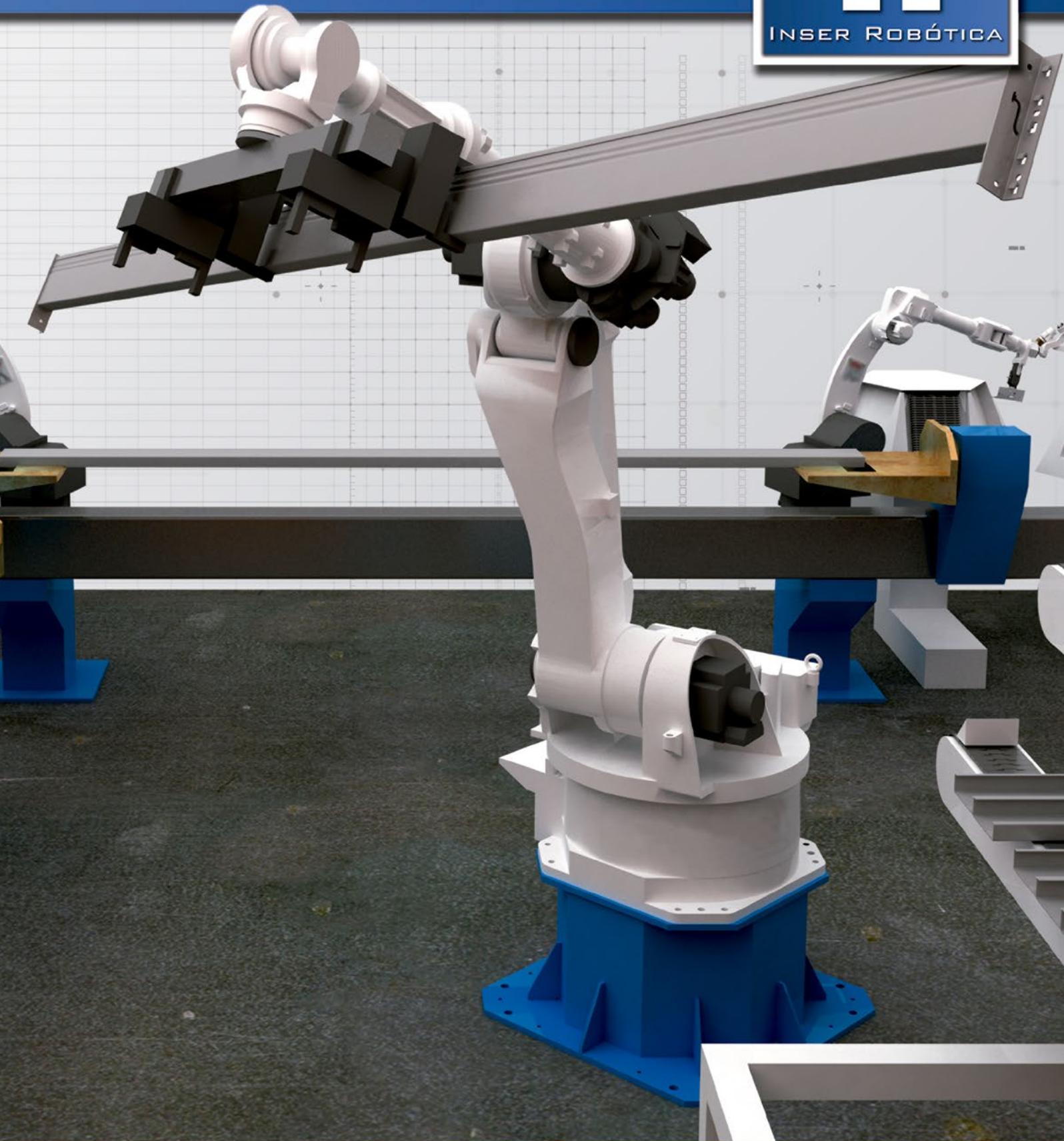


INTEGRAL SOLUTIONS
FOR PALLET RACKS MANUFACTURING



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INTEGRAL SOLUTIONS FOR PALLET RACKS MANUFACTURING

Inser Robótica, on the belief that permanent R&D investments are necessary to ensure the future of the industry, identified 25 years ago the industrial racking manufacturers as a strategic sector to develop a R&D plan in order to automate most of the manufacturing processes in this kind of industry.

