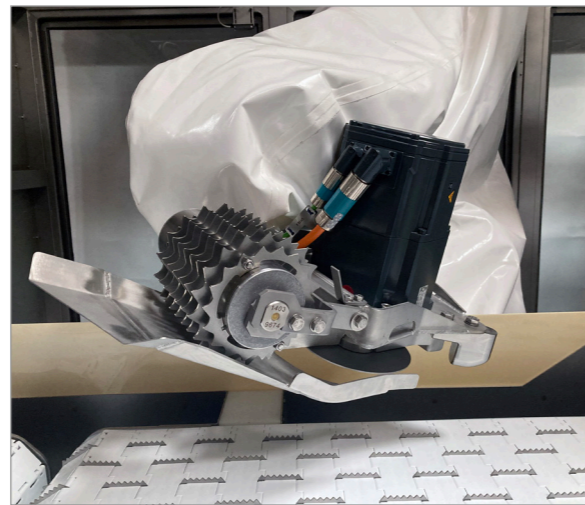




PLC control



Cutting tool with chute for transport of backbone to bin



AUTOMATIC CHINE BONE SAW TYPE CBCL-100

PRECISE SAWING WITH HIGH YIELD

With the Frontmated automatic chine bone saw, high yield and easy deboning at a high capacity is achieved by consistent sawing precision. The setup is flexible and can easily be integrated on an existing deboning line.

Functionality

With the automatic chine bone saw, continuous operation on the primal cutting and deboning line is maintained, as the robots are synchronized with the line movement.

During transfer of the middles on the robot conveyor, the middles are scanned by the 3D vision camera, and specific cutting positions and a specific path is determined. After the detection of the cutting position the chine bone is cut off each middle individually, in a position which can be adjusted. The flat bones, feather bones and the pearl of strings will be left on the loin. This ensures that the following deboning processes can be performed easy and correct with optimal yield.

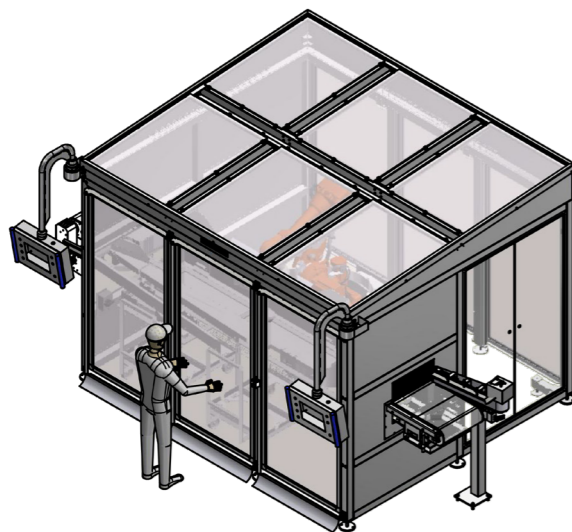
The chine bone is transported into a bin or a bone grinder, and the middles is transport through the outlet belt further to the loin belly splitter or the deboning lines.

Two carriers for trays are placed in the cabin to collect bone dust. The carriers are complete in stainless steel with lockable wheels.



Why the Frontmated chine bone saw!

- High capacity: 1,200 middles/h
- High yield due to consistent operation performance
- Less heavy workload
- Save working environment
- Noise reduced cabin
- Low maintenance



The middles have to be aligned and with the loin at the robot side before transfer to the inlet

Easy cleaning and maintenance

For cleaning and maintenance purpose the loin trimming machine is hygienically designed and equipped with features such as belt lifting as well as CIP cleaning system.

Hygiene and maintenance

The equipment is designed to meet the high and strict demands in the meat industry. The robot is covered in a strong flexible cover with constant pressured air, keeping the vital parts of the robot.

Preventive maintenance

For maintenance purpose data is collected to make scheduled maintenance, through our Scada system.

Data collecting

With a constant focus on optimization, up-time and flexibility, the need for correct data collection is high. With the Frontmated solution we ensure that our customers get high return on their projects.

