

## ***Food Automation Technologies***

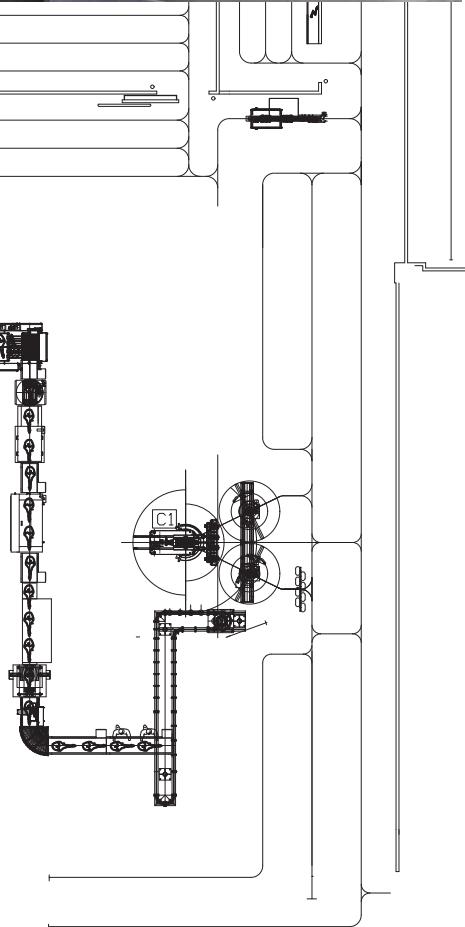
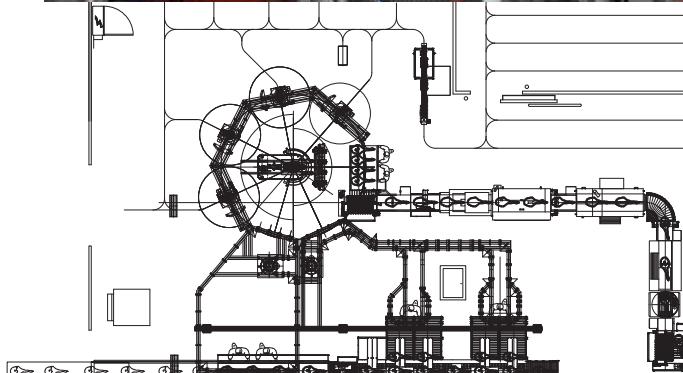
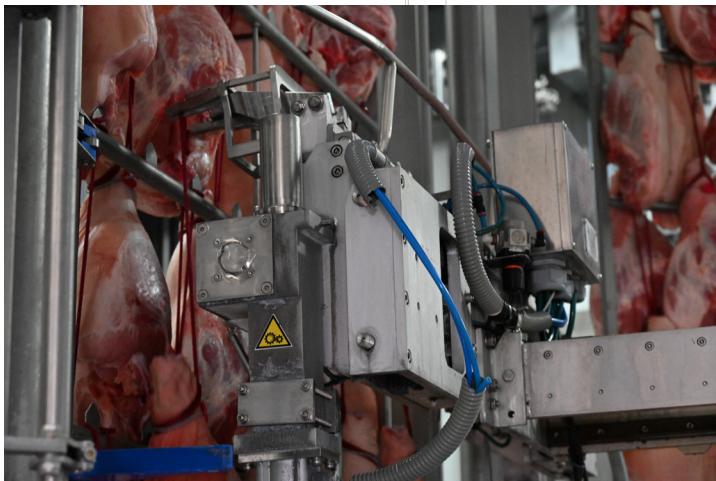
**THEMA SYSTEM**  
[www.themasytem.com](http://www.themasytem.com)

# Hams Seasoning Plant

Plant for the seasons of hams, located in Spain.  
The project by Thema 2 covers major part of the whole production plant, including:

