



Jetino
3100

Item no.:

Manual

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1. Important basic information

1.1 Scope of delivery

The Jetino jet consists as standard of

- from the machine
- as accessories for hoses and guns
- the operating instructions with circuit diagram
- training for new customers

1.2 Responsibilities

1.2.1 Responsibilities of the manufacturer

Frisch-Spritzmatic GmbH hands over a machine to its customers that has been built in accordance with the applicable regulations and standards.

(EC Declaration of Conformity)

1.2.2 Responsibilities of the operator

The customer is responsible for the proper operation of the machine. This includes the exclusive deployment of trained personnel, the care and regular maintenance of the machine, as well as compliance with the relevant regulations (e.g. pressure equipment regulations).

1.3 Legal information

The operating instructions may not be reproduced, distributed, modified, transmitted, translated into another language or used in any other way, either electronically or mechanically, in whole or in part, without the express written authorisation of Frisch-Spritzmatic GmbH.

Frisch-Spritzmatic GmbH is not liable for damage resulting from the fact that the operating instructions were not or only partially observed.

We would like to point out that

- the operating instructions are part of the machine,
- the operating instructions must be kept and maintained (i.e. updated) for the entire service life of the machine,
- the operating instructions must be passed on to any subsequent owner.

1.4 Documentation

1.4.1 Content and structure

The operating instructions describe all activities required for the installation, commissioning, use and maintenance of the machine. The operating instructions do not replace the training of suitable employees.

The operating instructions are primarily intended for the persons in a company who are responsible for the machine and who are responsible for organising and training the employees working with this machine.

The machine must not be put into operation without prior training or instruction. These operating instructions must be kept accessible to employees at all times.

1.4.2 Conventions

Representation:

All function switches are shown in angle brackets > <

All descriptive designations are shown in straight type. Special notes are shown in italics.

1.5 Service address

Frisch-Spritzmatic GmbH	Telephone: +49 (0) 73 45 - 20095 - 0
Ramminger Street 4	Fax: +49 (0) 73 45 - 20095 - 20
D-89129 Öllingen	eMail: info@frisch-spritzmatic.de

**Emergency service
telephone:**

0172 - 853 75 04

(from abroad with international dialling code 0049)

2. Machine description

The Jetino-Jet is a high-quality manual spray machine that is used for finishing fine baked goods. The media is heated and can then be applied with the respective spray guns.

The Jetino-Jet is equipped with two material containers as standard. However, additional optional containers can be connected quickly and easily using the quick connectors (couplings).

The material is heated using continuous flow heaters, which ensure economical and, above all, gentle handling of the material to be processed. Only the material that is actually being processed is drawn. This means that the remaining material in the containers remains untouched in its original quality.

The Jetino-Jet is designed for a long service life. All essential parts are made of stainless steel and components that have been tried and tested over many years are installed. Please pay attention to a few care principles, which we have compiled separately. The stainless steel housing, material tanks, material hoses and guns are easy to clean and fulfil all hygiene requirements.

2.1 Future security

The Jet series was developed with the future in mind. Thanks to its longevity, it is not only the basis of professional finishing technology today, but will also form the basis of your expansion in the future.

Do you have any questions? We will be happy
to help you. Give us a call! Phone +49 (0) 73
45 - 75 04

We wish you successful work with the Jetino.

3. Security

3.1 Convention for safety instructions

3.1.1 Labelling on the machine



EU mark of conformity
Conforming to European standardisation



Warning of dangerous electrical voltage Danger:
electricity

3.1.2 Meaning of signal words

The signal words used in the manual and their meanings are defined below. Make sure you understand their meaning before reading this manual. Do not work on this machine until you have read this manual.



Indicates a fundamentally dangerous situation that must be avoided, otherwise it will lead to death or serious injury.



Indicates a potentially dangerous situation that must be avoided, otherwise it could lead to death or serious injury.



Indicates a potentially dangerous situation that must be avoided as it may otherwise lead to moderate or minor injuries.



Indicates a potentially dangerous situation that must be avoided as it may otherwise lead to material damage.

3.1.3 Meaning of safety symbols



"Caution" indicates points that you should observe. Be sure to read the relevant points in the operating manual before using the machine.

3.2 Behaviour in an emergency

In an emergency, switch off the Jetino at the >MAIN SWITCH< of the machine. Set the compressed air switches to "OFF". If necessary, vent the material hopper manually at the safety valve on the cover of the material hopper.

Immediately call in authorised personnel who can determine and rectify the cause of the emergency. Only then may the >main switch< be operated again.



Compressed air is used to feed the material from the containers to the guns.

Possible emergencies:



- The safety valve opens in the event of overpressure in the boiler.
 - Main switch to >OFF< . Compressed air to >OFF< .
 - Maintenance and care (see manual).

- A hose bursts due to material fatigue.
 - Main switch to >OFF< . Compressed air to >OFF< .
 - Maintenance and care (see manual)

3.3 Intended use of the machine

3.3.1 Field of application

The Jetino is used for refining pastries. Only food-technically approved media may be used for this purpose.

3.3.2 Requirements for personnel



The machine may only be operated by personnel trained and specially instructed by Frisch-Spritzmatic GmbH. This personnel may, in accordance with the training provided by Frisch-Spritzmatic GmbH, pass this instruction on to other personnel.

Only personnel trained in this way are authorised to operate this machine in accordance with its intended use. The basic principles of the manual must be observed.

The description of the protective devices and displays / error messages are shown separately in the chapters on safety and control.

Work on electrical parts of the machine may only be carried out by a qualified electrician.

3.3.3 Safety-relevant ambient conditions

The Jetino must be set up in such a way that electrical cables and pressure / material lines cannot be affected by external influences.

3.3.4 Safety-relevant information for certain phases of life

Assembly,	installationChapter 7
	ListChapter 7
	OperationChapter 9
	DismantlingChapter 15
	DisposalChapter 15

3.4 Possible misuse



The Jetino hand spray machine may only be used for finishing pastries. The media used must be matched to this and processed in accordance with the manual (chapter "Operation").