Our modular cells can automate these processes:

- Beam and connector **welding**.
- **Hanging** up on the painting line.
- **Unhanging** from the painting line.
- Final bundle **palletizing**.

Welding



Hanging



Unhanging



Palletizing



The benefits of our systems:

- Great flexibility. We can work with different type of beams (step beam, structural channel beam, tube beams...), wide variety of connectors, and diverse relative positions between beam and connector.
- Quality improvement of the final product.
- Optimization of the occupied area.
- Manufacturing waste reduction.
- Manpower costs reduction.
- Better utilization of the manufacturing consumables.
- More than 90% of availability.

Our technology allow us to:

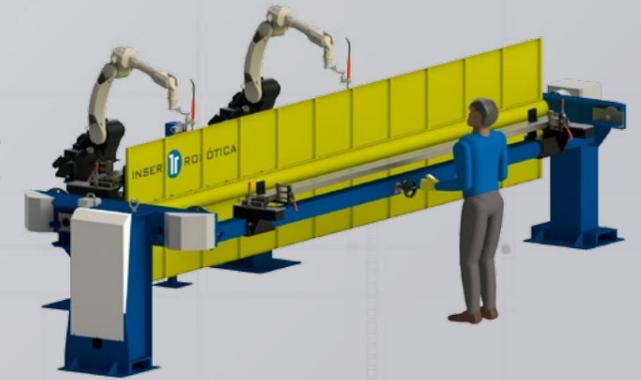
- Production control and monitoring using SCADA software.
- Fast reference changes by entering the beam data (model, length, width, and height), connector data and "Down Weld".

WELDING CELLS

MANUAL LOADING & UNLOADING

This turntable allows the operator to load and unload the beams and connectors in one side while the robots are welding on the other side.

Manual length adjustment of the welding jigs



MANUAL LOADING, AUTOMATIC UNLOADING

Same concept as the previous one, but with automatic adjustments of the welding jigs (length and down weld).

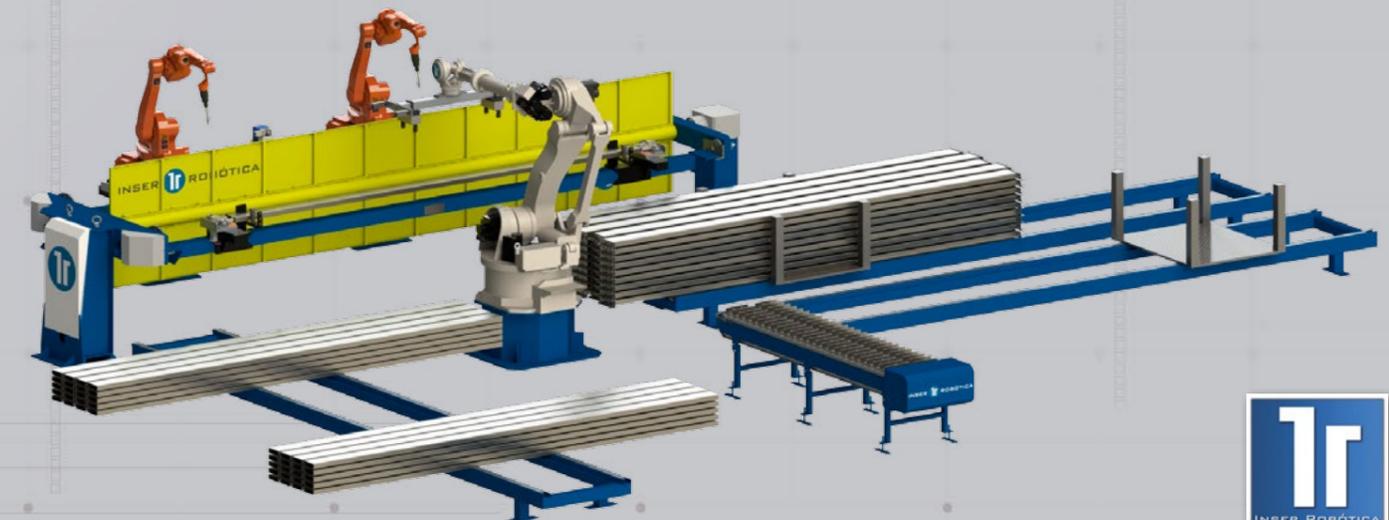
As an option, an automatic device can unload the welded beams and take them out of the cell from the back side.