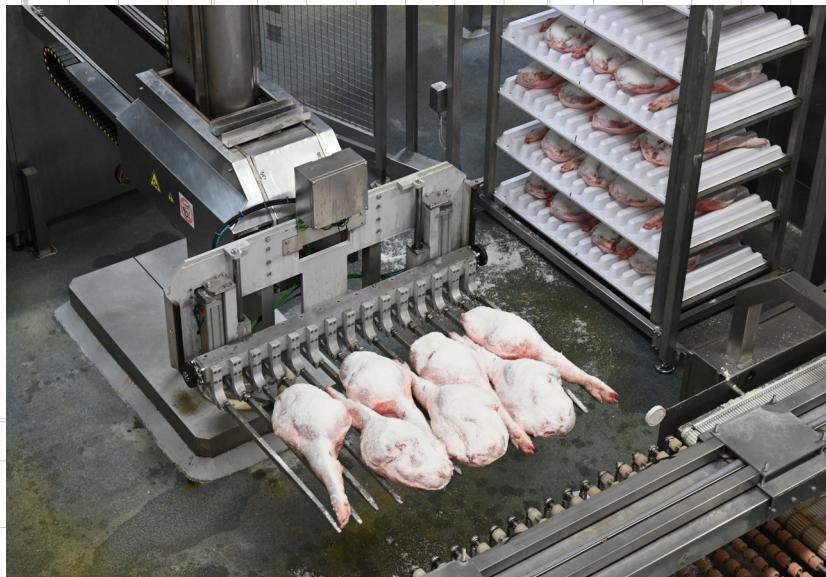
- **Robots for loading and unloading operations**
- **Chassis handling**
- **Radio controlled "tractors"**
- **Transponder based guide system**
- **RFID Tag**

## TRANSPOUNDER BASED GUIDE SYSTEM



# Hams Seasoning Plant

## ROBOTS FOR LOADING AND UNLOADING OPERATIONS



Robot for loading/unloading operations of the hams from the chassis. with simultaneous loading of two or more hams.

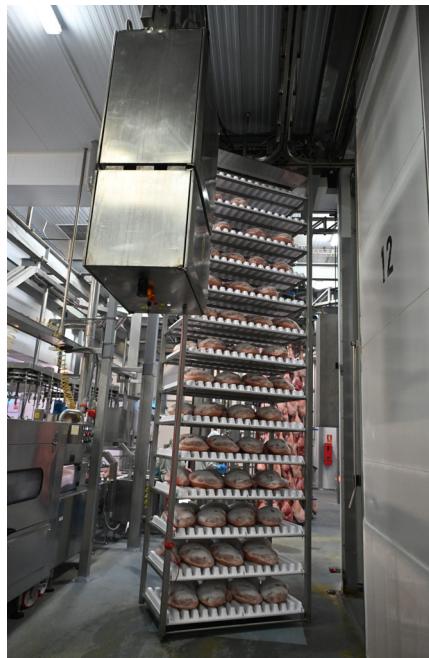
Control system equipped with axes control card for movements interpolation.



