

TONELLI
Food technologies

Mixing Technologies 

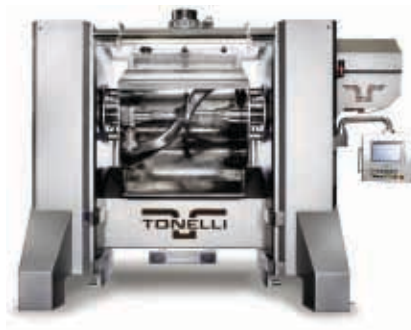


Mixing Technologies



Vertical Planetary Mixer

- ▶ 120 *lt*
- ▶ 200 *lt*
- ▶ 300 *lt*
- ▶ 400 *lt*
- ▶ 600 *lt*
- ▶ 800 *lt*
- ▶ 1.300 *lt*



Horizontal Mixer

- ▶ TR 500
- ▶ TR 1000
- ▶ TR 1500



Centrifugal Mixer

- ▶ MU 50
- ▶ MU 100
- ▶ MU 150
- ▶ MU 200
- ▶ MU 300
- ▶ MU 400



Batter&Cream Premixer

- ▶ RPX 200
- ▶ RPX 400
- ▶ RPX 600
- ▶ CRPX 200
- ▶ CRPX 300



Continuous Aereating Mixer

- ▶ CAM 10
- ▶ CAM 50
- ▶ CAM 70
- ▶ CAM 80
- ▶ CAM 120



Vertical Planetary **Mixer**

It is the machine by which Tonelli is known worldwide.

The exclusive Tonelli Planetary Mixing System combines the use of one or two tools with the scraper, depending on a pre-set rotating ratio, to guarantee an unmatched mixing quality.

A wide range of tools, interchangeable according to product's technology, makes Tonelli Planetary mixers the more versatile equipment to obtain any kind of bakery and confectionery product.



120 Lt

200 Lt

300 Lt

400 Lt

Innovative Classics

The range of equipment, designed according to tradition with robust and long-lasting qualities, also provides integrated and complex systems, offering custom-made solutions.

With products ranging from large, automated and computerised systems to mixers for smaller-scale businesses with a home-made touch, the Tonelli Group is the ideal partner for both large and small companies working in the confectionery and bakery industry.



