

SmartVeyor®

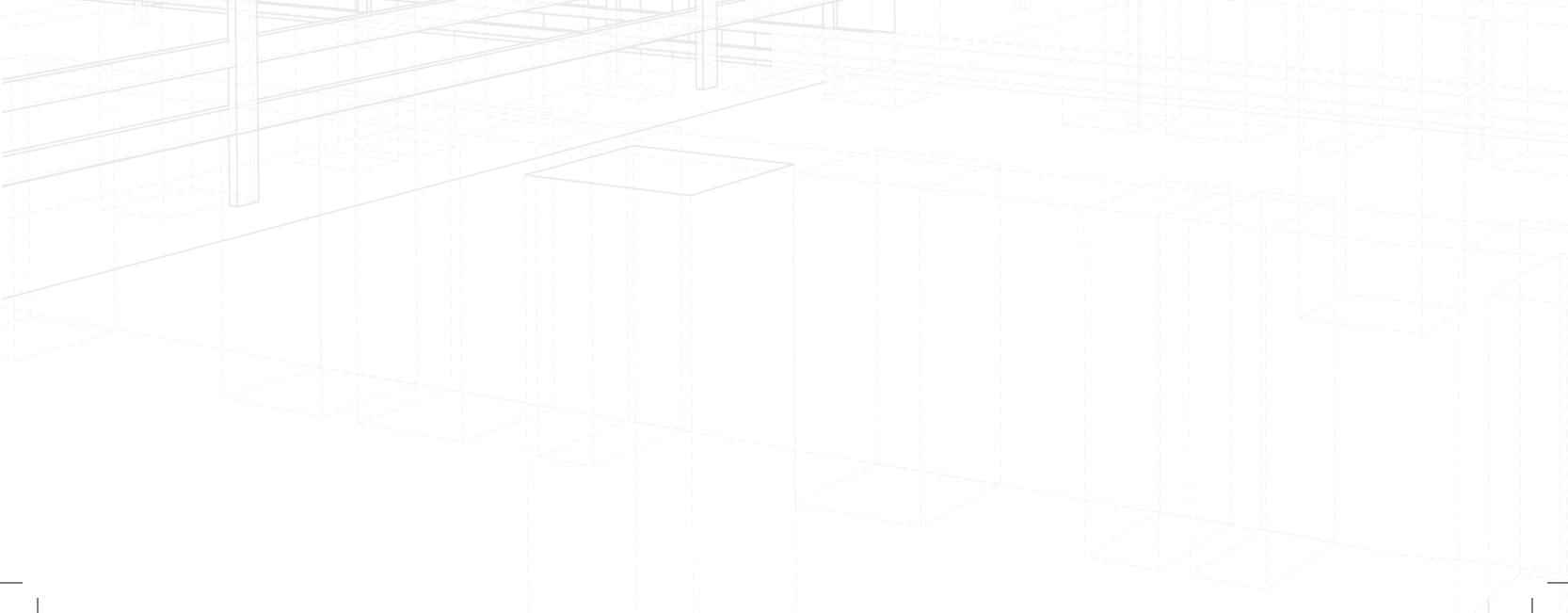
Pallet conveyor system

GENERAL
catalogue

The innovative
pallet conveyor modules
ALL IN ONE

HTO
MOVING SYSTEMS

HTO
MOVING SYSTEMS



The background of the page is a light gray wireframe architectural drawing of a building's interior. It shows a complex network of structural beams, columns, and floor slabs, creating a sense of depth and perspective. A large, solid red rectangular block is positioned on the left side of the page, partially overlapping the wireframe. The text is contained within this red block.

Who we are

H100 is an innovative start-up with a high technological value, which thanks to the 30 years of experience of its founders, it has developed e is developing new solutions for pallet handling.

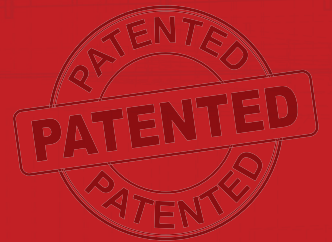
Our headquarters are located in Scandiano (Reggio Emilia province) in the beating heart of industrial production, a tradition that is still alive today thanks to constant research and a high-level professional and academic paths.

H100 thanks to the partnership with a leading manufacturer, partner specialized in production of high-tech Servomotors with significant experience in the Material Handling field, it has already standardized the **SmartVeyor**[®] conveyors.

The image is a promotional graphic for the SmartVeyor pallet conveyor system. It features a central red horizontal band. Above and below this band are grayscale images of the conveyor system's rollers and tracks. In the background, a white wireframe architectural drawing of a multi-story building is visible. The text 'SmartVeyor®' is prominently displayed in white on the red band, with 'Pallet conveyor system' written below it in a smaller font. A circular stamp with the word 'PATENTED' repeated three times is located in the lower right area of the red band.

SmartVeyor®

Pallet conveyor system



H100 has patented **SmartVeyor**[®] the new system of automated pallet transport ready to enter into the market and bringing several advantages over traditional solutions, thanks to the use of a new motoroller concept.

- Compact Drive board mounted on the conveyor frame
- 48 Vdc power supply
- Fast and secure connections
- Dual axes Drive (each drive supports 2 motorollers)
- Integrated field buses such as Profinet, Ethercat, Ethernet-IP
- I/O integrated for Photo eyes
- Status display LED