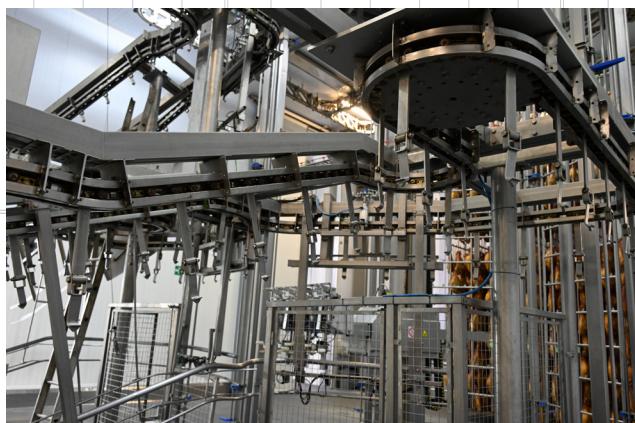
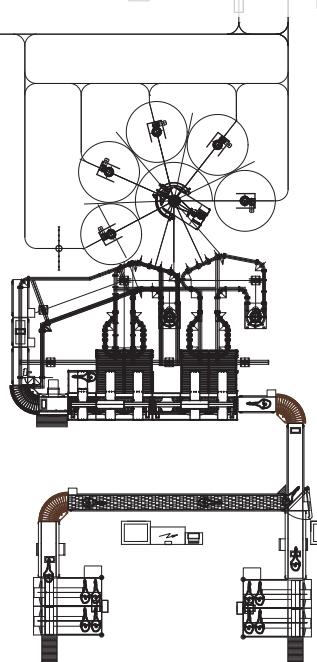
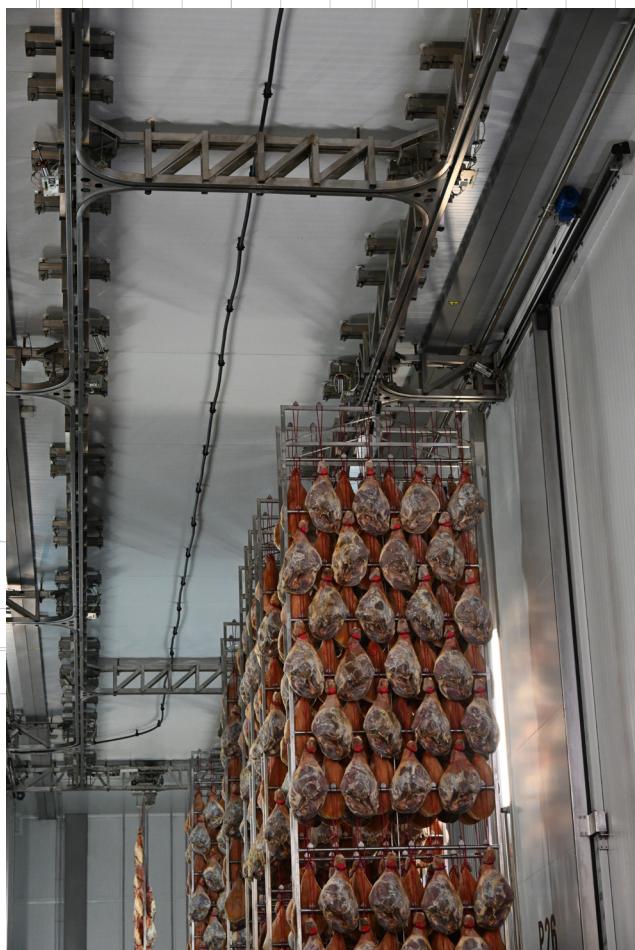
## RADIO CONTROLLED TRACTORS

Radio controlled "Tractors" for the handling of chassis and guide system based on trasponder technology.

## TRANSPOUNDER BASED GUIDE SYSTEM



# Hams Seasoning Plant



# RFID Tags

## FEATURES

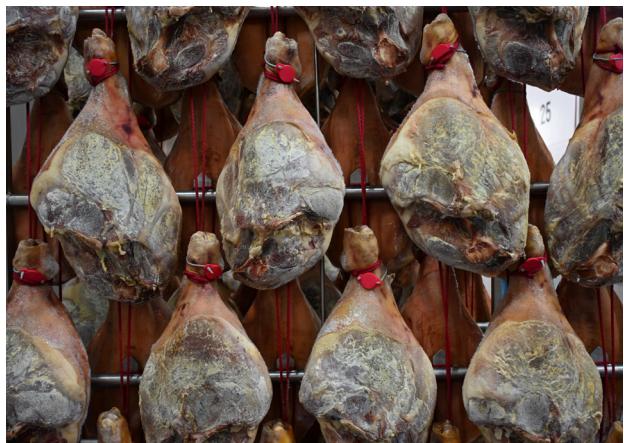
- 64 bits Read Only memory
- Typical operating frequency :125kHz
- Contactless power supply, very low power
- Several options of data rate and coding type (during device manufacturing)
  - Data Rate: 2, 4 or 8kb/s
  - Modulation type : Manchester, Biphasic or PSK
- Guaranty of the unicity of the codes
- Special Customer ID codes on request
- Protected IP68
- Operation range is -40°C to +85 °C
- Laripur 9025 COIM (TPU thermoplastic polyurethane)

## MEMORY ORGANIZATION

- 9 header bits (all programmed to "1"). This sequence of 9 "1" plus the stop bit, cannot be reproduced in the data string and allows the message synchronization.
- 10 groups of 4 data bits (allow 100 billion combinations)
- 10 line even parity bits, 4 column even parity bits, 1 stop bit (programmed to "0")



1	1	1	1	1	1	1	1	1	1
<b>8 version bits or customer ID</b>				D00	D01	D02	D03	D04	
				D10	D11	D12	D13	P1	
<b>32 data bits</b>				D20	D21	D22	D23	P2	
				D30	D31	D32	D33	P3	
				D40	D41	D42	D43	P4	
				D50	D51	D52	D53	P5	
				D60	D61	D62	D63	P6	
				D70	D71	D72	D73	P7	
				D80	D81	D82	D83	P8	
				D90	D91	D92	D93	P9	
<b>4 column parity bits</b>				C0	C1	C2	C3	stop	



# Salami String Cutting Machine

Cutting machine for the salami string division for a well known italian company.

