail, tote box & carton 0.2-10kg / tote box & carton 10-25kg.

Single piece High Speed Sorter

Flat Sorter

- Suitable for garments, books, pharmaceutical, postal/express (parcel,package) industries etc.
- Capacity: 5-20,000 tray/h
- 0.15-10kg/tray.
- 0.6-1.2m/s.
- Safe manual induction and automatic induction.
- Directly sort into transport box or tote, no chutes needed, relative low input.
- Minimum ground space needed because of high drop position.
- Simple and reliable, maintain in short time.
- Suitable for items that are difficult to be handled (eg. irregular shape/ round item/ item not packaged/ soft item/ item non-conveyable).



Push-tray sorter

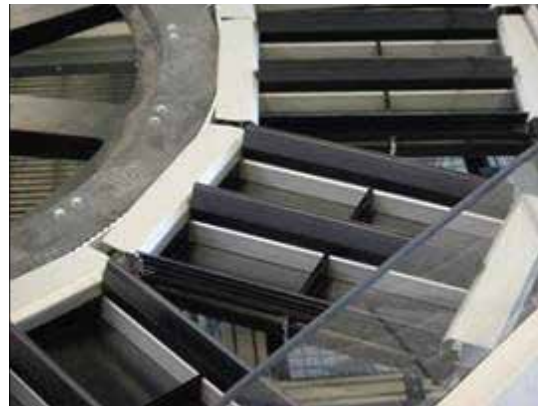
- Suitable for: garments, multi-media, books, packaged food, personal care, pharmaceutical industries etc.
- Type:
 - ◆ Single tray pushing outwards.
 - ◆ Single tray pushing inwards
 - ◆ Double trays
- 5,000-12,000 tray/h
- 0.6-1.2m/s
- Noise level: < 69dBa
- Manual & automatic induction
- Based on weight and size, chute can be:
 - ◆ Carton/ tote box slide
 - ◆ Slide bed, single/ double
 - ◆ Flow rack guider rail roller bed
 - ◆ Gravity roller bed
- Length: 40-175m
- Exit: 5-100 parts
- Scan: manual or automatic scanning
- Simple and stable design
- Low maintenance cost
- No need for air pressure



Single piece High Speed Sorter

Inclined tray sorting machine

- Suitable for decoration, pharmaceutical, multi-media, E-commerce industries.
- Capacity: 5,000-35,000 tray per hour
- 0.15-4kg per tray
- 0.6-1.2m/s
- Safe manual induction or automatic induction
- Methods of using tilt tray sorter:
 - ◆ Items gently slide to chute at an angle of 45°, then into a tote box/carton or accumulative chute for repackaging to a tote box/carton.
 - ◆ Application: damageable items like CD, package, e-commerce goods. Items directly glide to or through chute into a tote box and carton, tilt angle of tray is +/- 60°, max rate depends on height of tray/height of small sized exit.
 - ◆ Application: corollary equipment, pharmaceutical products, light duty products glide.



Slide belt sorter

- Used to handle hard carton products, such as shoebox, carton, multi-media, tote box etc.
- Size range:
 - ◆ A range: 200*200*20t/m 600*600*400;
 - ◆ A range: 200*200*20t/m 800*600*400 (no arc);
 - ◆ C range: 140*140*5t/m 400*400*400.
- Weight range:
 - ◆ A range: 50gr-5kg;
 - ◆ B range: 2kg-15kg;
 - ◆ C range: 7.5-25kg.
- 1,000-9,000 pc/hr.
- 0.3-0.65m/s (higher the speed, higher the noise level).
- Manual induction or connecting with conveyor line.
- Based on weight and size, chute can be:
 - ◆ Chute;
 - ◆ Flow rack guide rail roller bed;
 - ◆ Gravity roller bed.
- Length: 10-500m.
- Exit: 5-500pcs.
- Scan: manual or automatic.
- Simple and stable design.
- Low maintenance cost.
- Need air pressure.



TB Sorter



Sorting equipment with innovative compact layout. Save space for logistics center. Suitable for a variety of packages. Suitable for goods in non fixed dimension. When you are worried about choosing the type of sorter and your cost, or considering the re-use of equipment for logistics center expansion plan, TB SORTER is the most suitable solution for you. TB sorter can be modular installed. It is remarkably convenient for addition and removal. According to the different purposes, it can be put a sorter unit by a new combination. It can be applied to various forms of diverters.

Product advantages

- **Smooth conveying of goods**

The drive roller is made of rigid polyurethane. It can prevent the collide and impact and increase the friction to makes it easier to move. There is no friction in the roller table plate and use wear hard film to process.

- **Direction steering quickly and accurately**

It adopts servo motor or stepping motor to achieve quickly transfer of rotating platform and reduce inertia. Thereby it achieves high speed sorting (accurate steering angle).

- **No noise(Low noise)**

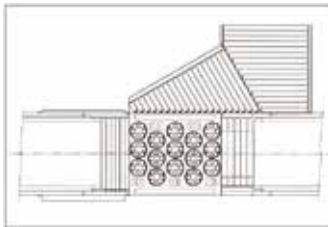
The driving of roller adopt timing belt and non-contact magnetic gear with permanent magnet principle. Driving with no noise also no need to add lubricating oil and other maintenance measures.

- **Easy maintenance**

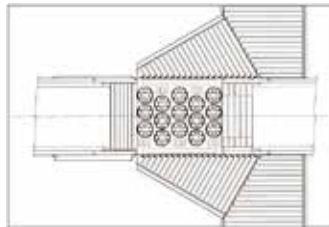
Each rotating unit is very easy to remove and replace. It has no difficult to be fast loading and unloading to everyone.

TB Sorter

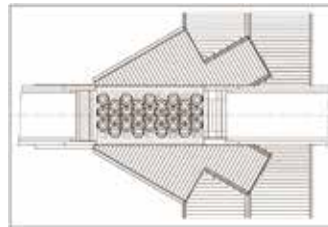
The case of diverter



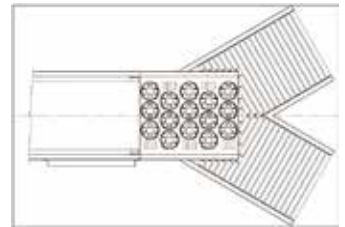
Single-direction sorting



Three-directions sorting



Four-directions sorting

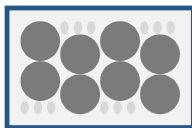


Two-direction branch device

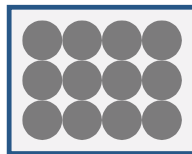
Variety of platform



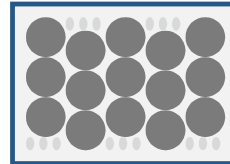
Diverse combination of rotational parts, can be combined to suit the goods size and rapid direction of sorting equipment. Even second hand equipment also can be reassembled into new type of equipment.



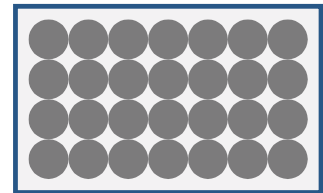
Goods width 500mm



Goods width 600mm



Goods width 700mm



Goods width 800mm

General specifications

No.	Content	Specification
1	Max dimension and weight of goods	L1500 x W800 x H700 (50kg)
2	Min dimension and weight of goods	L150 x W120 x H10(50g)
3	Roller conveying speed	90-110m/min
4	Capacity	8000-10000pcs/h
5	Parameters and type of drive device	Roller steering motor (0.12kw x 7=0.84kw) Change Direction of motor (0.4kw x 7=2.8kw)
6	Power	220V 4p 60Hz (standard type)
7	Roller specification	External diameter68mm x width 50mm - 4 parts/Module
8	Normal running temperature	-5 ~ 30 °C
9	Sorting angle	30 ~ 45°
10	Weight	400 kg (based on 4 rows 3 lines,two-directions)

Spiral Chute



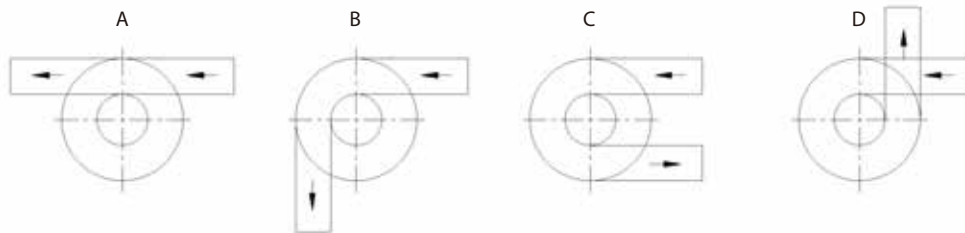
The mild steel spiral chute are proven performers which allow the smooth transfer of products from one level down to the next without jamming. When used in accumulation mode, the products are self-starting.

- The mild steel spiral chute offers significant benefits over existing conventional designs ;
- Material move through the chute at a constant velocity, due to computer aided design.
- The possibility of breakdown is eliminated, since there is no power source, other than gravity and no moving parts.
- There is minimal cost involved with operation and maintenance.
- The low friction surface material has excellent sliding qualities which remain unaffected by unfavorable conditions such as high humidity.
- The chute can be utilized for accumulation with surface material to permit self-starting of product that has been stopped in the chute.
- The chute is very durable and the surface is extremely wear resistant, thus insuring longer life.