600 Lt

800 Lt

1.300 Lt





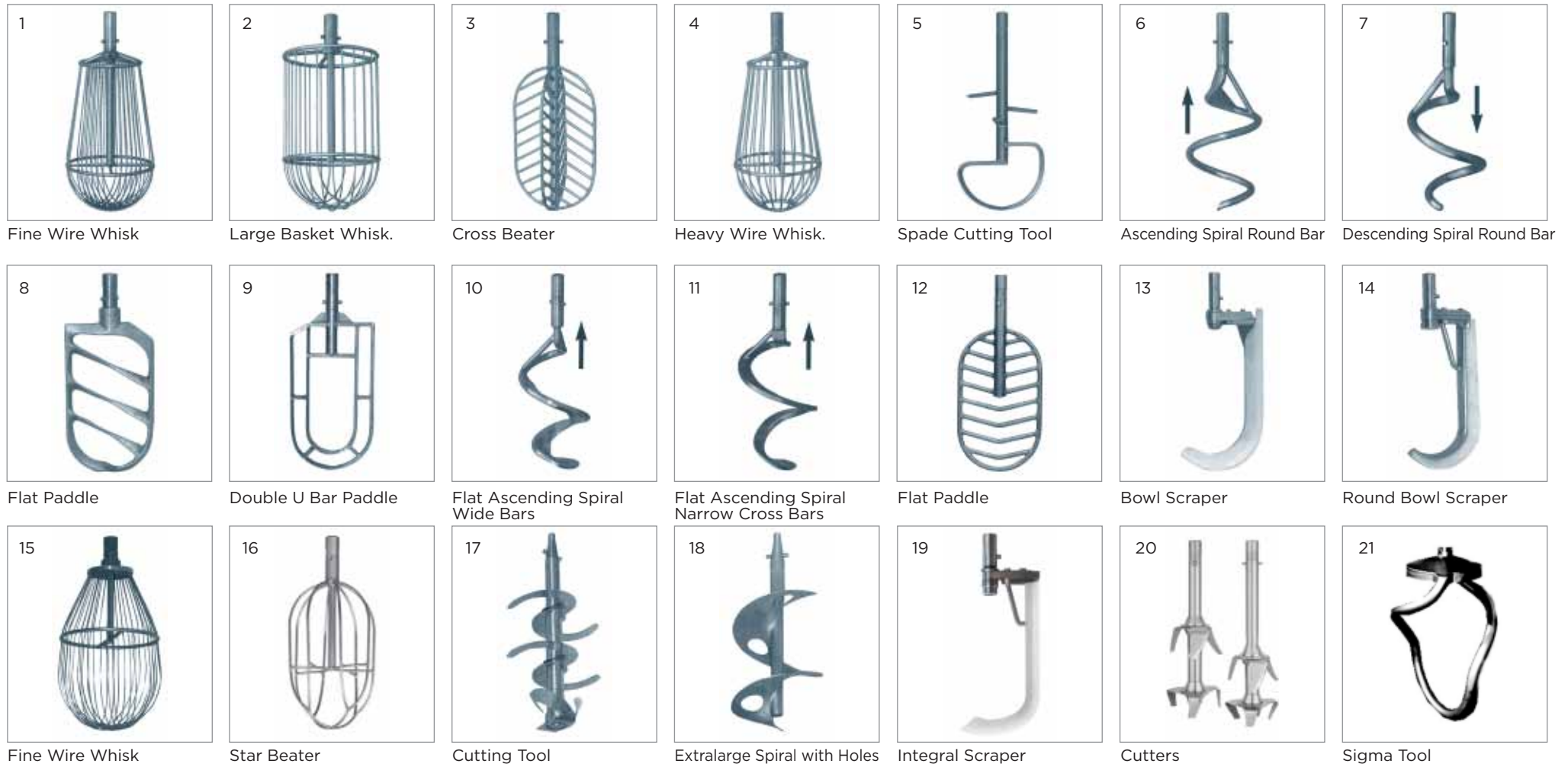
Planetary Mixing System

The exclusive Tonelli Planetary Mixing System combines the use of one or two tools with the scraper, depending on a pre-set rotating ratio, to guarantee quality mixing in a class of its own. To meet different production needs related to specific product technologies, Tonelli also provides a Dual motorisation option. This means the revolution of tools is independent of their rotation, so the number of parameters that can be programmed for recipes can be increased.

Hygiene

All parts in contact with the product have been designed and developed to prevent the formation of bacteria. The mixing environment is fully washable, even at high pressures and can be integrated with C.I.P. washing circuits. The AISI 304 stainless steel execution, makes easy the overall cleaning.





Mixing accessories

A wide range of tools that are interchangeable depending on product technologies, quick and easy to change, makes Tonelli Planetary mixers even more versatile.



Automatic feeding & dosing of ingredients

Manual or automatic FEEDING of a wide range of ingredients; dosing of liquids using magnetic or mass flow meters, and powders using scales. Accuracy: 3%



*Automatic discharge*

Bowl scraping

A stainless steel scraper, with scraping part in Teflon or Polyethylene ensures that the inside of the bowl (exclusive Tonelli mould) is perfectly scraped at all times and that the mixture is continually directed towards the tools. This, in turn, speeds up and optimises ingredients' mixing. This function is important during heating and/or cooling processes, as it facilitates heat exchange, reducing process times, and in particular prevents the product from solidifying or burning on the inside of the bowl.

*Manual discharge*



1

Product transfer

- 1- Product lifters and tilters for high viscosity products, or products with particles.
- 2- Ejectors for particular technological needs.
- 3- Specific positive-displacement pumps to suit the particular characteristics of the product.
- 4- Pneumatic systems.



