



**NEFAMAK<sup>®</sup>**

REAL MEANING OF COMPLETE SOLUTION

**PRODUCT CATALOGUE**

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**NEFAMAK**

*NEFAMAK brand is the quality promise given to our customers.*

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**Necmettin DUMAN**  
Chairman

Our focus is to grow by making continuous new

# INVESTMENTS

to follow new developments in the fields of technology and digitalization and to integrate them to our production lines.

Nefamak's long-term success has been built on a solid basis in respect of the integrated management approach including loyalty to the corporate values, reliability, integrity and perfectionist manufacturing. According to us, Nefamak brand is the quality promise given to our customers. All of our future investments, technological infrastructures, management strategies have risen over these values. Operational agility is very important to keep up with the speed of the change. It needs a concentration.

Our focus is to grow by making continuous new investments, to follow new developments in the fields of technology and digitalization and to integrate them to our production lines. During this rapid process, our engineering staff consists of long term experienced, vision holder people and this enables us to make our future aims bigger, to open new horizons and to encourage us for globalization.

All of our customers, shareholders, team mates lead in the way of creating new values for our country and world. We are improving this continuously.

**Necmettin DUMAN** / Chairman

## ABOUT US

*We would like to introduce our company NEFAMAK as a solution partner for confectionery industry, specialized in manufacturing flat & hollow wafer production lines in Turkey, since 1989.*

*Our company serves all worldwide markets through providing complete solutions including the design, supply, installation and after sales services.*

*We can provide alternative solutions to our customers especially in design and manufacturing range to meet their requirements such as tailor made feeding/packaging solutions for many kind of confectionery products like, wafers, biscuits, chocolate bars and cakes, which is still rare in this industry.*

*With industry-specific experienced managers, highly qualified engineers employed at R&D, manufacturing and after sales departments, our goal is to be one of the leaders in worldwide markets by implementing high standards of machinery and offering "fit to purpose" solutions to our customers.*

*Moreover, a further important requirement for the long-term success of our company are our employees and their commitment to satisfy our customers.*

***We are completely at disposal of our customers all the time whenever and wherever they need our services.***





### In doing so, both technical and commercial factors are considered:

- Capacity
- Consumption Values
- Functionality
- Flexibility
- Low Maintenance

### Further important factors are:

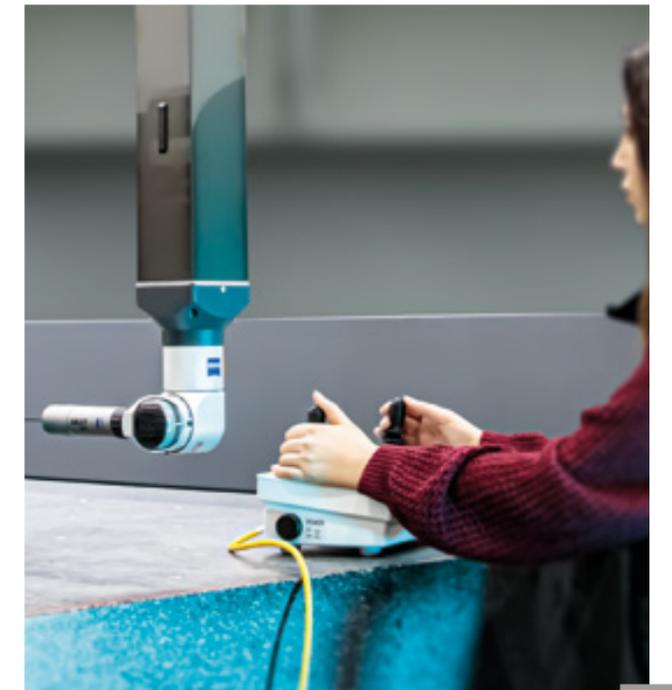
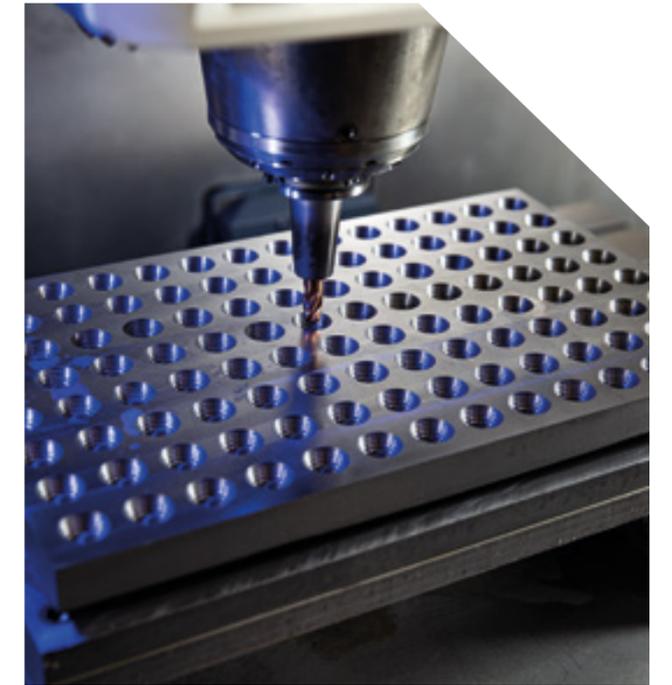
- Safety
- Hygiene
- Ease Of Operation

*Our company is especially specialized in design and manufacturing range and our continuous desire to improve products in accordance with market needs is the basis for today's global activities which is still very rare in our industry.*

*Therefore, our in-house research center in Turkey continuously searching for new possibilities both in engineering and technology. Our goal is to develop even more efficient production processes and products of even higher quality and in wider variety.*

*Before developing a large sized plant, we simulate at very reasonable cost the complete production process and produce samples on trial equipment to test new baking molds, plant components, special raw materials or new recipes.*

*Based on the results gained in the lab and the test center, our designers draft custom-tailored machines and plants using as many standard components as possible.*

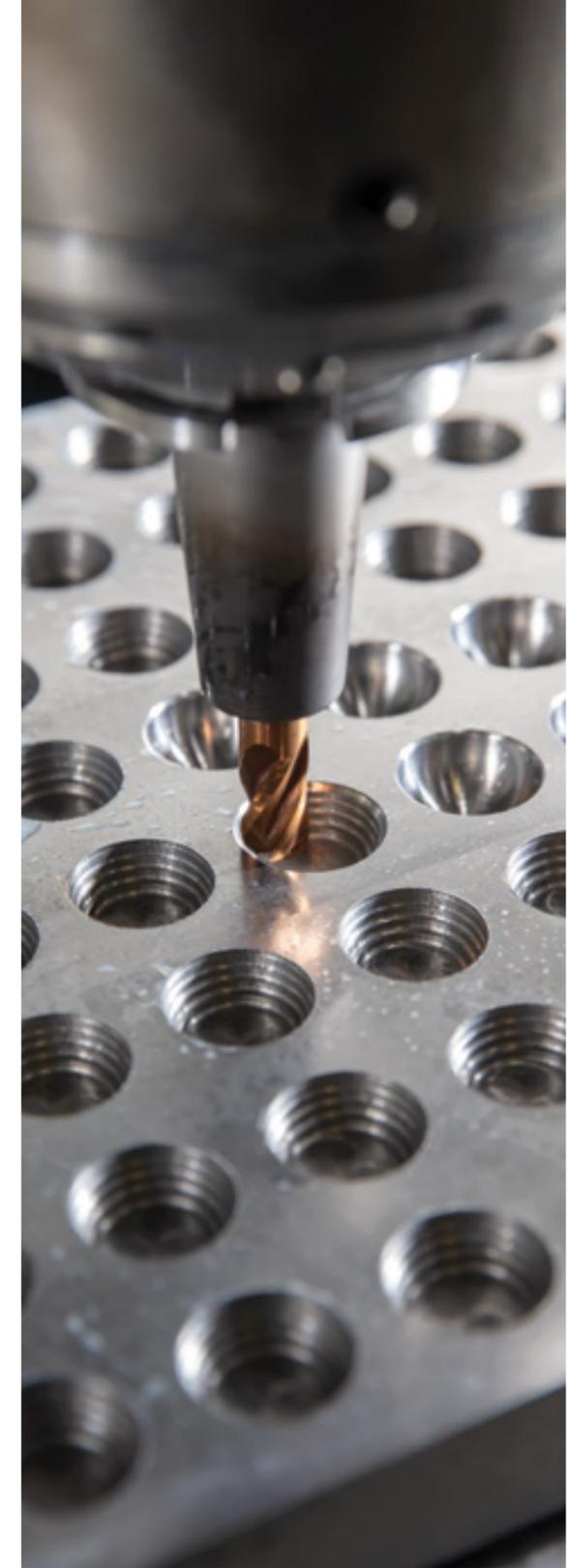


## Capability Manufacturing

The range of products reaches from computer-controlled plants for large-scale industrial production to semi-automatic or manually operated plants.

Numerically controlled machining centers (CNC) ensure highest precision and quality combined with economy and shortest possible delivery times.

