Original user manual for

Fleshing Automat T6

1. Declaration of conformity

EU Declaration of Conformity

Manufacturer: Jasopels A/S tel. +45 76 94 35 00
Address: Fabriksvej 19 DK-7441 Bording

Machine: Fleshing Automat T6
Type : 3220 - 020402

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, 2013

Navn: CEO Poul Bach

2. Table of contents

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 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.

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.

- Warning!! 

High noise level. Always use hearing protection equipment.

5. Introduction of the machine

- The Fleshing automat has been designed to flesh mink skins.

- Innovative ideas regarding the shape of the beam and the impellers, motor mounting and the automatic controls have made this fleshing machine an exceptionally quick device with a working capacity of 400 skins per hour that performs high quality fleshing work.

- The combination of the beam's shape and the adjustable fleshing pressure at the front and rear part of the skin have made it possible to scrape the fat completely off the skin.

- The fleshing pressure of the side, top and bottom impeller can be adjusted individually on the control panel.

- The impellers are lifted independently from each other when the skin has passed by. This reduces the time during which the beam is in contact with the impellers, which, in turn, reduces wear and tear.

- The Fleshing Automat can be equipped with impellers of different hardness, which, along with the adjustable fleshing pressure feature, protects the skins from getting damaged during fleshing.

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.**
- **Make sure you have read the entire manual before you start using the machine.**
- **The machine may only be used for the purpose it has been designed for.**
- **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. Commissioning

- Before the Fleshing automat is started up the user must make sure that the machine is placed on a firm and stable floor. The machine's adjustable feet must be adjusted so that the machine is plumb and level, measured by the vertical and horizontal profiled tubes.

DANGER!

Always stay at an appropriate distance from the machine when connecting the compressed air supply, as unexpected movements of the cylinders may occur.

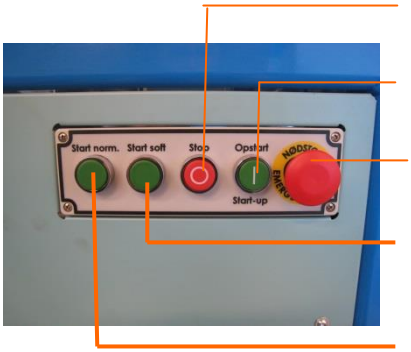
- The manufacturer has equipped the machine with a 5-pin 32 A CEE plug at the end of the power supply cable. It is to be connected to a wall socket. Air supply is to be connected to the air filter, which is installed at one of the machine's ends.

DANGER!

Always disconnect the machine's compressed air and power supply before maintenance, cleaning and other service activities are performed on the machine.

- After the power supply has been connected to the machine and before fleshing starts, you need to check the rotation direction of the fleshing motors.

Main switch



Stop

Start-up

Emergency switch, see fig. 38.

Soft scraping, see p 12.

Normal scraping

Fig. 1 Start-up

- **The main switch**, which is placed on the left side of the electrical cabinet, needs to be set to 1. Make sure that the **EMERGENCY STOP** is not pressed in. Next, start up the machine by pressing **Start-up**. The fat pump will now start working (if connected) and the impellers will start to rotate. When the fat pump and all 4 fleshing motors have started, the green **READY** lamp will illuminate on the screen. Next press **Stop** and then, while the impellers are decelerating, make sure that they are rotating in the direction that will allow the skin to de drawn onto the beam. If the direction of the impellers' rotation needs to be changed, you can do that by reversing the two phases in the CEE plug on the power supply cable.

- The machine has been designed to be able to control a Jasopels Fat Pump / Fat Conveyor. The Fat Pump's electrical connection must be done by a certified electrician. The Fat Pump's tube connection is to be connected on the manifold under the machine.

- The impellers' alignment needs to be checked before the Fleshing Automat is started up and used.

- The Fleshing Automat should be ready to be used when the sawdust machine has been filled with sawdust.

- The Fleshing Automat's automatic controls are designed to be able to control and monitor the work of the Jasopels Leather Side Drum, the Jasopels Sawdust Conveyor and the Jasopels Sawdust Return Screw Conveyor via the CEE plug to the right of the air cabinet (Ext.) Socket).

Note!!

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

7. Operation

7.1 Start-up

- Turn the ”**Main Switch”**, which is placed on the electrical cabinet, to position 1.
- Make sure that the **”EMERGENCY STOP”** is not pressed in.
- Press ”**START-UP”**. The display will show a screen with data concerning the remaining time and skin quantity on the impellers (Fig.2). The fat pump will now start (if connected) and the impellers will begin to rotate. After a few seconds, when the fat pump and all of the fleshing motors have been started, the green ”READY” light will become illuminated and the machine will be ready to start fleshing.
- Functions are controlled directly on the screen using the respective menu features.
- It is also possible to change the values in various fields.

Fig. 2. Menu

Fig. 3 Start screen

Menu

Current status

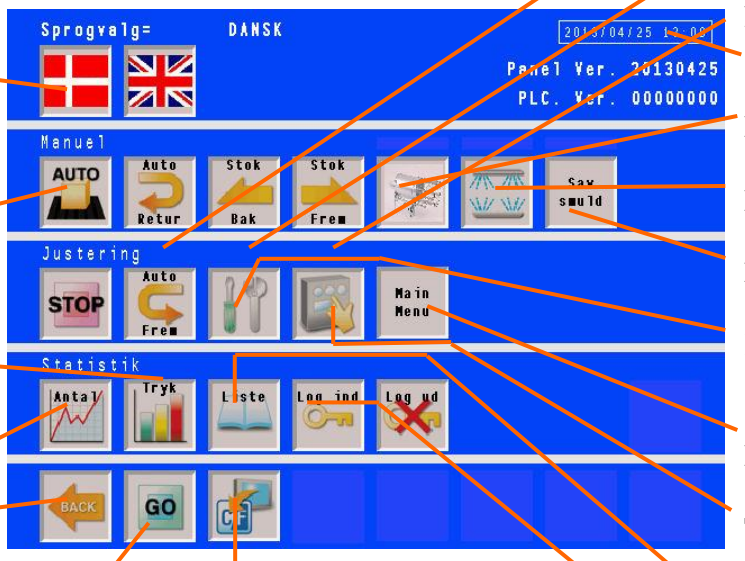


Fig. 4 Menu

Language selection

Manual/automatic control

Pressure settings. See fig. 6

Statistics. See fig. 10

Back

Auto return

Back (manual)

Forward (manual)

Clock settings. See fig. 13

Manual start/stop of the drum

Manual start of the washer

Manual start of Sawdust auger

Impeller adjustment. See fig. 14

Main Menu. See fig. 5

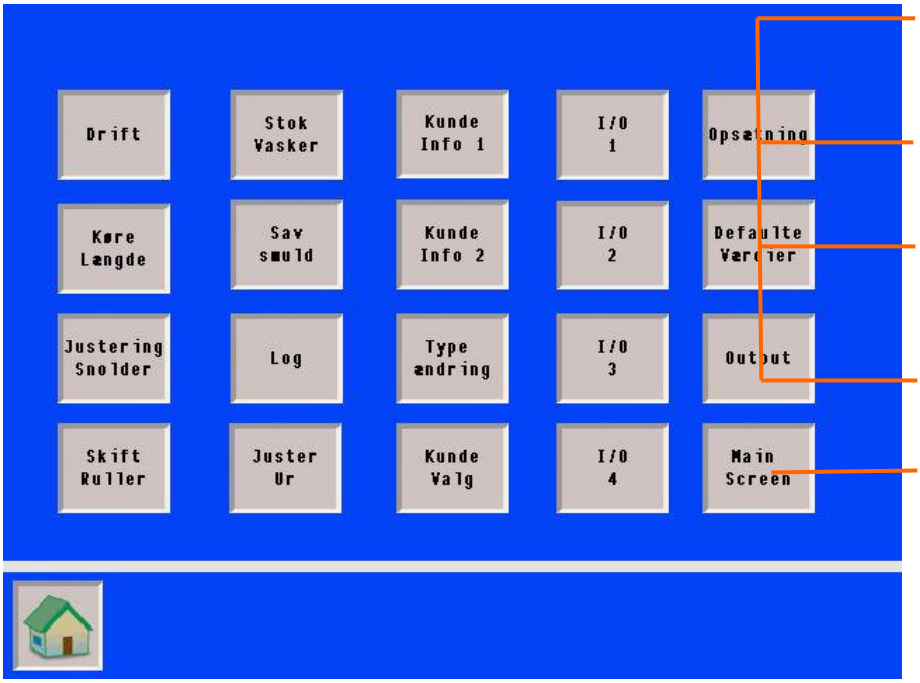
Travelling distance adjustment. Se fig.15

Customer list.

Log in/out to replace the SD card. See fig. 20

Current status
See fig. 6

Save data on the SD-card



To access, enter the code 9966.
Press Ent to finish.

Soft pressure settings etc. (fig.18)

Default values.

Output.

Back to main menu.

Fig. 5 Main menu

- Main menu is an overall menu, from which you can access all the various submenus.

7.2 Fleshing – operating controls

- Pull the skin onto the beam with its back side facing up, and place it so that the two pins at the end of the beam stick out through the eye sockets.
- The front part of the skin, from the nose to the front paws, is to be pulled tightly onto the beam but the rest is supposed to sit as loosely as possible so that the impellers can work with the skin.
- When the skin has been pulled onto the beam, the fleshing process can begin.
  - Press the green **"START NORM"** key**.** The beam will now run evenly forward while the skin will be getting fleshed. When the skin has passed the impellers, it is run through the skin scraper, where the loose fat gets scraped off. Next it is run through the sawdust machine, where it gets sprinkled with a layer of sawdust before the skin remover grabs the skin and lets it fall down into the inlet that leads to the leather side drum before the beam turns and returns.

- **"SOFT START"** is a program used for starting when working with delicate or damaged skins. Pressing **"SOFT START"** gets the machine to run along the beam while applying the pre-set gentle pressure. **Note!** If you press and hold **"SOFT START"** until the beam is moving, the first 20 cm of the beam will not get scraped and the rest will be scraped according to the gentle pressure settings in fig.18.

Warning!!

Hearing protection equipment must be used during fleshing due to the loud sounds produced when the skin is run past the impellers.

- If the impellers are to be stopped, for example for periodical cleaning (as described in chapter 8.2), press the red **"STOP"** button for a short time. If the **"STOP"** button is pressed and held for over 3 seconds, the impellers, the fat pump and any other equipment connected via the Ext. socket will stop.

7.3 Pressure settings

- The fleshing pressure is the pressure that the impellers apply to the skin when it is mounted on the beam.
- The standard pressure values have been set by the manufacturer. **(Check if the skins are fleshed correctly)**
- Set the pressure by pressing the respective bars, in which case a keyboard will appear. To finish press ENT. (You need to be logged in order to change values, see fig. 4)

Current customer

Current values

Operation status Standard Settings

Current beam speed

Pressure, front paws

Current type

Menu

A keyboard will appear when you press the bars and you can then change the pressure. Press ENT to finish.

Beam speed

Number of defective skins

Number of fleshed skins

Cold water removal

Resets and saves data See fig. 12

Skin error message

Customer selection See fig. 8

Type See fig. 7

Male/Female

Cycle time

Sawdust See fig. 16

Beam washer See fig. 17

Fig. 6 Aktuel status

The fleshing pressure may vary greatly based on the mink type. It also depends on what impellers are installed in the machine. The recommended pressure values are to be treated as guidelines and can be used during start-up but the operator must control the fleshing quality continuously. It may be necessary to adjust the fleshing pressure based on the type of skins one is working with.

- The fleshing pressure also depends on the beams speed. The higher the beam speed, the higher pressure on the impellers is required.

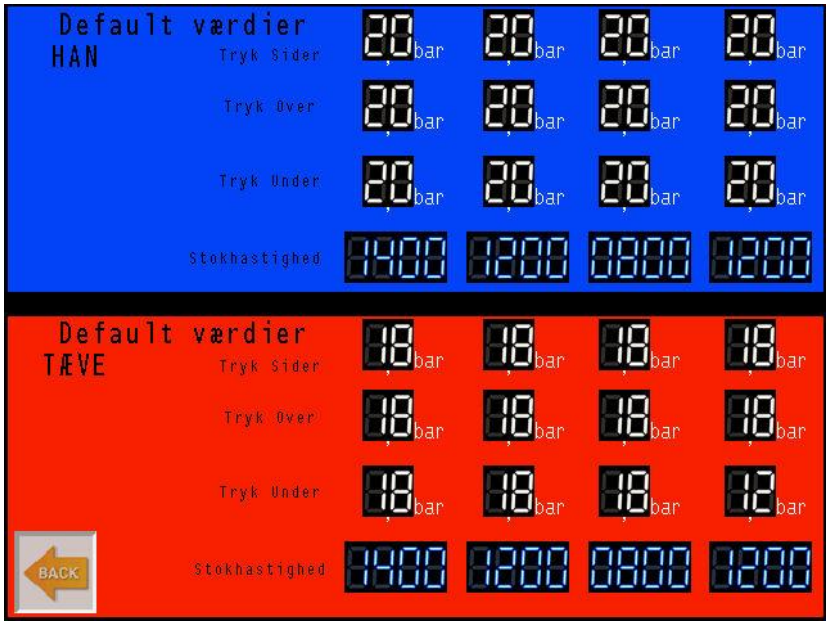


Fig. 7. Default values.

- Default values are the machine's basic values of fleshing pressure and beam speed.

7.4 Switching between customers

- It is possible to enter various customers in the panel's index.
- A keyboard appears when you press the bars. You can edit or create a cusotmer's name. To finish press ENT.

Index

Menu

Current customer

Find new customers in the index using the arrow keys and press OK to finish.

The Customer

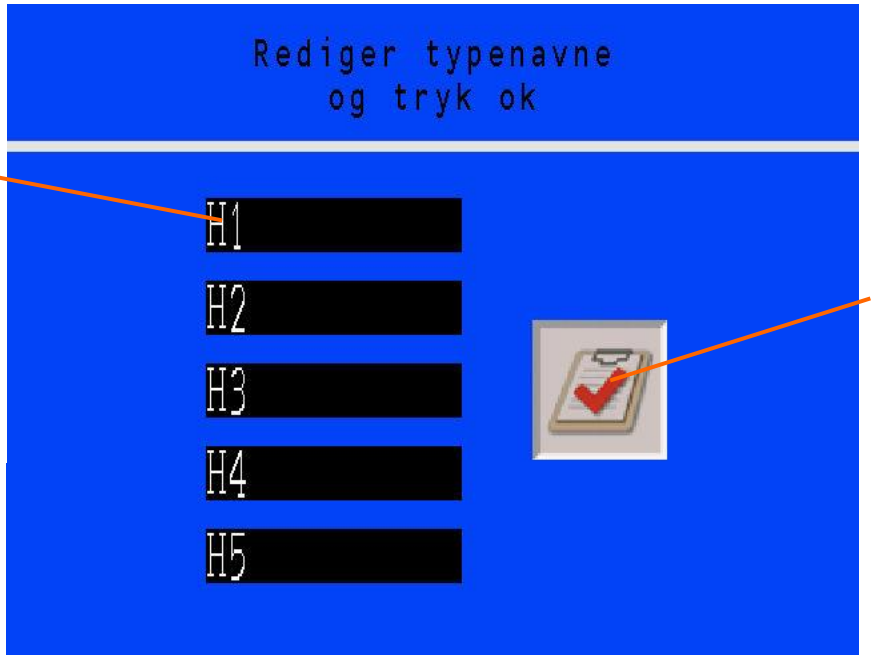
Customer selection

Acknowledgement key

Fig. 8 Customer selection

7.5 Switching between types

A keyboard appears when you press the bars and you can now change the name. To finish press ENT .

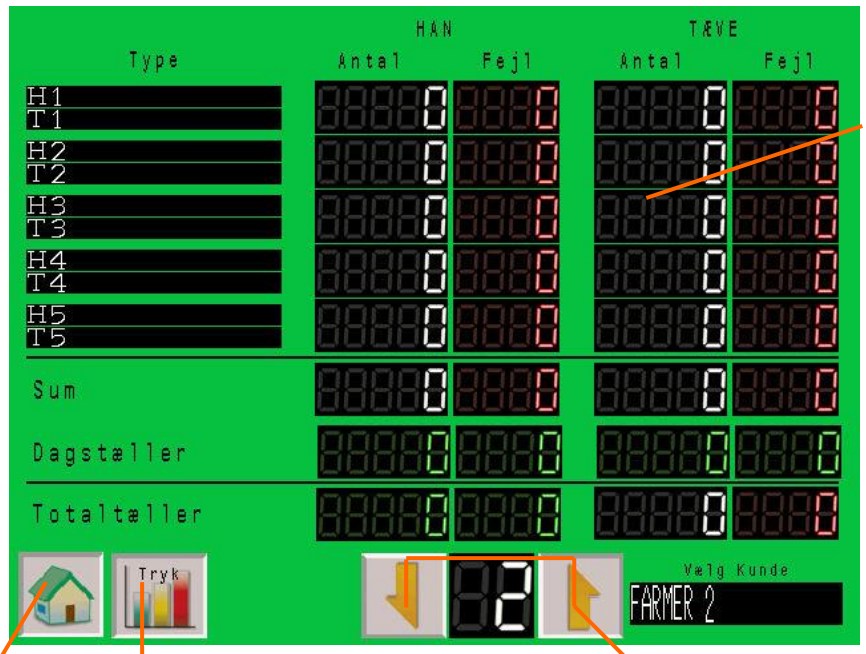


Leave this screen by pressing this button.

Fig. 9 Switching between types

7.5.1 Time and quantity data reading.

- To find this screen choose ”statistics” – ”quantity” in fig. 4 or choose ”quantity” in the screen with pressure settings in fig. 6

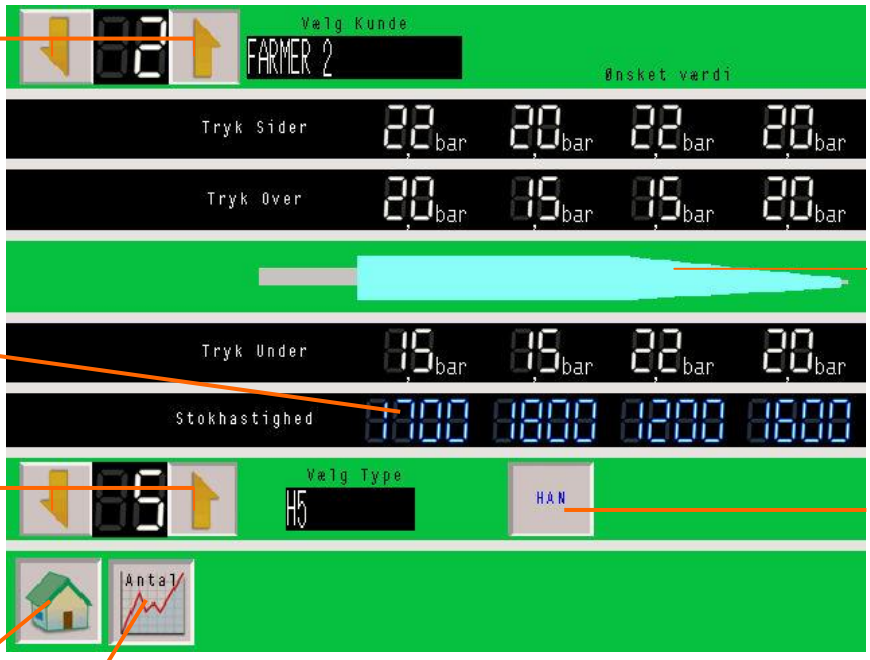


A keyboard appears when you press the bars and youb can now reset/change the quantity. Press ENT to confirm.

Fig. 10 Reading statistics

Menu **Pressure settings** **Customer selection**

Choose customers using the arrow keys.



A keyboard appears when you press the bars and you can now change the pressure settings while working for another customer. To confirm press ENT.

