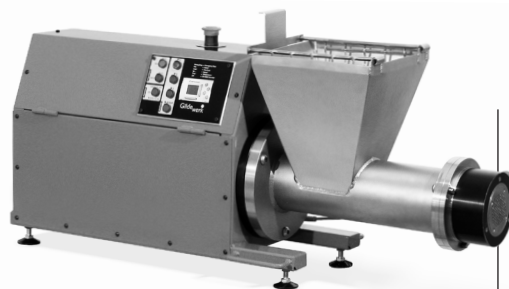


Soap extruder

ZXM-05000



Gildewerk

www.gildewerk.com

The Netherlands

Gildewerk B.V.
Jan van Geunsweg 10A
NL-2031 BD Haarlem
Pays-Bas
T 31-(0)23-532 22 55
F 31-(0)23-534 09 65
E holland@gildewerk.com

©2011 Gildewerk NL

Subject to changes. The conditions held at the county court in Haarlem apply to all services and goods supplied by Gildewerk.

CONTENTS

I Introduction	1
1.1 Points of interest	
1.2 Safety guidelines	
1.3 Operating environment	
2 Construction	2
2.1 Motor housing	
2.2 Control panels	
2.3 Screw	
2.4 Screw housing	
2.5 Filling feeder	
2.6 Heating of press head unit	
2.7 Extrusion plates	
3 Operation	2
3.1 Start-up	
3.2 Short-term deactivation	
3.3 Long-term deactivation	
4 Transport and installation	4
4.1 Transport	
4.2 Installation	
5 Maintenance	4
5.1 Cleaning	
6 Extruder specifications	5

Chapter I Introduction

This soap extruder has been designed to produce staves of soap from soap granulate, which is a semi-processed product. This is made possible by means of extrusion. The machine is equipped with a three-speed revolution control and an electronic temperature regulator. The various other functions of the machine are controlled by a PLC. By using assorted shape plates, it's possible to produce differently shaped staves of soap.

Please note: Read this instruction manual carefully before use. Only use the soap extruder if the ambient temperature is at least 18 °C.

1.1 Points of interest

This machine was tested prior to delivery. However, you should still do the following:

- 1 Check the machine for apparent damage.
- 2 Make sure that the electrical specifications on the model plaque correspond to the available current.
- 3 Because the press screw and the screw housing - when new - must hone one another to create a perfect fit, some miniscule metal particles may be released. This is not in any way a problem.

In case of malfunctions, transport damage and/or deficiencies, please notify Gildewerk immediately.

1.2 Safety guidelines

- This machine has been designed to be splash proof and is intended for indoor use.
- The operation and maintenance of this machine must only be performed under the constant supervision of a capable person.
- This machine is only suitable for the extrusion of soap granulate supplied by Gildewerk and using Gildewerk fragrances and colourants.

Please note: If ingredients not mentioned above are used, the guarantee becomes null and void and Gildewerk will not be liable for injury and/or damage. This also applies to possible modifications which could influence the functioning of machine, and to use in an area with an ambient temperature below 18 °C!

1.3 Operating environment

In order to guarantee the reliable functioning and long useful life of the machine, the below conditions must be met:

- 1 Ambient temperature: 18 °C to 25 °C
- 2 Relative humidity: max 90 %
- 3 Vibration: max 0,5 g
- 4 No aggressive fumes or gases present.
- 5 No excessive dust, sand, etc.
- 6 Adequate ventilation.

Chapter 2

Construction

The soap extruder consists of a number of basic components.

- 1 Motor housing-
- 2 Control panels
- 3 Press screw
- 4 Screw housing with the mixing plate
- 5 Filling feeder with lid
- 6 Press head-
- 7 Shape plates are attached

2.1 Motor housing

This is the large purple case on top of which the 'Emergency Stop' button is mounted. The motor housing is supported by four adjustable feet which can be set to stabilise the machine using a no. 17 spanner. The opening in the underside of the machine ensures that the motor receives adequate ventilation. It's important that this opening is not obstructed. A cable with a round connector is also attached to the motor housing. This is for the heating of the press head.

2.2 Control panels

The two control panels are located on the sides of the motor housing: Depending on the configuration, the locations of these panels may differ (left- or right handed machines). This is not significant to the rest of the operation instructions.

The Power panel featuring:

- Main switch (on/off)
- Fuse holder with 20 mm 16 A fuse. Please note! When replacing the fuse, make sure that it is replaced with the abovementioned type!
- Electricity supply cable
- Indicator lamp which shows that the machine is live.
- 'Remote' operating pedal connection.