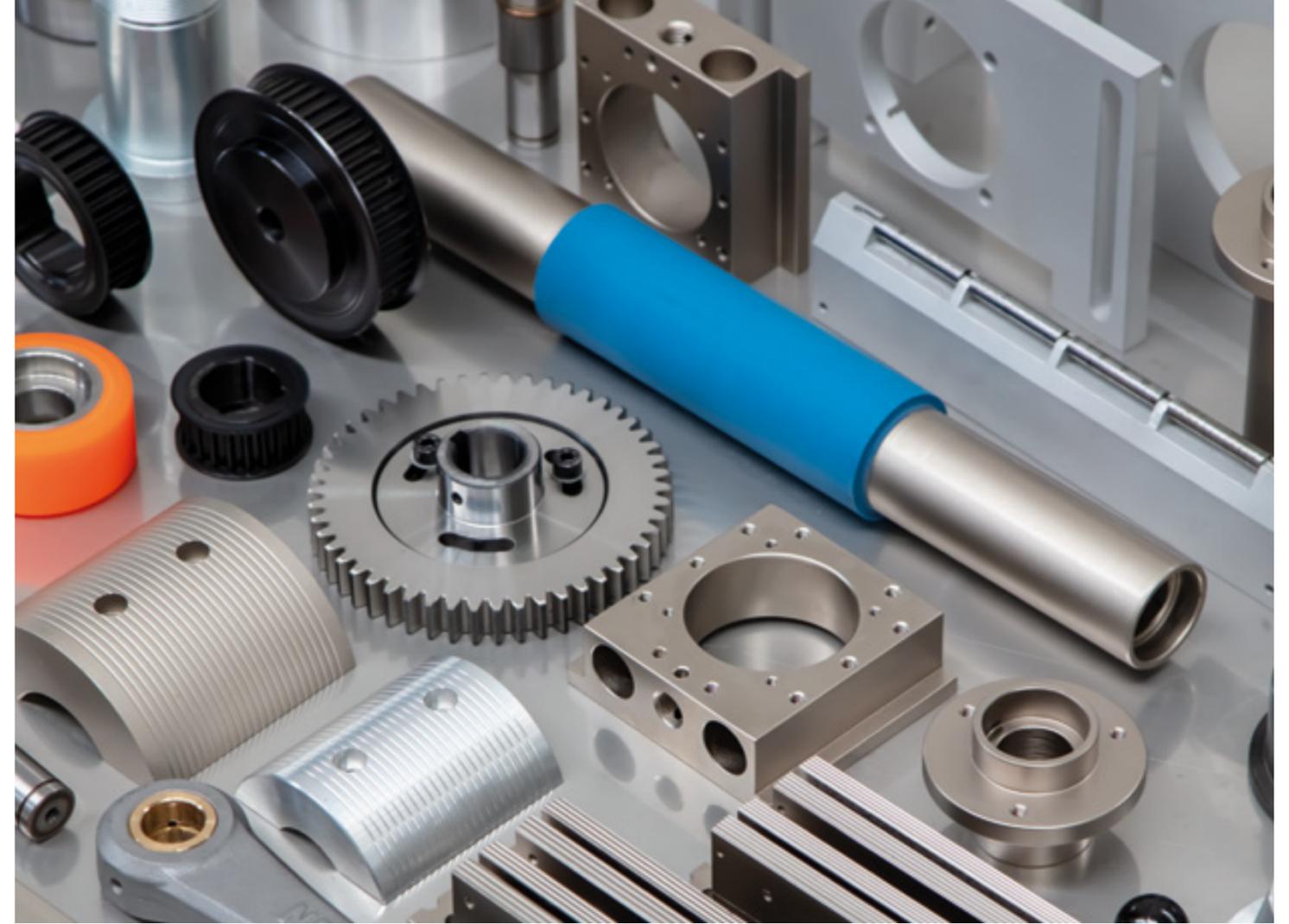
The wide variety of the tools used also allows the flexible production of spare parts and complicated special components. At the final stage after assembly, all functions of the machines are thoroughly tested by trial runs before shipment.



## Sales & Project Management

The close cooperation of our sales managers/ engineers, and representations in numerous countries on all continents as well as detailed knowledge about different markets enables us to offer our customers on site advice for developing tailored and innovative products and to support them in implementing their projects.

The exact presentation of plant layouts, processes and the planned end products in combination with continuous project monitoring guarantee the satisfactory fulfillment of all customer requirements.



## After Sale Services

As well as having the widest service and spare parts network in the domestic market, NEFAMAK also expands its existence in the export market with the same vigor. We are always ready to provide NEFAMAK equipment owners with the utmost service.

Furthermore, NEFAMAK supplies its export customers with intense and continuously updated service education. NEFAMAK's foremost service standards principle is to procure spare parts immediately without delay and we are resiliently meeting the requirements of this principle.

## YOUR ADVANTAGES BY CHOOSING NEFAMAK

- You receive a brand new system of latest design standard, executed for your task. The offered solution is most flexible and can be adapted to your future needs.
- Most modern design ensures highest hygienic standard by separating the driving section from product section. Secondly first class access to clean and maintain the system easily.
- The technology we are using is proven, most modern and refers to the latest state of the art. This quality means safe production, low maintenance and high availability of the machine.
- Excellent quality of all chosen components to ensure safe operation and to minimize maintenance.
- You will work together with an experienced supplier. NEFAMAK is a leading solution partner for most of the confectionary manufacturers in global market more than 30 years - for your safe decision.
- High outputs and high machine efficiencies together with a space-saving layout are giving you all economies of scale which make your investment worthwhile for the future.



## WHAT WE DO?

### FLAT AND HOLLOW WAFER PRODUCTION LINES

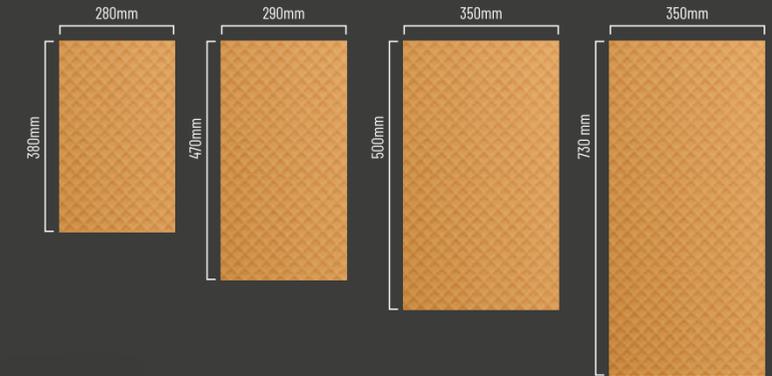
Cream filled flat wafers are made up to 7 wafer sheets and produced on semi- or fully automatic production lines. The wafer batter is produced in batches and then deposited automatically onto controllly pre-heated baking plates of gas heated ovens available with from 32 up to 112 baking pairs, and baked to wafer sheets within 2-3 minutes baking time depending on wafer thickness required.

After baking process, the wafer sheets are automatically discharged and transferred to a cooler to cool down to room temperature before they are fed onto the fully automatic cream spreading machine which applies cream onto them and sandwiches them to wafer books. In case of chocolate-coated products, an additional conditioning of the wafer sheets is recommended to enrich the wafers with controlled moisture, to prevent later cracking of the chocolate coating. The finished cream-filled wafer books are cooled and processed to wafer fingers in the cutting machine. Finally, the wafers are transferred to a chocolate enrobing line or a packaging system.



# AUTOMATIC WAFER BAKING OVENS

The fully automatic AWBO series ovens are available with from 32 up to 112 baking tongs and are designed for a capacity of up to 50 wafer sheets per minute. They are used for the industrial production of flat and hollow wafers and are specially designed to meet rough operating conditions.



## BAKING PLATE SIZE UP TO

Capacities from 40 kg/hr up to 300 kg/hr (100-1.000 kg/hr plain wafers; 130-1.300 kg/hr chocolate coated wafers)

## MANUFACTURING PROCESS

- ▶ The batter depositing station of the wafer baking oven allows the batter to be deposited onto the lower baking plate of the opened baking tongs.
- ▶ The baking tongs form an endless rotating chain of the baking tongs.
- ▶ The batter depositing station of the wafer baking oven allows the batter to be deposited onto the lower baking plate of the opened baking tongs.

### BAKING PLATES

Made with special alloy casting with a high-tensile cast structure. The selection of the alloy components and the casting procedure ensure dimensional stability, a homogeneous and dense surface, heat stability, good heat accumulation characteristics and excellent thermal conductivity. CNC-controlled grinding machines are used to form the reeded-structure of the baking plates. The baking surface is protected and sealed by an additional hard chrome plating. The adherence of baking residues is thereby largely prevented, cleaning intervals are considerably prolonged and easy removal of the wafer sheets is ensured.

### BAKING TONGS

The baking plates are supported by an extremely rugged and solid tong frame. This ensures that the thickness of the wafer sheet is kept constant over its entire surface with an accuracy of +/- 0.2 mm. Adjusting bushes are fitted for the uncomplicated adjustment of the wafer sheet thickness. Each baking tong is equipped with four carriage rollers with thermally stabilized ball bearings. All bearings are provided with grease nipples.

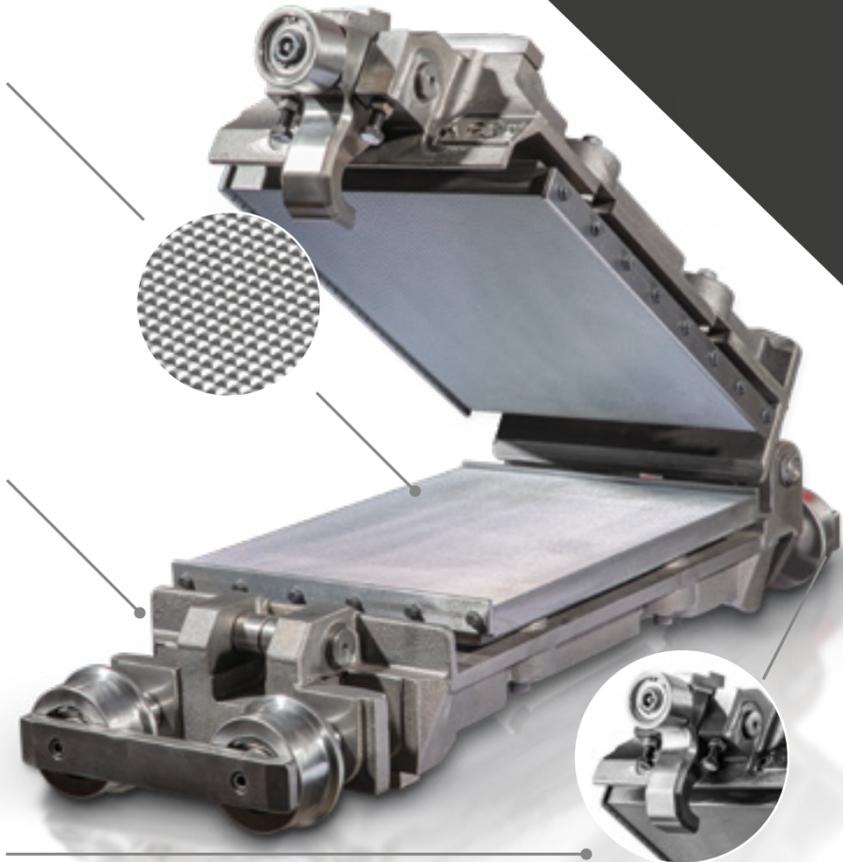
### BAKING TONGS LOCKING SYSTEM

The tong-mold set, which is open on the curved shaft, fulfills the hook locking after the upper roller contacts the curved shaft from the moment the upper fork enters the presser wheel. With this special system, the frequency of maintenance and maintenance cost are reduced and a high sensitivity in thickness has been achieved.