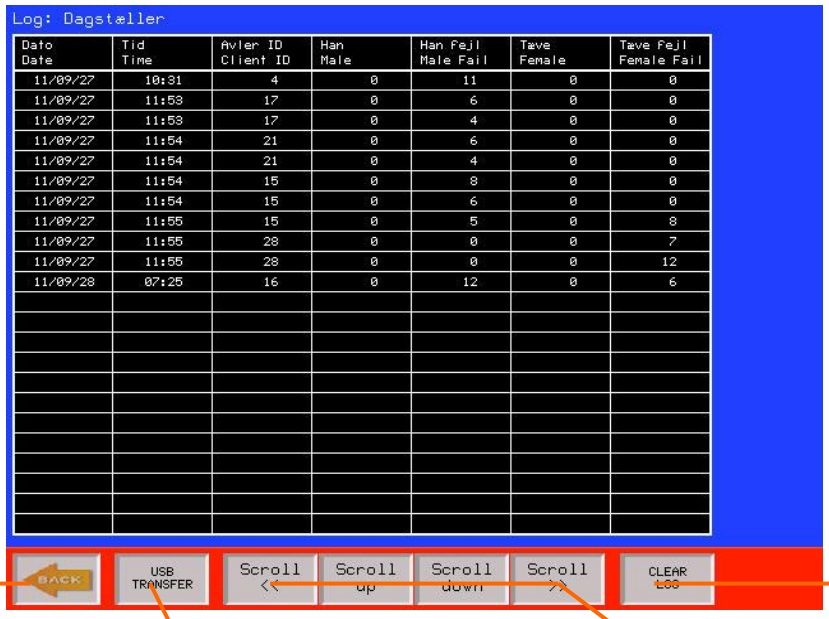
Beam speed

Choose types using the arrow keys.

Male/female

Fig. 11 Reading customer settings

Menu **Statistics**



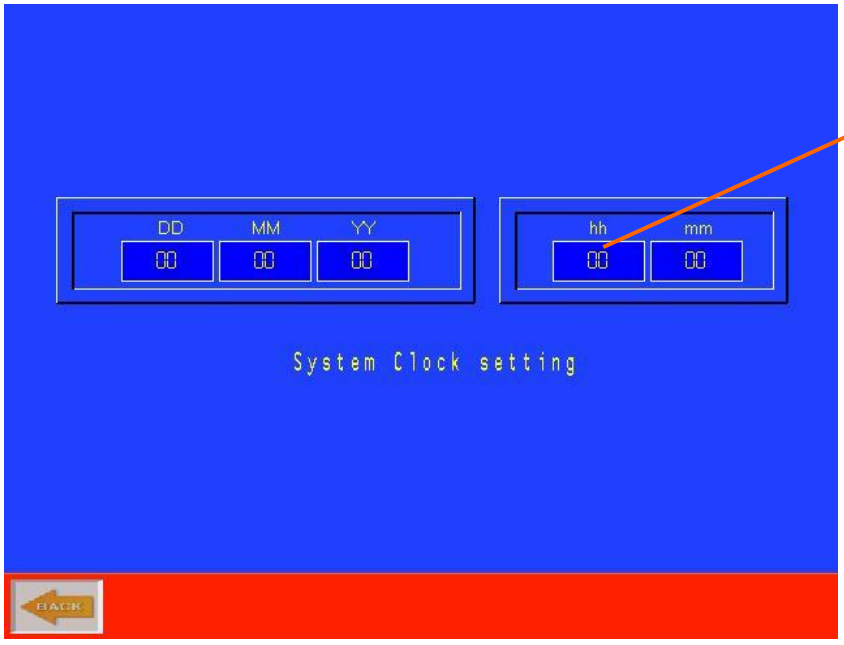
Back

Counter reset key

Fig. 12 Fleshing data.

Arrow keys for navigation

It is possible to transfer data from the Fleshing Automat to a computer.
Insert a USB memory device into the control panel for data output.
The data can be opened on a computer in an Excel file.



A keyboard appears when you press the bars and you can now change the time settings.

Fig. 13 Time and date settings.

7.5.2 Impeller adjustment

- Here you can adjust fat suction, fat scraping, stopping points, sides and washer settings using the arrow keys. Press the green arrow to confirm.

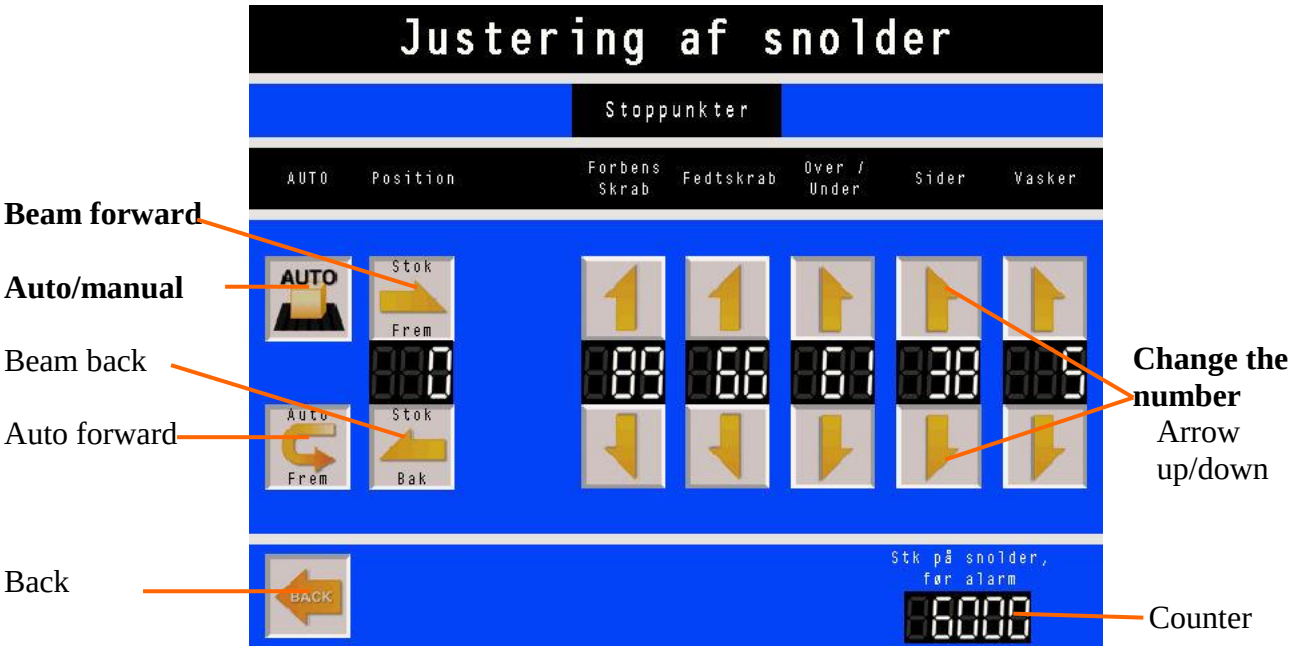
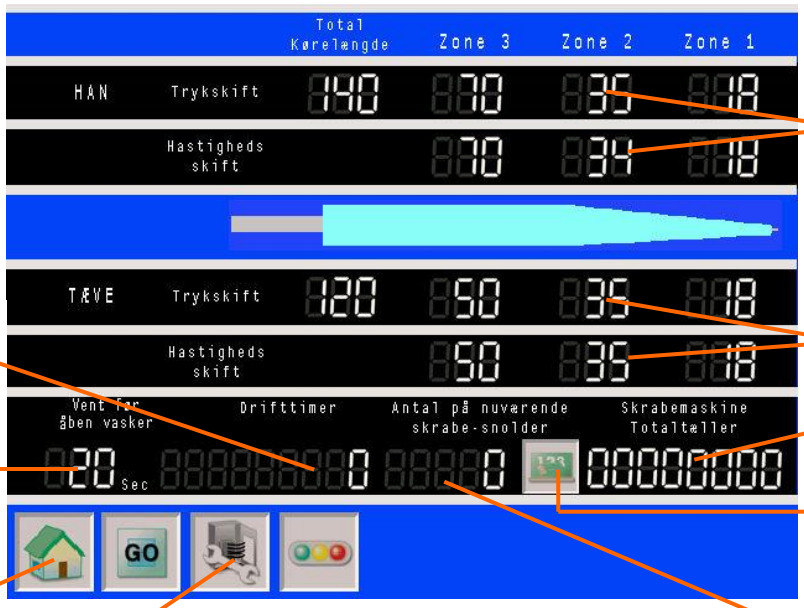


Fig. 14 Impeller adjustment

- Set the machine to manual mode in order to be able to make adjustments.
- When you press ”Auto forward”, the beam will run to the first stopping point. The washer will then close and it will be ready to be adjusted.
- When you press ”Auto forward” again, the washer will open and the beam will continue to the next point, etc.

7.5.3 Travelling distance adjustment

- Here you can enter the travelling distance by pressing the respective buttons above the beam.
- A keyboard appears when you press the bars and you can then edit the numbers. To confirm press ENT.



Operation timer

Waiting time for opening the washer

Back

Service button
For authorized personnel

A keyboard appears when you press the bars and you can now change the value. To confirm press ENT

Total counter

Remember to reset the counter after changing.

Quantity on present impellers

Fig. 15 Travelling distance adjustment

7.5.4 Sawdust and beam washer

- Here you can choose the starting and end points for sawdust dosage and beam washing. Use the arrow keys to do that.
- The manufacturer has preset standard values for these points. Press the green arrow to confirm.

End point settings. Seconds after the beam has returned.

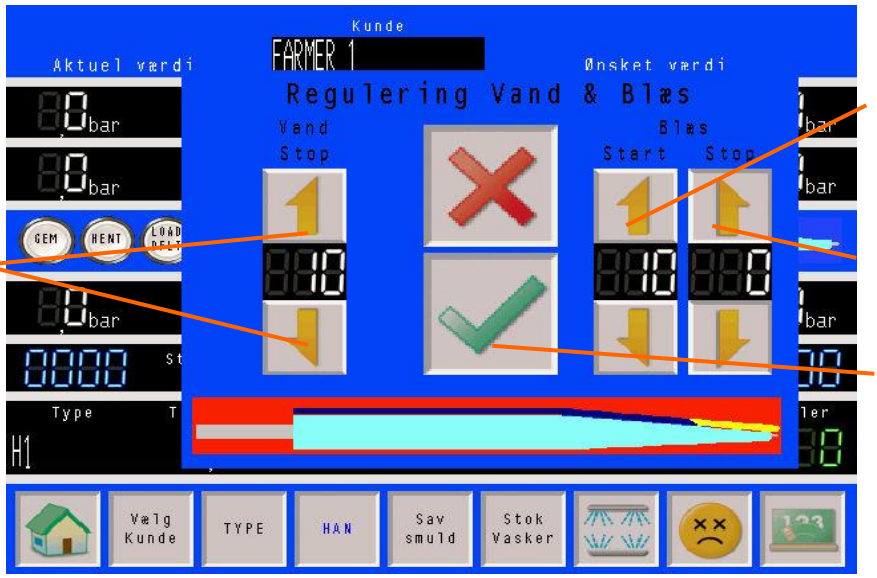
Starting point settings.

Confirm and finish.

Fig. 16 Sawdust dosage

- The end point adjustment function is used in order to give the last bit of the skin sawdust while the skin remover is pulling the skin off the beam.

End point settings for water

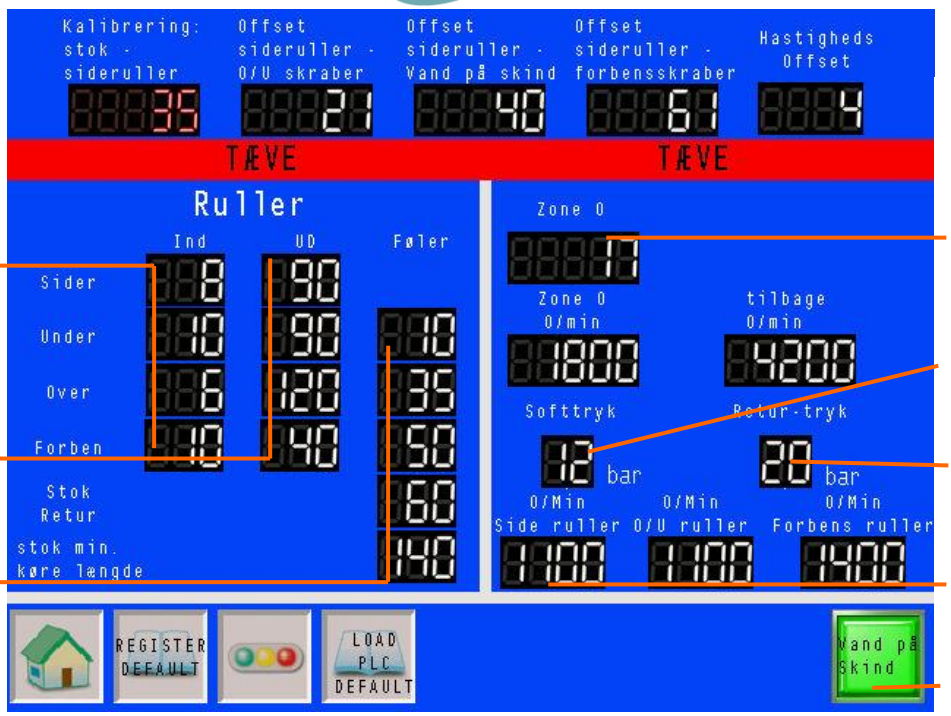


End point settings for air.

Air time settings.

Confirm and finish.

Fig. 17 Water and air settings adjustment.



Distance at which the impellers come in contact

Value if sensor is disconnected.

Values from sensor.

Length with high speed before the side impellers come in contact

Soft pressure settings

Working pressure

Impeller speed settings

Warm water can be applied to the fat scraper.

Fig. 18

- The machine has a sensor that can read the skin length. The impellers move away from the beam according to this measurement. If the sensor gets dirty, the machine's program switches automatically to the values entered manually. The current setup is crucial for the type one switches to (Male/female).

- To find this screen you need to choose **Main Menu** in (fig.4). Next choose **Setup** in fig.5 and the code is 9966 + enter. You can now access and change the various values.

Clean the sensor's back side daily when it gets dirty.

You can see the machine's speed in fig. 6

Fig. 19 Sensor.

7.5.5 Annual SD-card replacement

- 1. Press **"log in"**

Fig. 20

- 2. Enter the code **9966** and confirm by pressing ENT.

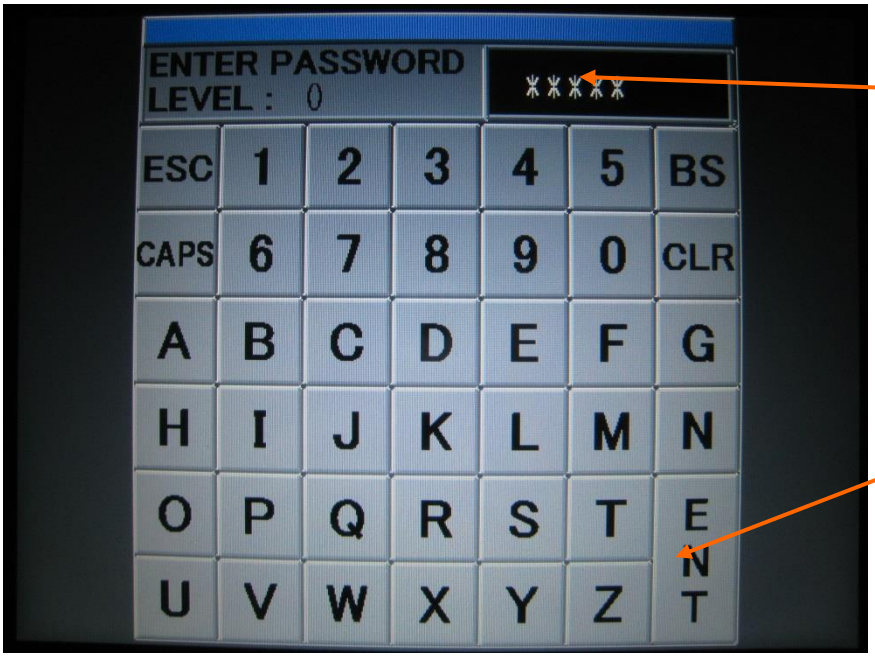


Fig. 21

- 3. Press **"Replace SD-card"**

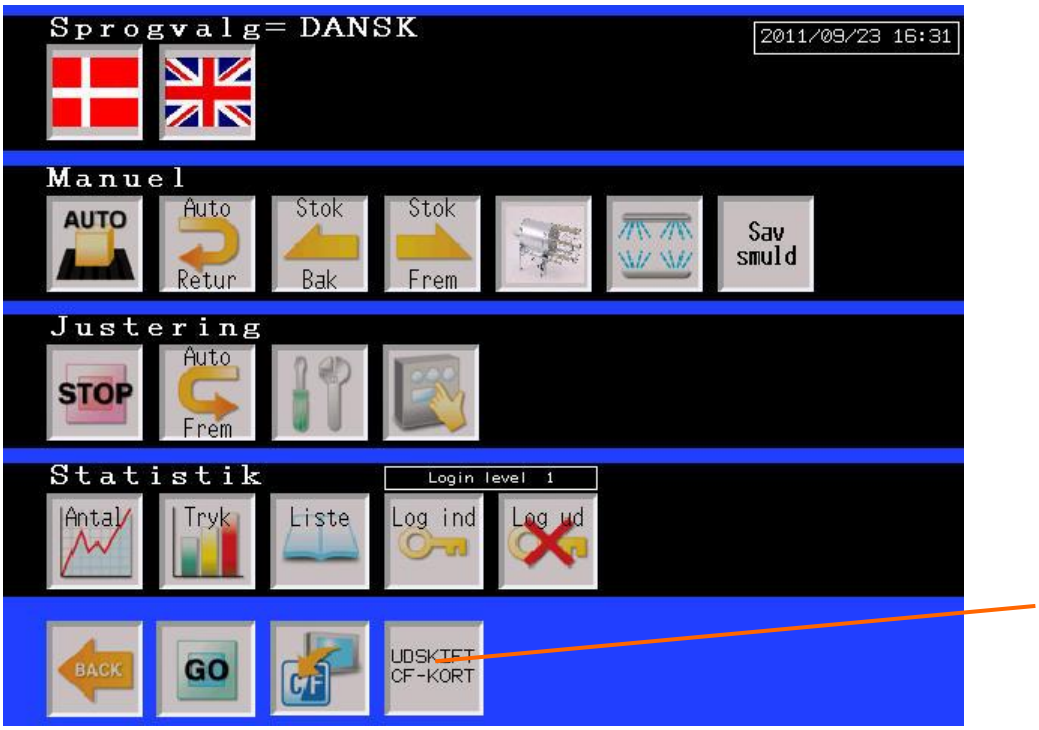


Fig. 22

- 4. Press **"start"**

Fig. 23

- 5. Save the parameters.

Fig. 24

- 6. Saving parameters.

Fig. 25

- 7. When saving is complete, replace the SD-card and press **"OK"**.

Fig. 27

- 8. Reset the counters.

Fig. 28

- 9. To finish press **"Back"** and then log out.

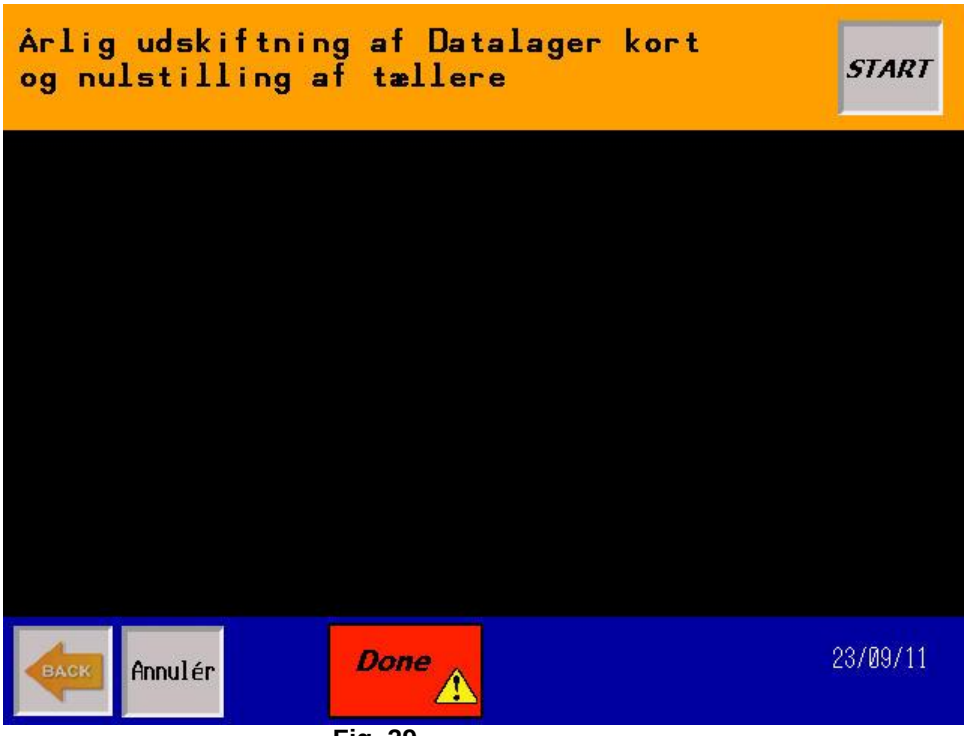


Fig. 29

8. Maintenance

8.1 At the beginning of the season

Before you start using the machine at the beginning of a new season, you need to check the following:

- The air filter's water separator needs to be emptied and cleaned.
- Make sure the machine has been cleaned as described in section 8.3.
- Clean rust and dirt off the shafts. If there is rust on the shafts, it needs to be removed using a fine abrasive cloth.
- All shafts need to be lubricated with a thin layer of a neutral oil.
- Make sure that the fleshing motors, the beam and the skin remover are able to move freely.
- Make sure that the motor mounting is not broken.
- Check the quality of the impellers (the blade and surface deformation).
- Make sure that the beam and the skin scraper rubber, the skin remover rubber and the skin remover are not broken or deformed.