Make sure that no sealing film gets into the material containers. Do not process fresh or whole egg!

If the material hose is not properly connected to the bayonet catch, it may come off. In this case, the opening must not be closed reflexively as hot material may escape (risk of burns!).

3.5 Observe the operating instructions

This manual / operating instructions are an integral part of the machine. The employee must familiarise himself with the manual before using the machine. This means that

that the operating instructions must be followed in full

that the operating instructions must be kept in the immediate vicinity of the machine and must be available to all machine personnel at all times

that the operating instructions must be passed on to the next owner of the machine.

3.6 Safety labelling on the machine

All safety-related information on the machine in the form of stickers, signs or other notices must be observed. These must not be removed or pasted over.

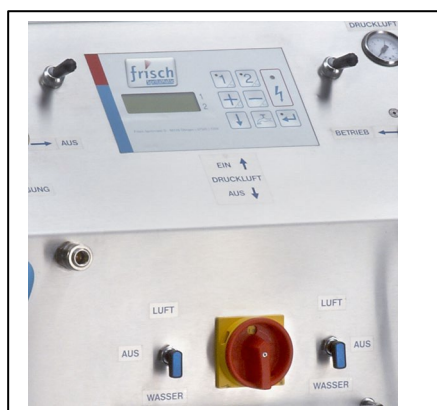


Warning of dangerous electrical voltage Danger:
electricity

3.7 Residual hazards and protective measures



- Before opening pressurised parts (e.g. hoses, heat exchanger), the machine must be depressurised (disconnected from the air supply)
- Before working on the electrical system, the machine must be de-energised. (Disconnect from the power supply.)



Compressed air switch >OFF<

Switch off the machine

- Hoses and connections carrying material may be hot. Allow to cool down.
- Never touch the heat exchanger without first allowing the machine to cool down.

4. Technical data

Jetino - Hand sprayer

Dimensions	Jetino
Width	720 mm
Depth	600 mm
Height	1220 mm
Weight	105 kg
Connected loads	
Operating voltage	400 V
Protection	16 A
Apricot heating	3 KW
Heating fondant	3 KW
Compressed air	8 bar
Volume	350 litres/min.
Material container	approx. 8 litres

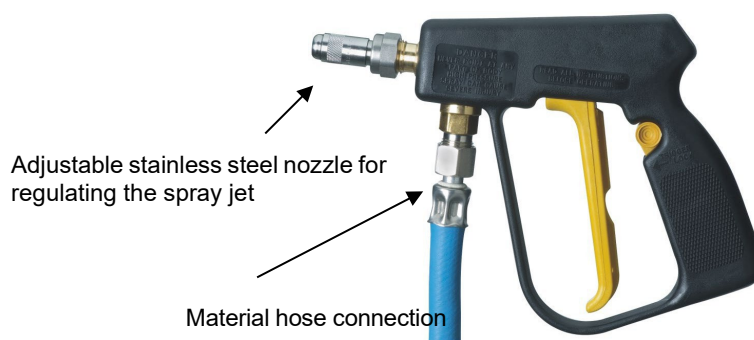
5. Structure and function

5.1 Structure

The Jetino hand spray machine is a high-quality finishing device that can process a variety of materials.

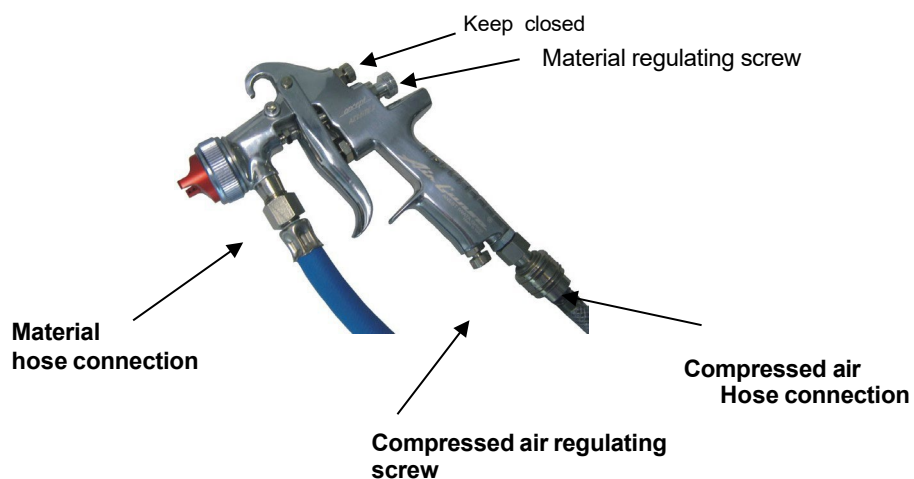
The material is heated using continuous-flow heaters, which ensure economical and, above all, gentle handling of the material to be processed.

The material is applied with a spray gun.



Apricot gun NP

Fondant gun FP



5.1.1 Main components Jetino



A1 > Compressed air main switch - Apricot	B1 > Main air pressure switch Fondant
A2 > Pressure gauge Apricot	B2 > Pressure gauge Fondant
A3 > Apricot pressure regulator (inside)	B3 > Fondant pressure reducer (inside)
A4 > Operating position selector lever	B4 > Operating position selector lever
A5 > Water flush	B5 > Water flush

5.1.2 Operator workstations

The Jetino is designed for two workstations.
Apricotising pastries or spraying cake icing and spraying or filing fondant.

5.2 Functional description

Depending on the equipment, the Jetino heats apricot jam, cake icing and/or fondant. The media can be applied to the pastries using special spray guns. The hand spray machine is operated with compressed air.

5.3 Process engineering description

Once the material tanks have been properly filled and connected, the machine is switched on and compressed air is supplied. Once the set temperature has been reached, the machine is ready for operation.

6. Delivery, internal transport, unpacking

6.1 Security

The Jetino is designed so that it can be transported, handled and stored safely at all times.