**Drive board,
the core of our system.**



Noiseless

Less than

35db

Roller height

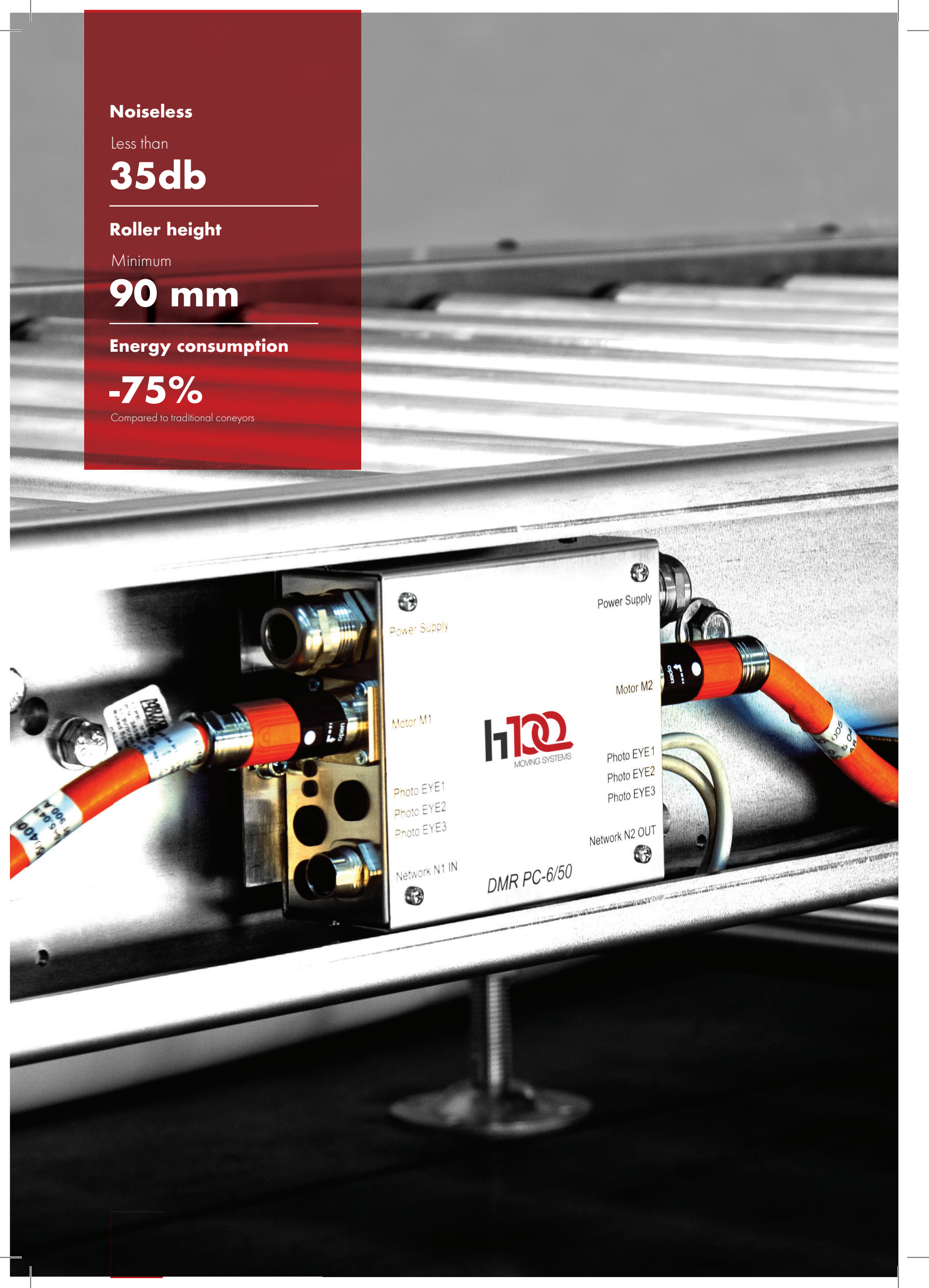
Minimum

90 mm

Energy consumption

-75%

Compared to traditional conveyors



Why choose the new SmartVeyor® system?

There are many advantages over traditional conveyors:

- Fieldbus: no inverters in the electrical cabinet
- Removal of traditional electric motor and gearboxes
- Plug & play
- Fast connections
- Modular system
- Quiet: **less than 35dB**
- Compact
- **Minimum roller wire height 90 mm**
- Savings of about 2.5 times on the overall volume for shipments
- Significant cables reduction
- Easy installation
- Optimized design costs
- Safe and reliable products
- Many options available, also on request

Energy costs saving

Reduction of energy costs and the optimization of production processes are among the key factors of a complete transformation of companies.

By adopting new energy efficiency solutions, companies are able to increase the efficiency of their machinery and improve production times.

In cooperation with Unimore University (Modena and Reggio Emilia University) we were able to test the power consumption of our handling system, and **reduction was 75% less** compared to traditional conveyors. Test performed with load of 600kg.

	ADVANCEMENT OPERATION (W)	BACK OPERATION (W)
Maximum consumption	174	217
Average consumption	160	200
	Average voltage (Vrms)	Average voltage (Vrms)
Average values	405,83	406,71
	Frequency (Hz)	Frequency (Hz)
Average values	49,987	49,996



Energy consumption
certification
edited by:



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

measurement made with accurated Power Analyser
Newton 4th Ltd

Scan QR code to see
technical features:





CODING TABLE
SmartVeyor®

L = Conveyor length

N = Number of pallet on conveyor

H = Height on up roller board

P = Roller pitch

P143

P206

FINISH

Z = Zinc plated

CO = Coating

OPTIONS:

PE (photo eyes)

SG (side guards)

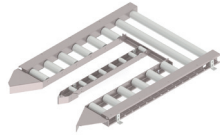
MG (side guards)

SC (special coating)

EB (special coating)

RF (roller flange)

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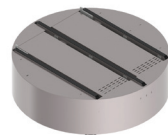
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SV-MLU