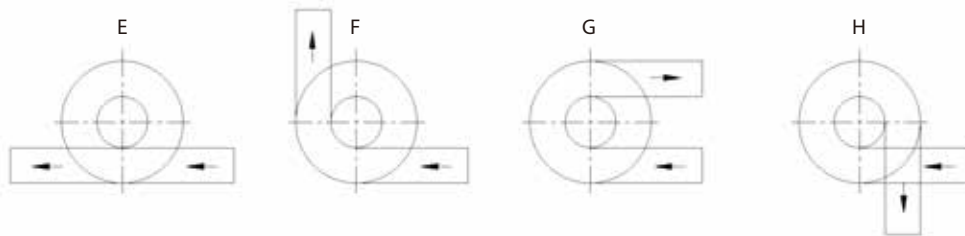
Spiral Chute

Type

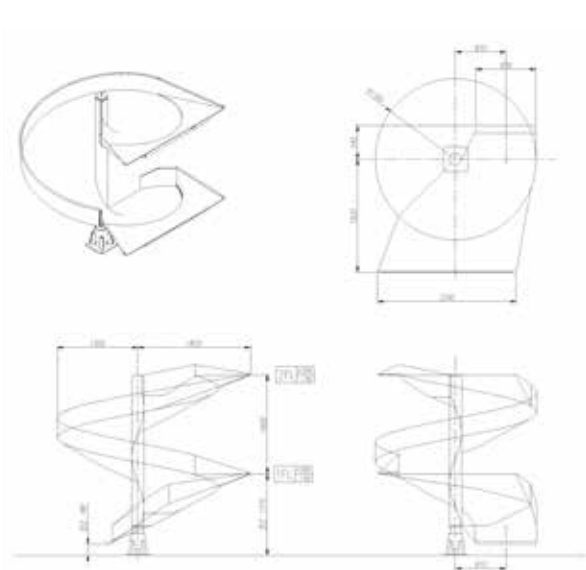
Counterclock wise (CCW)



Clock wise (CW)



Specification : 1300Wx1600P (Standard)



Type	Angle	Gate length	Chute height	Remarks
A&E	360°	460	1310	
	720°	460	2910	
	1080°	460	4510	
B&F	450°	460	1710	
	810°	460	3310	
	1170°	460	4910	
C&G	540°	460	2110	
	900°	460	3710	
	1260°	460	5310	
D&H	270°	460	2510	
	630°	460	4110	
	990°	460	5710	

Belt Conveyor



Belt conveyors use a belt as a carrying medium to transport products. Products are conveyed directly on the belt so both regular and irregular shaped objects, large or small, light and heavy, can be transported successfully. Belt conveyors can be used to transport product in a horizontal straight line or through changes in elevation or direction. Belt conveyors are available with either roller bed or slider bed to support the carrying belt.

Product features:

- Simple structure
- Modular construction
- Smooth operation
- Easy maintenance
- Able to convey goods of various shapes, sizes and weights
- Able to achieve lift and steering transportation of goods
- Conveyor belts supported by roller or slide bed

Belt Conveyor

Target Industries

Chemical industry, light industry, mechanical industry, E-commerce industry, electronics industry, pharmaceutical industry, foods industry, tobacco industry, post and telecommunications industry, etc.

Environment requirement

- Temperature and humidity: temperature: 0 to + 40°C; humidity: below 80%.
- Indoor (no direct sunlight or direct contact with water).
- Environment: no corrosive gas, no explosive gas, no steam.

Control system

An easy to operate control system dependent project size and requirement to control equipment including start-stop, speed, diverting, merging, steering of goods as well as identification detection system.

General specifications

No.	Type	Specification
1	Frame	165X35X3, Standard Length 3000mm
2	Frame width	417,517,617,717,817,917
3	Length of odd sections mm	600-2400, increments of 600
4	Speed V (m/min)	15-70
5	Max. load capacity (kg/m)	Max: 50
6	Power supply	380V/3ph/50Hz 380V/3ph/60Hz
7	Drive type	Roller chain (default)
8	Motor mounting mode	Under slung on left Under slung on right
9	Support type	ST floor support (TOR≤2.38m) (default) Hanger (TOR > 2.38m) (default) None
10	Belt type	PVC Smooth/PVC V-Runner/PVC Rough Top
11	Belt joint	Cliper Lacing Vulcanized Lacing
12	Guard rail	Stainless Pipe Steel Channel None

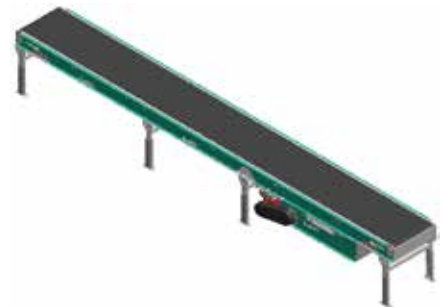
1BC01 End Drive Roller Bed Horizontal

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-2.2kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Length: 1650-20500
- Add auxiliary take-up when the length over 5m



1BC02 Center Drive Roller Bed Horizontal

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Length: 2700-30300
- Add auxiliary take-up when the length over 20m



1BC03 End Drive Slider Bed Horizontal

- Widths: 417, 517, 617, 717, 817, 917
- Motor power: 0.37-2.2kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Length: 1650-20250
- Add auxiliary take-up when the length over 5m



1BC04 Centre Drive Slider Bed Horizontal

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Length: 3000-30300
- Add auxiliary take-up when the length over 20m



1BC05 End Drive Roller Bed Incline

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Incline Angle: 5°-25°
- Length: ~20000



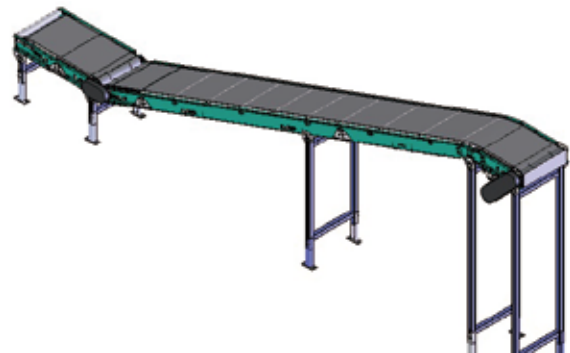
1BC06 Centre Drive Roller Bed Incline

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Incline Angle: 5°-25°
- Length: ~30000



1BC07 End Drive Slider Bed Incline

- Widths: 417, 517, 617, 717, 817, 917
- Motor Power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Incline angle: 5°-25°
- Length: ~20000



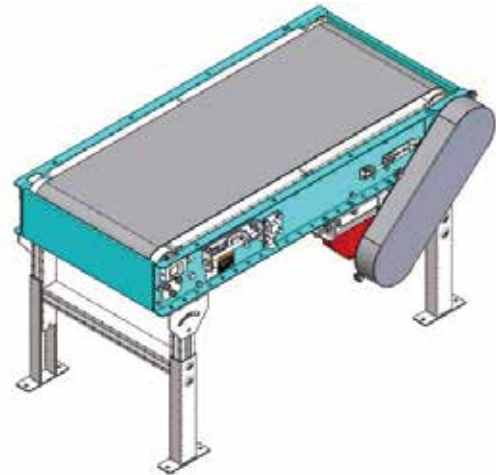
1BC08 Centre Drive Slider Bed Incline

- Widths: 417, 517, 617, 717, 817, 917
- Motor power: 0.37-4kW
- Speeds: 15, 20, 25, 30, 35, 40, 50, 60, 70
- Incline Angle: 5°-25°
- Length: ~30000



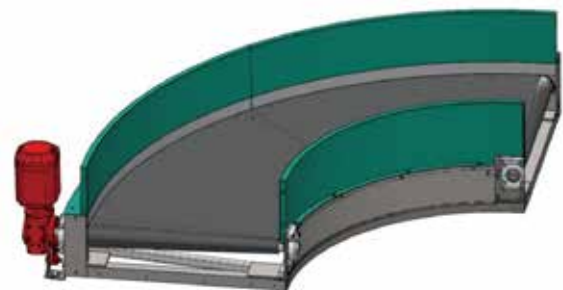
1BC09 Brake/Metering Belt Conveyor

- Widths: 417,517,617,717,817,917
- Motor power: 0.37-2.2Kw
- Speeds: 20,25,30,35,40,50,60,70,90
- Length: 1000,1200,1500,1800,2000



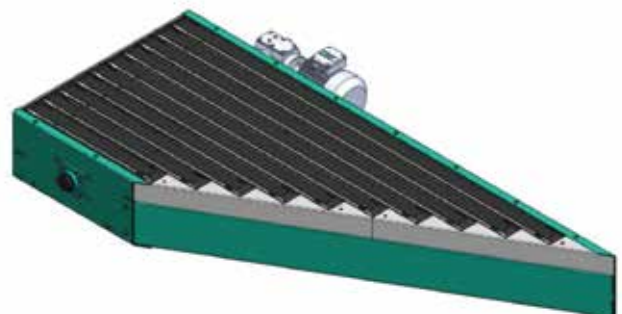
1BC10 Curve Belt Conveyor

- Widths: 517,617,717,817,917,1017
- Curve degree: 30°, 45°, 60°, 90°
- Motor power: 0.37-2.2Kw
- Speeds: 20,25,30,35,40,50,60,70,90



1BC11 Narrow Belt Merge Conveyor

- Widths: 574,655,736,817,997
- Degree: 30°
- Hand: Left or Right
- Motor power: 0.37-2.2Kw
- Speed: 20,25,30,35,40,50,60,70,90



Belt Conveyor

Sites Photos



Poly-V Belt Driven Roller Conveyors



Poly-V belt driven roller conveyors are quiet in operation and offer the possibility of both transportation and zero pressure accumulation. Used in conveyors with decentralized drives this type of conveyor roller can provide a highly modular solution creating the possibility to add/remove zones from conveyor schemes with ease.



