WORKPIECE TRAY CONVEYOR

TRANSVERSE UNIT
CURVE UNIT

LIFT UNIT
POSITIONING UNIT

ROTATOR UNIT
CONTROL UNIT

Accumulated Roller Conveyor System

CONVEYOR SYSTEM

Vitrans

Vitrans Automation

Heavy Duty Conveyor System

Maximum Allowed Load Over 4000KG

Design the conveyor system layout with the standardized modules

Workpiece Pallet	Roller Conveyor	Rotary Unit	Diverter	Elevator	Positioning Unit	Control Parts

All the modules are with flexible design and assembled

The modular design make the conveyor system easy to be set up with good durability and consistency.

Produced with high quality technology:
Drive by gear and king shaft

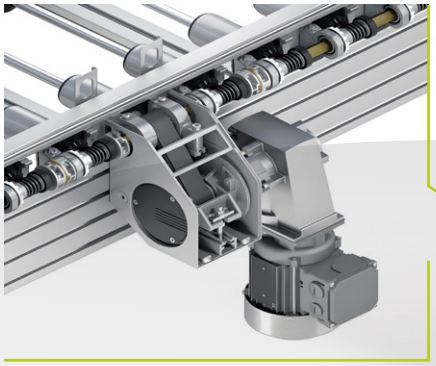
The advantages of driving by gear and king shaft compare to chain:
①Easy to maintain ②Low noisy ③Low energy consume and high efficiency
④Drive force adjustable ⑤Allowed all-day continue operating

Easy to set up and operate with flexible design

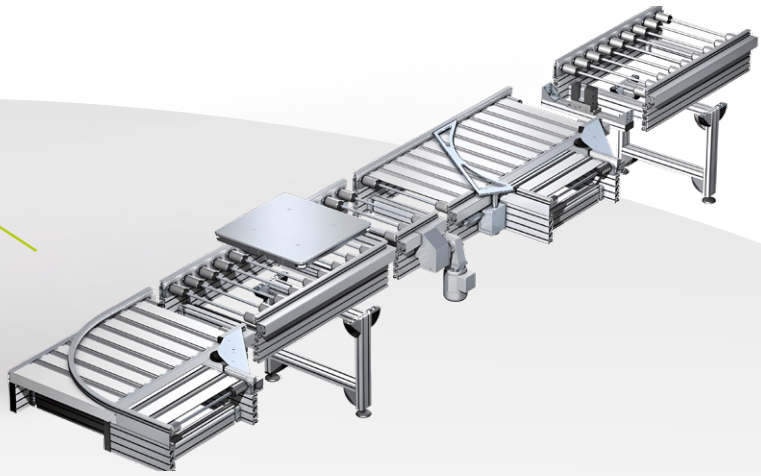
All components are designed modularly and produced in a standardized manner

Efficiency and scalable system design

①Motion direction can be easily controlled by diverter and rotary
②Reliable structure
③Short Leadtime by high standardized components and production process
④Suitable for various product manufacturing



Drive Unit



Roller Conveyor

A modular designed roller conveyor type for heavy workpiece transfer.
Rollers are driven by gear and king shaft
Removable transmission mechanism protective cover for safety operating and maintaining.