### BAKING TONG CHAIN TENSIONING

It is used to automatically compensate for changes in the length of the cooking tong chain that occur as a result of heating or cooling the oven

- Can be adjusted separately on the right and left sides.
- Pneumatically operated.
- Provides high machine safety with automatic air control system.



### HEATING SYSTEM

With the help of Dungs combustion equipment, proportional air fans and mixer, the gas-air mixture has the highest combustion efficiency. It is also completely safe with air and gas pressure switches. Thanks to the energy-saving arc-shaped burner, equal heating can be achieved on the plates. Top-bottom plates automatically determine the gas-air mixture according to their temperature. The entire burner group and gas equipment (gas group) provide safe and secure operation. (ISO 13849-1)



### INSULATED BURNER ROOM

The burners arranged in the center of the baking machine are separated from the outer area by additional bulkheads to concentrate the heat in the middle of the machine. By the help of the non-combustible fire walls integrated in the burning room, hot combustion gases are passed between the baking plates and the shielded carrier rollers, which are located externally and run in the considerably cooler outer zone.



### INSULATING ENCLOSURE

Both sides of the automatic baking machine are executed in form of side-hung doors. Tightly closing, side-hung doors provide max. heat insulation with special non-combustible materials inside.



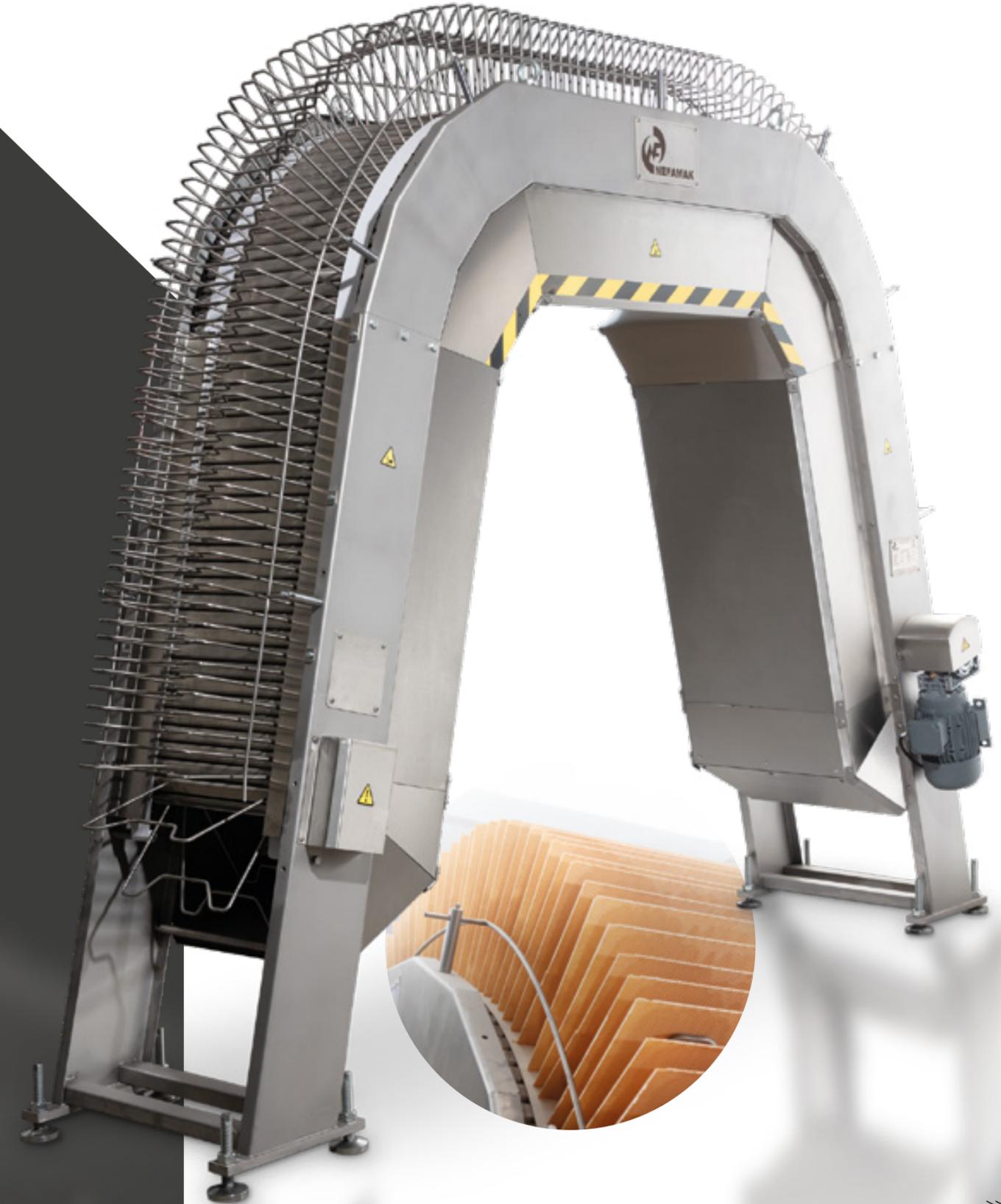
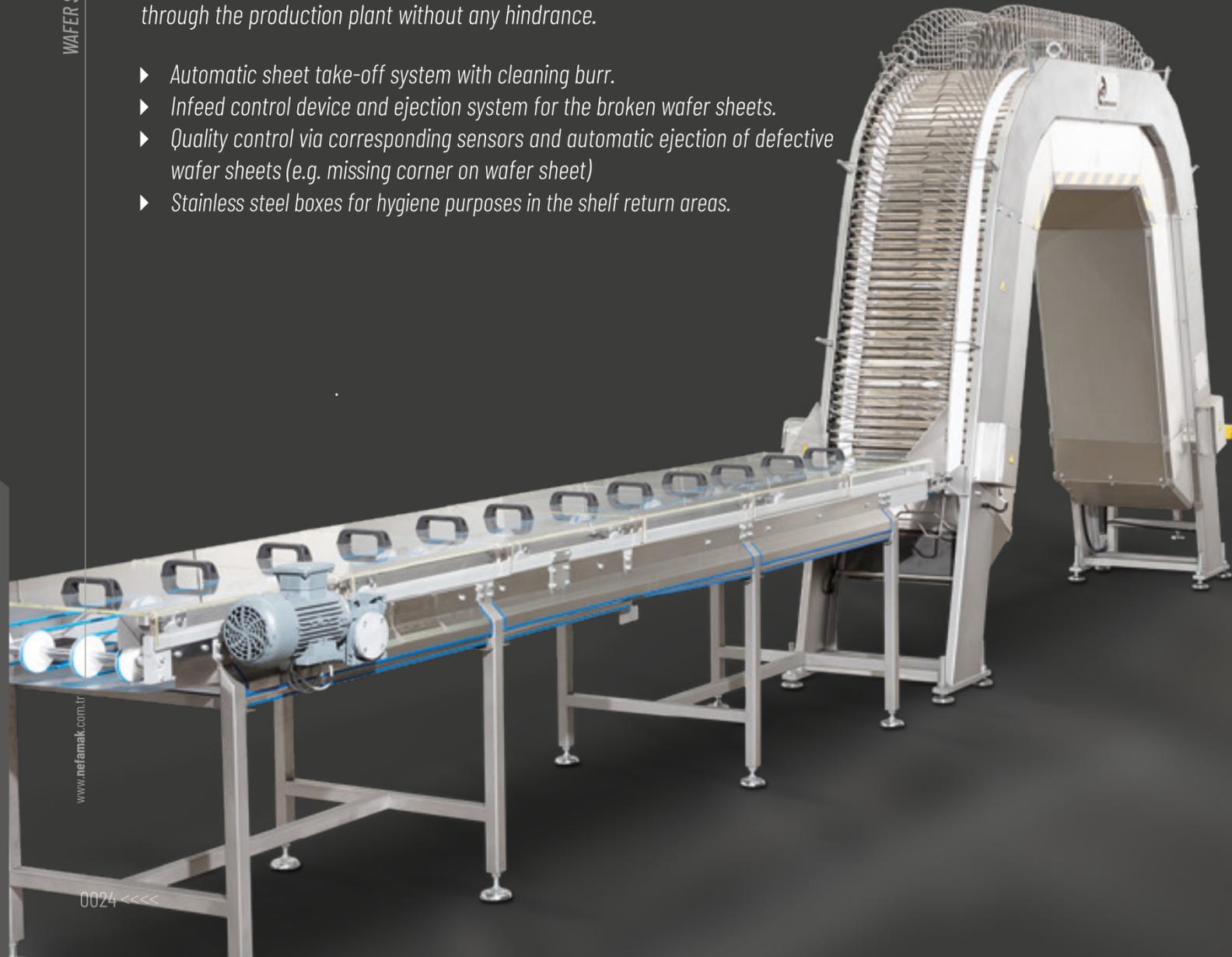
### BATTER DEPOSITING STATION

Servo motor controlled non-drip dosing pump for exactly positioned batter depositing with adjustable batter depositing volume. A quick-release lock enables easy replacement of the batter gun (depositor) even during operation. In addition, thanks to the closed dough storage group and vibrating fork sensors, high hygiene and high performance are achieved