Product features:

- Strong power transmission: V belts have outstanding mechanical drive capability, high torque transmission.
- Convenient combination: one drive for one unit for different length combinations.
- Zero-pressure accumulation: independent drive unit combinations can be used to provide zero pressure accumulation.
- Adjustable speed: use of 24V DC motorized roller and drive control card can adjust running speed.
- Low running noise: V belt driven, no driving noise.

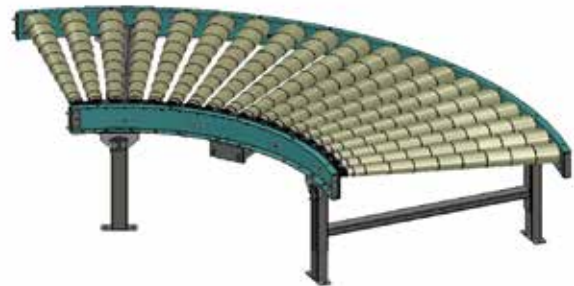
Poly-V Belt Driven Roller Conveyors

Poly-V Belt Conveyor Types



1BD04

Powered Roller Driven Conveyor Straight



1BD05

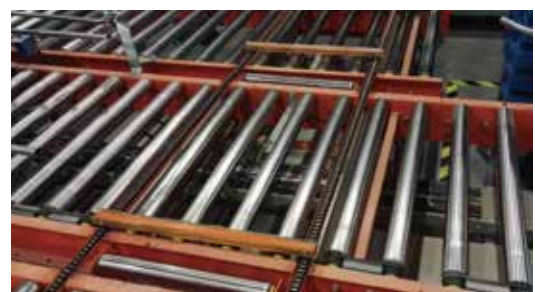
Powered Roller Driven Conveyor Curve



1BD06

Powered Roller Driven Conveyor Spur

Typical Use



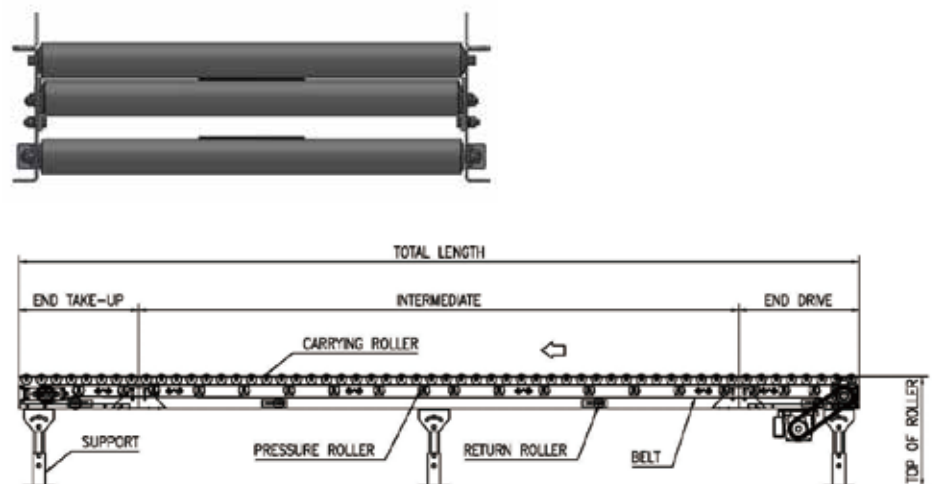
Belt Driven Roller Conveyors



Belt driven roller conveyor is a powered conveyor where the load or product is carried directly on carrying rollers. An endless flat belt drives the carrying rollers. Adjustable height pressure rollers located below the carrying rollers engage the belt with the carrying rollers, providing the power to transport the product.

Commonly used for long distance transportation, variety of merging line, receiving zone line and picking zone line.

Typical Cross Section



Belt Driven Roller Conveyors



1BD01 BDRC End Drive

- B/B Widths: 417,517,617,717,817,917
- Roller Pitch: 75,112.5
- Motor Power: 0.37-2.2Kw
- Speeds: 15,20,25,30,35,40,50,60,70
- Total Length: 1200-20000
- Add auxiliary take-up when length is over 5m



1BD01 BDRC Center Drive

- B/B Widths: 417,517,617,717,817,917
- Roller Pitch: 75,112.5
- Motor Power: 0.37-2.2Kw
- Speeds: 15,20,25,30,35,40,50,60,70
- Total Length: 1200-20000
- Add auxiliary take-up when length is over 5m

Typical Use



Gravity Conveyor



Non-powered or gravity conveyor is the most basic type and economical conveyor. They are usually mounted so that the elevation of the conveyor decreases from the beginning of the conveyor to the end of the conveyor and power to move units along the conveyor is provided by the Earth' s gravity.

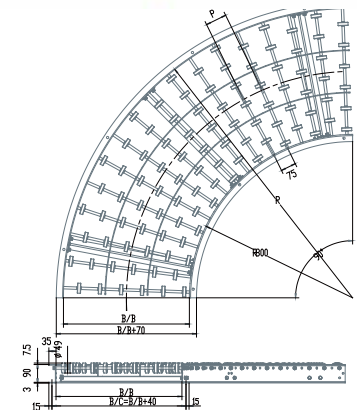
Gravity conveyor consists of either roller or wheel conveyors. They are ideal for moving unit loads that have a firm and flat bottom surface. Such as cartons, plastic totes etc.



Gravity Conveyor

1GC06 Skatewheel Curve

Model	1GC06
Roller diameter (D)	Φ49
Length (L)	1000、1500、2000、3000
Frame Width (B=B)	317, 417, 517, 617, 817
Formed steel for frame	90*35*3
Skatewheel Code	GB-02A
Roller Material	Steel
Number of wheels in each group	3, 4, 5, 6, 8
Skatewheel pitch (P)	90, 95, 99, 104, 114
R frame inside radius	800
R frame outside radius	1117, 1217, 1317, 1417, 1617
Support	TAE- II type
Max. load capacity (B/B=500)	50kg/m



Features:

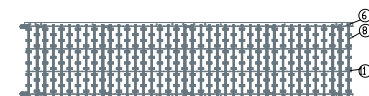
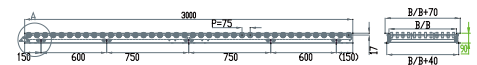
- Light load, low price.

Application:

- Gravity roller conveyors are used to transport light loads, such as cartons, magazines, etc. in an indoor environment.

1GC04 Skatewheel Conveyor

Model	1GC04
Roller diameter (D)	Φ49
Length (L)	1500、3000
Frame Width (B=B)	317,417,517,617,817
Formed steel for frame	90*35*3
Skatewheel code	GB-02A
Roller material	Steel
Number of rollers/wheels in each group	3,4,5,6,8
Skatewheel pitch (P)	75
Support	TAE- II type
Max. load capacity (B/B=500)	50kg/m



Features:

- Light weight, low price, economical and practical.
- Product flow by manual pushing or by gravity under its own weight when the conveyor is declined at a sufficient angle.

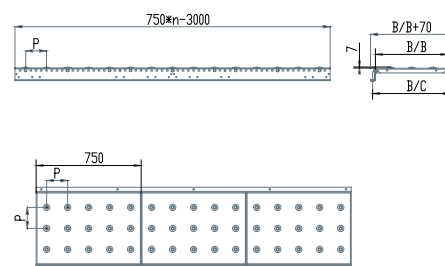
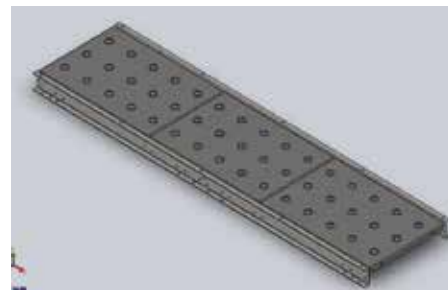
Application:

- Used in indoor environments, light load;
- Used for transport and temporary storage of boxed unit loads with flat bottom.

Gravity Conveyor

1GC08 Ball transfer platform

Model	1GC08
Roller diameter (D)	Φ49
Length (L)	1000、1500、2000、3000
Frame width (B=B)	317、417、517、617、817
Formed steel for frame	90×35×3
Skatewheel code	GB-02A
Roller material	Steel
Number of wheels in each group	3、4、5、6、8
Skatewheel pitch (P)	90、95、99、104、114
R frame inside radius	800
R frame outside radius	1117、1217、1317、1417、1617
Support	TAE- II type
Max. load capacity (B/B=500)	50kg/m



Features:

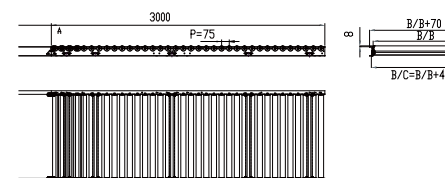
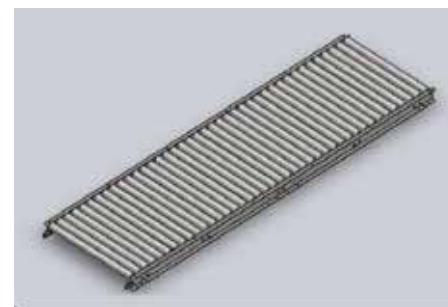
- Light weight, low price, economical and practical.
- Product flow by manual pushing or by gravity under its own weight when the conveyor is declined at a sufficient angle.