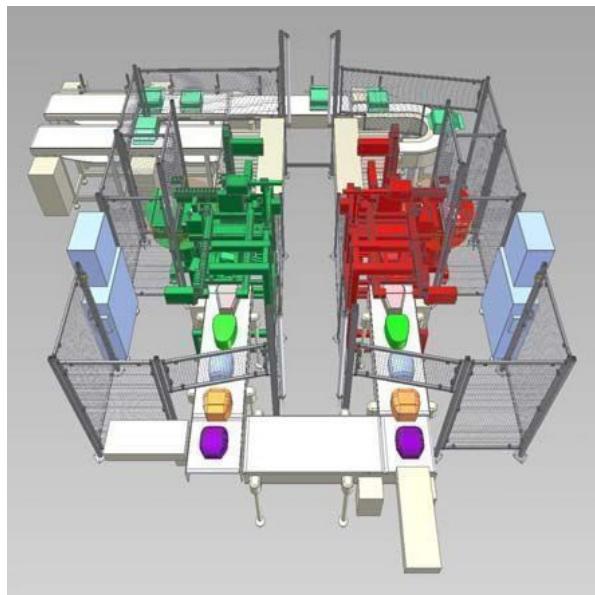
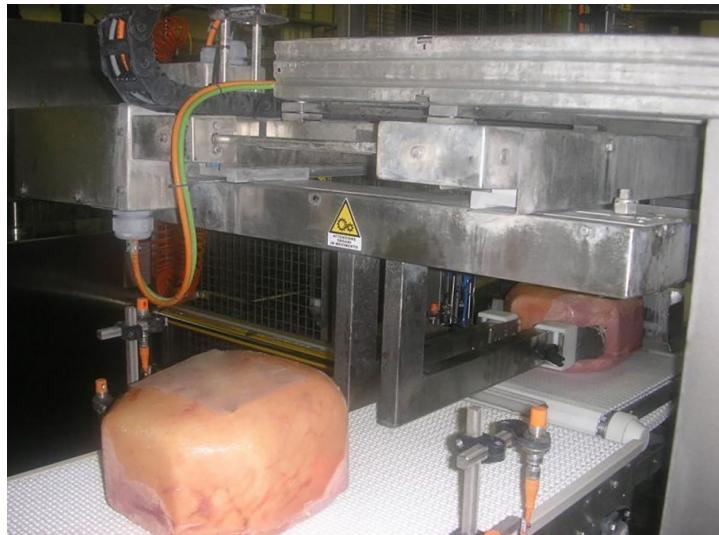
- **High production capacity**
- **Possibility to process products of different lenghts**
- **Possibility to process strings of different number of salamis**



# Automatic Packing System for Hams

The automatic packaging system for cooked hams is equipped with ultrasounds welding on 2 or more points, direct transfer at the vacuum machine and production control software.