DANGER!

Always disconnect the machine's compressed air and power supply before maintenance, cleaning and other service activities are performed on the

- The suction tubes/pipes and suction heads need to be checked for leaks and deformations.
- Make sure to check all cables and air hoses for cracks and leaks.

- Carry out the start-up procedure as described in section 4 of chapter 6. The machine is supposed to be connected to a fat suction device, a leather side drum and a sawdust return device etc. ***REMEBER! The Start button must not be activated when there is no skin on the beam.***

8.2 Daily maintenance

The Fleshing Automat requires very little daily maintenance if you make sure you follow a few simple rules.

- The beam scraper and the fat scraper must be cleaned with a blow gun every 100-150 skins or whenever the operator takes a break.

DANGER!

Never start the machine without the protective screen(s)!

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- The fleshing room needs to be cleaned daily when the day's work is done. Remove the side shield and get the impellers to move apart from each other (fig. 31). Turn on the suction device and clean the entire fleshing room using compressed air, i.e. the frame, sliding guides, motors, compressed air cylinders, suction heads etc.
- After cleaning check the motor mounting for cracks. Make sure that the fleshing motors, compressed air cylinders, scraper etc. can move freely. Make sure that no parts have

been loosened and that the impellers and the scraper rubber are not damaged.

DANGER!

Always disconnect the machine's compressed air and power supply before maintenance, cleaning and other service activities are performed on the machine.

8.3 End-of- season maintenance

At the end of the season the Fleshing Automat needs to be thoroughly cleaned. If you leave the machine without proper cleaning and end-of-season maintenance, the preparation of your machine for the next season may become unnecessarily expensive. Rust on shafts etc. may result in subsequent wear of the fleshing rings and bearings. A machine that has not been cleaned properly is an easy target for rodents and vermin, which can lead to damage to the machine's cables and air hoses.

- Remove all sawdust from the sawdust machine.
- The suction box with hoses needs to be dismounted, cleaned and checked for cracks. The rest of the suction hoses along with the manifold must also be disassembled and washed in order to keep up the maximum suction capacity.
- If the impellers can still be used, it is recommended to dismount and wash them, after which they need to be stored in a dark and cool room. **Note! It is important to have the impellers standing on their ends so that the blades don't get deformed.**

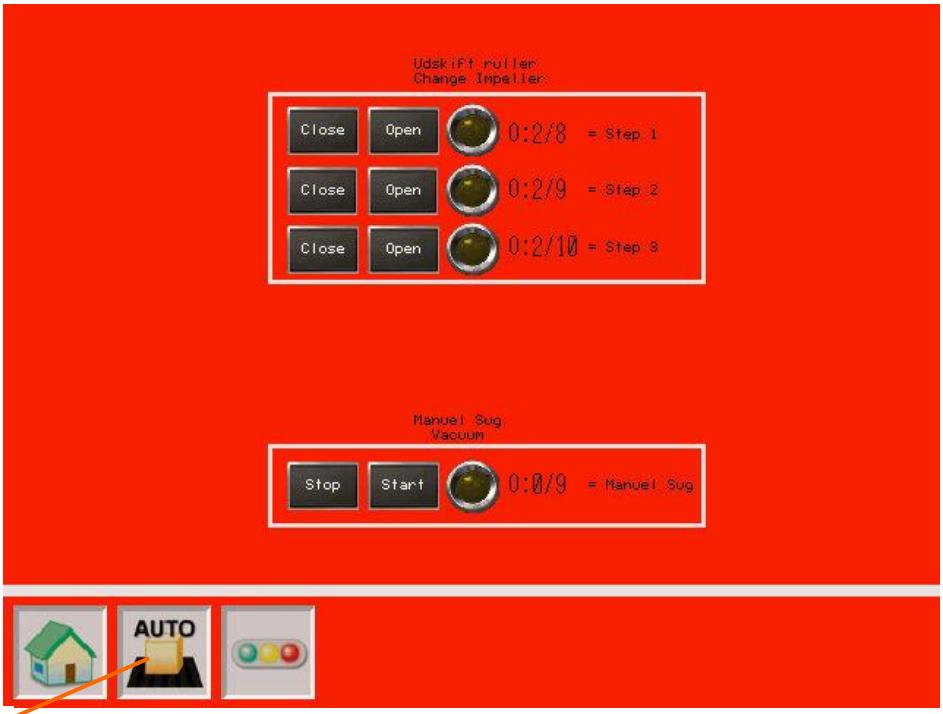
- Clean the entire machine using compressed air but the dirtiest parts of the machine may need to be cleaned using a high-pressure cleaning device. Avoid pouring water directly onto bushings, bearings and electrical components. If the fleshing motors have been sprayed with water, they should be kept running for about 30 minutes so that the water can evaporate.
- Finally, the machine needs to be blown dry with compressed air and all shafts need to be lubricated with a thin layer of oil in order to prevent corrosion attacks.
- Remember to close all control cabinets in order to prevent rodents from coming in.

8.4 Impeller replacement

It is necessary to replace the impellers once their blades become worn or deformed or when you need to use a set of impellers with a different hardness. Factors that may cause the lifespan of impellers to shorten include e.g. fleshing mink skins that haven't had the paws cut completely off, in which case you may damage the impellers' blades. Too hard pressure applied to a soft impeller can also damage an impeller, as can incorrect storage. The impellers should be stored in dark and cool rooms. **Note! It is important to have the impellers stand on their ends so that the blades don't become deformed.** Below you will find a description how to replace the impellers.

Fig. 30

- Remove the side shields located next to the controller.



Auto/Man

Fig. 31 Impeller replacement.

- 1. Switch from **"Auto"** to **"Man".**

- To get the impellers to move outwards press and hold **"Open"** for a couple of seconds.
  Note! When the impellers have been replaced, press and hold **"Close"** until the impellers have returned to their original position.

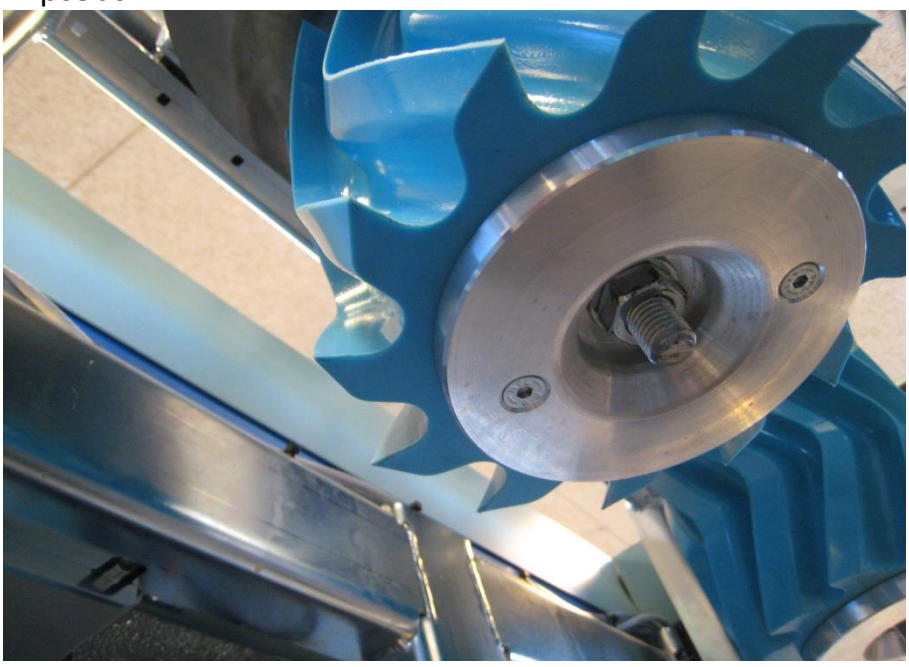


Fig. 32

- Use a 22 top to loosen and fasten the impeller. **Important! After replacing the impellers make sure that they are facing the right way.**

Fig.33

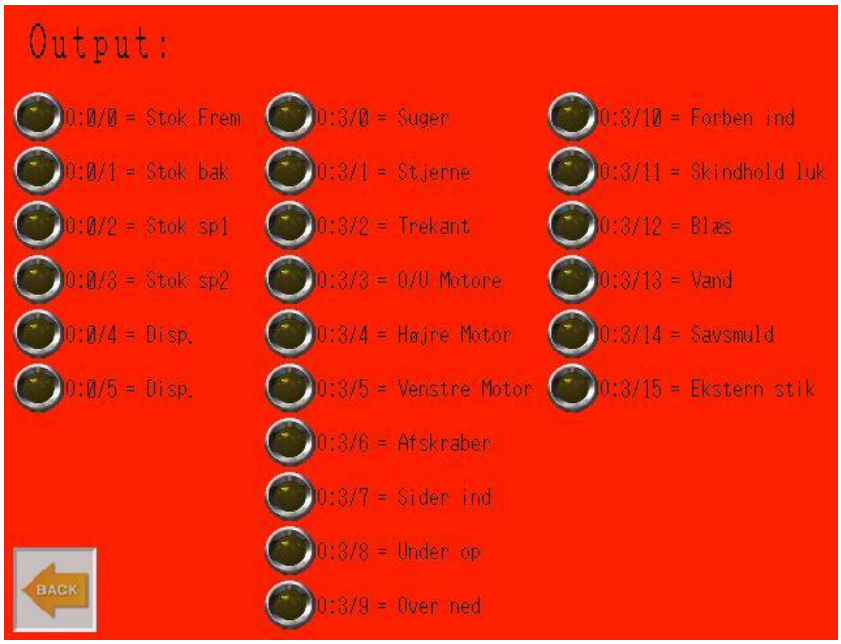
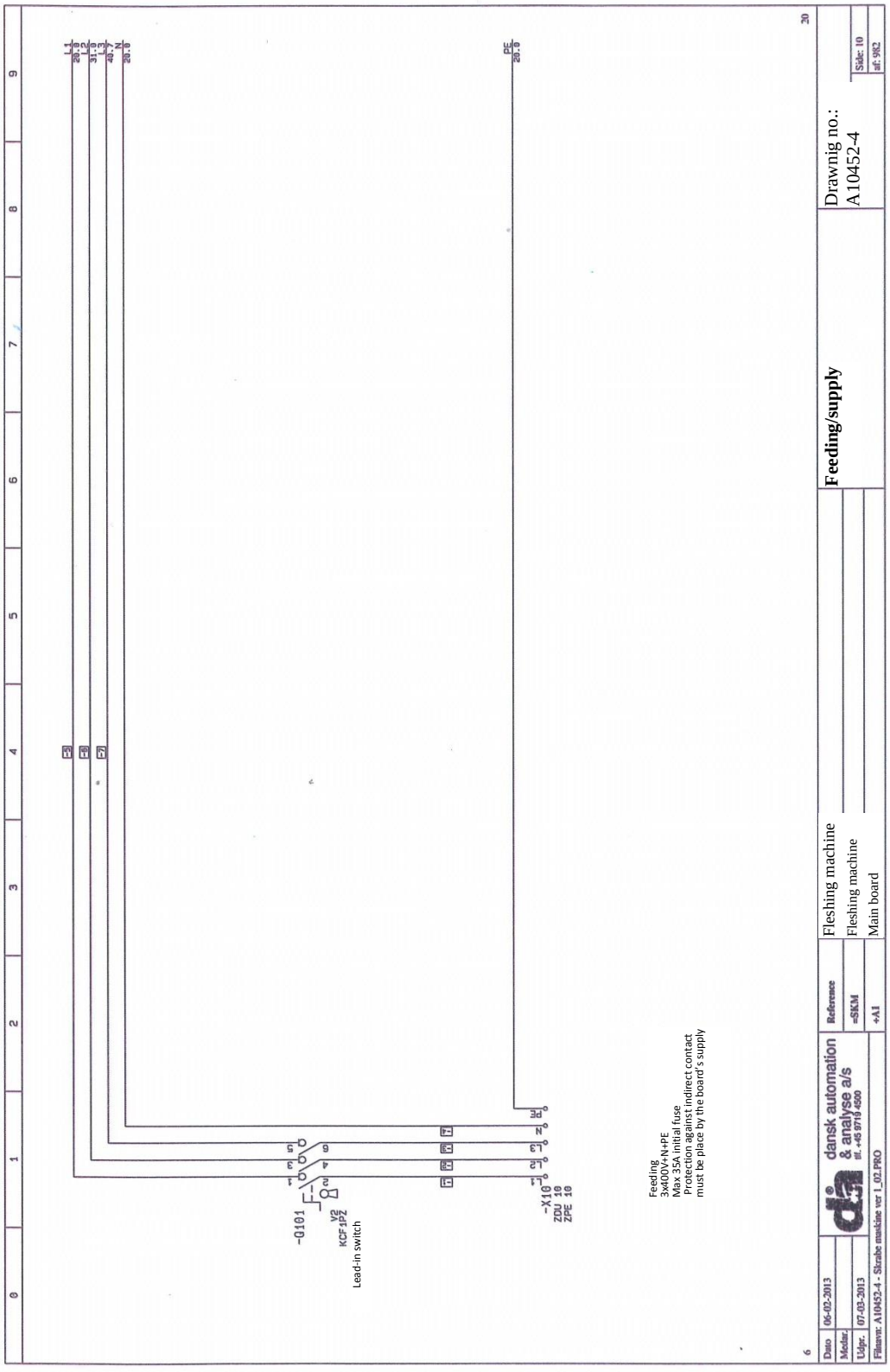