FULLY AUTOMATED SYSTEM - 1 WELDING STATION

The handling robot makes the loading and unloading operations.

It can take beams from a bundle and connectors from a buffer conveyor to load the welding jigs. The welded beams will be palletized in an outgoing conveyor.

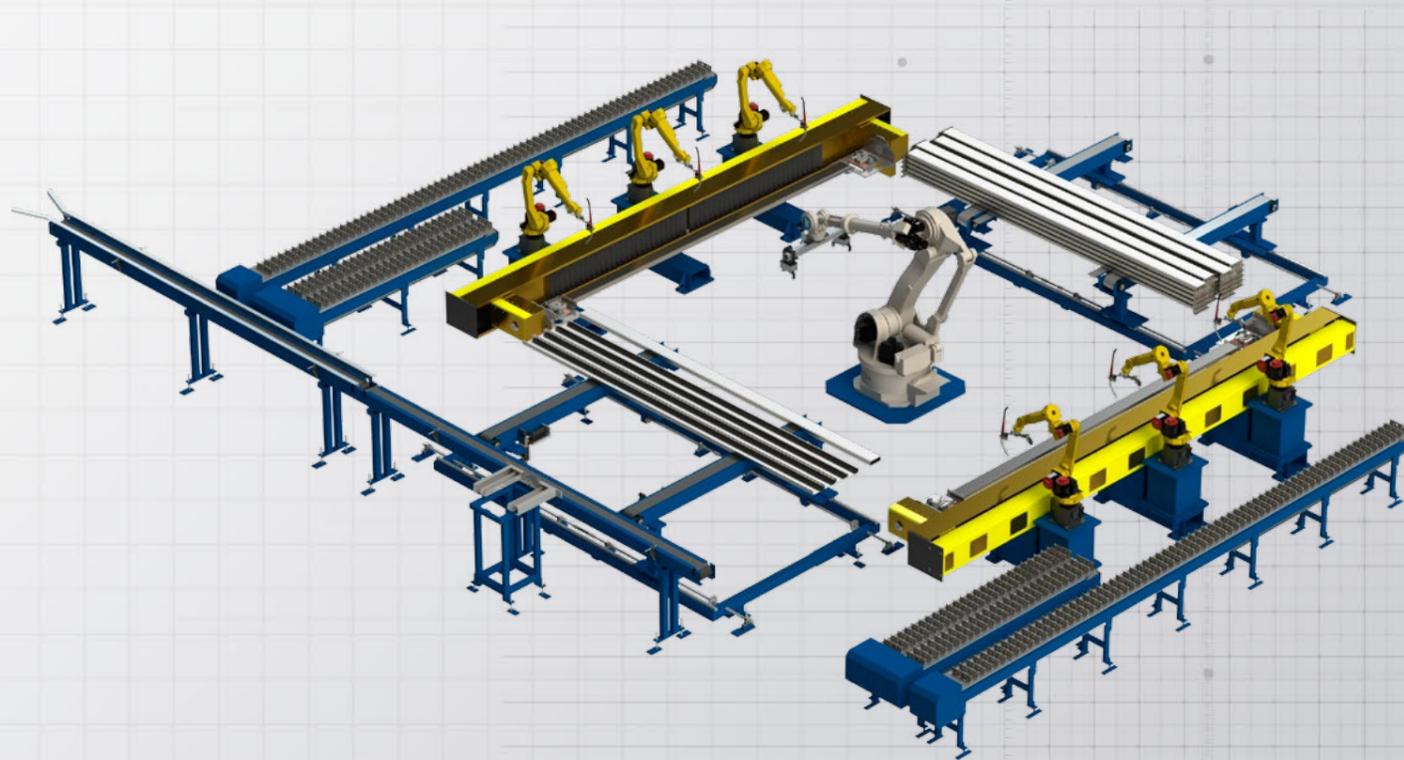


WELDING CELLS

FULLY AUTOMATED SYSTEM - 2 WELDING STATIONS

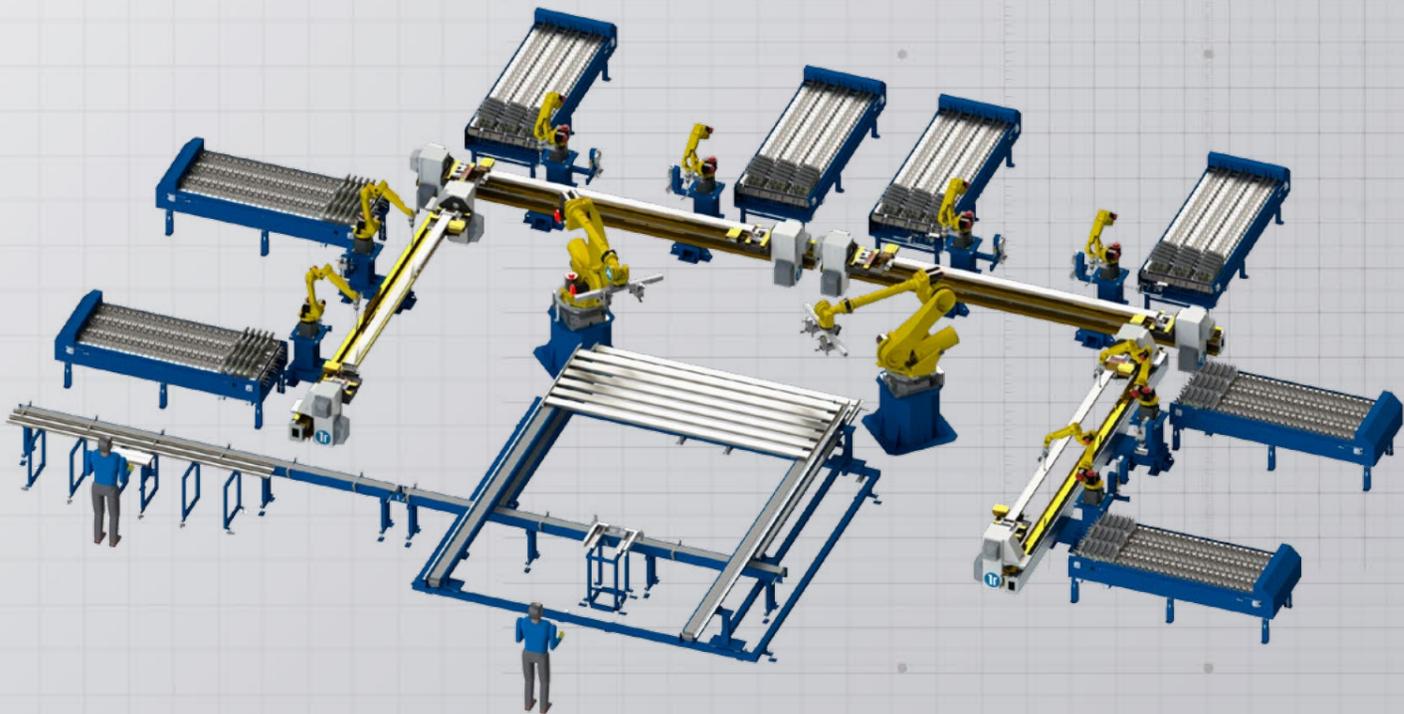
In this case the handling robot attends 2 welding systems.

The incoming beams arrive in a bundle or one by one over a conveyor. The handling robot has a double gripper to load and unload the welding stations. The connectors are loaded by the welding robots.



FULLY AUTOMATED SYSTEM - 4 WELDING STATIONS

2 handling robots and 8 welding robots to achieve high production rates. Up to 450 beams/hour. A double level conveyor feeds the beams to the system and takes out the welded parts.