# WAFER SHEET COOLERS

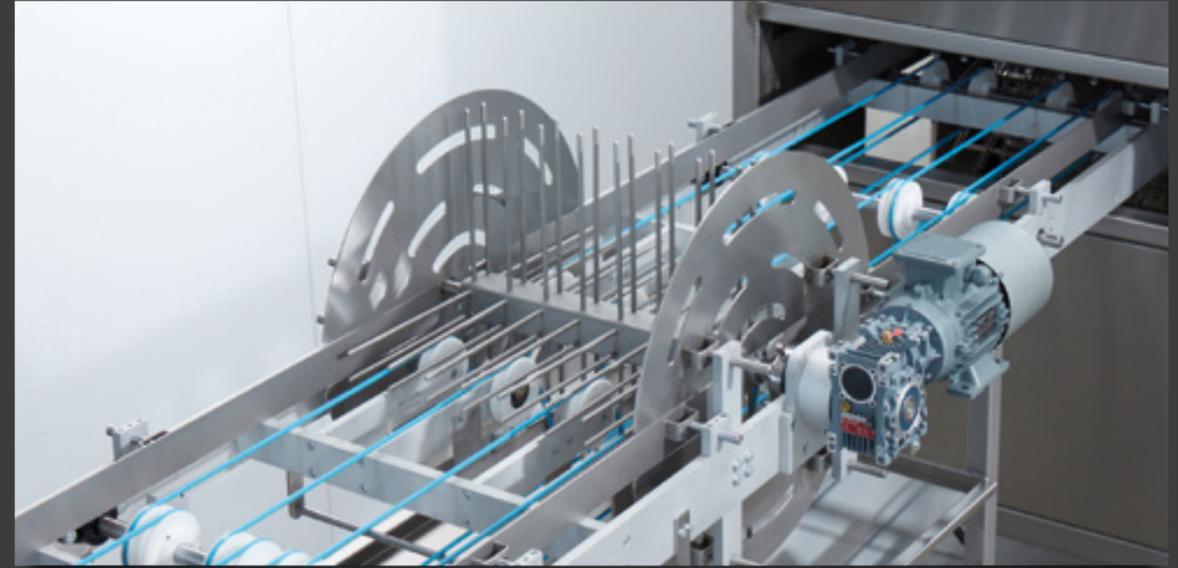
After baking, the wafer sheets are cooled stress-free at ambient temperature by the wafer sheet coolers. The archway design allows operating personnel to walk through the production plant without any hindrance.

- ▶ Automatic sheet take-off system with cleaning burr.
- ▶ Infeed control device and ejection system for the broken wafer sheets.
- ▶ Quality control via corresponding sensors and automatic ejection of defective wafer sheets (e.g. missing corner on wafer sheet)
- ▶ Stainless steel boxes for hygiene purposes in the shelf return areas.



# CONDITIONING TUNNEL

WCT series wafer sheet conditioning tunnel moistens wafer sheets to prepare them for molding or enrobing with chocolate. This prevents the chocolate coating from cracking or chipping.



- ▶ Between 2.5 and 4.5 % moisture is added depending on the wafer sheet structure. Longer periods of conditioning will result in a more even distribution of the moisture within the fine structure of the wafer sheet.
- ▶ At the entrance of the conditioning tunnel, there will be a bypass conveyor for the leaves to pass directly under the tunnel to the cream spreading machine without entering to the tunnel.
- ▶ Controlled addition of moisture prevents later uncontrolled absorption of moisture and expanding of the wafer, thus the achieved moisture equilibrium largely prevents subsequent cracks or breaks in the coating on the final product.
- ▶ There is uv disinfection system in the humidity unit.
- ▶ At the entrance of the conditioning tunnel, there will be a bypass conveyor that will allow the leaves to pass under the tunnel without entering the tunnel and directly to the cream application machine.
- ▶ Machine has a reject system for broken wafer sheets.

## AUTOMATIC CREAM SPREADING MACHINES

Automatic high-capacity spreading machines for application of cream fillings with either the film or the contact method, as required. Up to 60 sheets/min can be processed.

### OPERATIONAL METHOD FOR THE FLAT WAFER SHEETS

In accordance with the wafer book composition selected, the wafer sheets are transported over a smart feeder conveyor system to the spreader head and to the cover sheet station. The wafer sheets to be creamed are fed continuously under the spreader head and are creamed by either the film or contact method.

In the film method, the film knife takes the cream film from the spreading roller and transfers this onto the wafer sheet.

In the contact method, the wafer sheet takes the cream from the spreader roller by direct contact.

In the downstream stacking station, the creamed wafer sheets are placed one above the other, in exact alignment, in accordance with the respective book composition. The wafer book is then completed with the placing of the non-creamed cover sheet.

### OPERATIONAL METHOD FOR THE HOLLOW WAFER SHEETS

The hollow wafer sheets to be spread are fed continuously beneath the spreader head and coated by the "film" method. To do this, the film knife takes the cream film from the spreading roller and applies it to the wafer sheet.

The roller gap, roller speed, roller height and roller temperature are individually adjustable according to the type of cream.

Then the cream is spread into the con-cavities in the hollow wafer sheet by the spreader head.



#### WAFER SHEET STACKING STATION

The wafer sheet stacking station is located at the entrance of the machine. Its smooth sequence of movements throughout the stacking operation guarantees an extremely gentle handling of the wafer sheets in case the production is interrupted - a key advantage particularly to minimize wafer sheet loss during operation.



#### WAFER SHEET DISTRIBUTION STATION

The wafer sheet distribution station distributes wafer sheets to be spread, and topping sheets, in the proper quantities, for the product being manufactured.



#### CREAM SPREADING STATIONS

Versions available with one, two or three spreading heads. The roller gap, roller speed, roller height and roller temperature can be set individually, depending on the type of cream and required thickness of the cream layer.



#### BOOK FORMING

There are different types of book forming stations depending on product weight, line speed and capacity, including vacuum, forward-backward arm, angular servo control, servo arm, kinematic 2-axis, with wide surface support for wafer sheets and adjustable lateral guides.



#### PRESSING ROLLER STATION

Pressing roller after the cover sheet station ensures uniform product height and homogeneous spreading. The device is equipped with an adjustable pressure roller for processing the entire surface of the wafer book homogeneously. With the correctly dosed pressure, the cream flows into the depressions in the wafer sheet as the pressure roller acts on the entire surface.



#### CHECK WEIGHER AND REJECTION SYSTEM

There is a weighing control and discharge system for manual or automatic regulation of cream application and block weight monitoring to achieve stable wafer block weights. Unacceptably heavy wafer blocks (for example, if the block weight is above or below the selected limit values) are automatically discharged. This system can be activated or deactivated from the operator panel.



#### COVER SHEET STATION

Quality control via corresponding sensors for stopping the machine in case of missing cover sheet coming from the top. The system can also be manually activated for ejection the broken wafer books during operation.



#### CREAM RECIRCULATION SYSTEM

Cream recirculation system located under the spreading head carries the unused cream back to the spreader hopper - a key advantage particularly to minimize the cream losses during operation. Cream spreading machines are fully compliant with European Standards (CE) with safety modules and RFID cover switches.

# WAFFER BOOK COOLING TOWERS

*Cream-filled wafer books are cooled so that the cream filling sets sufficiently for cutting and packing. Cooling the books ensures a clean cut.*

The capacity of the wafer cooling towers depends on the plant performance and the product-specific cooling time. The cooling time is set between 8 and 15 minutes depending on the product. The wafer books are placed in the brackets of an endless carrier chain and are cooled during their transport through the tower.

The insulating enclosure is made of high-grade steel elements filled with rock wool for heat insulation. Swing doors allow easy access for inspection and cleaning. The viewing windows in the doors are used to see the production.

- ▶ Little space requirements.
- ▶ Hygienic design of stainless steel.
- ▶ Side doors allow good access for cleaning and maintenance.
- ▶ Integrated evaporating unit in book cooler.
- ▶ Including circulating air blower with air filter.
- ▶ Compact cooling unit with separately installed air-cooled condenser.
- ▶ Perfect temperature control.
- ▶ Block cooling machines are fully compliant with European standards (CE) with safety modules and RFID cover switches.



# WAFER CUTTING MACHINES

Fully automatic cutting machines to cut cream filled flat and hollow wafers. Capacity up to 20 wafer books per minute. The totally new machine concept guarantees fully automatic production even at a high plant capacity.

The wafers are cut by fixed cutting steel blades fitted onto exchangeable frames. The cutters can be adapted quickly and easily to other product sizes by changing the cutting frames. According to the further processing desired, the wafer books are cut as single book or as book stacks.

In addition, thanks to the servo driven block rotation units, the desired direction of the wafer block can be automatically adjusted.



- ▶ Available with single, double, twin or 4 axis cutter versions.
- ▶ Manufactured and covered by stainless steel components. All parts in contact with the product are made of either stainless steel or food grade elements.
- ▶ Wheeled trolleys made of plastic to collect the wastes under the cutting stations.
- ▶ Transparent hinged polycarbonate cover to protect the products from contamination and for safety purpose.
- ▶ Wafer Cutting machines are fully compliant with European Standards (CE) with safety modules and RFID cover switches.

# WAFER DISTRIBUTION DEVICES

This device separates the wafer bars from each other when discharged from the wafer book cutter and feeds them, aligned to a chocolate enrober. The second cut pushes the cut wafer bars through the distribution rails and singles them.

- ▶ Removable stainless steel separator plate.
- ▶ Individual execution adapted to the respective wafer bar size and enrober.
- ▶ Transparent hinged polycarbonate cover to protect the products from contamination.



# WAFER WASTE GRINDING

The WGM wafer grinding machine grind the wafer trimmings produced during cutting so that the trimmings can be recycled for cream production.

- ▶ Robust stainless steel design meets the hygiene requirements of the food industry.
- ▶ Good accessibility for easy cleaning.
- ▶ Container for wafer trimmings-container lid easy to open for manual addition of ingredients.Product is fed manually through a hinged lid,keeping the operator away from the moving parts. The lid has an interlocking safety switch to ensure safe operation.
- ▶ The waste wafers pass through a sieve with a diameter of 5 mm, then grinded down to 120 microns thickness by the powerful grinding blades.
- ▶ Capacity up to about 150 kg/h.
- ▶ Wafer grinding machine includes a metal detector unit. Contaminated products are rejected by signal received from the metal detector unit.
- ▶ Pre-grinder unit on the wafer grinding machine performs the pre-grinding process of hard wastes.



## BATTER MIXING PLANTS

This is the plant for the production of homogeneously mixed wafer batter and fully automatic feeding of one or several automatic wafer baking ovens.

### MANUFACTURING PROCESS

The individual batter ingredients are fed into the mixing tank (s) manually. The raw materials are then mixed in batches in an especially gentle and efficient process within 5-7 minutes. Thereafter, the homogeneous wafer batter is pumped into the batter storage tank from where it is continuously fed by another pump to the automatic wafer baking oven.