The Command panel featuring:

- the 'ZX' section with 'ready / error' indicator

The 'heating' section with:

- On/off button with 'active' indicator

The 'remote' section with:

- On/off button and 'active / stand-by' indicator

The 'feeder' section with:

- 'closed' indicator

The 'motor' section with

- button and 'stop' indicator
- button and 'speed 1' indicator
- button and 'speed 2' indicator
- button and 'speed 3' indicator

The display is also located here. This provides the user with all necessary information, including the state of the machine, the temperature of the press head, the motor capacity and the elapsed running time. It is also used to provide instructions in case of errors. Certain settings can be changed by the user with the buttons next to this display.

2.3 Press screw

The press screw, which becomes visible when the screw housing is disassembled, is attached to the motor in the motor housing. The soap is pushed forward by the movement of the screw. It's important that this screw is kept as clean as is possible. The smoother the screw, the more efficient the extrusion process becomes.

2.4 Screw housing

The screw housing is a stainless steel tube into which the screw is placed. It is fixed to the motor housing by means of three hex bolts. As the screw rotates, soap is extruded via this tube – which leads to the press head - through the large mixing plate.

2.5 Filling feeder

The filling feeder is fixed to the screw housing and is fitted with a lid to ensure safety. The lid is equipped with a grid, and soap granulate can be added from above. If the lid is opened while the machine is active, the press screw will stop immediately. Never insert any objects into the feeder with the intention of, perhaps, pushing the soap down. This can cause irreparable damage to the screw and screw housing.

2.6 Press head

The press head is mounted on the end of the press tube by means of three hex bolts. Various interchangeable shape plates can be fixed to this head. For optimum performance during the extrusion of soap, the press head is heated. This heating system is connected to the machine's electricity supply cord.

2.7 Shape plate

The shape of this plate determines the style of the extruded stave of soap. The plate is fixed to the press head with four crosshead screws.

Chapter 3

Operation

Please note: Before the machine is used, make sure that all the hex bolts are fitted and have been tightened using the hex key provided!

3.1 Start-up

- Makes sure that the main switch is in the 'off' position.
- Connect the electricity supply cord to the machine and insert the plug into an earthed wall socket.

Please note: To ensure safety and to prevent damage to the machine, it is absolutely essential that the machine is connected to a suitably earthed socket. If you are in doubt, ask your technical department to check.

- Attach the plug on the press heater cable to the connector on the press head and make sure that it fits properly: Push the plug onto the connector (*please note!* It only fits when inserted in a certain way) and carefully turn the ring on the plug in a clockwise direction.
- Make sure that the 'emergency stop' button is in its upward position and deactivated. If this is not the case, the machine won't start!
- Please note! If the 'emergency stop' button is used while the machine is working, it cannot simply be turned on again. Obviously something has gone wrong and must be checked by someone capable of doing so. This is also indicated on the display. In order to reactivate the machine, the main switch must first be placed in the 'off' position and, after a few minutes, returned to the 'on' position.
- The 'main switch' activates the machine. When it is turned on, the yellow 'power' indicator lamp next to this switch will illuminate.
- The machine will first test a number of functions and display its software version. During start-up, you do not need to pay attention to what is displayed. After two seconds, the machine will start and the display will indicate its processes.

- Now, the machine will start heating the press head. If the heating is 'on', the 'active' indicator will illuminate. The display will read ZX=Warming up and will also indicate the temperature. If the heating cord is not connected, the display will read 'Connect Heater! Or outside temp too cold'. The machine cannot be used if the ambient temperature is below 10 degrees. If, for some reason, you would not like to use the press head heating, you can deactivate it by pressing the 'heating on / off' button. To later reactivate the heating, press the 'heating on / off' button a second time.
- Once the press head has reached its temperature, the green 'ready' indicator lamp will illuminate, indicating that the machine is ready. The display will read ZX = Ready. The machine is now ready for use.
- Using the '1, 2 and 3' buttons, you can set the machine to run at a predetermined speed. The indicator lamp in the chosen button will illuminate. The 'stop' button will turn off the motor.
- The display indicates the selected 'speed' and motor capacity in Amperes. It's essential that you keep an eye on this value. If it rises above 8A, we recommend that you select a lower speed. If the motor capacity remains higher than 8A for more than 20 seconds (overload), the motor will automatically shut off and you will have to select a different, lower speed. If the motor reaches a state of 'Overload' three times, it will shut itself down and you will have to restart the machine once you've removed the cause of the blockage. This will rarely happen in practice, where the machine efficiently functions at 3 to 4A. If the meter indicates values above 6,5A when it is not heavily loaded, the soap in the screw housing has probably dried out and you will have to detach the press head and remove the old soap from it. Also beware against running the machine at a low speed for too long. This affects the quality of the soap, while the motor also doesn't receive enough ventilation, causing it to overheat and automatically shut down. If this happens, you should turn off the machine and allow it to cool for at least an hour before starting it again.