6.2 Delivery

On delivery, please ensure that the machine has not been damaged during transport. The machine will be delivered by Frisch employees or a forwarding agent. Installation is carried out by Frisch-Spritzmatic GmbH or by personnel instructed by us.

6.3 Internal transport



Risk of the machine rolling away. Only move the machine on level, stable ground. Always apply the parking brakes on the castors before you park the machine.

6.4 Unpacking

The Jetino is delivered wrapped in stretch film. This must be completely removed after installation.

7. Assembly and installation, initial commissioning

7.1 Security



Ensure that the Jetino stands securely and on a level surface. The brake castors must be locked.

7.2 Assembly and installation



Before installation, ensure that the power switch is set to "0" and the compressed air toggle lever is set to "Off".

The material hoses of the guns must be connected to the appliance in the correct orientation. Ensure that the bayonet connections are secure. A pressurised air hose is also connected on the fondant side using a quick-release coupling.

Only then is the appliance connected to the power and compressed air connections. The Jetino is only connected to the water connection for cleaning.

7.3 Initial commissioning



Initial commissioning may only be carried out by Frisch-Spritzmatic GmbH employees or appropriately trained personnel. The safety instructions must be observed.

7.3.1 Technical requirements and preparations

The Jetino hand spray machine is designed for professional use for processing materials to be heated (e.g. apricot icing, fondant, cake icing).

The Jetino is set by default to the usual values, from which there is no reason to deviate.

Apricot: Pressure regulator for gun and material > 3-4 bar, temperature:
95° C. Fondant: Pressure regulator for gun and material > 5-6 bar,
temperature: 45° C



A 400 V three-phase connection (16A) and compressed air (oil-free) at 8 bar must be available. The Jetino requires an air volume of 350 litres / minute.

7.4 Setting up / preparing the Jetino hand sprayer



Danger from the machine rolling away.

⚠ VORSICHT

The manual sprayer is equipped with smooth-running castors for easy manoeuvrability. The machine may only be positioned and moved on a level, stable surface. Always apply the parking brakes on the castors before you park the machine.



- Connect the hoses correctly. (make sure the connections are secure)
- Fill material into the machine containers.
- Connect the machine to the power supply (400 V), observe the fuse protection!
- Connect the machine to compressed air (compressed air line or compressor (oil-free!)).

Heating up the material:

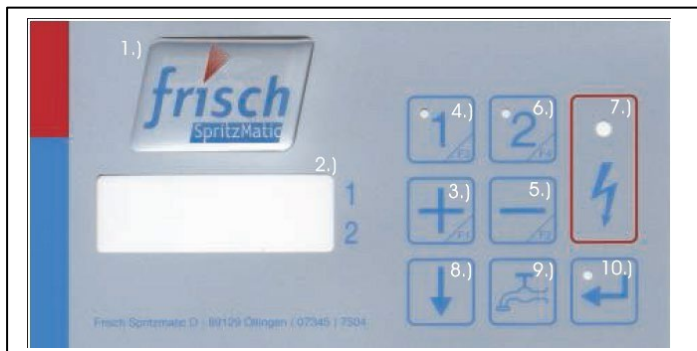
- Set the temperature (see control unit and control panel)
- Preheat the apricot oven to 95° C for 10 minutes
- Preheat the cake glaze to 80° C for 10 minutes
- Preheat the fondant to 45° C for 10 minutes

⚠ WARNING



Never open the control box or parts of the machine's electrical equipment. Always inform a qualified electrician if you are concerned about faults in the machine's electrical equipment.

8. Control system and control panel



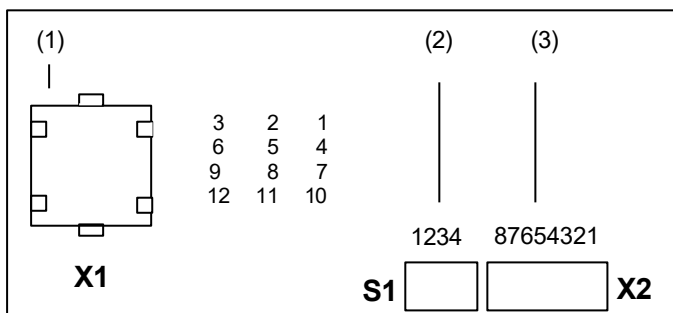
- | | |
|------------------------------------|------------------------------------|
| 1.) Company logo | 6.) Heating 2 / F4 function button |
| 2.) LCD display | 7.) Alarm - Display |
| 3.) Plus button / F1 function key | 8.) Select button |
| 4.) Heating 1 / F3 function button | 9.) Cleaning |
| 5.) Minus button / F2 function key | 10.) Return button |

The Spritzmatic control unit is housed in a closed plastic housing and designed so that it can be installed behind a metal panel. A plastic film is applied to this panel for covering and operation.

The control unit contains an alphanumeric display, seven buttons and several LED indicators for user guidance. The electronics are designed to control the heating. The integrated fault monitoring system is able to recognise various malfunctions. These are then shown on the display in the form of error messages. To return to normal operating mode, such error messages must be acknowledged with the >RETURN< button.

After switching on the appliance, a start message appears on the display for approx. 1 second, followed by the normal operating display with the setpoint settings. The operating modes and functions of the system are described below.

Rear of control unit



- | | |
|---|-----------------------------|
| (1) Mains plug X1 AMP Mate-N-LOK no. 926681-3 | |
| Mating pieceAMP | no. 350735-1/6-5 |
| (2) DIP switch S1 | |
| (3) Plug | X2AMP No. 0-280612-1 |
| | CounterpartAMP no. 280593-0 |

Start registration

```

*****
Fresh
Spritzmatic
*****
  
```

Normal operating display

```

APRICOTUR
E:                3 Bar
Target:
FONDANT:          6 Bar
Target:
  
```

Operating modes and functions

The system supports the control of two heating circuits, one heating circuit for >APRIKOTUR< and one heating circuit for >FONDANT<. Both circuits can be operated and adjusted independently of each other.