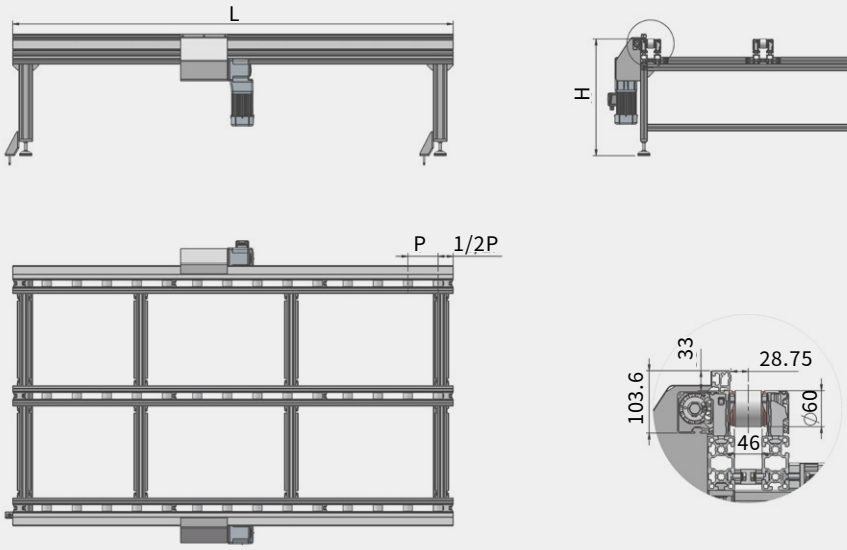
Deliver Note

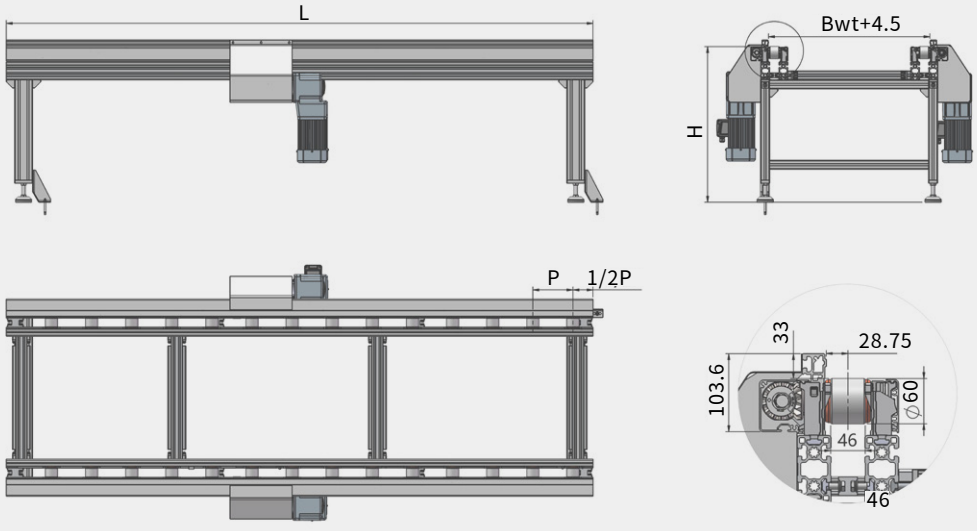
Recommend Accessories
Connection Parts
Conveyor Legs
Foundation Bracket and Bolts

Deliver Status
Assembled

- Compact and modular design, easy to maintain
- Strong aluminum conveyor section
- Flexible drive unit location
- Adjustable driven force
- Allowed reverse operating
- Allowed accumulation
- Roller transfer medium
- Allowed maximum total load: 4000KG

Product Dimensions





Product Parameter

Transfer Medium		Roller
Roller Material		Stainless Steel
Roller Pitch	P	130 / 195 / 260
Conveyor Width(mm)	Bwt	300≤Bwt≤1200
Conveyor Length(mm)	L	1000≤L≤6000
Conveyor Speed(m/min)	V	Vmax=15m/min
Allowed Total Load(kg)		4000
Allowed Payload		100KG/Roller
Drive Method		Gear and King Shaft
Voltage	U	220/380AC
Frequency	f	50Hz
Motor Connection	AT	Terminal Box

Ordering Information

TS7	King Shaft Drive Type Accumulated Roller Conveyor
BG ☐	BG1：Dual Lane Roller Conveyor　　BG2：Three Lane Roller Conveyor
B ☐	Conveyor Width：300≤W≤1200
L ☐	Conveyor Length：1000≤L≤6000
P	Roller Pitch
V	Conveyor Speed
Motor Brand	ZY075(Sumitomo750W)/JY075/SEW075(SEW750W) /XMZ075(Siemens750W)
U	220V / 380V

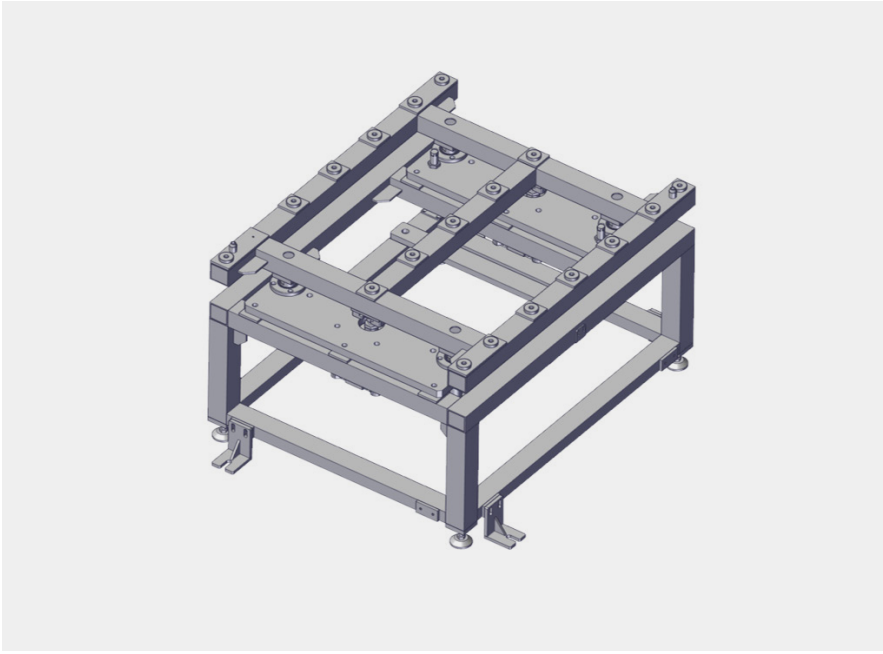
Ordering Example

TS7-BG1-B500-L4000-P130-V12-JY075-380

Roller Conveyor	Dual Lane	Conveyor Width	Conveyor Length	Roller Pitch	Conveyor Speed	Motor Brand	Voltage
TS7	BG1	B=500mm	L=4000mm	P=130mm	V=12m/min	JY075	380V

Heavy Duty Positioning Unit

To ensure the precise execution of assembly or testing,
workpiece need to be stopped and located at designated workstation.
Positioning unit is used to locate workpiece at designated workstation.