MANUAL LOAD/UNLOAD MODULE

KG
MAX
1.500

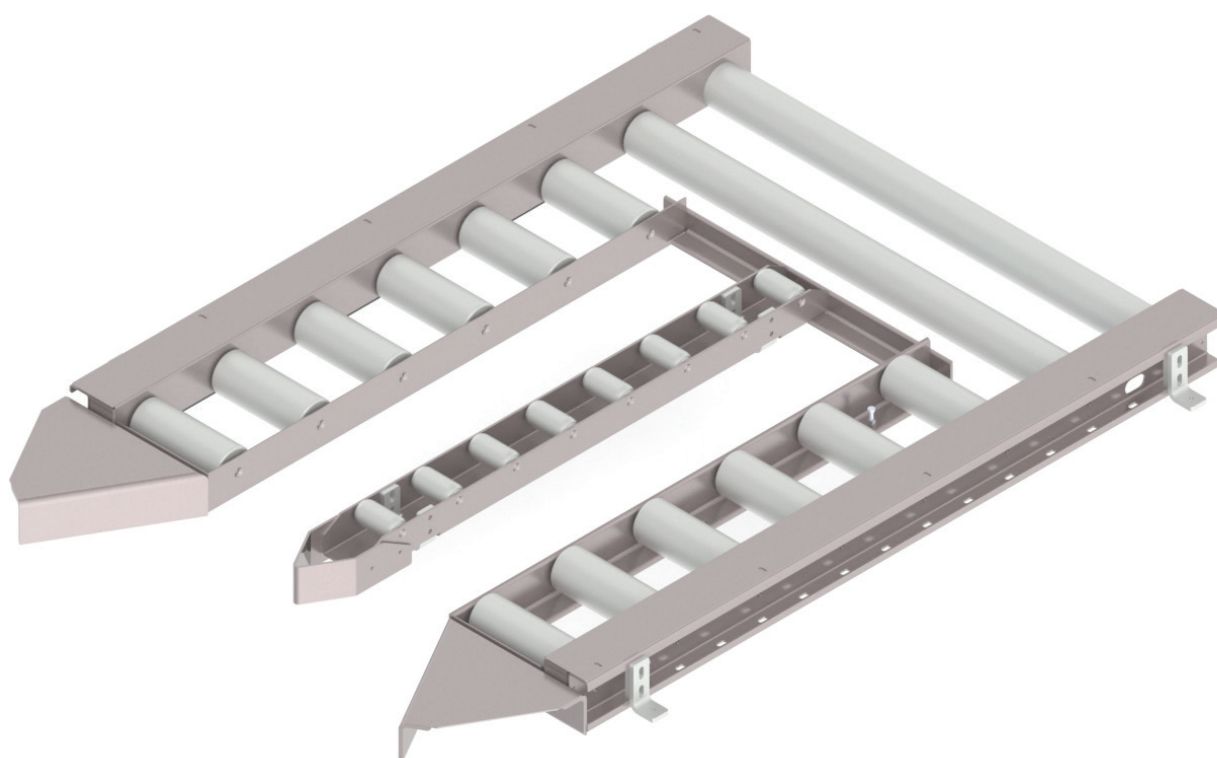
Description

The manual loading and unloading module is suitable for feeding semi-automatic lines, or simply accumulation of pallet manipulated by operator.

Powered at 48Vdc, it can be simply connected with other **Smartveyor®** modules with max load 1500 kg.

Pallet feeding for this module is expected from manual transpallet up to automatic ones.

Rollers movement takes place thanks to **H100** motorroller and this it allows both a space saving (compared to traditional motors applied on lateral side), and greater safety for operators who have to work around the frame.



Manual load/unload module

General technical data

Max. load capacity	1500 kg / pallet
Conveyor speed	Da 6 a 24 m/min full load (1500 kg)
Ambient temperature	-10 °C to +45 °C (non-condensing)

Drive

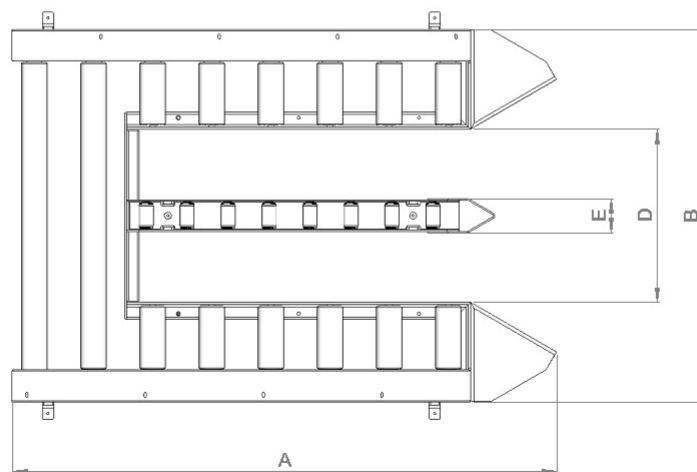
Rated voltage	48 V
Motor type	H100 - MPC Rollerdrive
Power	335 W
Roller chain	5/8" x 1/2"

Roller

Roller diameter	89 mm
Sprocket	5/8" Z14 o 1/2" Z14
Wall thickness of rollers	3 mm
Material	Steel, zinc-plated

Profile

Color	Standard Zinc Plated or powder coated RAL 7035
Material	Steel



Quote A	1900 mm
Quote B	1300 mm
Quote C	115 mm
Quote D	604 mm
Quote E	120 mm

SV-R-S



**MAX
1.500**

SINGLE PALLET CONVEYOR

Description

The single pallet conveyor is designed for intermediate loading or unloading processes that require a minimum overall length.

Thanks to fieldbus availability it can be connected with other **Smartveyor®**, this module can also be extended up to 5060 mm for the transport of payloads up to 1500 kg (for example in backbones without accumulation).

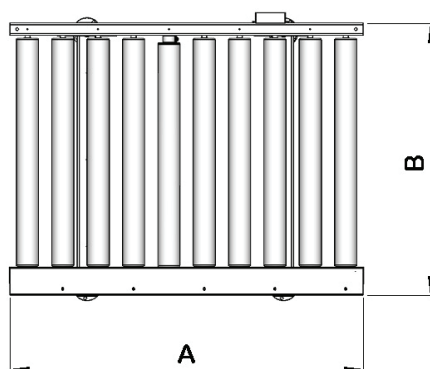
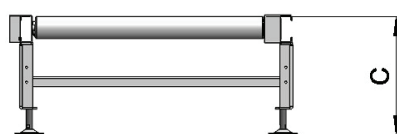
The same module can be placed directly on the floor in order to obtain a conveyor height 100 mm wire roller, so as to be able to use the SV-ML or SV-MU manual loading / unloading module and keep a compact ergonomics.