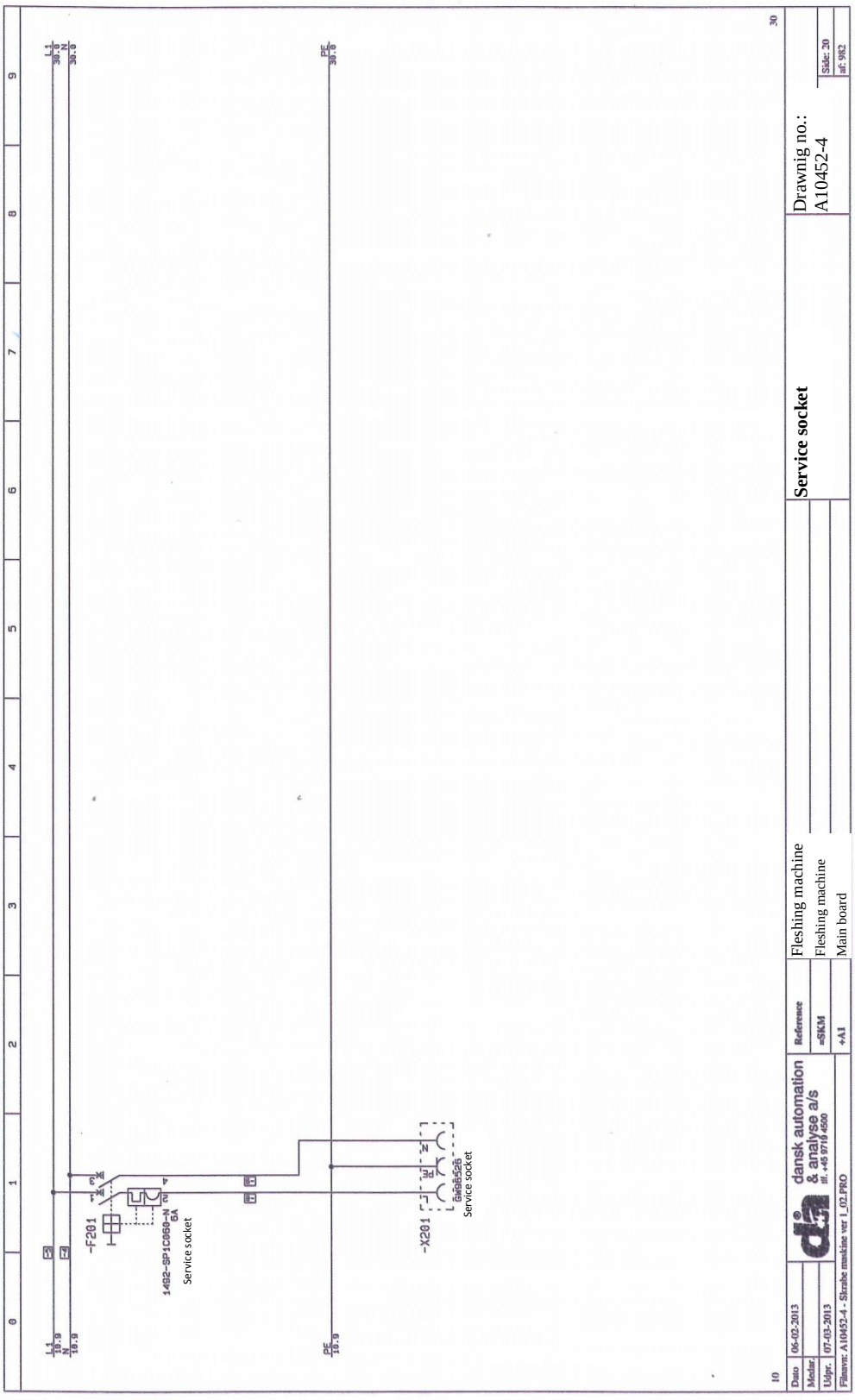
Fig. 34

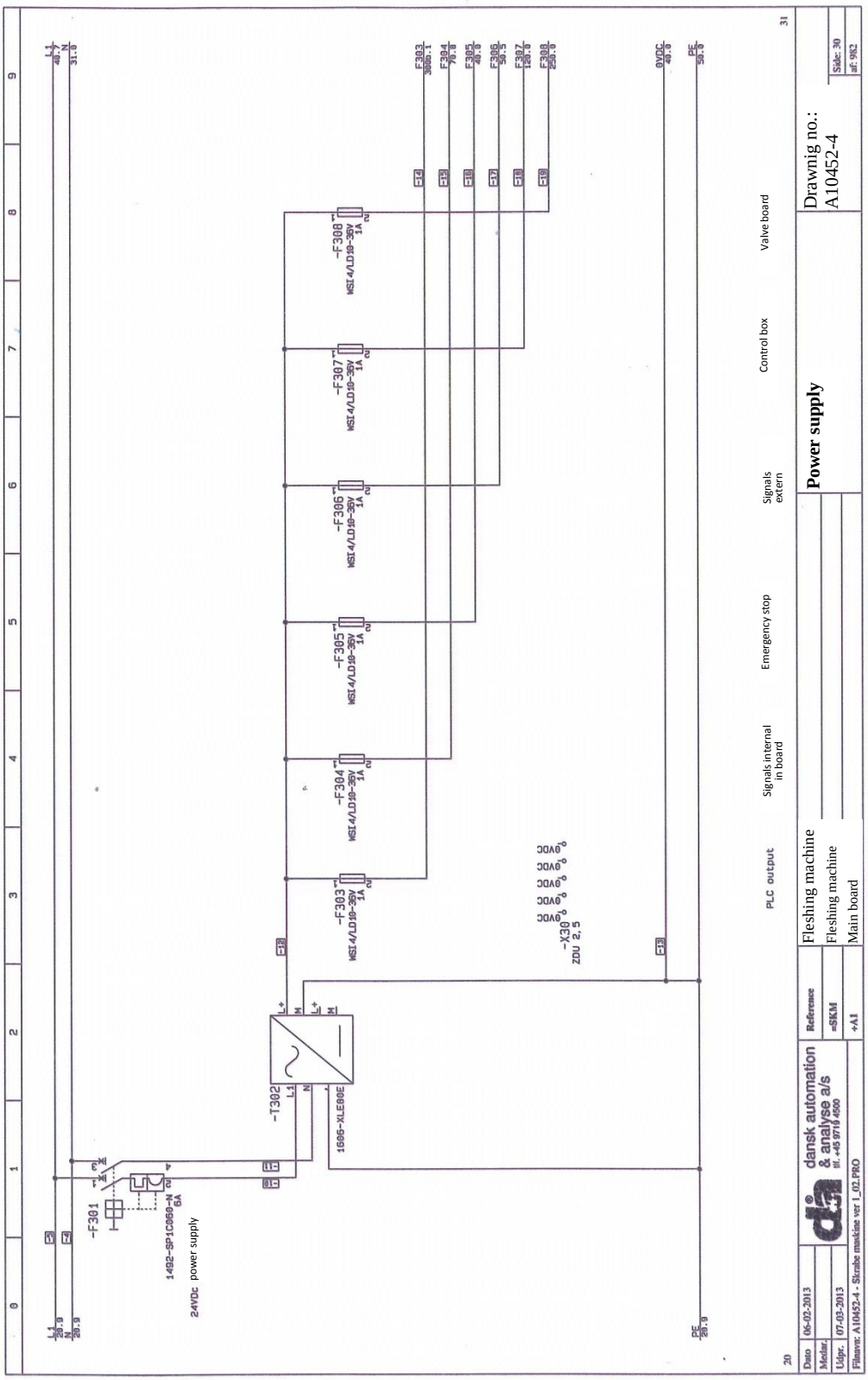
9. Technical data

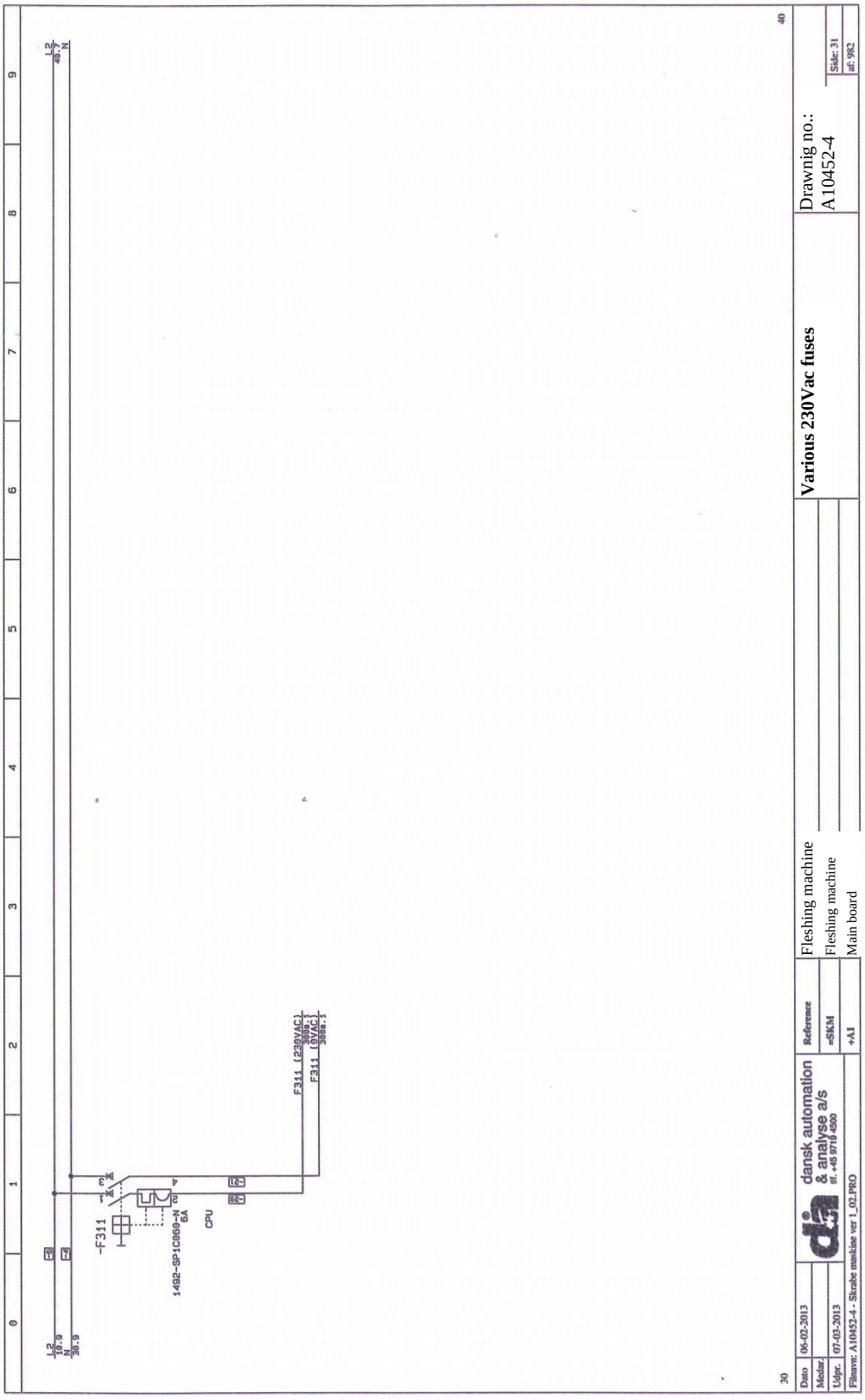
• Power connection		32A 5-pole CEE plug 3X400 V+N+PE
• Power consumption		32 A
• Air connection		Quick-release coupling
• Compressed air		Min. 8 bar
• Compressed air consumption		120 l/min.
• Dimensions	Height	210 cm
	Length	470 cm
	Width	190 cm
• Electrical cabinet	Height	170 cm
	Length	60 cm
	Width	40 cm

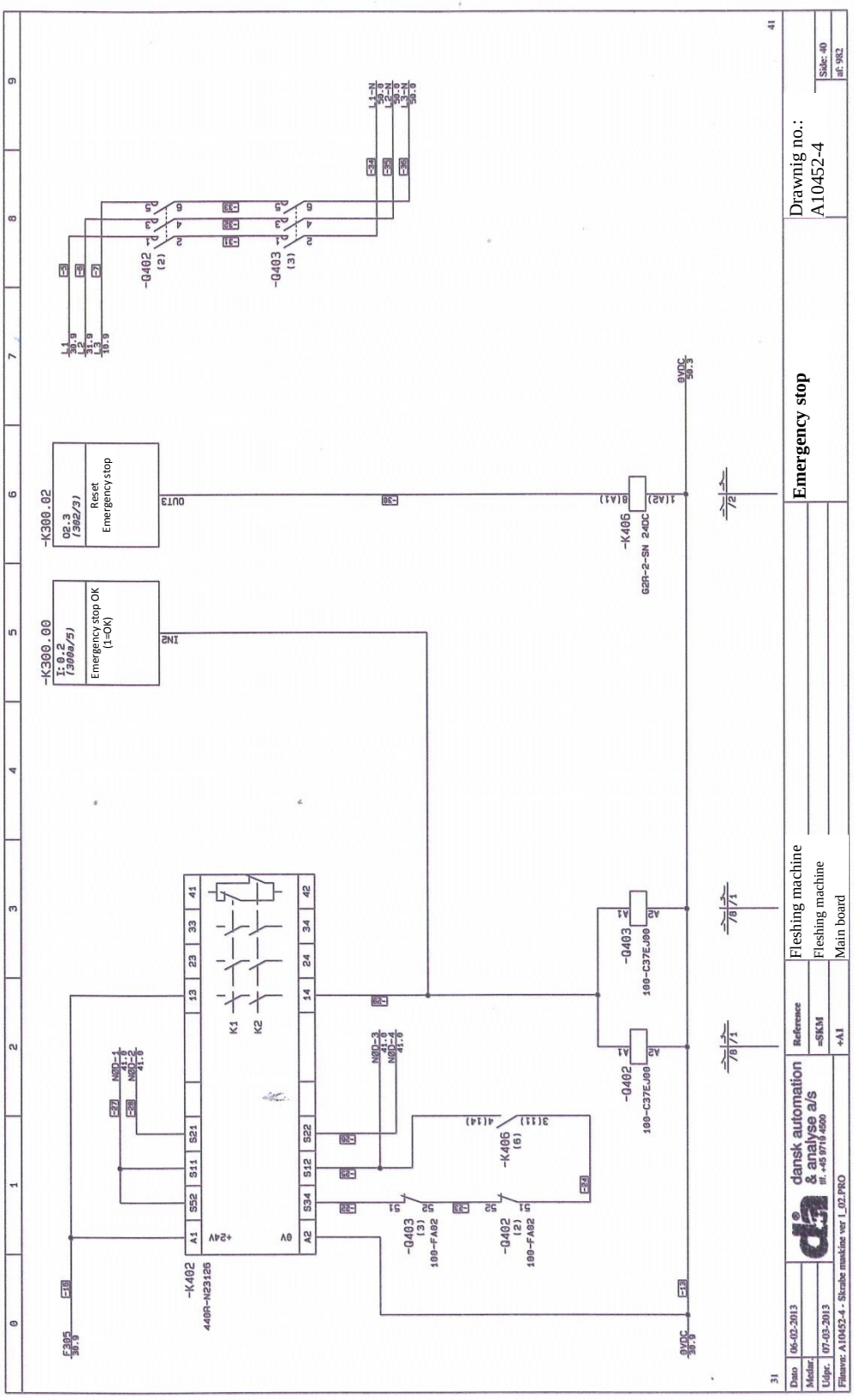
10. Circuit and airflow diagrams

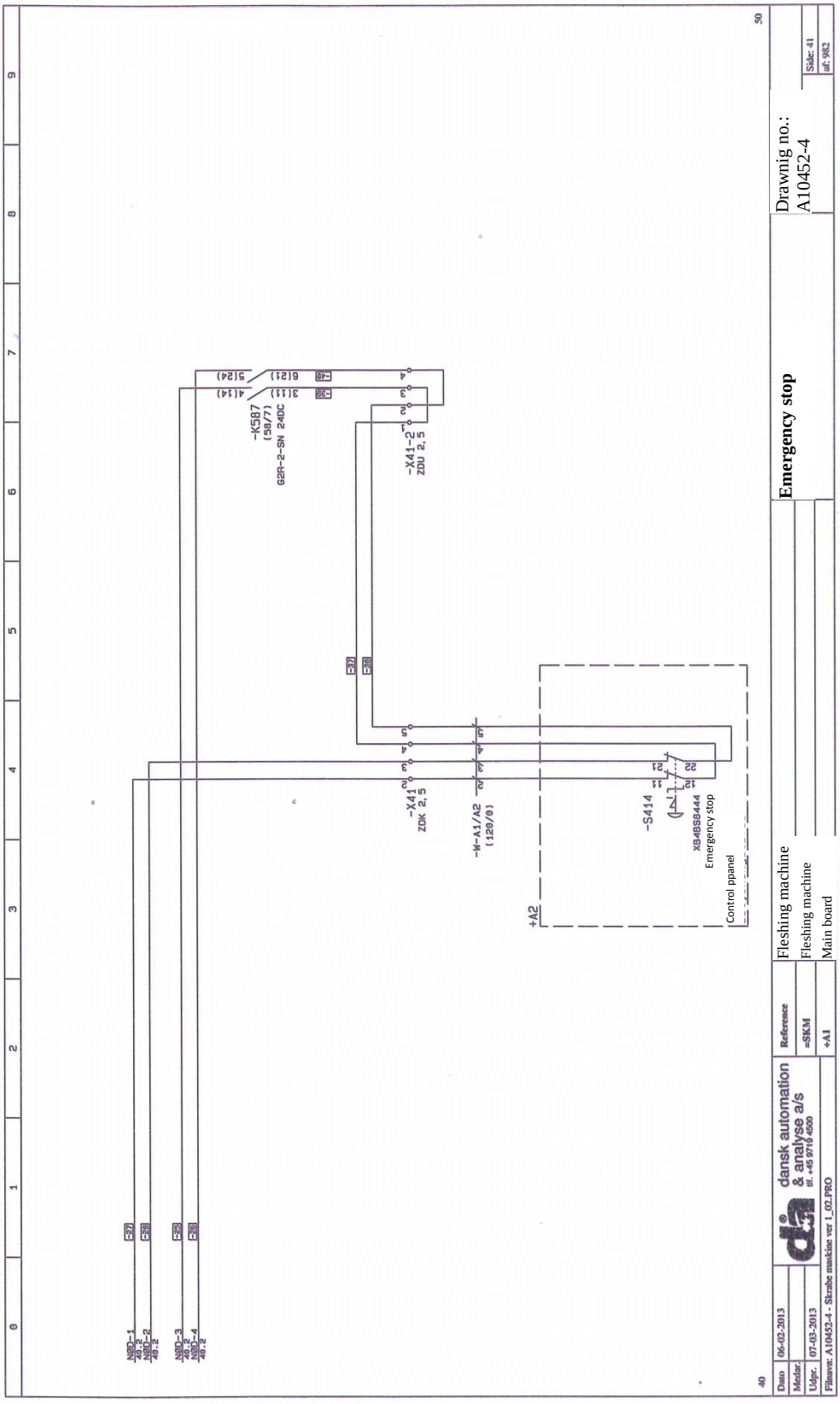


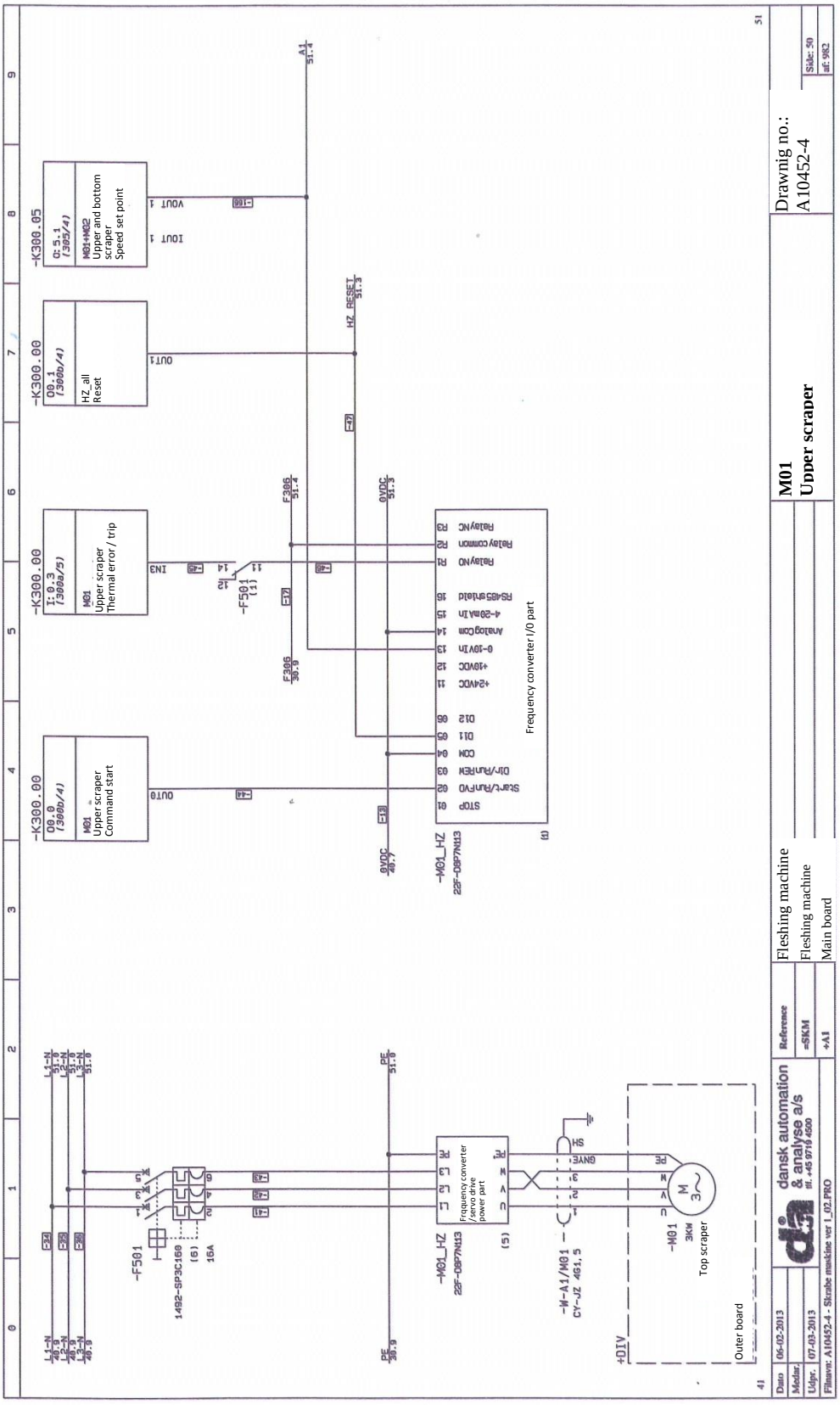

Service socket
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
-F201
-X201
Service socket
Service socket

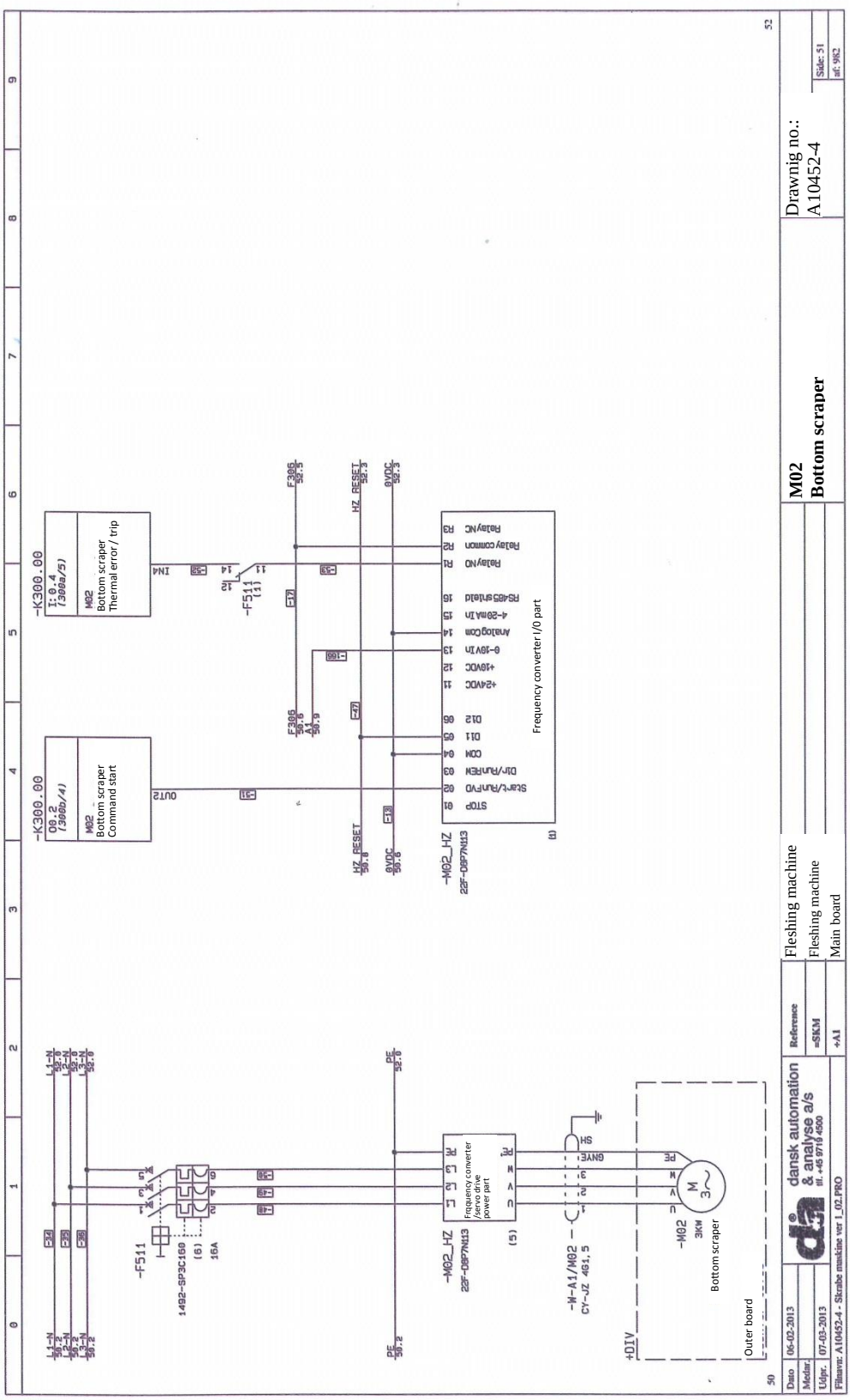

Power supply
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation & analyse a/s
-F301
-T302
-F303
-F304
-F305
-F306
-F307
-F308
-X30
24VDc power supply
PLC output
Signals internal in board
Emergency stop
Signals extern
Control box
Valve board

