



BEEF PROCESSING SYSTEMS

SCOTT™ designs and manufactures off-the-shelf and custom beef processing systems that can be installed and maintained in the vast majority of existing boning room operations.

Through strategic partnerships SCOTT has honed its skills in diverse real-time environments and the adaptive approach to product development ensures its global market leader status. As with the lamb boning systems, SCOTT's beef modules have a direct positive impact on yield and throughput efficiency by reducing manual handling and providing a consistent flow of product. The modules also reduce the danger in such 'high risk' tasks as band saw portioning, as well as

reducing repetitive strain injury caused by heavy lifting and pulling. Reduction of human operator intervention also decreases contamination and maintains higher quality assurance standards throughout carcass processing.

The world-class Beef Boning Unit is a manual-assist mechanical arm which is directed at making "aitchbone" and "knuckle" removal less physically demanding. It also achieves a higher yield by reducing the amount of knife work needed.

The Striploin Saw keeps the workers' hands away from the bandsaw blade and has been shown to improve yield over traditional processing methods.



SCOTT Technology Limited markets products developed by Robotic Technologies Limited (a joint venture between SCOTT Technology Limited and Silver Fern Farms Limited) with support from Meat & Livestock Australia



MEAT PROCESSING





HINDQUARTER SYSTEM

A robotic arm is used to automatically cut the leg from the aitchbone, achieving consistently higher yields than manual boning.

PRIMAL SYSTEM

Produce primal cuts from a carcass – forequarter, middle and hindquarter – at a rate of up to 10 carcasses per minute.

X-RAY SYSTEM INCLUDING GRADING

Patented X-Ray system specifies the skeletal structure of a carcass, determining the ideal cut points for the forequarter, middle and hindquarter. An additional module can offer weight apportioning analysis for grading.

MIDDLE SYSTEM

Automates the bone-in processing of middles into market-ready cuts.

FOREQUARTER SYSTEM

A robotic arm automatically processes forequarters into market-ready cuts.

AUTOMATED BONING ROOM SYSTEMS



The Automated Boning Room System modules can be adapted to many processing room layouts or customer requirements.

ROBOTIC CUTTING

The Automated Boning Room Systems use 'intelligent management' in the form of robotic sensing and cutting, to optimise cut selection for each carcass. Robotic sensing enables highly accurate, cleaner cuts and reduced waste.

At the first stage of the boning room processing, the x-ray system

creates a 3D map of the bones within the carcass. This data is provided to all downstream boning room modules, and is used to guide the cutting robots at each stage of the boning room processing line. This enables cutting with an accuracy far greater than human capabilities.

The 3D scanning and use of robots for cutting also reduces human intervention in processing. This virtually eliminates repetitive and accidental injuries for the selected processes. Additionally, products are transferred between processing modules automatically and onto conveyor belts for final processing and packaging. This means that little human intervention is required to process finished products into marketable cuts of meat.

YIELD AND THROUGHPUT IMPROVEMENTS

Automated Boning Room Systems achieve increased yield and operational efficiencies.

Highly accurate cutting and the elimination of sawdust from human operated bandsaws can deliver average yield improvements of 60 grams per carcass.

Ensuring a consistent throughput has the potential to increase boning room processing volumes by around 4% without changing the maximum room rate.



KNUCKLE TIPPER

The Knuckle Tipper cuts the knuckle from the leg at the optimal cut location to maximise yield, giving improvements of around 9 grams per carcass.

The rotary toothed blade produces a high quality cut surface which is rounded at the bone edges. This prevents packaging being pierced and results in a more attractive product than that produced with bandsaws. Use of the Knuckle Tipper eliminates dangerous bandsaw cutting from the boning room, with all blades being enclosed within interlocked guards.

