

Original user manual for
Fat Pump



1. Declaration of Conformity

EU Declaration of Conformity

Manufacturer: Jasopels A/S tel. +45 76 94 35 00
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Machine: Fat Pump
Type : 80-50000

Jasopels A/S declares that this product is in accordance with the following EU Directives:

2006/42/EC

2006/95/EC

2006/108/EC

Furthermore, we declare that relevant chapters of the following harmonized standards have been applied:

EN 60204-1

DS/EN 12100 : 2005

DS/EN 14121-1

DS/EN 14121-2

DS/EN 13857 : 2008

DS/EN 13850

Place and date: Bording, January 31

Name: CEO Poul Bach



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3. Preface

- This User Manual is an important part of your new machine. Read the manual thoroughly and use it as a reference book.
- This manual contains important information about safety and the correct use of the machine.
- The manual should be stored with the machine. It is important that the user manual is supplied with the machine upon resale and lending.
- The user of the machine must make sure that the operator, service personnel and others who have access to the machine have been instructed in the correct use and handling of the machine. Refer to this user manual for further information.

4. Symbol explanation

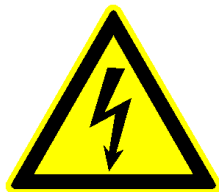
Please read this user manual and follow the included instructions. In order to emphasize certain information, the following expressions are used:

- Note!



A triangle with an exclamation mark is a symbol that warns you of important instructions or information concerning this machine.

- Danger!



A triangle with a flash of lightning is a symbol that warns you of "High Voltage".

- Warning!



A triangle warning you of entanglement and crush hazard.

5. Introduction of the machine

- The Fat Pump is designed to transport fat from the Jasopels Fleshing Automat to a container.
- The machine is a combination of the already known fat suction device with an integrated pumping unit. One of its many advantages is that it makes it possible to continue the fleshing work while the fat container is being replaced.
- The development of the fat conveyor's control system has led to a significant reduction of energy consumption in comparison to previously known systems. We have achieved that by having the conveyor run in a pulse/pause sequence.
- Thanks to its construction the machine is very easy to operate. During normal operation the fat conveyor is controlled via the control panel on the Fleshing Automat.

Note!

- The owner of the machine must make sure that the operator, service personnel and others who have access to the machine have been instructed in the correct use and handling of the machine. Refer to this user manual for further information.
- The machine may only be used for the purpose it has been designed for. The CE declaration becomes void upon any other use.
- If any problems should occur with the machine or its operation, they must not be fixed before the machine is properly switched off, unless a correction can be made via the machine's control buttons.
- The user manual should always be kept available for the operator.



6. Start-up

- Before start-up the machine has to be placed on a firm and stable base. The adjustable feet of the machine need to be adjusted so that the machine is properly leveled.
- The machine is delivered with two CEE wall sockets (4- and 5-pin, respectively). The user has to arrange for the installation of the mentioned sockets as well as for the cabling between the fat pump and the Flething Automat.
- The fat pump has been equipped with 2 CEE plugs, which are to be connected in the following way:
 - the 4-pin CEE plug is to be connected to the wall socket that the Flething Automat uses to monitor and control the fat pump.
 - the 5-pin CEE plug is to be connected to a standard wall socket, 3 * 400 V+N+PE, and protected with at least 16 A.
- The automatic controller and monitoring system of the fat pump is not activated until the included K09 relay has been installed in the PLC cabinet on the Flething Automat.
- The Flething Automat and the fat suction device have to be connected using a 160 mm suction pipe. In order to obtain optimal suction, install the Fat Pump as close to the Flething Automat as possible. Make sure that the pipe is installed with as gentle swings and rising as possible. Avoid sharp turns right after the Flething Automat. The fan can be placed outside in order to avoid noise during its operation.
- The pump can easily pump fat up to 30 m away from the pump.
- The fat pump is now ready to be used.



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Note!

