A new approach to portioning fresh red meat

By Mark Bishop, Interfood

With the increased move towards fixed weight packaging it is becoming more important to be able to guarantee accurate portioning and to keep giveaway to a minimum.

For bone-in product the ends are squared off enabling their use as premium products.

This trend started with lower value products where accuracy perhaps was not as important as it is with higher value products. We are now seeing this trend increase into the premium range of products. In order to stay within legislation relating to fixed weight packaging many meat producers will routinely operate with a high giveaway figure as a safety margin. This is often necessary as a result of the inability of the equipment they have to produce consistently accurate portions from a naturally produced and inconsistent raw material. Some equipment can be adapted to produce accurate portions but this is normally at the cost of yield and a high proportion of waste or lower value product is produced as a result of this. Currently it is widely accepted that to get the best results multiple types of machines are required within the same production facility to produce the standard range of fresh meat portions:-

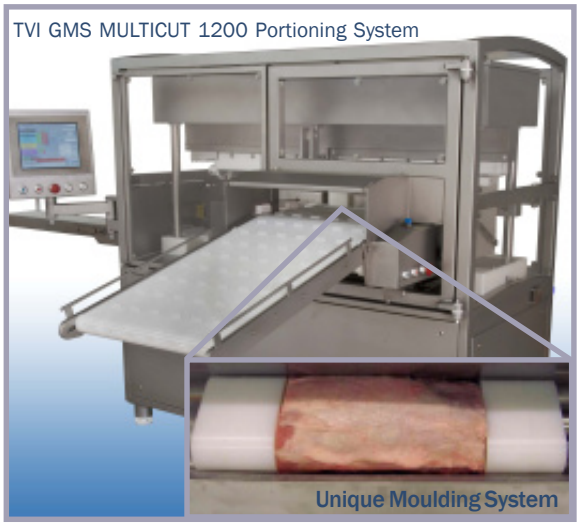
The ***'Bread' type slicer*** is most widely used for boneless products such as steak portions and has reciprocating vertical blades mounted at a fixed spacing to give the required slice thickness and a pusher to force the product through the blades. This type of action produces good quality slices but creates a high waste percentage (unsalable end pieces) that can often negate its use on expensive raw materials as there is no control or measurement of the raw material.

Lasers offer a modern method of scanning fresh products prior to slicing and before using typically a horizontal continuous machine with a cleaver to cut the product.

Machines incorporating ***Rotating orbital blades*** slice product which is vertically fed to the blade. Equipment can incorporate vision/scanning systems which allows the machine to automatically adjust the slice thickness and therefore weight dependent on the product shape to maintain slice weight consistency.

'Choppers' are typically used for bone-in products and use a cleaver type blade that literally chop through the product. These generally have a gripper (claw) that holds the product as it is sliced. Generally the first slice is of poor quality and the end piece that was held by the gripper is often unsalable as a premium product and has to be used for trim or as a lower value product.

The general drawbacks from current techniques relate to the way the product is held during the slicing operation and that multiple machines are required to deal with wide variations of product shape and size. To address these issues the German manufacturer TVI have developed a system based around one slicing machine to handle virtually all red meat raw materials.



The new TVI GMS MULTICUT 1200 Portioning System utilises an in built ***moulding system*** and state of the art measuring systems to achieve optimum results in relation to yield and accuracy. The universal moulding system holds and fully controls the product during the slicing cycle from all sides; this ensures there is no possibility of wedge cutting or unusable ends that could be created by a gripper type system. This also allows the possibility of very thin facing cuts to remove excess fat or rind, and to visually improve the first/last portions without a high loss of yield. By maintaining control of the hydraulic pressing system it can handle very small raw materials to very large bone-in and boneless product, and requires less than a minute to change two components to handle different products.

The system also features a dynamic scale in the automatic loading system and an intelligent operating system (GMS) to ensure fixed weight portioning with the lowest possible giveaway and the highest yield.

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