

FRONTMATEC

Q-FOM™ BEEF HANDHELD CARCASS GRADING





OBJECTIVE ASSESSMENT OF MEAT QUALITY

Grading and classification of beef carcasses are traditionally done by certified graders, who visually assess the ribeye. By nature, grading this way is strenuous and subjective and the results from different graders, or even from the same grader over the course of a day, tend to exhibit significant variation.

Q-FOM™ Beef changes that. Grading results from Q-FOM™ Beef are independent of the person operating the instrument, and long-term testing has proven Q-FOM™ Beef to be highly consistent as well as accurate across a wide variety of cattle.

Accredited grading parameters measured in a few seconds with a single picture of the ribeye include Marbling, IMF%, Eye Muscle Area, Meat colour, Fat colour, and Rib fat thickness.

Marbling (IMF)

Flavor and juiciness of a steak are related to the marbling and IMF%, and the marbling score is greatly affecting meat value.

Eye muscle area

The most attractive part of the rib eye steak is the eye muscle, and the size of the eye muscle is strongly influencing the value of the steak and of the whole carcass.

Meat colour

Consumer preference at the point-of-purchase is strongly favoring beef with a bright red colour and veal with a pale pink color.

Fat colour

Consumers in most markets prefer the fat to be as white as possible, but in select markets the yellow fat typical for grass-fed cattle fetch a premium.

Rib fat thickness

Medium rib fat thickness is preferred. Enough to shield the meat during chilling and storage, but in excess it will reduce yield.



With Q-FOM™ Beef you get:

- Marbling and other sorting parameters measured at the press of a button with unparalleled accuracy and repeatability
- User-friendly and ergonomic design for speedy and error-free operation in-chiller and at grading stations
- Plant IT integration and data management made easy with GO MES software module
- Approvals from AUS-MEAT and MSA on most ribeye classification and payment parameters

Marbling MSA	100	←-----→	1190	
Marbling AUS-MEAT	0	←-----→	9	
Eye Muscle Area	30 cm ²	←-----→	170 cm ²	
Meat colour	1A	←-----→	7	
Fat colour	0	←-----→	6	7 → → 9
Total Rib fat	0 mm	←-----→	60 mm	
IMF%	0%	←-----→	40%	

AUS-MEAT approval status (Caudal to 10th rib, December 2023)

- Full approval granted
- Approval test pending

OPERATIONAL EFFICIENCY AND INTEGRATED PRODUCTION PLANNING

Reliable grading with Q-FOM™ Beef

An operator can after a short training grade a carcass every 10-20 seconds with Q-FOM™ Beef and keep that pace throughout the working day.

The fact that the instrument is easy to use and can grade at this speed, mitigates the concern many plants have about the long-term cost, availability, and quality of certified graders.

Quality and productivity improvement

The classification and the sorting group a carcass is assigned has a significant impact on what price the carcass can be traded at or what it will be used for in production. Incorrect grading has significant impact on the brand perception and eventually the pricing of the end products.

Meat processors that demand consistency in the grading of meat quality in the individual plant as well as across plants cannot rely on subjective grading. With Q-FOM™ Beef this consistency is provided and allows the individual plant and the group to implement effective quality and productivity improvement programs.

Plant IT integration with GO MES module

Q-FOM™ Beef can be fully integrated with the plant's production planning system via a GO MES module.

With this integration implemented, the plant's ERP system can download task lists, specifying to GO which carcasses are ready for grading and transferring existing data relevant for calculating the sorting code.