Deliver Note

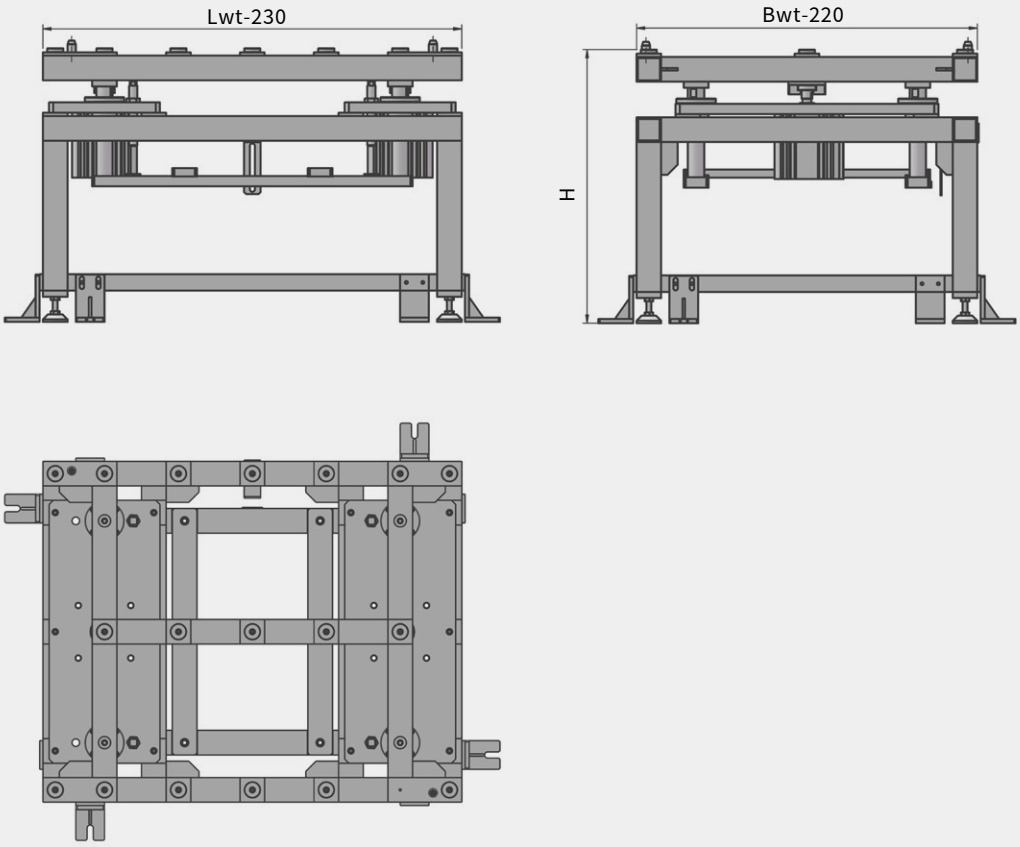
Deliver Scope
Positioning Unit
Protective Cover
Magnetic Switches
Throttle Value(ϕ6)

Recommend Accessories
Stopper
Solenoid Valve

Deliver Status
Assembled

- Used with stopper to locate workpiece at station.
- Suitable for small lifting height situation.
- Repeat positioning precision: ±0.3mm
- Support maximum pallet size up to 1200*1200mm
- Pallet lifting height 5mm
- Dual cylinder drive, maximum load up to 400kg
- Support customization

Product Dimensions



Product Parameter

Pallet Width(mm)*	Bwt	480,640,800,1200(480≤Bwt≤1200)
Pallet Length(mm)*	Lwt	480,640,800,1200(480≤Lwt≤1200)
Allowed Max. Load		400
Lifting Cylinder Size		140
Frame		6060 carbon steel tube

Ordering Information

PU/H	Heavy Duty Positioning Unit
B□	Pallet Width: B480 / B640 / B800 / B1200 / customization
L□	Pallet Length: L480 / L640 / L800 / L1200 / customization
Cylinder Brand	SMC(SMC) / YDK(AirTAC)
SP	Special Requirements