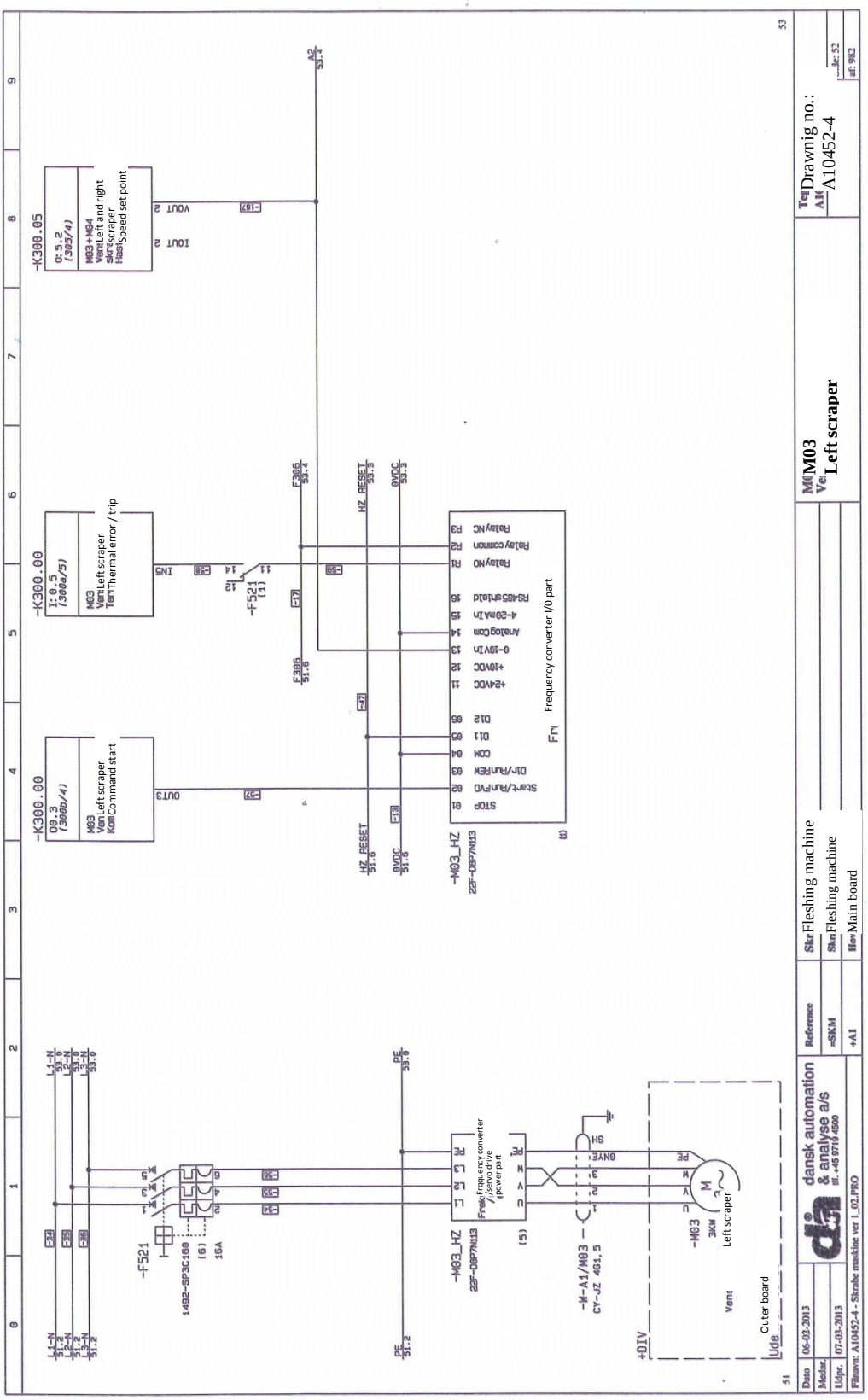

Various 230Vac fuses
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
-F311
CPU
F311 (230VAC)
F311 (0VAC)

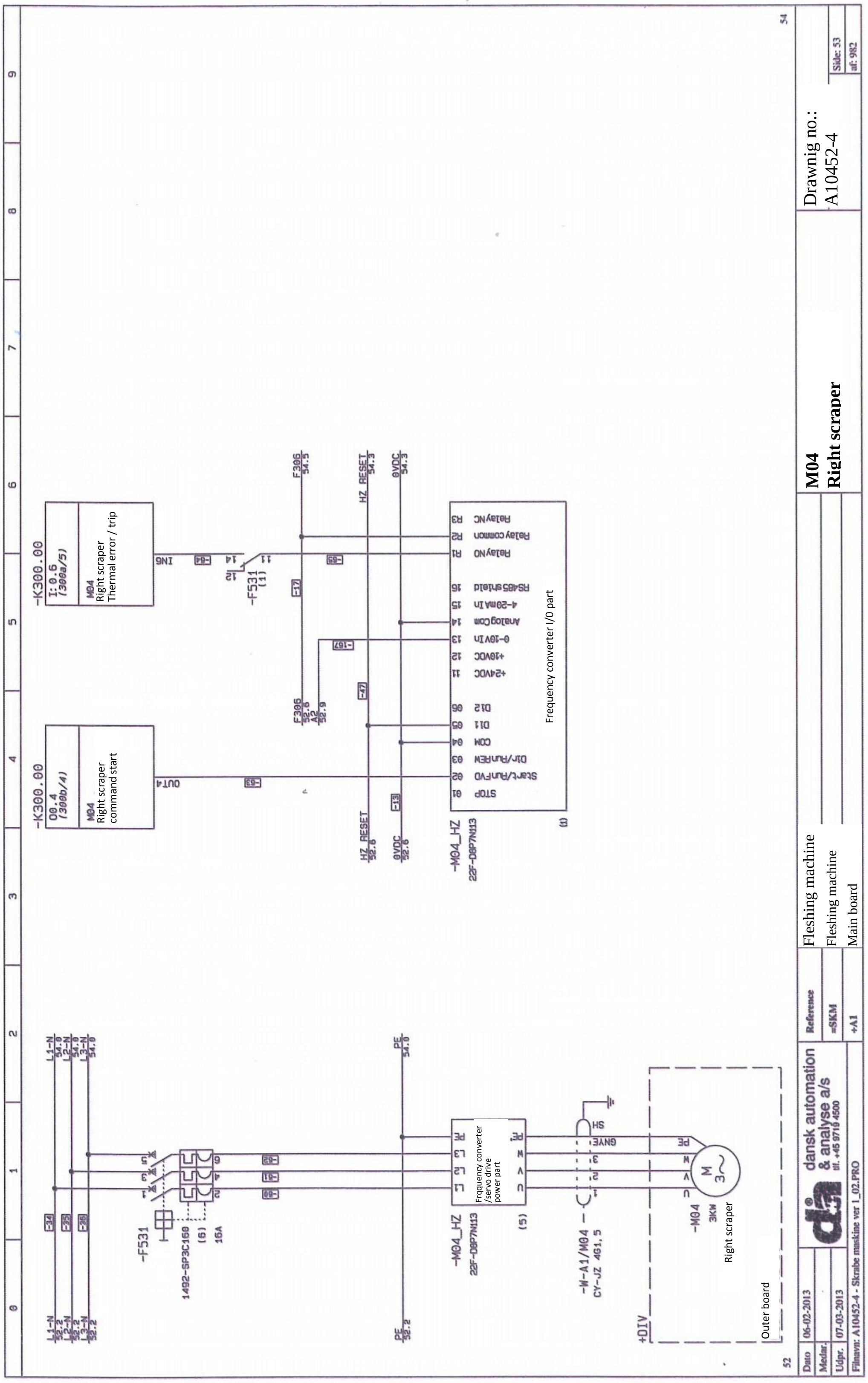

Emergency stop
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation & analyse a/s
-K300.00
I:0.2
(300a/5)
Emergency stop OK (1=OK)
-K300.02
02:3
(302/3)
Reset
Emergency stop
-K402
440R-N23126
-K406
G2R-2-SN 240C
-Q402
100-C37EJ00
-Q403
100-C37EJ00
-Q402
(2)
100-FA02
-Q403
(3)
100-FA02
-K406
(6)
-Q402
(2)
-Q403
(3)
F305
L1-N
L2-N
L3-N
0VDC
+24V
0V

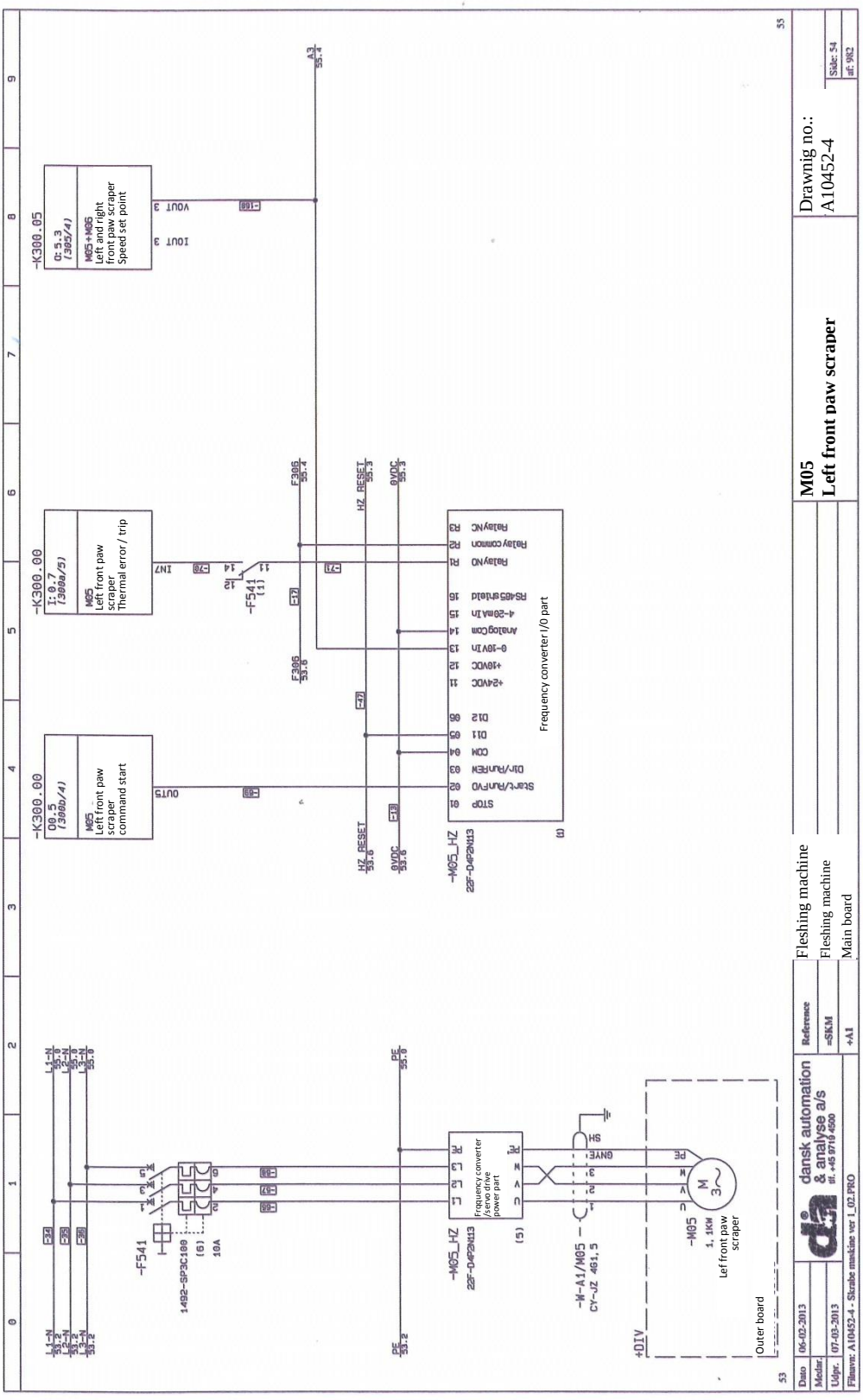

Emergency stop
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
-K587
(58/7)
G2R-2-SN 24DC
-X41-2
ZDU 2,5
-X41
ZDK 2,5
-M-A1/A2
(128/0)
-S414
XB4BS8444
Emergency stop
Control ppanel
+A2

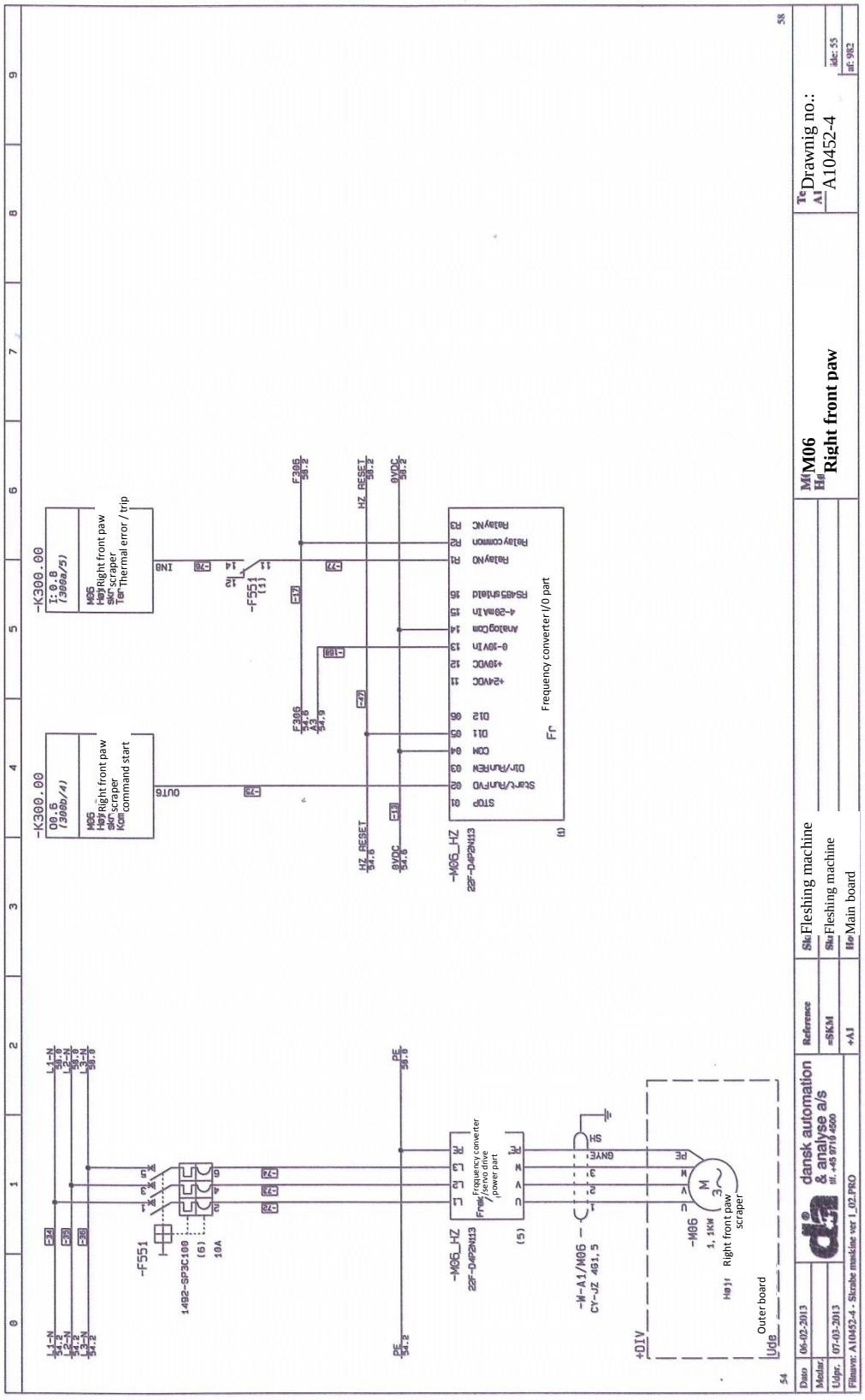

M01
Upper scraper
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
-K300.05
-K300.00
-K300.00
-K300.00
Upper and bottom scraper Speed set point
HZ_all Reset
Upper scraper Thermal error / trip
Upper scraper Command start
Frequency converter I/O part
-F501
-M01_HZ
-M01
Top scraper
Outer board
Frequency converter /servo drive power part
-W-A1/M01
+DIV

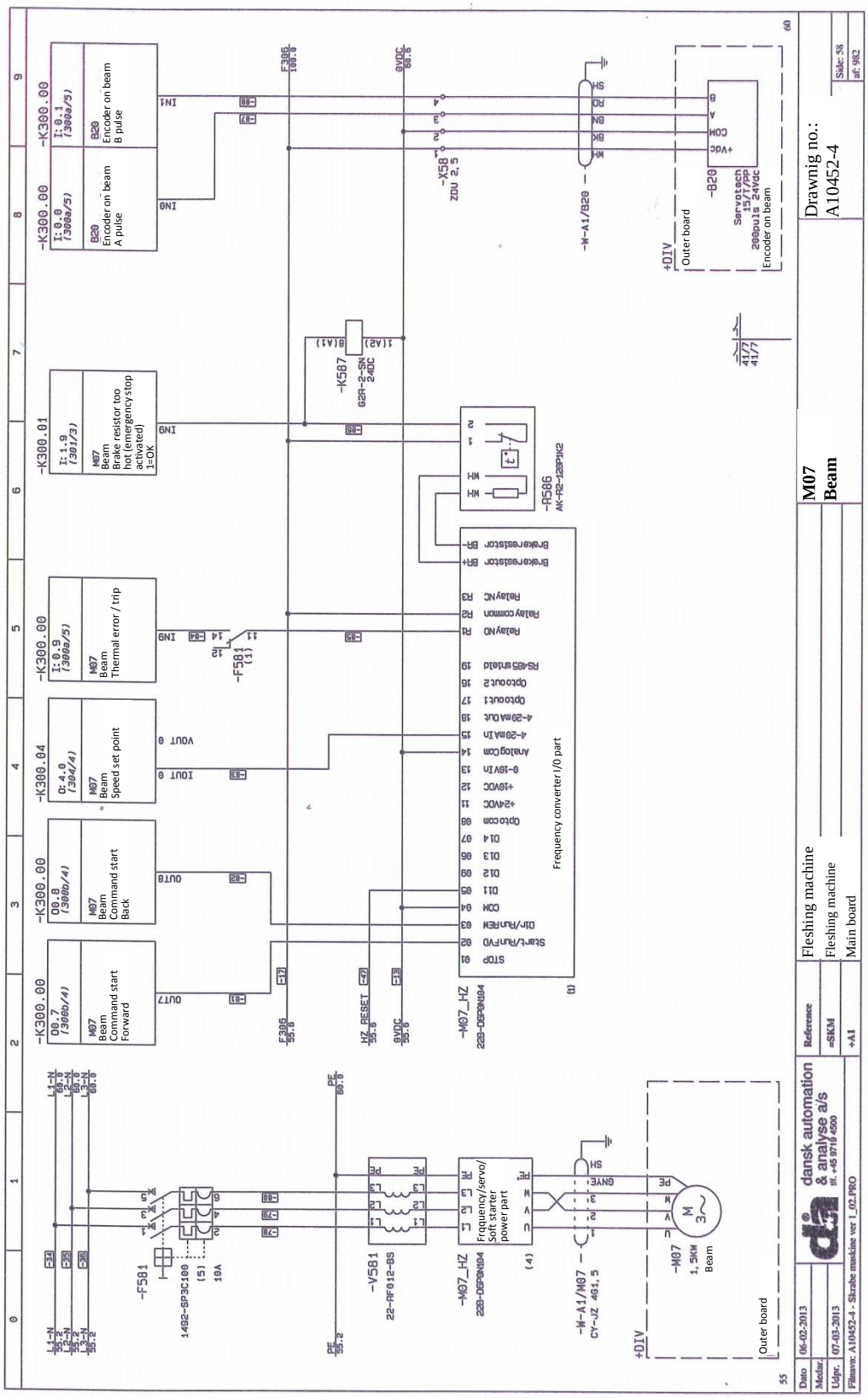

M02
Bottom scraper
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
Frequency converter I/O part
Frequency converter
/servo drive
power part
Bottom scraper
Outer board
-K300.00
-F511
-M02_HZ
-M02
-W-A1/M02
Command start
Thermal error / trip