Single pallet conveyor

General technical data

Max. load capacity	1500 kg / pallet
Conveyor speed	Da 6 a 24 m/min full load (1500 kg)
Ambient temperature	-10 °C to +45 °C (non-condensing)
Drive	
Rated voltage	48 V
Motor type	H100 - MPC Rollerdrive
Power	335 W
Roller chain	5/8" x 1/2"
Roller	
Roller diameter	89 mm
Sprocket	5/8" Z14 o 1/2" Z14
Wall thickness of rollers	3 mm
Material	Steel, zinc-plated
Profile	
Color	Standard Zinc Plated or powder coated RAL 7035
Material	Steel



Standard pallet size	800, 1000, 1200 mm
Roller casing length	1000, 1200, 1400 mm
Module width (B)	1100, 1300, 1500 mm
Module high (C)	Std da 400 a 650 mm. Su richiesta da 100 a 400 mm.
Roller pitch (P)	143 or 206 (su richiesta possibile altri passi)
Module length (A)	800 to 5060 mm

SV-R-D

KG
MAX
1.500

DOUBLE PALLET CONVEYOR

Description

The double pallet conveyor is designed for loading/unloading process as well as all the operations that need a product step accumulation.

Thanks to fieldbus connections with other **Smartveyor®**, this module can also be extended up to 5060 mm for the transport of a maximum of 1.500 kg per motoroller area.

The drive board allows to connect 2 motorollers.



Double pallet conveyor

General technical data

Max. load capacity	1500 kg / pallet
Conveyor speed	Da 6 a 24 m/min full load (1500 kg)
Ambient temperature	-10 °C to +45 °C (non-condensing)

Drive

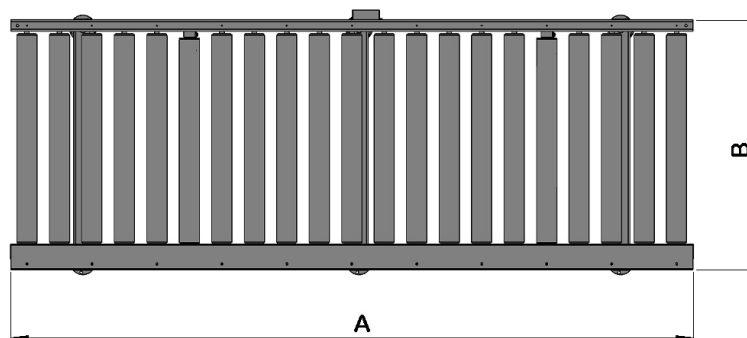
Rated voltage	48 V
Motor type	H100 - MPC Rollerdrive
Power	335 W
Roller chain	5/8" x 1/2"

Roller

Roller diameter	89 mm
Sprocket	5/8" Z14 o 1/2" Z14
Wall thickness of rollers	3 mm
Material	Steel, zinc-plated

Profile

Color	Standard Zinc Plated or powder coated RAL 7035
Material	Steel



Standard pallet size	800, 1000, 1200 mm
Roller casing length	1000, 1200, 1400 mm
Module width (B)	1100, 1300, 1500 mm
Module high (C)	Std da 400 a 650 mm. Su richiesta da 100 a 400 mm.
Roller pitch (P)	143 or 206 (su richiesta possibile altri passi)
Module length (A)	800 to 5060 mm

SV-C-2

DOUBLE CHAIN TRANSPORT

KG
MAX
500

Description

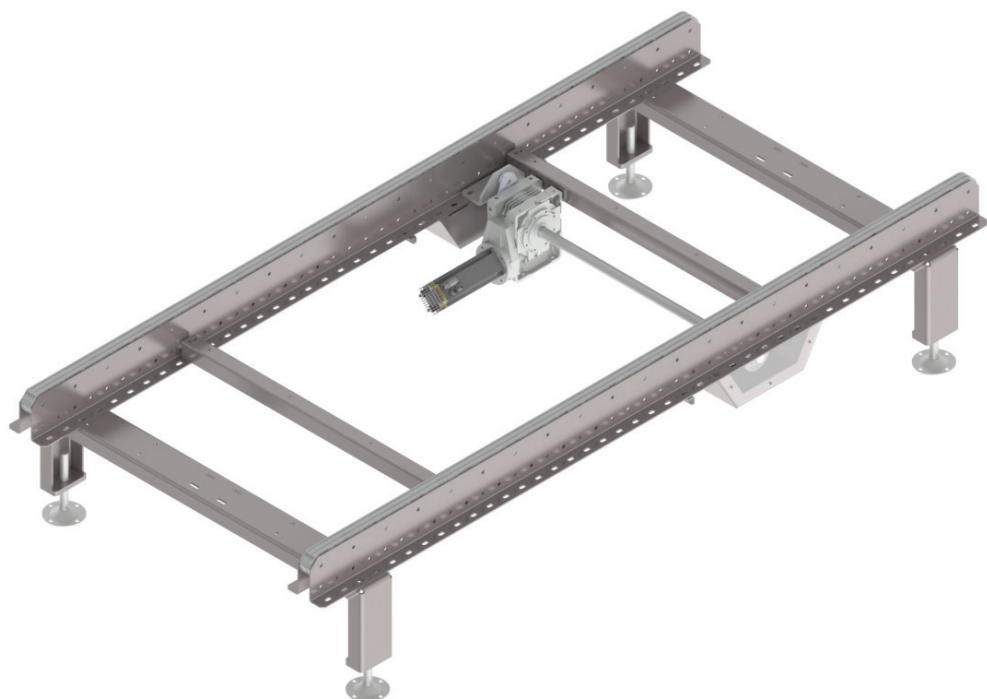
The chain conveyors are designed for pallets transport in any direction, full and empty, with MAX load 500 kg.

Always integrated with a fieldbus, this transport is economical and functional for loads up to 500 kg.

The chain return system allows easy assembly and disassembly.

Adjustable supports help the customer compensate for unevenness in the ground and have a regularity of the plans to obtain a transport efficient and centered.

Available in the version with walkable surface (optional), an ergonomics of compact conveyors.