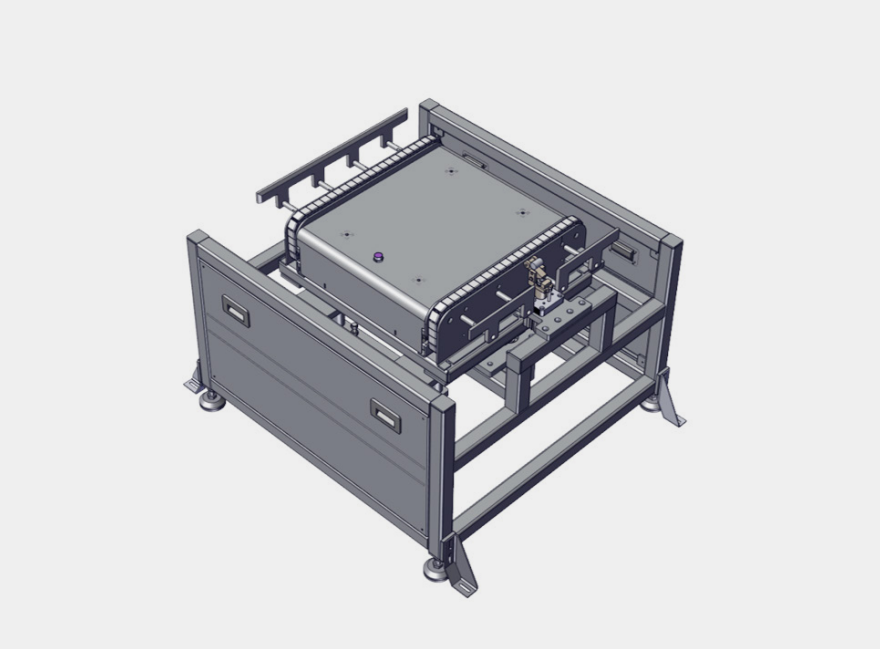
Ordering Example

PU/H-B800-L800-YDK

Heavy Duty Positioning Unit:	Pallet Width:	Pallet Length:	Cylinder Brand:	Special Requirements:
PU/H	Bwt=800	Lwt=800	AirTAC	None

ET2/H Heavy Duty Turn Table

Turning by servo motor, turning angle can be 90° or 180°
Same function as curve unit, workpiece direction can keep no change



Deliver Note

Heavy Duty Lift and Transfer Unit
Magnetic Switches: D-M9B
Throttle Valve（φ6）

Recommend Accessories

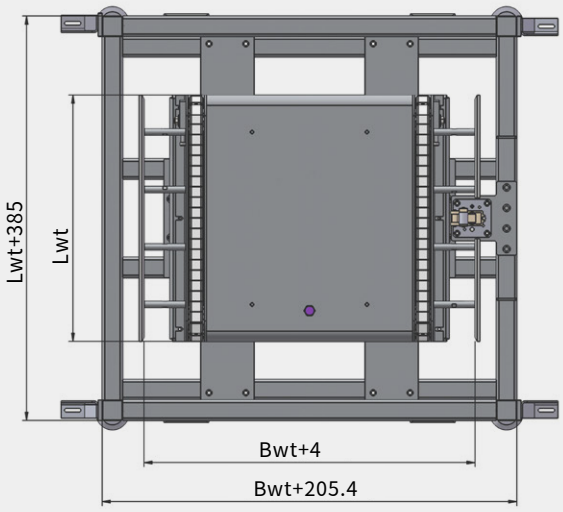
Stopper
Solenoid Valve

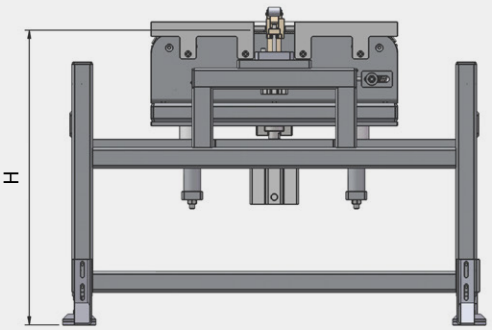
Deliver Status

Assembled

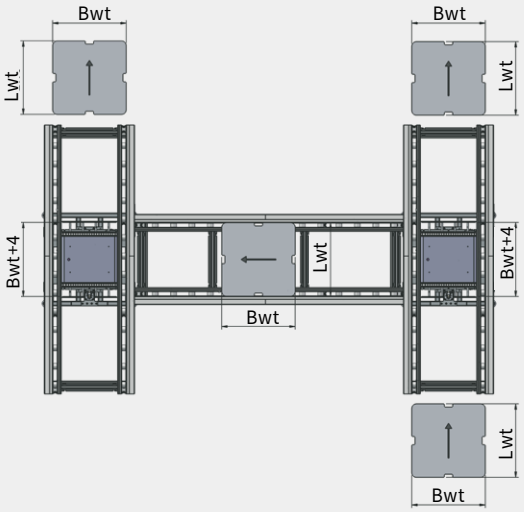
- Allowed Reverse Operating
- Not Allowed Accumulation
- Support maximum pallet size up to 1200*1200mm
- Dual cylinder drive, maximum load up to 400kg
- Support customization

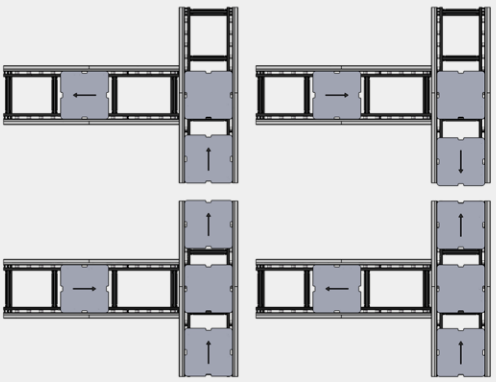
Product Dimensions





Pallet motion direction





Product Parameter

Transfer Medium		Steel Flat Chain
Pallet Width(mm)*	Bwt	480,640,800,1200(Support customization)
Pallet Length(mm)*	Lwt	480,640,800,1200(Support customization)
Lifting Cylinder Size(nm)		100
Drive Method		3 Phase motor
Voltage	U	220V / 380V