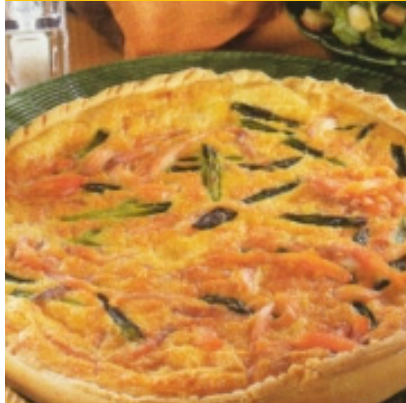
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➤
Cookies



➤
Pasta
brisè



➤
Short-
bread



➤
Cake
mixes



➤
Sweet &
savory
leavened



only a few applications

➤
Cream
and
mousse



➤
Meringues



➤
Marzipan



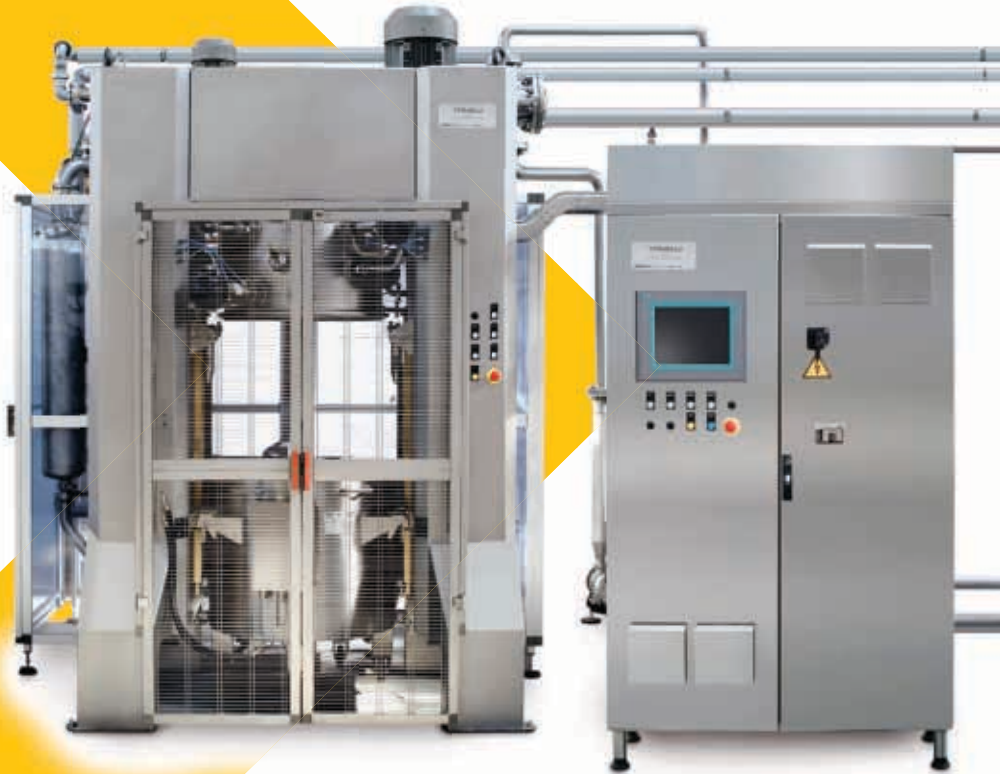
➤
Ganache
& choco-
lates



➤
Bakery
products



Multifunctional Mixer



In special executions, the mixer can be supplied as a multifunctional cooking/cooling system. The steam circulating through the jacketed walls, allows the product to be cooked in the mixing bowl. Cooling takes place in the same bowl via water chilled bowls and vacuum in the mixing chamber.

Characteristics

The Multifunctional mixer has the following peculiar characteristics, instead of the Classic Planetary Mixer:

- 1** Unit for the survey and management of the product temperature, control and setting of the desired temperature;
- 2** Unit for the automatic management of the saturated steam at a maximum temperature of 4 ATM;
- 3** Unit for cooking at desired temperatures and pressures;
- 4** Automatic unit for the management of condensate water;
- 5** Safety installation on the whole steam circuit;
- 6** Tonelli's software for product cooking at different phases;
- 7** Stainless steel safety cage to access the back side of the mixer, where is settled the zone dedicated to the steam treatment into the mixer;
- 8** Double walled bowls for saturated steam management at a high pressure - ISPES Safety Certification with final test at 6,5-7 Bar;
- 9** Mixing tools specific for mix cooked products, even at high temperatures;
- 10** Scraping system specific for high temperatures;
- 11** Man-machine interface for production phases with steam mixer TP1200 12" color Siemens Touch Screen;
- 12** Steam preparation Unit can be provided on request.