OEE

Collection of machine operation data, to calculate OEE (Overall Equipment Effectiveness) through our MES (GO. OEE).

Traceability

Traceability from batch and ID-numbers is possible through the machine, by MES solution.

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CONTACT

CN: jining@frontmated.com
+86 537 371 3266

DK: tandslet@frontmated.com
+45 744 076 44

NL: rijssen@frontmated.com
+31 886 294 000

US: kansascity@frontmated.com
+1 816 891 2440

frontmated.com

DE: beckum@frontmated.com
+49 252 185 070

ES: barcelona@frontmated.com
+34 932 643 800

UK: birmingham@frontmated.com
+44 121 313 3564

LABOR SAVING AND HIGH PRECISION

The concept is a dynamic concept, as multiple robots can be fitted along the main conveyor of the primal cutting line, and the line movement of the deboning line.

Noise reduction

The machine is delivered with cabin covered with hardened laminated glass that consist of multiple layers and has a 12,76 mm sound film that gives a noise reduction of 40 dB.

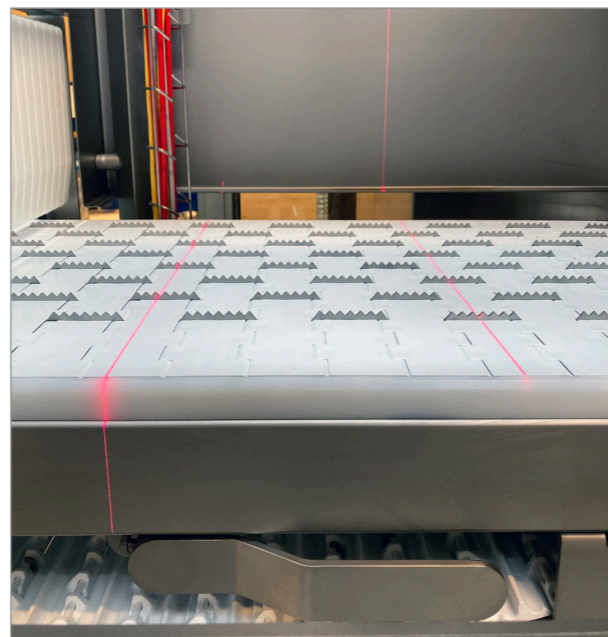
Labor saving

By chosen the Frontmatec chine bone saw you can remove a physically hard-working position and thereby reduce labor costs. At the same time, you ensure a consistent quality of your cuts.

The chine bone saw offers an easy and user-friendly operator panel, and the software interfaces with all types of monitoring systems.



3D vision system



3D vision system



3D vision system detecting measures of each middle



Each middle is cut individually

Technical data

| | |
|---------------------|--|
| Capacity | Max. 600 porks/hour Max. 1,200 middles from pork/hour |
| Robot | ABB type IAB 4600 - 45-205 Frontmatec tool for cutting off backbone and transport of backbone to bin |
| Vision | IH Food vision system |
| Cabin | Classcom A/S laminated glasses 12,76 mm with sound film for noise reduction up to 40 dB |
| Length | 5,200 mm |
| Width | 3,550 mm |
| Height | 2,720 mm |
| Inlet height | 900 +/-50 mm - adjustable |
| Outlet height | 900 +/-50 mm - adjustable |
| Products | Pork middles from pork slaughtered weight between 70 - 120 kg, Left and right middles can be mixed, but must be aligned and with the loin at the robot side |
| Product temperature | Min. 3°C - max. 7°C |
| Electric control | Frontmatec PLC control incl.: - Siemens PLC - Industrial PC for communication to IH Food - Vision camera - Display for vision system - Display for CBCL-100 |
| Voltage | 3x400V, 50 Hz |
| Power | IN 32 Amp |
| Prefuse | 64A |
| Consumption | xx kW |

Technical data may be subject to changes. The equipment is CE approved and designed in accordance with the EU regulations to meet the strictest demand on health and safety.