HANGING CELL

A conveyor system brings the beams or uprights to the hanging cell.

Through the use of a handling robot and specific accessories we proceed with the hanging up on the conveyor that takes the beams to the painting booth.

Our hanging systems can work with continuous or "power and free" conveyors.

With a single robot we can hang regular sized beam and uprights without complex fixtures or adjustments. (*until 4.500mm / 180in)

Manpower: There is no direct manpower involved in this process.
Cycle Time: Less than **8 seconds** for any kind of beam or upright.

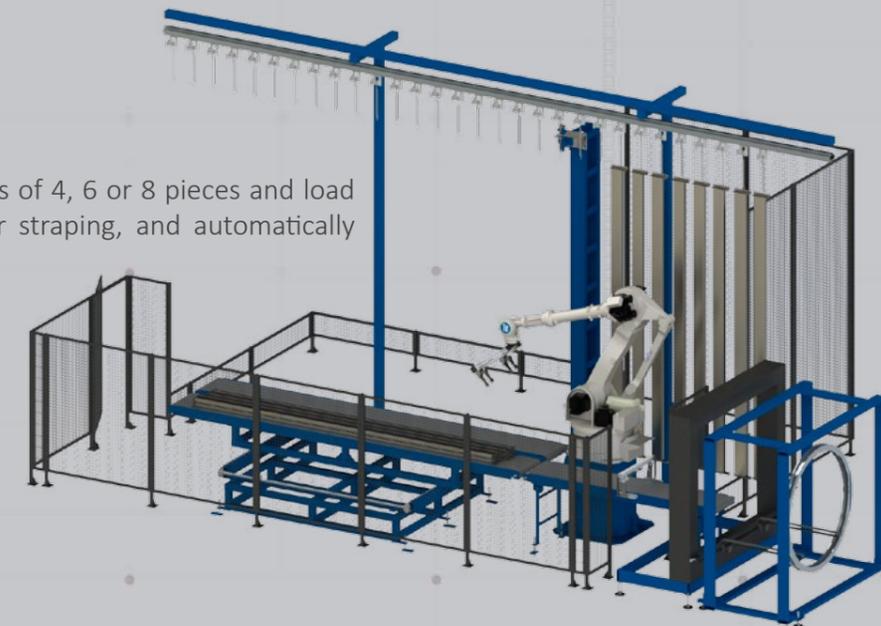


UNHANGING CELL

Inser Robótica has developed a technology that allows unhanging the beams that come from the painting booth. This operation is done by only one handling robot and the specifically designed accessories.

The system can unhang automatically all the beams and uprights up to 4.500mm / 180in. long. This robot, after unhanging the beams or uprights, can palletize them in full size bundles with wooden spacers between layers.

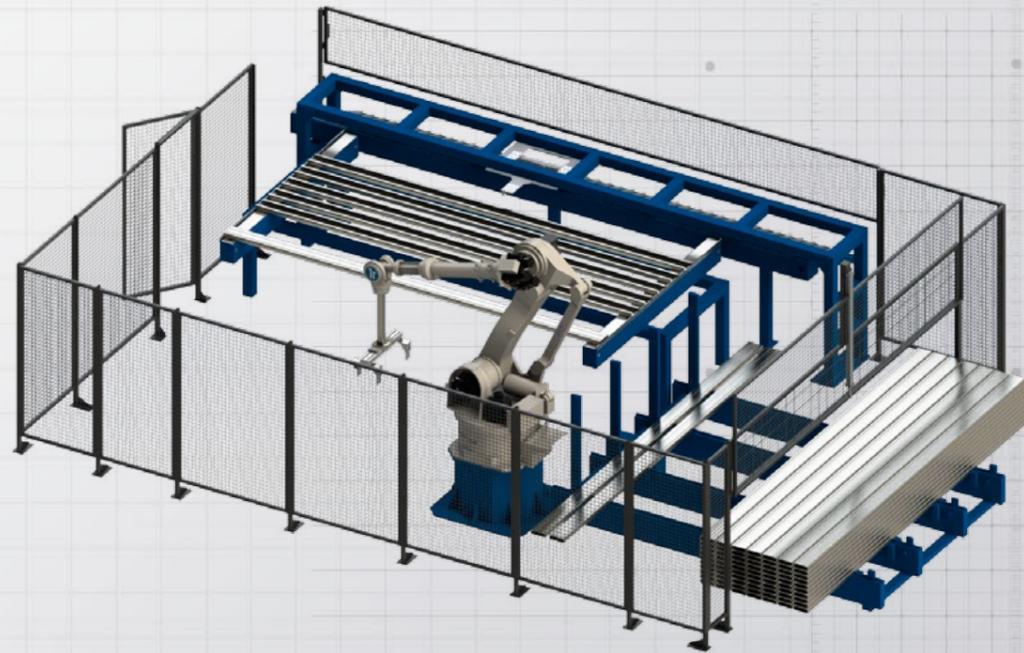
Other possibility is to make little bundles of 4, 6 or 8 pieces and load them to the next process, wrapping or straping, and automatically enter the palletizing cell.



