

VETRON

5000 / 5100 » INSTRUCTION MANUAL

07/2020



VETRON

5000/5100 » INSTRUCTION BOOK
07/2020

STANDARD

- » 5000
- » 5010
- » 5020
- » 5030
- » 5040

LONGARM

- » 5100
- » 5110
- » 5120
- » 5130

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Reserve technical changes!

The contents were carefully prepared and checked by the publisher. Due to continuous development, illustrations, functional steps and technical data may differ slightly.

Updating the documentation

If you have suggestions for improvement or have detected any irregularities, please contact us.

 The documents for the machines can be accessed by logging on <https://www.vetrontypical.com/> downloaded for free.



CE marked after §7 Prod SG



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General Safety Instructions

This manual and the warning symbols on the machine should ensure the safe use of the machine, so that no accidents and injuries may occur to you and others. Please read this instruction and also the safety instructions of the motor manufacturer carefully.

- » The machine must only be operated in accordance with its intended purpose (for example, sewing medium to heavy materials such as jeans, leather, etc. NO tin!) and with the associated protective equipment. The relevant country-specific safety regulations and technical data must also be observed.
- » The machine should only be used in accordance with its intended purpose (eg sewing medium to heavy materials such as jeans, leather, etc.) and with the associated protective equipment. The relevant country-specific safety regulations and the technical data must also be observed.
- » The machine should only be set up and operated in dry and well-kept rooms.
- » Do not place the machines outdoors, next to radiators or heat source. The ambient temperature should not be lower or higher than between 0° C to 45° C.
- » The machine must only be commissioned after the relevant operating instructions have been taken into consideration and by appropriately instructed operators.
- » These instructions are to be stored at hand.
- » The connection cable must be provided with a country-specific approved mains plug. The mains plug must only be connected to grounded sockets. Here a qualified specialist is necessary.
- » The machine must always have a grounding. Only over this is a normal operation of the machine to ensure.
- » The danger and safety instructions attached to the machine must be followed.
- » When replacing sewing tools such as needle, sewing foot, stitch plate, feed dog or bobbin, when threading, when leaving the workplace and during maintenance, etc., the machine must be disconnected from the mains.
➔ Press the main switch or pull out the mains plug.
- » Machines with compressed air components must be disconnected from the compressed air supply and the residual pressure released before repair or maintenance work. Exceptions to this are performance tests or specific settings.
- » Repairs and all maintenance work should only be carried out by qualified personnel or appropriately instructed persons.
- » Work on electrical equipment must only be carried out by qualified specialists.
➔ If errors are detected, stop the machine immediately.
- » Work on parts and equipment that are live is not permitted. The machine must be disconnected from the mains.
- » Modifications or modifications to the machine must be carried out in compliance with all relevant safety regulations. The manufacturer assumes no responsibility for damage caused by changes or modifications.
- » For repairs, only spare parts approved by VETRON may be used. In case of infringement the guarantee expires.
- » The machines are to be used only for the purpose intended.

- » If oils, greases, etc., used for the machines and accessories, get in your eyes or on your skin, or should you swallow any of these fluids, wash them immediately and thoroughly, or seek medical attention immediately.
- » Commissioning of the machine is prohibited until it has been determined that the entire sewing unit complies with the provisions of the EC directive and the declaration of conformity has been created.

Advice to the Owner

- » As part of the machine, this operating manual must be available to operating personnel at all times. Before using the machine for the first time, the operator must read this operating manual.
- » The operator has to ensure that the machine is only operated in perfect condition.
- » The operator must ensure that no safety devices are removed or disabled.
- » The operator must ensure that only authorized or properly instructed persons work on the machine.
- » The operator must therefore ensure that the workstations according to ASR lux. 4 are adequately illuminated (min. 750 lux).

Operators and Technical Staff

- » The operating personnel are responsible for setting up, operating and cleaning the machine and responsible for the elimination of faults.
- » Qualified personnel include people with specialist training in electrical / electronics, pneumatics and mechanics.
➔ Lubrication, maintenance, repair and adjustment are your responsibilities.
- » The operator must refrain from any operation that impairs the safety on the machine.
 1. Jewelry, chains and rings - must not be worn.
 2. The clothes should be tight
 3. Only authorized persons may enter the danger area.
- » If changes occur to the machine that affect safety, they must be reported immediately to the operator.
- » The specialist personnel - persons with training in electrical / electronics and mechanics - are responsible for the lubrication, maintenance, repair and adjustment of the machine.
- » Before starting adjustment and repair work, the main switch must be switched off and secured against reclosing.
- » Work on parts that are under tension should be avoided. Exceptions are regulated by EN 50110. After maintenance and repair work, the protective covers must be replaced.
- » Operating and specialist personnel are obliged to observe the safety instructions given in the instructions for use during all work.

01. PREFACE

02. SYMBOLISM



DANGER!

This symbol in combination with the word **DANGER**, indicates an imminent danger that may result in serious injury or death.



WARNING!

This symbol in combination with the word **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.



ATTENTION!

This symbol in combination with the word **ATTENTION** may indicate a potentially hazardous situation that could result in minor personal injury.



DANGER OF CUTS!

This symbol indicates that there is an increased risk of cuts here.



CRUSHING!

This symbol indicates that there is a heightened risk of crushing.



RISK OF BURNS!

This symbol indicates that there is an increased risk of burning here.



MAGNET!

This symbol indicates that there is a magnet field.



INFORMATION!

This symbol displays information.



ADVICE!

This symbol indicates important information.



HARMFUL TO HEALTH!

May damage certain organs. Can lead to immediate and long-term massive impairment of health, cause cancer, damage genetic material, fertility or development. May be fatal if infiltrated into the respiratory tract.



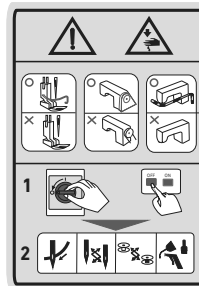
HAZARD TO WATERS!

May cause acute or long-term damage to aquatic organisms such as fish, aquatic insects and aquatic plants in low concentrations.



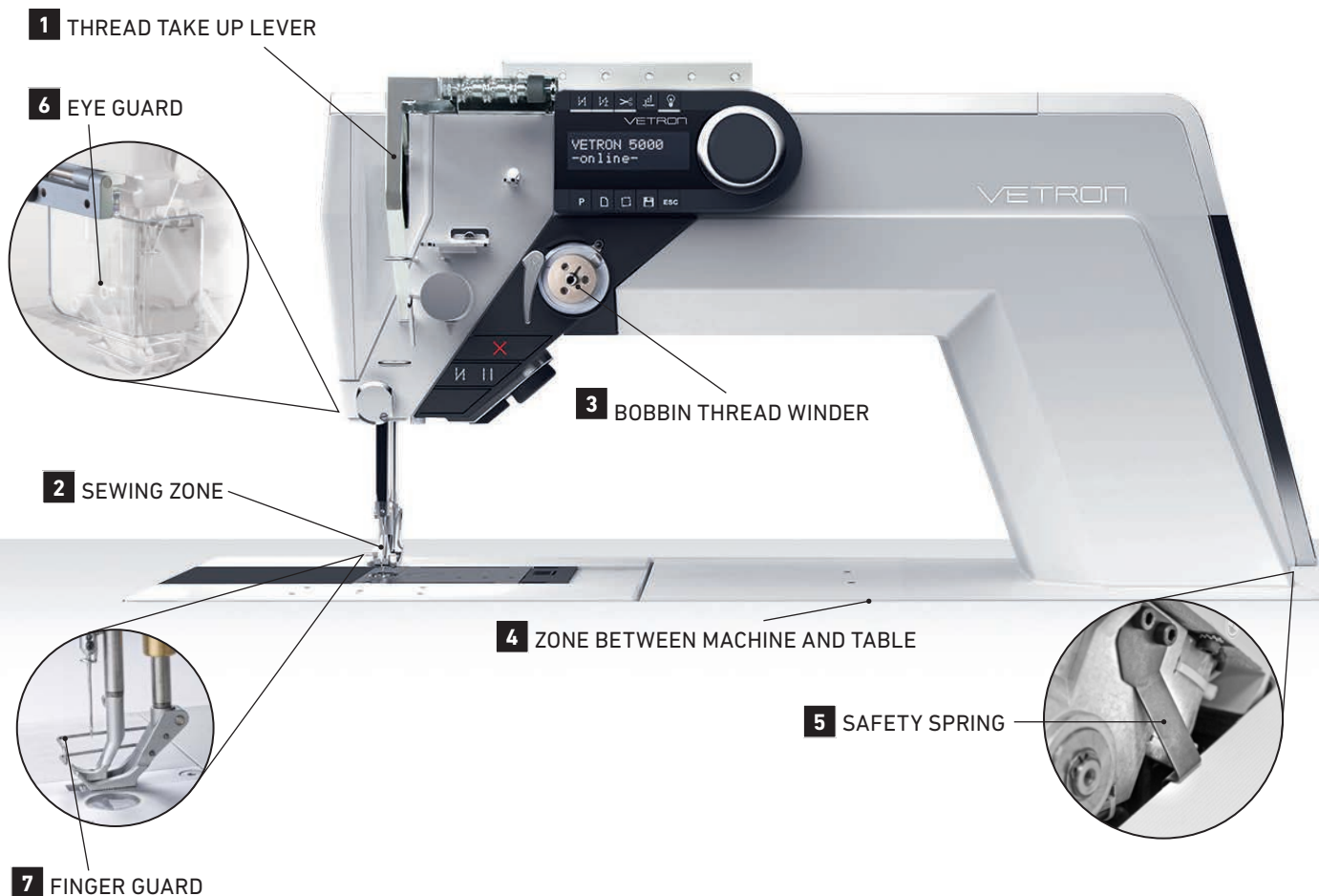
PROTECTIVE EARTHING!

Earthing one or more points of a network, installation or equipment for the purpose of electrical safety.



DANGER LABEL

Do not work the machine without finger guard and safety covers! Before threading, changing the needle, adjusting, changing the bobbin, cleaning, maintenance, etc. switch off the main switch on the control.



CRUSHING

Crushing and bruising through the thread take up lever **1**
 Make sure thread take up lever guard is mounted.
 Risk of injury due to movement of the lever.



CRUSHING

Crushing and bruising through the needle and sewing feet **2**
 Make sure finger guard is mounted.
 Risk of injury through needle and feet movement.



DANGER OF CUTS

Cuts through rotation **3**
 Keep distance from bobbin winder while winding.
 Risk of injury due to rotation.



CRUSHING

Crushing and bruising due to tilting the machine **4**
 Make sure safety spring **5** is mounted.
 Risk of injury when machine is tilted back.



SAFETY PRECAUTIONS!

The eye protection **6** can be ordered optionally, but must not be removed after installation without consultation with the operator.

The finger guard **7** must not be removed!

01. PREFACE

04. PRODUCT INTRODUCTION / INTENDED USE / CONFORMITY DECLARATION

1-/ 2-NEEDLE LOCKSTITCH SEWING MACHINE WITH DIRECT DRIVE AND TRIPLE FEED

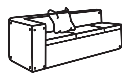
The consistent use of state-of-the-art control technology has made it possible to program all machine parameters programmatically, making them directly accessible. This ensures that the process parameters are free from operator influence and after each setup.

The innovative dynamic machine parameters based on the current speed and the permanent material thickness measurement open up new paths in terms of processing quality, process reliability and reducing cycle times.

Typical applications:



Automotive



Upholstery



Suitcase



Bag



INTENDED USE

Any use not approved by the manufacturer is considered improper! Proper use also includes compliance with the prescribed operating, adjustment, maintenance and repair measures. Damage due to non-intended use is not covered by the manufacturer's liability!

The **VETRON 5000/5100** and its subclasses are 1- and 2- needle lockstitch sewing machine with direct drive and triple feed. Use the machines only according to their technical data and for medium to heavy materials such as jeans, leather, etc.. No tin! The machine is only intended for processing dry material and must not contain any hard objects. In this respect, the seam must be made with a thread whose requirement profile corresponds to the application purpose.

The machine is designed for industrial use.

The operator is obliged to carry out a risk assessment in accordance with the Work Protection Act (ArbSchG).

CE-CONFORMITY DECLARATION

All VETRON sewing machines comply with the applicable European regulations of relevant basic health and safety requirements, which are specified in the declaration of conformity and manufacturer.



Technical Data Vetron 5000/5010 - 5100/5120 (Standard - Longarm)

Stitch type 301	1- or 2-needle lockstitch with triple transport
Needle system	134-35
Needle size 110-140	for sewing middle heavy materials
Needle size 140-180	for sewing heavy materials
Thread size	10/3 (depending on version)
Max. Stitches/minutes	Standard: 4000; XXL -Hook: 3400 Longarm: 3000
Max. Stitch length	12mm
Max. clearance under the sewing feet	20mm
Max. top-feed-stroke	9mm
Thread cutter for threads up to	10/3
Clearance space	Standard: 350 x 130mm Longarm: 680 x 130mm
Table plate size	Standard: 640 x 200mm Longarm: 990 x 200mm
Netto weight	Standard: 55 kg Longarm: 82 kg
Gross weight	Standard: 70kg Longarm: 110 kg
Operating voltage	AC 220-240V / 50-60Hz
Rated power	1200W
Noise indication	80dB(A)

Versions and subclasses can be found under:
www.vetrontypical.com

01. PREFACE

06. TRANSPORT - PACKAGING - DISPOSAL - STORAGE | FIRST COMMISSIONING / DECOMMISSIONING

TRANSPORT - PACKAGING - DISPOSAL - STORAGE

01. Transport of the machine

All machines are delivered packed.

The product must be checked for shipping damage after delivery. For subsequent damage within the customer's operation, the manufacturer assumes no liability.

Make sure that the products are transported safely and with the utmost care at your facility.

→ Moving machines with EHS (electrically height adjustable) with wheels:

- » Turn off the machine
- » Make sure that the sewing machine head is not tilted back
- » Put the table in the lowest position
- » Pull power and pneumatic connections
- » Release wheel brakes
- » Grab the table top and push the entire machine to the new location
- » Reconnect the electricity and pneumatics and tighten roller brakes

02. Packaging

The packaging material must be disposed of in accordance with local environmental protection regulations.

03. Disposal

The customer is responsible for the proper disposal. Disposal should comply with local environmental regulations.



NOTE!

Parts contaminated with lubricants or oils must be disposed of separately.

04. Storage

When not in use for a long time, the machines must be protected against dirt, moisture and corrosion (e.g.: by an oil film).

FIRST COMMISSIONING

01. Before operating the machine, clean the machine thoroughly.

02. Check whether the machine or electrical cables are damaged.

03. Have specialists confirm that you are allowed to operate the machine with the mains voltage and that it is correctly connected.

04. MACHINES WITH PNEUMATIC CONNECTIONS:

Connect the machine to the compressed air system. The operating pressure at the filter valve is 6 bar.

05. All covers must be mounted.



NOTE!

- 1.) Should deviations occur, do not operate the machine!
- 2.) Only connect the machine to a grounded power outlet!

DECOMMISSIONING

01. Switch off the machine at the control.

02. Pull out the mains plug.

03. Disconnect the machine from the compressed air supply, if available.

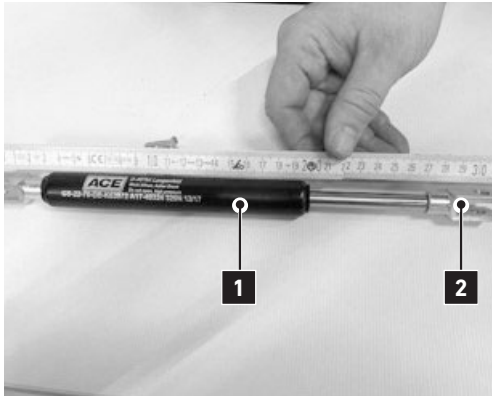
04. Clean the machine if necessary.

05. If possible, cover the machine to avoid soiling.

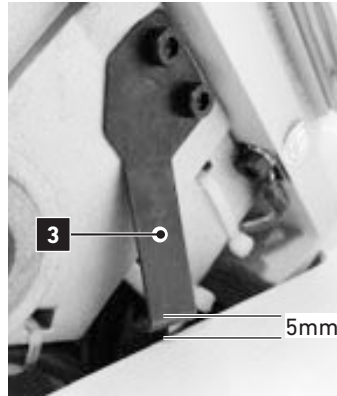


WARNING!

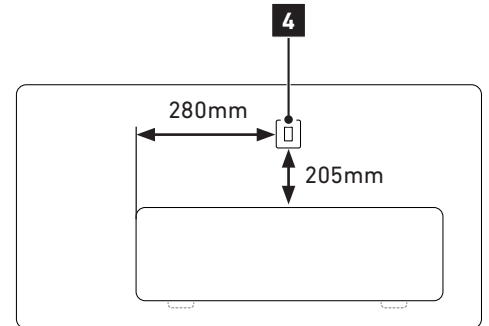
Work on safety devices must only be carried out by trained personnel!



Picture 1



Picture 2



Picture 3

SAFETY CYLINDER 1:

- » The safety cylinder 1 should be approx. 304mm to 310mm long.



NOTE:

If the cylinder is longer (max 310mm), the machine is moved further back. That means the machine is safer and more stable in this position.

- » If the machine is tilted back, the safety spring 3 must be locked securely. The distance between the table top and the spring must be at least 5mm (Picture 2). The distance can be adjusted on the cylinder by turning the fork head 2 in or out. If this is not enough, the cylinder carrier 4 must be readjusted. (Picture 3)

HOW TO MOUNT THE SAFETY CYLINDER 1 :

- » Screw the cylinder carrier 4 under the table.
The distance between the edge of the machine cutout and the cylinder carrier 4 is 205mm (minimum 203mm).
- » The distance between the cylinder carrier 4 and the edge of the machine cutout is 280mm.



