ASSEMBLY LINES
PRODUCTIONS SYSTEMS

PIBRA

ASSEMBLY LINES

PIBRA's **Assembly Lines** observe the highest performance, quality and excellence standards, gained over more than 25 years of experience in the market.

PIBRA's builds modular **Assembly Lines**, especially designed for the production of electrical cables and assembly of mechanical/electric components for the automobile industry.

Our **Assembly Lines** can be designed according to each client's production requirements and specification for the required adaptability to each factory unit.

System flexibility enables line cycle and speed adjustment, rapid reference change or the adjustment of associated peripherals, being able to operate according with two functional modules (continuous or sequential).

Safety is one of our main concerns and that is why we develop redundant systems that facilitate function reliability and commitment before the operators.

THE SOFTWARE

PRODUSI® is the right solution to ensure a high performance and efficiency level in PIBRA's Assembly Line management, by means of its several functional modules.

(for more information, please refer to the PRODUSI® SOFTWARE catalogue)

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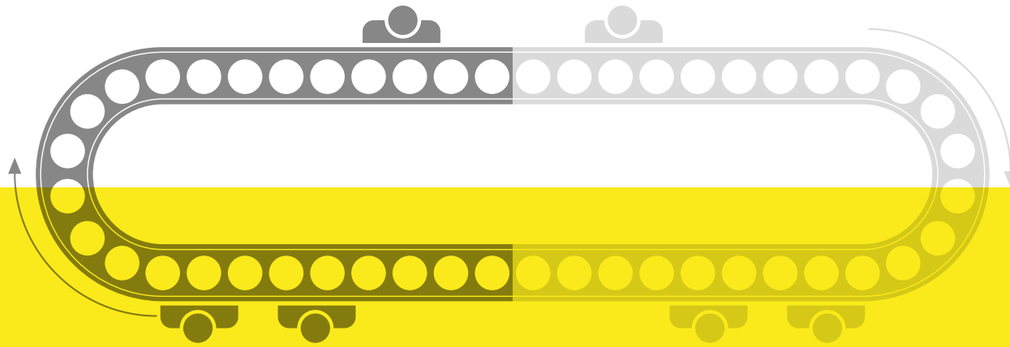
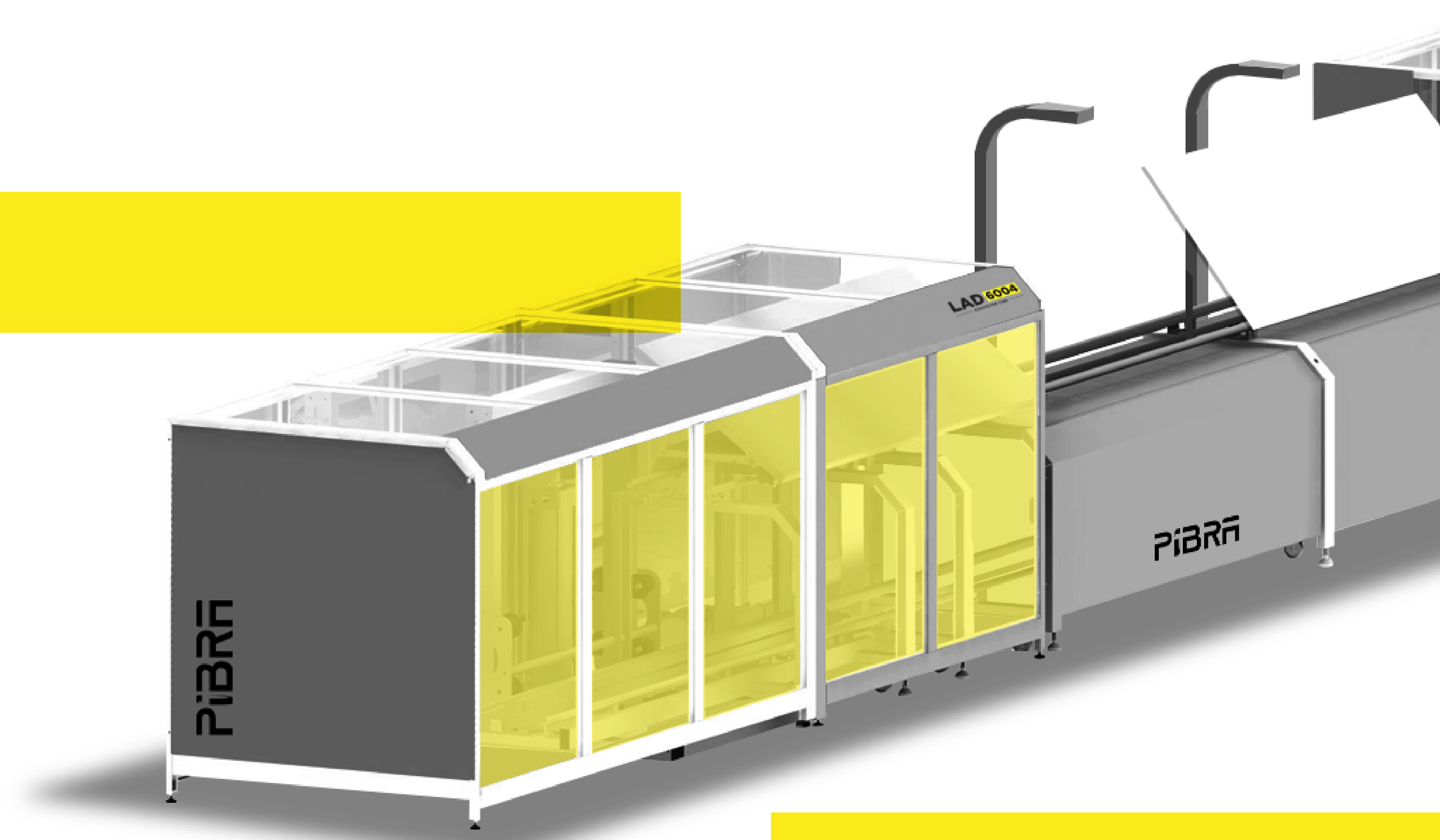
ASSEMBLY LINES