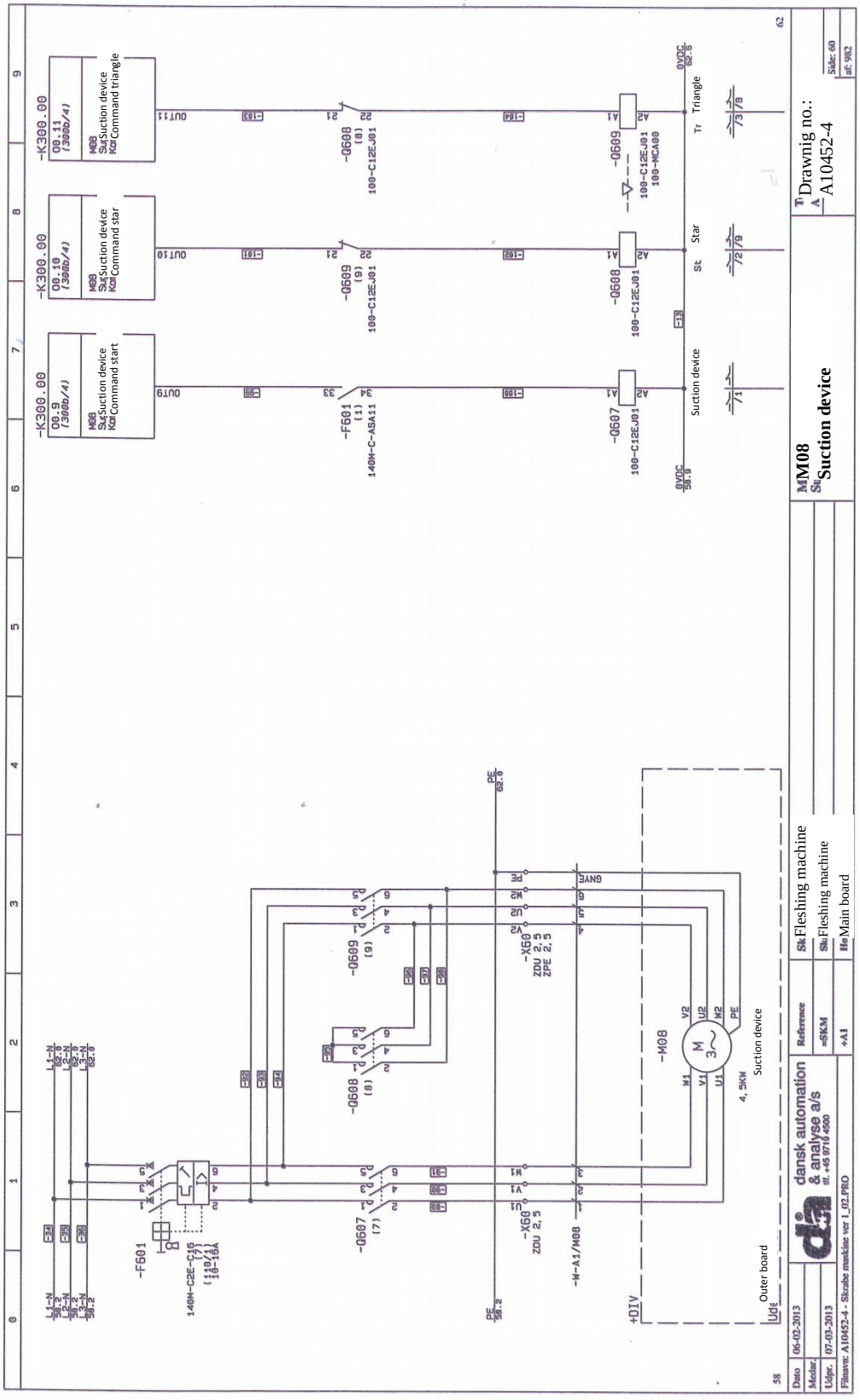

-K300.00
-K300.05
-M03_HZ
-F521
-M03
-W-A1/M03
Frequency converter I/O part
Left scraper
Outer board
dansk automation & analyse a/s
Drawnig no.: A10452-4
M03
Left scraper
Fleshing machine
Main board

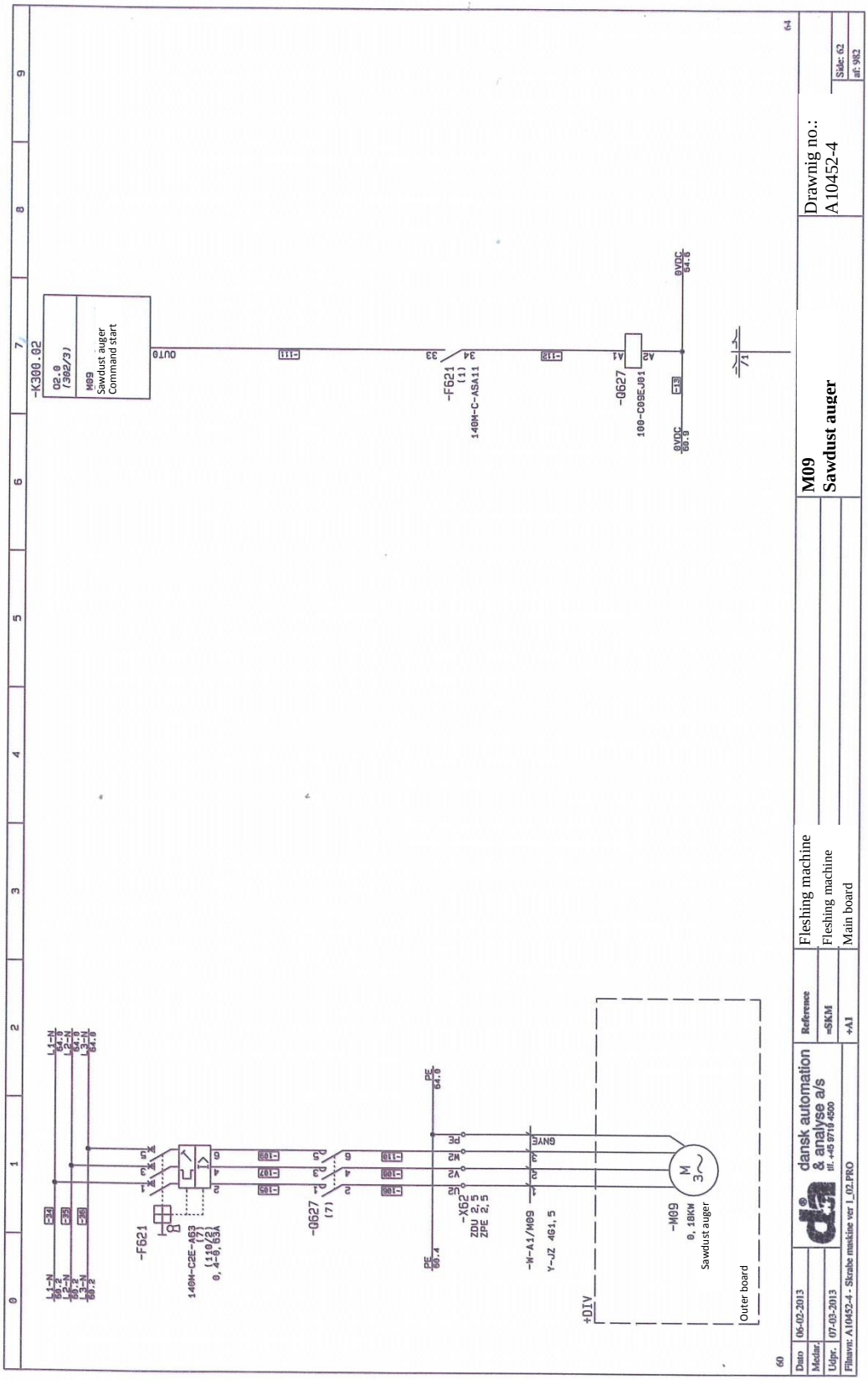

-K300.00
O0.4
M04
Right scraper
command start
OUT4
-K300.00
I:0.6
M04
Right scraper
Thermal error / trip
IN6
-F531
-M04_HZ
22F-D8P7N113
Frequency converter I/O part
STOP
Start/Run FWD
Dir/Run REW
COM
DI1
DI2
+24VDC
+10VDC
0-10V In
Analog Com
4-20mA In
RS485 shield
Relay NO
Relay common
Relay NC
HZ_RESET
0VDC
F306
PE
1492-SP3C160
16A
Frequency converter
/servo drive
power part
-W-A1/M04
CY-JZ 4G1,5
-M04
3KW
Right scraper
+DIV
Outer board
Dato 06-02-2013
Udpr. 07-03-2013
dansk automation & analyse a/s
Reference
=SKM
+A1
Fleshing machine
Fleshing machine
Main board
M04
Right scraper
Drawnig no.:
A10452-4
Side: 53
af: 982

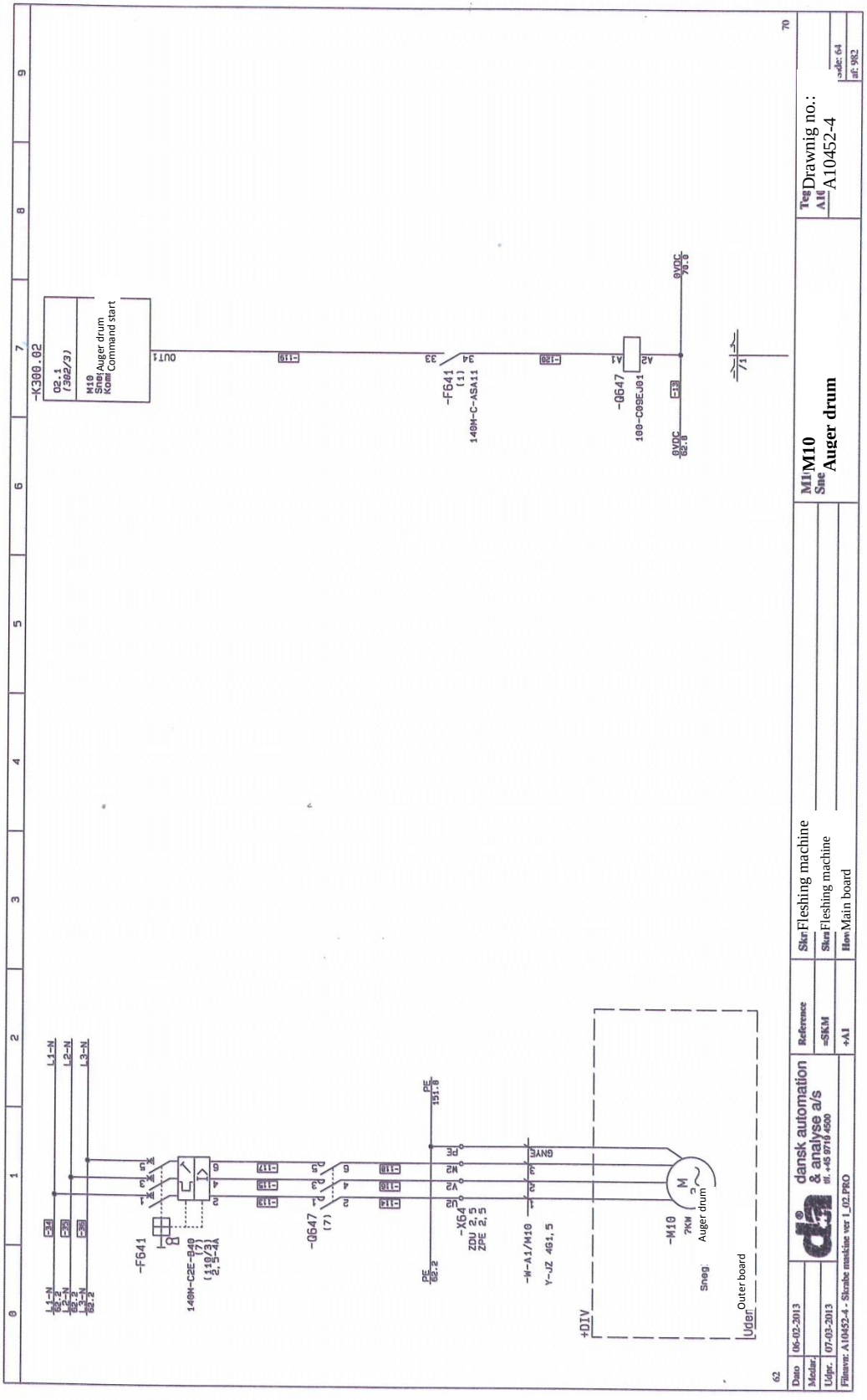

M05
Left front paw scraper
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation & analyse a/s
Frequency converter I/O part
Outer board
Left front paw scraper
-K300.00
-K300.05
-F541
-M05_HZ
-W-A1/M05
-M05

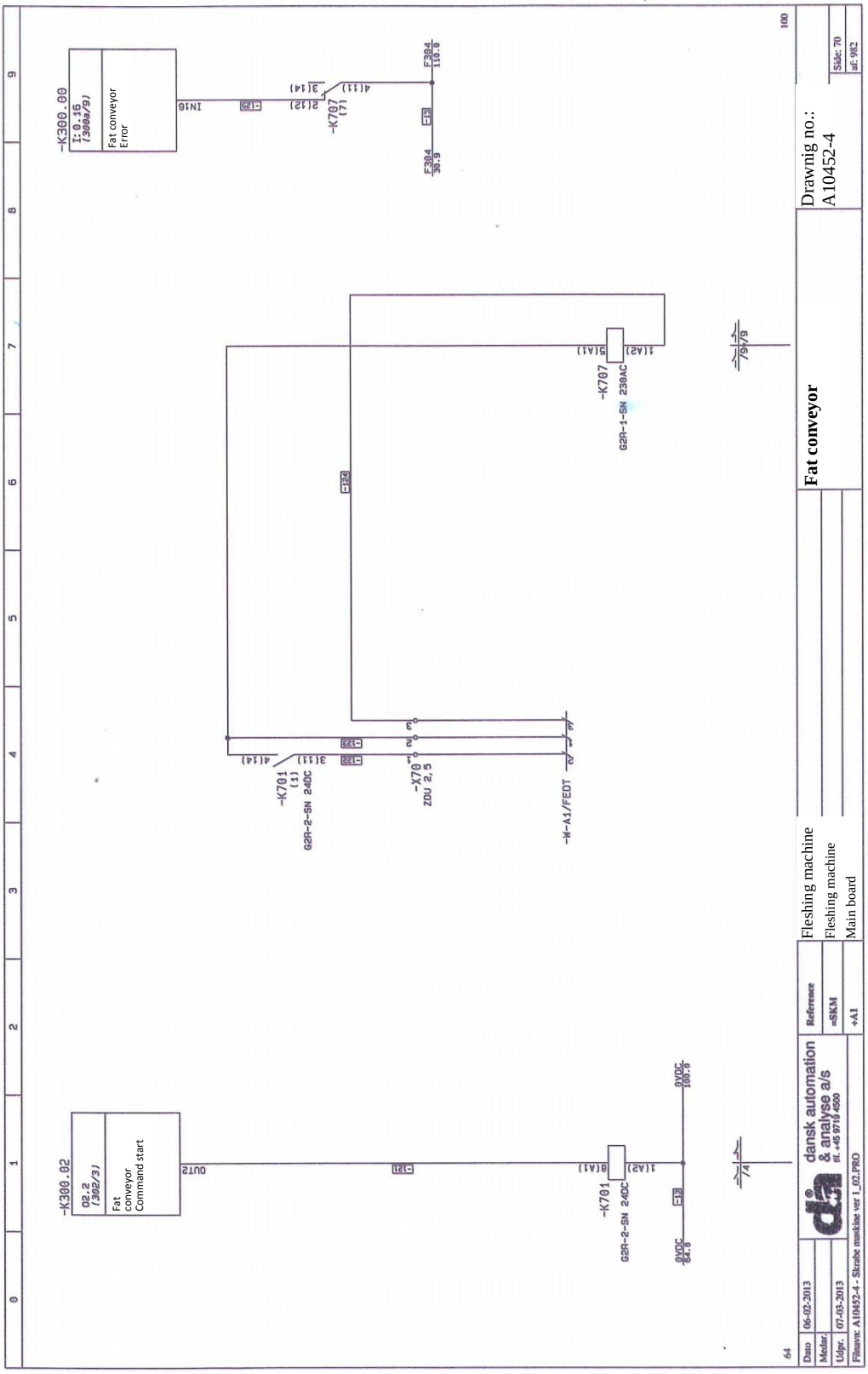

M06
Right front paw
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
-K300.00
I: 0.8
(300a/5)
M06 Right front paw
SKM scraper
Ter Thermal error / trip
-K300.00
O0.5
(300b/4)
M06 Right front paw
SKM scraper
Kom command start
-F551
(1)
-M06_HZ
22F-D4P2N113
Frequency converter I/O part
Frequency converter
/servo drive
/power part
-M06
1,1KW
Right front paw
scraper
-W-A1/M06
CY-JZ 4G1,5
Outer board
+DIV
HZ_RESET
0VDC
F306
STOP
Start/RunFWD
Dir/RunREW
COM
DI1
DI2
+24VDC
+10VDC
0-10VIn
AnalogCom
4-20mAIn
RS485Gnd
Relay NO
Relay common
Relay NC

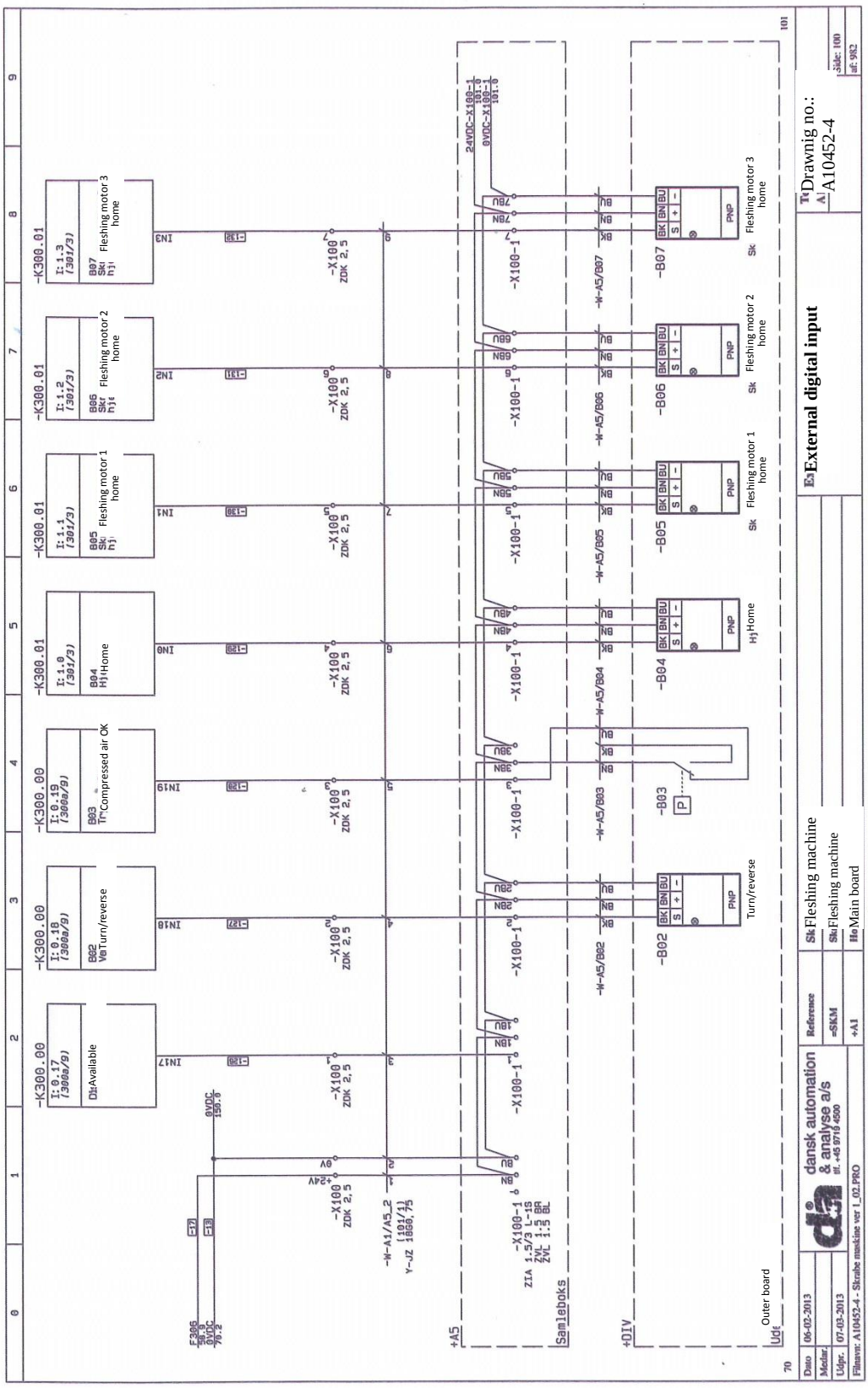

M07
Beam
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation & analyse a/s
Frequency converter I/O part
Outer board
Encoder on beam
Brake resistor too hot (emergency stop activated) 1=OK
Thermal error / trip
Speed set point
Command start Back
Command start Forward
Frqquency/servo/ Soft starter power part
Beam
1,5KW

