

Uni-3

Industrial sewing machine for awnings

Machine technical specifications

Electric circuit:
Electric Power: 4kW Supply voltage: 230V Frequency: 50-60 Hz
Pneumatic circuit:
Operating pressure: 6 bar
Weight:
Total weight: 500 kg
Noise:
Noise level: below 80 dB

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Safety

This chapter contains Basic information for Your safety. Read the instruction carefully before setting up or operating the machine. Make sure to follow the information included in the safety instructions. Failure to do so can result in serious injury and property damage.

The machine may only be used by trained personnel and as described in these instruction. The instructions should be available at the machine's location at all times.

For the following work, switch off the machine at the main switch or disconnect the power plug:

- Replacing the needle or other sewing tools,
- Leaving the workstation,
- Performing maintenance work and repairs,
- Threading

Obligations of the operator- Follow the country-specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment. All the warnings and safety signs on the machine must always be in legible condition. Do not remove!

Missing or damaged warnings and safety signs must be replaced immediately.

Only qualified specialists may:

- Set up the machine,
- Perform maintenance work and repairs,
- Perform work on electrical equipment.

Only authorized persons may work on the machine and must first have understood these instructions.

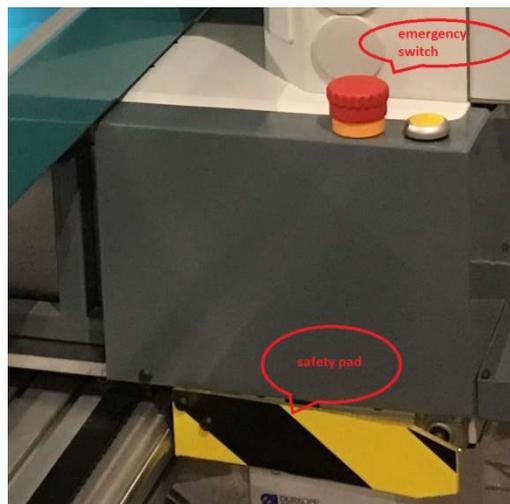
Please check the machine during operating for any externally visible damage. Stop working if You notice any changes to the machine. Report any changes to your supervisor. Do not use damaged machine any further.

Safety equipment should not be removed or deactivated. If it is essential to remove or deactivate safety equipment for a repair operation, it must be assembled and put back into operation immediately afterwards.

There are five active safety equipment and warning signs described further in this instruction.

Active safety equipment:

- Residual current device(RDC)[EN 60204-1:2006 Annex E],
- Overcurrent protection[EN 60204-1:2006 Annex E],
- 2 channel safety relay- launched by emergency switch performs stop category 0[EN 60204-1].
- Safety pads on sewing head- when engaged, machine stops. They are present on both sides of platform with sewing head. Afterward you push any of them machine will stop and on screen will pop up message if you would like to continue sewing cycle or finish it.
- Limit switches,



1 emergency switch and safety pad present on sewing platform.

The following symbols indicate the type of danger to personnel:

Symbol	Type of danger
	General
	Electric shock
	Crushing
	Sharp element

Machine description

Uni-3 is an industrial sewing machine dedicated to sew awning sheets. We can describe it as sewing head (brand: Durkopp adler 867-M premium, there is a separate instruction attached to head itself, attach.nr.1) integrated with custom length frame on which it moves in a synchronized way according to sewing speed. It is a very brief description which will be fulfilled with more details in the user manual.

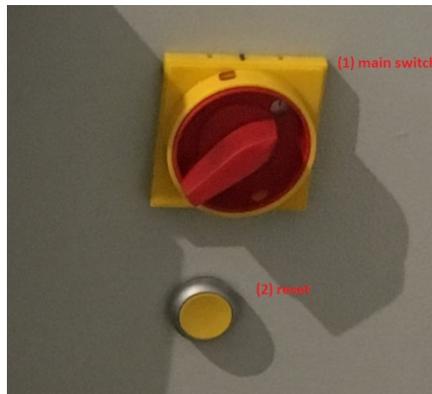
User manual

Switching on and off the machine

To switch on the machine:

1. Make sure power plug is connected to grid,
2. Make sure air supply plug is connected to compressed air system,
3. Turn the main switch(1) to position "1",
4. Press yellow push button(2) which will engage safety relay, let's call this button "reset".

You should see then the sewing head and touch screen starting up. It will happen even if you will not press "reset" but you won't be able to use the machine. Only functionality of standalone sewing head will be available. Inverter and controller's outputs are cut off from power supply then. "reset" button is also installed next to emergency switch (pic.1)



2 main switch and reset button on control cabinet.