Ordering Information

ET2/H	Heavy Duty Lift and Transfer Unit
B▢	Pallet Width: B480 / B640 / B800 / B1200 /customization
L▢	Pallet Length: L480 / L640 / L800 / L1200/customization
Motor Type	JY037 / ZY04(Sumitomo 400W)
Voltage	220V / 380V
Cylinder Brand	SMC(SMC) / YDK(AirTAC)
SP	Special Requirements

Ordering Example

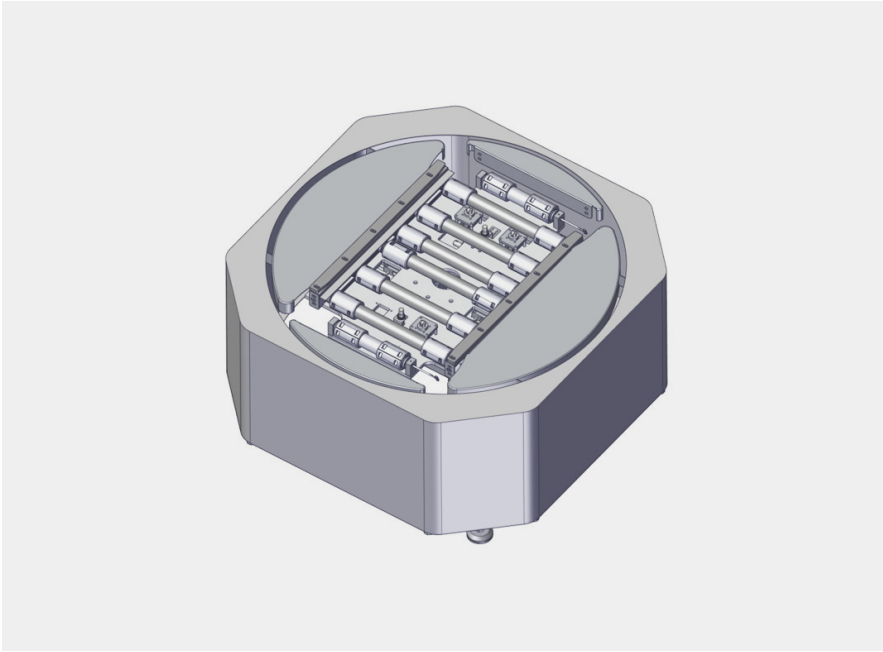
ET2/H-B640-L640-JY037-380-YDK

Heavy Duty Lift and Transfer Unit:	Pallet Width:	Pallet Length :	Motor Type :	Voltage :
ET2/H	Bwt=640	Lwt=640	JY037	380V

Cylinder Brand :	Special Requirements :
AirTAC	None

Heavy Duty Turn Table

Turning by servo motor, turning angle can be 90° or 180°
Same function as curve unit, workpiece direction can keep no change



Deliver Note

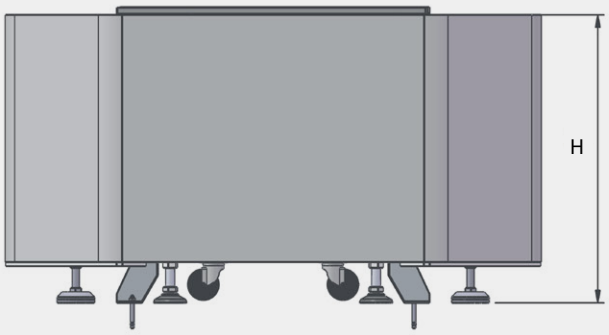
Deliver Scope
Heavy Duty Turn Table
Protective Cover
Mounting Parts