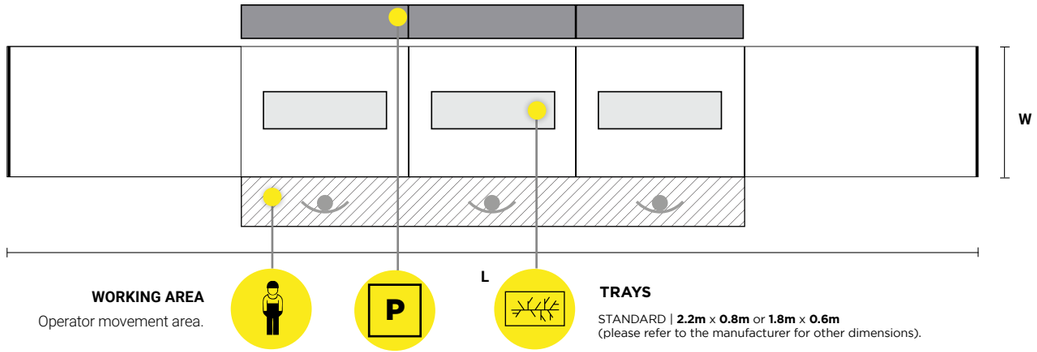




DYNAMIC ASSEMBLY LINES
ASSEMBLY LINES

LAD

LAD is a line developed according to the start-stop principle for the assembly trays throughout the several working areas. Trays slide on tubular rails in two movement platforms: the higher working platform and the lower tray return platform. Line configuration ensures that components to use for assembly are provided frontally therefore assuring optimal ergonomics for operators.



WORKING AREA
Operator movement area.

PERIPHERAL
Normal placement of production supporting structures.

TRAYS
STANDARD | **2.2m** x **0.8m** or **1.8m** x **0.6m**
(please refer to the manufacturer for other dimensions).

LEVEL	DIMENSIONS
H	Variable
W	Variable

PROTECTION
Protection against edges and tray movement.

MOVEMENT
Line movement according to the start-stop principle.

INCLINATION
Working area regulable inclination.

TRAY CONVEYANCE
Transport in line with central traction.

LIFT
Tray lifting and transition area.

TRAYS
STANDARD | **2.2m** x **0.8m** or **1.8m** x **0.6m**
(please refer to the manufacturer for other dimensions).

CONTROL SYSTEM
PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

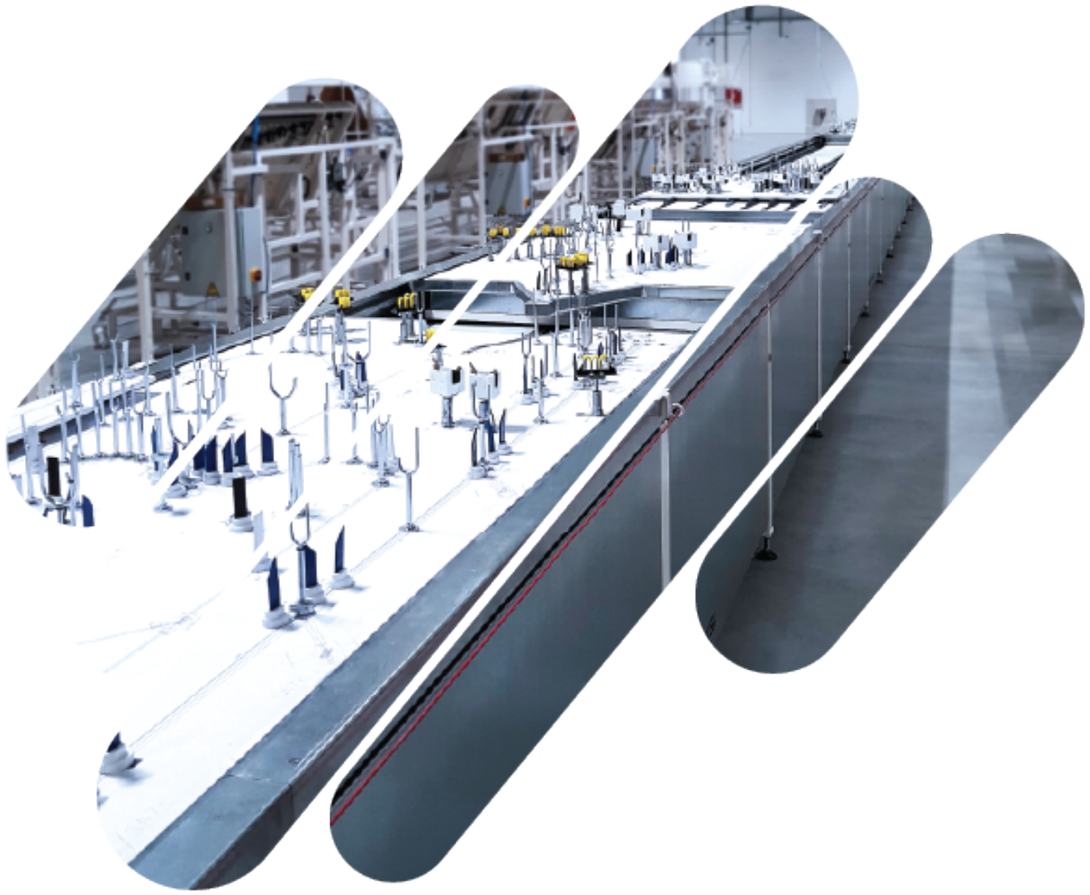
EMERGENCY SYSTEM
EC DIRECTIVES.
For the entire line.

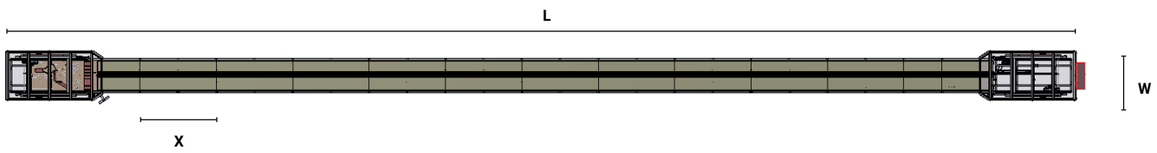
STRUCTURE
Modular: from 5m with multiples of 3m

SPEED
Between **1m/min** and **4m/min**, variable speed drive-controlled.

FLAT

The **Flat Line** is constructed in accordance to the start-stop movement of the assembly trays throughout the several working areas. The sliding movement of the trays is made by lateral guides and the upper work platform and the lower trailing platform. This line is preferably **used for large wiring**, where there is a need for **several trays for a single cabling**. The identification of the different functions, through the use of LEDs and adjustments trays, gives a great flexibility of assembly. The **Flat Line** also has a web platform for monitoring and production management.





