



PORK SOLUTIONS // RPS-D

FAST AND ACCURATE ROBOTIC SPLITTING

The Frontmatec-AIRA dual arm with splitting saw combines two industrial robots with the same controller, thus both robotic arms act as a single machine. The RPS-D combines two six axis industrial robots with hygienic configuration and a highly optimized and specialized tool using a circular saw. The carcasses are split in two halves along the spinal canal, which is symmetrically opened. The cut is executed vertically to the end of the atlas vertebra. Alternatively the machine can split the head completely, depending on the customer preferences.

The concept

With the Frontmatec-AIRA robots, continuous operation on the dressing line conveyor is maintained, as the robots are synchronized with the main line conveyor. While carcasses are pulled forward, the position, depth, and angle are determined by the detection unit (vision scanner), the process is performed in a downward movement.

The Frontmatec-AIRA concept is dynamic, as multiple robots can be fitted along the main conveyor of the slaughter line. The Frontmatec-AIRA robots are all “plug and play”, and can operate in any type of new or existing pig slaughter lines.

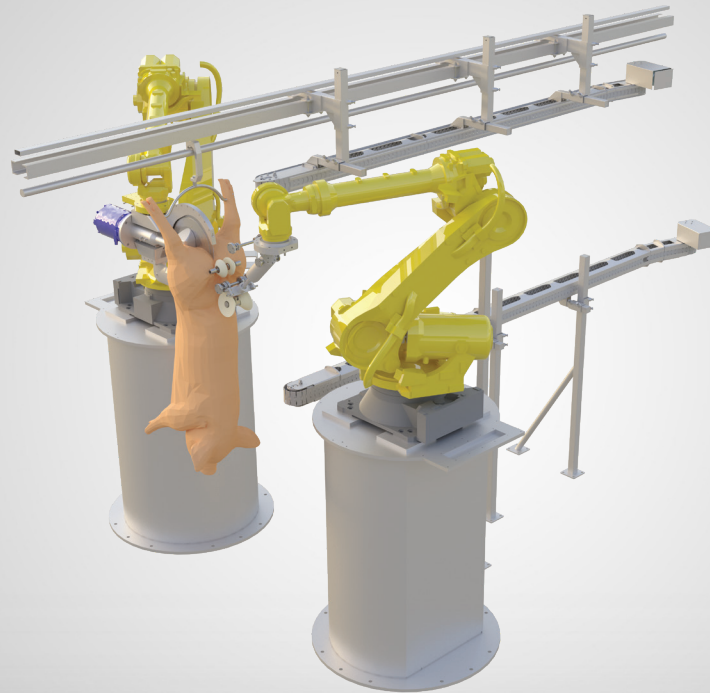
Hygiene

The integrated sterilization system with its unique cleaning set-up secures fast and accurate sterilization between each operating cycle, allowing the robot to operate at high capacity with negligible cross contamination. The robot itself is enclosed in a strong flexible protective cover with constant air flow inside and lightly over-pressure, keeping the vital part of the robot clean and safe in the harsh environment.



Value for you!

- High capacity: 650 carcasses/hour
- Precise and accurate automated splitting
- Easy to service with quick and easy change of blade
- Yield improvements



System consisting of:

- Two robots, each with a hygienic protective cover
- Cutting tool with circular saw blade attached to the robot
- Sterilization system
- Vision system which is installed along the slaughter line
- Carcass guidance system
- Control unit with transformer box
- Robot fence with secured entrance

Safety and legal requirements

The Frontmatec-AIRA aitch bone cutter is CE approved and designed to meet the strictest demand on health and safety.

Advantages with the Frontmatec-AIRA concept

- A concept founded on more than 20 years of experience in R&D and engineering of automated processing.
- Homogeneous processing and high quality cuts.
- High hygiene level with integrated sterilization of cutting tools, minimizing the risk of cross contamination.
- Reduction of labor cost with one robot.
- Human-machine interface for setting and adjusting the robot.
- Low maintenance.
- Easy and swift to clean and keep clean.
- Easy operation and troubleshooting with uniform user-friendly operator panels on the Frontmatec-AIRA robots.
- Software interfaces with monitoring systems.

Pre-conditions

Capacity	650 carcasses/hour
Live weight	60-140 kg/132-308 lbs
Process parameters	Individual cutting parameters for each carcass, customized settings possible
Vision scanner	3D vision system based on optical measuring device
Voltage	380-575V AC 50/60Hz 3 phase
Control voltage	24V DC

Requirements

Water	6 bar (min. 4 bar constantly)
Water consumption	Cold (<20°C) 1.8 liter/pig*
	Hot (>82°C) 0.9 liter/pig*
Compressed air	8 bar (min. 6 bar constantly)

**Dry air, free of oil and dust absorbed. Approved for use in the food industry ISO 8573-1:2010 Class 1.4.1*

**Values are based on experience in the field and cannot be guaranteed, as many factors can influence these numbers*

**Technical data may be subject to changes*

Frontmatec-AIRA_V1-0_2024_EN

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