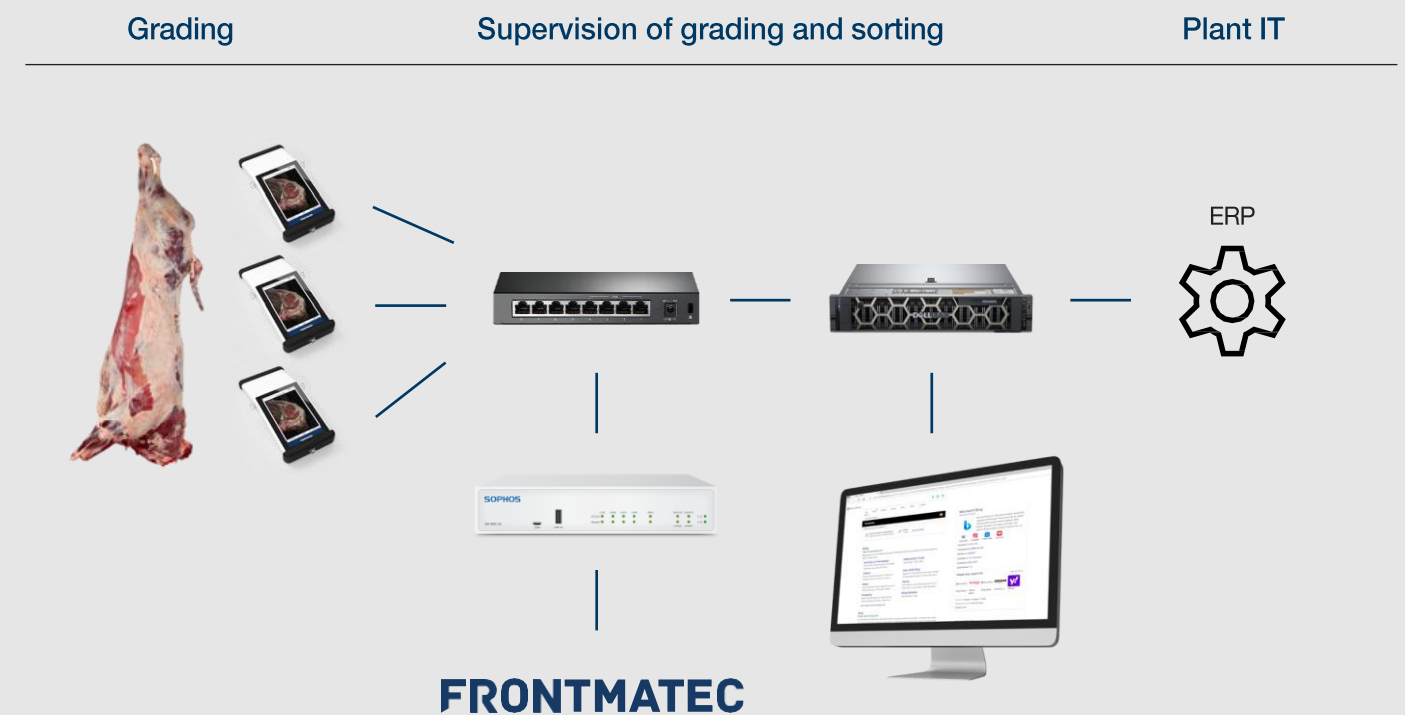
When the operator logs in to a Q-FOM™ Beef camera, data has already been transferred from GO to the camera. The operator just needs to scan the barcode of the carcasses and take a picture of the ribeye, and then Q-FOM™ Beef determines the ribeye grading scores and combine that with the data from ERP to calculate the sorting code on the spot. The operator can then affix the correct label to the carcass.

Results from Q-FOM™ Beef are transmitted back to GO, which monitors progress and relays the results to ERP, so plant management during the day can see in their system how many animals there is in each sorting group and how many animals are yet to be graded.