Double chain transport

General technical data

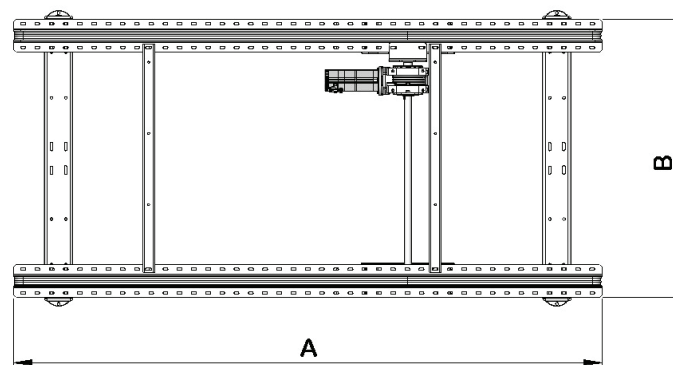
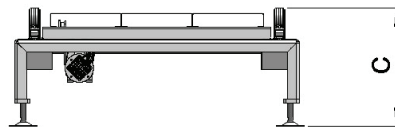
Max. load capacity	500 kg / pallet
Conveyor speed	Da 4 a 24m/min
Ambient temperature	- 10 °C to +45 °C (non-condensing)
Discesa/salita	max. 3 %

Drive

Rated voltage	48 Vdc
Motor type	Brushless
Power	750 W max
Roller chain	5/8" o 3/4" duplex

Profile

Color	Zinc plating or RAL 7035 painted
Material	Steel



Module width (B)	Da 800 a 1400
Full load (D)	As needed
Module high (C)	350 mm to 650mm
Module length (A)	800 to 5020 mm

SV-C-3

3 CHAINS TRANSPORT

KG
MAX
1.500

Description

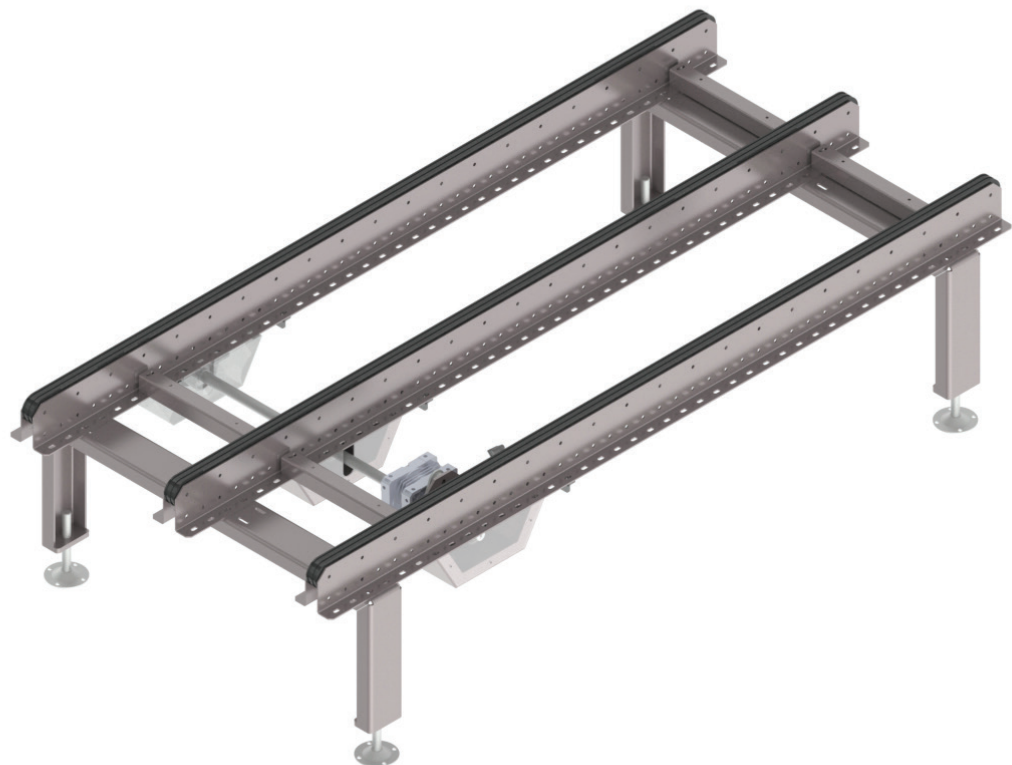
The chain conveyors are designed for pallets transport in any direction, full and empty, with MAX load 1500 kg.

Always integrated with a fieldbus, this transport is economical and functional for loads up to 1500 kg.

The chain return system allows easy assembly and disassembly.

Adjustable supports help the customer compensate for unevenness in the ground and have a regularity of the plans to obtain a transport efficient and centered.

Available in the version with walkable surface (optional), an ergonomics of compact conveyors.



3 chains transport

General technical data

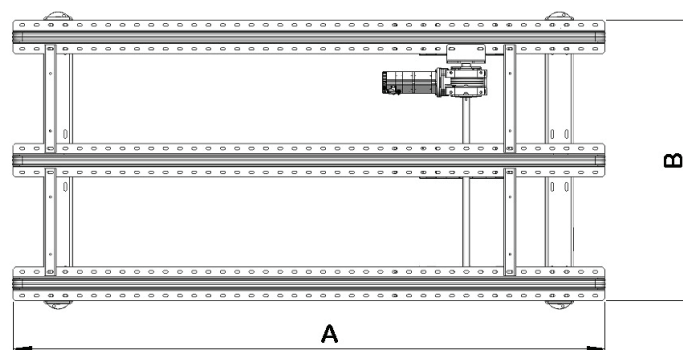
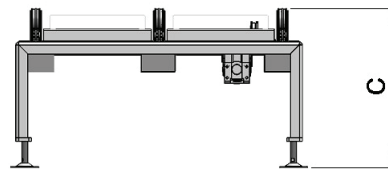
Max. load capacity	1500 kg / pallet
Conveyor speed	Da 4 a 24m/min
Ambient temperature	- 10 °C to +45 °C (non-condensing)
Discesa/salita	max. 3 %

Drive

Rated voltage	48 Vdc
Motor type	Brushless
Power	750 W max
Roller chain	5/8" o 3/4" duplex

Profile

Color	Zinc plating or RAL 7035 painted
Material	Steel



Module width (B)	Da 800 a 1400
Full load (D)	As needed
Module high (C)	350 mm to 650mm
Module length (A)	800 to 5020 mm

SV-SS

CHAIN TRANSFER 90/270°



**MAX
1.500**

Description

The transfer system is used for the orthogonal direction change of the pallets, both for empty and full.

The transfer chain is double or triple, depending on the weight of the pallets to be handled.

The construction of the system provides for the static roller part, while the lifting of the chains is pneumatic with a 50 mm offset.

Normally this ergonomics is used in multiple directions, with multiple stacks each output.