- ▶ Mixing tank, lid easy to open, for manual addition of ingredients.
- ▶ Special turbo mixing turbine for extremely gentle and efficient mixing resulting in a lump-free batter within short time.
- ▶ Flow-meter and spray nozzle dosing of water directly from the water mains by way of electronically operated ball valves.
- ▶ Batter storage tank with easy-to-remove filter insert.
- ▶ Batter storage tank with stirrer to keep the mixed batter in homogeneous condition and in order to prevent sedimentation of the wafer batter.
- ▶ Long-lasting easy operation with a single recipe.

## CREAM PRODUCTION PLANTS

This is the plant for the production of homogeneously mixed creams and fully automatic feeding of an automatic wafer spreading machine.

### MANUFACTURING PROCESS

The individual cream ingredients are fed into the mixing tank manually or automatically if optional equipment has been installed. The raw materials are then thoroughly mixed in batches by the optimally designed agitators; the resultant cream is very soft and mellow. The mixing time is about 25-30 minutes. Thereafter, the cream is pumped into the cream storage tank from where it is continuously fed by another pump to the automatic wafer spreading machine.

- ▶ Completely made of stainless steel components.
- ▶ Tanks have covers fixed with hinges for raw material loading.
- ▶ Double-jacketed cream mixer with mixing turbine, scraper-agitator and homogenizer.
- ▶ Double-jacketed storage tank with base and wall agitator to keep the cream in homogeneous condition.
- ▶ Long-lasting easy operation with a single recipe.

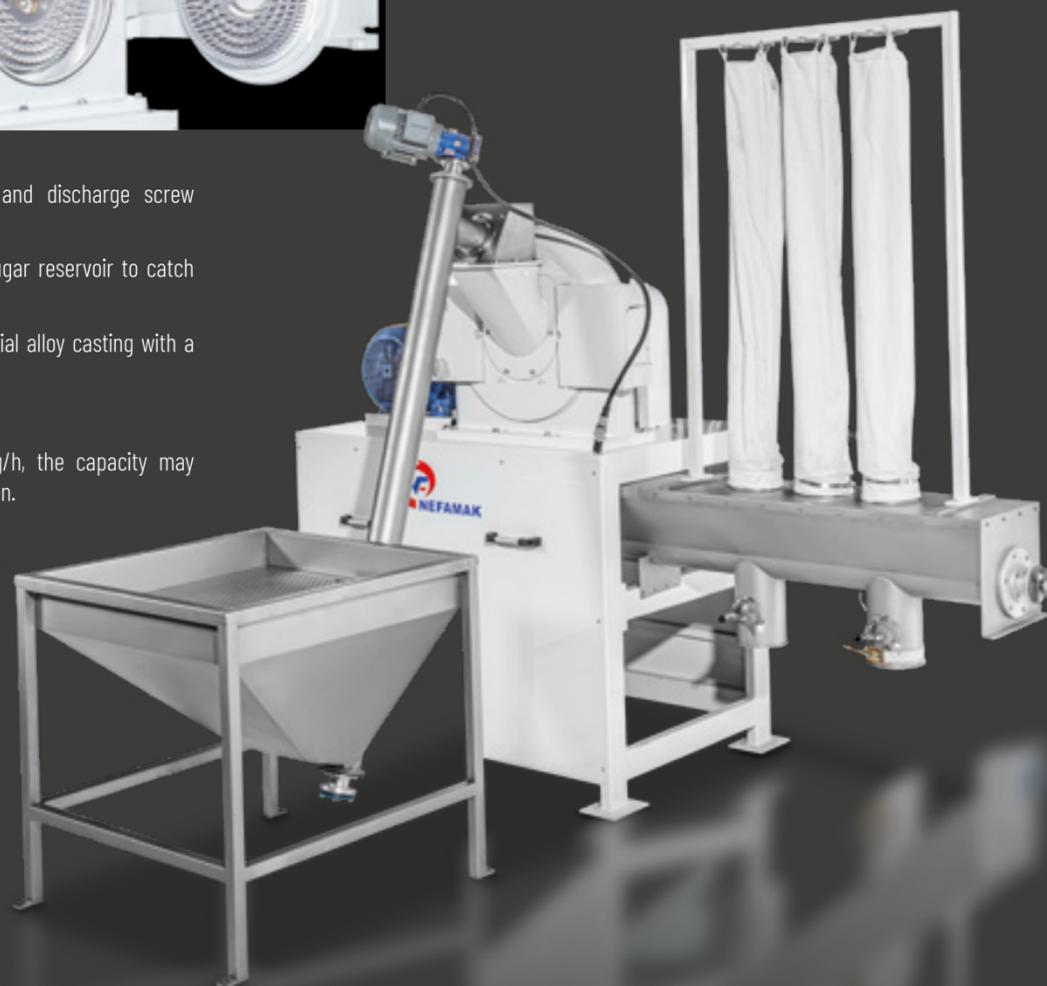


# SUGAR GRINDING MACHINE

This sugar grinding machine is used for crystal sugar milling in the production of semi-finished goods in the confectionery industry. The design of the machine components could be tailored as per space requirements.



- ▶ Crystal sugar reservoir with sieve and discharge screw conveyor.
- ▶ Magnetized filter inside the crystal sugar reservoir to catch metal particles.
- ▶ Powerful grinding head made of special alloy casting with a high-tensile cast structure.
- ▶ Dedusting of conveying air with filter.
- ▶ Production Capacity: 600 – 1000 kg/h, the capacity may change according to the desired micron.



# CHOCOLATE PRODUCTION PLANTS

This is the plant for the production of homogeneously mixed chocolate mass and fully automatic feeding to the chocolate enrobing machine.

## FAT MELTING TANK (FMT series)

FMT series fat melting tanks are specially designed to melt and keep at liquid state, at constant and controlled temperature ingredients such as cocoa butter, cocoa blocks and fat materials.

- ▶ Completely made of stainless steel components.
- ▶ Lid easy to open for manually adding ingredients easily.
- ▶ Double - jacketed (oil jacketed) tank prevents heat loss and saves energy.
- ▶ The product can be discharged from the machine by an outlet valve, or alternatively, by the product outlet pump.
- ▶ Perfect temperature control with PID.



## CHOCOLATE PRE-MIXER (CPM series)

All liquid and dry ingredients are manually fed into CPM series chocolate premixers. During the mixing process, a homogeneous dough is created and then transported to a ball mill machine for further processing.

- ▶ Completely made of stainless steel components.
- ▶ Lid easy to open for manually adding ingredients easily.
- ▶ The machine has two mixing systems to homogenize all raw materials in a faster way.
- ▶ The double jacketed tank prevents heat loss and saves energy.

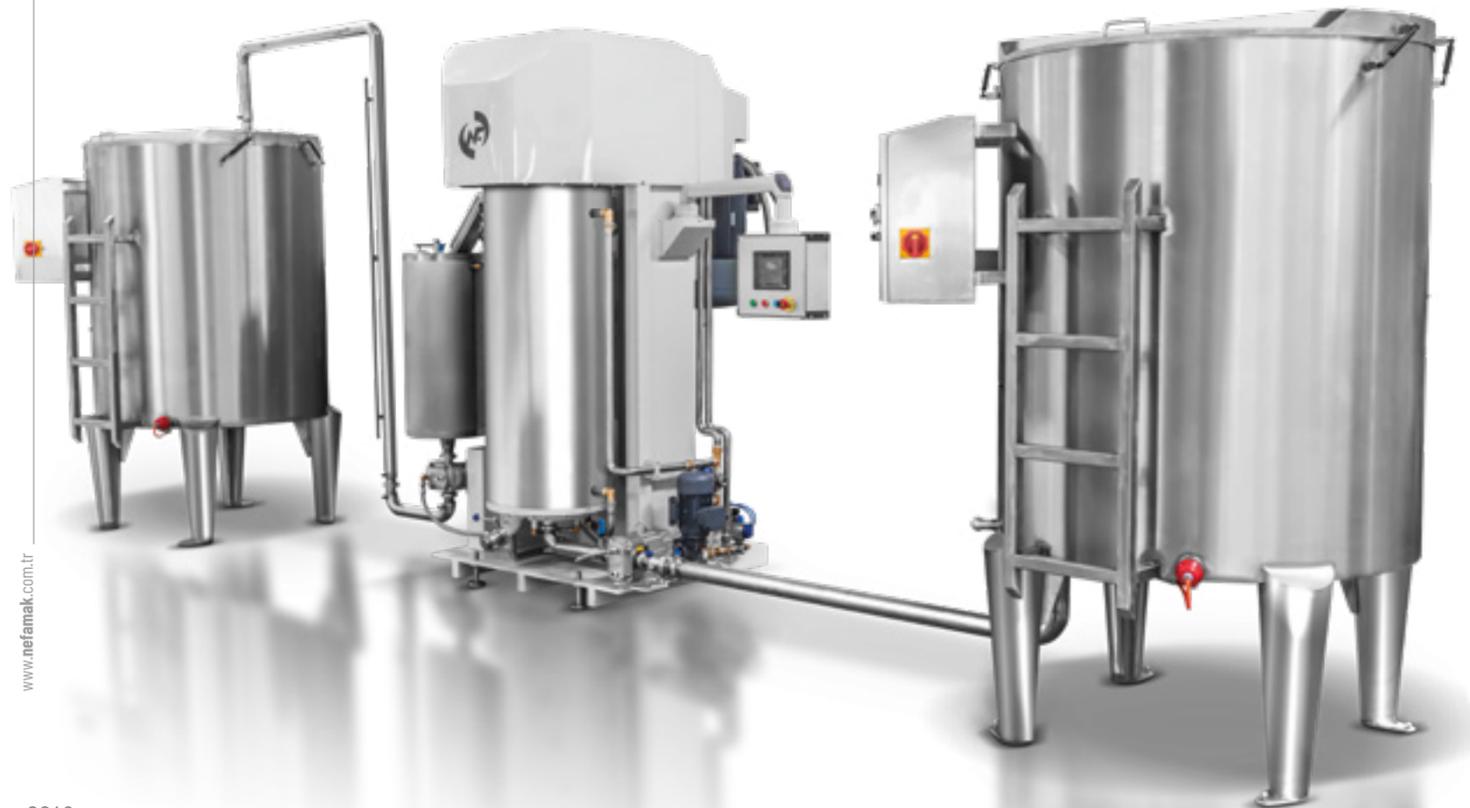


# CHOCOLATE PRODUCTION PLANTS

## MANUFACTURING PROCESS

The individual chocolate ingredients are fed into the pre-mixing tank manually, then the raw materials are thoroughly mixed in batches by the optimally designed ball-mills; the resulting chocolate mass is very soft and mellow.