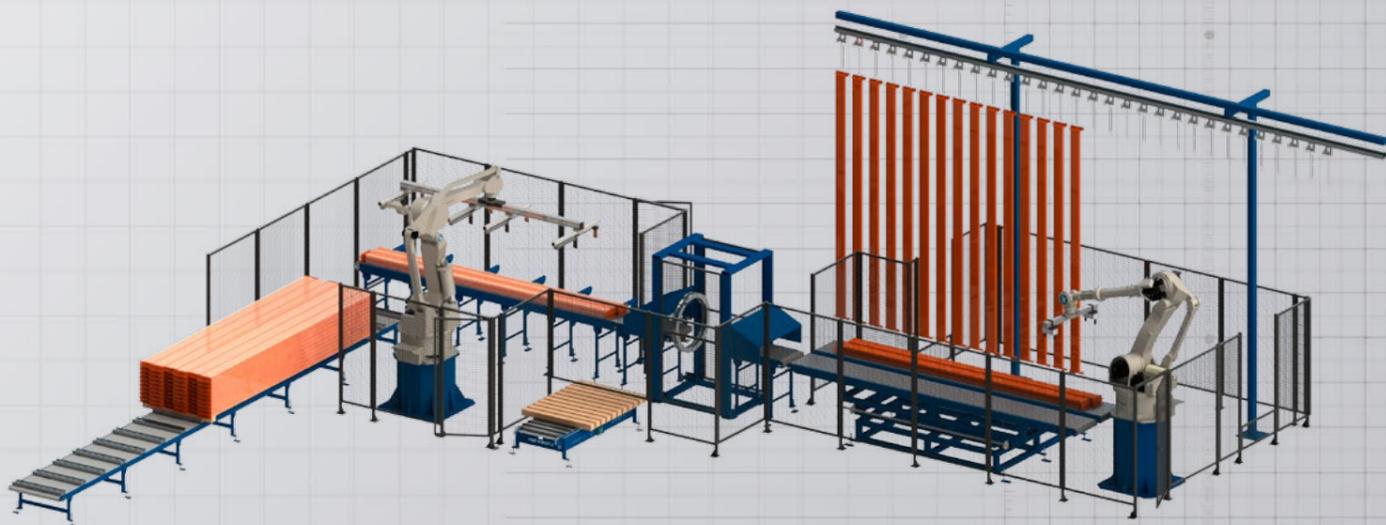
PALLETIZING, STRAPPING AND WRAPPING CELLS

For the automation of this process, Inser Robótica had developed different kind of palletizing systems:

- Palletizing after roll forming or profiling machine.



- Palletizing after paint operation to a full size bundle with wooden spacers between layers.



We can also integrate wrapping and strapping machines in the final palletizing operation.