only a few applications

>
Jam



>
Jelly, aspic
miroir



>
Molleux



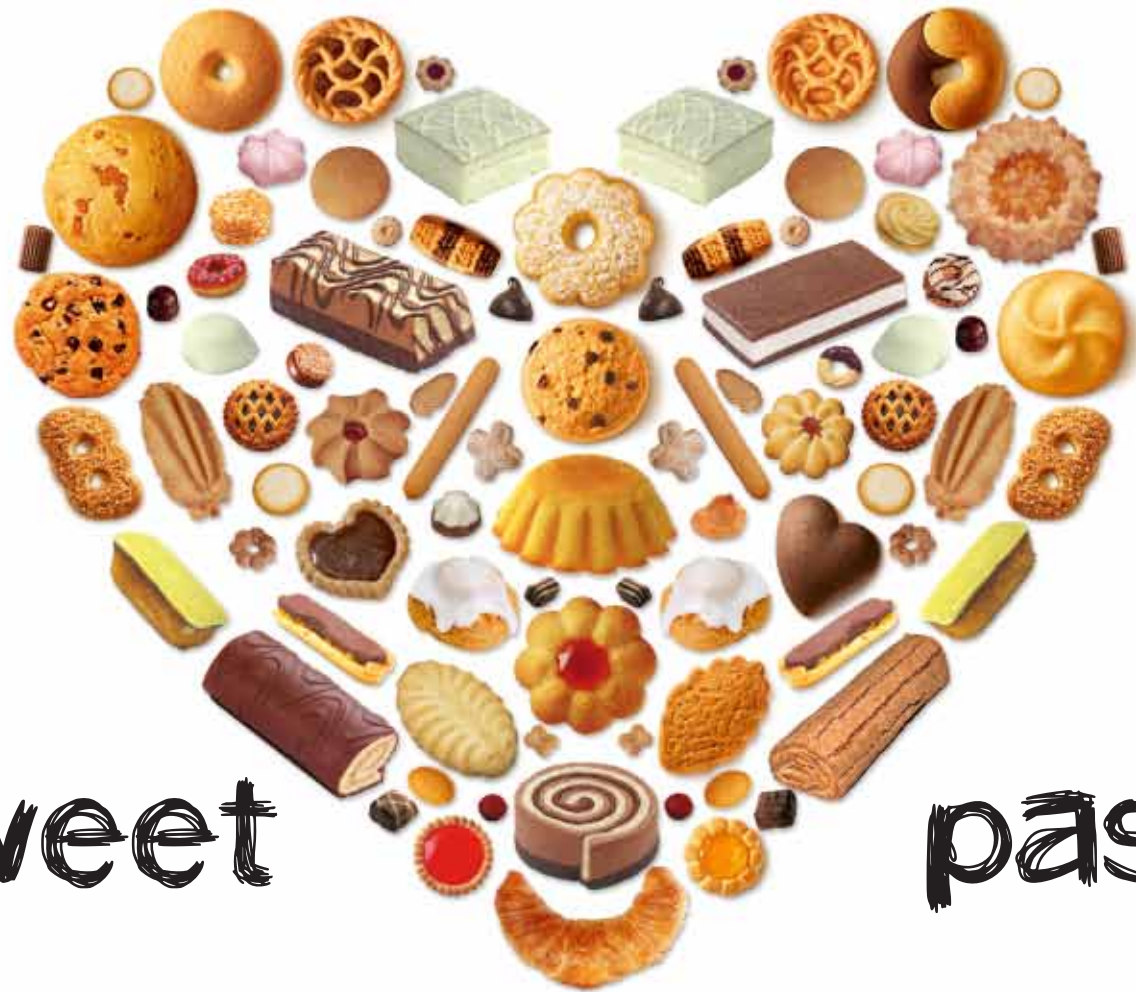
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Con-
densed
milk



