

Innovations and solutions for the food industry

## Baking & Confectionery Industry



## Milk & Cheese Industry



## Vegetables & Drinks Industry

## Meat & Fish Industry



# Robotics and ultrasonic cutting with the U-302



## Ultrasonic

The machine equipped with ultrasound cutting technology. This allows for clean cuts especially when slicing fresh and cooled products.

Systems by 20; 30; 40 kHz

## Robot PLC

High performance with the robotics PLC and works for robot or portal systems. One robot PLC for many machine solution for Cutting and Pick & Place.



## Robotics

Humid environment robots  
Ideally suited for applications in very humid environments, such as ultrasonic cutting and food processing.

- Enclosed structure
- Easy to clean
- Rigid structure
- Better dynamic performance



## Electric cabinet

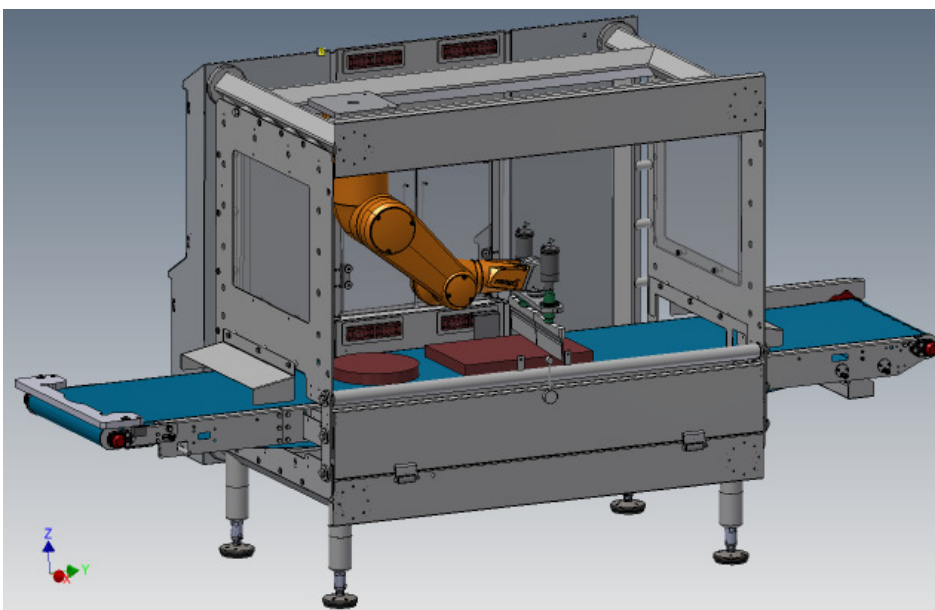
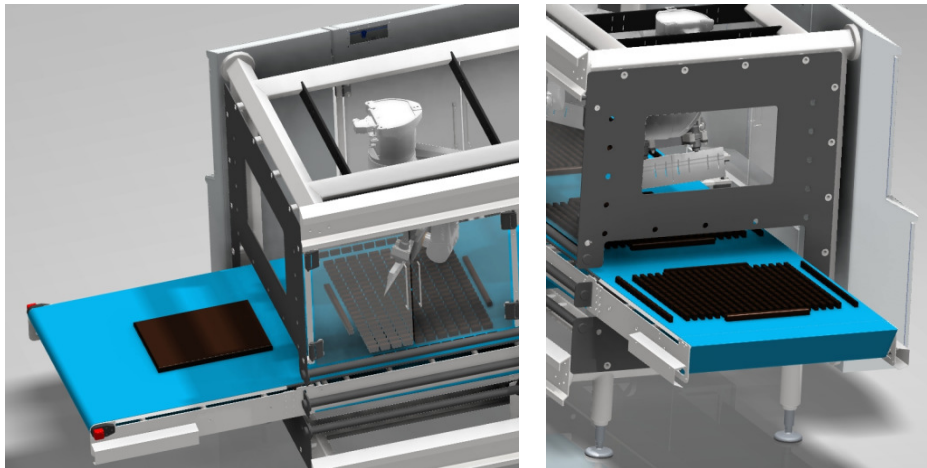
The housing of the Hygienic Design fulfils the high requirements of the food industry. This is confirmed officially by the technical committee for alimentary and semiluxury food of the (German) employer's liability insurance association, test centre and certification office with the "BG-PRÜFZERT" label.