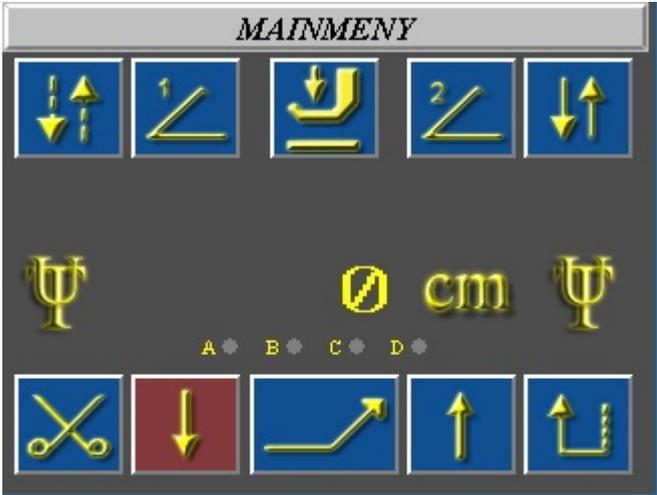
Switching off the machine

To switch off the machine:

1. Please park platform with stretcher at spot where it is joint with extension. 200cm from the end of the machine.
2. Turn the main switch to position "0".

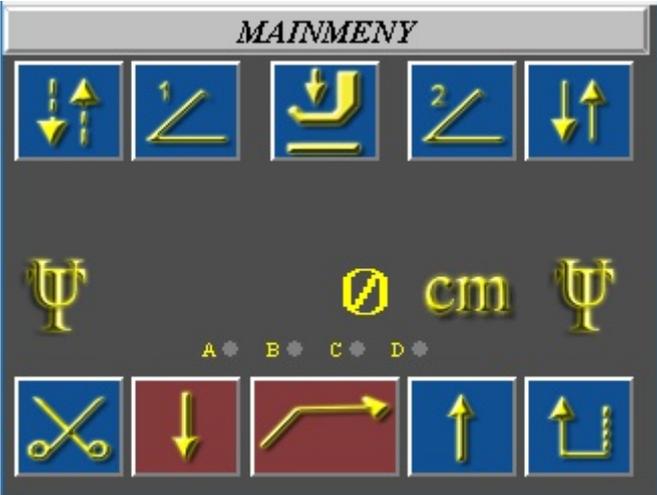
Preparing for first use + interface description

After You switch on machine please make sure that it drives. To do that please press button from screen below, "jog forward". Platform with sewing head suppose to move towards You.

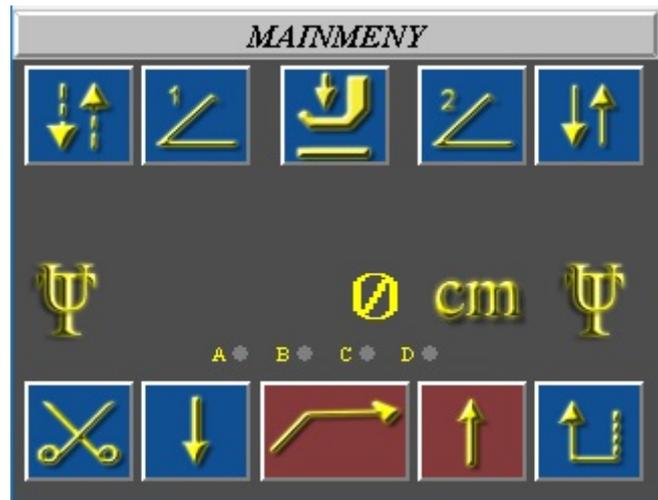


3 Jog forward

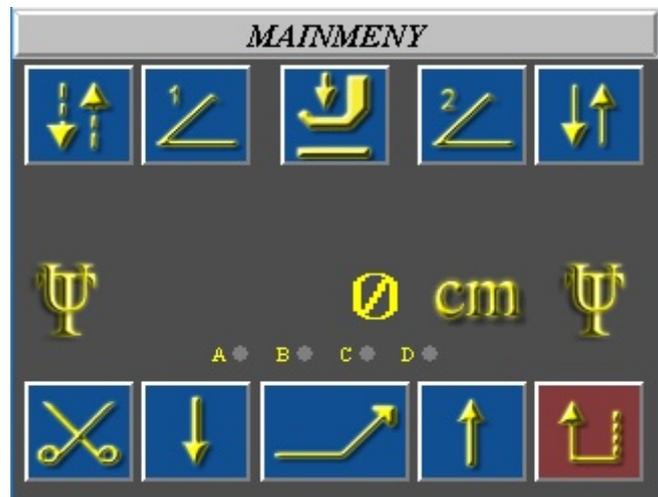
With next few graphics it will be explained what each of these buttons do.