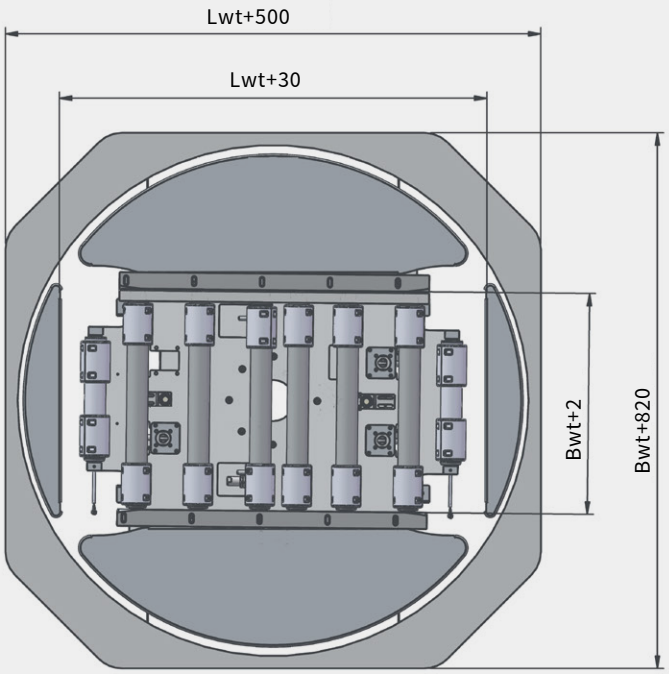
Recommend Accessories
Stopper

Deliver Status
Assembled
Flexible Solution

- **Flexible Solution**
  Compatible with all standard workpiece pallet for heavy-duty conveying system, supporting flexible production line layouts design.
- **Modular Design**
  The modular and compact product design can save space and make the maintaining easier.
- **Mechanism Parameter**
  Allowed maximum load 400kg(Basis on pallet size), it can fulfill heavy duty application.
  Allowed reverse working, it is suitable for multi process circular operating.
- **Rotating Performance**
  Support turning angle 90° , 180°and 270°. Servo motor is used to ensure rotating precision.
  Optimized cycle time: 90°/4s; 180°/7s; 270°/10s;

Product Dimensions





H:Conveying Height

Product Parameter

Conveyor Width(mm)*	Bwt	480,560,640,800,1200(480≤Bwt≤1200)((Support customization)
Conveyor Length(mm)*	Lwt	640,800,1200(640≤Lwt≤1200)(Support customization)
Allowed Max.Load(KG)		400
Drive Method		Servo Motor

Ordering Information

PR/H	Heavy Duty Turn Table
B▢	Pallet Width: B480 / B640 / B800 / B1200 / customization
L▢	Pallet Length: L640 / L800 / L1200 / customization
▢	Turning Angle : 90 180
SP	Special Requirements

Ordering Example

PR/H-B480-L800-90

Heavy Duty Turn Table:	Pallet Width	Pallet Length	Turning angle	Special Requirements
PR/H	Bwt=480	Lwt=800	90°	None