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In order to avoid potential damage to the control system's microcontrollers and the rest of the machine's electrical system due to thunderstorms, it is recommended to disconnect the machine from its electrical power source whenever it is not being used.
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7. Operation

7.1 Preparation for start-up

- The control buttons on the control cabinet have to be set as follows:
 - The **MAN- 0- AUTO** switch must be set to **AUTO**.
 - If the control buttons are not set in the described positions, it will not be possible to start the Fleshing Automat and the error light on the PLC cabinet will be on.
 - Make sure that the cyclone is fastened to the gear pump with the clamp. The fat pump is now ready and you can start the Fleshing Automat.



Fig. 1

- As the first part of the starting sequence, the star-triangle automatic control in the Fleshing Automat will start the fat suction motor and the pulse/pause timer for the fat pump will be activated. Because of this the Fat Pump is not supposed to run continuously – it starts and stops with intervals that are preset by the manufacturer on the PLC in the control cabinet.

Danger !
**The machine must never be started when
 the cyclone is not properly closed.
 Never stick your fingers into the fat pump
 or the fat suction device.**



7.2 Setting the pump's speed

The RPMs of the pump engine, and along with that the pump's speed, can be set using the black adjusting knob on the control panel in the frequency converter. The RPMs are shown on the display that is located in the upper part of the control panel. During normal operation the speed should be set to 2800 RPMs.

7.3 When the fat pump is stuck

If the fat pump is entangled with skin or sinew residue, there is a risk of it getting stuck and thereby triggering the electronic overload protection in the frequency converter, which will then signalize an **Error** and stop the Flething Automat. You can try to loosen the jammed objects in the following way:

- Set the switch to **MAN**.
- Remove the clamp and turn the cyclone to the side.
- The frequency converter will now be blinking and showing an error code on the display.

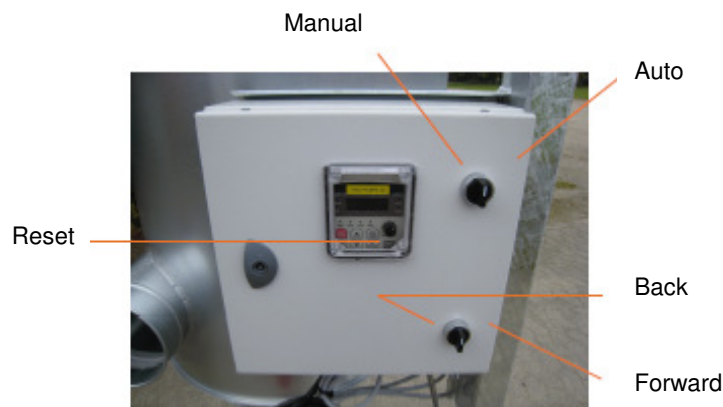


Fig. 2

- In order to cancel the error in the frequency converter you need to press the **RESET** button on the control panel.
- The pump will run slightly backwards when you set the button to **BACK**. If the objects are severely jammed, the electronic overload protection in the frequency converter will disconnect the motor again.

- If the frequency converter has disconnected, you can reset the error. After that you can try to loosen the jammed objects by setting the switch to the **FORWARD** position.
- Repeat this procedure until the jammed objects are loosened. If the frequency converter is disconnected repeatedly, you must keep an eye on the motor's temperature, as the motor can easily overheat and get damaged due to this heavy strain.
- If you suspect that the pump may have frozen, you should try to thaw whatever is jammed with hot water before activating the **FORWARD** and **BACK** buttons.
- After the pump has been emptied, install the cyclone again and set the switch to **AUTO**.

7.4 Emptying the Fat Pump

When the day's fleshing work is over, the cyclone and the fat auger should be emptied manually, especially when there is a risk of the temperature dropping below zero at night. This is done in the following way:

- The fat suction device should not be stopped until all cleaning of the Fleshing Automat has been finished.
- Set the function switch to **MAN**.
- Turn the switch to **FORWARD** until the pump is completely empty.
- Set the function switch to **AUTO**.
- Take the emptying hose inside so that it does not freeze.