LEVEL	DIMENSIONS
L	Variable
x	3 m
W	Variable

MOVEMENT

Line movement according to the start-stop principle.

SIGNALING

Signaling and Navigation system configured to the product to be produced.

POSITIONING OF TRAYS

Positioning between automatic trays by product.

TRAY CONVEYANCE

Transport in line with central traction.

LIFT

Tray lifting and transition area.

TRAYS

STANDARD | **2.2m** x **0.8m** or **1.8m** x **0.6m**
(please refer to the manufacturer for other dimensions).

CONTROL SYSTEM

PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

EMERGENCY SYSTEM

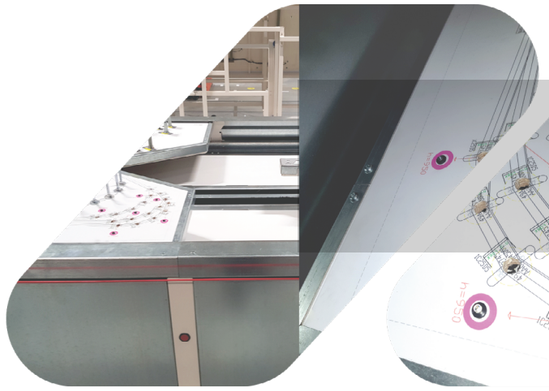
EC DIRECTIVES.
For the entire line.

STRUCTURE

Modular: from 5m with multiples of 3m

SPEED

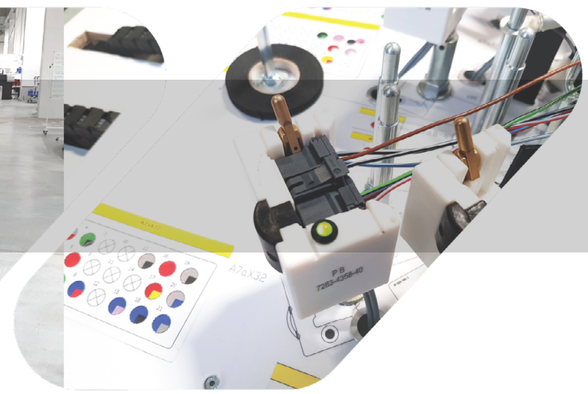
Between 1m/min and 4m/min, variable speed drive-controlled.



Positioning and interconnection between trays.
(Barcode scanning).

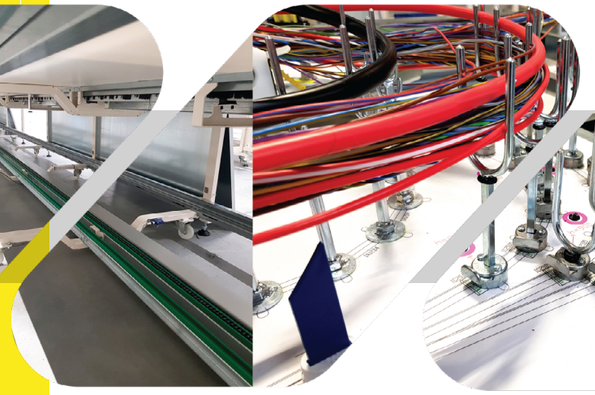
Positioning Led of components.

Association of pre-assembly to the line, with same type of led identification associated with the product.

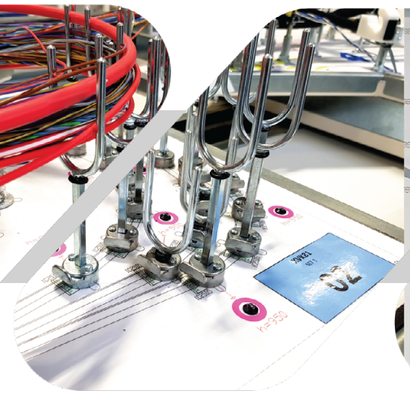


Connector in use.

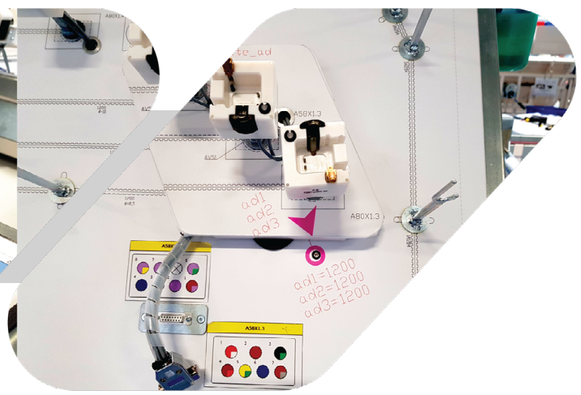
Tray elevation zone.



Lower return zone of trays.



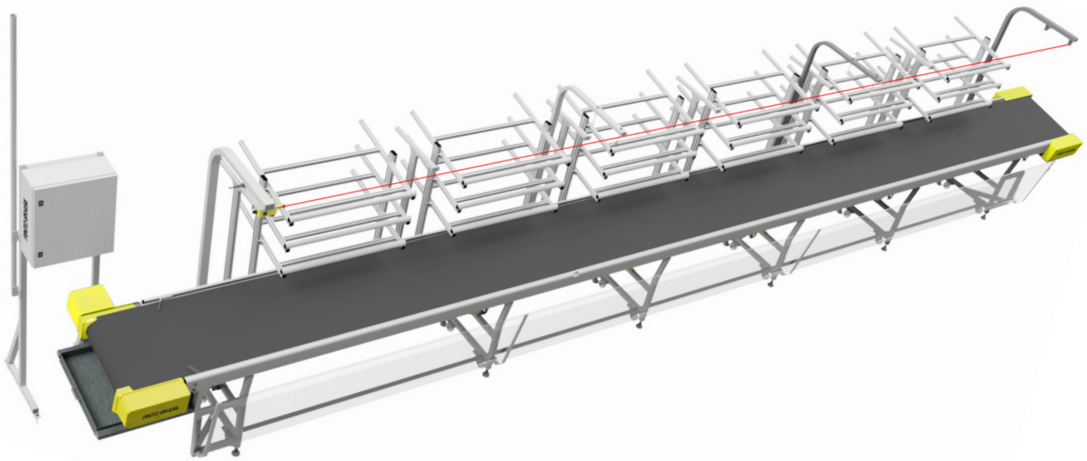
Routing identification.