>
Toffies



only a few applications

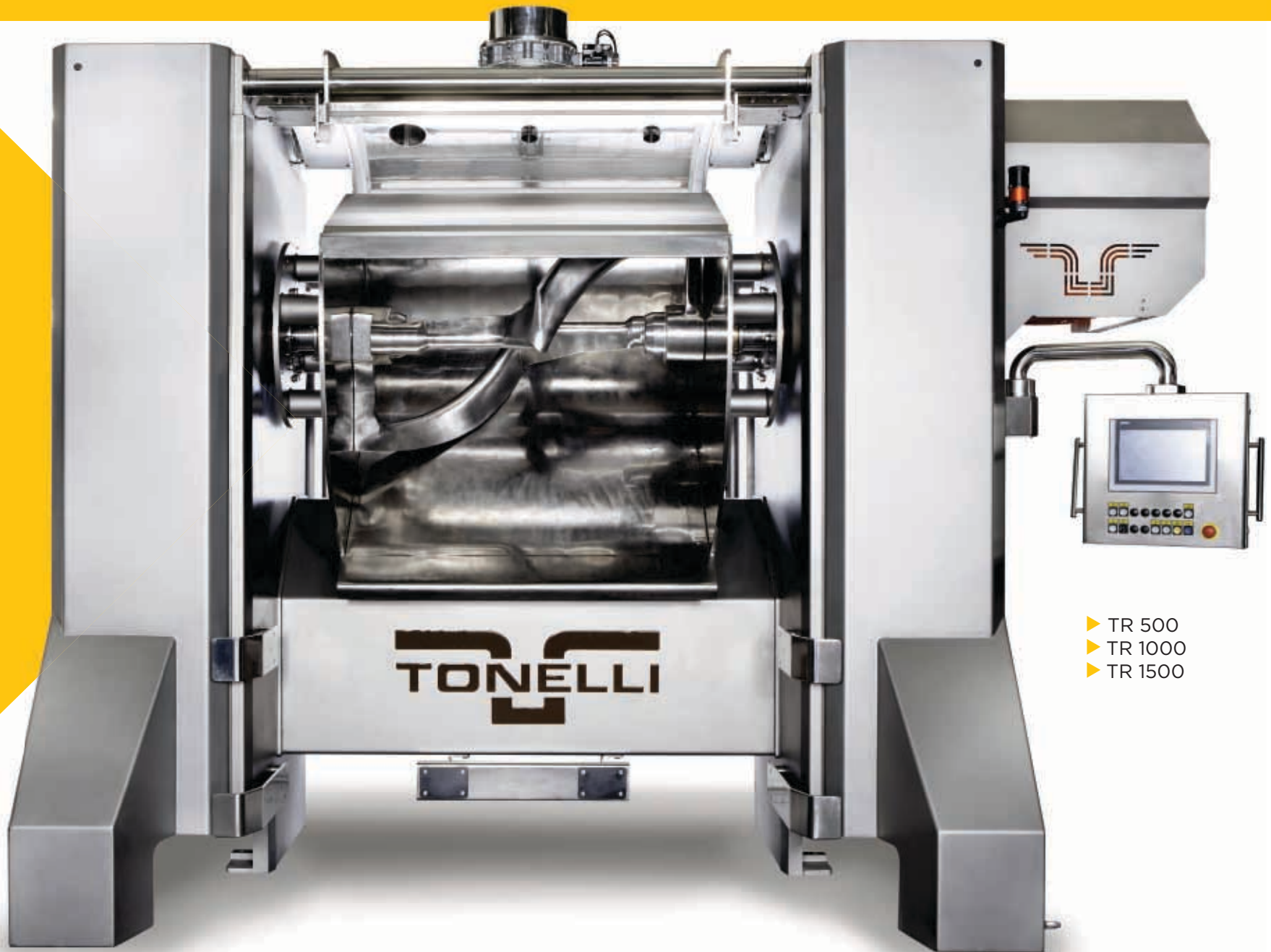


sweet

passion

since 1948

Horizontal Mixer



- ▶ TR 500
- ▶ TR 1000
- ▶ TR 1500



Heavy Duty Mixing Arm

made of cast stainless steel AISI 304

- ▶ High stability bearing structure.
- ▶ Mixing Environment (Bowl, Tool, Cover) in Stainless Steel AISI 304/316.
- ▶ High thermic exchange.
- ▶ Presetting for ingredients' automatic loading.
- ▶ Bowl's rotation by self-braking motor.
- ▶ Bowl's safety lock.
- ▶ Double motorization, directly coupled to the mixing arm.
- ▶ Mixing tool created by Stainless Steel AISI 304/316 fusion.
- ▶ Hydrodynamic washing unit.