Application:

- Used in indoor environments, light load.
- Used for transport and temporary storage of boxed unit loads with flat bottom.

1GC01 Gravity roller conveyor

Model	1GC01
Roller diameter (D)	φ50.6
Length (L)	1500、3000
Frame width (B=B)	317、417、517、617、717、817、917
Formed steel for frame	90×35×3
Roller code	1300II type
Roller material	Steel
Mounting method for roller	Spring press-in type
Roller pitch(P)	75、112.5、150
Support	TAE-III type
Load per roller (B/B=517)	35kg
Max. load capacity (B/B=500,	150kg/m



Features:

- Light weight, low price, economical and practical
- Product flow by manual pushing or by gravity under its own weight when the conveyor is declined at a sufficient angle.

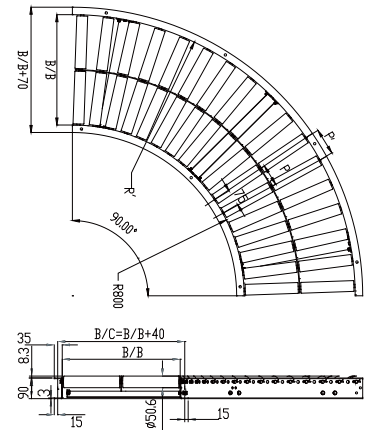
Application:

- Used in indoor environment, light load;
- Used for transport and temporary storage of boxed unit loads with flat bottom.

Gravity Conveyor

1GC03 Gravity roller curve

Model	1GC03
Roller diameter (D)	φ50.6
Angle	90°
Frame Width (B=B)	317、417、517、617、717、817、917
formed steel for frame	90×35×3
Roller code	1300II type
Roller material	Steel
Mounting method	Spring pressing mode
Roller pitch (P)	90、95、99、104、109、114、118
R frame inside radius	800
R frame outside radius	1117、1217、1317、1417、1517、1617、1717
Support	TAE- III type
Load per roller (B/B=517)	35kg
Max. load capacity (B/B=500P=75)	150kg/m

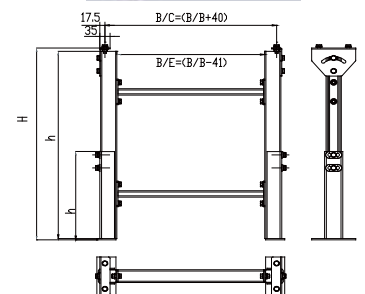


Application: Used in indoor environment, light load; Used for transport and temporary storage of boxed unit load with flat bottom.

Features: Light weight, low price, economical and practical. Double row of rollers arrangement , flexible turning of goods. Goods flow by manual pushing, no need for power.

Support

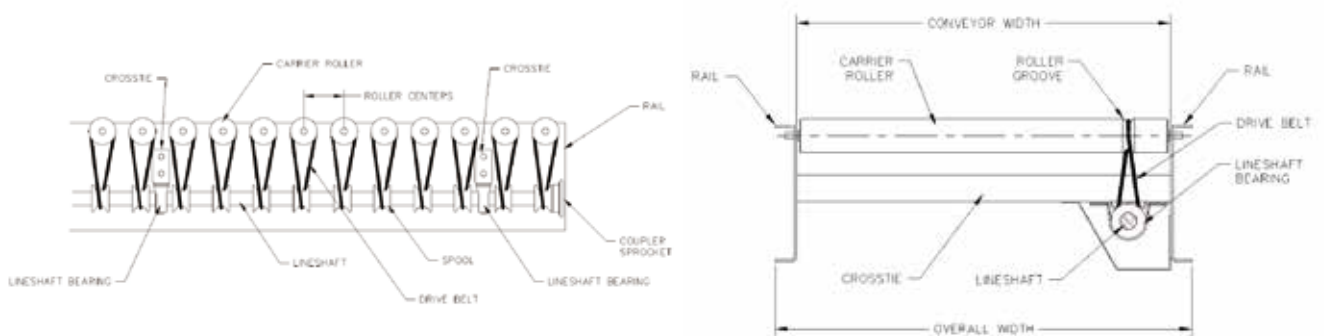
Order code	Adjustable length (H)	Frame width B/B	Mounting hole pitch B/C	Height of upper support H	Height of lower support h	Quantity of cross bar	Remark
D10-ST12005-225	225-245	317、417	B/B+40	205	115	1	Support 225-715
D10-ST12005-260	260-325			240	150	1	
D10-ST12005-310	310-365			290	150	1	
D10-ST12005-360	360-515			335	250	1	
D10-ST12005-460	460-715	817、917		435	350	1	Support 710-1715
D10-ST12006-710	710-1215	700		600	2		
D10-ST12006-1210	1210-1715	1200		600	2		
D10-ST12007-1722	1722-2215				1700	600	3



Line-shaft Driven Roller Conveyors



Line-shaft-driven live roller conveyors use a shaft running longitudinally with the frame structure and perpendicular to the rollers to provide the power source to the rollers. The rollers are individually driven by pre-tensioned elastomeric belts which pull individual drive spools against the line-shaft. Each spool delivers a fixed amount of torque from the line-shaft to the rollers depending on the amount of belt tension. If the torque requirement from the load on the rollers exceeds the fixed torque of the spool, the spool slips on the line-shaft like a clutch.





1LD01 Intermediate With Drive

- Standard Length: 3 meters
- B/B Widths: 417,517,617,717,817,917
- Roller Pitch: 75,112.5,150
- Motor Power: 0.25-1.5Kw
- Speeds: 15,20,25,30,35



1LD01120 Power Crossover

- B/B Widths : 417,517,617,717,817,917
- Roller Pitch: 75,112.5,150
- Fixed Length: 800



1LD01 Intermediate with Slave Drive

- Standard Length: 3 meters
- B/B Widths: 417,517,617,717,817,917
- Roller Pitch: 75,112.5,150
- Motor Power: 0.25-1.5Kw
- 600mm minimum length in 75mm increments.



1LD01 Intermediate Odd Section

- Section length is smaller than 3 meters of standard
- B/B Widths : 417,517,617,717,817,917
- Roller Pitch: 75,112.5,150
- 600mm minimum length in 75mm increments



1LD02 Curve 90°

1LD02 Curve 60°

1LD02 Curve 45°

1LD02 Curve 30°

- Curve Degree: 90°,60°,45°,30°
- Widths: 417,517,617,717,817,917
- Roller pitch of small end: 75mm
- Generally curves are slaved, also can have independent driver.

1LD04 Spur 30°/D10-LD410 spur 45°

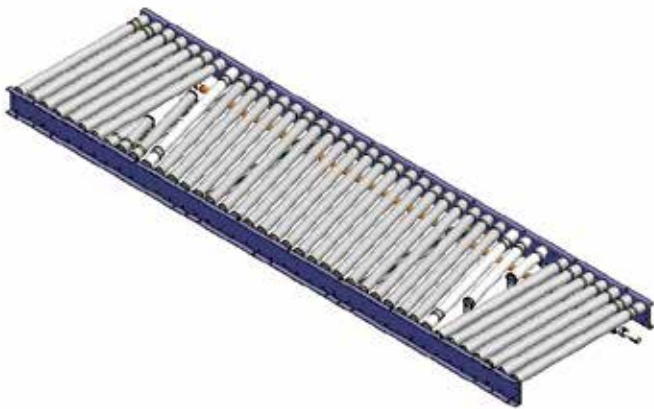
- Spur Degree: 30°, 45°
- Widths: 417,517,617,717,817,917
- Roller Pitch: 75mm
- Spurs have right and left direction
- Generally spurs are slaved, also can have independent driver.





1LD05 Gate Roller

- Horizontal section length 600, Gate section length 800
- Widths: 417,517,617,717,817,917
- Roller pitch: 75
- Gate section drive power is slaved form horizontal



1LD04 Skewed Roller

- Widths: 517,617,717,817,917
- Roller pitch: 75,112.5

Line-shaft Driven Roller Conveyor

Sites photos



Transfer Conveyor



Typical Use

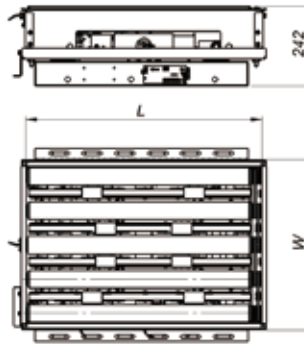


Transfer Types

1TC05 Motorized Roller Driven Transfer

Motorized roller driven transfer is an independently 90 degree transfer device, all power of movements are supplied by 24V DC motorized rollers. It contains 3 different types of motorized roller which used for the movements of lifting, rollers driving and belts driving. The running direction of rollers is perpendicular to belts, roller conveying unit and belt conveying unit are lifted interactive through the lifting base drive. That achieve the transfer function.

