

Automatic rib puller ARP15



Optimized rib pulling operation

The Automatic rib puller (ARP) is maximizing yield and producing a much more consistent final product, both optimizing results in the total belly and side ribs operation.

The ARP15 features the latest vision and robotic technologies combined with advanced computer programming. The result is a highly flexible machine able to simultaneously produce different cutting specifications that always make the best use of raw material.

Use the ARP15 with other Frontmatec equipment such as the Automatic loin puller and scribing system (ALP) as well as the Automatic belly trimmer (ABT) for complete belly/ribs line optimization.

Working process

1. The vision system acquires over 300,000 measurements to create a precise 3D model used to determine bone-in belly shape (length, width and thickness)
2. The intelligent software determines the ultimate side rib cut path that meets specifications; an operation which maximizes yield while also generating quality products
3. All ribs are classified according to the most profitable products or grading priorities. Additional criteria such as dimensions, weight, shoulder ribs width can also be used for classification
4. A 6-axis robot accurately performs the cutting motion synchronously with the conveyor while the spike chain and vacuum system holds the belly in place
5. In-line scale provides feedback to the ARP for weight validation and dynamic adjustments
6. The customized classifier system is controlled by the ARP, which establishes the specific ribs count/weight for every combo

Why the Automatic rib puller!

- Consistency
- Cut path maximization
- Production optimization with *Value Grading*
- Simultaneously handle different product specifications
- Reduce labor variability
- Automated knife change
- Minimum maintenance
- Superior uptime



Hygiene

To ensure high hygiene levels and efficient cleaning, the robot is covered with a strong flexible suit with constant pressured air, keeping the vital part of the robot clean and safe from the harsh environment. The knife is sterilized between cuts several times per minute depending on line capacity.

Safety and legal requirements

The ARP15 is CE approved and designed to meet the strictest demand on health and safety.

Technical data

Capacity	1,500 ribs/hour
Dimensions	
Length	29'
Width	11' 4"
Height	9'
Power supply	480V/3PH/40 AMPS
Water	
Sterilizer 180°F	1 GPM
Air	
Connection	1/4" NPT
Total consumption	3 SCFM

Technical data may be subject to changes

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