

# Pallet i-Veyor® concept — Technical specifications



The Pallet i-Veyor® concept of CSi offers a product line of modular pallet conveyors based on proven performance and the latest technologies. As a result of mechatronics design and the integrated modular software the conveyors are easy to install and user-friendly to operate. Without virtually any limitation, every given pallet transport system can be created and installed quickly and cost effectively. By making the best use of high quality materials and frequency controlled drives, smooth operation will be guaranteed and operational costs are kept to a minimum and an extremely high degree of reliability and system availability is achieved.

The Pallet i-Veyor® concept has a standard mechatronics and modular design. With the complete line of pallet conveyors it is easy to configure any pallet transport system. The standard integrated electrical control system shortens delivery and commissioning times and increases the system reliability and availability to the highest levels. Field cabling is tidily hidden in the cable trench, which is worked into the mechanical construction of the conveyors. Only the best components are being used, which are easily to be replaced and maintained when necessary. Notwithstanding the cost effective execution of the modules, the design complies with today's highest safety standards.

## ● Roller conveyors

Rollers : Ø 88.9 x 2.9 mm, axle Ø 20 mm and double sprocket wheels 5/8" x 13t  
 Drive : from roller to roller  
 Width : 1100 mm  
 Speed : up to 24 m/min  
 Rolling pitches : 151 mm

## ● Chain conveyors

Chain type : 5/8" duplex with flat links  
 No. of chains : 2  
 Centre-to-centre transfer wheels : 76 mm  
 Width : 920 mm  
 Speed : up to 30 m/min

## ● Transfers

Rollers : Ø 88.9 x 2.9 mm, axle Ø 20 mm  
 Drive : from roller to roller  
 Width : 1100 mm  
 Speed : up to 24 m/min  
 Capacity : up to 250 pallets/h  
 Lifting motor : 0.55 kW in combination with two eccentric shafts

## ● Turntables

Versions : roller or chain conveyor  
 Turning motor : 0.37 kW with pinion and 19 teeth  
 Turning rim : Ø 625 mm with 122 teeth  
 Turning speed : approx. 4 sec. per 90 degrees  
 Capacity : up to 200 pallets/h at 90-degree angle

## ● General

Drives : SEW motor reductor  
 Bearing blocks : Nachi  
 Construction : stainless steel frame and galvanized supporting parts; aluminum for pallet chain conveyors  
 Side guide : guide disks (on rollers) or fixed guide in the form of angle/C sections  
 Supports : variable in height by means of screw adjustable feet  
 Pallet specifications : all common pallet types, like Euro pallets: 1200 x 800 x 144 mm UK Chep: 1200 x 1000 x 166 mm Industry: 1200 x 1000 x 144 mm  
 Loads : max 1500 kg per pallet

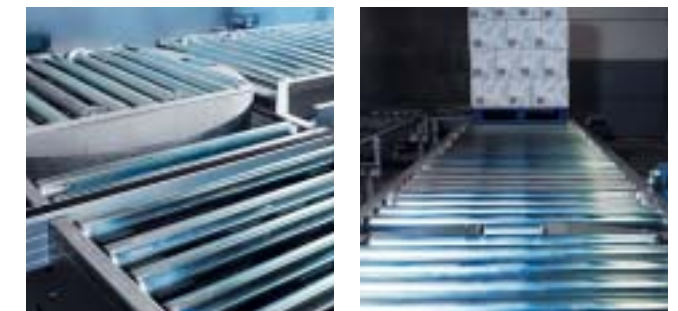
## ● Control specification

Controller : Beckhoff IPC CX 1000 series  
 Soft PLC : TwinCAT IEC 61131-3  
 HMI : 15" Touch panel  
 Operating system : Windows CE  
 Network : Ethernet (all common network connections are possible)  
 Fieldbus : Profibus  
 Inverters : SEW integrated Movimot

## ● Pallet i-Veyor® modules

The Pallet i-Veyor® product line comprises the following main conveyor modules:

- Chain driven pallet roller conveyor
- Pallet chain conveyor
- Right angle transfer station
- Pallet turntable with roller conveyor
- Pallet turntable with chain conveyor
- Pallet destacker
- Pallet transfer car



IMPROVING PERFORMANCE



CSi • Lissenveld 41 • 4941 VL Raamsdonksveer • P.O. Box 70 • 4940 AB Raamsdonksveer, the Netherlands  
 Tel: +31 162 575 000 • Fax: +31 162 575 111 • e-mail: info@csiweb.nl • www.csiweb.nl  
 CSi de México S. de R.L. de C.V. • Telephone: +52 55 5682 4228 • Telefax: +52 55 5682 4404  
 CSi, UK Office • Telephone: +44 1276 686 862 • Telefax: +44 1276 682 397  
 CSi GmbH Germany • Telephone: +49 2852 509 990 • Telefax: +49 2852 5099 91