NOTE:

The position of the safety cylinder is important for the stability of the machine. This must be checked when the machine is received.



CRUSHING

Crushing and bruising due to tilting the machine

For different adjustments, the safety cylinder should be unhooked.

Caution is advised, when returning the sewing machine to its original position.

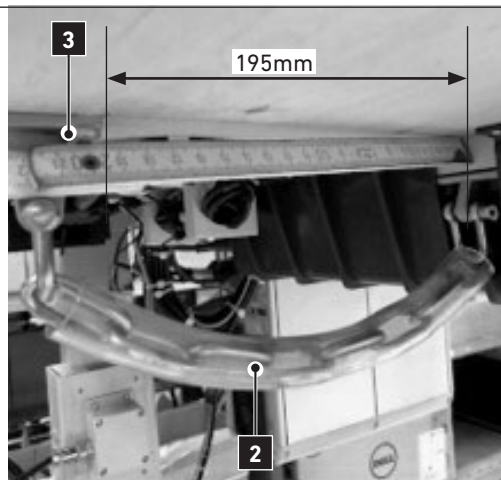
After work, reattach the safety cylinder

01. PREFACE

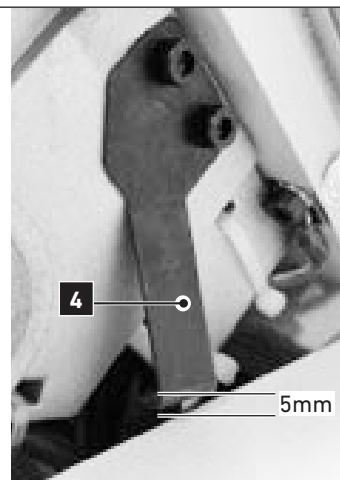
07.01. SAFETY DEVICES FOR TILTING (CHAIN)



Picture 1



Picture 2



Picture 3

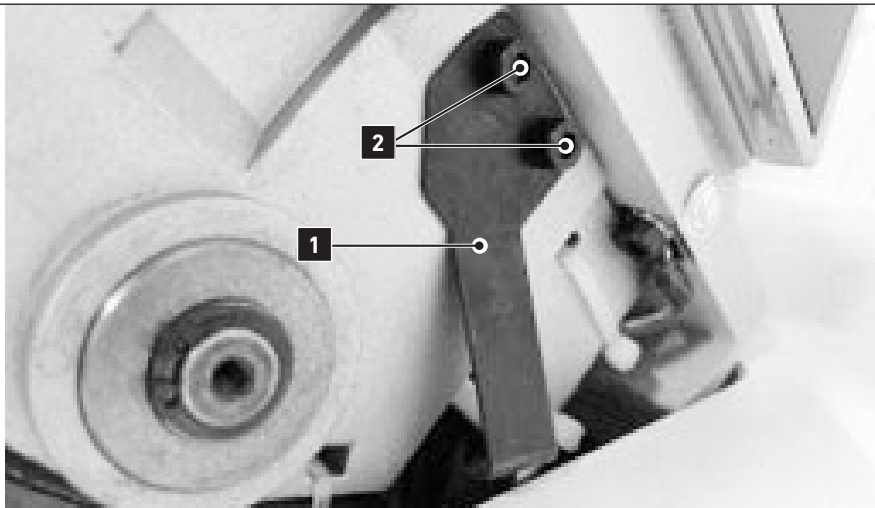
HOW TO MOUNT THE SAFETY CHAIN **2** ON THE POST BED MACHINE WITH SLANTED PEDESTAL **1** :

- » The carrier of the safety chain **3** should have a distance of 195mm to the machine housing. (Picture 2)

! ATTENTION:

The chain must hold the machine securely when the machine is tilted backwards.

- » If the machine is tilted back, the safety spring **4** must be locked securely. The distance between the table top and safety spring must be at least 5mm. (Picture 3)



HOW TO MOUNT THE SAFETY SPRING **1** :

- » Mount the safety spring **1** with the screws **2** .



ATTENTION:

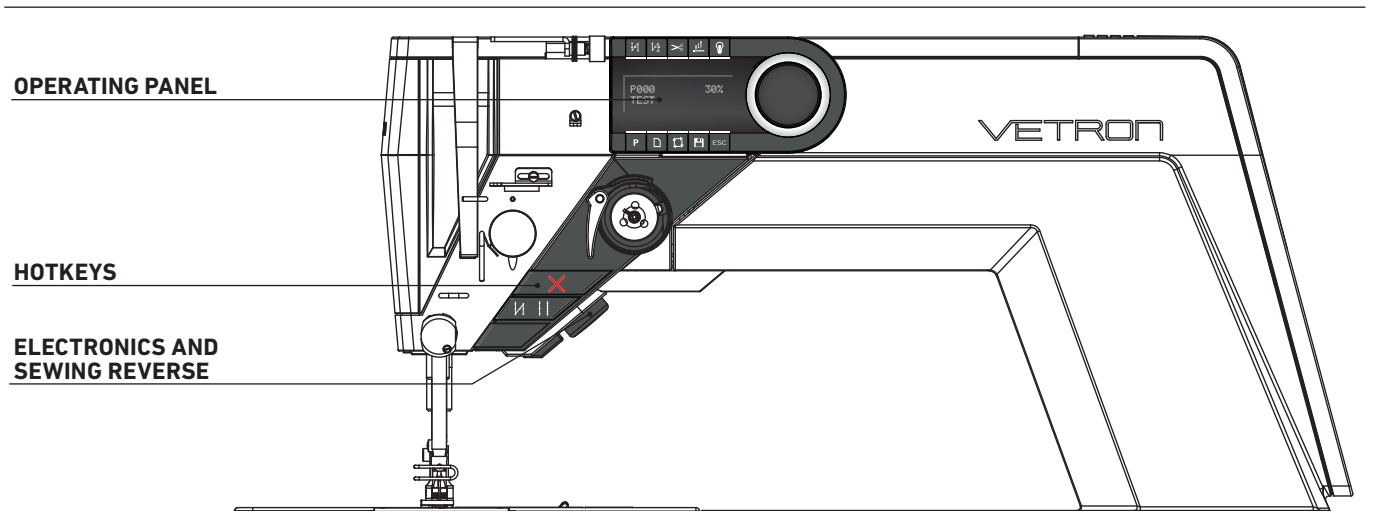
The safety spring **1** must engage securely when the machine is tilted backwards.

- » If the machine is tilted back, the safety spring **1** should be locked securely. The distance between the table top and the bracket must be at least 5mm.

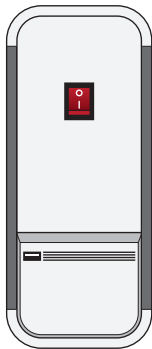
01. PREFACE

02. MACHINE DESCRIPTION

01. OVERVIEW



CONTROL



DONGLE



PEDAL



02. MACHINE DESCRIPTION

02. OPERATING PANEL



The operating field indicates the current operating states.

Operation takes place via continuous dialog between control and operator.
Depending on the operating state, different texts are displayed.

The following functions are assigned to the **BUTTONS ABOVE AND BELOW THE DISPLAY**:

1 BACKTACK (from left to right):

A Start backtack

B End backtack

2 THREAD TRIMMING

3 NEEDLE UP/DOWN AFTER STOP

4 LIGHT ON/OFF

5 PARAMETERS

6 NEW PROGRAM

7 PROGRAMMED SEAM

8 SAVE

9 CANCEL

If a function is activated, this is indicated by illuminating the corresponding LED.

In order to **CHANGE OR SET VALUES**, use the **JOG KEY (10)**:

Turning changes the values; pressing the **JOG KEY** enters the value.

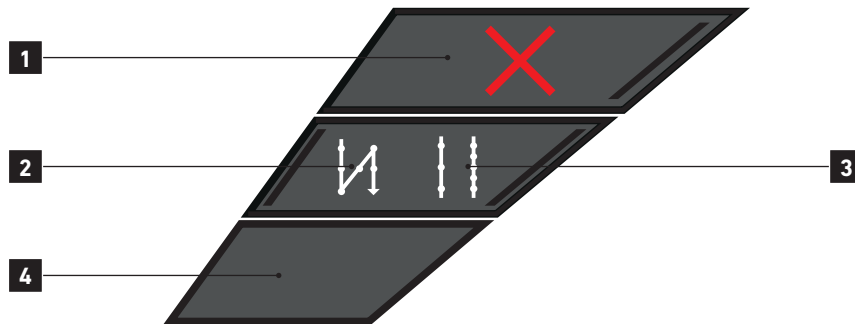
In the following, the operating type is indicated by the following icons:

Input = Press the **JOG KEY**:



Change = Turn the **JOG KEY**:





1 SAFETY SWITCH

If the safety switch is triggered, all functions are locked. The LED lights up red. The **"BLOCKED MODE"** is active.

With software version 1.338, the machine is automatically blocked when the gripper cover is opened. To continue sewing, the safety button **1** must be pressed after closing the hook cover.



ADVICE:

Before activating the machine by the X-button make sure to remove **sewing material** or **other items** below the sewing feet if necessary and follow the instructions displayed in the control panel.

2 SINGLE BACKTACK SUPPRESSION

If the backtack function is activated, the following backtack is switched off once by pushing the key.

3 2ND STITCH LENGTH

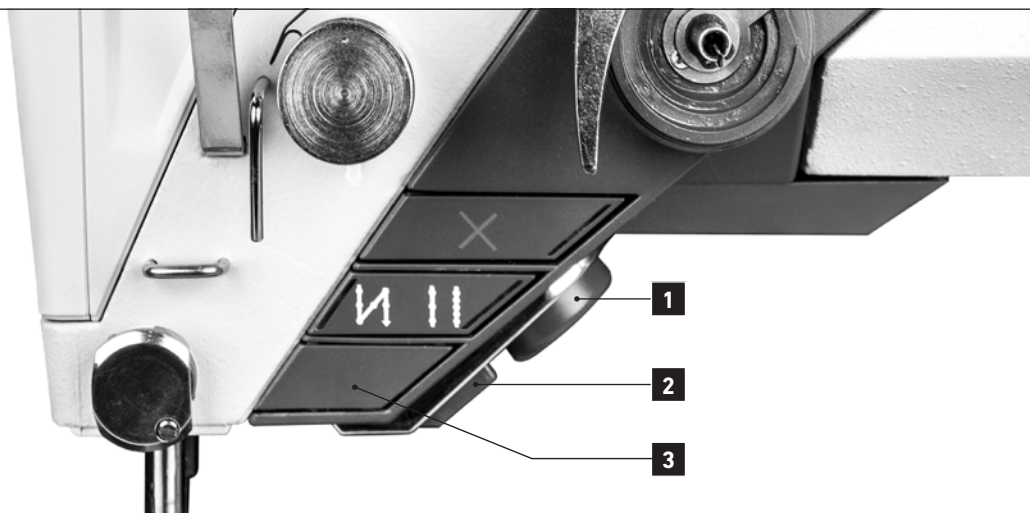
If the second stitch length is activated, the corresponding LED lights up.

4 CUSTOMIZABLE BUTTON

Default: Toggle foot stroke level

02. MACHINE DESCRIPTION

04. ELECTRONIC HANDWHEEL & REVERSE SEWING



ADVICE!

The electronic handwheel is not active unless the machine has performed at least one stitch.

For safety reasons it is necessary during "**BLOCKED MODE**" to push and hold the programmable button (the lowest button) **3** to activate the electronic handwheel.

1 ELECTRONIC HANDWHEEL – FUNCTION

By turning the handwheel, you can move the needle bar up or down.

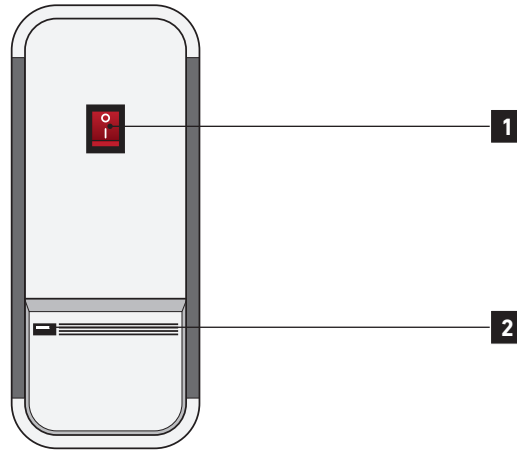
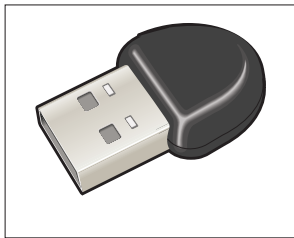
From here on, the operating type is indicated by the following icons:

Pressing the handwheel:  stitch-for-stitch function / needle positioning

Turning the handwheel: 

2 REVERSE SEWING

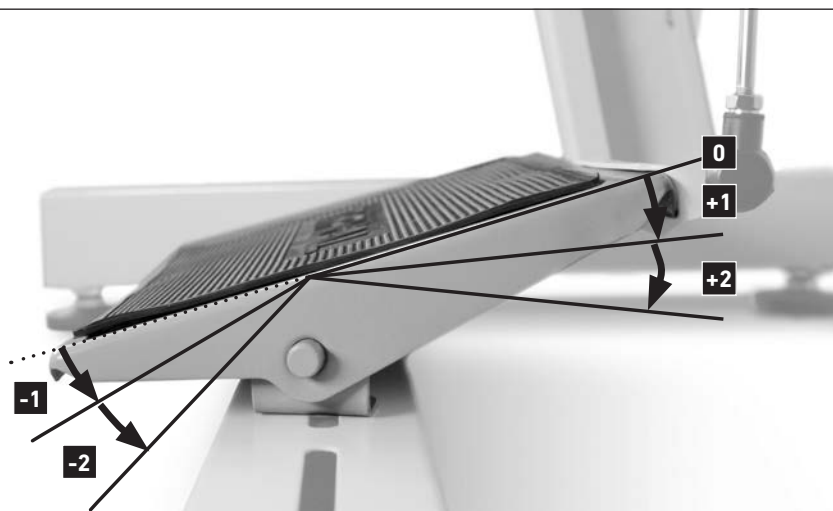
Pulling the button changes the sewing direction.








- 1 MACHINE MAIN SWITCH**
Switches the machine ON / OFF
- 2 USB-PORT**
Identify yourself using the provided USB dongle.

02. MACHINE DESCRIPTION

06. PEDAL

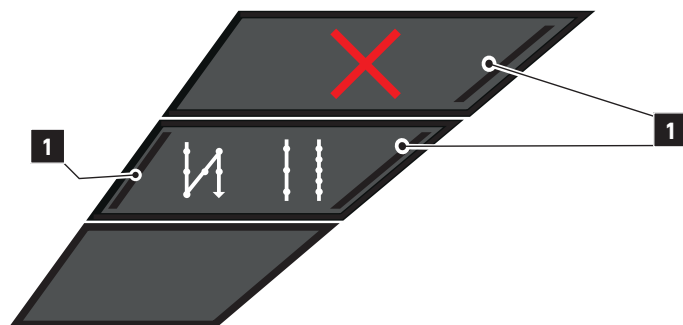


- 0** IDLE POSITION
- +1** CONSTANT SEWING SPEED (adjustable via parameter M502)
- +2** VARIABLE SEWING SPEED FROM 0-100%
OF THE CHOSEN MAXIMUM SPEED (depending on sewing program)
- 1** SEWING FEET LIFT
- 2** SEAM END PROCEDURE ACTIVATION (depending on sewing program)

DISPLAY	STEP	DESCRIPTION
» LIGHT ON/OFF		
		The VETRON head module is equipped with LED lighting.
	 Press the LIGHT button	The corresponding LED on the display lights up.
» ADJUST LIGHT INTENSITY		
	 Press the LIGHT button	The corresponding LED lights up on the display.
02	 100% ADJUST LIGHT	Change LIGHT INTENSITY
		Percentage on the display and light intensity of the light are changed.
03	 060% ADJUST LIGHT	
		After 2 seconds without further input, the value is set and the current program number is shown.
04	 P123 W12345 PROGRAM NAME	Machine is ready for operation

02. MACHINE DESCRIPTION

08. MACHINE START



Press the main switch at the control box to turn on the machine.

01. Wait a few seconds until the machine is initialized.



ADVICE!

Make sure that no **sewing material** or **other items** are below the sewing feet before pushing the pedal.

02. Push the pedal. The sewing feet move and are finally positioned on the needle plate.

The red and white control lights **1** at the machine head are flashing during automatic movement.

03. The sewing light is automatically switched on.

04. The machine is now ready for use.



ADVICE!

Inside the seam it is not possible to change the program. Press the pedal back to thread trimming position to activate the function if necessary.

01. Push the **JOG KEY 1**.
02. The current program number is flashing.
03. Turn the **JOG KEY** to the left or right to choose the desired program number.
04. Confirm your choice by pushing the **JOG KEY** again.
05. The machine is now ready for use.

02. MACHINE DESCRIPTION

10. DIRECT ACCESS



ADVICE!

It is possible to create operator's direct access to one program parameter via the control panel.

The direct access parameter is permanently shown in the display. The manipulations by the operator are **not saved** in the program and will be reset after program change or when the machine is turned off.

By turning the **JOG KEY 10** the value can be adjusted directly.