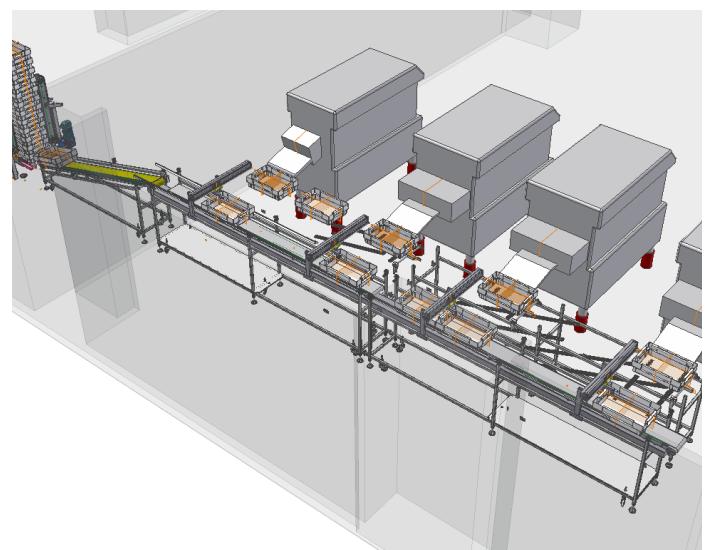
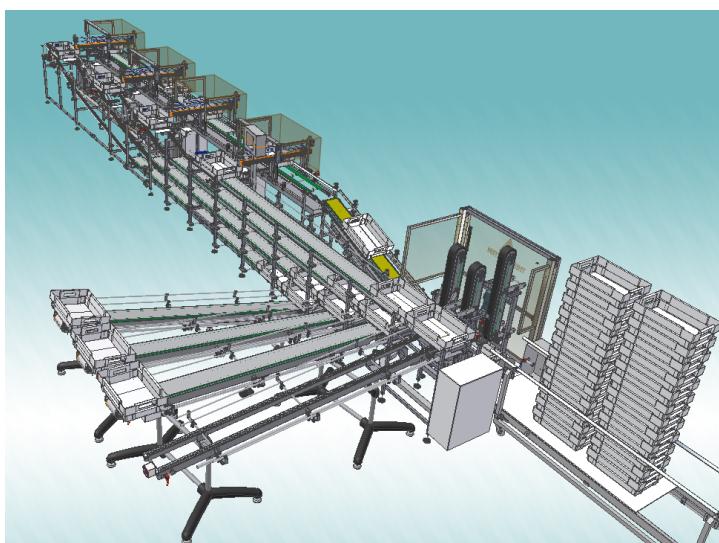
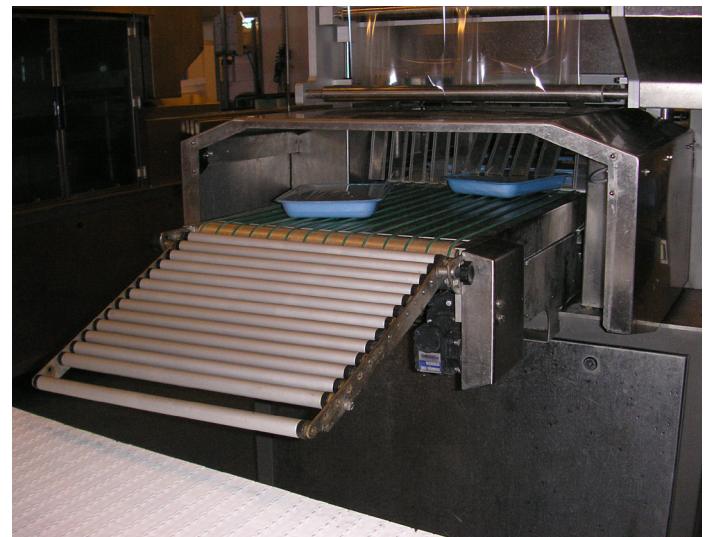
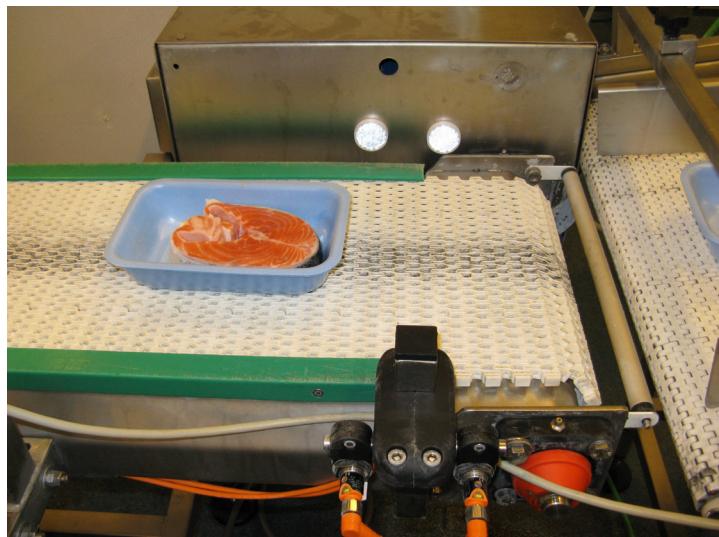
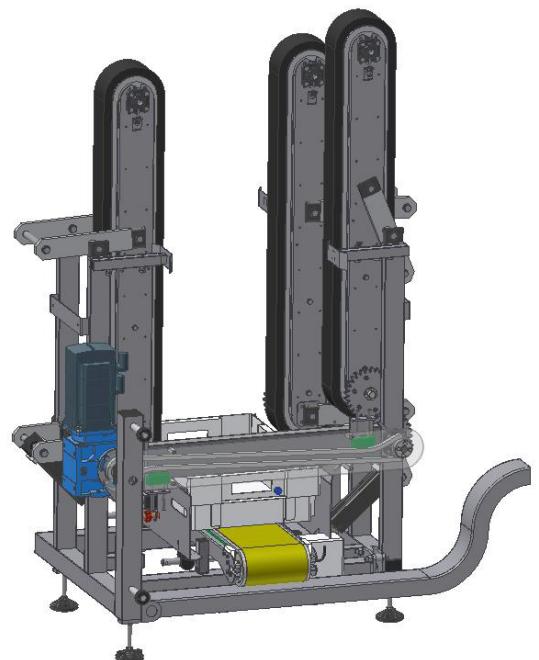
- **High production capacity**
- **Optic control for the correction of the ham orientation**
- **Possibility of personalization of the bag dimension and product dimension**