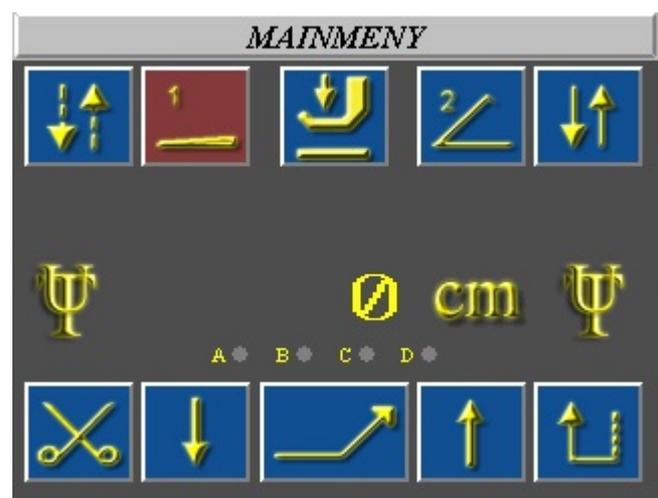
4 Combination of these two buttons make machine drives with higher Speed



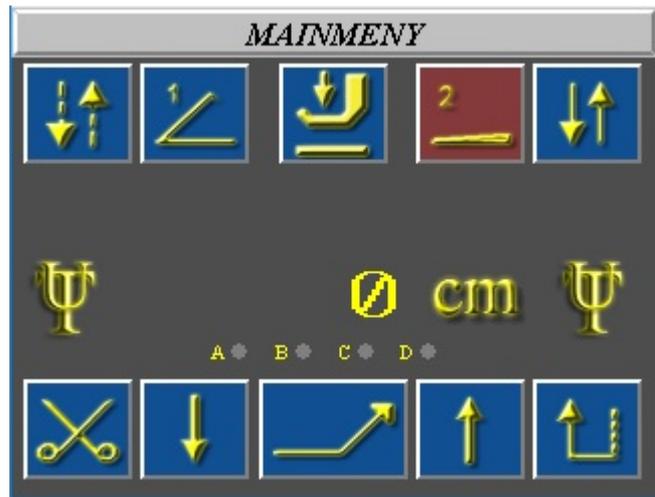
5 same behavior but in opposite Direction



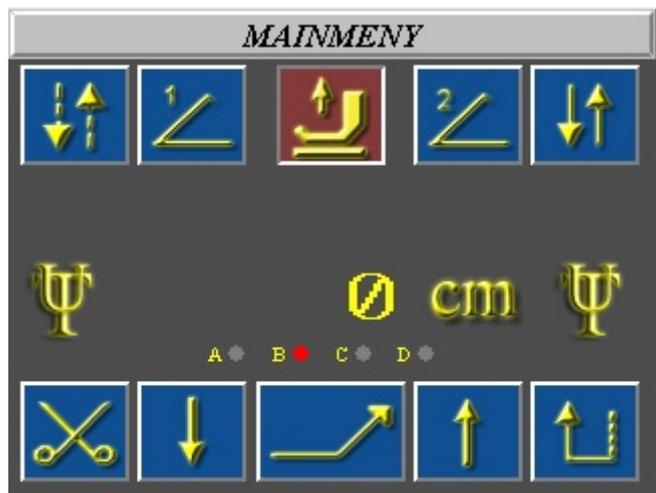
6 this button will drive machine back to origin- position where you start sewing in automatic mode from.



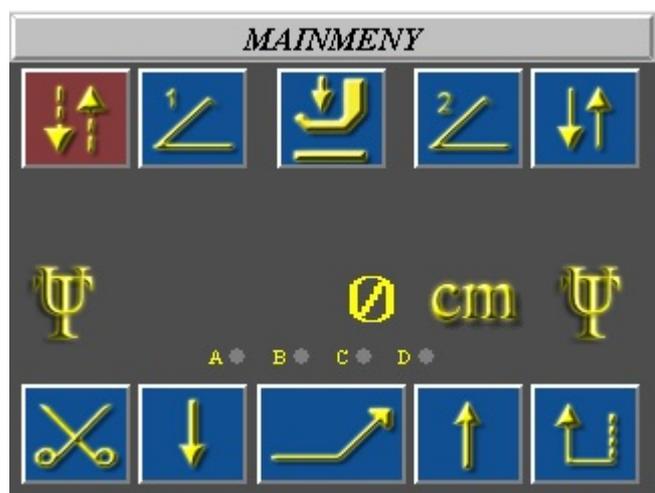
7 this button close/open the left gripper installed at the front of the machine.