The process time is about 1-3 hours. The cream is pumped into the chocolate storage tank from where it is continuously fed by another pump to the chocolate enrobing machine.



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## CHOCOLATE STORAGE TANK- CST series

CST series chocolate storage tanks are designed to store and keep at constant temperature liquid products such as: cocoa butter, fat, cocoa liquor, chocolate, cream compound chocolate. Inside the tank a rotary blade stirrer controlled by a reduction gear motor, ensures homogeneous product mixing.

The stirrer is connected to a bottom scraper to prevent any product sticking to the tank bottom. The tank has an interspace where either product heating or product cooling water circulates. The product can be discharged from the machine by an outlet valve, or alternatively, by the product outlet pump.

- ▶ Completely made of stainless steel components.
- ▶ Double jacketed tank prevents the heat loss and saves energy.
- ▶ Temperature control with PID

## CHOCOLATE BALL-MILL- CBM series

CBM series chocolate ball-mills are used for the production of all kind of chocolate, chocolate compounds and cream starting from the raw materials (sugar, cocoa, cocoa butter, hazelnut paste etc.).

The raw materials are either to be fed manually or automatically from a connected chocolate pre-mixer. The steel balls inside the tank have the function to give the fineness to the product, and product fineness degree changes according to the working time which can be electronically set.

- ▶ With the help of special angled hoes, the balls move up and down, and as a result, 1000 kg/hour of chocolate is refined.
- ▶ The interface is very easy to use thanks to the controlled touch screen.
- ▶ Activation of the cooling system, operating temperature, chocolate mix, transfer pumps and main engine operating time are automatically provided from the touch screen.
- ▶ Product inlet and outlet are carried out with a 1.5" pump.

# CHOCOLATE ENROBING MACHINES

The CEM-S model enrobers are suitable for full, half or bottom-coating of pralines, bars, pastries etc. with chocolate or chocolate compounds, and for medium operating speeds of up to approx. 5 m/min. Detachable lower section containing the chocolate service tank, enables rapid changeover and is suitable for all enrobing works.



The CEM-D model can enrobe two layers at once creating an extra thick chocolate layer or allowing for faster enrobing. It is provided with two curtain boxes, two air-blower systems and two bottoming systems. Perfect for large-scale productions up to 9 m/min operating speeds.



- ▶ Machine widths of 600 to 1500 mm.
- ▶ Uniform coating of products.
- ▶ Hygienic design with stainless steel surfaces for maximum cleanliness and ease of cleaning.
- ▶ Advanced closed water system.
- ▶ Slow-running, temperature-neutral chocolate pumps.
- ▶ Blower operating within a tolerance of only  $\pm 1\%$  over the entire width of the machine.
- ▶ 7 zone temperature control with accuracy of  $\pm 1^\circ\text{C}$ .
- ▶ Specially developed stored program control system for maximum ease of operation.
- ▶ Fully compliant with European Standards (CE).

# CHOCOLATE ENROBING MACHINES



## SPRINKLING EQUIPMENT

A variety of different sprinkling systems to be used on a universal basis and is suitable for nearly all granulated sprinkling materials. The sprinkling material is distributed sparingly via a special conveyor belt in a process with a continuous variable control. All sprinkling systems are manufactured completely from stainless steel and food grade materials. Available for machine widths from 1000 to 1500 mm



## CHOCOLATE ENROBING MACHINES DECORATING UNIT-DECORIDEAZ

The decorating unit -Decorideaz is a universal decoration system for pralinés, sweets, candy bars, biscuits, wafers, cakes, etc. The variety of dash, zigzag, circular or double loop movements is nearly unlimited. The movements of the nozzle tube can be adjusted infinitely during operation. The Decorideaz is available for working widths from 1000 mm to 1500 mm.



# CHOCOLATE COOLING TUNNELS

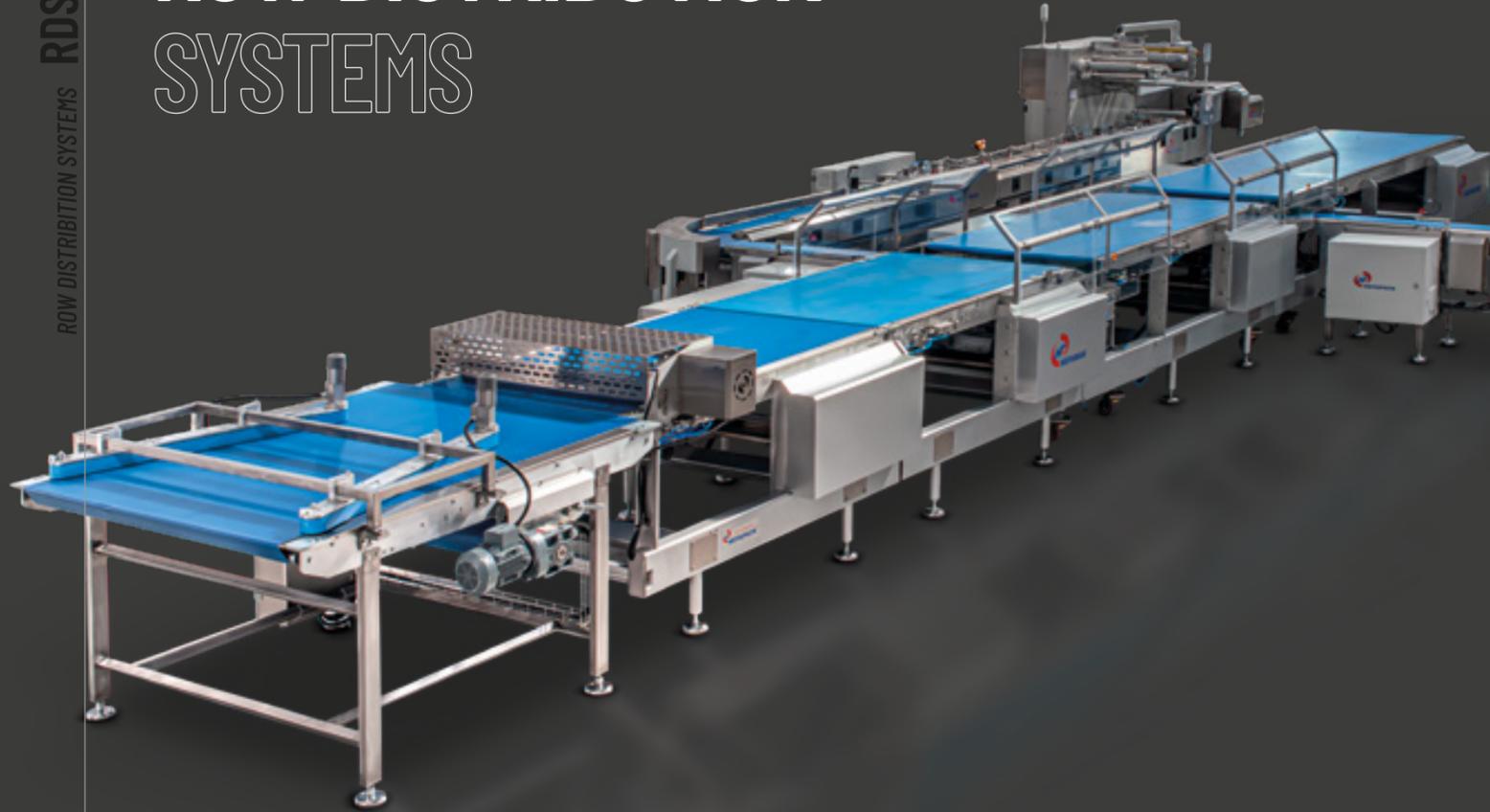
CCT-H model high-performance cooling tunnel operates with more intense convection cooling from above and intensive cold water contact cooling below. The two cooling systems can be regulated independently of one another. This combination enables optimum quality to be achieved in the shortest possible cooling times.

Suitable for cooling chocolate coatings in high-output production lines. CCT model cooling tunnels are suitable both for cooling chocolate coatings and for cooling fillings for biscuits and other individual items. Suitable for small or medium scaled production lines.

- ▶ Available for machine widths from 1000 to 1500 mm.
- ▶ The cooling tunnels are of modular design and consist of individual sections.
- ▶ Energy saving and CFC-free insulation.
- ▶ Stainless steel hoods that can be lifted on either side for maximum accessibility for cleaning.
- ▶ Cooling units contain a built-in semi hermetic air-cooled or water-cooled compressor, a recirculation fan and an evaporator as standard.
- ▶ Cooling compressor housing also designed for easy cleaning.
- ▶ Photo-pneumatic belt-tracking devices on both sides.
- ▶ Temperature control with PID.
- ▶ Fully compliant with European Standards (CE).



# ROW DISTRIBUTION SYSTEMS



The RDS row distribution system is a modular flexible system compatible with a wide range of automatic feeding and packaging solutions.

The products are delivered in aligned transversal rows from processing and/or cooling devices and thereafter divided by a set of even number of packaging lines (legs). Speed up to 90 rows per minute.