Target temperature setting

The setpoint temperature of the heaters can be preselected between 20°C and 120°C. The selector button is used to switch between the setpoints for heaters 1 and 2. The current display is indicated by an arrow. The PLUS and MINUS buttons can be used to change the values in 1° increments within the specified range. If a change has been made, this is documented by a flashing setpoint display and a flashing red LED in the RETURN button. The new value is only accepted after confirmation with the RETURN button. If this is not confirmed, the old value is retained.

Switching the heating controls on and off

The heaters are switched on and off using buttons 1 and 2. When the heating control is switched on, the ACTUAL temperature value is shown on the display and regulated to the set SET value within the permissible tolerances. The active status of the control circuits is documented by a green LED in the corresponding button.

Switching the cleaning function on and off

A valve is provided to control the cleaning of the system's hoses and pipes. The cleaning system is activated using the >CLEANING< button. The cleaning function is locked when one of the two heaters is switched on. The message appears on the display:

```

WATER VALVE

ACTIVE CLEANING
SYSTEM
  
```

Overheating protection

To protect the heaters, two safety thermostats must be fitted in the system's power circuit and connected in accordance with the wiring diagrams. If a heating circuit overheats, the circuit breakers are disconnected. The control unit recognises this function and documents this fault both in the display and by switching on the red ALARM LED.

The message appears on the display:

HEATING SYSTEM
FAULT
OVERHEATING IN
BOILER 1

HEATING SYSTEM
MALFUNCTION
OVERHEATING IN
BOILER 2

Temperature sensor monitoring

The temperature sensors in the boilers are permanently monitored for short circuits and wire breaks. If a fault occurs in this respect, all units are switched off and the following error message appears on the display:

HEATING SYSTEM
FAULT SENSOR
FAULT IN BOILER 1

HEATING SYSTEM
FAULT FAULTY
SENSOR IN BOILER
2

Special functions

The control unit contains a number of special functions that are not required for everyday use of the system.

To prevent these functions from being executed unintentionally, they can only be called up with an encrypted key combination.

If the >RETURN< >PLUS< and >MINUS< buttons are pressed together when the appliance is switched on, the menu with the special functions appears on the display:

<SPECIAL FUNCTIONS>
F1: APRIC. F2: MEMSTD
F3: CALIB1 F4: CALIB2

Cancel -> Return

The PLUS, MINUS, HEAT 1 and HEAT 2 buttons are assigned the dual functions F1 - F4.

F1 APRIC or GUSS

Press the F1 button to switch between the normal version of the control unit and the special version >CAST/GEL<. The setting is saved in the control unit's non-volatile memory.

F2 MEMSTD Programming default values

The control unit contains a non-volatile memory in which various parameters required for the function are stored. Pressing the F2 button resets these parameters.

< DEFAULT VALUE >

THE DEFAULT VALUES
ARE ADOPTED

F3:CALIB1 - Calibrate measuring amplifier heating circuit 1.

The temperature of the control unit is measured using a PT 100 sensor connected to an integrated measuring amplifier. The electronics must be calibrated for optimum temperature measurement. When the F3 button is pressed, the display shows

<CALIBRATE TEMP:1>

Measured value:
Cancel -> Return

The measuring circuit can now be calibrated with the aid of two calibration standards. (Attention: This is carried out at the factory)

F4:CALIB2 - Calibrate measuring amplifier heating circuit 2

The temperature of the control unit is measured using a PT 100 sensor connected to an integrated measuring amplifier. The electronics must be calibrated for optimum temperature measurement. When the F3 button is pressed, the display shows :

<TEMP:2 CALIBRATE>

Measured value:
Cancel -> Return

The measuring circuit can now be calibrated with the aid of two calibration standards. (Attention: This is carried out at the factory)

System configuration

There is a multi-pole dip switch on the back of the housing that can be used to set various configurations. When the control unit is switched on, the status of the switches is recognised once and saved. The configuration can only be changed when the device is switched off.

The individual switches have the following meaning:

Switch 1:

Switch 1 in the >ON< position means that heating control circuit 1 is enabled. If the switch is in the >OFF< position, heating 1 cannot be activated. The first two lines in the display then remain blank.

Switch 2:

Switch 2 in the >ON< position means that heating control circuit 2 is enabled. If the switch is in the >OFF< position, heating 2 cannot be activated. The first two lines in the display then remain blank.

Attention: If both switches are in the >OFF< position, an error message appears.

Switch 3:

Switch 3 can be used to switch between German and English. When the switch is in the >OFF< position, the text on the display appears in German; when the switch is in the >EIN< accordingly in English.

Switch 4:

Switch 4 in the >ON< position means that the cleaning system can be activated. If the switch is in the >OFF< position, the CLEANING button is disabled.

Pin assignment

Plug connector X1

1,4,7, 10 Mains connection 230V or 2 x 115V
 Depending on the operating voltage, jumpers are required according to the circuit diagram 9, 12 Protective conductor - It is sufficient if one pole is connected to the protective conductor

2 Relay heating 1 (L1)

5 Relay output cleaning valve (L1)

8 Relay output heating 2 (L1)

11 Relay output (currently not assigned)

3 Safety thermostat 1

The safety thermostat should be wired so that if the heating circuit overheats, both the power contactor is switched off and phase L1 is connected to this terminal.