8. Maintenance

DANGER!

Disconnect the machine's power supply before maintenance, cleaning and other service activities are performed on the machine.

It is ESSENTIAL that all CEE plugs are removed from the wall sockets.



8.1 Daily maintenance

The daily maintenance is limited to emptying the cyclone and the fat pump, as described in chapter 7.3.

8.2 End-of-season maintenance

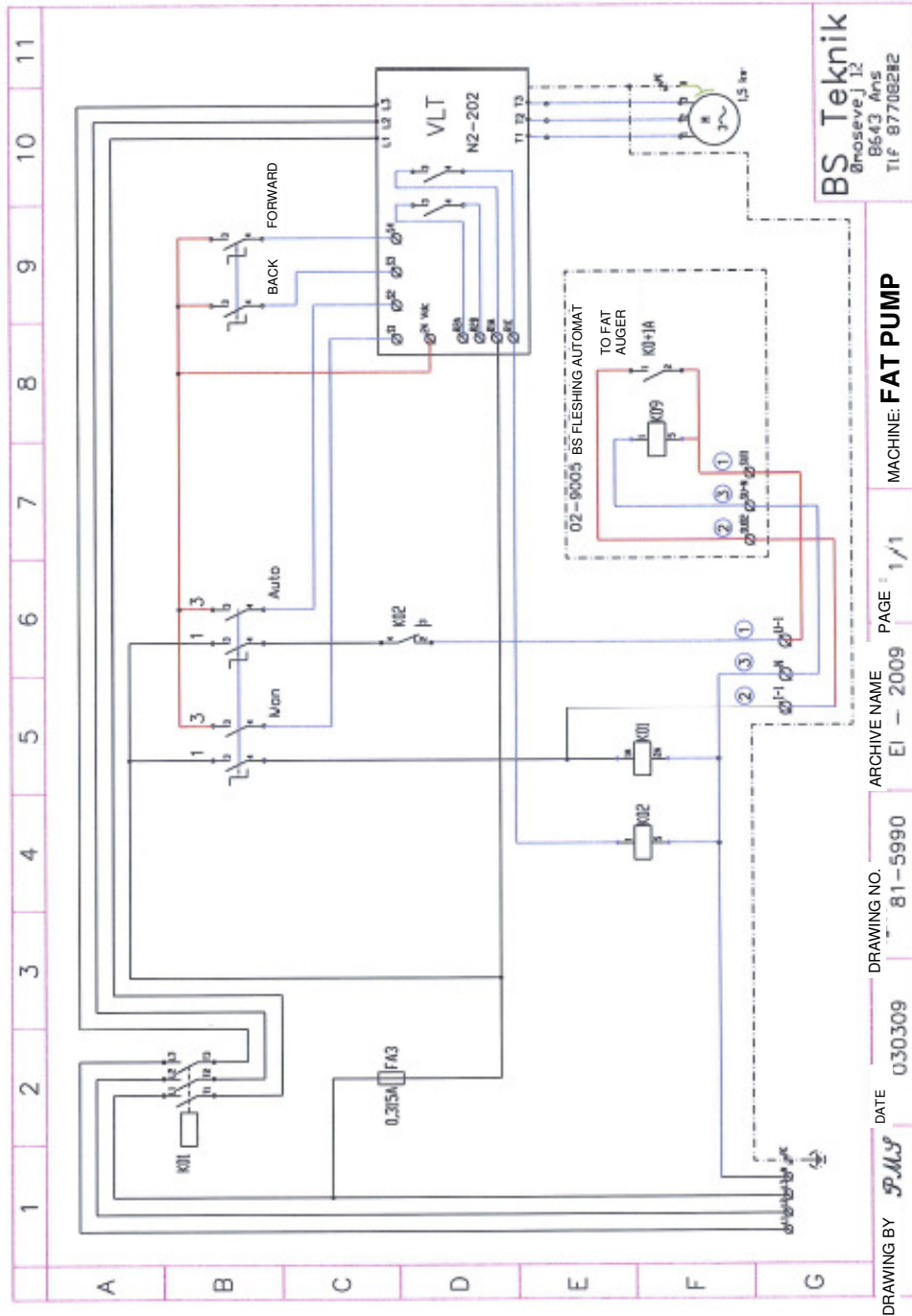
- At the end of the season the inside of the cyclone needs to be washed with a high-pressure washing device. When the clamps at the top and bottom have been removed, you can remove the cyclone from its frame in the hinge mounting.
- All suction pipes and bends between the Fleshing Automat and the fat pump need to be taken apart and cleaned on the inside so that maximum suction capability can be maintained.
- When cleaning is finished, remove the drain plug in order to remove any water that may be left in the fat pump.
- When all the end-of-season cleaning has been finished, store the fat pump indoors until the next season.