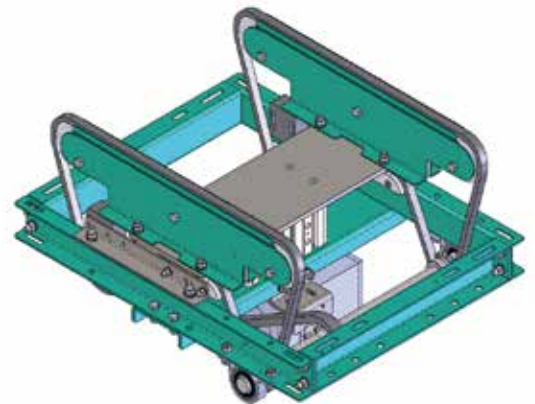
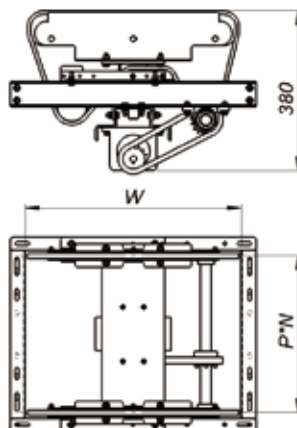
- Length: 717
- Widths: 417,517,617
- Height: 242
- Belt speed: 40-60m/min
- Roller speed: 40-60m/min
- Rate: 1800pcs/h (600*400 Tote)
- Load: max 30Kg
- Direction: Two-ways



1TC04 Chain Pop-Up Transfer

Chain pop-up transfer is designed for 90 degree transfer of products. It has two or multiple rows of chains that are raised and lowered by air cylinder to transfer 90 degree from the main module. The transfer chains are driven by an independently motor. It can be used with line-shaft driven roller conveyor or poly-v belt driven roller conveyor, suitable for standard size tote and low speed application.

- Width: 417,517,617,717
- Length: $N=2,3,4$ $P \geq 90\text{mm}$
- Height: 380
- Lift: Cylinder with 63mm bore
- Chain speed: 15-40m/min
- Rate: 800pcs/h (600*400 Tote)
- Load: max 30Kg
- Lift stroke: 25mm
- Direction: Two-ways

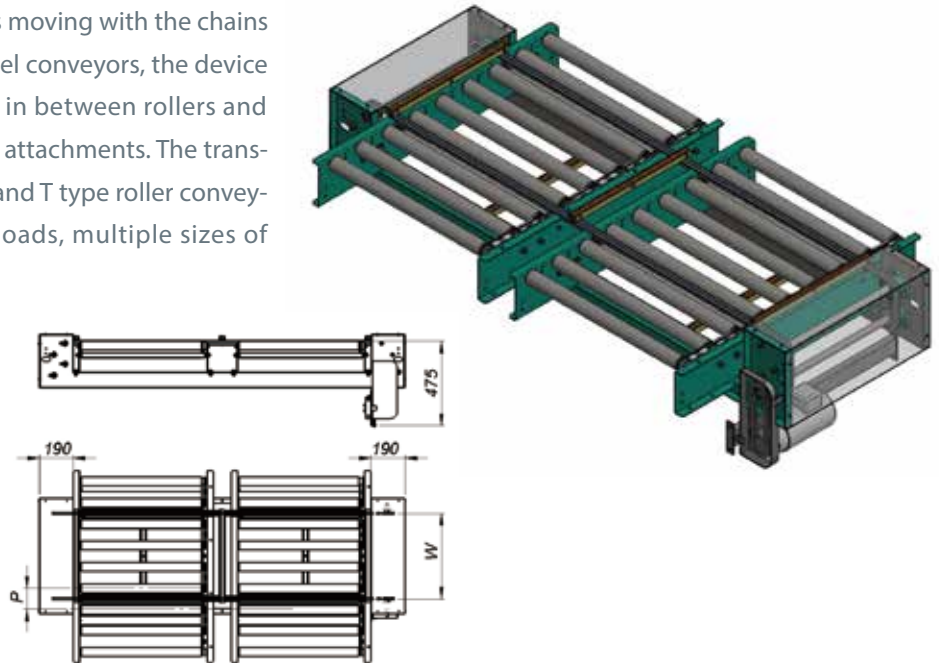


Transfer Types

1TC06 Chain Pusher Transfer

Chain pusher device is used pusher bars moving with the chains to transfer the goods to adjacent parallel conveyors, the device consists of tow row chains embedded in between rollers and multiple bars connected with the chain attachments. The transfer is suitable for double, three parallel and T type roller conveyors layout transfer, suitable for light loads, multiple sizes of goods and low speed.

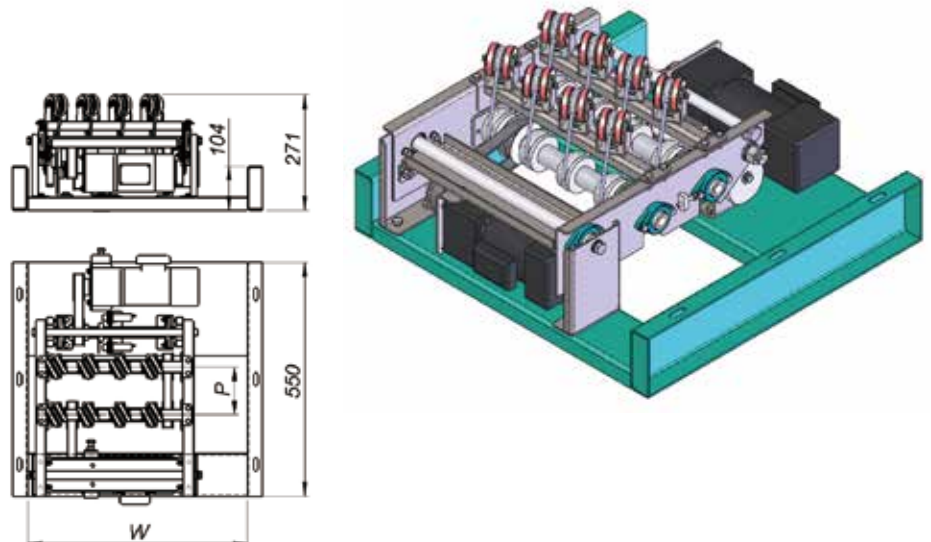
- Width: According to product size and roller pitch
- Chain Transfer Speed: 15-40m/min
- Rate: 800pcs/h (600*400 Tote)
- Load: max 25Kg
- Direction: Two-ways



1ST01 Skewed Wheel Diverter

Pop-up skewed wheel diverter is used a micro-motor to raise and lower two rows of powered wheels that are driven by an another micro-motor. Loads should be aligned to the divert side of the main conveyor and a minimum gap is required between loads for the diverter reaction time.

- Widths: 417,517,617
- Length: ≥ 500
- Height: 271
- Row Pitch: ≥ 100
- Lift Motor: 60W
- Transfer Motor: 60W
- Transfer Speed: 15-60m/min
- Rate: 900pcs/h (600*400 Tote)
- Load: max 30Kg
- Lift Stroke: 8mm
- Direction: One-way



Narrow-belt Merge Conveyor



The narrow belt merge conveyor is widely applied in conveyor and sortation systems. Damon's new MB-D1002 narrow belt merge conveyor is modular in design. Fixed side by side on the frame with several standard series unit module in a corresponding sequence. One drive roller drives the narrow belt in all unit modules. A unique tensioning and offset device is used to meet requirements for narrow belt tensioning and offset in each unit module. It provides high cost performance thanks to its new mechanical structure to improve comprehensive performance and life cycle.

● Fast assembling and disassembling, simple maintenance

The new narrow belt merge conveyor uses a modular structure. Unit modules and frames are installed separately. When disassembling and repairing, there is no need to disassemble each unit module and frame. You only need to disassemble the unit which needs to be repaired. This makes assembling, disassembling and maintenance much easier and improves their efficiency.

● Standard product, low cost

The new narrow belt merge conveyor uses a modular unit structure from standardized parts which reduce product lead time as well as reducing the maintenance costs.

● High speed, low noise

Maximum speed of the new narrow belt merge conveyor can be 120m/min which can meet needs of high efficiency conveying and sorting. Unit module rollers are constructed from a new plastic material which reduce noise when it is running.

● Unique tension & offset

The new narrow belt merge conveyor adopts a unique tensioning and offset device for narrow belts of different lengths to improve the life cycle of parts.