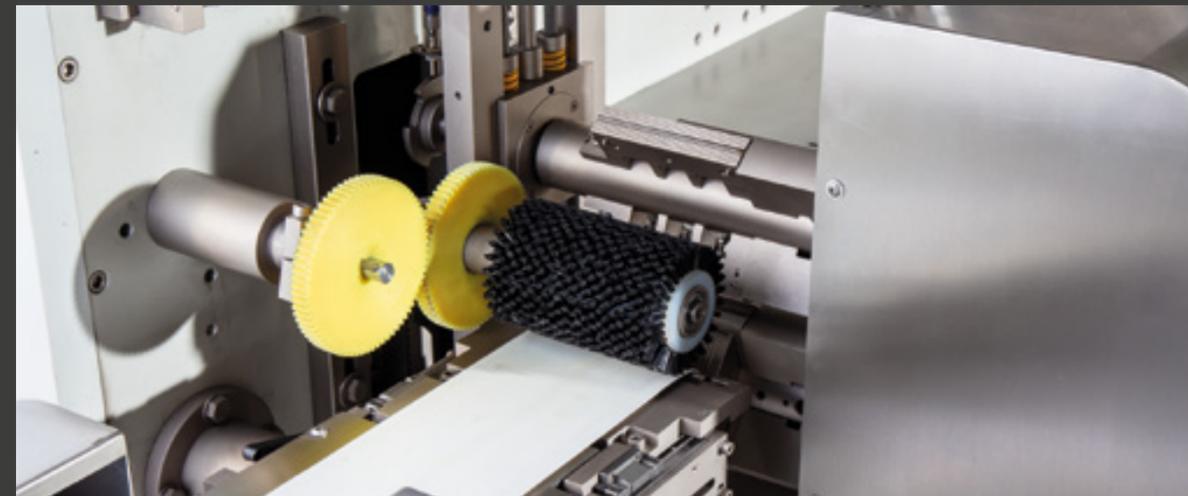


- ▶ AC or fully Servo driven models available.
- ▶ Automatic belt tracking system.
- ▶ Pneumatic belt tensioning system.
- ▶ Scraping device with collecting trays for crumbs or debris.
- ▶ Electro-welded painted structure with floor levelling devices.
- ▶ Transparent polycarbonate safety guard doors.
- ▶ All parts in contact with the products are in stainless steel AISI 304.
- ▶ Easy conveyor belt replacement.
- ▶ Extractable transverse conveyor option for easy cleaning operations.
- ▶ Highly customized solutions for difficult products (cereal bars, small pralines, bite size enrobed wafers.).
- ▶ Different width available to suit customers' needs (from 1000 mm to 1500 mm).
- ▶ Easy integration of different types of buffers.
- ▶ Fully compliant with European Standards (CE).

# HIGH SPEED WRAPPER

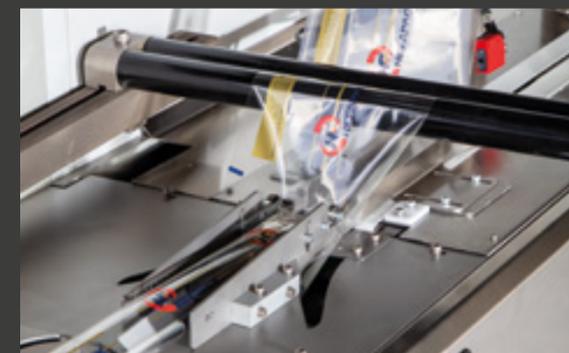


Designed for easy integration to automatic lines, HSW is completely servo-driven and it has been rationalized in order to improve the cost/ performance ratio. Speed up to 800 packs per minute for cold seal operations.



## KEY FEATURES

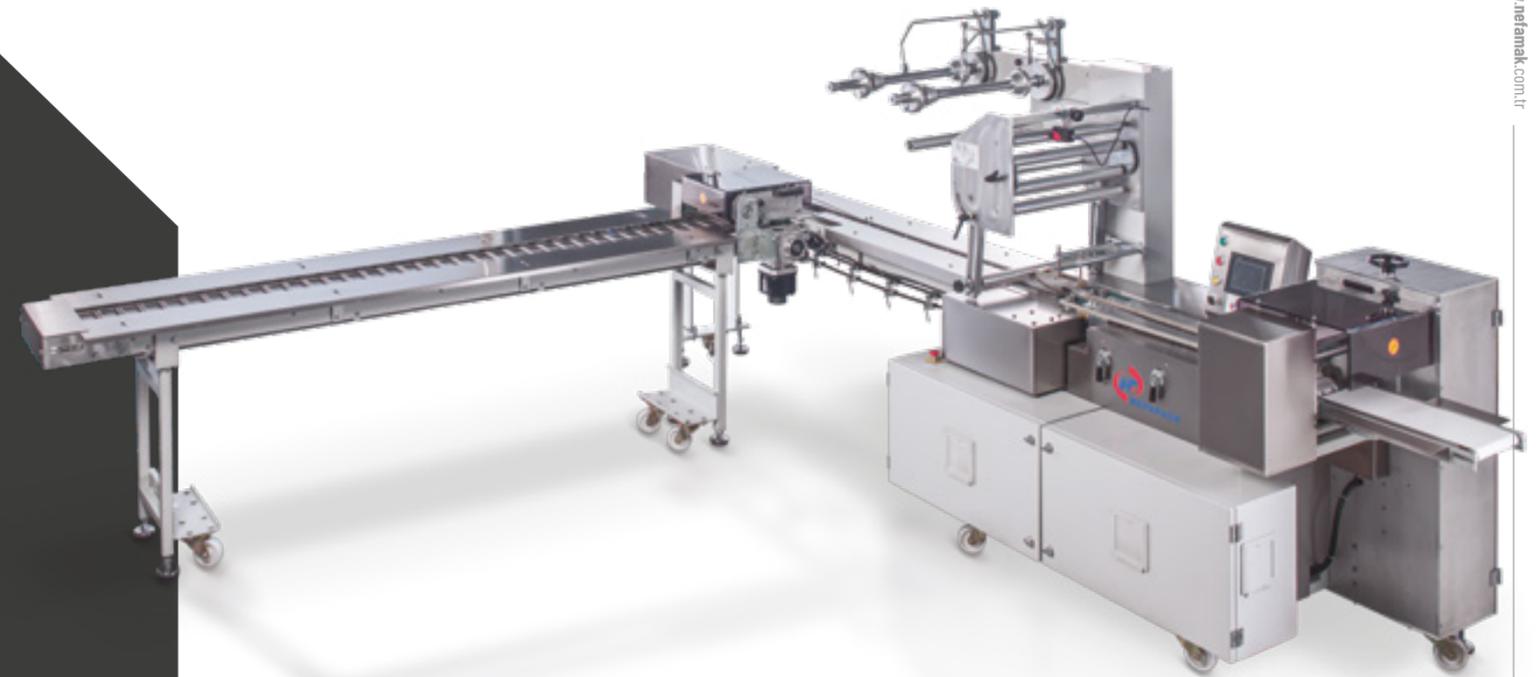
- ▶ Fully servo driven. Electronic multi axis control for maximum precision at high speeds.
- ▶ Strong painted steel frame, cantilevered construction to ease cleaning operation.
- ▶ All parts in contact with the products are in stainless steel AISI 304.
- ▶ 4 pairs of AISI grade steel fin wheels (including the bevel pair to fold the film) optimized to also run small dimension products.
- ▶ Hinged fin wheels assemblies with pneumatic lock.
- ▶ Interchangeable crimpers stops in open position.
- ▶ Straight or Zigzag cutting knives in Cobalt based HSS steel.
- ▶ Digitally controlled cut-off length.
- ▶ Double reel holder with pneumatic chuck provide enhanced film control for tighter packages.
- ▶ Mechanical/Automatic film centering system (web guide) to allow correct unwinding of the reel in axis with the longitudinal sealing unit for high quality packaging process.
- ▶ Automatic film splicing system.
- ▶ Electronically controlled print registration with +/- correction.
- ▶ High Pressure Air Reject for: splicing, empty, short product, uncut packs, not registered packs.
- ▶ Codeprinter bracket and synchronization.
- ▶ Outfeed product overhead belt/brush.
- ▶ HMI Color OMRON 12" Touch Screen Operator's friendly interface on swiveling arm.
- ▶ Suitable to run with all types of automatic distribution systems.
- ▶ Integrated inline feeding system with vacuum unit - to place products in the correct position at the insertion of the wrapper's chain lug - a must - for high capacity productions.
- ▶ Fully compliant with European Standards (CE).



# HORIZONTAL BOX MOTION WRAPPER

Electronic machine designed for modified atmosphere packaging and to pack bigger products when aesthetically good-looking packages are required.

The cantilevered frame and easy access reduce to a minimum the need for maintenance and cleaning interventions. Speed up to 150 packs per minute. **Fully compliant with European Standards (CE).**



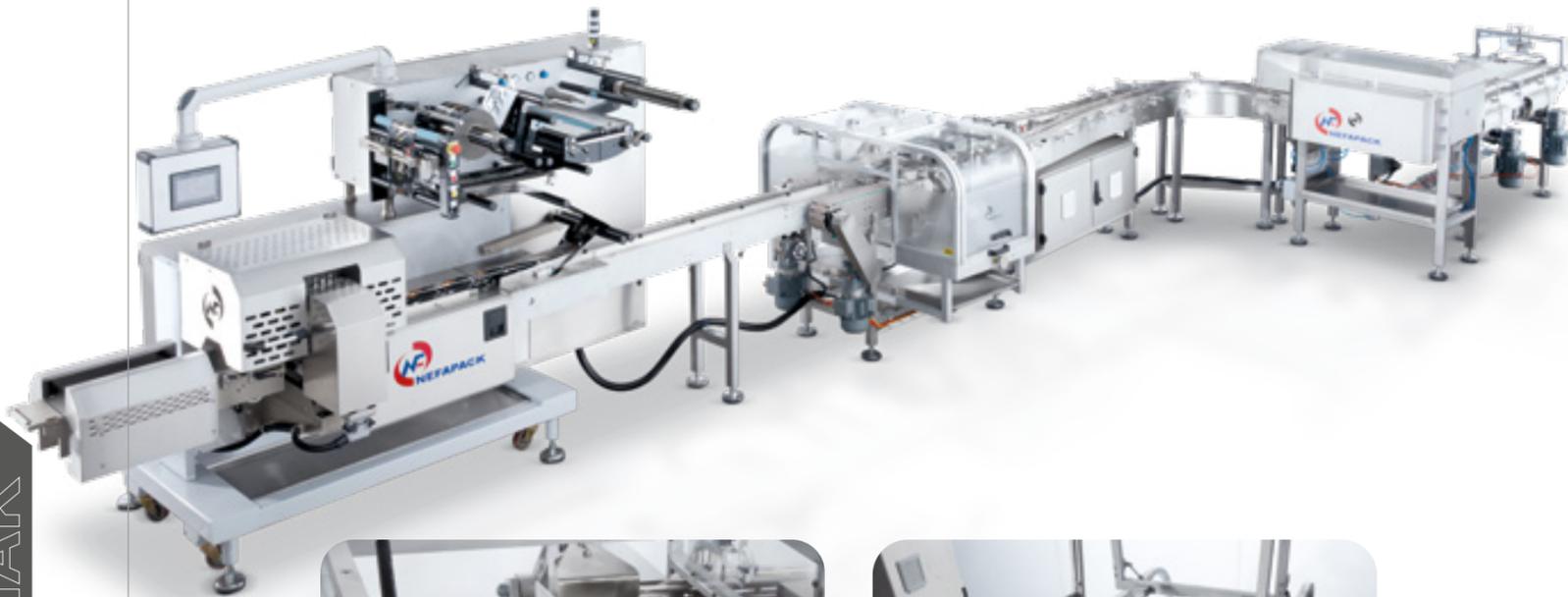
# ON-EDGE PACKAGING MACHINE

Horizontal continuous-motion packaging machine for slug products. Conceived to appropriately meet the growing needs of fast format changes, it associates easy use and maintenance, low-cost operation and high performances. Speed up to 100 packs per minute.