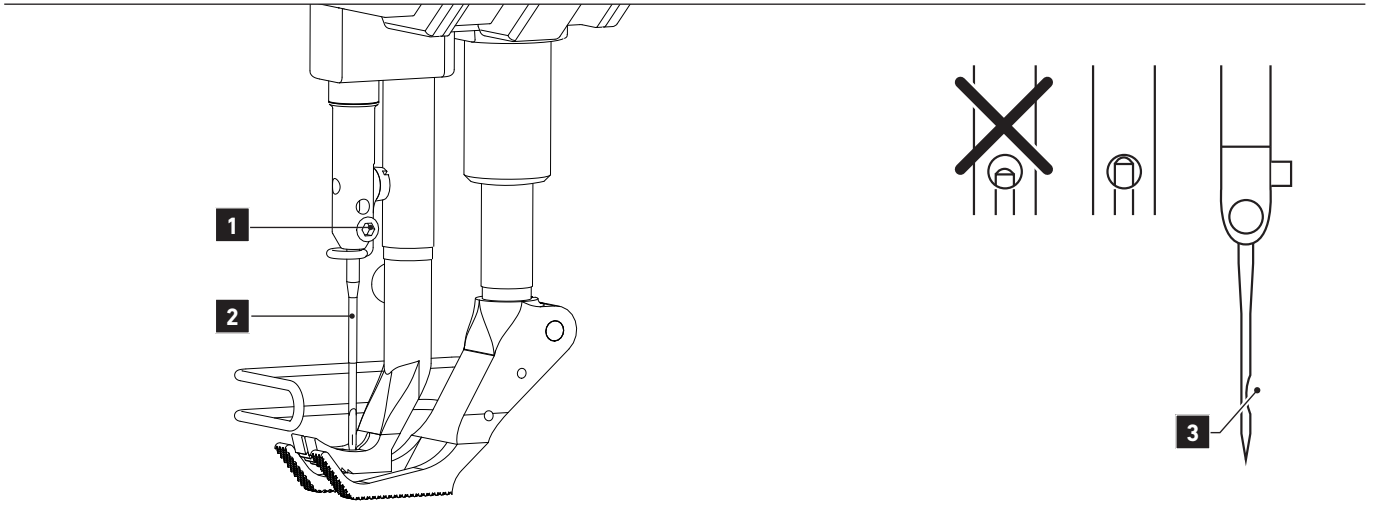
The following parameters can be displayed:

- » OFF
- » Thread tension
- » Stitch length
- » Maximum speed
- » Top feed stroke
- » Top feed pressure
- » Bobbin thread counter (only display)
- » Edge guide distance
- » Current sewing speed (only display)
- » Current needle position in degrees (only display)

03. OPERATION OF THE MACHINE

01. INSERTING THE NEEDLE (1- NEEDLE)

-1-2



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"** or turn the machine off, before inserting the needle. Failure to comply produces a risk of injury in case of an unintentional machine operation.



NOTE

Only use needles from the system intended for the machine.
(Needle system 134-35)

01. Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off.
02. Loosen the screw **1**.
03. Push the needle **2** fully in until it stop. Make sure that the groove **3** on the needle is to the right side.
04. Tighten the screw **1** again.
05. Push the X-button or switch the machine on again and follow the instructions displayed in the control panel.



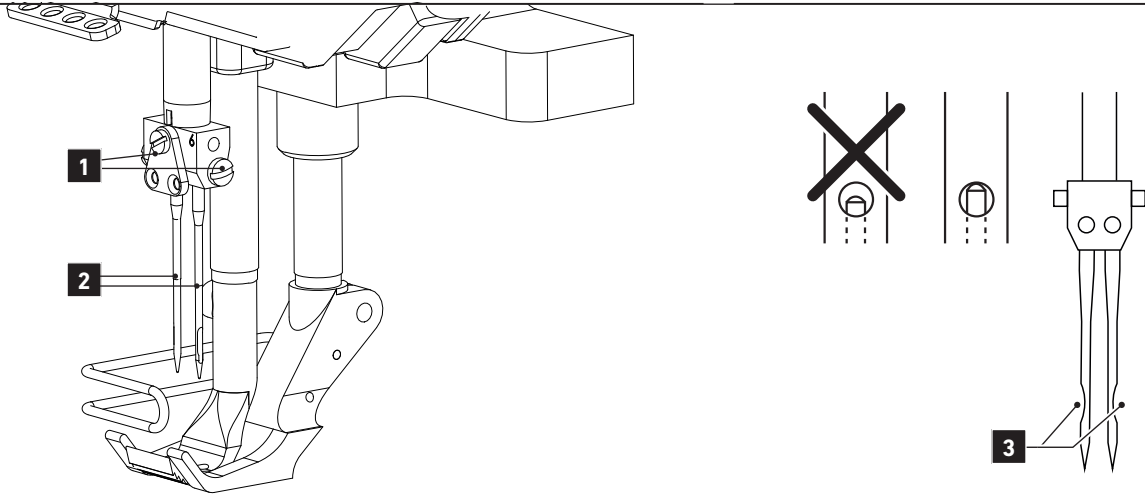
ADVICE:

Before activating the machine by the X-button make sure to remove **sewing material** or **other items** below the sewing feet if necessary and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

01.01. INSERTING THE NEEDLE (2- NEEDLE)

-2-2



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off before inserting the needles. Failure to comply produces a risk of injury in case of an unintentional machine operation.



INFO

Only use needles from the system intended for the machine.
(Needle system 134-35)

01. Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off.
02. Loosen the screws **1**.
03. Push the needles **2** fully in until they stop. Make sure that the groove **3** of the right needle points to the right and the left needle to the left.
04. Tighten the screws **1** again.
05. Push the X-button or switch the machine on again and follow the instructions displayed on the control panel.



NOTE:

Before activating the machine by the X-button make sure to remove **sewing material** or **other items** below the sewing feet if necessary and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

02. SEWING FEET EXCHANGE



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off before you change the sewing feet. Failure to comply produces a risk of injury in case of an unintentional machine operation.

During **"BLOCKED MODE"** the sewing feet have no pressure or position control. They can be moved by the following method:

01. Press and hold the programmable button on the machine head (lowest button).
02. By turning the **JOG KEY** the sewing feet can be moved.
03. By loosening screws **1** the sewing feet can be exchanged.

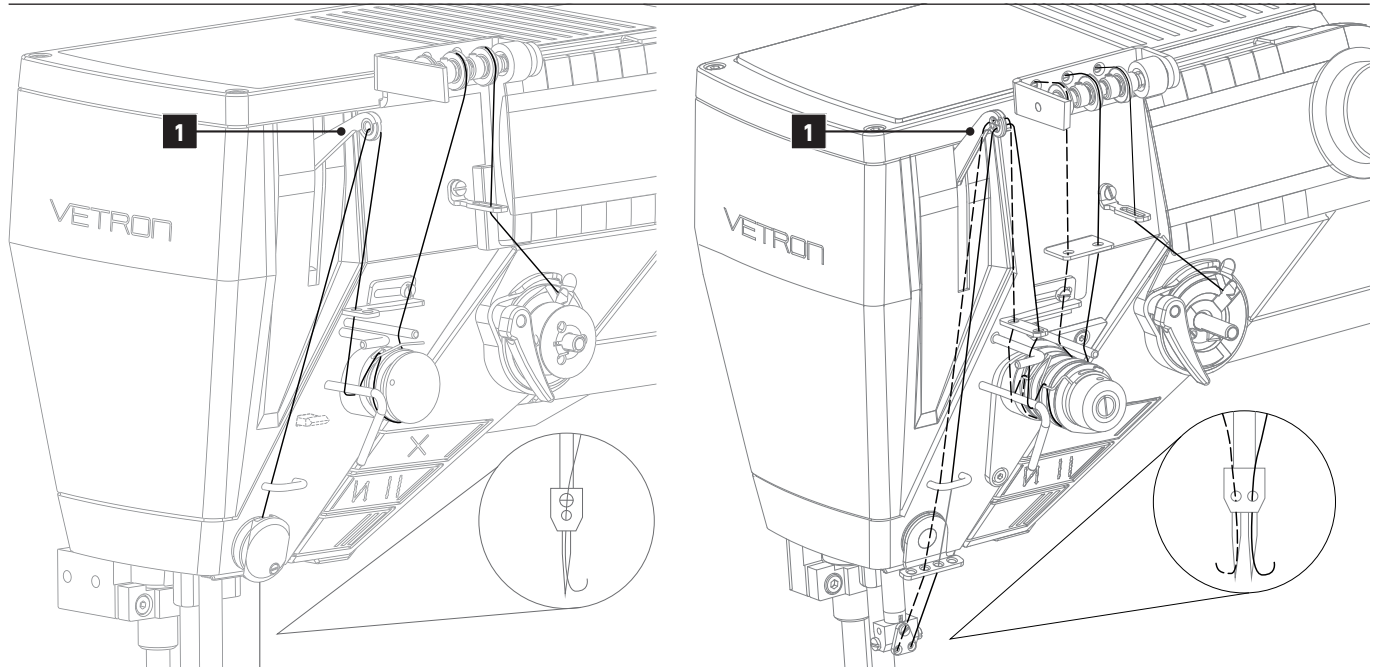


ADVICE!

Push the X-button or switch the machine on again and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

03. THREADING THE MACHINE (1- / 2- NEEDLE)



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off. Failure to comply produces a risk of injury in case of an unintentional machine operation.

Make sure that the thread takeup lever **1** is in its top dead position.
Now you can thread the machine according to the picture.

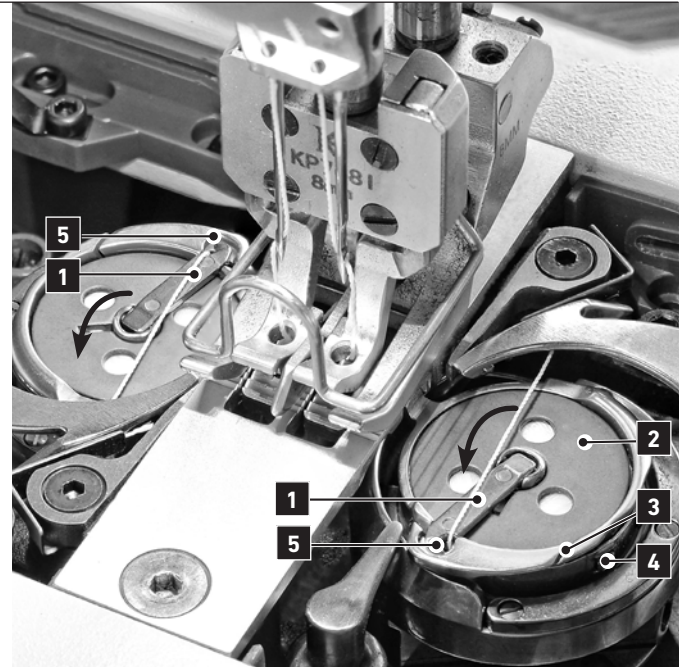
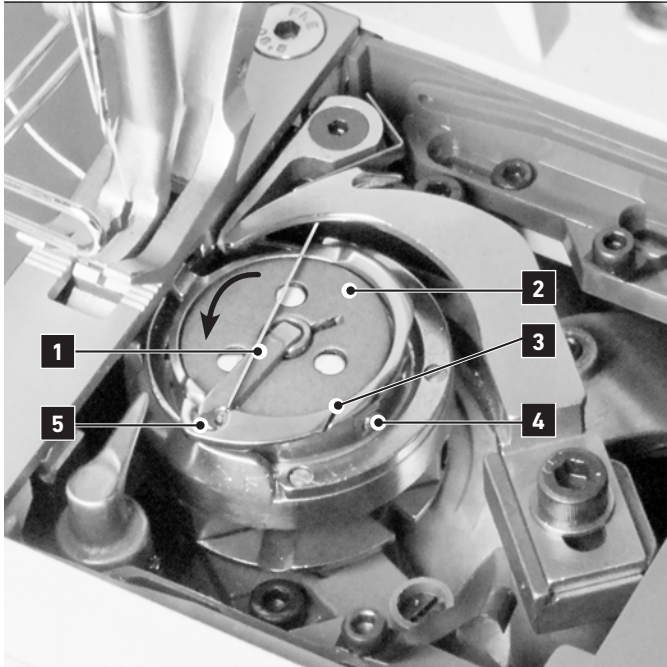


ADVICE!

Push the X-button or switch the machine on again and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

04. EXCHANGING THE BOBBIN AND ADJUSTING THE BOBBIN THREAD TENSION (1- / 2- NEEDLE)



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off before removing the bobbin. Failure to comply produces a risk of injury in case of an unintentional machine operation. If the machine is equipped with the special feature "bobbin cover detection" it automatically enters the **"BLOCKED MODE"** after opening the bobbin cover. With software version 1.338, the machine is automatically blocked when the gripper cover is opened. To continue sewing, the safety button (X-button) must be pressed after closing the hook cover.

01. Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off.
02. Open the hook cover. Fold up the tab **1** and remove the bobbin **2**.
03. Insert the filled bobbin. Check the correct direction by pulling the thread end and assuring the rotation of the bobbin is counter-clockwise.
04. Pass the bobbin thread through the slot **3**, then pass the tension spring below and pull it out of the thread guide **5**. Close the tab **1** and the hook cover.
05. The bobbin thread tension can be adjusted at screw **4**.

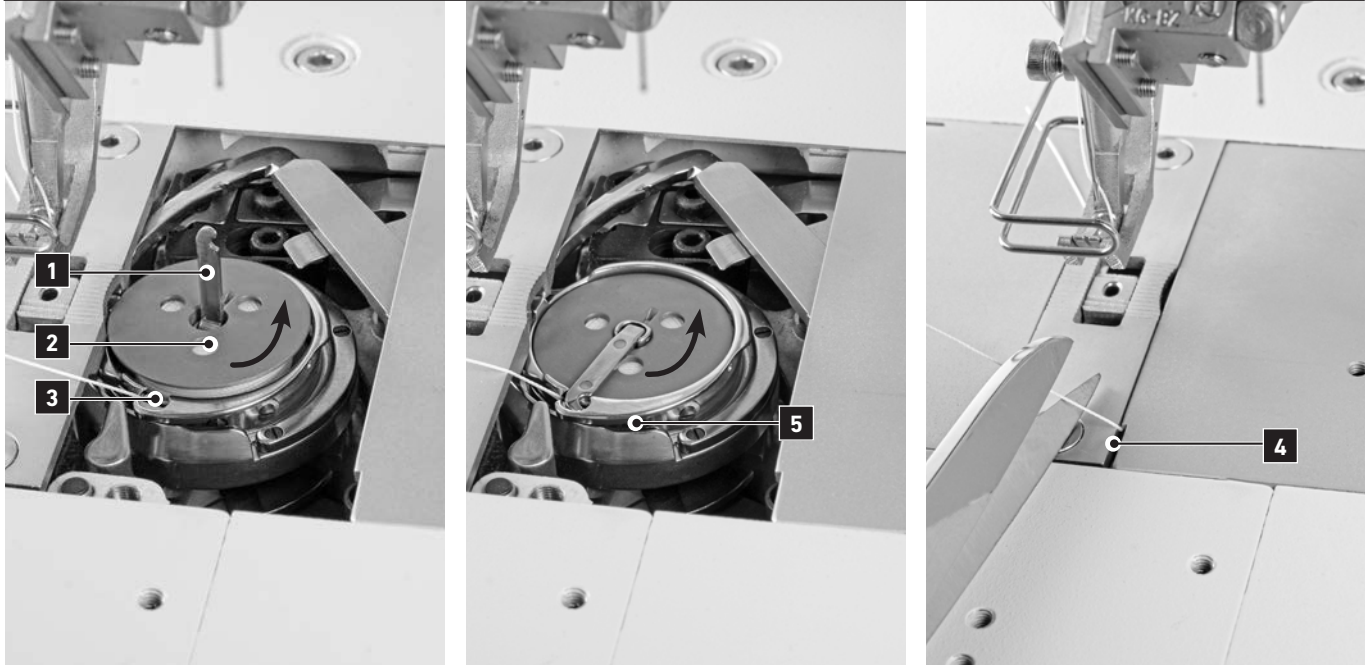


ADVICE!

Push the X-button or switch the machine on again and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

04.01. EXCHANGING THE BOBBIN AND ADJUSTING THE BOBBIN THREAD TENSION (SHORT THREAD CUTTER)



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **“BLOCKED MODE”**, or turn the machine off before removing the bobbin. Failure to comply produces a risk of injury in case of an unintentional machine operation. If the machine is equipped with the special feature “bobbin cover detection” it automatically enters the **“BLOCKED MODE”** after opening the bobbin cover. With software version 1.338, the machine is automatically blocked when the gripper cover is opened. To continue sewing, the safety button (X-button) must be pressed after closing the hook cover.

01. Push the X-button at the machine head. The red light illuminates showing the active **“BLOCKED MODE”** or turn the machine off.
02. Open the hook cover. Fold up the tab **1** and remove the bobbin **2**.
03. Insert the filled bobbin. Check the correct direction by pulling the thread end and assuring the rotation of the bobbin is counter-clockwise.
04. Pass the bobbin thread through the slot **3** (see image 1) and close the tab **1**.
ATTENTION: Make sure the bobbin thread is not pulled over the tab (see image 2)
05. Pull the bobbin thread through the slot **4** of the stitch plate and close the bobbin cover. Then cut the thread according to image 3.
ATTENTION: Is the bobbin thread too long, sewing disturbances and thread breakage occurs.
06. The bobbin thread tension can be adjusted at screw **5**.