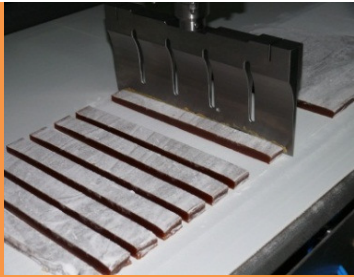
## Informations about the robotics ultrasonic cutter U - 302

### Functional description of the cutting machine

The cutter works predominantly automated and is equipped with ultrasound cutting technology. This allows for clean cuts especially when slicing fresh products. The overriding plc and all attached mechanisms all portioning parameters can be individually defined and stored in the recipe memory. Based upon the individual programming it is also possible to slice diagonally. The cleaning station for the cutting blade enables a fully automated process, this can be set to take place at set intervals or when the product is changed. Cleansing of the blade is achieved by gentle water-jetting of the blade and the use of ultrasonic waves, the adhesions flow off the blade and any remaining water droplets are expelled using air pressure.



## Options for the machine design *U - 302*



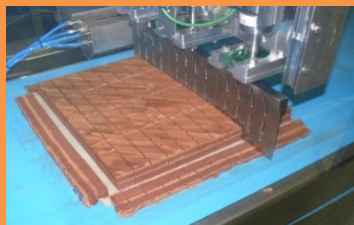
- Diagonal cutting



- Cutting on the conveyor belt



- Automatic adjustment of the tray centring device to the appropriate tray size through simple recipe selection



- Cutting in baking tray

- 100 x 600 mm
- 200 x 600 mm
- 400 x 600 mm
- 580 x 780 mm



- Cutting in a round baking trays

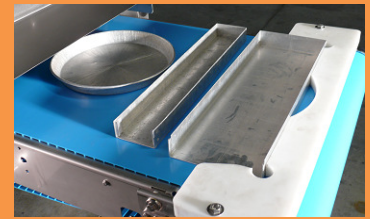
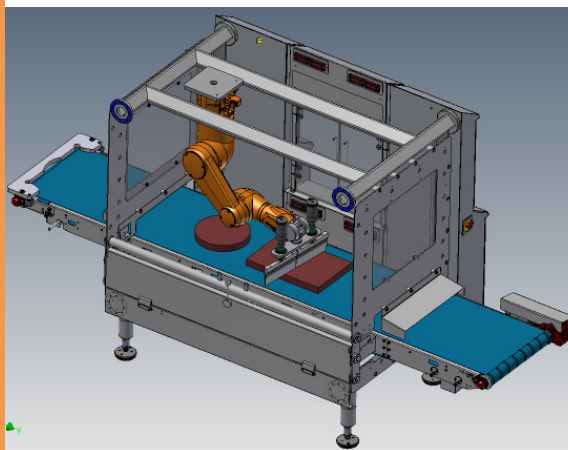


- Cutting of triangles



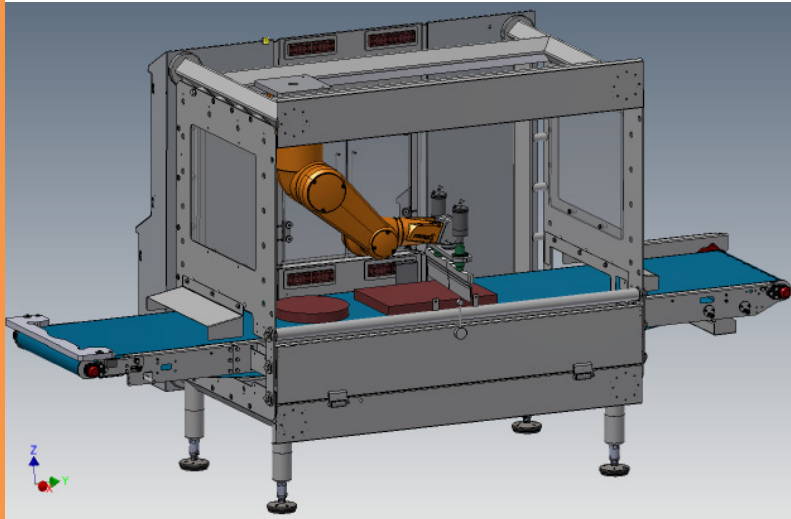
- Cutting of cream rolls directly on the conveyor belt or a plastic plate