Plant IT integration with GO MES module

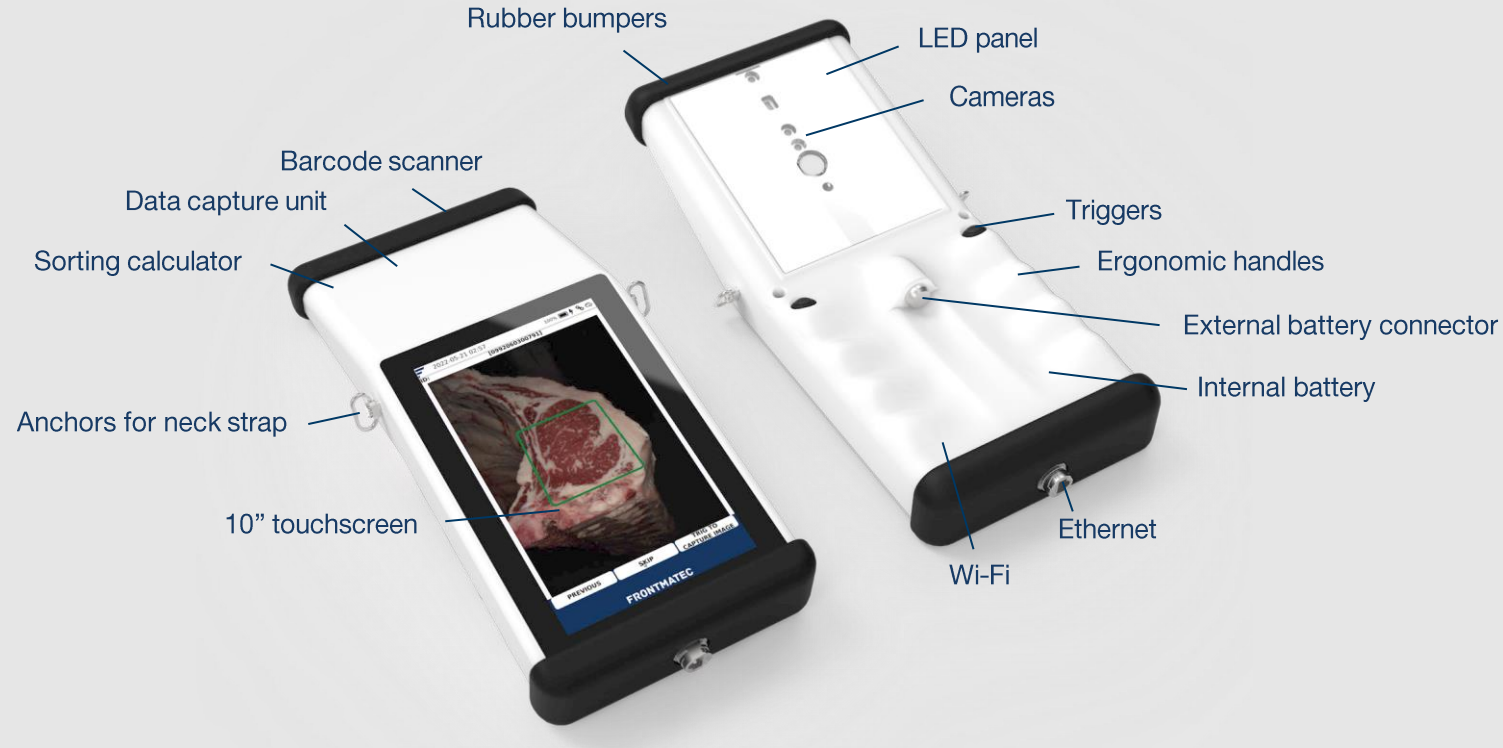
Q-FOM™ Beef can be fully integrated with the plant's production planning system via a GO MES module.





Advanced software married with rugged and practical hardware

Q-FOM™ Beef is a shroud-less and cordless grading camera with an ergonomic design made for the specific purpose of fast and accurate grading of meat both in-chiller and at grading stations.



Q-FOM™ BEEF SUITS ANY GRADING SITUATION

Grading on a Grading platform

Most ribeye grading is done on a stationary platform next to a conveyor rail.

Q-FOM™ Beef is designed with detachable anchors to easily click it in and out of the hanger at the grading platform. When the camera is suspended in the hanger, it can be operated effortlessly and fast with one hand.

Bar code scanning, grading, and adding a comment can be done in about 15 seconds per carcass.

Grading on the Chiller floor

For operations without a grading platform, Q-FOM™ Beef is clicked into a neck strap and carried around in the chiller. With its ergonomic design, Q-FOM™ Beef can be used for hours of grading without fatigue, and at a speed of down to 15 seconds per carcass.

Ribbing Site

Q-FOM™ Beef can grade the ribeye of carcasses ribbed at the anterior end, between 4th and 8th rib, as well as carcasses ribbed at the posterior end, between 10th and 13th rib.

The camera's viewfinder is flexible and ensures that Q-FOM™ Beef captures a useful image and calculates a grade at a wide range of height and angle of the cut surface.

The ribeye exposed at the ribbing the anterior and the posterior end, respectively, are very different, but Frontmatec has developed highly accurate calibrations for both.

Cattle Breeds and Categories

Extensive trials in Australia, North America and Europe have proven Q-FOM™ Beef to work exceedingly well across a variety of beef and dairy cattle breeds and categories.

Technical data

Screen size	10" PCAP
Barcode scanner	1D, 2D and stacked codes
Internal battery run time	3-4 hours (lithium-ion)
Power-over-Ethernet	802.3bt Type 3, 1Gbit
Ingress protection	IP54
Dimensions (LxWxH)	42 x 19 x 9 cm
Weight	2.3 kg

FRONTMATEC

Frontmatec develops world-leading customized solutions for automation in the food industry, other hygiene sensitive industries and the utilities industry. We are especially renowned for our high-quality systems for the entire value chain of the meat industry – from carcass grading, slaughter lines, cutting and deboning lines, hygiene systems and control systems, to logistics and packaging.

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