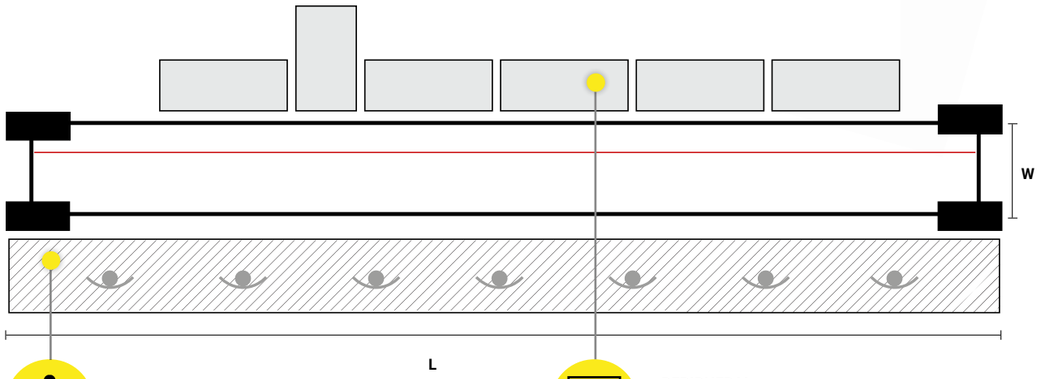


Position of equipments according to the reference to be produced

EQ (EFFICIENCY AND QUALITY)

The **E.Q.** line was designed based on the start-stop principle. Product assembly is made by moving between working areas via a **conveying canvas**. This line offers great benefits from the ergonomic point of view as it allows the front loading of components by operators. In addition, and because area supply is made in line's posterior region, this equipment increases factory layout improvement.





WORKING AREA
Operator movement area.

PERIPHERAL
Normal placement of production supporting structures.

LEVEL	DIMENSIONS
H	0.9 m
W	0.4 a 0.6 m
L	From 6 m

PROTECTION
Wire protection canvas.

MOVEMENT
Line movement according to the start-stop principle.

INCLINATION
Working area regulable inclination.

TRAY CONVEYANCE
Fixed trays in the stations.

CONVEYING CANVAS
Width: **0.2** to **0.4m**

TRAYS
Trays of various sizes
(depending on the size of the post).

CONTROL SYSTEM
PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

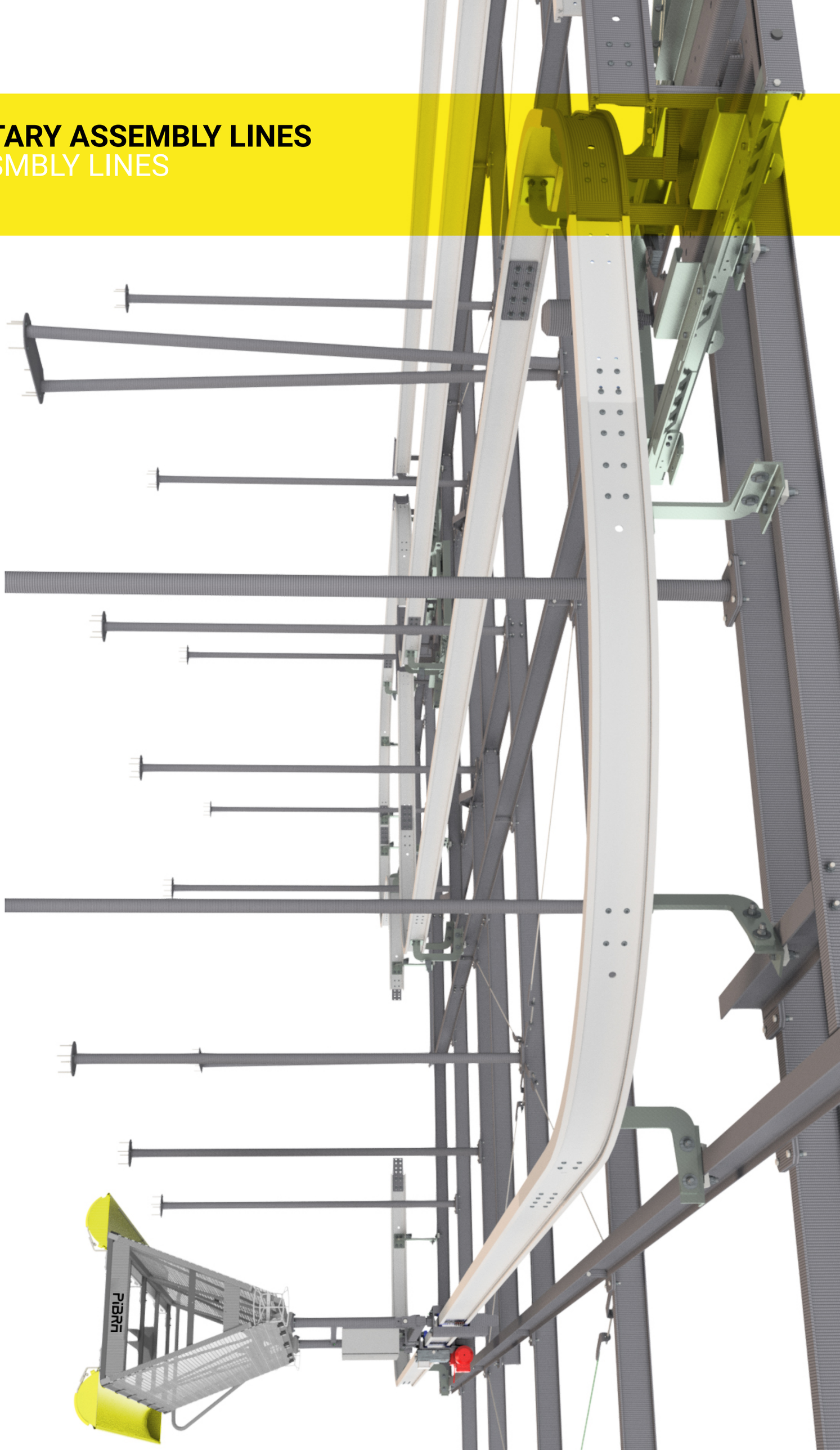
EMERGENCY SYSTEM
EC DIRECTIVES.
For the entire line.