Chewin-
gum



Hard
dough



Leavened



only a few applications

Bakery products



Cookies



Crackers





Centrifugal **Mixer** - MU

High production efficiency mixer, suitable for fast mixing of batters for cakes and sponge cakes, meringue premix, to homogenize and emulsify creams and whipped creams, sauces and mayonnaise, and also fats for margarine plasticization.

The machine is also provided with a capacity of mixture: max 400 Kg / min 10 Kg, suitable for small productions or small bakeries.

Advantages

Process times reduction versatility of application cost savings, thanks to its capacity to be also a scraps mixer

The ingredients can be introduced both manually and with volumetric dosers or by using a pump, or they can be weighed with loading cell scales.



➤
Bakery
products

➤
Sauces



➤
Creams



➤
Meringues



only a few applications





Batter&Cream **Premixer**

The Tonelli premixers for batters and creams allow to obtain a fast and simple mixing of ingredients, when the next step is a continuous process.

The mixing speed and times are completely adjustable, according to the working phases and the kind of raw materials. Thanks to this, the Tonelli premixers are extremely flexible and allow to obtain a high level of quality in the final mixed product. After mixing the product is transferred by a mono screw pump to the buffer tank.

Our premixers are all built in AISI 304 stainless steel and are fully washable, with predisposition for C.I.P. systems; the management through PLC and HMI allows the storage of recipes and a safe and easy use by the operator.

Batter Premixer RPX

This is the classical system for batter preparation, in which mixing times are extremely fast. Mixing is obtained with little and frequent batches, in order to avoid too long resting times and so the quality of the product is optimal.



Buffer Tank RAT

The pre-mixed product is transferred to a Buffer Tank where it is kept cold, so that the following step of aeration can be performed at best. The cone shape allows the perfect draining and the inner agitation with scraping blades assures an homogeneous cooling of the batter batch.





Cream Premixer CRPX

This premixer produces cream for fillings extremely fast, thanks to its "vane mixing system". Cream can be conditioned through the cavity wall, in which cold water keeps the temperature uniform for the following step of the aeration. Cream transfer is eased by a screw feeder for pump.

Both premixer and tank are built in such a way that all the parts on contact with the product can be perfectly cleanable.





Buffer Tank RMMI

It is a container for cream storage and feeding, jacketed for hot water forced circulation. One arm agitates the stored cream, while dedicated scrapers prevent the cream from sticking to the internal wall.