Plug connector X2

1,2, 3PT 100 - Sensor for 1st heating circuit (1:Red, 2:Red, 3:White)

4,5, 6PT 100 - Sensor for 2nd heating circuit (1:Red, 2:Red, 3:White)

7,8 Protective conductor connection possible

Texts in English:

**Fresh
Spritzmatic**

APRICOTUR
E: 3 Bar
Set:
FONDANT: 6 Bar
Set:

<SPECIAL FUNCTIONS>
F1: TEST :MEMSTD
F3: CALIB1 F4: CALIB2

Exit -> Return

<DEFAULT VALUES>

DEFAULT VALUES
WILL RESET

<CALIBRATE TEMP. 1>

VALUE:
Exit -> Return

<CALIBRATE TEMP. 2>

VALUE:
Exit -> Return

Texts in English:

WATERVALVE
CLEANING SYSTEM
IS ACTIVE

ERROR
HEATING SYSTEM
OVERHEAT
BOILER 1

ERROR
HEATING SYSTEM
OVERHEAT
BOILER 2

ERROR
HEATING SYSTEM
SENSOR
BOILER 1

ERROR
HEATING SYSTEM
SENSOR
BOILER 2

9. Operation

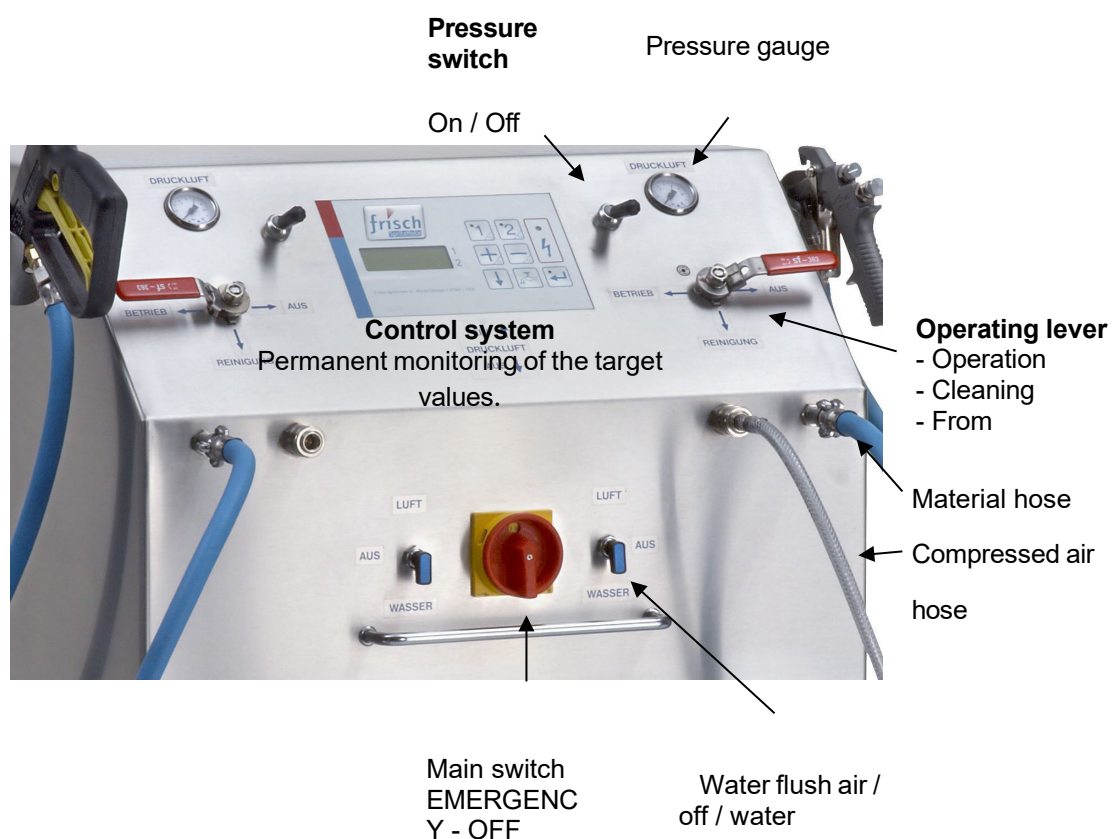
9.1 Security

Safety labelling on the machine



Warning of dangerous electrical voltage. Sticker on the electrical box inside the machine door

9.2 Control elements



9.3 For displays see chapter "Control"

9.4 Operating modes

The Jetino can be operated with one material boiler or with both at the same time. To do this, press "Heating1", "Heating2" or both options in the control unit.

9.5 Materials

You do not need any special materials or equipment to operate the Jetino.

9.6 Commissioning

1. Connect the three-phase cable (400 V) to the power cable correctly.
2. Connect the appliance to the compressed air line or compressor (oil-free).
3. Connect the material hoses and material guns. For the fondant gun, also connect the compressed air hose.

The machine is set to the usual values at the factory. This should not be deviated from without good reason.

Apricot: Pressure regulator for gun and material (A2, A3) > 3-4 bar.
Temperature: 95° C.

Fondant: Pressure regulator for gun and material (B2, B3) > 5-6 bar.
Temperature: 45° C.

9.6.1 Recommissioning after an emergency stop



If an emergency stop (main switch / compressed air switch) has been triggered due to a machine-related condition, it must be ensured that the cause has been eliminated.

9.6.2 Recommissioning after a longer standstill



All safety-relevant components (safety valves, brackets, etc.) must be checked to ensure that they are in proper condition, i.e. fully functional.

9.7 Set-up, material feeding

To fill the material, remove the quick-release fastener. To do this, fold down the locking clip, hold the lid by it and remove it by turning it a quarter turn while simultaneously tipping the lid into the container.

Open the lid and fill the ready-to-spray material (observe any formulations) into the storage containers. Before opening, make sure that the containers are depressurised (release pressure at the safety valve).

Caution: The quick-release fastener can only be removed when the appliance is completely depressurised.

The container is filled to a maximum of $\frac{3}{4}$ of its capacity, which corresponds to a usable capacity of 5 or 10 litres. The remaining volume is required for the air cushion, which is necessary for atomisation.

When closing the quick-release fastener, make sure that the sealing ring rests lightly against the oval container opening all round and that the locking clip is folded down to the container.

9.8 Starting the machine

The machine is ready for use in 10 minutes.

1. Switch on the main electrical switch.
2. Switch on the heating by pressing the F3 and F4 buttons on the membrane keypad when starting work.
3. Switch on compressed air main switch (A1, B1)
4. Set the operating lever to >OPERATION<.
5. Press the spray gun handle until the material to be sprayed emerges.

The spray pattern on the gun can be influenced using material and compressed air. Compressed air and material fine tuning are possible on the fondant gun. Spray a little material in the feed pipe until heated material emerges.



Attention:

The water level of the instantaneous water heaters must be checked once a year!