STRUCTURE
Modular: from **6m** with multiples of **3m**
Supporting structure optional for component rack fixation.

SPEED
Between **1m/min** and **4m/min**, variable speed drive-controlled.

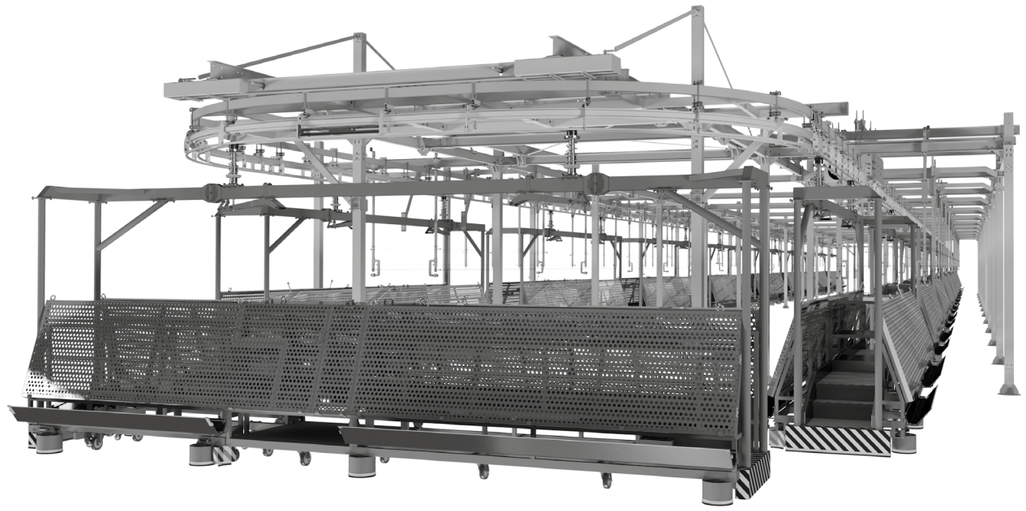
SPEED
Possibility of placing aligned springs for wire/cable fixation.

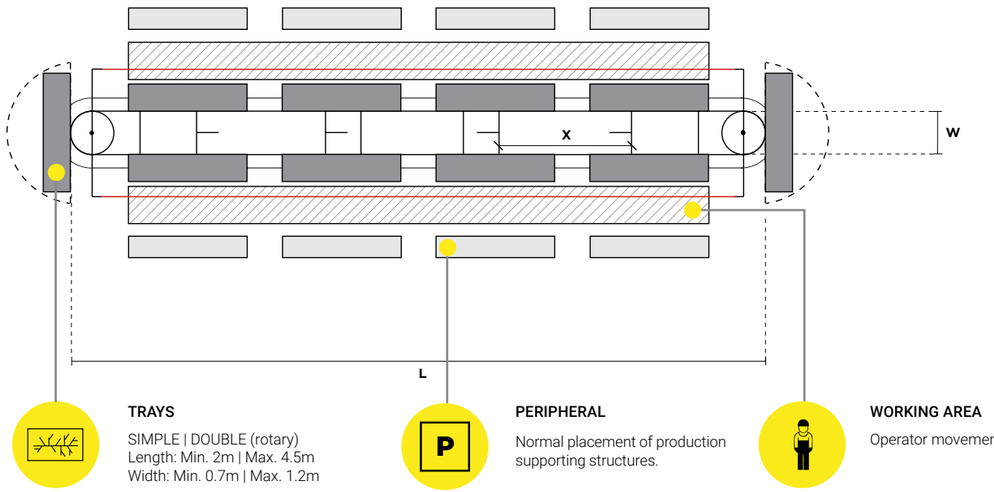
ROTARY ASSEMBLY LINES
ASSMBLY LINES



ROTARY 7

Rotary 7 is a line formed by a dynamic carousel-like structure. Trays move in a controlled way throughout the line. They slide on tubular rails, above ground, under regulable speed. Support and sliding structure, and trays are flexible and modular allowing prompt setup adjustments.





TRAYS
SIMPLE | DOUBLE (rotary)
Length: Min. 2m | Max. 4.5m
Width: Min. 0.7m | Max. 1.2m

PERIPHERAL
Normal placement of production supporting structures.

WORKING AREA
Operator movement area.

LEVEL	DIMENSIONS
H	2.250 m
L	Variable
W	0.9 m
X	Modules 3 to 5 m

PROTECTION
Wire protection canvas.

MOVEMENT
Line movement according to the start-stop principle.

INCLINATION
Working area regulable inclination.

TRAY CONVEYANCE
Conveyance on tubular rails, above ground.

ROTARY TRAYS
Tray rotation for different products

TRAYS
SIMPLE | DOUBLE (rotary)
Length: Min. **2m** | Max. **4.5m**
Width: Min. **0.7m** | Max. **1.2m**

CONTROL SYSTEM
PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

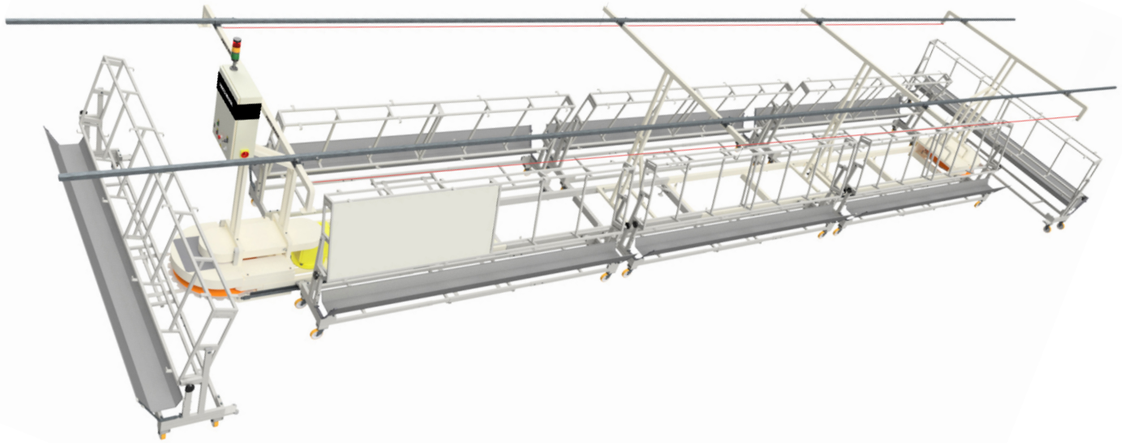
EMERGENCY SYSTEM
EC DIRECTIVES.
For the entire line.