● Stable and reliable conveying

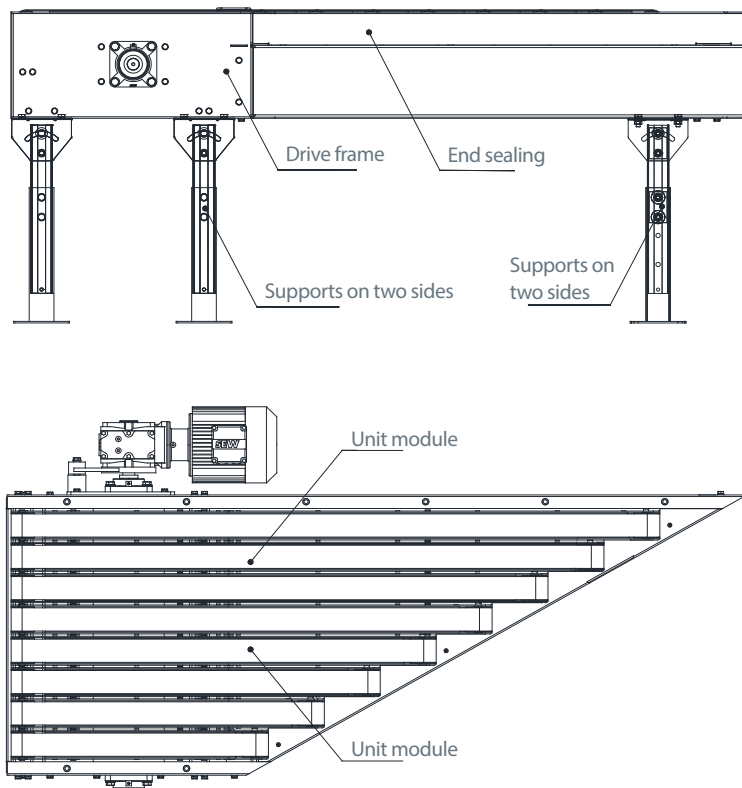
The new narrow belt merge conveyor can convey smaller products by reducing the gap between the narrow belts. At the same time, the unit module joints ensure a stable and reliable conveying operation.

● Simple look, easy to use

The new narrow belt merge conveyor uses a fully enclosed structure with a simple look. As the narrow belt merge is a free standing unit, when used with other equipment, there is no need for connecting braces or brackets which provides easy installation and maintenance.

Narrow-belt Merge Conveyor

Schematic diagram



Example



General specifications

No.	Item	Specification
1	Conveyor type	Roller drive, narrow belt conveying
2	Merge rate (pcs/h)	1,800~5,500 (L=500)
3	Conveying speed (m/min)	30~120
4	Effective width (mm)	574, 655, 736, 817, 979
5	Merge angle	30°, 45°
6	Merge direction	Left, right
7	Type of conveyed goods	Carton, tote, package
8	Dimension of conveyed goods	200-1,350(L), 100-900 (W), 30-600 (H)
9	Load capacity (kg)	50kg (Max)

Application of narrow-belt merge conveyor

Narrow belt merge conveyor is usually used in courier, logistic, warehouse, food and pharmaceutical industry.

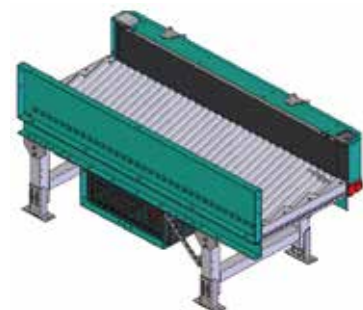
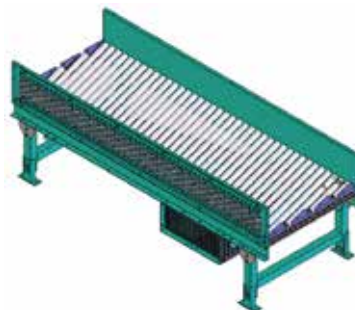
Belt Driven Skewed Roller



Belt driven skewed roller conveyor is sometimes used at infeed end of an accumulation conveyor to align the package to one side of conveyor. Typical applications for edge alignment include: accumulation of multi-width cases, sortation, and bar code scanning.

Product features:

- B/B Width: 617,717,817,917,1060
- Roller Pitch: 60,75
- Skewed Rollers Direction: L/R
- Motor Power: 0.37-1.5Kw
- Speeds: 30,35,40,50,60,70,90
- Total Length: 2000-3000
- Alignment Side: Skate Wheel or Belt Conveyor



1CC01 Chain Conveyor



Product features:

Maximum length of standard chain conveyor is 6,000mm

Simple structure, stable conveying of product, complies with international safety standards

Modular design, easy installation and maintenance

Suitable for indoor pallet conveying



1CC01 Chain Conveyor

Structure

The chain conveyor structure comprises the frame, drive assembly, supports, chain and guard rail assembly etc. The motor mounted on the drive frame drives the chains on both sides by a common shaft. Conveying chains move along the track on the frame. There is a chain tensioning unit on the drive frame. The frame is available in either steel or aluminum.

Drive

The standard conveyor is equipped with high quality gear motor. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements. Power is determined by loading, conveyor speed and length etc.

Tensioning

Tensioning units for the chain are on both sides of the drive frame. Tensioning of the chain is achieved by adjusting the position of the take-up pulley with the tensioning adjusting bolt. The chain on each side is tensioned separately.

Guardrail

The standard guard rail is constructed from formed steel. Special guard rails are available upon request.

Conveyed products

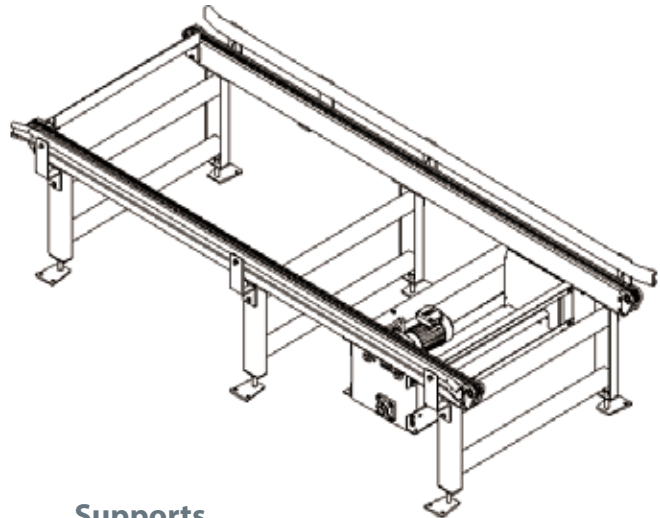
Conveying products on pallets.

Chain type

Standard chain conveyor uses C10B-2 double row straight chain.

General specification :

No	Type	Specification
1	Length	1200-6000mm
2	Chain centre	850, 1050,1250
3	Frame A	Formed steel channels with box section, whose lower section is cut out.
4	Frame B	Aluminium profile with T slot.
5	Chain rail	Extruded UHMW-PE.
6	Chain	Flat linked duplex roller chain with 5/8" pitch.
7	Motor power	0.37kw-3kw
8	Speeds	12, 15, 18m/min.
9	Capacity	1500kg/P Total 3000kg
10	Operation	One-way or Reversing



Supports

Welded or bolted support. Adjustable feet provide height adjustment within the range of ± 30 mm. Distance between supports is determined by system requirements. Generally the distance is between 800-1500mm.

Safety

Drive components are fitted with guards. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Surface treatment

When constructed from mild steel, the frame, drive unit and supports are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc. Standard galvanization treatment is used for double chain roller, adjustable support feet, photoelectric bracket etc.

Control

As per system requirements.

1CD04 Roller Conveyor



Product features:

Maximum length of standard chain conveyor is 6,000mm

Simple structure, stable conveying of product, complies with international safety standards

Modular design, easy installation and maintenance

Large bearing surface, high carrying capacity, long service life

Suitable for indoor pallet conveying



1CD04 Roller Conveyor

Structure

The roller conveyor is comprised of the roller section, drive unit (including guard), chain, support etc. An under slung mounted gear motor drives two rollers via chain, these two rollers separately drive front and back rollers.

Drive

The standard conveyor is equipped with high quality gear motor. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements. Power is determined by loading, conveyor speed and length etc.

Tensioning

Tensioning of the chain is achieved by adjusting the height of the gear motor which is done by adjusting bolts on the drive frame.

Drive chain type

National standard 10B-1 drive chain

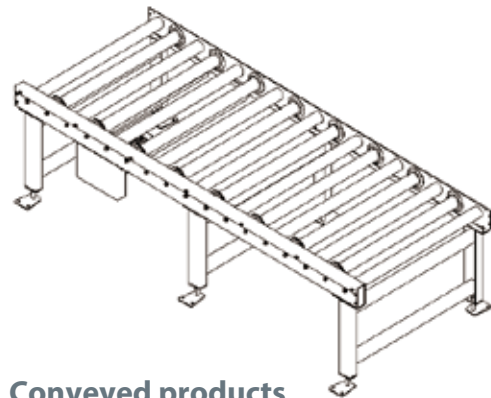
Rollers

Standard roller diameter is 76mm. Roller sprockets are 10B-16T. Optional 89mm diameter rollers are also available. High quality bearings are used to ensure smooth rotation with low resistance, low noise and long service life. Rollers are constructed from standard welded steel tube with galvanization treatment on the roller surface. Roller conveyors with low speeds and light loading may use 76mm diameter rollers with an aluminum lock ring.

Available roller pitch 111.2, 127, 143, 158.8, 174.8, 190.5mm.

General specification :

No.	Type	Specification
1	Length (mm)	1500-6000
2	Widths (mm)	971, 1171, 1371
3	Frame (mm)	Cold rolled steel angle L140X80X40X5.
4	Rollers (m/min)	76/89 diameter with double sprocket 10B-16T and 20 diameter shaft mounted on frames with female screws.
5	Roller pitch	127, 142, 175.
6	Drive unit	Outside or inside.
7	Motor power	0.37kw-1.5kw
8	Speeds	12, 15, 18m/min.
9	Capacity	1500kg/P
10	Operation	One-way or Reversing



Conveyed products

Conveying products on pallets

Supports

Welded or bolted support. Adjustable feet provide height adjustment within the range of ± 30 mm. Distance between supports is determined by system requirements. Generally the distance is between 800-1500mm.