Thanks to **H100** technology, **Smartveyor®** for transfer chain system has a minimum wire height of 350 mm.



Rollers/chains Devio

General technical data

Max Load	1500 kg / pallet
Speed	From 4 to 24m/min
Max chain deviation	50 mm
Number of stop positions	2
Working temperature	-10 °C to +45 °C (non-condensing)
Ascent/descent	Pneumatic
Number of chains	2 or 3

Chain conveyor

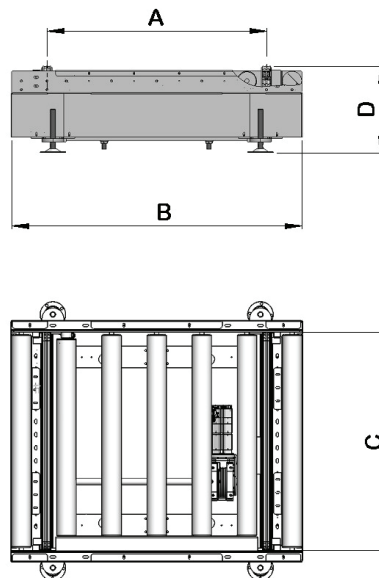
Rated voltage	48 V
Motor type	brushless
Power	750W
Roller chain	5/8" x 3/4" duplex
Lifting	Pneumatic

Roller conveyor

Rated voltage	48 Vdc
Motor type	H100 - MPC Rollerdrive
Power	335 W
Pinion	5/8"

Roller

Diameter	89 mm
Thickness	3 mm
Material	Steel, zinc-plated



Standard pallet size	800, 1000, 1200 mm
Effective width (A)	860, 1060, 1260 mm
Conveyor width (B)	Min 1400 mm, max 1800 on pallet std
Chain spacing (C)	1075 mm
Conveyor height (D)	from 350 to 600 standard up to 1200

SV-SXS



**MAX
1.500**

CHAIN TRANSFER 90°

Description

The transfer system is used for the orthogonal direction change of the pallets, both for empty and full.

The transfer chain is double or triple, depending on the weight of the pallets to be handled.

The construction of the system provides for the static roller part, while the lifting of the chains is pneumatic with a 50 mm offset.

Normally this ergonomics is used in multiple directions, with multiple stacks each output.

Thanks to **H100** technology, **Smartveyor®** for transfer chain system has a minimum wire height of 350 mm.



Chain transfer 90°

General technical data

Max Load	1500 kg / pallet
Speed	From 4 to 24m/min
Max chain deviation	50 mm
Number of stop positions	2
Working temperature	-10 °C to +45 °C (non-condensing)
Ascent/descent	Pneumatic
Number of chains	2 or 3

Chain conveyor

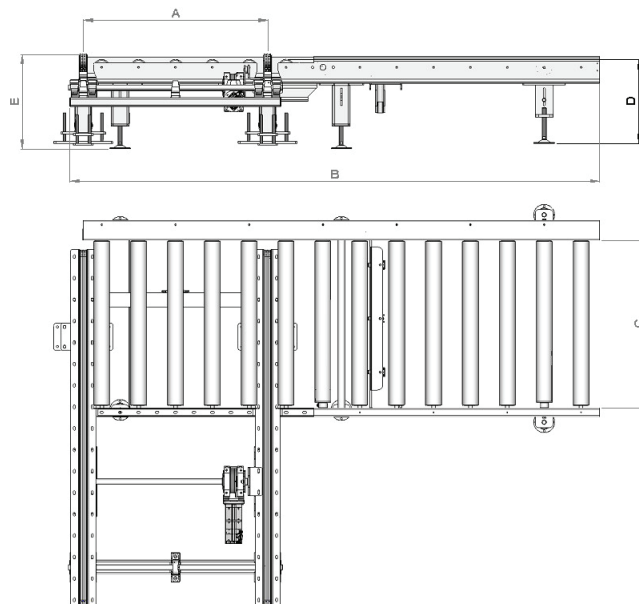
Rated voltage	48 V
Motor type	brushless
Power	750W
Roller chain	5/8" x 3/4" duplex
Lifting	Pneumatic

Roller conveyor

Rated voltage	48 Vdc
Motor type	H100 - MPC Rollerdrive
Power	335 W
Pinion	5/8"

Roller

Diameter	89 mm
Thickness	3 mm
Material	Steel, zinc-plated



Standard pallet size	800, 1000, 1200 mm
Effective width (A)	860, 1060, 1260 mm
Conveyor width (B)	Min 1400 mm, max 1800 on pallet std
Chain spacing (C)	1075 mm
Conveyor height (D)	from 350 to 600 standard up to 1200

SV-TS

TURNTABLE WITH ROLLER CONVEYOR



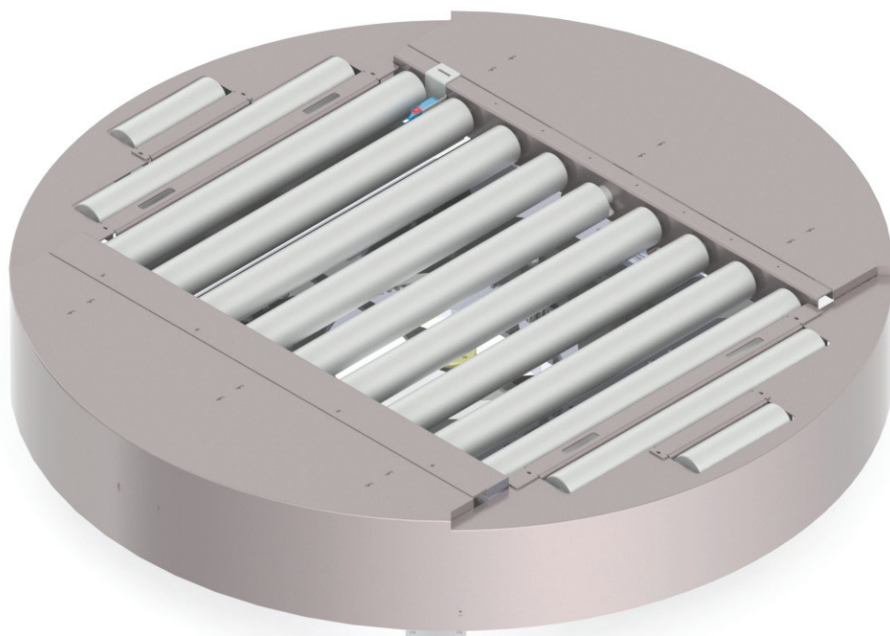
**MAX
1.500**

Description

The turntable is used for direction change of empty or full pallets, coming from the roller conveyor and redistributed on the roller conveyor.