Cutting of round cake



# Menu-driven recipe management and parameter settings

## One robotics PLC Two machine versions



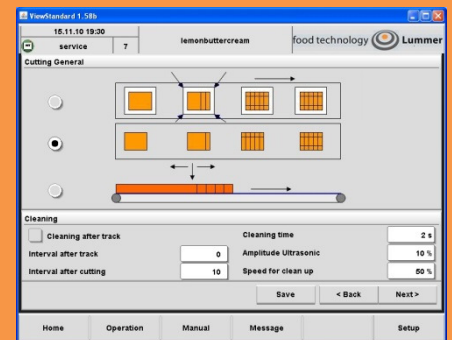
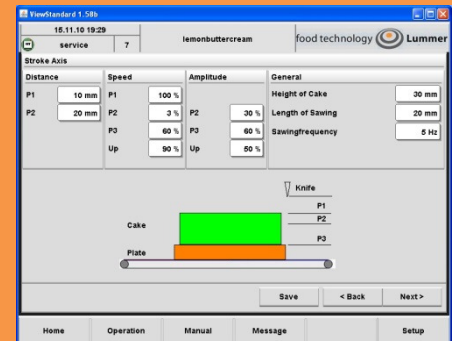
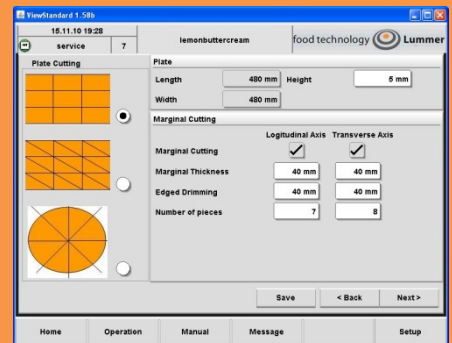
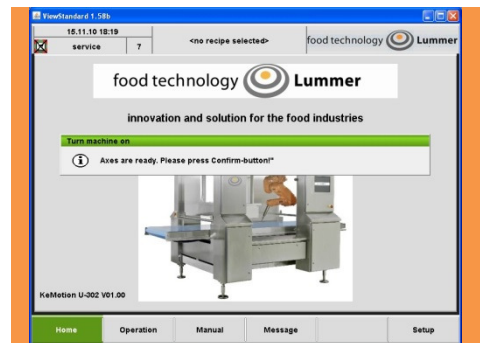
Solution with one robotics system

Every detail is well thought – out

The machine concept is designed in such a way to fulfill completely the legal regulations considering hygiene and food safety. Rounded surfaces, clearly defined drip rails and the open design, enable a hygiene rating of the automatic cutting system. No chance for any kind of dirt collection. Germs or microbes have no chance to take hold or to increase.



Solution with one portal robot system



## Options for the machine design and advantages with robotics U-302

**Ultrasonic blade combination:**  
To cut in baking trays with tray size 200x600 or 400x600.



**Version with one ultrasonic blade.** To cut in baking trays with tray size 200x600 or 400x600 and cut triangles.



**Following advantages speak for a robotic solution:**

Product changes is rapid and easy to perform.

High precision / high repeatability  $\pm 0,003$  mm > important when it comes to cutting.

Easy to clean by the closed design.

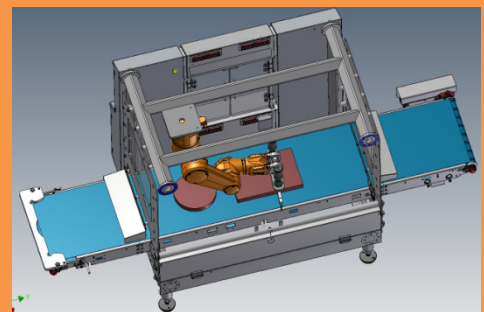
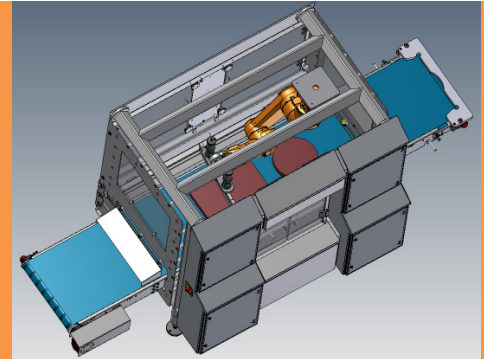
Savings from energy costs by lower consumption of the robot system.

