

RBDH bung dropper and aitch bone cutter



Fully automatic precision bungger

The AiRA RBDH can be used as a single machine or in combination with other robot modules. The RBDH combines a six-axis industrial robot, with a hygienic configuration and a highly optimized and specialized tool, equipped with a blade or a saw blade to open the aitch bone and a mandrel to cut the rectum.

The concept

With AiRA robots, continuous operation on the dressing line conveyor is maintained, as the robots are synchronized with the main line conveyor; so while carcasses by drop fingers are pulled forward, the position, depth, and angle are determined by the detection unit (vision scanner) and the process is performed in a downward movement.

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

Hygiene

After each process, a cycle of cleanliness and sterilization is implemented to clean all the parts that are in contact with the product, thus avoiding contamination between carcasses and ensuring a maximum level of hygiene and food safety.

The tool is sprayed by special nozzles in the required directions, using pressurized cold water for cleaning and hot water for sterilizing.

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.

Options

- Guidance system for the hind legs
- Sterilization as separate unit

Why the RBDH bung dropper and aitch bone cutter!

- High capacity: 550 carcasses/hour
- Fully automated bunging
- Fully automatic opening of aitch bones and ham separating when using version with “disc”
- Minimal risk of cross contamination
- A vacuum suction ensures smooth and easy disposal of the removed bungs
- Easy to service, minimal moveable parts, quick and easy change of cutting tool



Pre-conditions

The total system consisting of:

- Robot with a hygienic protective cover
- Cutting tool attached to the robot
- Vacuum unit
- 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 AiRA bung dropper and aitch bone cutter is CE approved and designed to meet the strictest demand on health and safety.

Technical data

Capacity	550 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 constant)
Water consumption	Cold (<20°C) 1.2 liter/pig* Hot (>82°C) 0.4 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 8573-1:201 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



Advantages with the AiRA concept

- A concept founded on more than 20 years 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 labour 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 AiRA robots
- The software interfaces with all types of monitoring systems



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