- The 'emergency stop' function speaks for itself and should only be used if something threatens to go wrong. To restart the machine, refer to the start-up instructions above.

3.2 Opening the feeder

- If you open the feeder lid while the machine is running, the machine will immediately stop and the green 'feeder closed' indicator lamp will go out. This indicator also specifies whether or not the lid is well-closed. It is not always necessary to open the lid to fill the feeder. The grid openings are large enough to allow soap granulate to pass through the grid.
- When you replace the lid, you once again must select a speed in order to activate the motor.

3.3 Using the remote

- To use the 'remote' pedal, first plug it into the 'remote' connector on the power panel.
- By pressing the 'remote on' button (of the feeder open indicator) once, you can activate remote operation.
- Now, when the feeder is closed, the remote on indicator lamp will flash, indicating that the machine is awaiting use of the pedal.
- A speed can now be selected. When you now depress the pedal, the motor will start and the lamp will illuminate continuously. If you release the pedal, the motor will stop. Depress the pedal and the motor will start again (this depends on the PLC settings, see page 11). This function is especially useful for emptying the machine.

Please note: If you open the feeder, you will have to reset the motor speed.

- By pressing the 'remote off' button, you deactivate remote operation.

3.4 Turning off the machine

- After use, place the machine in 'stop' mode.
- After intensive use, allow the machine to cool down for a while (you'll be able to hear the fan running) before turning it off using the 'power on' switch. This procedure will increase the useful life of the machine.

Please note: If necessary, the machine can be turned off at any time without following specific procedures.

3.5 Changing various functions

When the machine is not in operation, you can use the display to view and change various functions. You can do this by briefly pressing the button with the arrow pointing to the right. Using the up and down arrow button, you can then browse the various menus. These are, in order:

● Locking the machine

This function is handy if you would like to prevent the buttons from being tampered with (e.g. in a store). Press the right-arrow button to select this function. When the 'Code' is zero, all the buttons are active. Using the 'plus' button, you can change the code to a number of your choice, thereby deactivating the buttons. You must confirm your choice by pressing the 'OK' button. By pressing the 'Esc' button, you will return to the main screen. The display will indicate that the machine is locked (ZX=locked). You can reset this function by zeroing the 'Code' again using the 'min' button and confirming this with the 'OK' button.

● Checking the number of 'session hours'

This function allows you to determine the number of hours during which you have made soap in a week, for instance. This is the 'Session' time. The time indicated is the actual time during which the motor has been active. You can reset this counter by pressing the left-arrow and right-arrow buttons simultaneously for 10 seconds.

● Checking the total number of hours

This function allows you to determine the total number of hours during which the machine has been 'On' and in operation. This is important with respect to the maintenance of the machine. This counter cannot be reset.

● Setting the press head temperature

You can use this function to set the temperature of the press head. The default temperature is 42°C. Using the 'plus' and 'min' buttons, you can adjust the temperature. Once the desired temperature has been set, you must press the 'ok' button to save this temperature. Press 'Esc' to return to the main screen.

- **Adjusting remote pedal operation**

You can use this function to adjust the operation of the remote pedal. Press the right-arrow button to set the pedal. If the 'code' = 1, the pedal will function as a 'pulse' switch. The motor will then start when you depress the pedal and stop when you release it. If you change the code to zero using the 'min' button, the pedal will function as a 'latch' switch.

The motor will then start when you depress and release the pedal, and will stop when you once again depress and release the pedal. You must confirm your selection using the 'ok' button.

If you don't press any buttons for a period of 100 seconds, the display will revert to the main screen.

Chapter 4

Transport and installation

4.1 Transport

Warning: Before moving the machine, always make sure that it is unplugged!

When moving the machine, always take the following into account:

- Never lift or move the machine by its cables, knobs, switches or other fragile components. The machine is provided with two handles at the front and one at the back.
- Place a flat object underneath the machine when it is being moved using a pallet mover or forklift. This is due to the 'open bottom' of the motor housing.
- Avoid severe vibration during transport of the machine.
- Avoid movement of the machine due to vibration.
- Only move the machine horizontally and vertically.