9. Technical data

- Electrical connection: 5-pin CEE plug +N+PE
- Power consumption: Max. 16 A
- Dimensions:

Height:	170 cm
Length:	80 cm
Width:	80 cm

10. Circuit diagram



11. Spare parts list

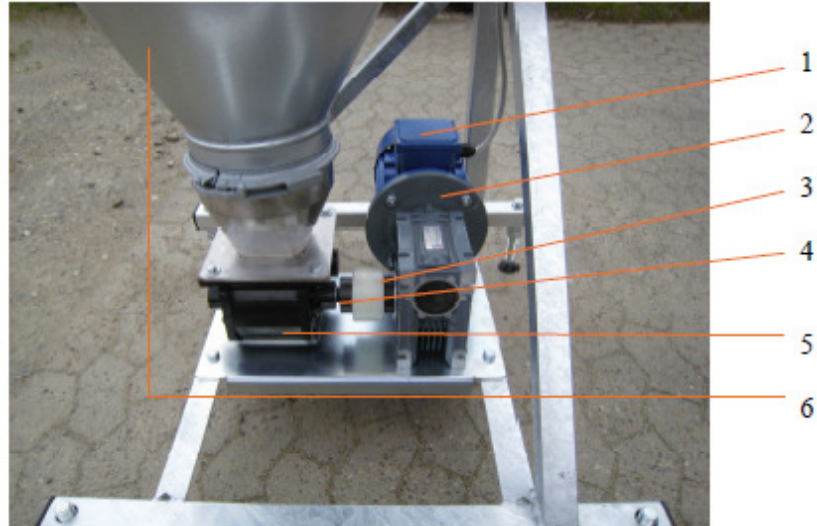


Fig. 3

Fig. number	Jaso number	Description
3.1	5931-10220205	MS 90 L2 2,2kW 2800 RPMs B5
3.2	5931-10220205	LAC 61-20-200-Ø24-Ø30 (B5)
3.3	5968-8151000038	Outer ring for SITEX 38 clutch
3.4	5968-8151000138	Clutch hub for SITEX 38 undrilled
3.5	5020-010001	Feed pump Soffie XL 4 M
3.6	5200-00801036	Cyclone for fat conveyor
	5260-11605000	Lindab clamp
	5260-11805000	Lindab clamp
	5260-12005000	Lindab clamp
	5260-12505000	Lindab clamp
	5260-122000780	Kongskilde 160 clamp
	5260-122050101	Kongskilde 200 clamp
	5290-220005	Sunnex Maskinsko No 19 Ø50