Safety

Drive components are fitted with guards. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Surface treatment

When constructed from mild steel, the frame, drive unit and supports are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc. Standard galvanization treatment is used for double chain roller, adjustable support feet, photoelectric bracket etc.

Control

As per system requirements.

1TC01 Roller Transfer



Product features:

Electric lifting and conveying

Compact structure, complies with international safety standards

Modular design, easy installation and maintenance

Four angle crank arm synchronizing lifting, stable lifting and reliable positioning

Used for right angle transition and direction changing of pallets, indoor use



1TC01 Roller Transfer

Structure

The transfer unit is comprised of an upper transfer sub assembly and lower lifting section. Roller transfer and chain transfer options are available. Optional accessories include end stops, drive side stops and driven side stops.

Conveying capacity

Standard time for transfer lifting from the lowest position to the highest position is 3 seconds with a lifting stroke of 80mm.

Drive

The standard conveyor is equipped with high quality gear motor. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements.

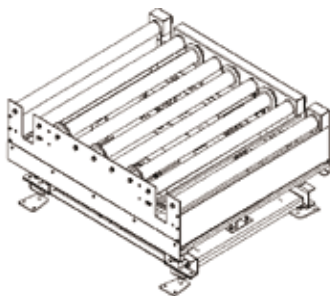
Power is determined by loading, conveyor speed and length etc. Standard motor power 0.37, 0.55, 0.75kw. Standard power for lift motor is 0.75kw, 1.1kw optional.

Tensioning

Tensioning of the chain is achieved by adjusting the height of the gear motor which is done by adjusting bolts on the frame.

Tensioning the roller conveyor motor chain is done by adjusting the height of the motor.

Tensioning the chain conveyor chain is done by adjusting the position of the drive shaft.



1TC01 Roller Transfer

Roller

Standard roller diameter is 76mm. Roller sprockets are 10B-16T. Optional 89mm diameter rollers are also available. High quality bearings are used to ensure smooth rotation with low resistance, low noise and long service life. Rollers are constructed from standard welded steel tube with galvanization treatment on the roller surface.

Roller conveyors with low speeds and light loading may use 76mm diameter rollers with an aluminum lock ring.

Available roller pitch 127, 143mm.

Conveyed products

Conveying products on pallets.

Supports

Welded or bolted support. Adjustable feet provide height adjustment within the range of ± 30 mm.

Support height is determined by conveying surface height.

Safety

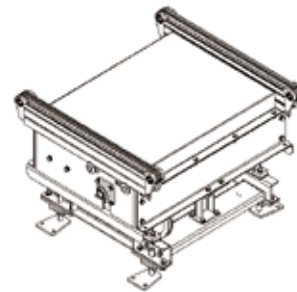
Guards are fitted to the drive unit and roller sprockets. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Surface treatment

When constructed from mild steel, the frame, drive unit and supports are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc. Standard galvanization treatment is used for double chain roller, adjustable support feet, photoelectric bracket etc.

Control

As per system requirements.



1TC02 Chain Transfer

Drive chain type

10B-1 chain for roller transfer. 16B-1 chain for lifting mechanism.

C10B-2 double row straight chain for chain transfer. 16B-1 chain for lifting mechanism.

1TC01 Roller Transfer

General specification :

No	Type	Specification
1	Length	1400
2	Widths	971, 1171, 1371
3	Height	500 (min)
4	Up/Down drive unit	A gear motor drives two separate cam lifting mechanisms.
5	Lift motor	0.75kw-1.5kw
6	Lift stroke	80mm
7	Transfer	Roller conveyor or chain conveyor
8	Transfer motor	0.37kw-0.75Kw
9	Drive location	Outside or inside
10	Travel speeds	12, 15, 18m/min
11	Capacity	1500kg
12	Travel operation	One-way or Reversing

1TC02 Chain Transfer

General specification :

No	Type	Specification
1	Length	970 (min)
2	Chain centre	850, 1050, 1250
3	Height	500 (min)
4	Up/Down drive unit	A gear motor drives two separate cam lifting mechanisms.
5	Lift motor	0.75kw-1.5kw.
6	Lift stroke	80mm.
7	Transfer	Roller conveyor or chain conveyor.
8	Transfer motor	0.37kw-0.75Kw.
9	Drive location	Outside or inside.
10	Travel speeds	12, 15, 18m/min.
11	Capacity	1500kg.
12	Travel operation	One-way or Reversing

Turn Table



Pallet Conveying Series

- Power driven rotation and conveying
- Compact structure, complies with international safety standards
- Modular design, easy installation and maintenance
- Rotation angles 90°-180°
- When changing direction, pallets retain their original orientation
- Used for changing pallet direction, indoor use



Chain Turntable



Roller Turntable

Turn Table

Structure

The turntable is comprised of an upper conveying unit and a lower rotating unit. Options for roller conveyor and chain conveyor are available.

Drive

The standard conveyor is equipped with high quality gear motor. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements. Power is determined by loading, conveyor speed and length etc.

Tensioning

The roller conveyor sub assembly uses a shaft mounted gear motor directly connected with the drive roller. Chain tensioning of chain conveyor sub assembly is the same as a chain conveyor. The rotating unit is driven by gear engagement. The gear motor position is adjusted to fine tune the gear engagement status.

Roller

High quality rollers are used for the roller turntable offering low resistance, low noise and long service life.

Conveyed products

Conveying products on pallets.

Drive chain type

10B-1 chain for the roller style turntable. C10B-2 double row straight chain for the chain style turntable.

Supports

Welded or bolted support. Adjustable feet provide height adjustment within the range of ± 30 mm.

Support height is determined by conveying surface height.

Safety

Guards are fitted to the drive unit of the turntable. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Surface treatment

When constructed from mild steel, the frame, brackets and guards are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc. Rust preventing oil is applied to the gears.

Control

Emergency stop switch and manual control buttons for different functions of operation.

1TT01 Roller Turntable

General specifications:

No.	Type	Specification
1	Length	1400
2	Widths	971, 1171, 1371
3	Height	500 (min)
4	Rotation	90 / 180 degrees, clockwise and counter-clockwise
5	Rotation motor power	0.37kw
6	Rotation speed	90°/ 4 sec
7	Roller speeds	12, 15, 18m/min
8	Transport motor power	0.37-0.55kw
9	Capacity	1500kg
10	Travel operation	One-way or Reversing

1TT02 Chain Turntable

General specifications:

No.	Type	Specification
1	Length	1400
2	Chain centre	850, 1050, 1250
3	Height	500 (min)
4	Rotation	90 / 180 degrees, clockwise and counter-clockwise
5	Rotation motor power	0.37kw
6	Rotation speed	90°/ 4 sec
7	Chain speeds	12, 15, 18m/min
8	Transport motor power	0.55kw
9	Capacity	1500kg
10	Travel operation	One-way or Reversing

1PS01/02 palletizer and depalletizer

Structure

Our palletizer and depalletizer utilizes a symmetrical structured frame. Components include the frame, flexible bracket, guide bracket, lifting tynes, drive unit, safety guards etc.

Palletizers and depalletizers only have lifting, depalletizing or palletizing functions and do not include a conveyor. In automated systems, the palletizer or depalletizer is used in conjunction with horizontal conveyors (chain conveyor).

Rate

Maximum rate: 120 p/h.

Drive

The palletizers and depalletizers are equipped with high quality gear motor. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements.

Power is determined by loading, speed etc. Standard power for the lift motor is 1.1kw. Standard power for the position motor is 0.18kW (depalletizer only).

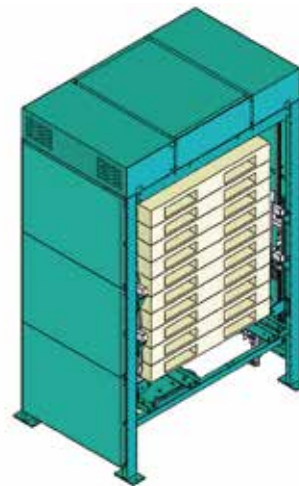
Chain and tensioning

12A-1 chain for the lifting chain and lower positioning motor. 16A-1 chain for upper lift motor.

The lift chain is tensioned by adjusting the chain on the flexible bracket. Tensioning the motor chain is done by adjusting the position of the motor.

Rollers

The equipment is fitted with lagged rollers which provide low resistance and low noise.



Conveyed products

Pallets in a stack or single pallet

Foot

Welded foot plate under the bottom of the frame structure. The four feet and installation base are adjusted by shims to ensure the equipment is level.

Safety

Guards are fitted to the drive unit of the palletizer and depalletizer. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Surface treatment

When constructed from mild steel, the frame, brackets and guards are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc. Rust preventing oil is applied to the gears.

Control

Emergency stop switch and manual control buttons for different functions of operation.