# Automatic Storaging System for Fish

The automatic storing system for fish wrappings is equipped with RFID technology for data tracking.

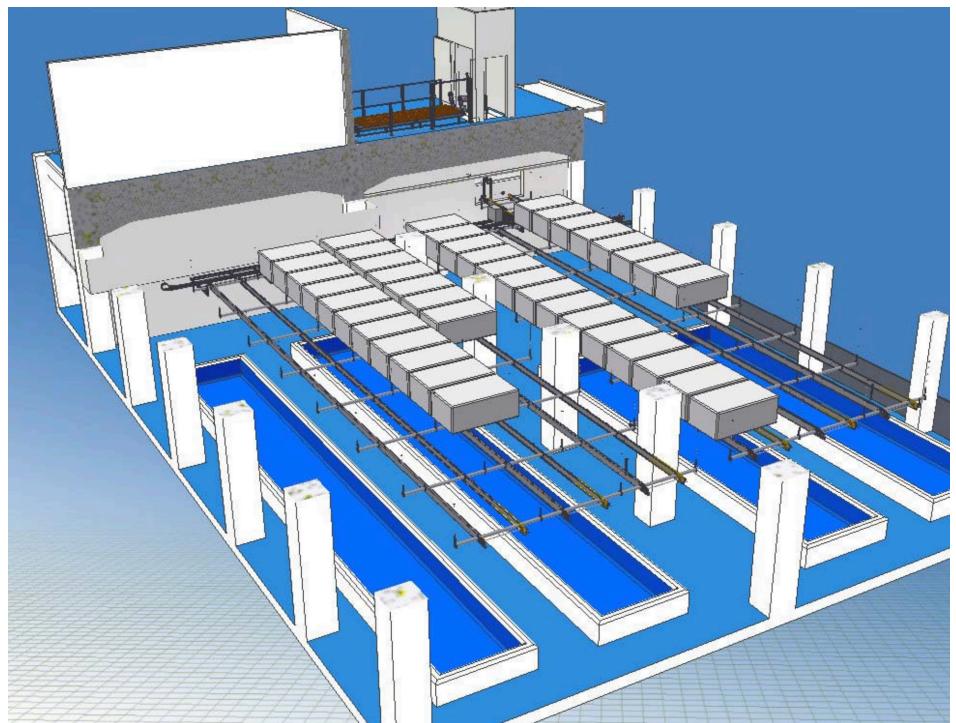
- **Handling line for cases with system for automatic separation**
- **Dropping filling system**
- **Transport and handling with overlapped belts**
- **Transponder reading workstation for each single handling line, with production control software linked to the local server**



# Overhead Warehouse for Fish Packs

The overhead warehouse for fish packing industries is located in a plant in Italy.

- **Maximum number of handled pallets on demand**
- **Maximum capacity load on demand**



# Handling System

Handling system for confectionery food industry.



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Made in Italy