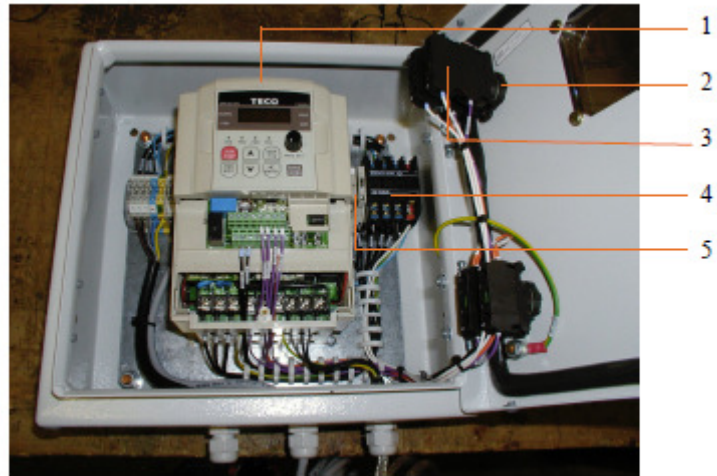


Fig. 4

Fig. number	Jaso number	Description
4.1	5925-14020030	B & J contactor K2-12A01-230V 5,5kW
4.2	5924-74011015	B & J coupling element
4.3	5924-74011030	B & J contact element 1NO
4.4	5925-44023410	Interface relay 1-pin, 10A LED 230V
4.5	5927-14080062	Fuse holder for WK4TKG-U



Fig. 5

Fig. number	Jaso number	Description
5.1	5924-74010110	B & J switch 1-0-2
5.2	5924-74010105	B & J switch 1->0<-2
	5926-59683980	Sight glass 96*83mm
5.3	5926-14300330	ETA cabinet B300*A300*D150

12. Additional equipment



Fig. 6

Fig. number	Jaso number	Description
6.1	5250-1210600	Kongskilde fan 5,5 kW 400 v 50 Hz
6.2	5931-20550203	MEZ 5,5 kW motor 2900 RPM

13. Troubleshooting

This chapter shows how some general problems can be solved by the user. This is not an actual description of how the machine as such is to be repaired but simply basic information on how to fix some minor problems so that you can resume fleshing quickly. In the case of complicated problems, which cannot be fixed by the user, it is recommended to contact the Jasopels Service Department for further assistance.

DANGER!

Switch off the machine's power supply before maintenance, cleaning and other service activities are performed on the machine.

It is ESSENTIAL that all CEE plugs are removed from the wall sockets.

13.1 PLC error

If a lump is created around the fat pump, it can cause the machine to run very slowly and even to stop completely. When this happens, the electronic overload protection in the frequency converter will be activated, which will trigger an error signal on the display of the control cabinet. The frequency converter can be reset by pressing the **RESET** button on the frequency converter's control panel. If the error is caused by a complete blockage in the fat pump, it needs to be removed as described in chapters 7.4 and 7.6 before fleshing can be resumed.



13.2 Poor suction capability

If the fat suction device's suction capability is not sufficient, there is a risk that the suction pipes between the Fleshing Automat and the fat suction device will stop. Reduced suction capability can be caused by:

- Insufficient vacuum in the cyclone caused by wear/leakage of the bend of the discharge pipe.

- It can also be caused by the fact that the suction device is "breathing incorrectly", i.e. if a leakage has occurred in the suction pipe between the Fleshing Automat and the suction device.

13.3 Fat is coming out of the air outlet

If the timer's basic setting is incorrect, there is a risk that the fat content in the cyclone becomes too big before the auger starts.

- The pulse/pause timer should be set by a Jasopels specialist.

13.4 The FORWARD/BACK functions are not working

If the **FORWARD** and **BACK** functions are not working when the function switch is set to **MAN** and when it has been confirmed that the overload circuit in the frequency converter has not been activated, you need to examine the following:

- Is the light in the frequency converter's display on? If this is not the case, the thermo relay can be disconnected. Check the motor protection in the Fleshing Automat's control system. The error can also be caused by a defect in the frequency converter, in which case you need to contact the Jasopels Service Department.