IMPROVING PERFORMANCE



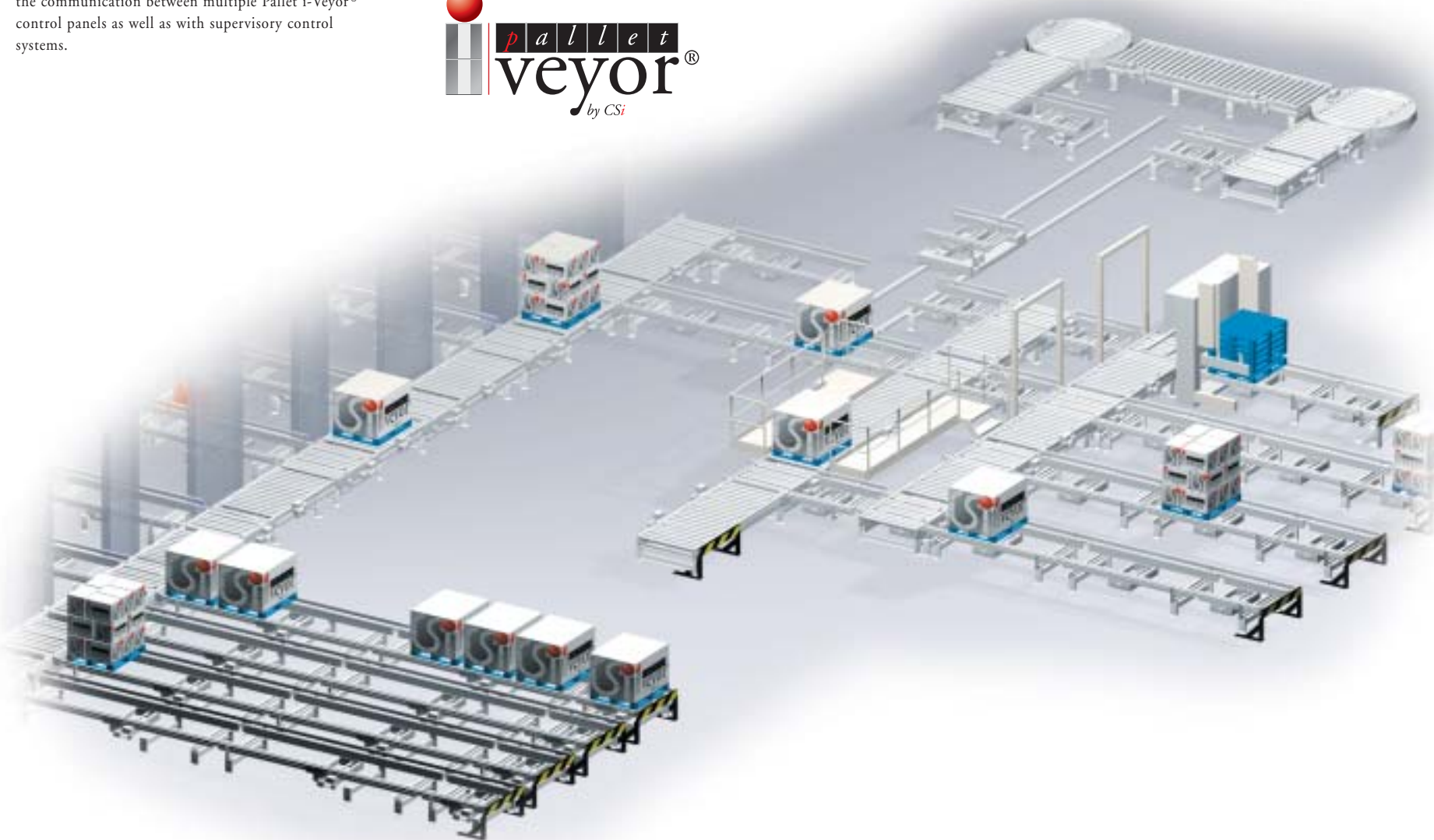
## Hardware

Having a standard electrical control cabinet equipped with an Industrial PC (IPC) controller and a 15" graphical touch screen user interface supports the modular design of Pallet i-Veyor®. The conveyors are controlled by field starters on Profibus with local modules for I/O. Plug and play wiring of power cables and sensors, all executed with connectors, makes it easy to install and reconfigure any system. A standard Ethernet connection enables the communication between multiple Pallet i-Veyor® control panels as well as with supervisory control systems.



## Software

With Pallet i-Veyor® the writing of software has been replaced by the parametric configuration of standardized software modules. Standard modules with proven performance also warrants a stable and reliable operation of any custom made system. Besides, the real time software and multitasking functionality of the IPC controller makes it possible to easily integrate additional functions, yet guaranteeing a very high system availability. The user-friendly graphical user interface provides on line extended monitoring functionality and system intervention possibilities. Reliable tracking and tracing is also standard included.



## Operations

The 15" graphical touch screen provides a user-friendly operator interface and easy access to system data. Logical pictograms show the status of the installation and enable the fast recovery to unexpected events. Manual control of all individual drives and 2-way transport directions are standard included. Ultra sonar sensors for pallet detection, integrated into the conveyors, eliminate the need for setting and adjusting the position of photoelectric cells and their reflectors enhance the system reliability and availability to the highest levels.



## Mechanical

The mechanical design of the Pallet i-Veyor® ensures durability, availability and low cost of ownership.

All conveyor drives are frequency controlled providing reduced wear and tear and gentle product handling due to soft start and stop in combination with adjustable speeds. This enables the handling of instable pallet loads and higher transport capacities.

The conveyors, executed in stainless steel and aluminum, are engineered to stock in order to facilitate shorter delivery and installation times.



## Maintenance

The structured, standardized and modular design of the Pallet i-Veyor® provides a transparent basis for easy maintenance. Components are selected to ensure minimum wear and tear and low maintenance attention. Standardization has resulted in a limited number of spare parts and plug and play field wiring enables the fast and easy replacement of electrical parts. Lockable motor isolator switches are standard and ensure safe maintenance. Also standard is the easy fault finding monitoring software with individual feedback of individual motor isolators and thermal overloads. The mechatronic concept with integrated logical wiring makes any system modification easier than ever before.