General specifications :

No.	Type	Specification
1	Length (mm)	Standard length is 1207mm
2	Width (mm)	According to standard pallet sizes, e.g. 1200mm pallet width, total width 1806mm
3	Height (mm)	Dependent on pallet quantity and horizontal conveying surface height, typically less than 3000mm
4	Lifting speed and stroke (m/min)	Lifting speed 6.8m/min (frequency conversion speed control), lifting stroke 380mm
5	Loading capacity (kg)	Standard: maximum total weight 400kg ; Pallet handling capacity: maximum 10 pallets

1PS01/02 Pallet Stackers & Distackers



- Powered drive for lifting pallets
- Compact structure, complies with international safety standards
- Modular design
- Easy installation and maintenance
- Swivel type tynes support the pallet, high reliability
- Suitable for depalletizing pallet stacks and palletizing single pallets, indoor use



1SV01 Shuttle Vehicles

Structure

The shuttle car structure is comprised of the conveying unit, car body, power supply system, track and stop etc. Options for the conveying unit include roller conveyor and chain conveyor.

Positioning accuracy

Positioning accuracy +/-5mm.

Safety

Guards are fitted to the drive unit of the shuttle car. Caution labels are placed wherever injuries may occur to remind users of danger and avoid accidents.

Drive

The shuttle cart is equipped with high quality gear motors. Configuration position, output speed and power etc. of the gear motor will be determined by system requirements.

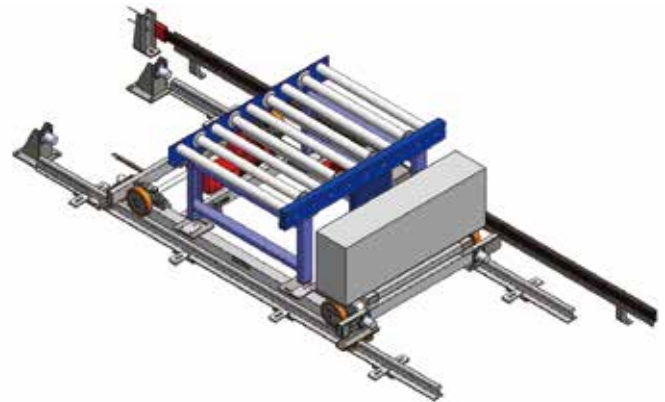
Power is determined by loading, speed etc. Standard power for the conveyor motor is 0.37kw. Standard power for the running motor is 3.0kW.

Drive chain

10B-1 chain for roller conveyors. C10B-2 double row straight chain for chain conveyors.

General specifications :

No.	Type	Specification
1	Conveyor length	1500
2	Roller widths	971, 1171, 1371
3	Chain centre	850,1050,1150
4	Height	Min 500mm
5	Conveyor power	0.37kw-1.5kw
6	Speeds	12, 15, 18m/min.
7	Shuttle power	3Kw
8	Shuttle speed	140m/min
9	Capacity	Max 1500kg
10	Electrical power	Sliding contact



Power supply

The shuttle car obtains its power from a safety sliding contact which runs on a standard light power rail mounted adjacent to the shuttle car track.

Surface treatment

When constructed from mild steel, the frame, brackets and guards are painted with an epoxy resin coating. Blackening treatment is used for sprocket and shaft housing parts etc.

Control

Emergency stop switch and manual control buttons for different functions of operation.

Shuttle Vehicles



Product features:

- Laser checking and positioning system with high positioning accuracy
- Compact structure, complies with international safety standards
- Modular design
- Easy installation and maintenance
- Utilizes infrared wireless communication
- Fitted with anti-collision device and system failure warning functions
- Suitable for tobacco, pharmaceutical, food, electronics, chemical, mechanical and light industries etc

Automatic truck loading / unloading system



Ancra System B.V. is a Holland company, The company was established in 1977, Ancra is engaging in ATLS' designing, manufacturing, installing and service for more than 30 years. Its customers are located in US, Germany, France, Spain, Belgium, Poland, Russia, China and so on. We have serviced for P&G, Fedex, Sterigenics etc. In October 2007, Damon signed the "cooperation agreement" with HKs, and Damon is Ancra's exclusive partner in China and Pacific area.

Product features:

- Efficient, economical solution
- High-quality ATLS equipment
- Most competitive price
- Timely and thoughtful local service
- Speed up your loading (unloading) process



Automatic truck loading / unloading system

What is automatic truck loading/unloading system (ATLS)?

ATLS is a system that can accelerate your loading/unloading process. It requires two 'combined' systems: one system in the trailer and a 'fixed' installation inside the loading and unloading dock. A cargo trailer will be fully loaded within a few minute after you press the button.

The benefit of ATLS - Less is more

- Less working time because trailer cargo can be loaded or unloaded in a few minutes.
- Fewer logistics personnel due to automation of the loading and unloading process.
- Fewer fork-lift trucks and associated equipment due to mechanization of the loading and unloading process.
- Fewer loading and unloading docks because each dock can handle higher volumes.
- Reduced damage of goods and equipment due to a controlled loading and unloading process.
- Safer working environment for personnel.

ATLS equipment that Damon & Ancra provide

There are many kinds of ATLS equipment, and the followings are some general types:

- Slat conveyor system;
- Chain conveyor system;
- Belt conveyor system;
- Rollertrack system;
- Skate system;
- Others.

Slat conveyor system

- It consists of aluminum slats or steel slats, Chain and slat guide supported by wear resistant plastic profiles.
- It suits for different kind of loads with various dimensions.
- It is easy to install in the truck due to the low height (min. 135mm) and light weight.
- Industries: auto industry (tyre); consumer goods (paper roll), industrial (special pallet, container with wheel).



Chain conveyor system

- It is driven through chain, and is ideal for standardized pallets.
- The length of chain conveyor system can be up to 14m with a maximum load of 30T.
- It can be conveniently transformed and mounted in existing or new trailers without the need for major bodywork modifications.
- It is perfect for dry freight trailers as well as refrigerated and deep freeze trailers.
- Applicable industry: foods, beverage, standard pallet packing, etc.



Automatic truck (un)loading system

Belt (parcel) conveyor system

- Belt is clear and free of grease.
- Belt is sealed and suitable for various item dimensions from small envelopes to middle-sized carton.
- Unloading of a truck can be done within 15 minutes with efficiency improved by 200%.
- Applicable industries: express mail service (envelope, parcel, and other items of different sizes and types.)



Rollertrack system

- Zinc-plated steel rollers mounted on extruded aluminum frames and enclosed with a steel top plate.
- When in use, the rollers are raised pneumatically to lift the pallets. The pallets are moved by hydraulic wheel drives or manually.
- When not in use, the steel rollers are retracted into the section which has the advantage that work floor or cargo floor can be driven over with a fork-lift truck or hand pallet truck.
- It can also be incorporated into elevators, which make it much easier to load and unload trailers with varying floor heights.
- Applicable industry: air freight, air pallet, ULD and container.



Skate conveyor system

- The main function is to automatically load and unload a complete load in one go. However, the pallets are first of all configured to create a compact unit, ready for handling.
- No automatic loading/unloading systems are required in the trailer, so no extra investments needed.
- The skate system is a fixed system need to be installed at a fixed location for the loading / unloading platform.
- Ancra's skate system allows 33 Euro pallets to be loaded / unloaded in a process that is completed in six minutes.
- Applicable industry: palletized packing materials.



Others

Ancra's continuous drive for innovation and improvement results in some surprising insights and remarkable solutions. Examples are multi-layer cargo floors, different speeds within one system and compacting and configuring loads.

Application Cases

Our ATLS equipment has become the most widely used system in the market and has been used in many industries worldwide, such as: auto manufacturing; air cargo; parcel, food & beverage, consumer goods etc.

Slat conveyor system projects

DHL, 2006, Belgium.

Indesit, 2005, Russia.

DistriQ-De Telegraaf, 1999, Netherlands.

Ancra supplied this system for DHL in 2006; it consists of 4 tracks of aluminum slats moving with a speed of 6 m/min, capable for loads of 30 tons at one time.



Indesit

Automatic truck (un)loading system

Chain conveyor system projects

Procter & Gamble, 2007, France.

Snack Food Poco Loco, 2008, Belgium.

We supplied 6 sets chain conveyor system for P&G in 2007; those are used in distribution center in France.



DHL-Dpont

Belt conveyor system projects

La Poste/ Coliposte, 2008, France.

Ankra have designed, produced a fully automatic system for unloading trailers with parcels. Loose-loading of the trailers increases the load factor by almost 300% compared to the conventional use of trolleys.



Procter & Gamble



Snack Food Poco Loco

Rollertrack conveyor system projects

Van de Put Fresh Cargo, 1999, Netherlands.

In Van de Put Fresh Cargo project in 1999, the system installed consists of 4 sections divided over 4 docks. All sections are flush with the concrete floor and can be fully crossed with fork-lift trucks.



La Poste/Coliposte

Ankra-ATLS Expert

Ankra is a company established in 1977 in Netherlands, engaging in ATLS product design, manufacturing, installation and service for over 30 years. Ankra has customers from USA, Germany, France, Britain, Spain, Belgium, Poland, Russia and China, including P&G, Fedex and Sterigenics. Ankra is an expert of ATLS.

Damon and Ankra signed a cooperation agreement regarding ATLS on Oct. 2007. Damon is the exclusive partner of Ankra in China and Asian-Pacific region, developing business including engineering solution, technology, manufacturing and after-sales service.



Damon

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