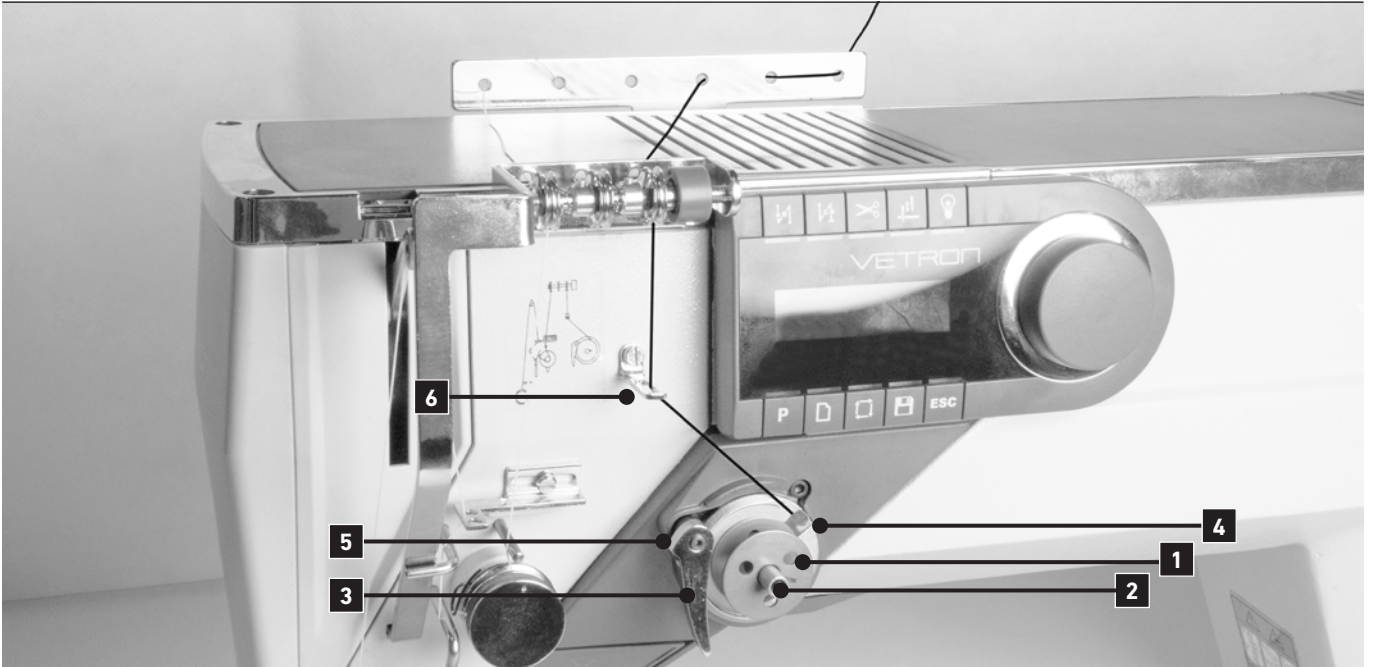


ADVICE!

Push the X-button or switch the machine on again and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

05. WINDING THE BOBBIN THREAD



CAUTION!

Avoid touching rotating parts to avoid the risk of injury or damage of the machine.

01. Turn the machine on.
02. Place a bobbin **1** on the bobbin winder **2**.
03. Push the lever **3** towards the bobbin.
04. After the winding process is finished, the lever **3** automatically moves back.
05. Remove the bobbin and cut the thread at the knife **4**.
06. Loosen the screw **5** and move the lever **3** to adjust the amount of thread on the bobbin. There should be a gap of 1 mm between thread and bobbin edge.

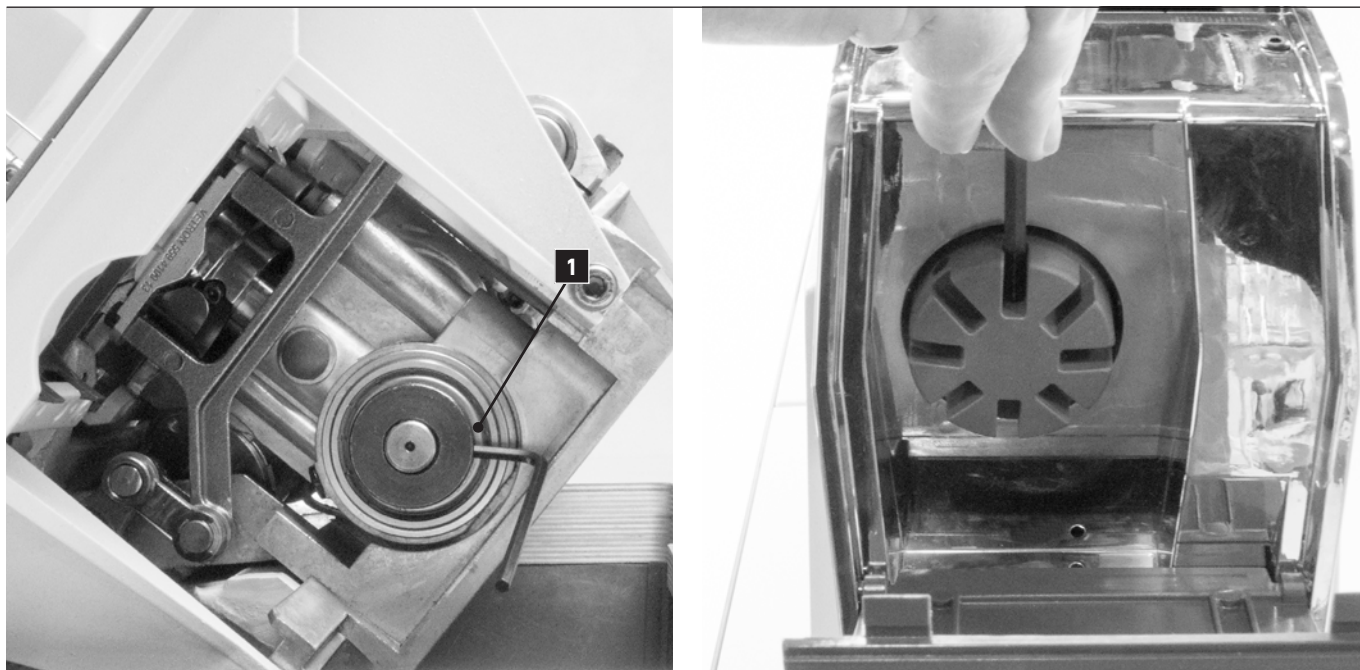


ADVICE!

If necessary, the bracket **6** can be slightly bended to the left or right to optimize the thread flow to the bobbin.

03. OPERATION OF THE MACHINE

06. ENGAGING THE SAFETY CLUTCH



DANGER! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off.

Failure to comply produces a risk of injury in case of an unintentional machine operation.

The safety clutch is integrated in the main drive module to protect the hook from damage. Causes of damage could be for example thread jamming, needle breakage or incorrect operation.

If the safety clutch has released, perform the following procedure:

01. Turn the machine off at the main switch.
02. Remove the cause of the disorder.
03. Tilt the machine to the back, open the right cover to get access to the mechanical handwheel.
04. Take the 3 mm allen key of the accessories and stick it in screw **1**.
Turn the handwheel until the key is touching the machine housing (picture left).
05. Take the 5 mm allen key of the accessories and put it in the handwheel gap (picture right).
Turn the handwheel until the safety clutch is adviceably engaging.
06. Check the needle bar rise. (refer to chapter **03.12.** of the adjustment manual).
If confirmed, the machine is ready for use again.

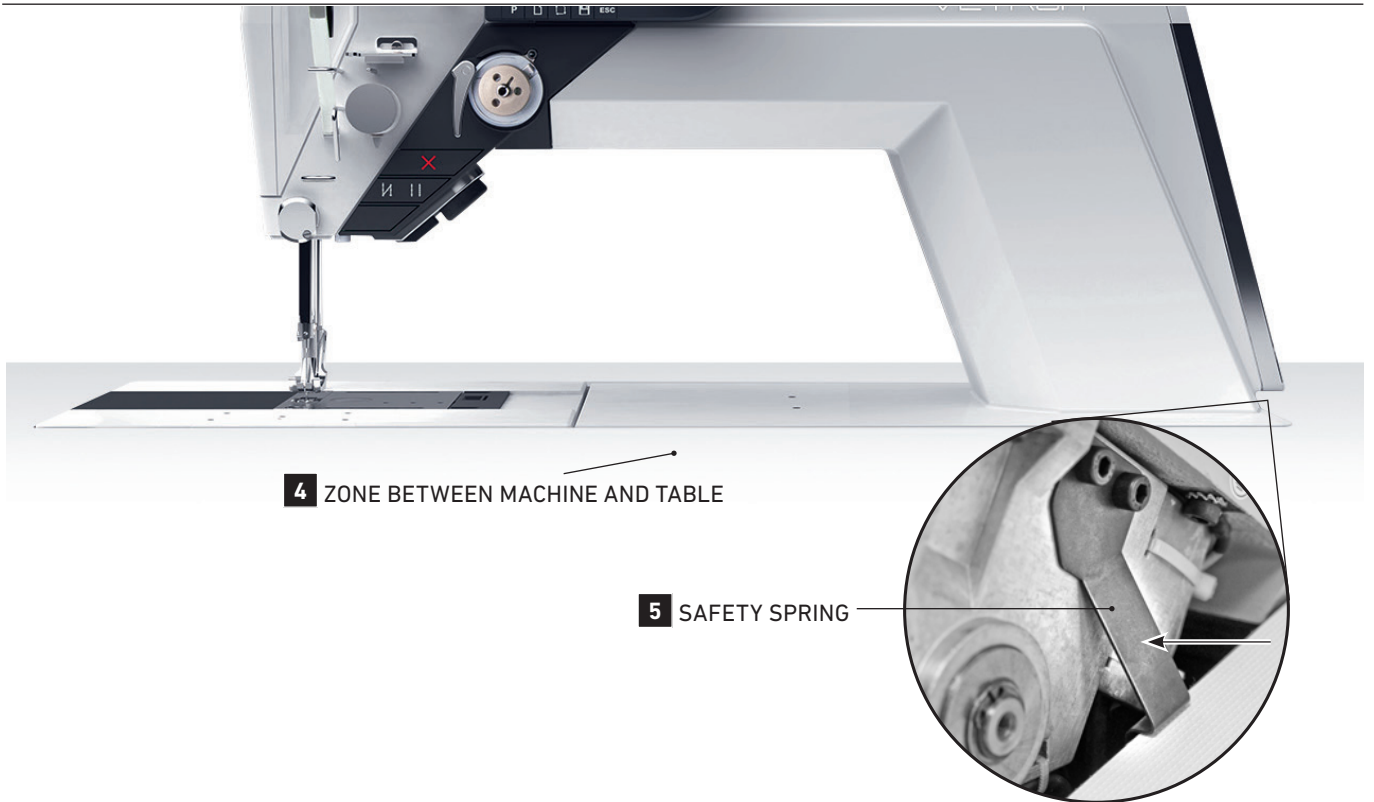


ADVICE!

Push the X-button or switch on the machine again and follow the instructions displayed on the control panel.

03. OPERATION OF THE MACHINE

07. SAFETY SPRING



NOTICE:

By tilting the machine back, the safety spring **5** hooks on the table. The machine can not tilt forward.

How to unlatch the safety spring **5** :

01. Push the machine slightly backward.
02. Press safety spring **5** carefully in direction of arrow.
03. Under consideration that nothing is between machine and table **4**, the machine can now be tilted forward.
04. The machine is ready for use again.



CRUSHING

Crushing and bruising can occur, when the machine is moved to the operating position, between the machine and the table **4** .

04. MAINTENANCE

01. MAINTENANCE INTERVALS



ADVICE!

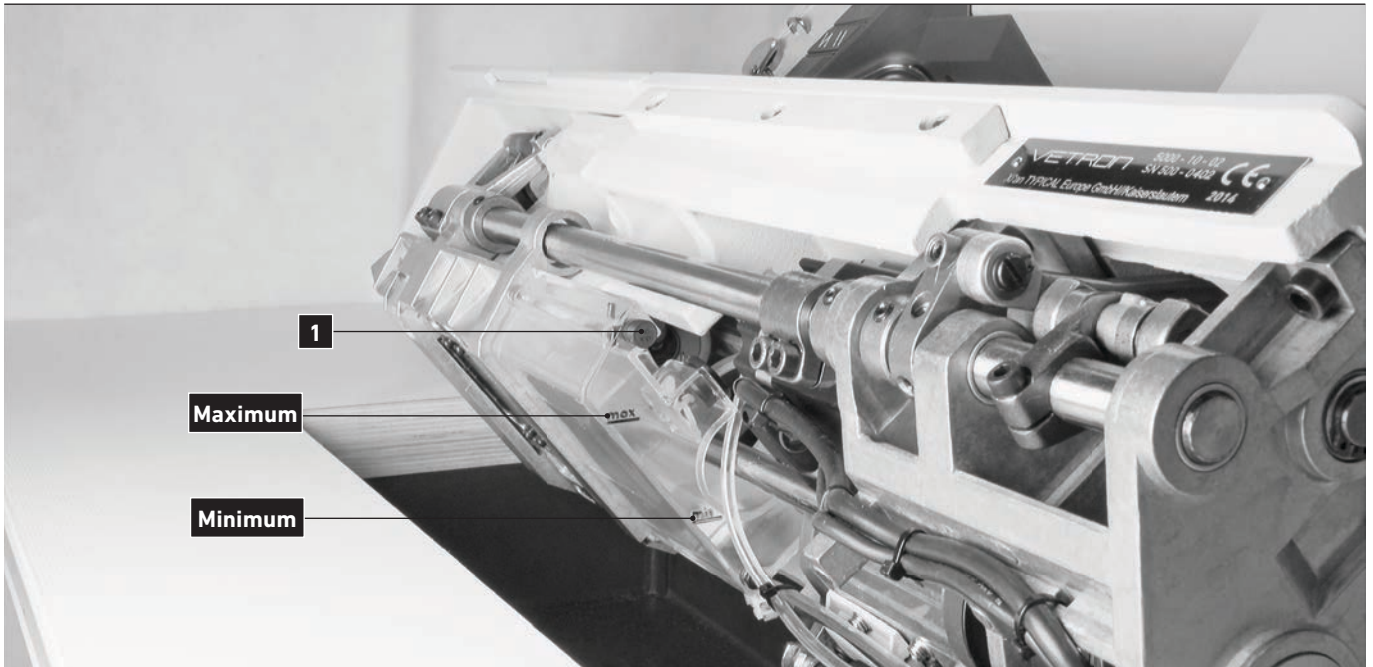
In the following chapter we will introduce you to the most important maintenance areas to be checked daily & before each use.

Detailed maintenance and cleaning instructions can be found in the respective adjustment instructions in chapter 05.



WARNING!

Before all maintenance work: push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off. Failure to comply produces a risk of injury in case of an unintentional machine operation.



Check the oil level before starting!



ADVICE:

The handling and disposal of mineral oils is subject to legal regulation. Deliver used oil to an authorized collection point. Protect your environment. Take care not to spill oil.



INFO!

By tilting the machine during power on, a gravity sensor automatically switches the machine into **"BLOCKED MODE"**. This is noted on the display.

01. Tilt the machine to the back. The oil tank is located below the base plate.
02. If necessary, slightly pull the oil plug **1** and fill the tank up to the "max" marking.
03. Please use only oil types recommended by VETRON.
E.g.: Oil PP 20 DAB 10
(Viscosity 40° C: 15 mm²/s; Flashpoint: 150°)
(Can be ordered under the number: SuS 6436)



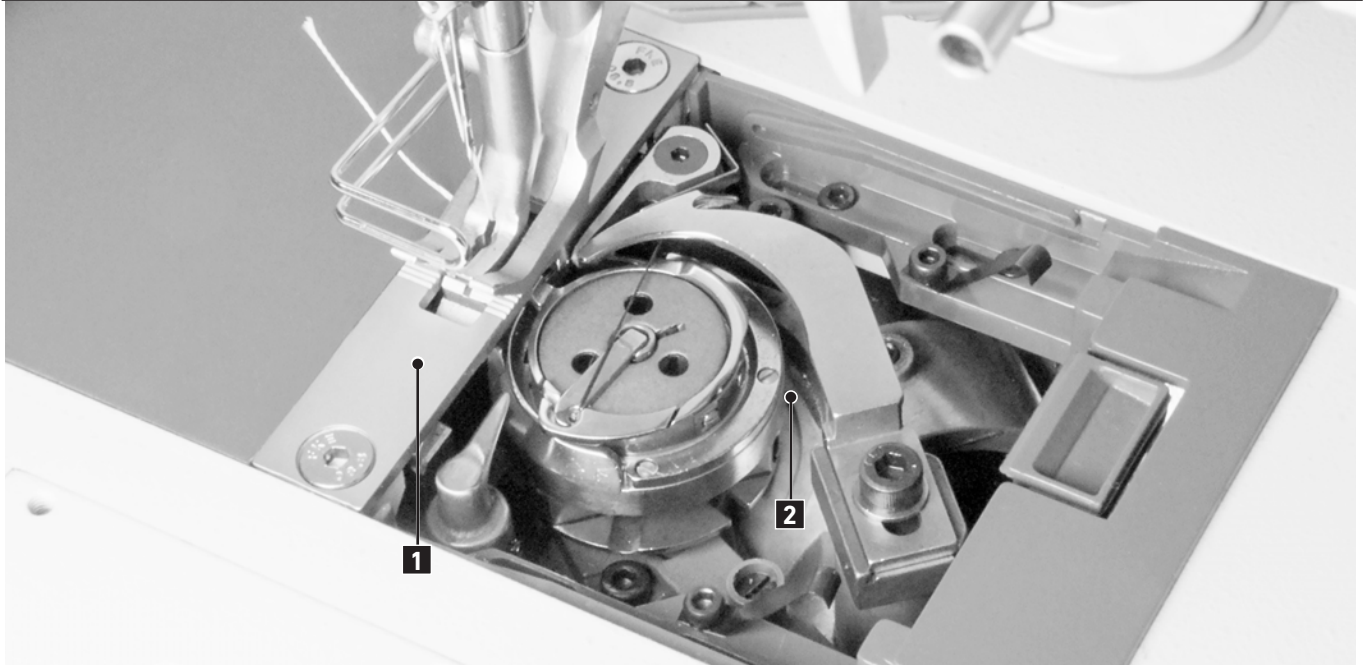
WARNING!

Oil on the skin, or swallowed.
If you get oil on your skin, make sure you clean it off the skin thoroughly.
In case you should swallow the oil seek medical attention immediately.