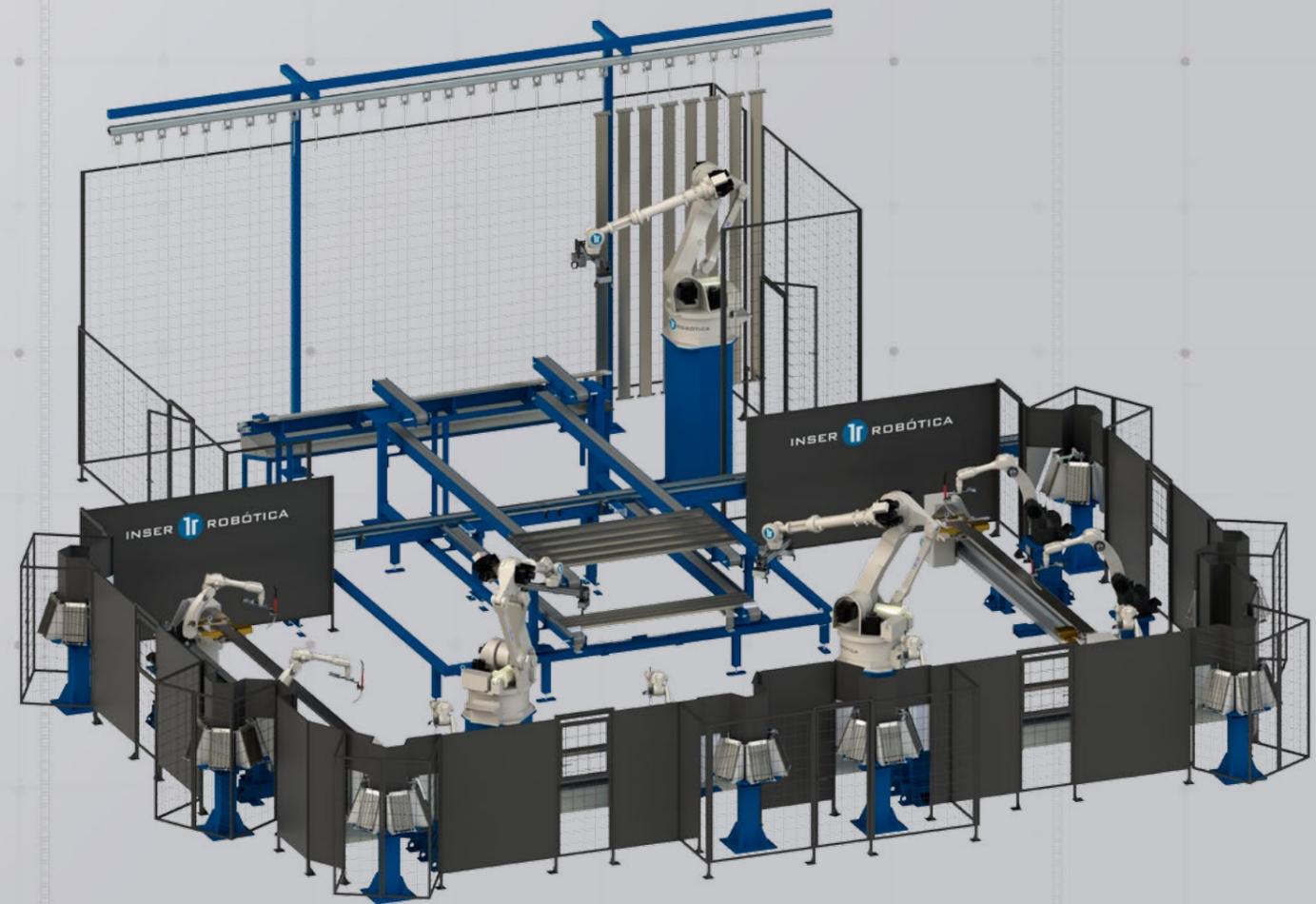
INTEGRAL SYSTEMS

All the individual processes and robotic cells can be linked in an integral manufacturing system.

We have developed a range of robotic cells with high technological content to link all the manufacturing operations from the roll forming or profiling machine to the final palletizing, passing through the welding and painting processes.

This way, the technology developed by Inser Robótica allows the whole production line to work being supervised by only 4 operators per shift.

Inser Robótica can help our customers to design the complete manufacturing line, integrate all the machines and program the robotic systems.





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