Maintenance and service is very easy.

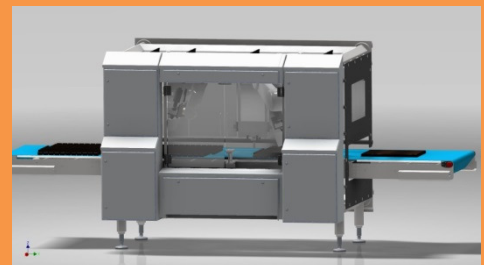
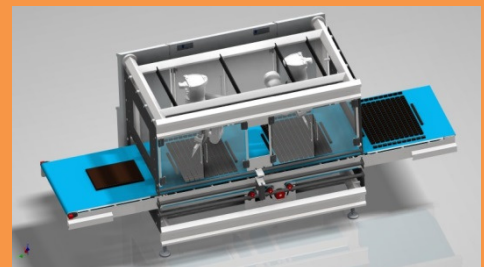
High performance and increase productivity.

Increasing the production and production quality.

Spare parts service: response time within 24 hours

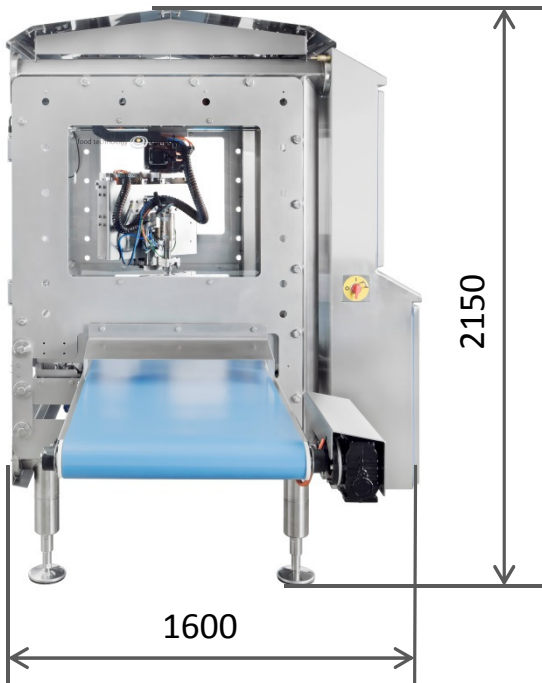


**Solution with one robotics system for higher flexible**



**Solution with two robotics system for more capacity and higher flexible**

## Technical dimensions U – 302 with Robotics



### Technical dimensions: U- 302

Length:	2050 mm
Width:	1600 mm
Height:	2150 mm
Working height:	850 mm +/- 80 mm
Weight:	1850 kg
Belt length:	approx. 4000 mm

### Consumption data:

Power:	5.5 KW
Voltage:	3 x 400/230 V 50 Hz
Compressed air:	approx. 3l/min. Depending on cleaning intervals

### Safety and design:

The machine complies with safety regulations according to the latest European and German standards. New machine concept for optimal hygiene.

### Equipment and execution of the machine:

- Stainless steel execution of the machine (W.No.1.4301)
- Frame with side walls in a solid construction
- Robotic Stäubli hygienic design for food industry
- Conveyor belt of food-grade execution and certification
- Protection covers with safety devices
- Easy cleaning due to new hygiene design
- Servomotor for conveyor belt
- Machine operation via touch panel
- Recipe management: storage of product parameters
- Switch cabinet: hygienic design, IP 66 as per EN 60529
- Blade cleaning device using water and air nozzles
- Stainless steel bases for secure standing of the machine
- Ultrasonic blades 20 kHz / 30 kHz



### Robotics by Stäubli

#### TX90 6-axis industrial robot

- Enclosed structure
- Easy to clean
- Rigid structure
- Better dynamic performance



## Solution about machine model U - 300