Or call the service hotline: **+49 631 / 2014 - 460**

04. MAINTENANCE

03. CLEANING THE MACHINE



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active "BLOCKED MODE", or turn the machine off before cleaning the hook area. Failure to comply produces a risk of injury in case of an unintentional machine operation.

PLACES IN SPECIAL NEED OF CLEANING:

- » area under the stitch plate **1**
- » area around the hook **2**
- » bobbin housing
- » feeders
- » thread trimmer
- » needle area

Clean the hook area daily.

With increased lint production, depending on materials, clean the hook area several times a day. For more cleaning tilt the machine back and clean the guard tank.



ADVICE!

If you tilt the machine during power on, a gravity sensor automatically switches the machine into "BLOCKED MODE". This is noted on the display.



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **"BLOCKED MODE"**, or turn the machine off before checking the timing belts. Failure to comply produces a risk of injury in case of an unintentional machine operation.

SEWING DRIVE:

- » Clean fan grill **1** from the main drive (e.g. with an air blow gun).
- » Tilt the machine in order to check the condition of the timing-belts **2** and **3**. The timing belts can be reached easily in this position.

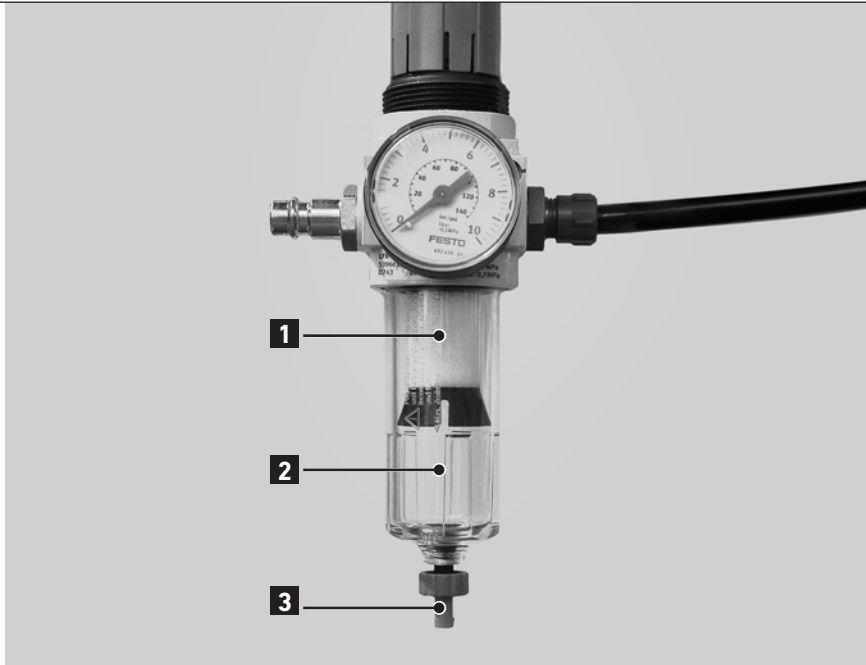


ADVICE!

If you tilt the machine during power on, a gravity sensor automatically switches the machine into **"BLOCKED MODE"**. This is noted on the display.

04. MAINTENANCE

05. PNEUMATIC SYSTEM



CAUTION! RISK OF INJURY!

Push the X-button at the machine head, the red light illuminates showing the active **“BLOCKED MODE”**, or turn the machine off before checking the pneumatic system. Failure to comply produces a risk of injury in case of an unintentional machine operation.

CHECKING THE MAINTENANCE UNIT:

Check water in pressure regulator:

- » The water level should not rise to the level of the filter cartridge **1**.
After unscrewing the drain screw **3**, the water will flow under pressure out of the water separator **2**.

Clean filter cartridge:

- » Dirt and condensation are separated through the filter cartridge **1**.
- » Disconnect the machine from the compressed air supply.
- » Loosen the drain screw **3**.
There should not be any pressure in the machine pneumatic system.
- » Unscrew the water separator **2**.
- » Unscrew the filter cartridge **1**.
Wash the filter shell and cartridge with cleaning fluid (no solvent) and blast clean.
- » Re-assemble the maintenance unit.

Check for system leaks.

Basically

The adjustments for e.g. stitch length, thread tension, foot pressure and other settings are made with equipment like knobs, switches and dials on conventional sewing machines. These settings are not accurately reproducible after changing them.

With the VETRON, these settings are made by step motors, they can exactly reproduce the desired setting. All settings for e.g. stitch length, thread tension and foot pressure are adjusted with parameters on the controller.

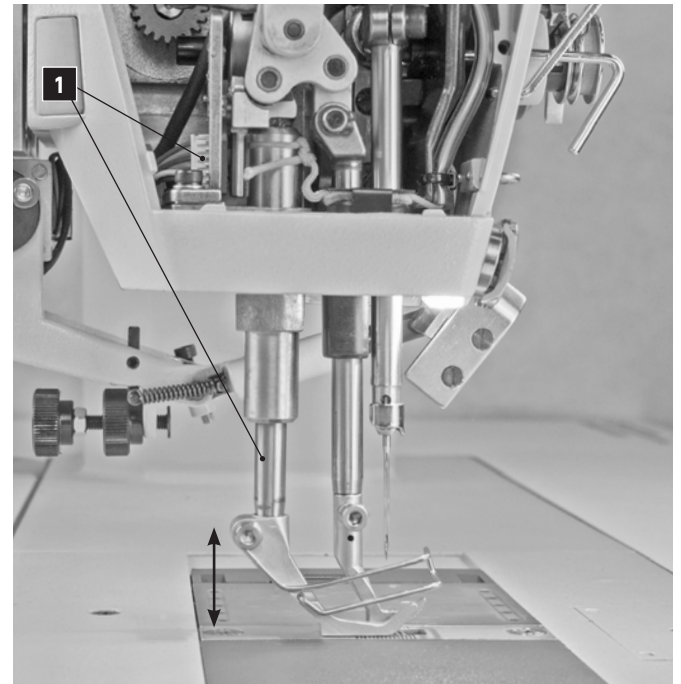
Single- and Chainprograms

A complete setting of the machine is called a program and can be stored under a name or a number. A change of program can be done with the push of a button and all adjustments are carried out. Multiple settings of different machines can be united in one machine. It is also possible to concatenate several programs. They will run automatically one after another. This is called a chain program.

A program can be used as a **single program**, or be linked in a **chain program**. Changes in a program will be active in a **chain program**. For this reason it is advisable to store the parts of a **chain program** separately e.g. with a number higher than 50 upwards.

Measurement of the material thickness

The machine is fitted with a electronic device **1** that can register the thickness of the material. This device enables the machine to react independently to different requirements within one seam, depending on the configuration. The thread tension, foot pressure and stitch length are adjusted with increasing material thickness.



Notice when switching on machine

The system will calibrate itself every time you switch the machine on. Also after pushing the safety switch (X-Key) calibration will take place. Calibration must take place without material under the sewing foot. The needle plate surface is 0mm material thickness.

05. PROGRAMMING

02. CREATE PROGRAMNAME AND STORING



DISPLAY	STEP	DESCRIPTION
» CREATE PROGRAM NAME AND STORING		
	1	Push the key NEW PROGRAM (6)
	2	The next empty program space will be shown on the display.
	3	Push the JOG KEY (10)
	4	Program name or number can be entered on the display.
	5	Push the JOG KEY again
	6	The cursor on the display will flash. You can select a number or letter by turning the JOG KEY . Push the JOG KEY to confirm selection. The cursor will move to the position for the next number or letter. You can enter a maximum of 15 digits.
	7	Move the cursor below the righthand arrow when the name is complete.
	8	Push the JOG KEY to confirm your entry.
		The display will now show your selected name.






ADVICE!

Turn the **JOG KEY** to select the desired parameter. Push the **JOG KEY**. The parameter will flash and can be changed by turning the **JOG KEY**. Pushing the **JOG KEY** again will store your input.

05. PROGRAMMING

03. CHANGE PROGRAM NAME



DISPLAY	STEP	DESCRIPTION
» CHANGE PROGRAM NAME		
1	Push the P button (5). 	The appropriate LED will shine on the display.
2		Parameter 1 appears on the display. Now you can change the name.
3	 Turn the JOG KEY to the right.	You are directed to the program parameters.

05. PROGRAMMING

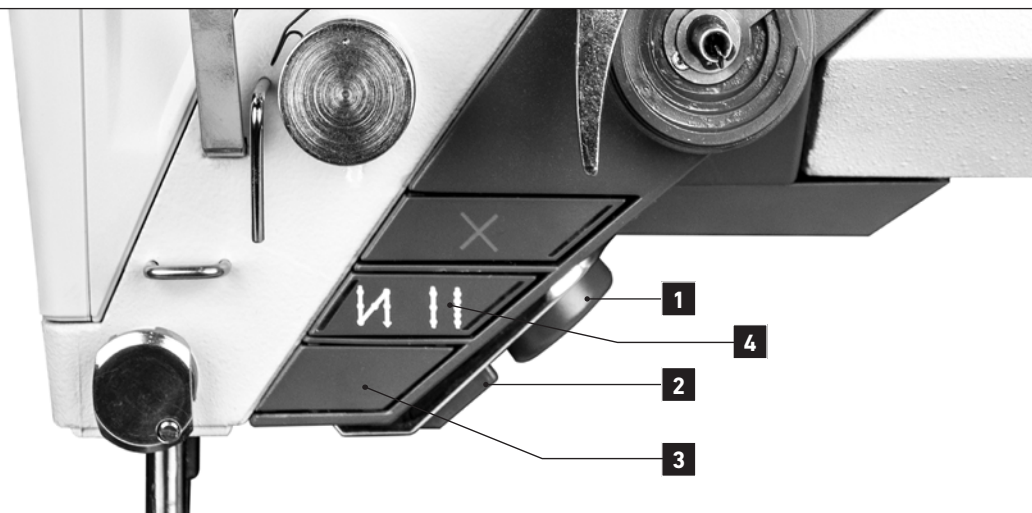
04. PROGRAM PARAMETER

-1-14



ADVICE:

A seam program can be created with the following parameters. When a function is deactivated the according parameter will not be displayed. To select a program parameter you have to turn the JOG KEY and push it when the desired parameter appears. It will now flash. Now you can select the desired parameter setting by turning the JOG KEY. The new setting will be stored by pushing the JOG KEY again.



NR.	PARAMETER	DESCRIPTION
» STITCH LENGTH IN THE SEAM		
010	Stitch length 1	Main stitch length in mm in the seam. The stitch length can also be entered in the negative range. The seam will be done in reverse.
011	Stitch length 2	Second stitch length, which can be selected by pushing button 4 (parameter 018). The stitch length can also be entered in the negative range. The seam will be done in reverse.
018	Button 4 Stitch length trigger function	<p>Select function with button 4.</p> <p>OFF Without function</p> <p>SWITCH Stitch length will change to 2nd stitch length as long as you hold it. When button is released 1st stitch length is back.</p> <p>TOGGLE Stitch length will change when button is pressed. When it is pressed a second time, it will change back to 1st stitch length.</p>

NR.	PARAMETER	DESCRIPTION
» FOOT STROKE		
020	Foot stroke 1	Stroke in mm during normal sewing. The value must be set depending on the thickness and texture of the material to achieve a correct material feed.
021	Foot stroke 2	2 nd stroke in mm. Can be switched on when reaching thick joints in the seam. Switching over can be done with key 3 or the electronic handwheel 1 . It can also be done with a knee lever (optional) or with the automatic switch parameter 027 .



NR.	PARAMETER	DESCRIPTION
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» FOOT STROKE

The machine will switch over to a higher stroke automatically after a certain time and revolution speed.



ADVICE!

Automatic stroke switch parameter 027

The stroke on an alternate machine are normally changed by pressing a button or with a knee lever. The VETRON can do this also automatically with the foot pedal. By activating parameter **027** it will activate the facility. When the machine is run a certain time on the 1st step of the foot pedal it will automatically change to a higher stroke setting. When you sew faster than the 1st step the machine will return back to the lower stroke. The time and revolution is adjustable (parameter **028, 029**).

027 Automatic stroke switch

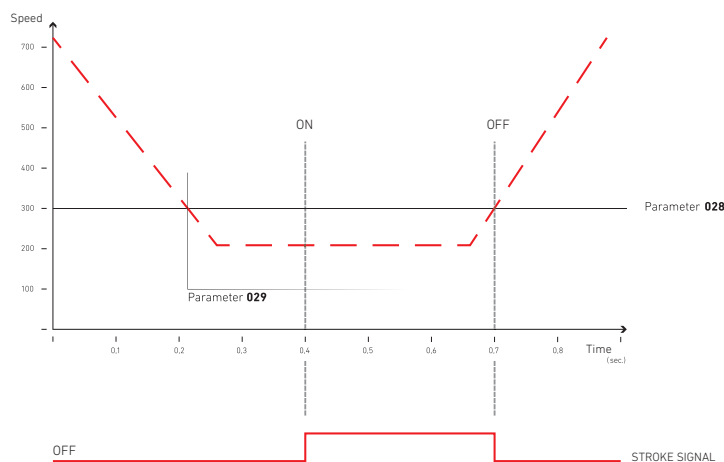
028 Automatic stroke switch speed threshold

Rotation per minute when switch should take place.

029 Automatic stroke switch delay

Delay time until stroke switch will occur.

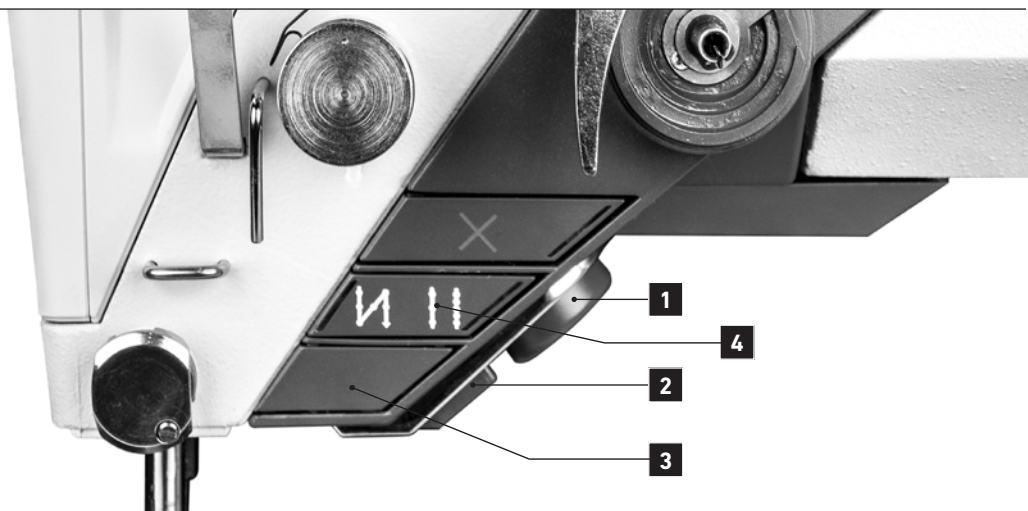
Parameter **027** Automatic stroke switch




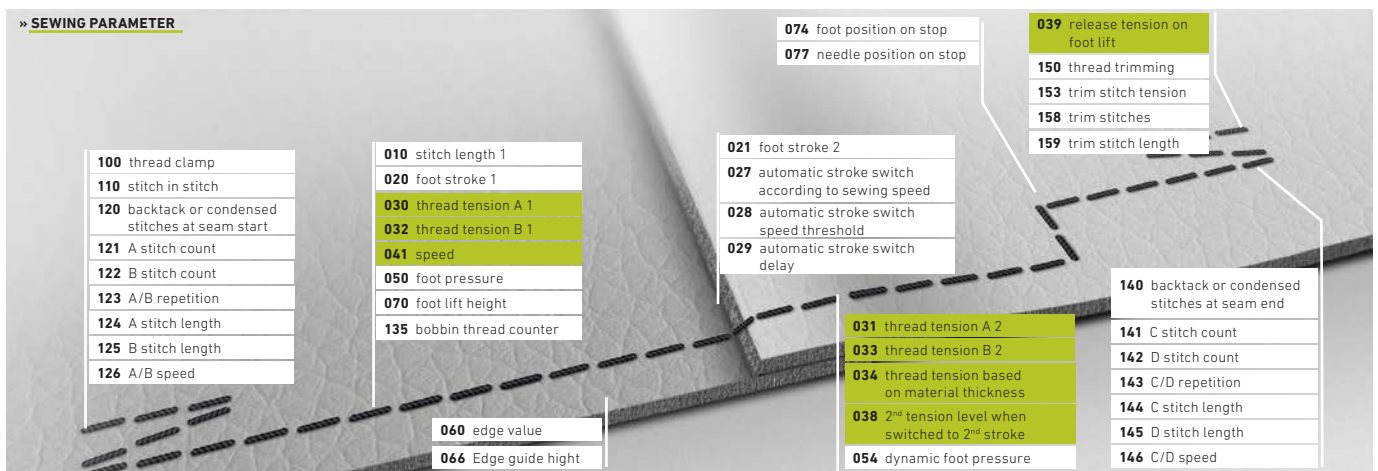
05. PROGRAMMING

04. PROGRAM PARAMETER

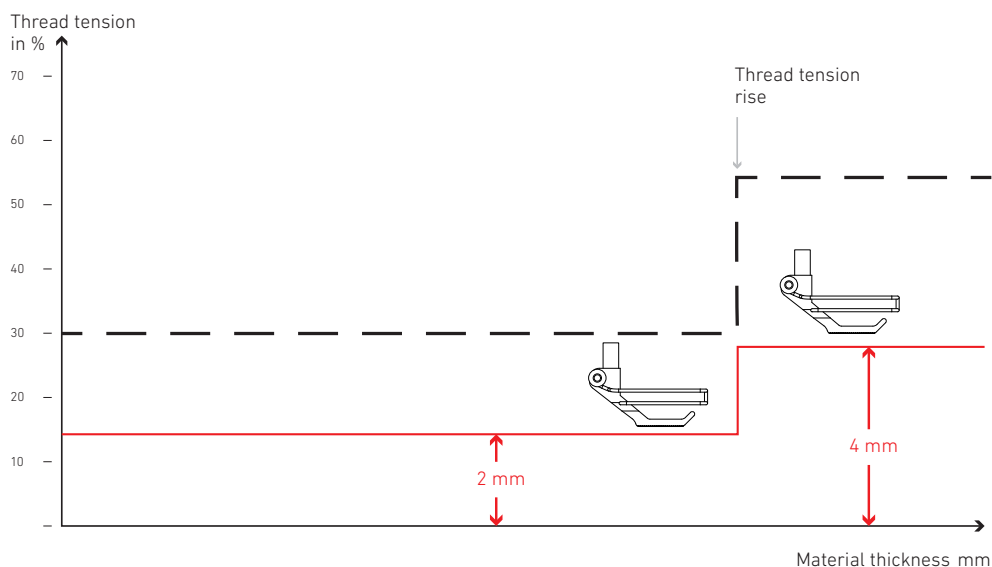
-3-14



NR.	PARAMETER	DESCRIPTION
» THREAD TENSION		
		<p>ADVICE! Thread tension The thread tension on conventional machines is adjusted with a spring. The reproduction of the desired thread tension is difficult. The VETRON sets the thread tension with a step motor. The task of the tension spring is taken over by an elastomer. A second thread tension on conventional machines needs an additional tension unit. The VETRON accomplishes the 2nd thread tension by increasing the tension.</p>
030	Thread tension A 1	Main thread tension in program. Setting range 0 to 100 %.
031	Thread tension A 2	Higher thread tension than the main program. Setting range 0 to 100 %. The connection with the higher thread tension can be done by pushing button 3 , or 1 or when the 2 nd top feed stroke is activated.
032	Thread tension B 1 (Two needle machine)	Main thread tension in program. Setting range 0 to 100 %.
033	Thread tension B 2 (Two needle machine)	Higher thread tension than the main program. Setting range 0 to 100 %. The connection with the higher thread tension can be done by pushing button 3 , or 1 or when the 2 nd top feed stroke is activated.
034	Thread tension level increase / decrease based on material thickness	Two function are available. Function 1 = OFF (no change on different material thickness) Function 2 = % (lower percentage = less thread tension increase) (higher percentage = more thread tension increase) Automatic thread tension adjustment depends on material thickness The tension will be adjusted with the information received from the material thickness recognition. You can activate this function with the parameter 034 . With a lower percentage the increase will be less than with a higher percentage.