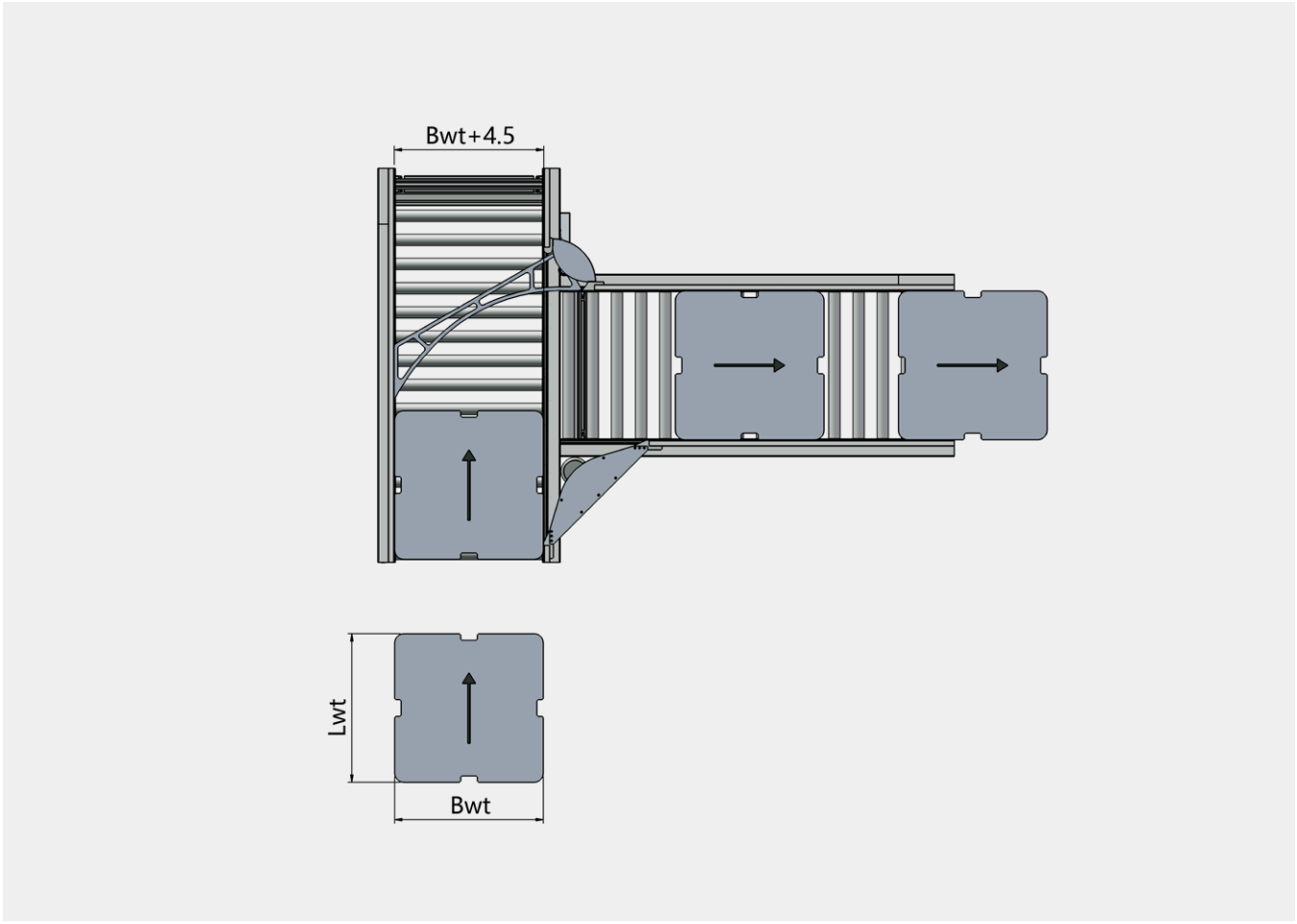
Diverter

Diverter is a modular mechanism, it can be easily installed on conveyor to transfer the pallet to another conveyor.
Diverter mechanism can be installed either side to achieve different conveying direction.

Deliver Status
Assembled

- Not allowed accumulation
- Modular design
- Drive by cylinder
- **Allowed Max.Load:** 300kg(V=9m/min)

Product Dimensions



Ordering Information

JU	Diverter
B□	Pallet Width: B400 / B480 / B640 / B800 / Customization
Cylinder brand	SMC(SMC) / YDK(AirTAC)
SP	Special requirements

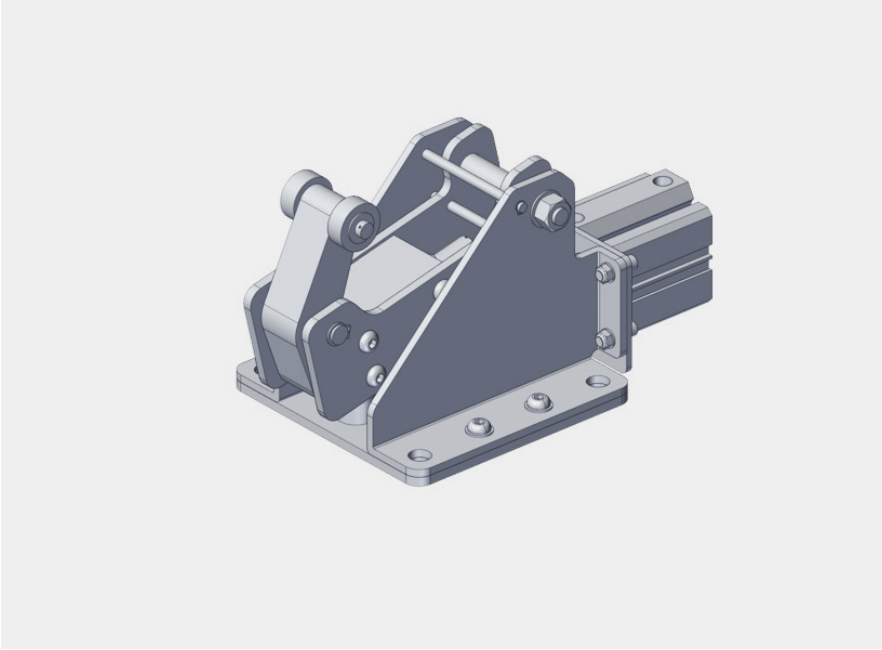
Ordering Example

JU-B480-YDK

Conveyor Type:	Pallet Width:	Cylinder Brand:	Special Requirements:
JU	Bwt=480	AirTAC	None

Stopper

Stop one or multi pallets at designated position.
After releasing the compress air,
stopper actuator will be returned by spring force to let pallet go through stopper.