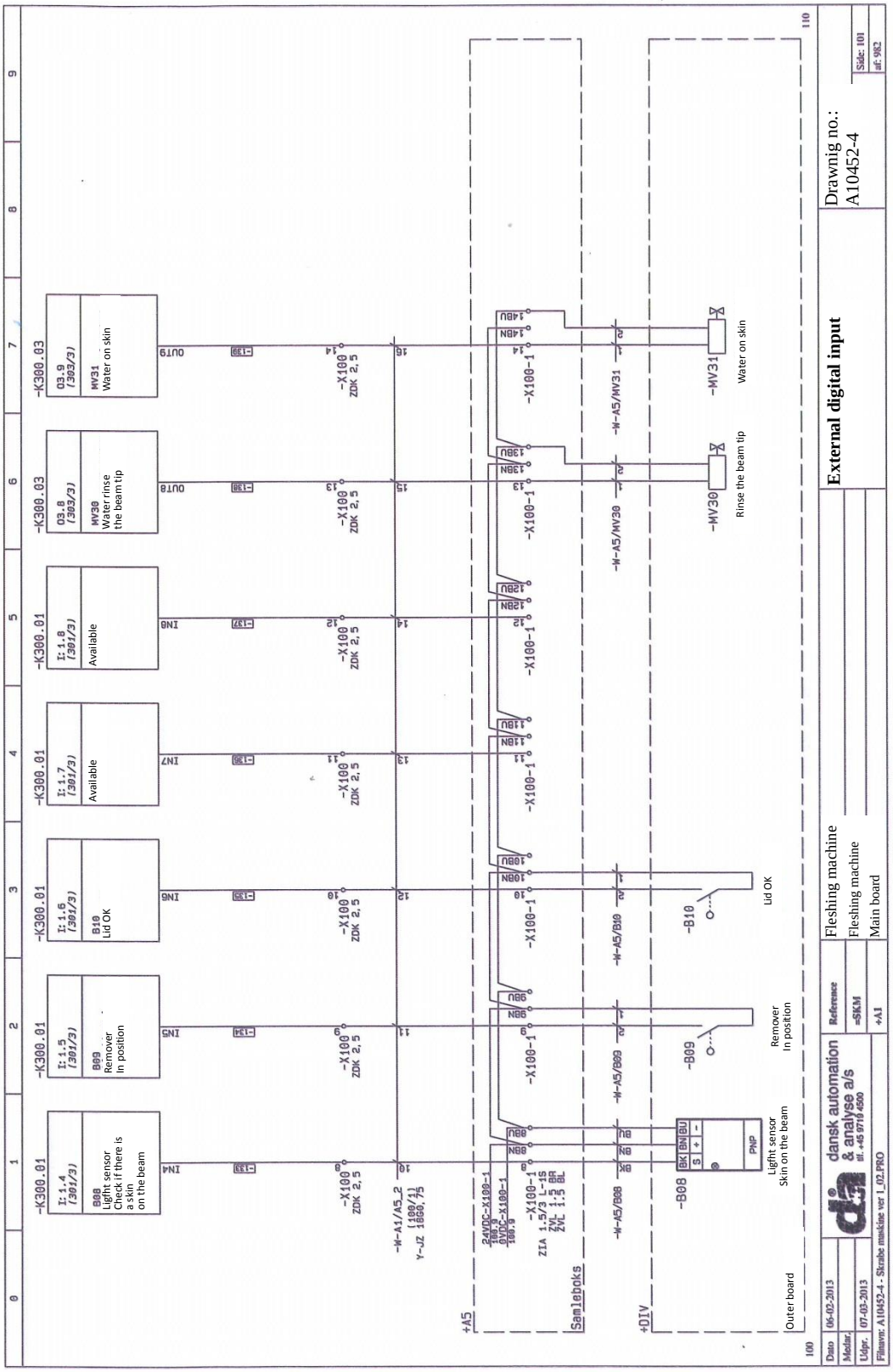

-K300.00
09.11
(300b/41)
M08
SuiSuction device
KdlCommand triangle
-K300.00
09.10
(300b/41)
M08
SuiSuction device
KdlCommand star
-K300.00
09.9
(300b/41)
M08
SuiSuction device
KdlCommand start
OUT11
OUT10
OUT9
-0608
(8)
100-C12EJ01
-0609
(9)
100-C12EJ01
-0607
(7)
100-C12EJ01
-F601
(1)
140M-C-A5A11
-0609
100-C12EJ01
100-MCA00
Tr Triangle
St Star
Suction device
0VDC
62.5
59.9
-M08
Suction device
4, 5KW
-W-A1/M08
-X60
ZDU 2,5
ZPE 2,5
-F601
140M-C2E-C16
(7)
(10/16)
10-16A
L1-N
L2-N
L3-N
62.0
59.2
PE
62.0
59.2
+DIY
Outer board
Udv
M08
Suction device
Drawnig no.:
A10452-4
Side: 60
af: 9K2
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
tlf. +45 9716 4500
Dato 06-02-2013
Medlar
Udpr. 07-03-2013
Filnavn: A10452-4 - Skrabe maskine ver 1_02.PRO

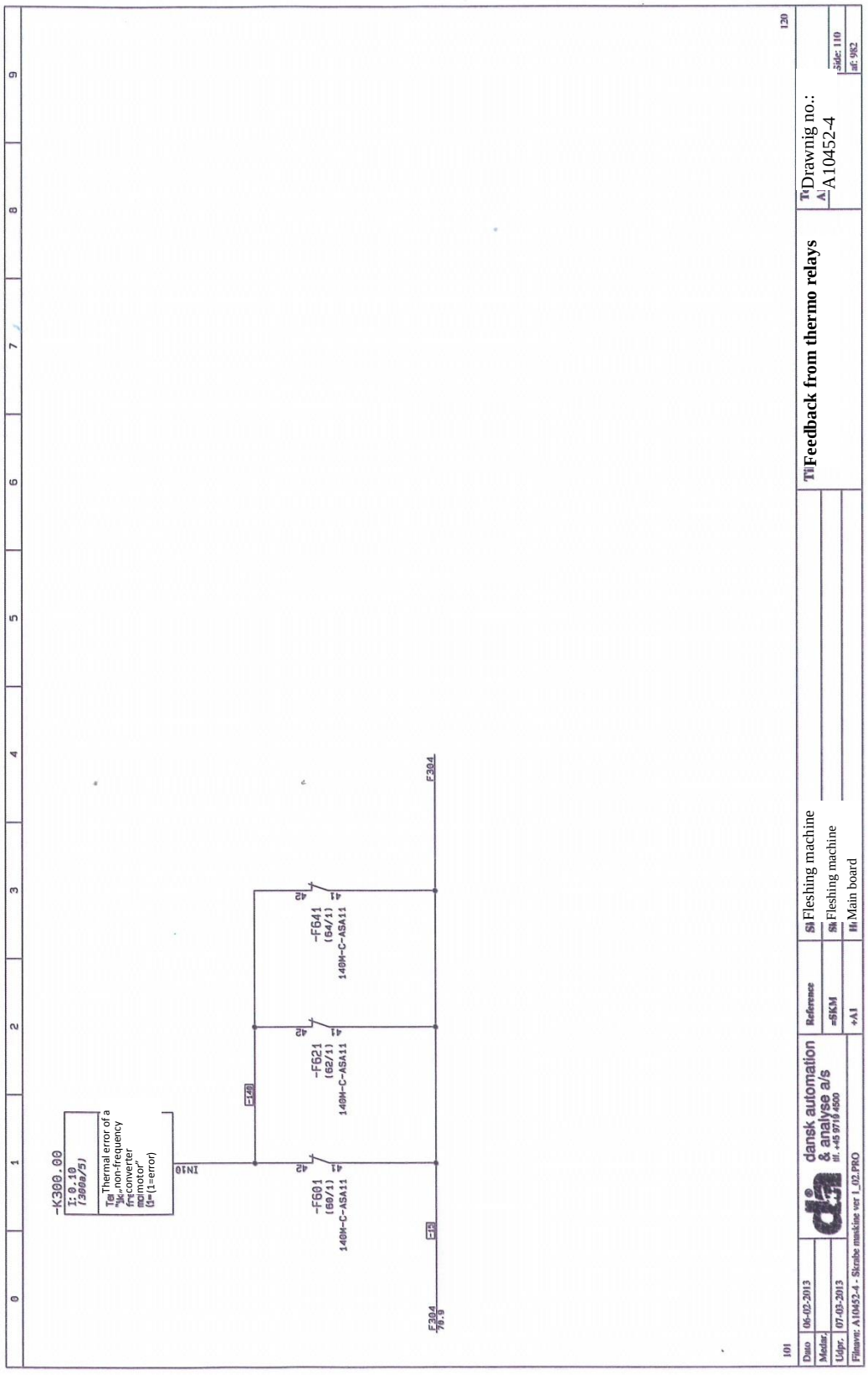

M09
Sawdust auger
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation & analyse a/s
Outer board
Sawdust auger
-K300.02
-F621
-0627
-M09
-XG2
-W-A1/M09
+DIV

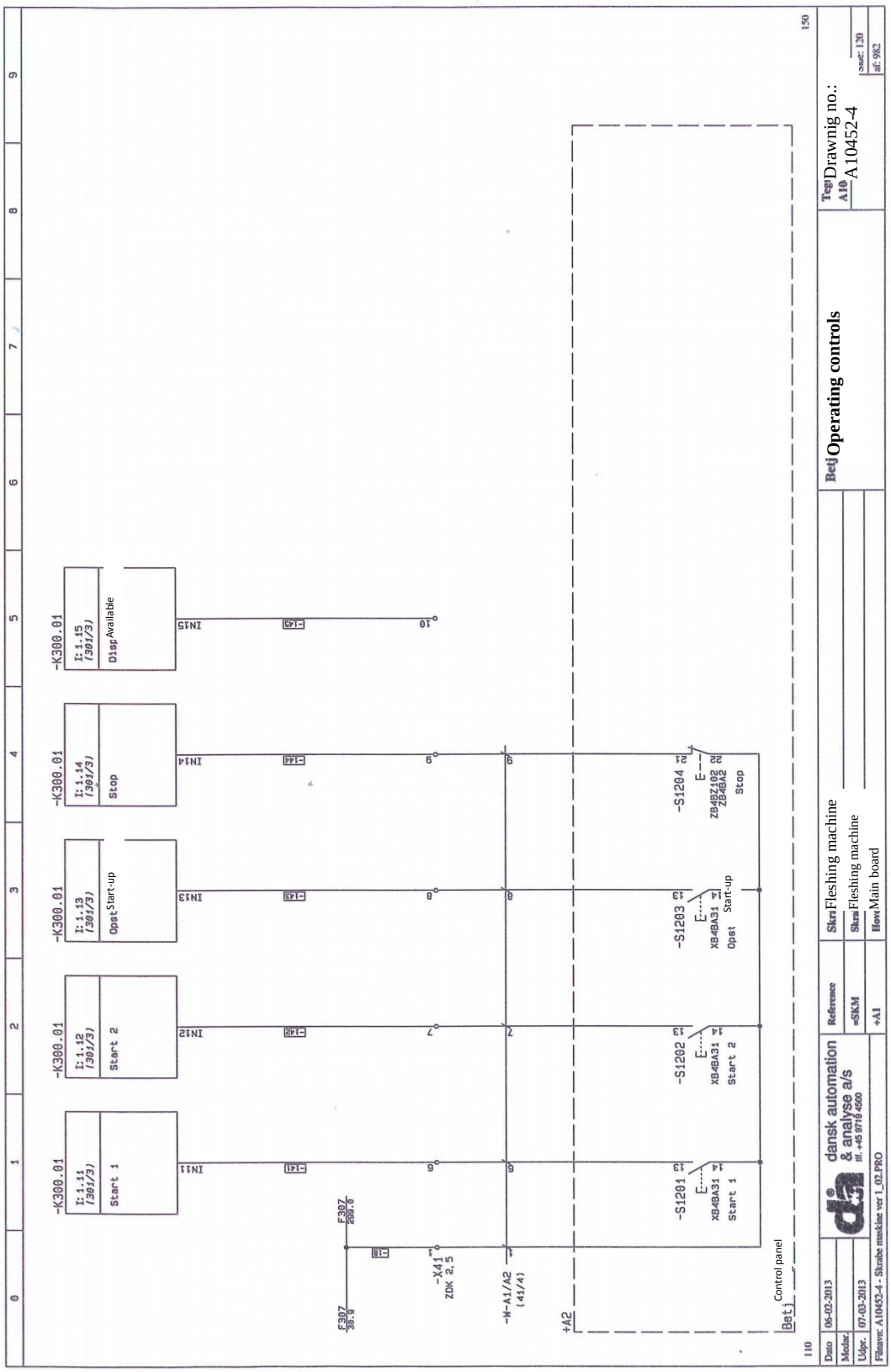

-K300.02
02.1
(302/3)
M10
Sneg Auger drum
Kom Command start
OUT 4
-F641
(1)
140M-C-ASA11
-Q647
100-C09EJ01
6VDC
70.6
6VDC
82.8
-F641
140M-C2E-B40
(119/3)
2,5-4A
-Q647
(7)
-X64
ZDU 2,5
ZPE 2,5
-W-A1/M10
Y-JZ 461,5
-M10
?KM
Auger drum
Sneg
Uden
Outer board
+DIV
L1-N
L2-N
L3-N
PE
151.8
PE
82.2
GNYE
M1 M10
Sne Auger drum
Tegn Drawnig no.:
Ant A10452-4
dansk automation
& analyse a/s
tlf. +45 9710 4500
Dato 06-02-2013
Modar.
Udgr. 07-03-2013
Filnavn: A10452-4 - Skrabe maskine ver 1_02.PRO
Reference
=SKM
+A1
Ske Fleshing machine
Ske Fleshing machine
Hom Main board

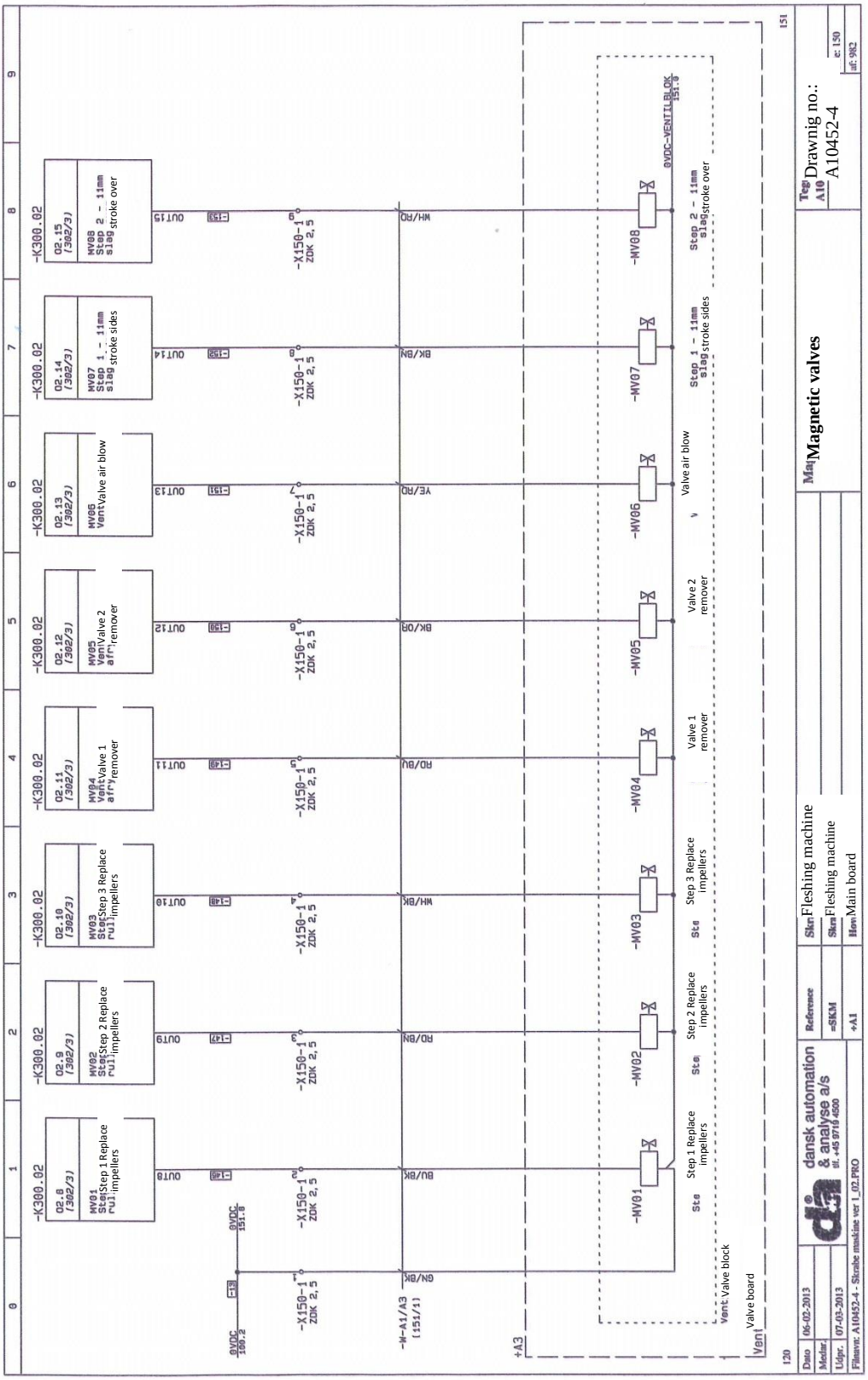

-K300.00
I:0.16
(300a/9)
Fat conveyor
Error
IN16
-K707
(7)
F304
110.8
F304
50.9
-K707
G2R-1-SN 230AC
-K701
(1)
G2R-2-SN 240C
-K70
ZDU 2.5
-W-A1/FEDT
-K300.02
02.2
(302/3)
Fat
conveyor
Command start
OUT2
-K701
G2R-2-SN 240C
0VDC
100.6
0VDC
64.8
Drawnig no.:
A10452-4
Fat conveyor
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
Reference
=SKM
+A1
Dato 06-02-2013
Udgv. 07-03-2013
Filnavn: A10452-4 - Skrabe maskine ver 1_02.PRO