Automatic tension adjustment when material thickness changes



NR.	PARAMETER	DESCRIPTION
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» THREAD TENSION

038	2 nd tension level when switched to 2 nd stroke	Two functions are available. Function 1 = OFF Thread tension will not change over. Function 2 = ON Thread tension will change over.
039	Release tension on foot lift	Three functions are available. Function 1 = OFF (No tension release when foot is lifted) Function 2 = END (Tension release when thread is cut) Function 3 = ALWAYS (Tension release when foot is lifted)

NR.	PARAMETER	DESCRIPTION
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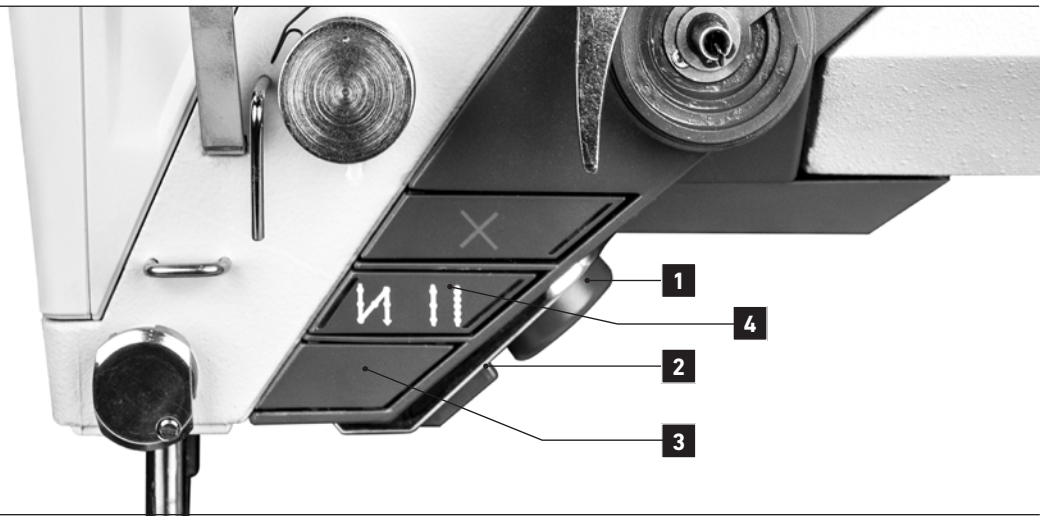
» MAXIMUM ROTATION SPEED

040	Speed mode	You can chose between two versions: Function 1 = PEDAL Sewing speed will be regulated by the positon of the pedal. Function 2 = CONSTANT Constant sewing speed as selected in parameter 041 .
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05. PROGRAMMING

04. PROGRAM PARAMETER

-5-14



NR.	PARAMETER	DESCRIPTION
» MAXIMUM ROTATION SPEED		
041	Maximum speed	The maximum speed will be entered here.
042	Softstart stitch count	Here the stitches are set which are required for a soft start.

NR.	PARAMETER	DESCRIPTION
» FOOT PRESSURE CONTROL		



ADVICE!

Automatic foot pressure control

On conventional machines the foot pressure is generated by a spring and will be adjusted seldom. The VETRON also generates the foot pressure with a spring, but the spring is pre-stressed by a step motor with gear (parameter **050**). In different programs can different foot pressure be applied. You have the choice between three operation modes (parameter **054**).

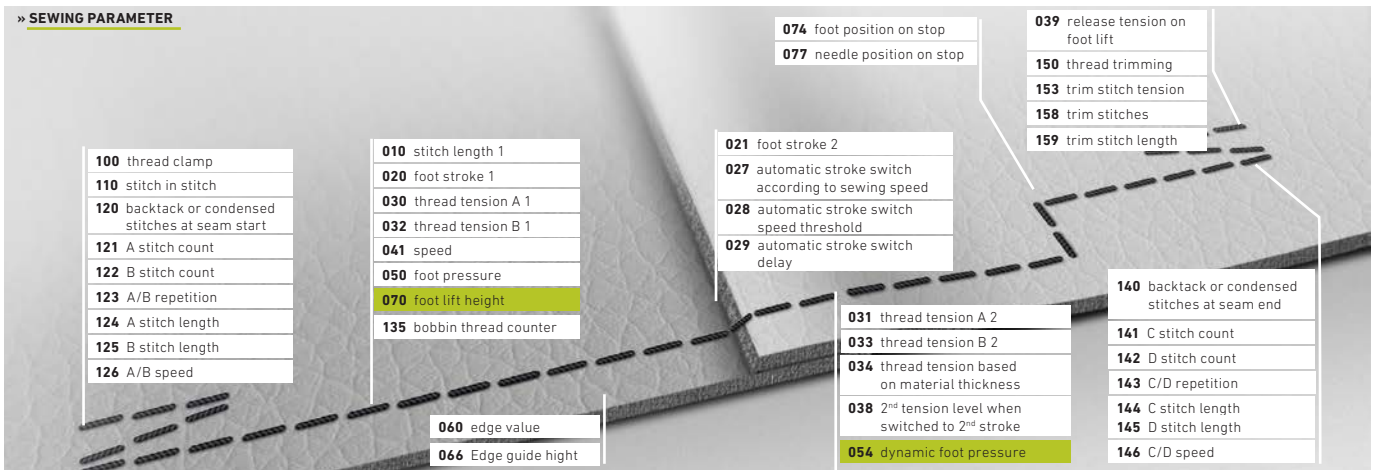
- Operation mode: 1 = OFF Foot pressure is generated like on a conventional machine. Can be different depending on the program.
- 2 = CONSTANT The foot pressure will be constant on all material thicknesses. The material thickness recognition will make sure that the foot pressure control that you have a constant foot pressure.
- 3 = 1-100% The foot pressure will be increased with increased sewing speed. Low percentage will increase the pressure only weak. High percentage will increase the pressure stronger.



ADVICE!

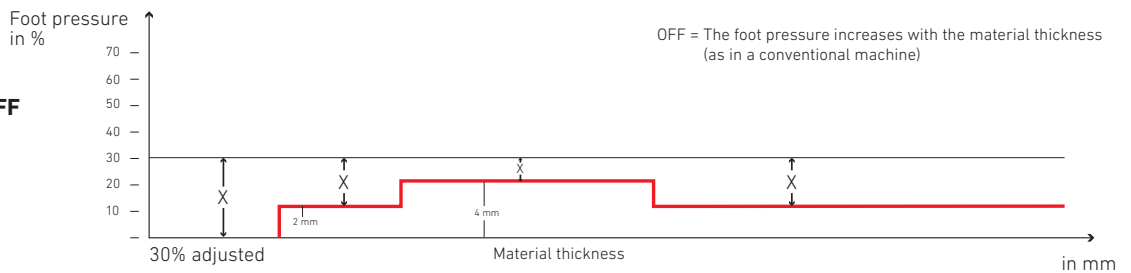
When sewing operations are done where the foot pressure is used to keep the material in position (e.g. piping), it is advisable to use operation mode 1 (**OFF**). Operation mode 2 (**CONSTANT**) will lead to a negativ result. The material thickness recognition will prevent positioning the piping.

050	Foot pressure	You can set the foot pressure for the program here. Comparable to a conventional machine.
054	Dynamic foot pressure	The following functions are available: Function 1 = OFF Function 2 = CONST Function 3 = %

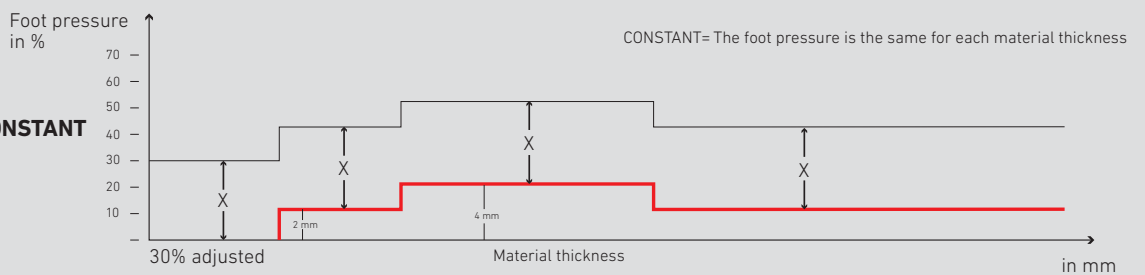


Automatic foot pressure

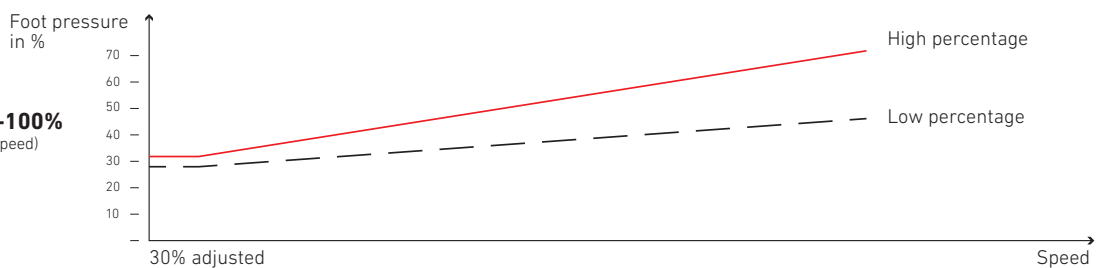
Operation mode **OFF**



Operation mode **CONSTANT**



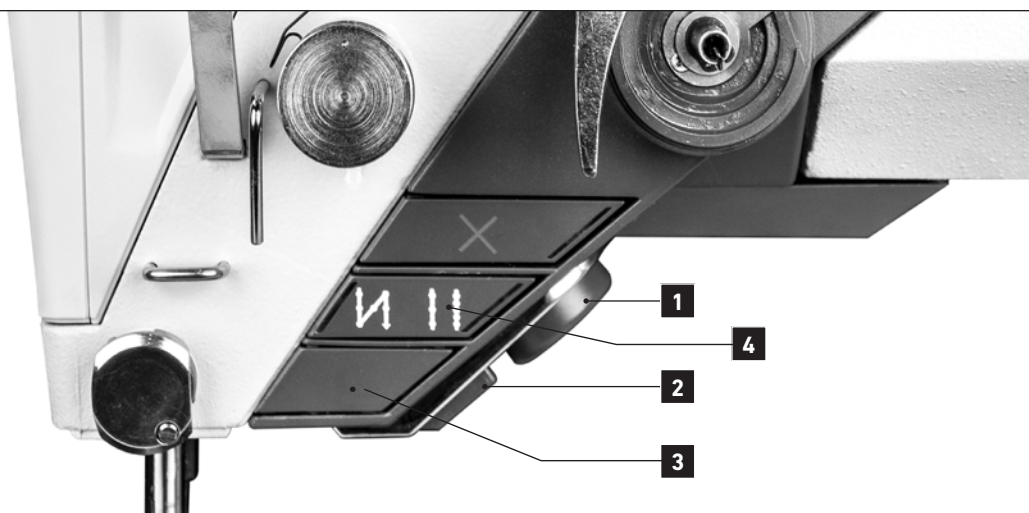
Operation mode **1-100%**
(Pressure increase over speed)



05. PROGRAMMING

04. PROGRAM PARAMETER

-7-14

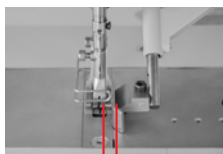


NR.	PARAMETER	DESCRIPTION
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» ELECTRONIC RULER FOR EDGE DISTANCE (OPTIONAL)

Edge value

060



Following functions are available:

OFF = Edge ruler is deactivated.

0.1–35.0 mm = Edge ruler is activated (Edge distance e.g. 10 mm).

The distance from the needle to the edge can be entered directly in mm. It can't be set below the right edge of the presser foot. This setting can only be done by a service technician.

066 Edge guide height adjustment

The setting for the desired height of the 2-axial edge guide is entered here in %.

NR.	PARAMETER	DESCRIPTION
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» PRESSER FOOT HEIGHT, PRESSER FOOT POSITION, NEEDLE POSITION

070 Foot lift height

The setting for the desired height of presser foot lift is entered here (in mm) for the program in question.

071 Foot lift maximum for operator

You can restrict the maximum foot height (mm) for the operator here.

074 Foot position on stop

Two positions are available (Pedal in 0-position):
UP or **DOWN**.

075 Foot position on seam end

Two positions are available (Pedal in 0-position):
UP or **DOWN**.

077 Needle position on stop

Two positions are available (Pedal in 0-position):
POS1 or **POS2**.

NR.	PARAMETER	DESCRIPTION
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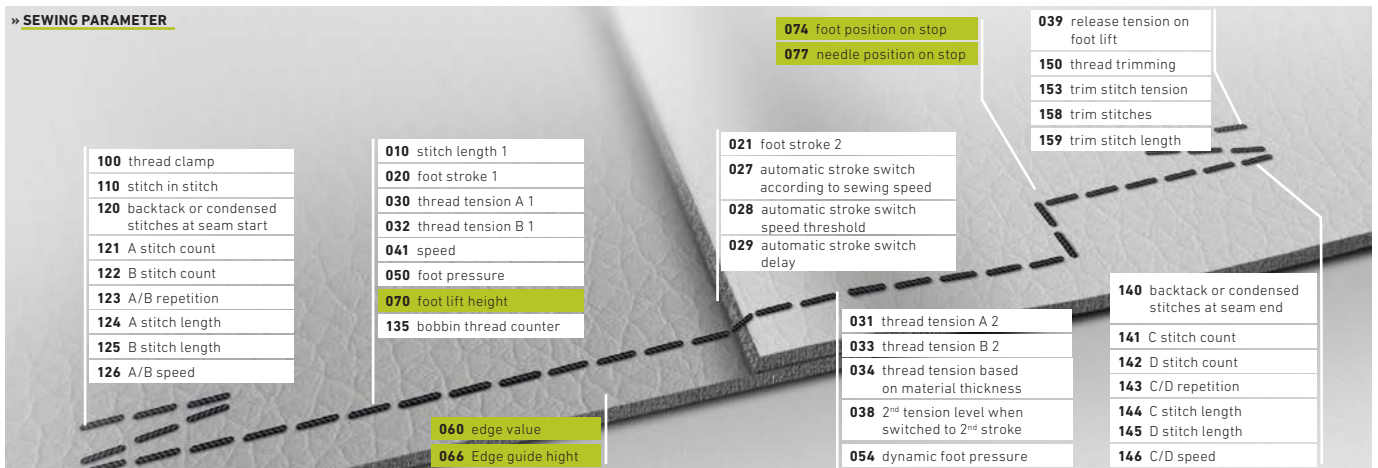
» TARGET STITCH FUNCTION

078 Target stitch position



ADVICE!

Parameter **078** can only be selected when the position of stitch placing is activated in parameter **085**, **086** or **087**. The position of the needle point above the material is set with this parameter.