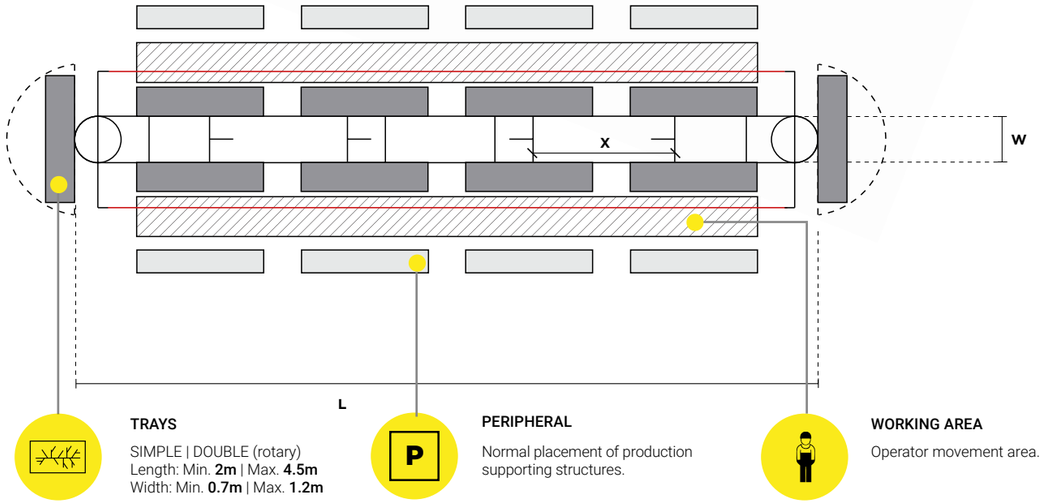
STRUCTURE
Modular: from interlinked modules of **3** to **5m**

SPEED
Between **1m/min** and **4m/min**, variable speed drive-controlled.

ROTARY 8 | 18

Rotary 8 | 18 is a line formed by a dynamic carousel-like structure. Trays move in a controlled way throughout the line and fixed in carts which move on the floor (guided by the line's central structure). All the elements are modular allowing prompt setup adjustments.





TRAYS

SIMPLE | DOUBLE (rotary)
Length: Min. **2m** | Max. **4.5m**
Width: Min. **0.7m** | Max. **1.2m**

PERIPHERAL

Normal placement of production supporting structures.

WORKING AREA

Operator movement area.

LEVEL	DIMENSIONS
H	2.250 m
W	0.8 m
L	Variable
X	Modules 3 to 5 m

PROTECTION

Wire protection canvas.

MOVEMENT

Line movement according to the start-stop principle.

INCLINATION

Working area regulable inclination.

TRAY CONVEYANCE

Tray conveyance via cart coupled to line (easily replaceable).

ROTARY TRAYS

Tray rotation for different products

TRAYS

SIMPLE | DOUBLE (rotary)
Length: Min. **2m** | Max. **4.5m**
Width: Min. **0.7m** | Max. **1.2m**

CONTROL SYSTEM

PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

EMERGENCY SYSTEM

EC DIRECTIVES.
For the entire line.

STRUCTURE

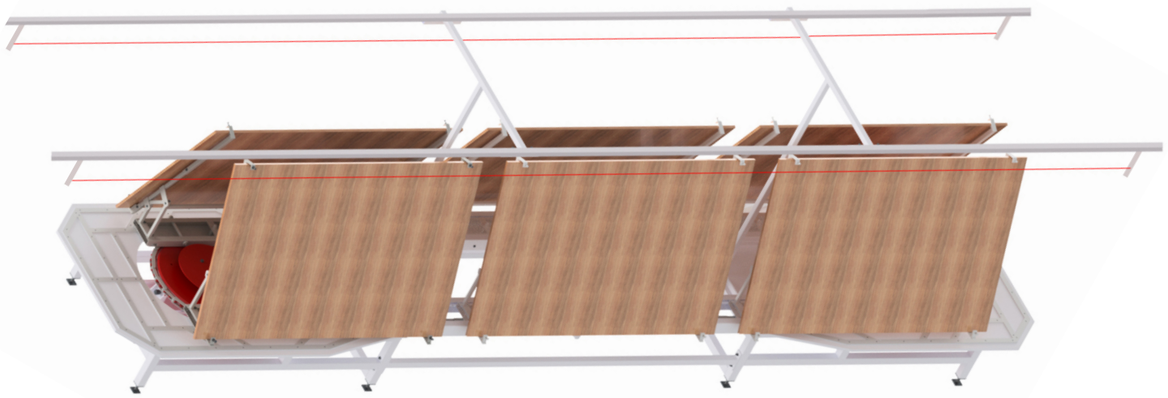
Modular: from **6m** with multiples of **3m.**

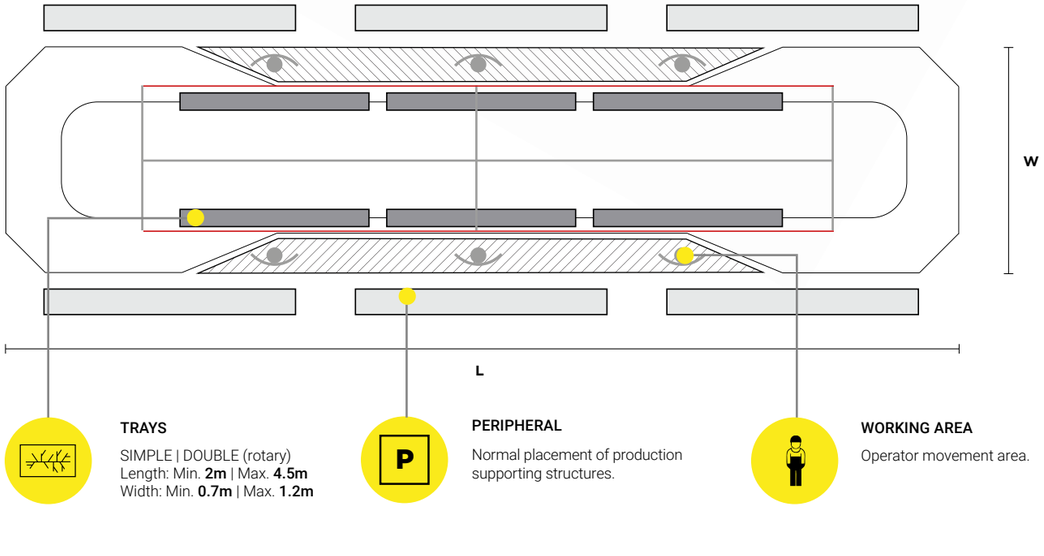
SPEED

Between **1m/min** and **4m/min**, variable speed drive-controlled.

