



ultrasonic food cutting systems

newtech



Product Capability

A range of Ultrasonic machinery has been designed, developed and manufactured for the precise and clean cutting and portioning of a wide range of products, including:

- Cheese
- Meat Pies
- Quiche
- Cake
- Pate
- Pizza
- Sandwiches
- Gateaux



Model Range

Products can be sliced and portioned to a user's specification with complete accuracy and flexibility. There is a choice of machine sizes and specifications to suit most requirements.

Through a close working relationship with customers, it is possible to produce unique cutting systems that have the benefits of an established range, along with the advantages of a bespoke system.

Newtech has been a supplier of quality machinery to the food industry for over twenty years and is ISO9001 certified.

The model range includes:

Batch Portioning Rotary Machine

The batch portioning rotary machine is the entry level machine. It is capable of cutting round products with a maximum diameter of 360mm, into variable portion quantities.

In-line slicer

This automatic in line system is suitable for the slicing of block products such as cheese and pate. It is possible to achieve variable slice thickness and the system can also include stacking, shingling, laser scanning and check weighing options. A multi lane option allows increased capacity.

In-line semi-rotary portioner

This combines in line slicing technology with a rotary cutting head for multi cut configuration. The system can be used to produce wedges, cubes and slices from a block product. It can also include stacking and shingling, laser scanning and check weighing options.

In-line rotary portioner, single or twin lane

The in line rotary portioner provides an automatic in line cutting solution for round or slab products into variable portion sizes. This configuration is suitable for a vast range of products including quiche, gateau and cheese. The equipment can easily be linked with a robotic loading and unloading system.



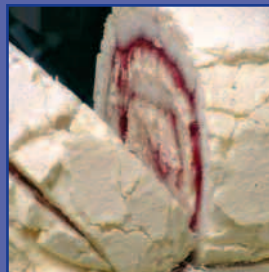
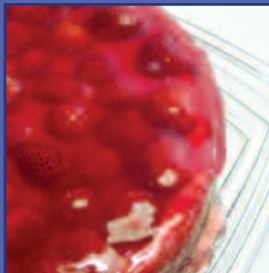
Ultrasonic Technology

Manufacturers and producers have previously had to compromise on the quality, yield and presentation of their end product because mechanical blades have considerable limitations when cutting certain food products.

Utilising Ultrasonics, products are cut using long established and superior process technology. This involves high frequency sound waves being generated through a sonotrode (cutting tool) oscillating at 20,000 times per second (20KHz). The sound waves are concentrated and evenly distributed along the leading edge of the sonotrode, thereby creating a very effective and unique cutting system.

With slice thickness control to 0.1mm accuracy and speeds of up to 120 cuts per minute per head, the ultrasonic slicer is an extremely efficient and highly flexible food-slicing machine.

The frequency of the movement of the sonotrode remains constant at 20KHz, but the amount of movement (amplitude) can be varied to suit the product, normally varying between 40 and 80 microns.



There is a choice of 1000W or 2200W ultrasonic generators, the more powerful one being used on some products which are of greater density. The generator is housed in the rear control panel and provides the power to the titanium sonotrode via a stainless steel housed transducer and booster.

Variable amplitude settings enable the optimum cutting of products with variable density and consistency. Problems associated with conventional equipment are eliminated, for example smearing and shredding, as the sonotrode gently but quickly passes through the product and moves the slices away.



Machinery Build

All machines are manufactured from stainless steel. Superior quality components are used, giving extended, untroubled use, low maintenance, low running costs, and excellent reliability.

Hygiene, wash down procedures and quick changeover times have been an integral part of the design process. Guarding is designed to comply with the latest health and safety guidelines, including the latest noise regulations.

Newtech's Ultrasonic cutting machines have been designed with a fast and efficient strip down procedure for ease of cleaning. Each machine is built around a stainless steel base and tubular legs, and a rear mounted stainless steel electrical control panel. Conveyors are always rear mounted and provide easy access for cleaning and strip down. Belts are manufactured from FDA approved material and are available with profiles for product support or smooth for continuous product.

Optional extras include independent infeed and outfeed conveyors, portioning conveyors and rotary cutting units. The control panel can be fitted with an in built modem for external access and networking facility.

All machines are equipped with servo-controlled conveyors, motion control units and colour touch screens for user-friendly programming and operation. The touch screen is housed in a stainless steel command panel sealed to IP65. In addition, clear and simple help texts are included for all programme and system settings, with photo images and schematics of key areas of the machine.

Optional remote start, stop and pause buttons provide additional machine control at the outfeed station. Emergency stops are fitted front and rear. Products with dimensions up to 380mm wide or 150mm high can be accommodated on a single head machine. An additional in line head on a machine can provide double the capacity.

Key features include:

- Fully programmed, user friendly colour touch screen
- Slice thickness to 0.1mm
- Speed of cut up to 120 per minute
- Variable amplitude settings to enable the optimisation cutting of products
- Variable portion sizes
- Side mounted servo controlled conveyors providing easy access for cleaning and strip down
- Quick release belts using FDA approved material
- Synchronised holding devices to ensure stability of product



Applications, benefits and pay back

The model range has been developed to provide customers with a variety of different benefits, including:

- Improved cut quality
- Uniform product size, shape and consistency
- Ability to slice or portion products which other equipment cannot process
- Increased throughput
- Increased yields
- Less handling
- Less giveaway
- Labour savings

It is possible to precisely slice, stack and shingle linear products and portion round products.



Customisation

Although machines are based on model types, customer requirements can be uniquely incorporated and can include:

- Customisation of infeed and outfeed conveyors
- Variable height adjustment
- Software links to other equipment
- In built modems for external access and networking
- Integrated product weighing with adjustable software feedback
- Laser scanning or digital imaging of products
- Automatic handling at loading or unloading stations (pick and place)
- Project management for line integration



Service and Support

Newtech is committed to first class support and provides full manuals on equipment and training for operatives and engineers.

Newtech are well known in the industry and have provided a continuous professional level of technical support to all of our customers for over 20 years.

Newtech's technical support staff are trained and fully conversant with the equipment and are available to carryout regular servicing. A 24-hour callout for breakdowns is provided and a comprehensive range of spare parts is maintained to support machine installations.



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