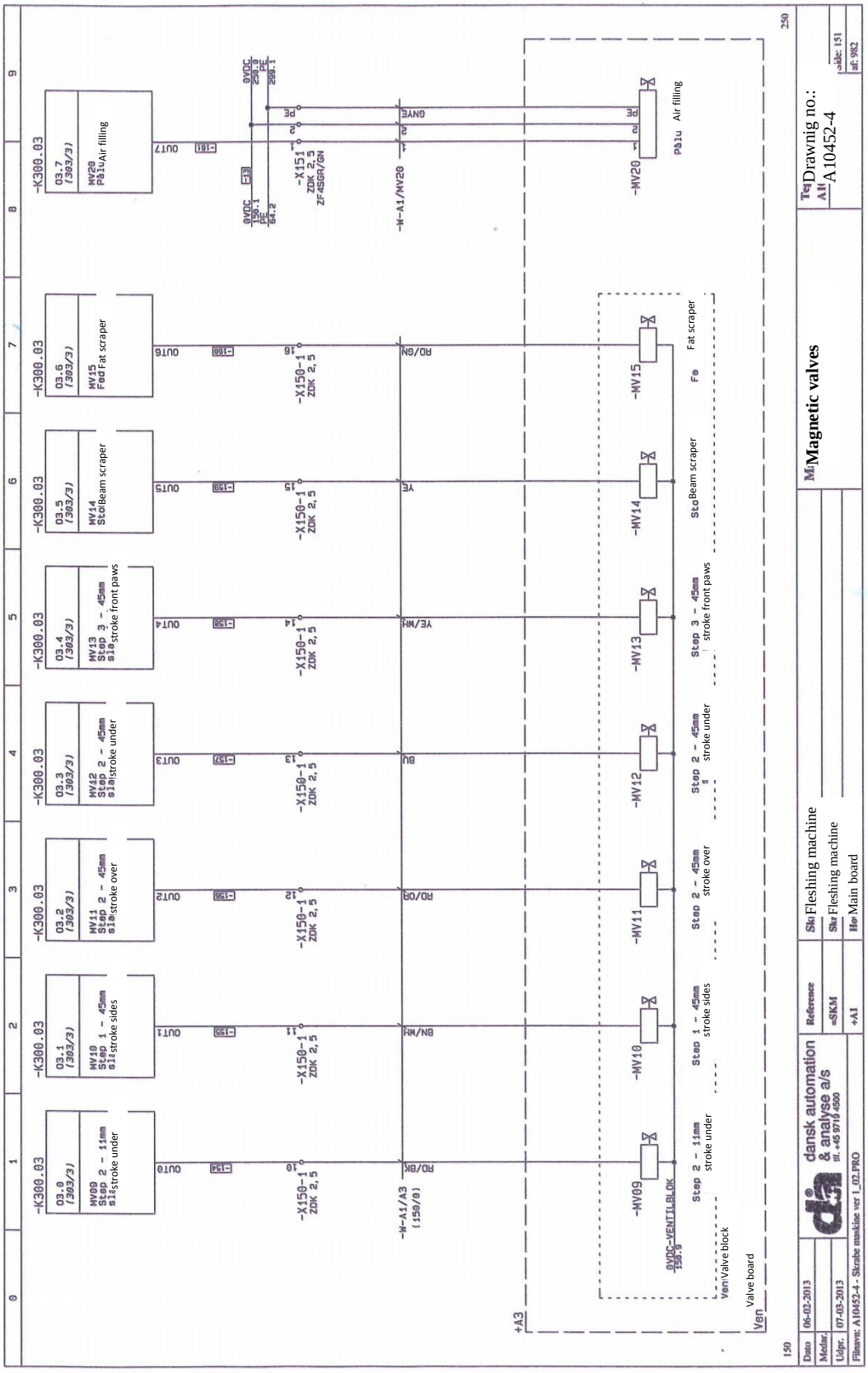

External digital input
Drawnig no.:
A10452-4
Fleshing machine
Main board
Outer board
Turn/reverse
Fleshing motor 1 home
Fleshing motor 2 home
Fleshing motor 3 home
Compressed air OK
Available
Home
-K300.00
-K300.01
-X100
-X100-1
-B02
-B03
-B04
-B05
-B06
-B07
+A5
+DIV
Samleboks
dansk automation & analyse a/s

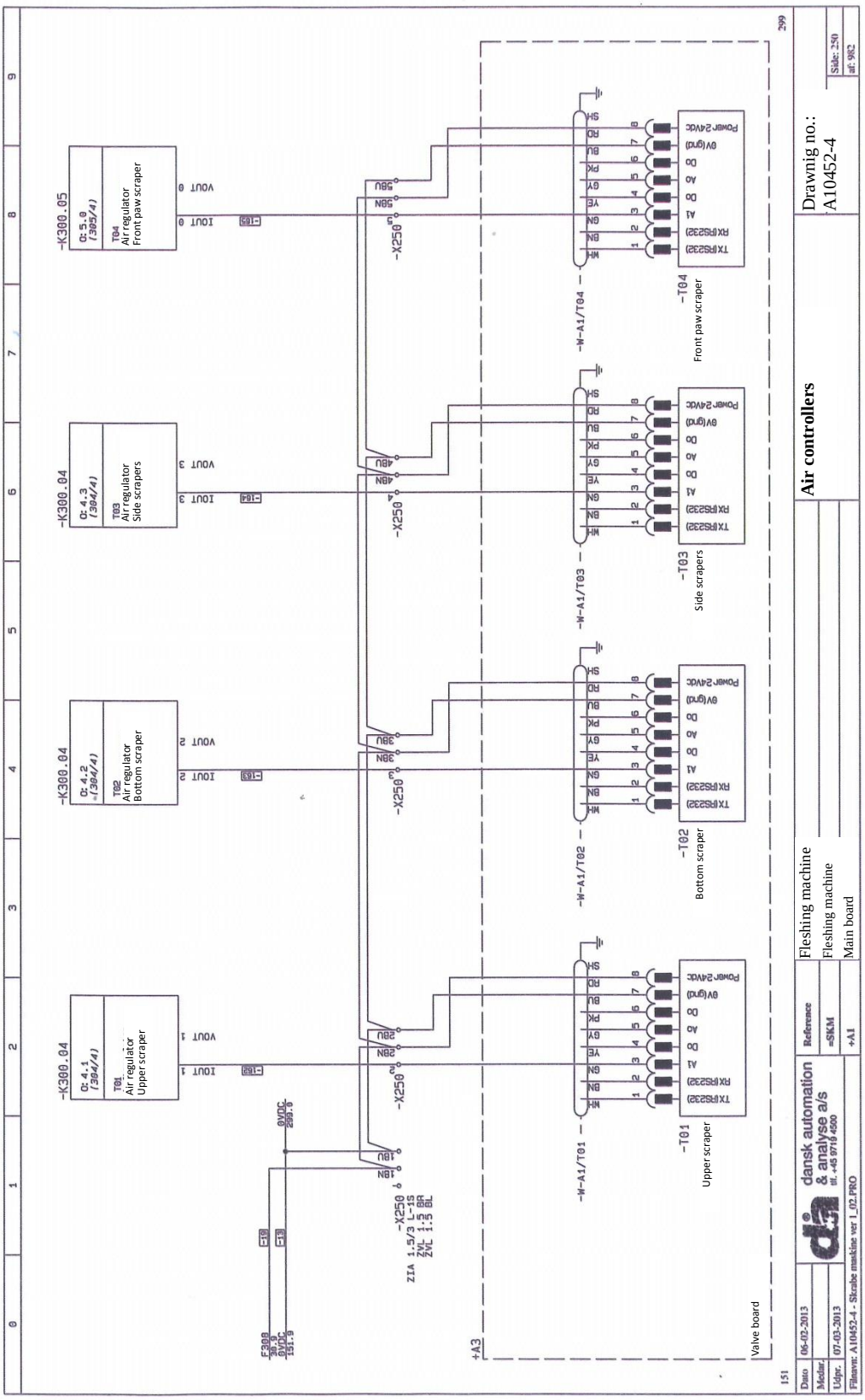

External digital input
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
dansk automation
& analyse a/s
Outer board
Lid OK
Remover
In position
Ligfht sensor
Skin on the beam
Rinse the beam tip
Water on skin
Available
Available
Available
Available
Sanlebaks
+A5
+DIV

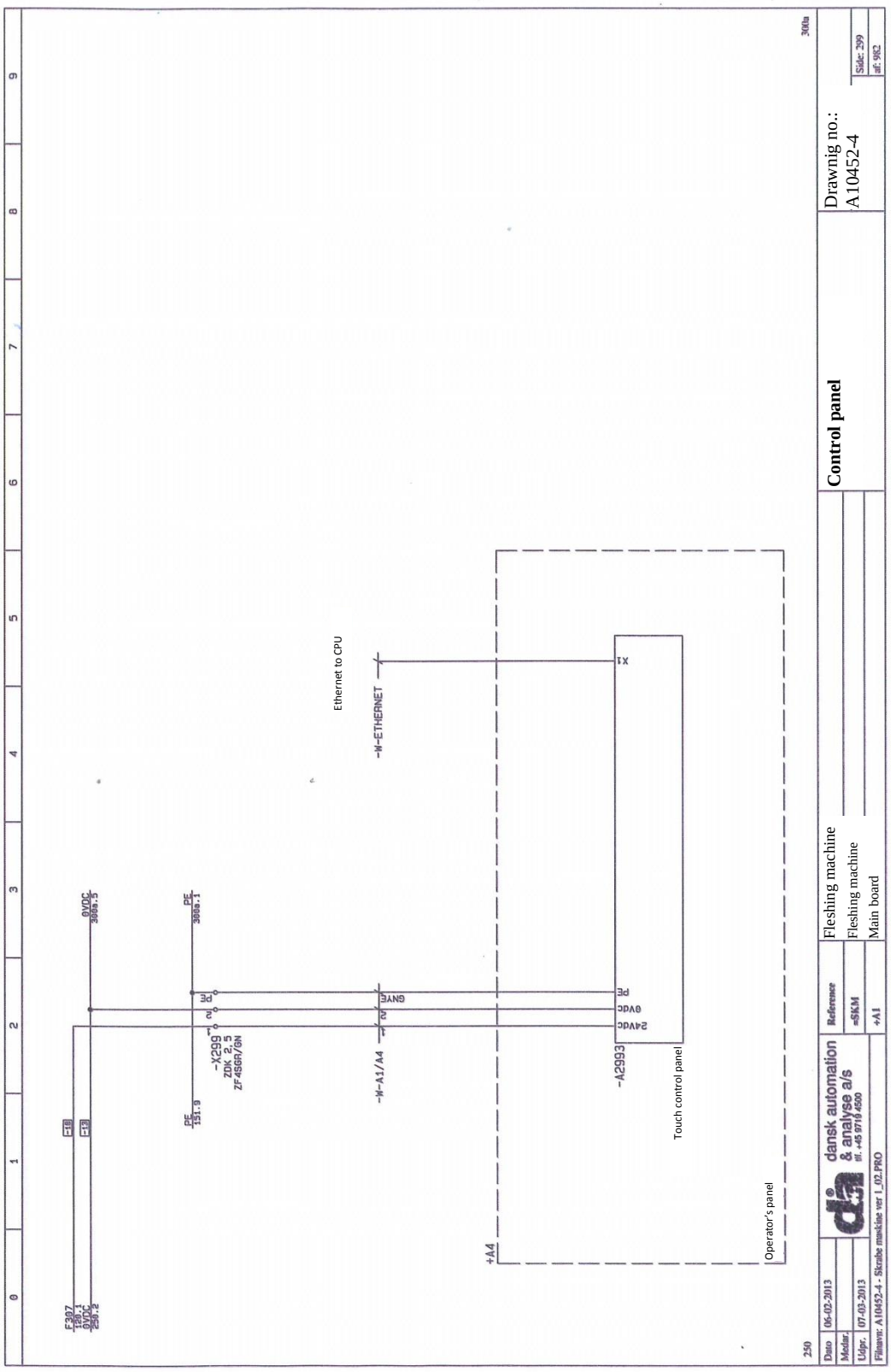

-K300.00
1:0.10
(3000/5)
Thermal error of a non-frequency converter fre motor
(1=error)
IN10
-F601
(60/1)
140M-C-ASA11
-F621
(62/1)
140M-C-ASA11
-F641
(64/1)
140M-C-ASA11
F304
F304
Feedback from thermo relays
Drawnig no.:
A10452-4
dansk automation & analyse a/s
Fleshing machine
Fleshing machine
Main board
=SKM
+A1
06-02-2013
07-03-2013

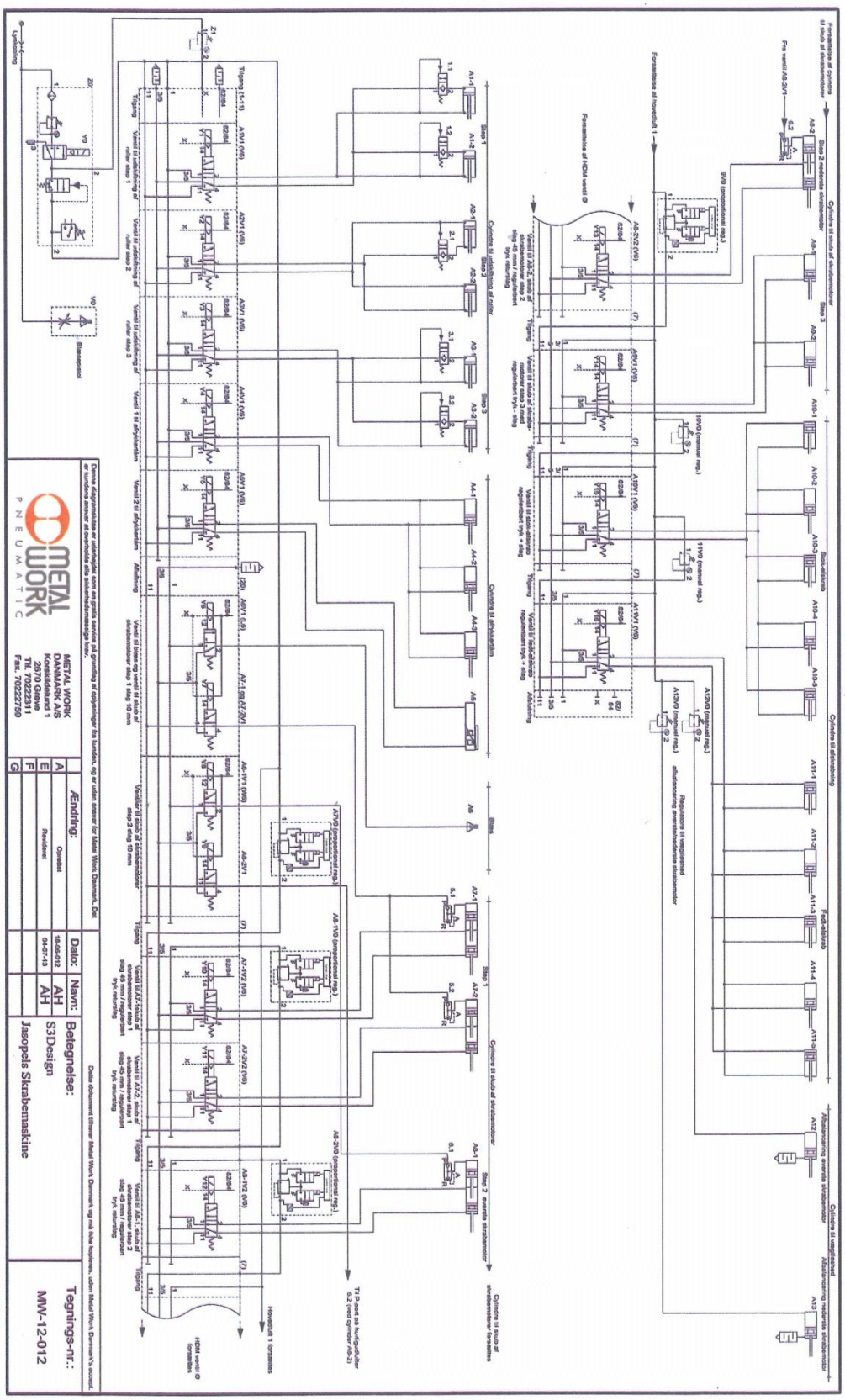

-K300.01
I:1.11 (301/3)
Start 1
IN11
-K300.01
I:1.12 (301/3)
Start 2
IN12
-K300.01
I:1.13 (301/3)
Opst Start-up
IN13
-K300.01
I:1.14 (301/3)
Stop
IN14
-K300.01
I:1.15 (301/3)
Disp Available
IN15
-S1201
XB4BA31
Start 1
-S1202
XB4BA31
Start 2
-S1203
XB4BA31
Opst Start-up
-S1204
ZB4BZ102
ZB4BA2
Stop
F307
269.0
F307
269.0
-X41
ZDK 2.5
-W-A1/A2
(41/4)
+A2
Control panel
Betj Operating controls
Tegn Drawnig no.:
A10 A10452-4
Dato 06-02-2013
Udgv. 07-03-2013
Filnavn: A10452-4 - Skrabe maskine ver 1_02.PRO
dansk automation & analyse a/s
Reference
=SKM
+A1
Skrv Fleshing machine
Skrv Fleshing machine
Hovv Main board


Magnetic valves
Drawnig no.:
A10452-4
Fleshing machine
Main board
Valve board
Valve block
Step 1 Replace impellers
Step 2 Replace impellers
Step 3 Replace impellers
Valve 1 remover
Valve 2 remover
Valve air blow
Step 1 - 11mm stroke sides
Step 2 - 11mm stroke over
dansk automation & analyse a/s


Magnetic valves
Drawnig no.:
A10452-4
Fleshing machine
Main board
Valve board
Step 2 - 11mm stroke under
Step 1 - 45mm stroke sides
Step 2 - 45mm stroke over
Step 2 - 45mm stroke under
Step 3 - 45mm stroke front paws
Beam scraper
Fat scraper
Air filling
-K300.03
-X150-1
-X151
-W-A1/A3
-W-A1/MV20
-MV09
-MV10
-MV11
-MV12
-MV13
-MV14
-MV15
-MV20
+A3
Ven


Air controllers
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
Valve board
Front paw scraper
Side scrapers
Bottom scraper
Upper scraper
-K300.05
-K300.04
-K300.04
-K300.04
-X250
-W-A1/T04
-W-A1/T03
-W-A1/T02
-W-A1/T01
-T04
-T03
-T02
-T01
+A3
dansk automation & analyse a/s
Dato 06-02-2013
Udgv. 07-03-2013


Control panel
Drawnig no.:
A10452-4
Fleshing machine
Fleshing machine
Main board
Ethernet to CPU
-W-ETHERNET
-W-A1/A4
-A2993
Touch control panel
Operator's panel
+A4
dansk automation
& analyse a/s


METAL WORK
PNEUMATIC
METAL WORK DANMARK A/S
Kometbjelund 1
2670 Greve
Tlf. 70222111
Fax. 70222759
Ændring:
Dato:
Navn:
Beteglnelse:
S3Design
Jasopels Skrabemaskine
Tegnings-nr.:
MW-12-012

11. Troubleshooting

This chapter is a description of how some general errors can be dealt with by the user of the machine. This is not an actual manual on how to repair the machine but merely basic information on how some minor errors can be taken care of so that fleshing can be resumed quickly. In the case of errors that cannot be dealt with right away please contact the Jasopels Service Department for further assistance.

DANGER!

Always disconnect the machine's compressed air and power supply before maintenance, cleaning and other service activities are performed on the machine.

11.1 Overload error – fleshing motors

An overload of the fleshing motor is usually signalized by the "Thermal error" screen (fig. 42). In such cases the machine, including the fat suction device, stops completely.

Fig. 35 Thermal error

11.2 Overload error – beam motor

An overload of the beam motor is usually signalized by the ”VLT Error” screen. The machine stops completely.

Fig. 36 VLT Error

- An overload of the beam motor may also lead to the activation of the VLT motor protection or the manually operated motor protection (placed in the VLT cabinet). Restart the machine. If this does not solve the problem, check the fuses in the control cabinet.

- A beam motor-related error can be caused by the fact that the chain has become too tight, possibly because there is sawdust in the chain box, which may have clung onto the gear wheel, which would then have become too big. It can also be caused by the fact that the beam does not touch the skin scraper exactly in the middle but slides up one of the sides, which may lead to increased friction. Contact the Jasopels Service Department in order to get advice and guidelines on how to fix this problem.

- Repeat the start-up procedure as described in section 7.1.

11.3 Overload of additional equipment

Motor faults of equipment connected via the CEE plug between the air cabinet and the sawdust machine (Leather Side Drum, Sawdust Return Screw Conveyor, etc.) and possibly the fat suction device can also cause the fleshing machine to stop. This will typically be a mechanical blocking-up. The ”Error – Fat Pump” screen will pop up (fig. 38)

Fig. 37 Error – fat pump

- The fat suction device is protected by a motor protection that is placed in the VLT cabinet. If an error occurs, the ”Thermal error” message will pop up. You must always try to find the reason for which the motor heats up. Increased power consumption can possibly be caused by the fact that the fat suction device is working slowly because the impeller is covered with dirt or because there is a leak in the piping between the suction nozzles and the fat suction device.

- Overload of external equipment connected via the CEE plug can activate the manually operated motor protection that is placed in the VLT cabinet. In this case you also need to find the cause of the error before the motor protection is switched on again.

- Press ”Auto return” on the display and the beam will return to its initial position.

- Repeat the start-up procedure as described in section 7.1.

Fig. 38 Emergency stop

- When the emergency stop has been activated, the button needs to be ”turned outwards”. After that press Reset. The machine will then restart.

12. User's notes