9.9 Operating (processing)

Place the baking trays on a flat surface and hold the spray gun at a right angle of approx. 10 cm above the baked goods and work quickly in circular movements, piece by piece. With sufficient practice, you can also work directly on the rack trolley. To do this, pull out a tray almost to the end, hold it at an angle with one hand and spray as described above.

Important:

The warmer the pastry, the better the adhesion and lustre of the apricot glaze.

Tip:

Before spraying fondant, close the compressed air supply on the fondant gun. Press the operating lever and open the compressed air supply until you reach the desired jet. You can also easily cover puff pastry in this way.

9.10. End of work

If you realise that only a small amount (approx. 1 sheet) remains to be processed, set the operating lever to >CLEANING< and spray out the material that is still in the lines. Spray until only air comes out! As there is now no material left in the hoses, nothing can stick together. Of course, instead of spraying out the remaining material, you can also collect it in a container and reuse it. (For details see chapter "Cleaning")

10. Cleaning (see also care and maintenance plan)

If you realise that only a small amount (approx. 1 sheet) remains to be processed, set the operating lever to >CLEANING< and spray out the material that is still in the lines. Spray until only air comes out! As there is now no material left in the hoses, nothing can stick together. Of course, instead of spraying the remaining material, you can also collect it in a container and reuse it.



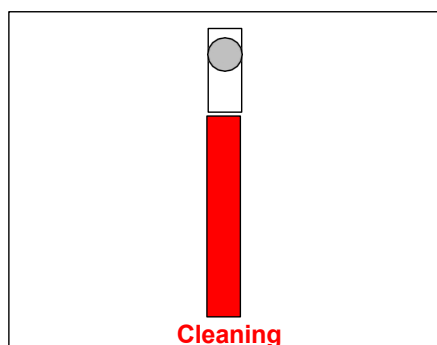
Operating lever to **OFF**

Switch to OFF at the end of work or if work is interrupted for more than 1 hour. Clean the hose beforehand - see below. **CLEANING.**



Operating lever to **OPERATION**

Working position for spraying



Operating lever to **CLEANING**
IMPORTANT!

Before the compressed air switches A1 and B1 are switched off, the material hoses must be sprayed empty. To do this, the operating lever must be set to >CLEANING<.

Otherwise there is a risk of **the non-return valve sticking.**

Attention: Failure to observe this will invalidate the warranty for a free repair.

Automatic water flush:

1. Spray the hose empty until only air comes out.
2. Switch off heating 1+2.
3. Press >Water tap symbol< on the control unit >Button 9<
4. Press and hold the gun until only clean water comes out (approx. 0.5 litres)
5. Press the tap symbol again >key9<
6. Press and hold the gun until air comes out (cleaning process complete)
7. The nozzle must be absolutely free of fondant (carry out a finger test)
8. **Important:** Close the water supply after flushing. The machine must not be permanently connected to an open water supply.

10.1 External cleaning of hose and gun: (daily)

For quick and easy cleaning, the material hoses are connected to the machine with a claw coupling. This can be released with a flick of the wrist. Before doing so, however, it is essential to ensure that both the main compressed air switches (A1 and B1) are switched off and that both operating switches are set to >OFF<.

Release the remaining pressure from the hose by pressing the gun again.

Afterwards, the gun and hose can be placed in a commissioning basket and placed in a rinsing machine. (The guns must not be left in the water for any length of time).

10.2 Cleaning the containers: (weekly)

Set both operating levers to > Operation <.
Fill both tanks with water. (Clean boiler weekly with disinfectant) Switch on heating system
Connect the spray guns to the housing and spray water from the empty container.

10.3 Cleaning the fondant gun: (monthly)

Keep all moving parts lubricated with food-grade oil. (material screw, nozzle screw, lever axle screw). If water comes out of the nut in front of the spray lever during cleaning, it should be tightened slightly.

10.4 Maintenance of pneumatics:

To maintain the pneumatic system, drizzle food-grade oil into the compressed air hose every 3-4 months. This extends the service life.

We recommend Fresh P&R Cleaning Concentrate for cleaning. Leave to act and rinse with clear water.

Remarks:



For safety reasons, replace the material hose of the apricot gun once a year!

11. Safety regulations

11.1 Machines

WARNUNG

**Read the manual carefully before operating the machine.
take. Observe all safety instructions.**



- The machine must not be used for purposes other than those for which it is intended.
- Minors may only operate the appliance under the supervision of an adult.
- The ball valve (depending on the model) must be checked for air permeability before each start-up. If no air can escape, it must be cleaned or replaced.
- Only connect compressed air via the quick-release coupling.
- The working pressure must be applied via a pressure gauge.
- Do not use oxygen or flammable gases as an energy source.
- Do not use flammable materials.
- Always wear the required protective clothing when working with the machine.
- The maximum permissible temperature must not be exceeded (depending on the model, max. 95° C).
- The maximum pressure must not be exceeded.
- Never reach into running machine parts.
- Take care with machine parts where heat or heating can occur - risk of burns!
- Pneumatic tools may only be operated and maintained by trained personnel. Secure from children!
- Repairs may only be carried out by authorised specialists.
- Disconnect the appliance from the compressed air and power supply before troubleshooting.
- Never open the control box or parts of the machine's electrical equipment. Always inform a qualified electrician if you are concerned about faults in the machine's electrical equipment.
- Only use original spare parts. Only these have been tested for sufficient compressive strength.

WARNUNG

Hot air/water can escape when the heat exchanger is opened.
The machines may only be operated on RCD-fused power sources (tripping current 30 mA).