NR. PARAMETER	DESCRIPTION
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» ALLOCATION OF HOTKEYS

080 Direct parameter access

With this parameter you can select which functions will be shown on the display in the top right position. The value can be changed with the **JOG KEY** at any time. You can choose between:

- OFF** = No access
- TENSION** = Thread tension
- LENGTH** = Stitch length
- SPEED** = Sewing speed
- STROKE** = Foot stroke
- PRESSURE** = Foot pressure
- BOBBIN** = Number of stitches remaining until bobbin thread is empty
- EDGE** = Edge distance - ruler
- ASPEED** = Actual speed is shown in the display
- NEEDLE P** = Needle position
- COUNTER** = Stitch count
- MULTIPLE 1** = Selectable: change program; stitch length; tension A

085 Key function (Key **3**)

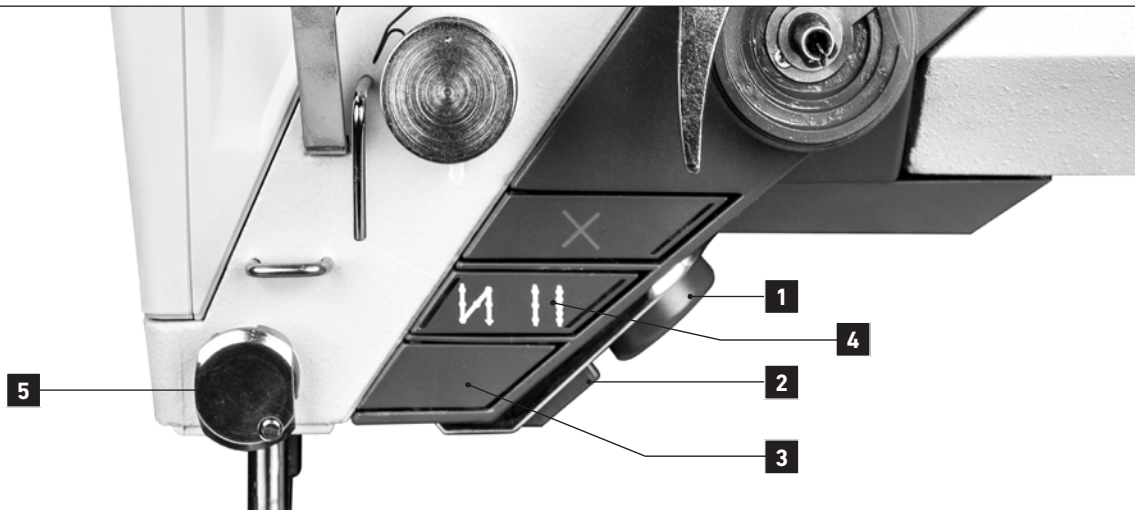
With this parameter you can select the function for the key **3** in this program. You can choose between:

- OFF** = No access
- TACKSW** = In between tack for this program. (By pressing the key the machine will sew backwards as long as you hold it).
- TACKTG** = In between tack for this program. (By pressing the key the machine will sew backwards. When pressing the key again it will sew forwards again).
- STROSW** = Foot stroke for this program. (By pressing the key you will switch to the 2nd stroke value. By releasing the key it will go back to the 1st stroke value).
- STROTG** = Foot stroke for this program. (By pressing the key you will switch to the 2nd stroke. Pressing it again will change back to the 1st stroke).

05. PROGRAMMING

04. PROGRAM PARAMETER

-9-14



NR.	PARAMETER	DESCRIPTION
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» ALLOCATION OF HOTKEYS

085	TENSSW	= Thread tension switch from A1 to A2 for this program. (By pressing and holding the key you will switch to the 2 nd tension as long as you hold the key. You will go back to the 1 st tension setting by releasing the button) (also for two-needle machines B1 and B2).
	TENSTG	= Thread tension switch from A1 to A2 for this program. (By pressing the key you will switch to the 2 nd tension. By pressing it again it will switch back to the 1 st tension setting. (also for two-needle machines B1 to B2).
	NEEDLE	= By pressing the key the machine will switch to the 2 nd needle position (needle up). By pressing it again it will switch back to the 1 st position (needle down).
	TARGET	= By pressing the key the machine will go to the target stitch position. Needle point just above the material. (Target stitch position parameter 078).
	SCENTER	= For the machines with two-needles, this signal for seam middle guide can be switched off.
	TACKTYPE	= With this function you can switch in the seam between stitch in stitch and normal back tack.
	POST BED	= By pressing the key the post bed can be moved in or out.
	PULLER	= By pressing the key the puller wheel can be moved up or down.

086 Handwheel function (1) Same functions as parameter **085**, when the electronic handwheel is pushed 1.

087 Knee switch function You have the same function as parameter **085**, when the knee switch is pushed.



NR. PARAMETER	DESCRIPTION
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» THREAD CLAMP

100 Thread clamp (5)

The following functions are available:

OFF = Out of action.
ON = In action.

The function of the thread clamp is equal to a thread wiper function. When the point of the hook catches the thread loop the clamp will close. The hook will pull the beginning of the thread down through the material.

NR. PARAMETER	DESCRIPTION
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» BACKTACK TYPE

110 Stitch in stitch backtack

You can choose between:

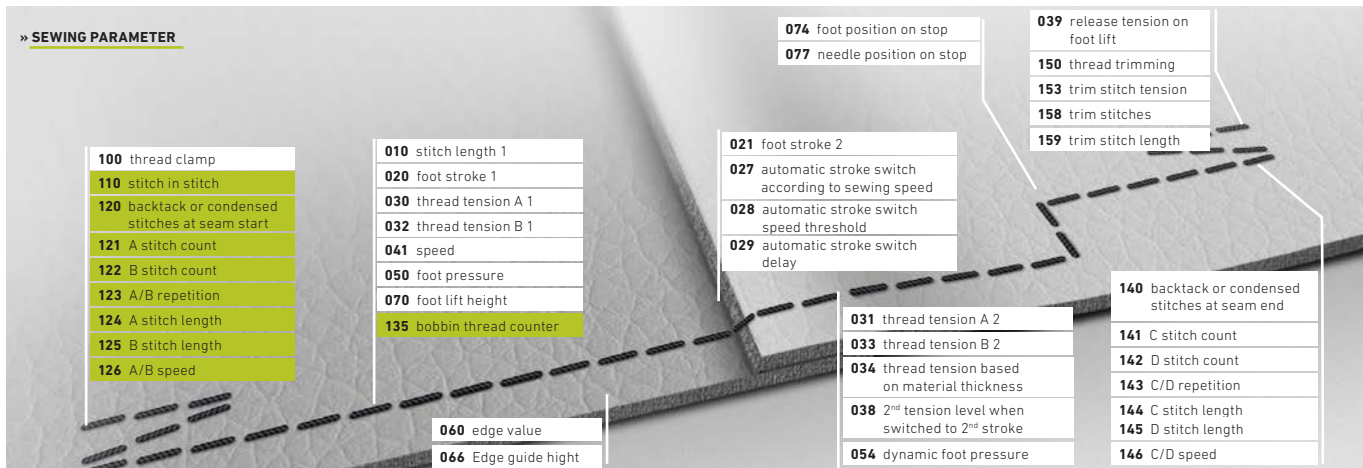
OFF = Out of action, normal backtack.
ON = In action stitch, in stitch backtack.

With a normal backtack the direction is changed while feeding. The penetration of the needle is not perfectly on top of each other. This is used for not visible seams. The stitches will be exactly in the same position with the stitch in stitch backtack. The feeding will be switched when the machine is standing still. It is used for visible backtacks with high quality.

05. PROGRAMMING

04. PROGRAM PARAMETER

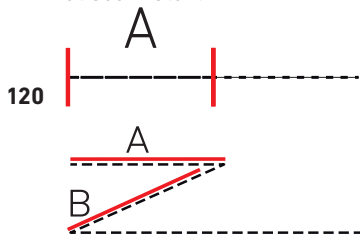
-11-14



NR.	PARAMETER	DESCRIPTION
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» START BACKTACK

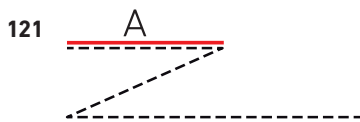
Backtack or condensed stitches at seam start



You can choose between:

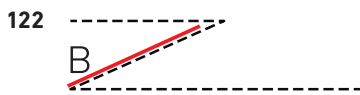
- OFF** = No backtack at seam start.
- STCONDS** = Condensed stitches at seam start. The distance A will be used for the condensed stitches. The stitch length will be set with parameter **124** (Distance B is suppressed).
- BACKTACK** = Backtack with distance A and B.
- BACKTACK B** = Backtack with distance A and B and A.
Use/Advantage: for different backtack length to stitch length.

A stitch count



Can be set from 0 to 100 stitches.

B stitch count

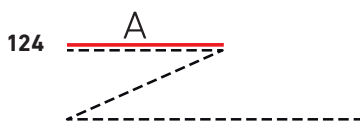


Can be set from 0 to 100 stitches.

123 AB repetition

Can be set from 0 to 100 stitches.
Repeats the start backtack depending on adjustment.

A stitch length



You can choose between:

- STD** = Stitch length for A in backtack same as length set in parameter **010** (Main stitch length).
- 4.0 mm** = Stitch length for A in backtack can be chosen irrespective of the main stitch length (parameter **010**) (e.g. 4.0 mm).
- 4.0 mm** = When the stitch length for A in backtack is entered in the minus range this part of the backtack will be done in reverse.

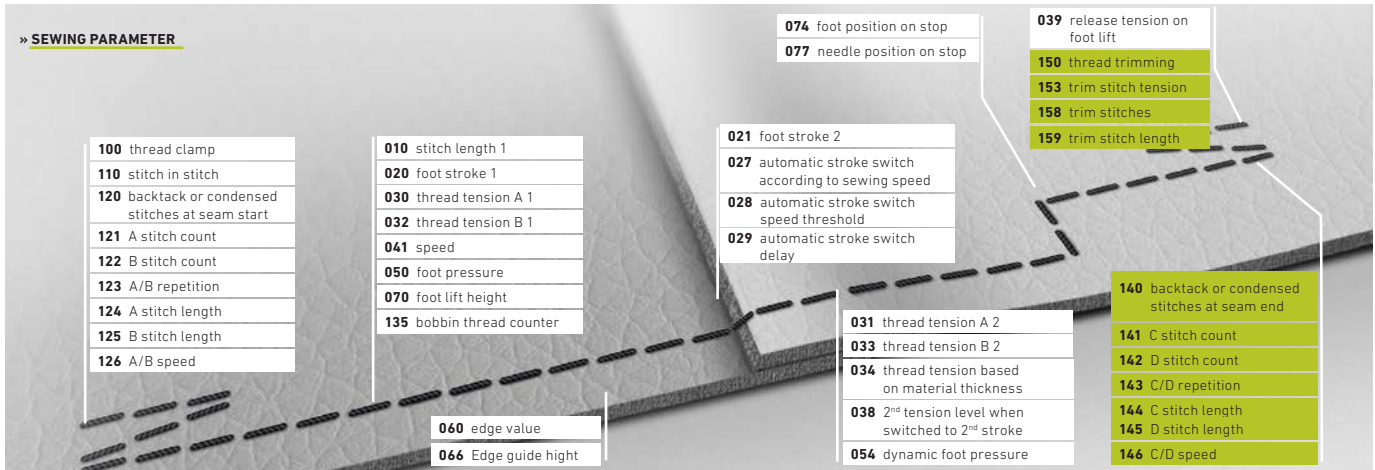
NR.	PARAMETER	DESCRIPTION
» START BACKTACK		
125	B Stitch length	<p>You can choose between:</p> <p>STD = Stitch length for B in backtack same as length set in parameter 010 (main stitch length).</p> <p>4.0 mm = Stitch length for B in backtack can be chosen irrespective of the main stitch length (parameter 010) (e.g. 4.0 mm).</p> <p>-4.0 mm = When the stitch length for B in backtack is entered in the minus range this part of the backtack will done in reverse.</p>
126	AB Speed	<p>You can choose between:</p> <p>PEDAL = The speed for sewing the backtack will be regulated with the foot pedal.</p> <p>800 S/min = You can select a speed of 50 – 2000 S/min.</p>

NR.	PARAMETER	DESCRIPTION
» IN THE SEAM		
130	Stitch counted seam track	<p>You can choose between:</p> <p>OFF = The seam is done manually. Free sewing, normal seam.</p> <p>1 – 20.000 = Stitch counted seam. The seam will be ended automatically when the entered amount of stitches is done (e.g. 30 stitches).</p>
135	Bobbin thread counter	<p>You can choose between:</p> <p>OFF = The bobbin thread counter is switched off.</p> <p>50 – 20.000 = You can enter the amount of back counting stitches here (max. 20.000 stitches).</p> <p>! INFO! The red LED in the safety switch (X Key) will flash when the entered amount of back counting stitches has been reached. The machine will continue work until the next thread cut. The machine is blocked after the thread cut and on the display you will see the request to change the bobbin. After changing the bobbin you have to press the safety switch (X Key) to reset the bobbin thread counter.</p>

05. PROGRAMMING

04. PROGRAM PARAMETER

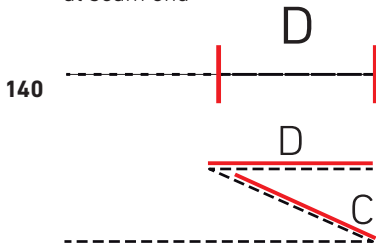
-13-14



NR.	PARAMETER	DESCRIPTION
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» END BACKTACK

Backtack or condensed stitches at seam end



You can choose between:

- OFF** = No tack on end of seam.
- STCONDS** = Condensed stitches at end of seam. The distance D will be used for the backtack. The stitch length will be set in parameter **145** (Distance C will be suppressed).
- BACKTACK** = End backtack with distances C and D.

C Stitch count



Can be set between 0 and 100 stitches.

D Stitch count



Can be set between 0 and 100 stitches.

143 CD repetition

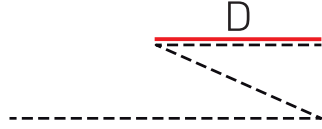
Can be set between 0 and 100 stitches.
Repeats the complete backtack depending on setup.

C Stitch length



You can choose between:

- STD** = Stitch length for B in backtack same as length set in parameter **010** (Main stitch length).
- 4.0 mm** = Stitch length for B in backtack can be chosen irrespective of the main stitch length (parameter **010**) (e.g. 4,0mm).
- 4.0 mm** = When the stitch length for B in backtack is entered in the minus range this part of the backtack will done in reverse.

NR.	PARAMETER	DESCRIPTION
» END BACKTACK		
145	D Stitch length	<p>You can choose between:</p> <p>STD = Stitch length for B in backtack same as length set in parameter 010 (Main stitch length).</p> <p>4.0 mm = Stitch length for B in backtack can be chosen irrespective of the main stitch length (parameter 010) (e.g. 4.0 mm).</p> <p>-4.0 mm = When the stitch length for B in backtack is entered in the minus range this part of the back tack will done in reverse.</p>
		
146	CD speed	800 S/min = Can be set between 50 – 2000 S/min (e.g. 800 S/min)

NR.	PARAMETER	DESCRIPTION
» SEAM END		
150	Thread trimming	<p>You can choose between:</p> <p>OFF = Thread trimmer is inactive.</p> <p>ON = Thread trimmer is active.</p>
153	Trim stitch tension (Only for Sub Class -11)	<p>You can choose between:</p> <p>-1 = Thread tension by trimming</p> <p>0-100% = Thread tension released</p> <p>Thread tension value</p>
157	Reserved (Only for Sub Class -11)	<p>Thread trimming tension, adjustable:</p> <p>-2 = The same thread trimming tension as the sewing thread tension</p> <p>-1 = Released thread tension</p> <p>0-100 = Thread trimming tension in %</p>
158	Trim stitches	Extra stitches before thread trimming, released by trimming. Adjustable between OFF and 100 stitches
159	Trim stitch length	Stitch length setting for the setted trim stitch.
160	Backturn	<p>You can choose between:</p> <p>OFF = Backturn is inactive.</p> <p>ON = Backturn is active.</p>

NR.	PARAMETER	DESCRIPTION
» CHAIN PROGRAM		
999	Chain program	<p>This parameter will show if a program is used in a chain program.</p> <p>INFO! A chain program can be used when different operations on a work piece are done one after the other. The machine will set itself automatically for the next work step.</p>



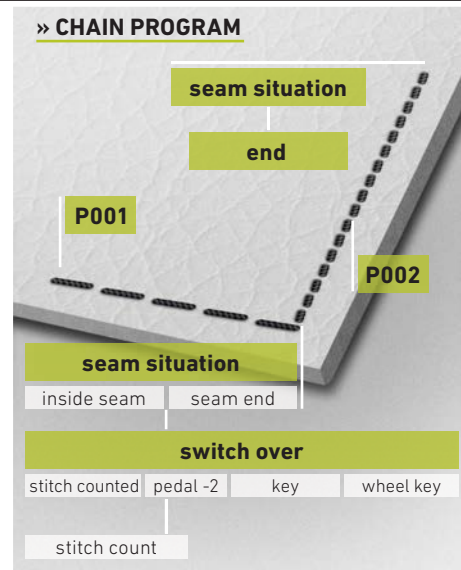
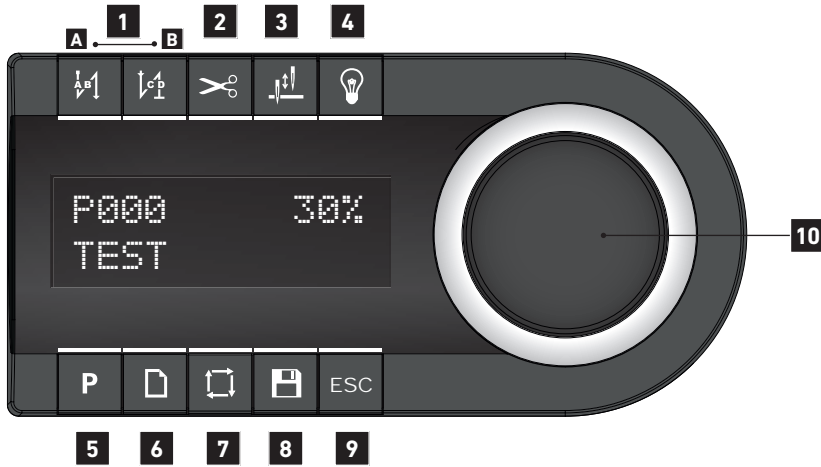
INFO!