8 this button close/open the right gripper installed at the front of the machine.

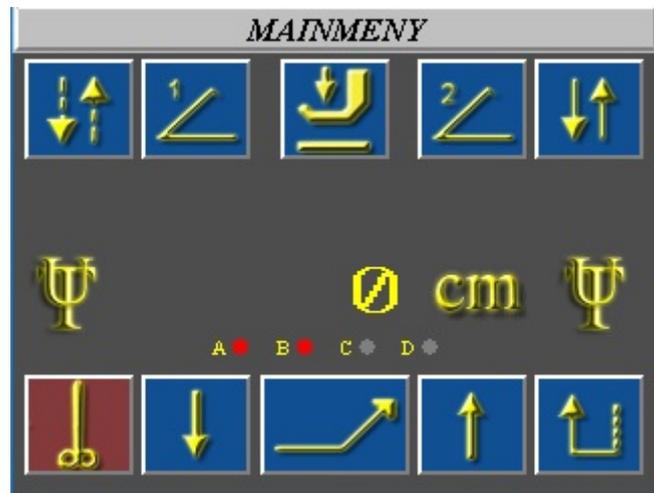


9 this button control foot position: foot down/up.



10 this button starts sewing in manual mode. fotocell installed in front of sewing head has to be covered to unlock sewing function. it sew as long as You keep it pressed but at the time when fotocell recognize end of fabric it will start ending cycle.

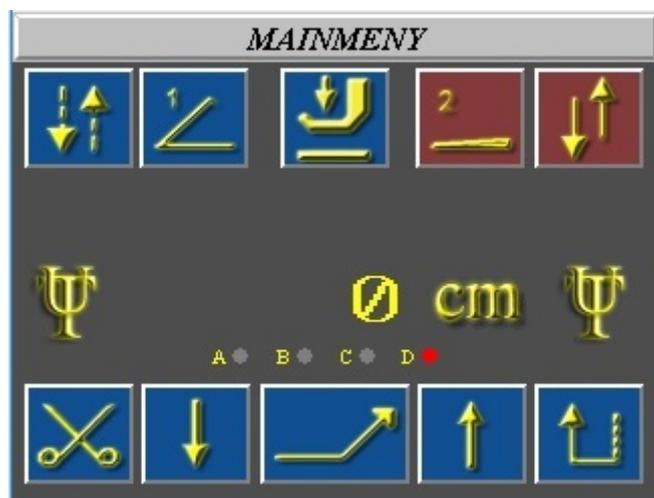
*ending cycle- machine is setup to sew until end of fabric and then it backtack. These options are adjustable. How to do that is explained in instruction attached to sewing head. Please refer to it in this matter



11 this button cuts bottom thread. Use it after sewing in manual mode.

Sewing in automatic mode

To sew in automatic mode fotocell also has to be covered with fabric and at least the right front gripper has to be closed. To start automatic cycle please push button from screen below.



12 automatic cycle.

When machine finish cycle it will return to origin position automatically.

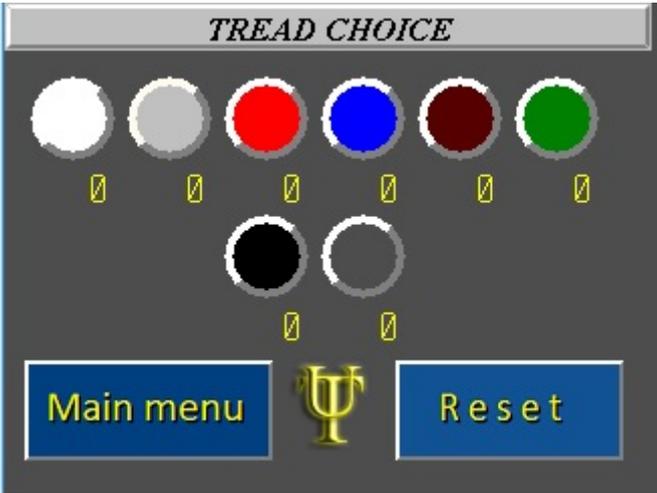
Changing bobbins

To change bobbin please press on the screen sign "cm". Before You will do that make sure machine it is in it's origin position. Pushing "cm" will effect in moving machine to changing thread position where there are revision openings. It will allow you to get access to bobbins.

Afterwards move back machine to it's origin position by pressing button on the screen from picture nr6.

Pressing sign “cm” on scree will effect also with appearing page with title thread choice. You can pick color of thread you are going to use now.