# SERVO FLOW WRAPPER

Electronical wrapping machine designed to meet the growing demand for rapid size change-overs, simple use and extremely easy maintenance. Compact structure for minimum dimensions and maximum loading space.

Suitable for manual, semi automatic and automatic loaders. Speed up to 250 packs per minute for cold seal operations.

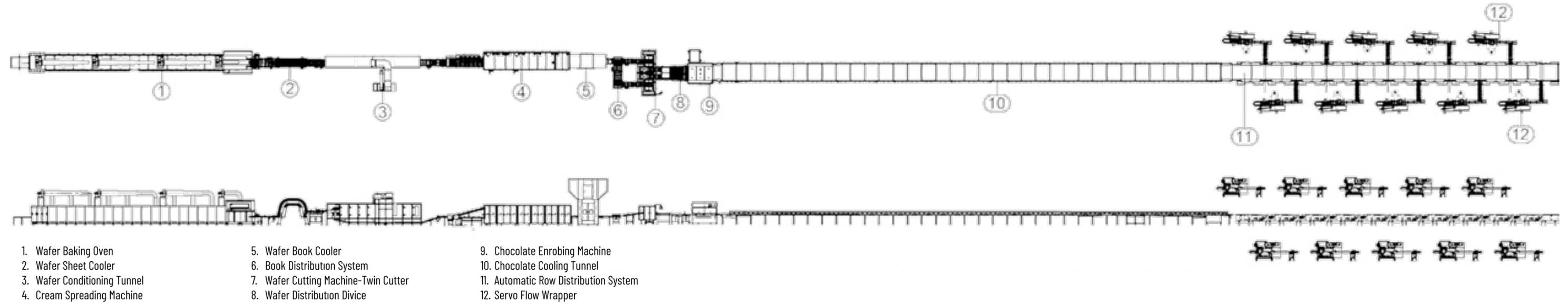


# OVERWRAPPING MACHINE

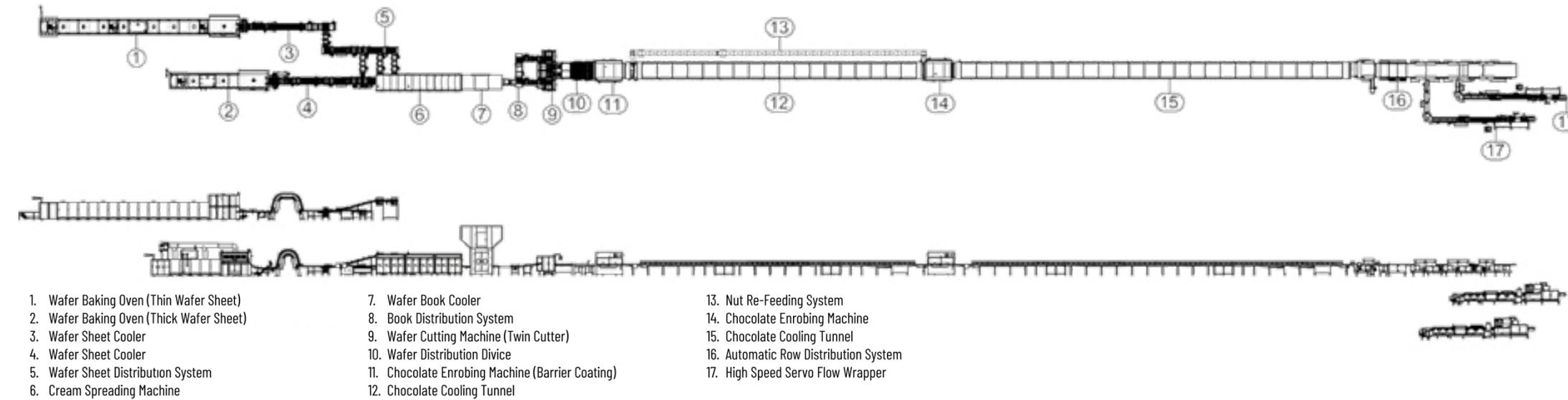
The OWM Series is designed as an entry level fully automatic base seal Overwrapping machine capable of wrapping speeds up to 50 packs per minute. Can be supplied with various feeding systems.

With relay logic control system and mechanical operation combined to offer a low maintenance, highly efficient production machine.

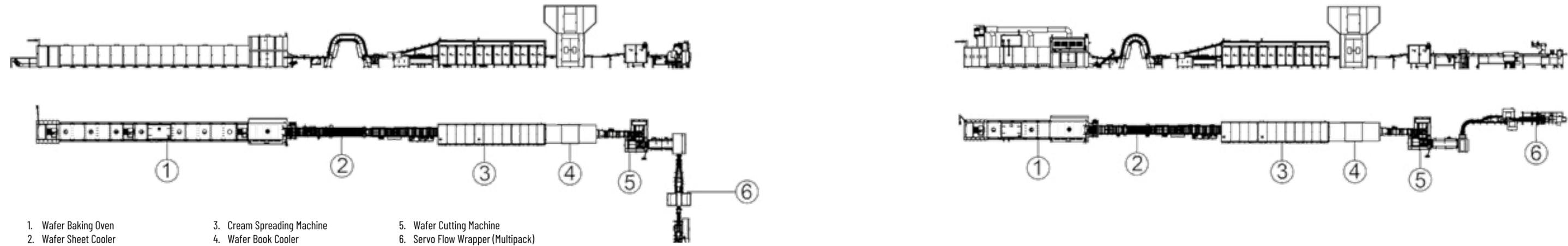
**PLANT FOR CHOCOLATE COATED WAFER PRODUCTION LINE**



**PLANT FOR (TWO DIFFERENT WAFER SHEETS) CHOCOLATE COATED WAFER PRODUCTION LINE**

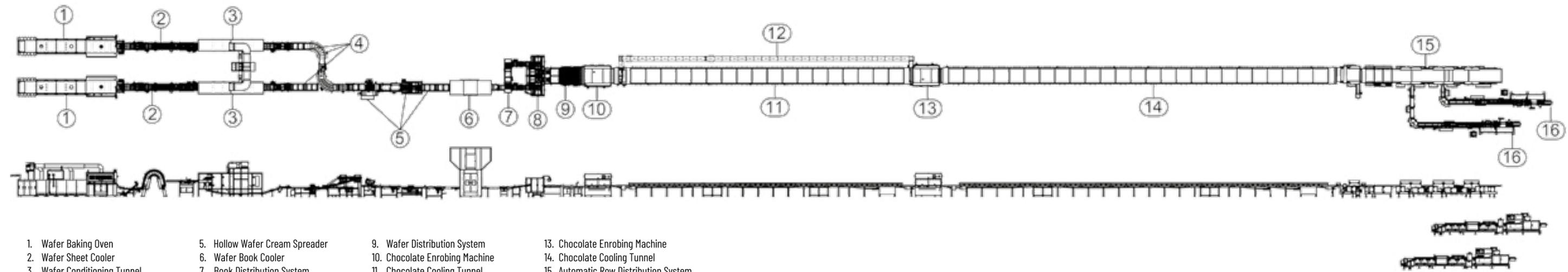


**PLANT FOR NON COATED WAFER PRODUCTION LINE**



- 1. Wafer Baking Oven
- 2. Wafer Sheet Cooler
- 3. Cream Spreading Machine
- 4. Wafer Book Cooler
- 5. Wafer Cutting Machine
- 6. Servo Flow Wrapper (Multipack)

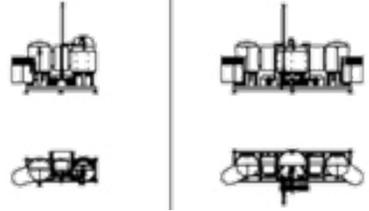
**PLANT FOR HOLLOW WAFER PRODUCTION LINE**



- 1. Wafer Baking Oven
- 2. Wafer Sheet Cooler
- 3. Wafer Conditioning Tunnel
- 4. Wafer Sheet Distribution System
- 5. Hollow Wafer Cream Spreader
- 6. Wafer Book Cooler
- 7. Book Distribution System
- 8. Wafer Cutting Machine Twin Cutter
- 9. Wafer Distribution System
- 10. Chocolate Enrobing Machine
- 11. Chocolate Cooling Tunnel
- 12. Nut Re-Feeding System
- 13. Chocolate Enrobing Machine
- 14. Chocolate Cooling Tunnel
- 15. Automatic Row Distribution System
- 16. High Speed Servo Flow Wrapper

## KITCHEN GROUP

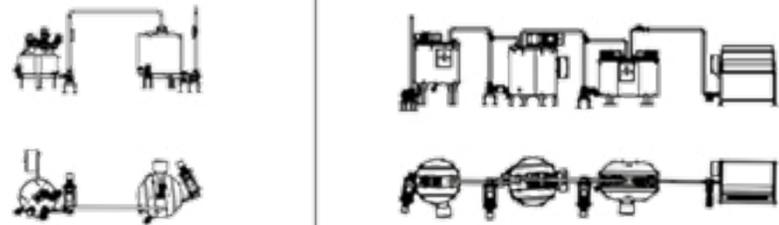
### BATTER MIXING PLANTS



Type 1

Type 2

### CREAM PRODUCTION PLANTS



Type 1

Type 2

### CHOCOLATE PRODUCTION PLANTS



Type 1

Type 2



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