Deliver Note

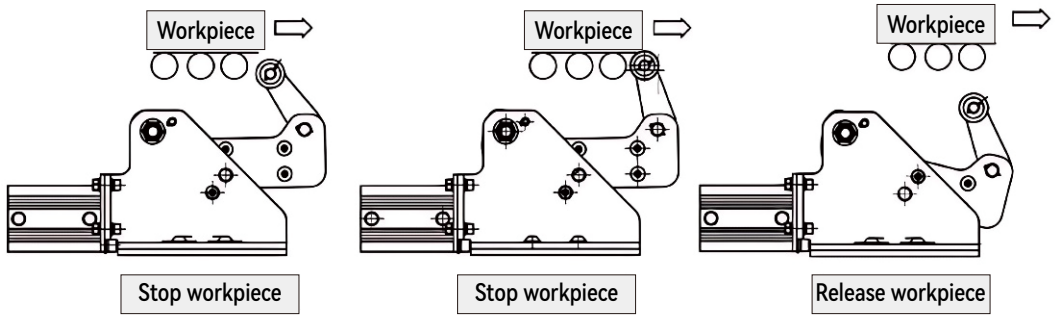
Deliver Scope
Stopper
Mounting parts

Recommend Accessories
Solenoid valve
Proximity sensor
Proximity sensor bracket

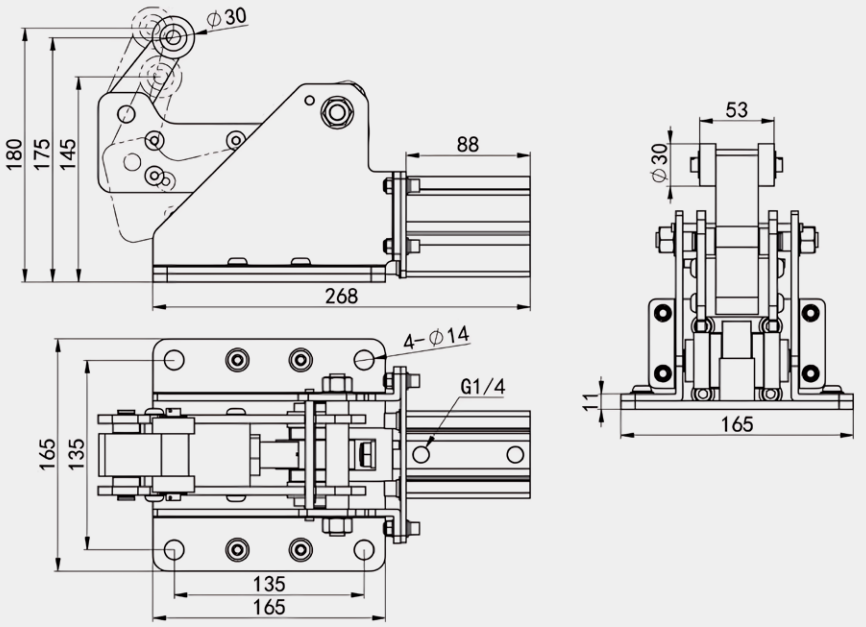
Deliver Status
Assembled

- Cylinder core size 50mm, stroke 50mm.
- Maximum working air pressure 0.7MPa,maximum withstand air pressure 1MPa.
- **Environment temperature:** -10~+60℃
- **Allowed Max.Load:** 550kg

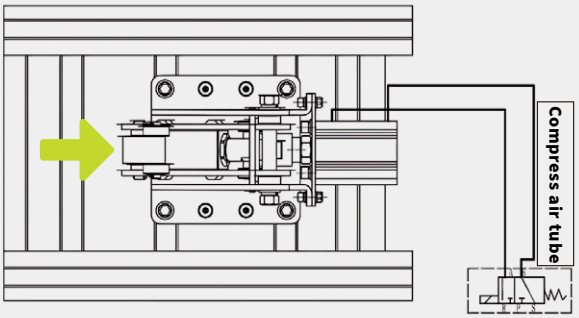
Working Diagram



Product Dimensions



Product Installation



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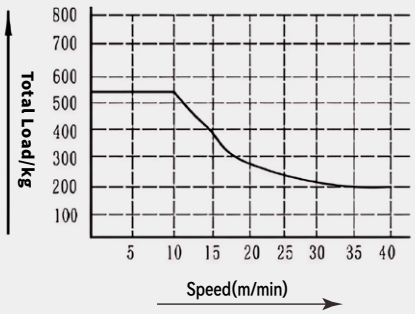
Stopper Capability Diagram



Allowed stopper load under different speed condition

Ordering Information

Product Name: Stopper	**Product Code:**QX-SMC / QX-YDK

Conveyor System Specification

1 Application

Vitrans heavy duty roller conveyor is made of modular mechanism for workpiece pallet conveying, it is suitable for different production layout.

2 Durability

Vitrans heavy-duty conveyor system is made of highly corrosion-resistant materials(polyurethane, stainless steel) to ensure the reliability of continuous operation in different industrial environments. It can withstand common lubricants and cleaning agents.

3 ⚠ Maintaining

Conveyor system needs regular maintenance. After long-term use, the frequency of maintenance should be gradually increased, and foreign objects should be cleaned and lubricating oil should be replenished in a timely manner.

4 Accumulation

①Accumulated workpiece total weight must not exceed maximum allowed load.
②Accumulation is not allowed at lift transfer unit and diverter unit.

5 ⚠ Over Load

①Over load operating may damage kind shaft、gear and motor.
②Pneumatic parts may be failure due to over load.

6 ⚠ Wear

Motion parts wear cannot be avoided after long term operating. Wear can be affected by system operating frequency, maintenance, and working environment (corrosion resistance, pollution).

Below measures can reduce wear.

- Turn off the system when it is not on production.
- System running at a specified speed.
- Avoid unnecessary accumulation
- Regular maintenance

7 Load and speed

The rated workpiece pallet load is specified under the standard conveying speed and general working conditions.

8 Speed and Wear

①High speed causes faster wear.
②When actual running speed 20% higher than rated speed, system life will reduce 20%.

9 Load and Wear

High load causes faster wear.

10 Compress Air Source

①Compressed air must be dry and filtered.
②Compress air pressure: 4-6 Bar

Vitrans Automation

Vitrans-conveyor

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