4.2 Installation

- Place the machine on a level surface which can comfortably support 104 kg and which has sufficient sideways stability (e.g. a worktable/-bench).
- The area in which the machine is placed must be adequately ventilated.
- Set up the machine in such a way that all the controls are easily accessible.
- Make sure that all its feet touch the surface. The feet can be adjusted by screwing them in or out.

- Avoid damage to the electricity supply cord during transport.
- Make sure that the main switch on the side of the motor housing is in the off position before inserting the plug into a socket.
- Never connect the machine to an unearthed socket!

Chapter 5

Maintenance

1.1 Cleaning

Warning: Place the main switch in the '0' position and unplug the machine before removing any components!

Warning: Never rinse or submerge any components in water, detergents, etc. unless you are specifically instructed to do so!

The machine must be cleaned under the following circumstances:

1. When changing the soap colourant.
2. When deactivating the machine for a long period of time.

Do the following:

- Allow the machine to empty almost completely. The machine is almost empty when virtually no more soap exits through the extrusion plate while the motor is running.
- Turn off the heating and disconnect the cord from the press head.
- Undo the four crosshead screws from the shape plate and place these in a safe place. If one of these screws were to end up in the machine, it could cause irreparable damage!
- Turn the motor back on (Speed 1) and allow the pressure to push the shape plate from the press head.
- Using the hex key provided, undo the three hex bolts on the press head and, once again, allow the pressure of the soap to push the press head off. Make sure that it doesn't drop off suddenly!
- Turn off the machine and unplug it.
- When removing the press head, the 'large mixing plate' will detach along with it. From the front, push the remaining soap from the press head. This is done more easily once the press head has cooled somewhat. A handy tool (item no. ZXB-01001) is available to assist you in doing this.

- Use a wooden palette knife to remove the rest of the soap stuck to the press head.
- Clean the mixing- and spaghetti plates using water and a brush. You could also use our handy aids (item nos. ZXB-01002 or ZXB-01003) to clean the mixing plate.
- Now undo the three bolts fixing the screw housing to the motor housing.
- Carefully slide the screw housing off the screw.
- Clean the screw housing with a damp cloth.
- Clean the screw with a wooden palette knife and/or a damp cloth. We recommend that you lubricate the screw's rubber sealing ring with acid-free Vaseline. Once you have finished cleaning the machine, it can be reassembled.

Do the following:

- Carefully slide the screw housing onto the screw.
- Make sure that the screw housing edge fits into the recess in the motor housing and that the bolt holes line up. Tighten the bolts with the hex key.
- Fix the 'large mixing plate' to the front of the screw housing with the larger sides of the holes towards the screw.
- Attach the press head to the screw housing and make sure that the electrical connection on the press head is pointed sideways. Tighten the bolts with the hex key.
- Place the small spaghetti plate in position and attach it evenly using the four crosshead screws. Use a no. 2 screwdriver to do this.
- Reconnect the press head heating.

Warning: Unattached and/or insufficiently tightened bolts or screws can cause irreparable damage to the machine during operation.

The soap extruder is now ready for further use. If it is regularly cleaned following the above mentioned procedures, the machine will remain in an excellent condition.

Chapter 6

Specifications of ZXM-05000 extruder and subsequent models

- Voltage: 220V-240V/50 Hz
- Motor capacity: 1,5 kW
- Revolutions: 15–30–45 rpm
- Heating: 80 W
- Max recorded capacity: 1,8 kW
- Length x breadth x height: 105 x 35 x 52 cm
- Weight: 104 kg
- Production capacity: 5 kg soap products
- PLC: Mitsubishi ALS-24-MR-D

EC Declaration of conformity



Manufacturer:

Gildewerk BV

Address:

**Jan van Geunsweg 10A
2031 BD Haarlem
The Netherlands**

Hereby declares that,

ZXM-05000 Extruder

comply with the stipulations found in the following EC directives, these being the most recently amended:

- EMC-Richtlinien 89/336/EEG, 91/263/EEG, 92/31/EEG en 93/68/EEG
- Niederspannungsrichtlinien 73/23/EEG en 93/68/EEG

and that the following standards have been met:

- EN 55014 (1995)
- EN 55104 (1995)
- EN 61000-3-3 (1995)
- EN 60335

Finalised in Haarlem on
17 Januari 2010

M.L.J. Teunissen
Directeur