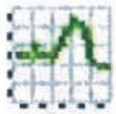
11.2 Spray guns

WARNUNG



- Spray guns may only be used for their intended purpose.
- Intended use also includes observing the important instructions in this manual and complying with all trade association regulations.
- Spray guns may only be used by persons who are familiar with their use and handling.
- Keep spray guns away from children.
- Check that all connections are secure before use.
- Never point the liquid jet at people - chemical liquid additives and/or high liquid pressures can cause serious injuries.
- Always wear suitable protective clothing.
- The smooth running of all moving parts must be checked and ensured on an ongoing basis - maintenance instead of force.
- The valve lever must not be tightened during operation.
- Make sure that the device is working properly before each use.
- High spraying pressure creates recoil forces - hold the appliance firmly - ensure a secure footing.
- Always depressurise the spray gun and supply line after use.
- If the ambient temperature is below 0 degrees and / or hot media are used, check whether the spray gun is suitable before use.
- When using hot media, the spray gun naturally heats up.

12.3 Causes of danger

	Pressure	- max. permissible overpressure PS	6 bar
	Temperature	- Wall / ambient temperature min - Wall / ambient temperature	. TS max.TS 5° C 50° C
	Operating mode	- No alternating load	
	Corrosion / erosion	Corrosion and erosion protection - Corrosion-resistant material: 1.4301 / 1.4404	
	External fire	Fire protection - Fire protection insulation Under the responsibility of the manufacturer of the module. Protection against external fire is provided by the manufacturer of the module	
	Protective measures against mechanical failure due to pressure, temperature, operating mode, external loads by testing	- For appropriate equipment of the permissible operating data by the operator. - Carrying out non-destructive tests For weld seam factor 0.7: Every object. - Carrying out the acceptance Construction and pressure test according to SVTI of each container	
	Protective measures against mechanical failure due to pressure, temperature, operating mode, external loads by using suitable materials	- Use of suitable materials 1.4301 / 1.4404 EN 10028-7 - Use of suitable welding consumables According to tested WPS	
	Protective measures against mechanical failure due to pressure, temperature, operating mode, external loads through design and construction	- Formulas according to SVTI regulations	

13. Troubleshooting

13.1 Security



The Jetino is an extremely powerful machine for daily production. Like all machines in this sector, all safety-relevant parts must be checked regularly. This ensures the safety of your employees.

13.2 Service address

Frisch-Spritzmatic GmbH
Ramminger Street 4
89129 Öllingen

Phone: 0 73 45 - 75 04
Fax: :0 73 45 - 2 18 19
Emergency number: 0172 - 85 37 504

13.3 Position and labelling of fuses

The electrical fuses are located in a closed electrical cabinet inside the machine (1). The thermostat fuses are also located inside the machine (2). In the event of overheating, this is shown on the machine display.

(1)



(2)



13.4 Error state detection

Electrical fuses:

In the event of a fault, the toggle lever of the fuse jumps to the OFF position. Check the cause of the fault. This must be rectified **immediately!**



Never open the control cabinet or parts of the machine's electrical equipment. Always inform a qualified electrician if you are concerned about faults in the machine's electrical equipment.

Thermostat fuses:

The limiters are set to the correct trigger temperature at the factory. If this value is exceeded, the heating system switches off or does not heat up at all when work starts. Instead, you will receive an error message on the display stating that there is an error in heating circuit 1 or 2.

When you are sure that the cause of tripping has been eliminated, press the green pin in again.

13.5 Initial troubleshooting measures

Fault/error message	Possible cause(s)	Remedy
No pressure build-up	Too many consumers	Reduce consumers
Compressed air escapes	Porous seals	Replace seals
No power	Supply line de-energised	Check fuse
Medium does not get really hot	Little water in the instantaneous water heater	Check and fill up
Safety valve does not open / close	glued	clean, better: replace

13.6 Further measures for troubleshooting

Fault/error message	Possible cause(s)	Remedy
Display "Error in the heating system"	Temperature limiter jumped out	Push in the pin
Crusty and black apricot	No water in the instantaneous water heater	Fill up with water
		Have the instantaneous water heater cleaned at the factory.

Test instantaneous water heater (water level):



1. Unscrew the lock
2. Check water level
3. Top up with water if necessary
4. Unscrew the cap
5. Heat up the machine so that excess water can escape (to be on the safe side, place a cloth around the cap).

14. Maintenance

14.1 Security

The Jetino is operated with three-phase current and compressed air and is virtually fail-safe with regular maintenance. As certain components, such as hoses and seals, are subject to natural wear and tear, you should carry out regular visual and functional inspections for your own safety.

Further details are also regulated by the Pressure Vessel Ordinance, the application provisions of which must be observed by the operator of the machine.

⚠️ WARNING Switch off the main switch and secure it with a padlock to prevent it from being switched on again before starting maintenance work.

⚠️ WARNING Danger from hot surfaces

Never touch heat exchanger components or product lines (hot surfaces) during operation. Switch off the machine and allow it to cool down before starting work on or near the heat exchanger.

14.1.1 Safety-relevant components



The machines in the Jet series are designed for professional use in production operations. Listed below are safety-relevant components that require regular replacement for your safety and that of your employees. We recommend documenting these replacements on a maintenance schedule. **Regular visual inspections and functional checks must be carried out.**

Safety-relevant components

Heat exchanger	Overpressure safety valve
Material container	Hoses and fittings
Hanger	Temperature limiter
	Main switch

Replacement interval

2500 h / 2 years
 Annually

14.1.2 Wear parts

Wear parts

Safety valve
 Hoses
 Pistols
 Pneumatic parts

14.2 Service address

Frisch-Spritzmatic GmbH	Telephone: +49 (0) 73 45 - 75 04
Ramminger Street 4	Fax: +49 (0) 73 45 - 2 18 19
D - 89129 Öllingen	eMail: info@frisch-spritzmatic.de

14.3 Proof of maintenance

It is advisable to keep a continuous and traceable maintenance record and to attach it to the manual. This enables our service technicians to rule out possible faults (e.g. too little water in the instantaneous water heater) over the phone.

14.4 Control procedures and test devices

Please subject hoses, seals, pressure vessels etc. to a thorough visual inspection. We recommend checking the hoses at 6 bar with the heating switched off. Furthermore, the instructions in the inspection and maintenance schedule must be observed.

14.5 Special tools, equipment, materials

The seals and hoses are optimised for Frisch-Spritzmatic spray systems. Replacement or modification without written consent jeopardises operational safety.

