

# **BM50TOP**

## **MULTIFUNCTION SYSTEM**

It is the ideal system for those looking for a single system to obtain a packaged and ready-to-sell food product from the raw material. Built entirely in stainless steel, it is functional and intuitive; its build quality meets the very high standards that have always been imposed in Frigojollinox. It has been developed to offer small and medium-sized enterprises an *all in one* system with which to set up an entire laboratory of agri-food preserves.

The BM50 TOP is equipped with two tanks that work totally autonomously and automatically. The Vacuum tank allows you to cook with almost all possible methods and in particular with the cooking/concentration method in vacuum. This method is ideal for the production of high quality jams and marmalades as well as sauces, chutneys, mustards, ready condiments and much more. The product, in fact, cooks at 50°C and in much shorter times, thus avoiding losing the organoleptic characteristics, the flavor, the aroma and the color of the fruit used without having to add gelling agents or sugars. The Stery tank allows you to sterilize food products of any type as long as they are packaged in suitable food containers. It also allows you to steam and cook in water or other liquid up to 135°C.

## **WHAT YOU CAN DO**

1. cook/concentrate in vacuum at 50°C
2. mix in vacuum
3. cook/concentrate in atmospheric pressure up to 140°C
4. fry
5. braise
6. candy
7. cook/scald in water or other liquid at atmospheric pressure or under pressure up to 135°C
8. steaming at atmospheric pressure or under pressure up to 135°C
9. sterilize up to 135°C with calculation of the algorithm F0, F100 and F71
10. sterilize up to 135°C with manual setting of time and temperature parameters.

Ideal for production of: jams, marmalades, syrups, jellies, fruit juices, sauces, pates, vegetables pickled in oil and pickled, sauteed vegetables and meat, legumes and soups, fish, condiments and whatever needs these processes.

## **SYSTEMS**

- > Automatic vacuum concentration system at low temperature 50-60°C (vacuum pressure less than -901mbar).
- > Automatic cooking system with variable temperature up to 140°C.

- > Automatic rotary candying system with dedicated stainless-steel basket with shelves (optional on request).
- > Automatic cooking system in water or other liquid under pressure or at atmospheric pressure up to 135°C.
- > Automatic steaming system up to 135°C.
- > Automatic saturated steam or water sterilization system (HACCP standards) up to 135°C.
- > Automatic system for pressure compensation so as to avoid accidental opening of the containers during the sterilization phase and allow the use of any material resistant to high temperatures.
- > Automatic mixing system with variable speed scraping mixer.
- > Indirect heating system, with gas burner or electric heaters, through a cavity with thermal liquid in order to distribute heat evenly on the bottom and walls of the tank. Equipped with automatic management and high energy efficiency (on VACUUM tank) .
- > Direct heating system through gas burner or electric heaters with automatic management and high energy efficiency (on STERY tank).
- > Automatic system for filling water on both tanks.
- > Automatic system for cooling sterilized cans through high performance flooding.
- > Automatic electronic valve system to ensure safe operation.
- > Loading and unloading system through reinforced stainless steel basket.
- > Automatic control system with 10" resistive color touch screen graphic display, SIEMENS® PLC and FJ4.0 management software, setting, storage and real-time display of all the parameters relating to the processes, real-time calculation and display of the F0, F100 and F71 values, creation of a time-temperature graph, storage of all sterilization cycles through an integrated data logger, USB interface for downloading graphics and data, ethernet network interface and wi-fi access for remote control via smartphone tablet or PC and remote assistance.

## **THE ADVANTAGES OF THE BM50TOP:**

### **VACUUM COOK SYSTEM**

*The vacuum cooking and concentration system is ideal for the production of the highest quality products. With this system, the product placed inside the cooking tank boils at 50°C instead of 100°C, in this way the organoleptic characteristics, flavor, scent and color of the raw material used are not damaged. It is particularly suitable for the production of the best jams, mustards, concentrates, chutneys, sauces and creams that at the end of the process will retain the bright color, the aroma and the intense flavor of the fresh fruit and vegetables used.*

## STERY & COOK DUAL SYSTEM

*In the first tank, the heating system with a cavity with technical liquid distributes the heat uniformly allowing both cooking and sterilization of any type of food product, in the second tank, direct heating allows the sterilization of any food product as well as cooking in water and with steam. The two tanks, although controlled by the same touch screen interface, are totally independent and can be used simultaneously ensuring a greater number of daily processes and greater efficiency in production.*