Cakes



Swiss Rolls



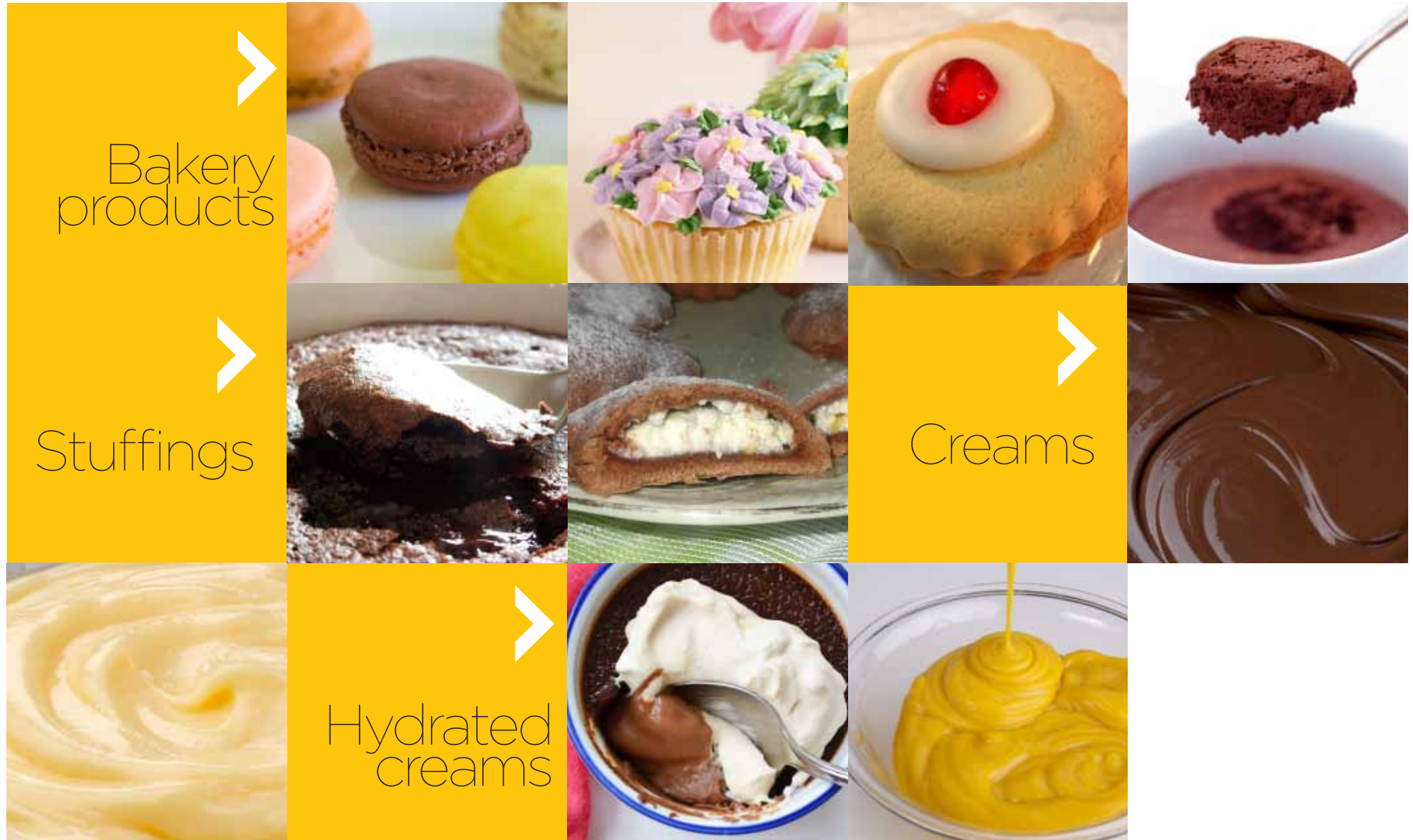
Sponge cakes



Lady-fingers



only a few applications



Continuous Aerating **Mixer** - CAM

The stator is jacketed to allow forced circulation of cooling water.





- ▶ Easy access to the electric and pneumatic parts for maintenance;
- ▶ Reduced vibrations, thanks to its low frame and improved motorization;
- ▶ The separate cabinet reduces overheating of the components;
- ▶ Maximum hygiene with its tubular frame.

The traditional turbo aerator have some new improvements:

- ▶ The vertical position of the aerating head is the most evident change (made to optimize the product feeding).
- ▶ Process control : accurate control of the resulting density (pump delivery/air or Nitrogen quantity) and temperature (chilling /heating jackets using thicker material).
- ▶ Ease of changes to the original production capacity : the rotor's new connecting system is such to enable the mixing head quick replacement with another having higher capacity, or different features (if recipe or technology require that);
- ▶ Technological flexibility : the available heads have different lengths, to select the best one for the product to aerate.
- ▶ Moreover, for special products or complex technologies, liquid ingredients can be injected straight into the aerating head; or liquid and solid ingredients can be added just downstream the aerating phase, with no impact on the quality of aeration while keeping the final specific gravity under strict control.
- ▶ The way both rotor and stator are manufactured remained unchanged (all machined from a single piece, no welds around), as this is the best way to ensure ease of washing and top hygiene.

Aeration Continuous Group

Platform Hygienic Design



Computerised management system



➤
Bakery
products



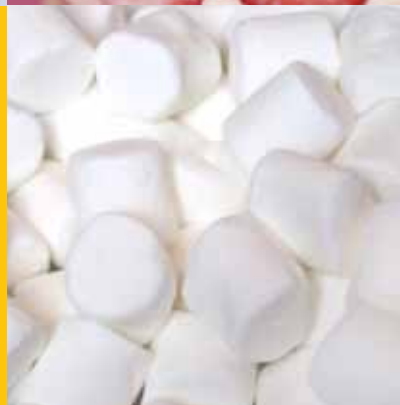
➤
Mousse



➤
Creams



➤
Marshmal-
low



only a few applications



www.tonelli.it

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