The table is able to make a full turn, hence the angles distribution of the pallet are relative to the entire round angle.

The table rotates on a fifth wheel, thanks to the 2048 ppr encoder (present in the motors), the accuracy of table movement and therefore of conveying of the product is very high.



Turntable with roller conveyor

General technical data

Max. load capacity	1500 kg / pallet
Conveyor speed	Da 4 a 24 m/min
Rotation speed (V)	90° in 4 s
Ambient temperature	-10 °C to +40 °C (non-condensing)
Rotation speed	Not possible

Roller conveyor data

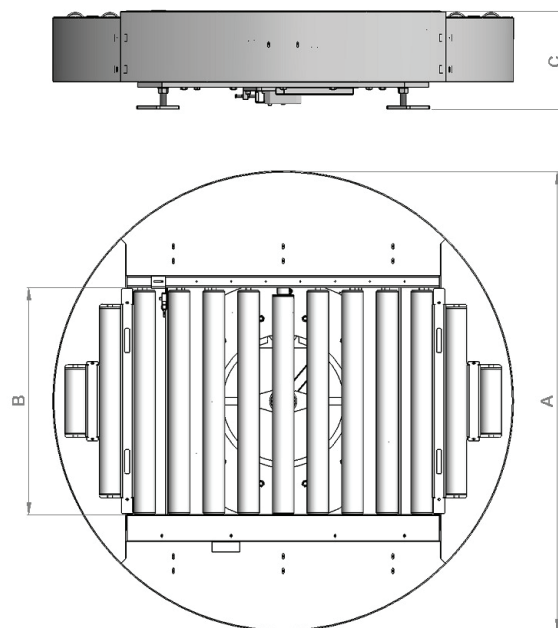
Motor roller rated voltage	48 Vdc
Power	335 W
Chain rings	5/8"

Turntable motor

Rated voltage	48Vdc
Motor type	brushless
Power	750W

Roller

Roller diameter	89 mm
Sprocket	Z14
Wall thickness of rollers	3 mm
Material	Steel, zinc-plated



Standard pallet size	800, 1000 mm
Module width (B)	940 - 1040
Module high (C)	350 - 650 standard
Module length	The diameter of the module determines the final length
Module length (A)	From 1890 mm

SV-TRS



**MAX
1.500**

TURNTABLE WITH CHAIN CONVEYOR

Description

The rotary table is used for direction change of empty or full pallets, coming from the roller conveyor and redistributed on the roller conveyor.

The table is able to make a full turn, hence the angles distribution of the pallet are relative to the entire round angle.

The table rotates on a fifth wheel, thanks to the 2048 ppr encoder (present in the motors), the accuracy of table movement and therefore of conveying of the product is very high.



Turntable with roller conveyor

General technical data

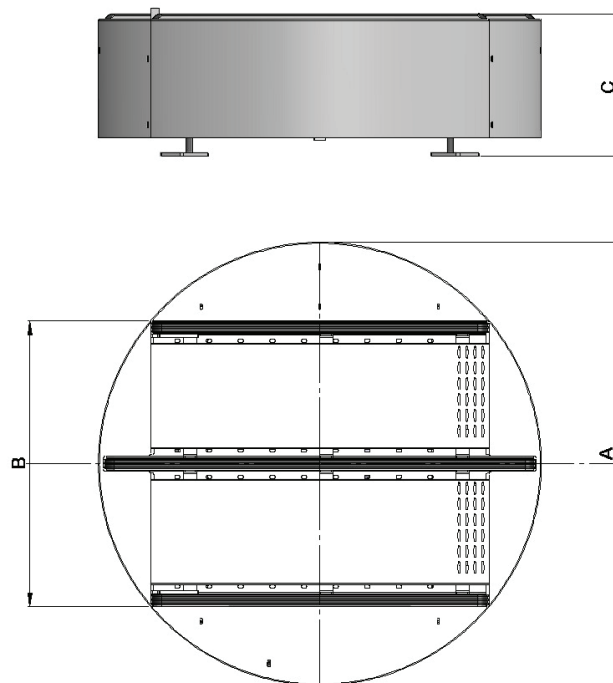
Max. load capacity	1500 kg per pallet
Conveyor speed	Da 4 a 24 m/min
Rotation speed (V)	90° in 4 s
Ambient temperature	-10 °C to +40 °C (non-condensing)
Rotation speed	Not possible

Chain conveyor data

Motor rated voltage	48 Vdc
Motor type	brushless
Power	750W
Chain rings	5/8" o 3/4" duplex

Turntable motor

Rated voltage	48Vdc
Motor type	brushless
Power	750W



Standard pallet size	800, 1000 mm
Module width (B)	940 - 1040
Module high (C)	350 - 650 standard
Module length	The diameter of the module determines the final length
Module length (A)	Da 1890 mm

SV-DMR PC-6/50/H/P

DRIVE

Profinet Version

The heart of **Smartveyor®** is the drive designed and produced by **H100** in cooperation with a leading manufacturer, the main board consist of 2 integrated drives capable of managing in pair or individually 2 brushless drive rollers.