## NONSTICK SYSTEM

*The stainless steel tank with non-stick finish and the variable speed rotating and scraping blade prevent the product from sticking to the bottom or wall of the tank during the cooking phase.*

## TOUCH SCREEN E DATALOGGER

*The touch screen control panel, with dedicated software, is intuitive and functional, allows you to simultaneously control both tanks, to modify any type of parameter and to carry out the processes completely automatically by following the algorithms F0 – F100 – F71 or by manually entering time and temperature parameters. The integrated DATALOGGER stores all the data relating to the process, makes them downloadable through a USB interface and creates a time/temperature graph relating to each individual process.*

## ETHERNET SOCKET

*The ability to connect to the internet through the ethernet socket allows you to always have new updates of the system management software available.*

## SMART CONTROL

*The remote control via smartphone, tablet or PC allows to carry out work even without the presence of the operator staff inside the laboratory. In fact, we can interact with the touch screen interface of the system through any device that has an internet connection as if we were in direct contact with the system. This function also allows you to keep under control everything the system is doing at any time.*

## DOUBLE PROBE AT THE HEART OF THE PRODUCT

*The double probe for detecting product temperatures, in addition to making the process safer, ensures the continuous running of the processes even in the event of breakage or malfunction of one of the two probes.*

## AUTOMATIC VALVES

*All water, steam and air loading and unloading valves are fully automatic and equipped with safety systems. In this way, the process times are significantly speeded up, allowing to carry out machining operations even in the absence of the operating personnel.*

## CONDENSATION SYSTEM

*During the concentration in vacuum the extracted steam must be condensed, the plate exchanger system specifically designed in the Frigojollinox R&D department allows this process to be carried out in a clearly more efficient and effective way than the normal tube bundle condensing systems installed on traditional concentrators in vacuum.*

## FDA CERTIFICATION

*In a context in which companies aim to sell their products on an international market, Frigojollinox s.r.l. guarantees the customer the possibility of obtaining the FDA certification, necessary for the sale of food products in the United States. In fact, our systems are designed and built specifically to comply with the strict standards in force in both the European and international markets.*

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|--|---|
| <i>Plant type</i>  | Multifunction double tank system  |
| <i>Construction</i>  | Stainless steel AISI 304/316  |
| <i>VACUUM tank capacity</i>                                    | 54 lt   |
| <i>STERY tank capacity</i>                                     | 70 lt   |
| <i>Production capacity of 212ml cans</i>                       | 115 pcs/cycle   |
| <i>Dimensions</i>  | 206*85*125  |
| <i>VACUUM tank heating system</i>                              | Integrated with gas burner or electric resistances and cavity with thermal liquid |
| <i>STERY tank heating system</i>                               | Integrated with gas burner or electric heaters                                    |
| <i>Heating systems power supply</i>                            | LPG / CNG / Electric  |
| <i>VACUUM tank burner power</i>                                | 13.000 Kcal/h   |
| <i>STERY tank burner power</i>                                 | 13.000 Kcal/h   |
| <i>Max consumption with LPG heating system</i>                 | 2,2 l/h + 2,2 l/h   |
| <i>Max consumption with natural gas heating system</i>         | 1,3 mc/h + 1,3 mc/h   |
| <i>Max voltage and absorption (gas heating systems)</i>        | 230V single phase 50Hz 500W   |
| <i>Max voltage and absorption with electric heating system</i> | 400V three phase 50Hz<br>6,25 kW + 6,25 kW  |
| <i>Max temperature in VACUUM chamber</i>                       | 140°C   |
| <i>Max temperature in STERY chamber</i>                        | 135°C   |
| <i>Control and automation system</i>                           | PLC Siemens® with 10" Touch screen  |
| <i>Integrated DATALOGGER</i>                                   | Yes   |
| <i>USB interface</i>   | Yes   |
| <i>Ethernet interface</i>                                      | Yes   |
| <i>Double probe at the heart of the product</i>                | Yes   |
| <i>PED certification</i>                                       | Yes   |
| <i>CE certification</i>  | Yes   |
| <i>CE use and maintenance manual</i>                           | Yes   |
| <i>Possibility to obtain FDA certification</i>                 | Yes   |
| <i>Industry 4.0 compatible</i>                                 | Yes   |