ROTARY 11

Rotary 11 is a line formed by a dynamic carousel-like structure. Trays move in a controlled over the defined working areas, by sliding on low-speed rails. Support and sliding structure is flexible and modular allowing prompt setup adjustments.





TRAYS

SIMPLE | DOUBLE (rotary)
Length: Min. **2m** | Max. **4.5m**
Width: Min. **0.7m** | Max. **1.2m**

PERIPHERAL

Normal placement of production supporting structures.

WORKING AREA

Operator movement area.

LEVEL	DIMENSIONS
H	1.5 m
W	0.7 a 1.2 m
L	2 to 4.5 m
X	Modules 3 to 5 m

PROTECTION

Wire protection canvas.

MOVEMENT

Line movement according to the start-stop principle.

INCLINATION

Working area regulable inclination.

TRAY CONVEYANCE

Tray conveyance on low-speed rails.

TRAYS

SIMPLE | DOUBLE (rotary)
Length: Min. **2m** | Max. **4.5m**
Width: Min. **0.7m** | Max. **1.2m**

CONTROL SYSTEM

PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

EMERGENCY SYSTEM

EC DIRECTIVES.
For the entire line.

STRUCTURE

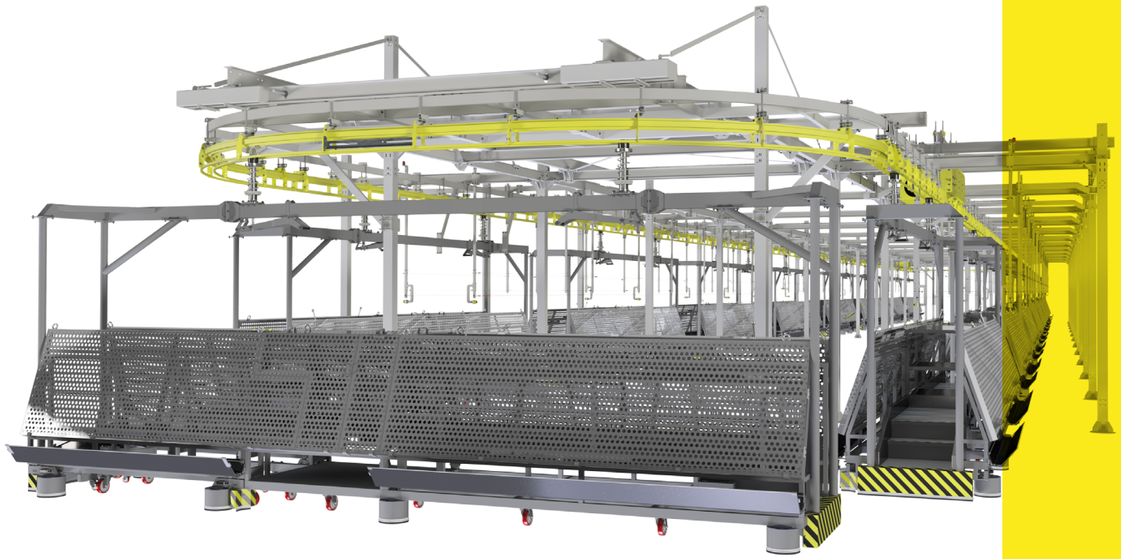
From **5m** with multiples of **3m**.

SPEED

Between **1m/min** and **4m/min**, variable speed drive-controlled.

ROTARY 19

Rotary 19 is a line formed by a dynamic carousel-like structure. Trays move in a controlled way throughout the line, and are fixed in carts which move on the floor (guided by the line's central structure). The traction zone is aerial and all elements are modular allowing prompt setup adjustments.



PROTECTION

Wire protection canvas.

MOVEMENT

Line movement according to the start-stop principle.

INCLINATION

Working tray inclination to be defined according to the set of specifications or client's specifications.

TRAY CONVEYANCE

Tray conveyance via cart coupled t o line (easily replaceable).

CASTORS

Swivel castor.
Injected polyurethane wheel, polyamide 6 core with roller bearing.

TRAYS

According to the set of specifications or client's specifications.

CONTROL SYSTEM

PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

EMERGENCY SYSTEM

EC DIRECTIVES.
For the entire line.