This machines has an option of thread’s length monitor. It informs You how many cm of thread on bobbins left and in addition you can shift it to another color and it will remember previous value You end up work with.

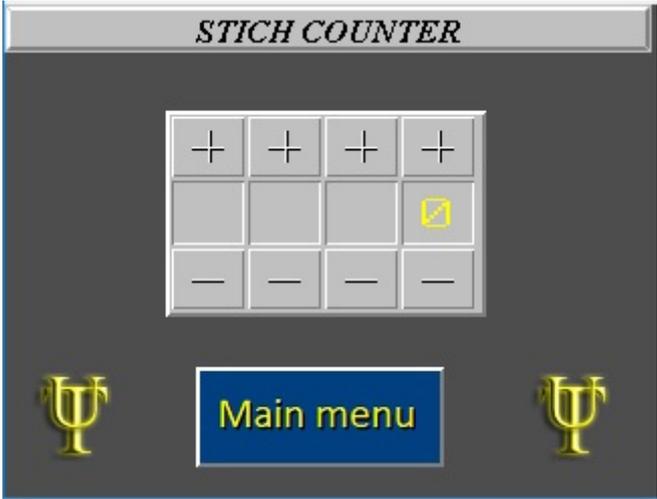


13 thread choice.



Value of how much cm of thread is on bobbin is preset but You can change it by pressing

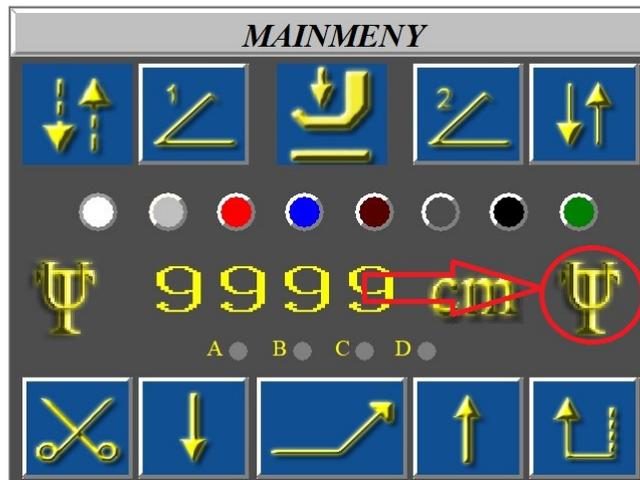
It will take You to page where You can setup this value by yourself.



14 here You can type in; how much cm of thread is on bobbin.

Setting up alarm for bobbins

There is an option to set up level below which machine will alarm You that threads on bobbin is about to end soon. You can decide how much it will be. To set this value up please press this sign on the main page.



15 press this to setup alarm.



16 bobbin's alarm page.

Maintenance

Any maintenance operations must be carried out with the machine standing still and disconnected from any power sources.

When performing maintenance and repair operations, we recommend following the instructions below:

- Before starting your job, put a “Machine under maintenance” sign in a clearly visible position.
- Do not use solvents or flammable products.
- Pay attention not to release lubricating liquids to the environment.
- Do not climb on the machine.
- Once maintenance has been completed, replace and properly secure all protection guards and covers previously disassembled or opened.

Cleaning

Before cleaning the machine, turn the main switch OFF and lock it in this position. The maintenance technician must wear suitable personal protection equipment before carrying out any intervention.

- Do not use hot steam or solvents to clean the machine.
- Do not use a jet of water to clean machine parts.
- Do not clean the machine right after it has been greased.
- Daily remove any deposits or scraps from the machine. If needed, use compressed air.

Upon completion of cleaning, ensure that the machine is in efficient working order, all safety devices are operable and there are no foreign objects that may hamper machine movements.

To keep the machine working to maximum efficiency, follow the routine maintenance plan described below.

The machine has been designed to minimize routine maintenance; the operator shall assess the condition of the plant and its suitability for use. Each time a reduction in efficiency is detected, stop machine and perform the necessary maintenance.

Maintenance must be carried out by qualified personnel. Planned routine maintenance includes inspections, checks and interventions to verify:

- The lubrication state of the machine,
- The condition of parts subject to wear off.

Table below shows maintenance schedule list

Maintenance	Frequency
Drain air condensate separator	Weekly if needed
Cleaning whole machine using air gun from threads leftovers and dust.	weekly
Cleaning machine with cloth- especially guiding rods	weekly
Lubricate guiding rods	monthly
Functionality check	Daily(before You start production)
Safety systems check	weekly
Threads tension check	weekly
General check of all systems- perform by technician	yearly

Wiring diagram, pneumatic diagram.

On next pages you can find attachments with wiring and pneumatic diagram