Coming soon:

SV-DMR PC-6/50/H/E

DRIVE Ethercat Version

SV-DMR PC-6/50/H/I

DRIVE Ethernet-IP Version



Dati tecnici generali

Nominal Supply Voltage	48 Vdc
Maximum Supply Voltage	60 Vdc
Nominal Current	6 A
Peak Current	15 A
Output Power	335 W
Efficiency @ rated Power	> 90 %
PWM Switching Frequency	10 kHz (MAX)
Input	6
Output	2
Weight	Kg 0,720
Dimensions	173 x 105,5 x 45 mm
Mounting Model	Wall Mount on Back side
Operating ambient temperature	0° ~ 40° C (32° ~ 104° F)
Storage temperature	-20° ~ +85° C (-4° ~ +185° F)
Humidity	90% maximum non-condensing
Protection level	IP54

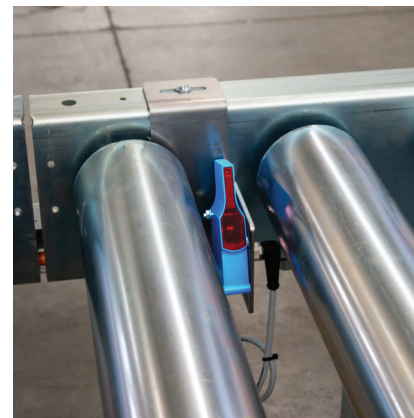
Designed in Compliance with UL508c and UL840

Designed in compliance with UL60950 (formerly UL1950)



IP 67 connector

Status lights



Integrated photo-eyes

The integrated photoeyes in the conveyor are directly powered and managed by the drive, on which there are leds to indicate its status.

The drive is equipped with IP67 quick fit connectors, both for the power and photoeyes, there is also a unique MAC Address for easy configuration of the system.

Example of use with Profinet Siemens protocol

For the **DRIVE DMR** which supports 2 motor rollers, we have studied a special GSD file to be able import into TIA PORTAL, the Siemens development software for Profinet management of the devices, where there are 6 IN and 2 OUT, which power the photoeyes.

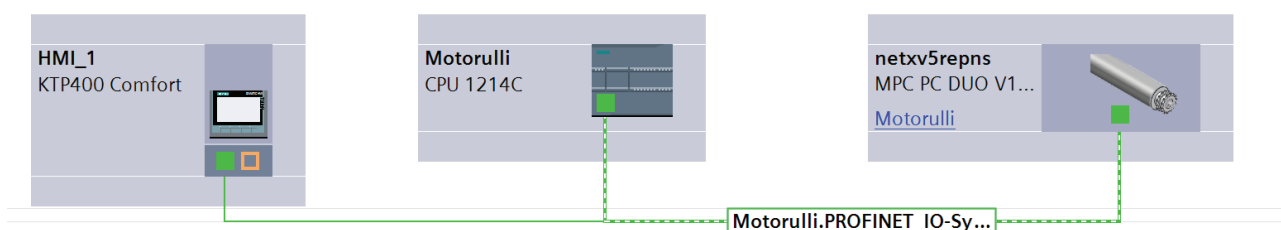
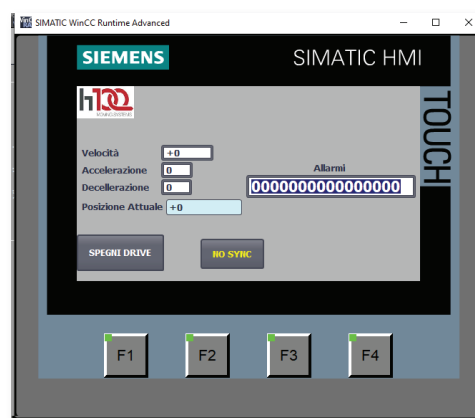
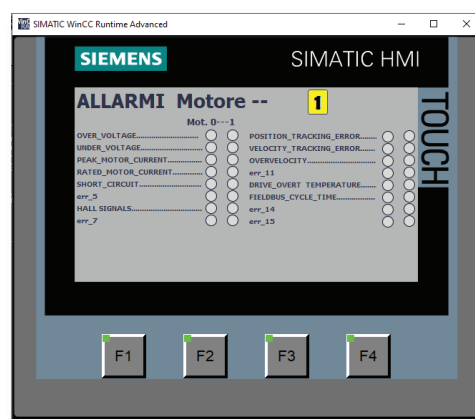
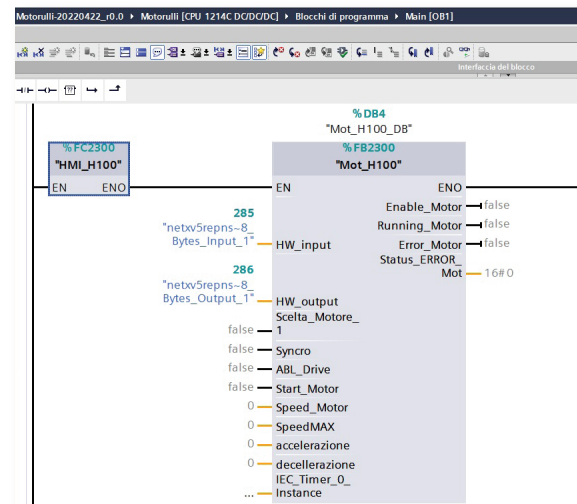
In addition to the GSD file, we provide the customer with an FB (function block), where is possible to set:

- a) Acceleration and deceleration ramps in seconds
- b) Rollers speed mt / minute
- c) Roller 1 and Roller 2 synchronization

We also provide an FC to be imported on Siemens HMI (panel) from which we can change the data set and display the data of:

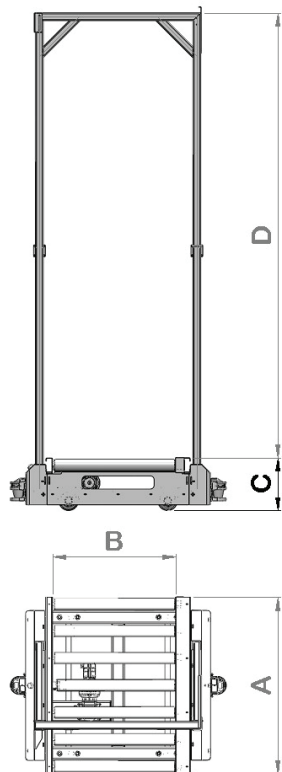
- a) Direction of rotation
- b) Speed mt / min
- c) Any (specific) alarms
- d) Millimeters distance **

** Inside the brushless motorroller we have an encoder with 1024 ppr, therefore it can also be used for positioning.



SHUTTLE ON TRACKS

H100 is also able to supply the transfer shuttle for pallets, to be defined according to the customer's project.





Via Pietro Nenni , 1
42019 Scandiano (RE)
info@h100.it

www.h100.it