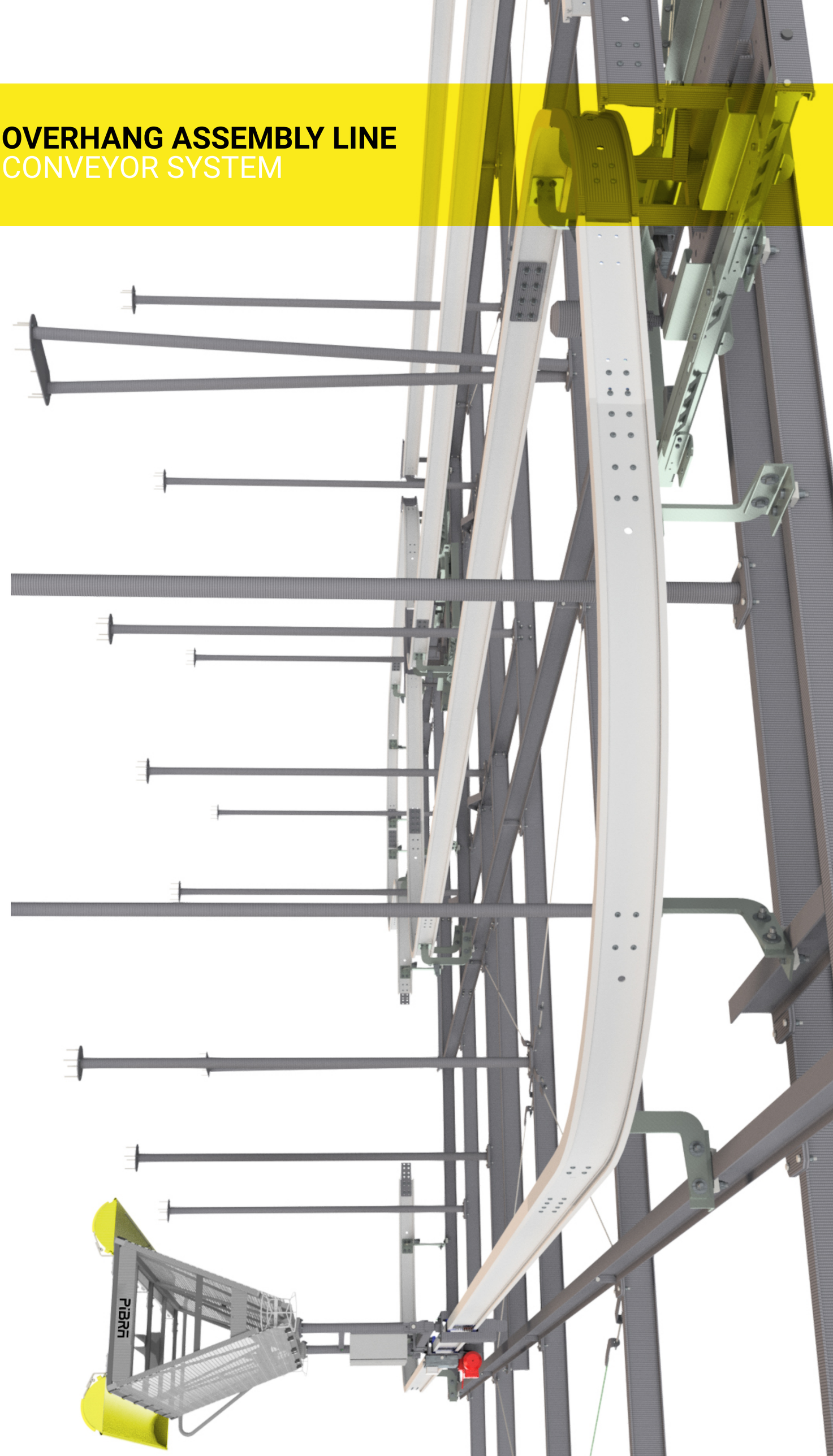
STRUCTURE

Modular: Modules **2,935m** and **5,870m**.

SPEED

Between **1m/min** and **4m/min**, variable speed drive-controlled.

OVERHANG ASSEMBLY LINE
CONVEYOR SYSTEM



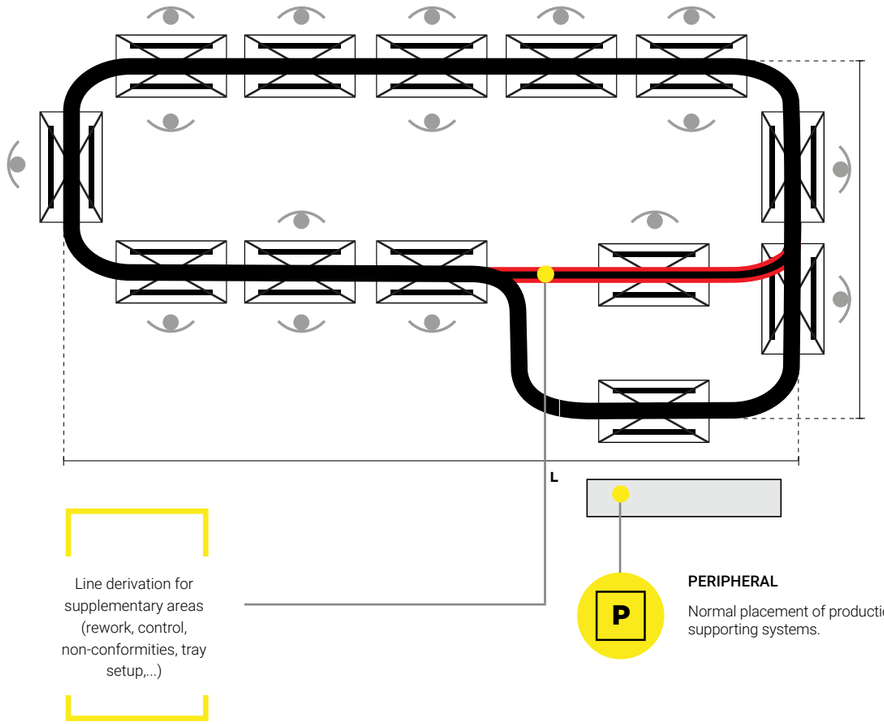
OVERHANG

Overhang is a line created according to the start-stop movement of the assembly trays throughout the several working areas. The tray is suspended in and slides along an electrified rail (**EMS – Electrified Monorail System**).

Several platforms may be placed along this line, in different levels, allowing perfect working area ergonomics. Its high flexibility enables the creation of working areas outside the central line for miscellaneous works like: rework; tray replacement and tray changes or modifications.

Tray placement and positioning allows working on both sides, therefore ensuring higher assembly process flexibility and a higher line reference diversity.

This line is laid out to ensure the frontal availability of components to be used during an assembly, assuring optimal ergonomics levels for the operators.



Line derivation for supplementary areas (rework, control, non-conformities, tray setup,...)

PERIPHERAL

Normal placement of production supporting systems.

LEVEL	DIMENSIONS
H	Variable
W	Variable
L	Variable

PROTECTION

Wire protection canvas.

MOVEMENT

Line movement according to the start-stop principle.

INCLINATION

Working area regulable inclination.

CAPACITY

300 KG.

QUICK SETUP

Rework; tray replacement and tray changes or modifications.

TRAYS

STANDARD | **4m x 1m or 6m x 1m** (please refer to the manufacturer for other dimensions). Working tray inclination to be defined. Movement pursuant to the start-stop principle.

CONTROL SYSTEM

PRODUSI® Software.
(for more information, please refer to the PRODUSI® catalogue).

EMERGENCY SYSTEM

EC DIRECTIVES.
For the entire line.

STRUCTURE

According to the set of specifications or client's specifications.

SPEED

Between **1m/min** and **4m/min**, variable speed drive-controlled.

DO YOU NEED A COSTUMIZED
WIRE HARNESS ASSEMBLY LINE?

LET’S TALK!

INDUSTRIAL SOLUTIONS

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