Only use original spare parts. Only these have been tested and approved for use in the food sector.

14.6 Inspection and maintenance schedule

t = daily, w = weekly, m = monthly, j = yearly

Work to be carried out	t	w	m	j
Visual inspection of the material and compressed air hoses		x		
Changing the apricot/cast hose				x
Container cleaning with disinfectant		x		
Visual inspection for cracks		x		
Check heat exchanger for water level				x
Testing the compressed air system for leaks (in accordance with pressure guidelines)			x	
Care of the material guns			x	
Air purification and water flushing of the entire hose system	x			
			x	
Maintain the compressed air supply line (drizzle in a few drops of life-centred oil every 3 months)			3 Mon.	

14.7 Lubrication plan

The mechanics of the guns should be cleaned regularly with food-safe oil. The threads of the U-bolts must be kept clean and smooth.

14.8 Description of the inspection and maintenance work

Every crack, whether in a seal or a metal, is a major source of danger. Accordingly, visual and tactile tests as well as tests with media that make a leak visible must be carried out.

14.9 Description of the repair work

Repair work must only be carried out by trained, specialised personnel. Work on pressurised containers in particular must be carried out with the utmost care.

15. Dismantling and disposal

15.1 Dismantling

15.1.1 Security

Before dismantling, make sure that the machine is not connected to the power supply or compressed air. When processing with guns, these must be depressurised once again to release any residual pressure. Only then may the hoses be removed.

15.1.2 Description of the dismantling work

Remove the hoses and material guns.

15.2 Waste disposal

The machine can be returned to Frisch-Spritzmatic cleaned and emptied.

16. Recipes

The quality of the end product depends crucially on the raw materials used. A whole range of first-class options are available here. Of course, all previously used products can still be used. However, the information given here are recommendations that may be helpful.

16.1 Recipe recommendations for hand sprayers:

- | | |
|--------------|---|
| Apricot jam: | 12.5 kg apricot jam
approx. 1000 - 1600 g water,
Stir in the mixer until smooth.
First stir until smooth, then add water |
| Fondant: | 15 kg solid block fondant
approx. 1.7 litres of
water 200 g glucose |
| Fondant: | 15 kg liquid fondant, spreadable, ready icing
approx. 0.4 - 0.5 litres water
200 g glucose |
| Fondant: | 15 Kg S 40 Frankenfondant
1.7 litres of water |

Stir in a mixer until smooth. Can be made in advance.

16.2 Preparation of cake icing or jelly

Mix the powder and sugar according to the manufacturer's instructions and stir in hot water (tap water) until completely dissolved. Pour into pressurised container.

Machine setting:

- Material pressure approx. 0.5 - 2 bar (depending on the strength of the mass / solid material = higher pressure).
- Set the temperature to 85 - 110° C (guide value 95° C)

Material regulation:

- Press the gun lightly
- Slowly increase the material pressure until the desired amount of material emerges.

Use spray nozzle for glossy surface; use flood nozzle for cut casting.

Application procedure:

Start at the bottom edge of the sheet and work in a serpentine pattern from left to right. The casting compound should flow slowly and smoothly in front of the gun. Repeat the process depending on the thickness of the layer.

16.3. Possible causes for unexpected results

Optics	Possible cause(s)	Remedy
Apricoturine dries poorly	too little! Water added	Increase water addition
Fondant layer is dotted	Distance between gun and cheek is too large (target = 10 cm)	Reduce distance
Fondant does not shine	too little apricot	Apply more apricot paste
Fondant dies off	too little apricot	Apply an even and enveloping layer of apricot paste
Fondant runs	Fondant too thin	Add less water

17. EC Declaration of Conformity

(original EC Declaration of Conformity) within the meaning of the **EU Directive for electrical equipment Low Voltage Directive 2014/35/EU**, EU file L 96/357 of 29 March 2014
 and the **EU Directive Electromagnetic compatibility "EMC" 2014/30/EU**, EU Official Journal L 96/79 of 26 February 2014.

We hereby declare, as manufacturer and under our sole responsibility, that the design and construction of the appliance specified below and the version placed on the market by us comply with the relevant provisions and harmonisation legislation of the above-mentioned directives.

Furthermore, we declare the conformity of the pressure equipment optionally used in the product with the requirements of EU Directive **2014/68/EU for pressure equipment**, EU file L 189/164 of 27 June 2014

All parts of the product that come into contact with food also fulfil the requirements of the **EU regulations on food materials and plastics**
REGULATION (EC) No 1935/2004, EU OJ L 338/4 of 13.11.2004,
REGULATION (EU) No 10/2011, EU OJ L 12/1 of 15.01.2011 and its
 amending regulations and on good manufacturing practice for food materials and articles
REGULATION (EC) No 2023/2006, EU OJ L 384/75 of 29.12.2006

Product designation	Jetino-Jet
Functional description	Heating and conveying of various materials
Model designation	3100
Type designation	3100
Machine number	3641
Production date	2023

Manufacturer and address	Frisch Spritzmatic GmbH Ramminger Straße 4 D-89129 Öllingen
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Authorised documentation representative	Jürgen Frisch
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Applied harmonised standards, in particular	Safety of machines and systems EN ISO 12100:2010 - Risk assessment and risk reduction EN 60204-1:2018 - Electrical equipment of machines EN 1672-2: 2005+A1:2009 - Food processing machinery - General principles for design - Part 2: Hygiene requirements Electromagnetic compatibility - Industry EN 61000-6-4:2020-09 Generic standard - Emission in industrial environments EN 55011:2018-05 Limits and methods of measurement of radio disturbance characteristics of ISM equipment
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Frisch-Spritzmatic

Ramminger Straße 4 - 89129 Öllingen

Tel.: 0 73 45 - 75 04 / Fax: 0 73 45 - 2 18 19



Öllingen,
Place

28.11.2023
date


.....
Jürgen Frisch - Managing Director

18. Supplementary documents

18.1 Pneumatic plan

18.2 Electrical documentation

18.3 Acceptance protocol