A chain program can be used when different operations on a work piece are done one after the other. The machine will set itself automatically for the next work step.

05. PROGRAMMING

05. CREATE PROGRAM CHAIN

-1-4



INFO! A chain program consist of several programs which a run one after the other. The switch to the next work step can be chosen differently. It can be done e.g. after a stitch counted seam or by pressing a key. The next step can also be initiated by the thread cut or the PEDAL -2 position. A chain program will be shown by a diode above the chain program key.

DISPLAY	STEP	DESCRIPTION
» CREATE PROGRAM CHAIN		
1	Press the CHAIN PROGRAM Key (7)	
2		A sequence of programs will be shown on the display.
3	Turn the JOG KEY (10) to the right to select the 1 st program.	
4	Turn the JOG KEY (10) to store.	
5		You can chose on the display the way to switch over to the next program.

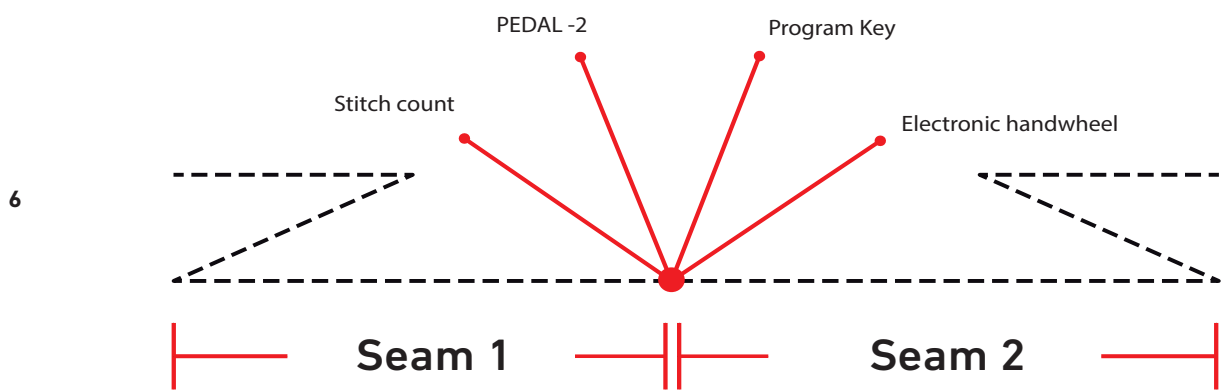
The following selection of switch over are available (see next page below point 6):

- Stitch count** = A certain amount of stitches for the seam sequence will be entered (e.g. 30 stitches). The machine stop after this work step is done. Bring the foot pedal in the centre position to switch to the next seam sequence.
- PEDAL -2** = The seam sequence is done manually. By bringing the foot pedal in position -2 at the end of the seam the sequence is ended and switches to the next work step. This can be done with thread trimming or "continue sewing" depending on the program.
- Program Key** = The next work step is initiated by pressing the key 3. (see next page)
- Electronic handwheel** = The next work step is initiated by pressing the electronic handwheel 1. (see next page)



DISPLAY	STEP	DESCRIPTION
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» CREATE PROGRAM CHAIN



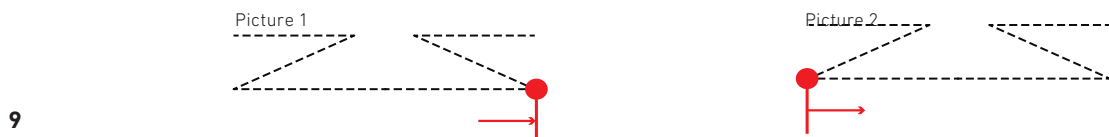
7  Turn the **JOG KEY** (10) to store.

8 **INSIDE SEAM**
Seam situation

You can enter the position in the seam for the switch over here.

You can choose between the following types of switch over:

In the seam = Switch will occur before backtack and thread trimming e.g. if you want to join two pieces with a chain on a program with start and end backtack it will switch to the next sequence before the end backtack (picture 1). Backtack and thread trimming will be deactivated. The next sequence starts after the start backtack (picture 2). The start backtack is deactivated.



9 **Seam end** = The switch will take place (if part of the program) after the end backtack and thread trimming (picture 3). The next seam starts with a backtack (picture 4) (if part of the program).



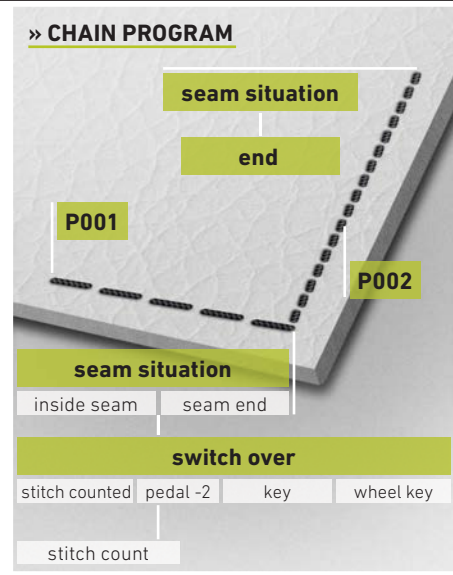
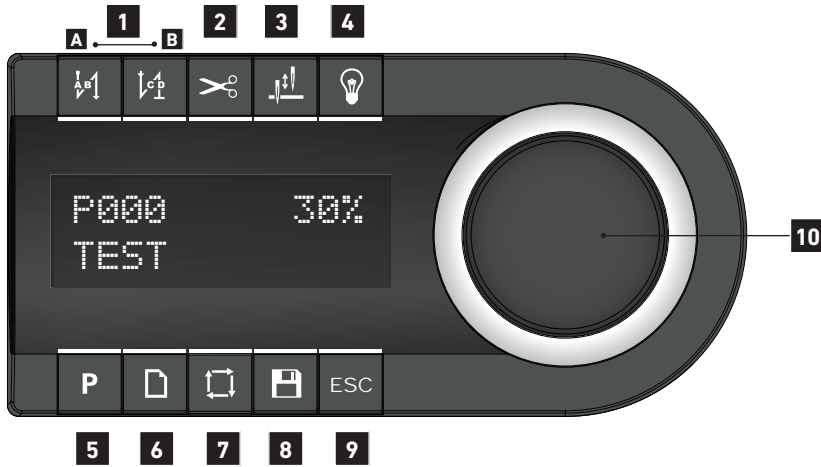
Picture 3

Picture 4

05. PROGRAMMING

05. CREATE PROGRAM CHAIN

-3-4



DISPLAY	STEP	DESCRIPTION
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» CREATE PROGRAM CHAIN

10 Push the **JOG KEY** (10) to set your selection.

11 **INFO!** After setting all the different programs you have to select the chain program end on the last sequence of the program chain.

12 Select **PROGRAM END**.

13 Push the **JOG KEY** (10) to accept your selection.

14 You will see **BOBBIN** on the display.




15 You can choose between:
OFF = No stitch count of remaining stitches.
4300 = Number of remainings stitches until bobbin thread is empty (see parameter **135**).

16 Push the **JOG KEY** (10) to accept your selection.

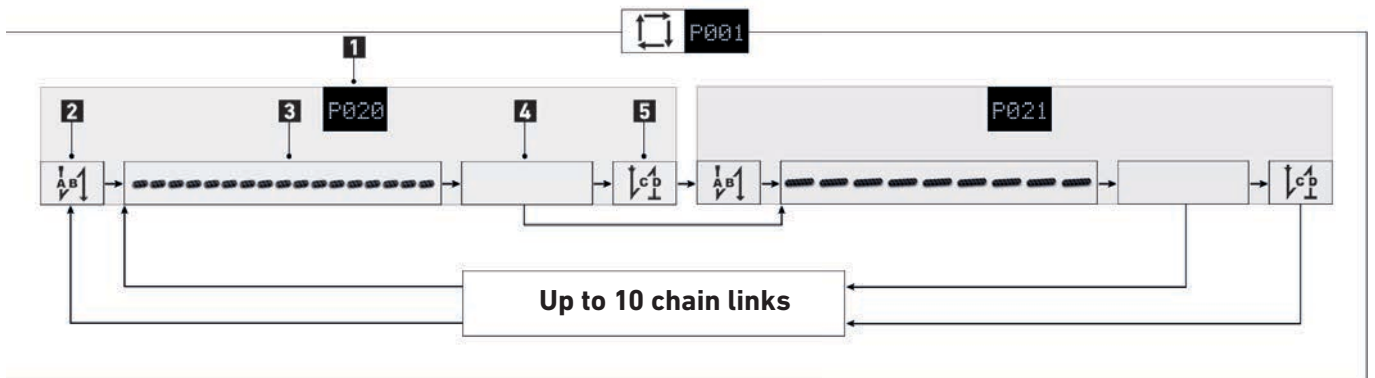
17 Choose number for this program.

18 Push the **JOG KEY** (10) to accept your selection.

19 Enter program name or number on the display.

DISPLAY	STEP	DESCRIPTION
» CREATE PROGRAM CHAIN		
20		When the complete name is entered, move the cursor below the right arrow.
21	 Push the JOG KEY (10) .	
22		The program name and number for the chain program appear on the display and can be used now.

Summary chain program:



- 1** PROGRAMM
- 2** SEAM START
- 3** SEAM
- 4** SWITCH OVER OPTION
- 5** END OF SEAM

05. PROGRAMMING

06. PROGRAM ADMINISTRATION WITHOUT USB DONGLE

-1-2



DISPLAY	STEP	DESCRIPTION
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» PROGRAM ADMINISTRATION WITHOUT USB DONGLE










1	Push the PARAMETER key (5): » P	The associated LED on the display shines.
2	go to the PROGRAM ADMINISTRATION .	Turn the JOG KEY to the left!
3		The LED PARAMETER shines.
4	Push the JOG KEY (10).	

YOU CAN CHOOSE BETWEEN:

A		B		C	
---	--	---	--	---	--

A COPY PROGRAM

5A		Push the JOG KEY (10).	
6A		Turn the JOG KEY (10) to the program you want to copy. Push the JOG KEY (10).	DEFAULT SETTING: The current program will be displayed. If you want to copy a different program, turn the JOG KEY .
7A		Push the JOG KEY (10).	The next free program space will be shown on the display.
8A		Push the JOG KEY (10).	Program name or number can be entered.
9A		Turn the JOG KEY (10) to select a letter or number. Push the JOG KEY (10) to jump to the next free space.	Up to 15 letters or numbers can be entered.

DISPLAY	STEP	DESCRIPTION
» PROGRAM ADMINISTRATION WITHOUT USB DONGLE		
<pre>VETRON 1 > ENTER PRG NAME</pre>	10A	<p>Move the cursor below the right arrow, after entering the complete name or number.</p> <p>▶  Push the JOG KEY (10).</p>
<pre>Single program Copy</pre>		COPY PROGRAM will appear on the display.
B DELETE ONE PROGAM		
<pre>Single program Delete</pre>	5B	▶  Push the JOG KEY (10) .
<pre>P001 VETRON</pre>	6B	<p>▶  Turn the JOG KEY (10) to select the program to be deleted.</p> <p>▶  Push the JOG KEY (10).</p> <p>DEFAULT SETTING: The current program will be displayed. If you want to delete a different program, turn the JOG KEY.</p>
<pre>YES/NO Delete</pre>	7B	<p>▶  Turn the JOG KEY (10) to select YES or NO.</p> <p>▶  Push the JOG KEY (10) to confirm your selection.</p>
<pre>Single program Copy</pre>		The display will show COPY PROGRAM .
C DELETE ALL PROGRAMS		
<pre>All programs Delete</pre>	5C	▶  Push the JOG KEY (10) .
<pre>YES/NO Delete</pre>	6C	<p>▶  Turn the JOG KEY (10) to select YES or NO.</p> <p>▶  Push the JOG KEY (10) to confirm selection.</p>
<pre>Single program Copy</pre>		The display will show COPY PROGRAM .

05. PROGRAMMING

07. PROGRAM ADMINISTRATION WITH USB DONGLE

-1-5



INFO!

Once the dongle is inserted into the USB-Port, a file with the serial number of the machine will be opened automatically. In this way you can transfer program from one machine to another. Serial number and program can be selected and transferred to the appropriate machine. Please use only VETRON USB Dongles to secure a safe transfer of data.



DISPLAY	STEP	DESCRIPTION
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» PROGRAM ADMINISTRATION WITH USB DONGLE

1	Switch the machine on and insert the USB dongle.	
2	Push the PARAMETER key (5): » P	The LED on the display is on.
3	▶ Turn the JOG KEY (10) and select PROGRAM ADMINISTRATION .	Turn the JOG KEY to the left.
4	▶ The LED PARAMETER shines.	
5	▶ Push the JOG KEY (10).	

YOU CAN CHOOSE BETWEEN THE FOLLOWING 9 OPTIONS:

A Single program Copy	B Single program Machine --> USB	C Single program USB --> Machine
D Single program Delete	E All programs Machine --> USB	F All programs USB --> Machine
G All programs Delete	H Configuration Machine --> USB	I Configuration USB --> Machine

A COPY ONE PROGRAM










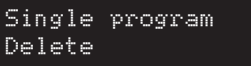













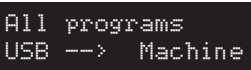


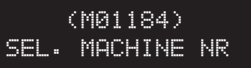


6A	▶ Push the JOG KEY (10).	
----	----------------------------------	--











DISPLAY	STEP	DESCRIPTION
» PROGRAM ADMINISTRATION WITH USB DONGLE		
7A P001 VETRON	<ul style="list-style-type: none"> ▶ Turn the JOG KEY (10) to the program you want to copy. ▶ Push the JOG KEY (10). 	DEFAULT SETTING: The current program will be displayed. If you want to copy a different program, turn the JOG KEY .
8A P003 CREATE PROGRAM	▶ Push the JOG KEY (10) .	The next free program space will be shown on the display.
9A _ ENTER PRG NAME	▶ Push the JOG KEY (10) .	Program name or number can be entered.
10A A ENTER PRG NAME	<ul style="list-style-type: none"> ▶ Turn the JOG KEY (10) to select a letter or number. ▶ Push the JOG KEY (10) to jump to next free space. 	Up to 15 letters or numbers can be entered.
11A VETRON 1 ENTER PRG NAME	<p>Move the cursor below the right arrow when you finished entering the name or number.</p> <ul style="list-style-type: none"> ▶ Push the JOG KEY (10). 	
Single program Copy		COPY PROGRAM will appear on the display.
B COPY ONE PROGRAM FROM MACHINE TO USB		
6B Single program Machine --> USB	▶ Push the JOG KEY (10) .	
7B P001 VETRON	<ul style="list-style-type: none"> ▶ Turn the JOG KEY (10) to select the desired program. ▶ Push the JOG KEY (10). 	
8B Single program Machine --> USB		Display will show SINGLE PROGRAM MACHINE ---> USB .
C COPY ONE PROGRAM FROM USB TO MACHINE		
6C Single program USB --> Machine	▶ Push the JOG KEY (10) .	
7C (M00310) SEL. MACHINE NR		YOUR MACHINE NUMBER WILL BE SHOWN IN BRACKETS ON THE DISPLAY.
8C (M01184) SEL. MACHINE NR	<ul style="list-style-type: none"> ▶ Turn the JOG KEY (10) to select the relevant machine. ▶ Push the JOG KEY (10). 	
9C USB: 004 SEL. PROGR NR	<ul style="list-style-type: none"> ▶ Turn the JOG KEY (10) to select the desired program. ▶ Push the JOG KEY (10). 	

05. PROGRAMMING

07. PROGRAM ADMINISTRATION WITH USB DONGLE

-3-5


DISPLAY	STEP	DESCRIPTION
» PROGRAM ADMINISTRATION WITH USB DONGLE		
10C	 	<ul style="list-style-type: none"> ▶  Turn the JOG KEY (10) to find a program space for your new program. You can use a new program place, or can overwrite a existing one. ▶  Push the JOG KEY (10).
11C		<ul style="list-style-type: none"> ▶  If you want to change the program name, move the cursor by turning the JOG KEY (10) below the part you want to change. ▶  Push the JOG KEY (10) to make a change or to confirm it.
12C		<p>Move the cursor below the right arrow once you completed the name or number.</p> <ul style="list-style-type: none"> ▶  Push the JOG KEY (10).
D DELETE ONE PROGRAM		
6D		<ul style="list-style-type: none"> ▶  Push the JOG KEY (10).
7D		<ul style="list-style-type: none"> ▶  Turn the JOG KEY (10) to the program to be deleted. ▶  Push the JOG KEY (10). <p>DEFAULT SETTING: The current program will be shown. If you want to delete another program, turn the JOG KEY.</p>
8D		<ul style="list-style-type: none"> ▶  Turn the JOG KEY (10) to select YES or NO. ▶  Push the JOG KEY (10) to confirm your selection.
		<p>The display will show COPY PROGRAM.</p>
E COPY ALL PROGRAMS FROM MACHINE TO USB		
6E		<ul style="list-style-type: none"> ▶  Push the JOG KEY (10).
7E		<ul style="list-style-type: none"> ▶  Turn the JOG KEY (10) to select YES or NO. ▶  Push the JOG KEY (10) to confirm your selection.
F-1 COPY ALL PROGRAMS FROM USB TO MACHINE (AVAILABLE FOR VERSIONS 1.29 AND OLDER/LOWER)		
6F		<ul style="list-style-type: none"> ▶  Push the JOG KEY (10).
7F		<p>YOUR MACHINE NUMBER WILL BE SHOWN ON THE DISPLAY IN BRACKETS.</p>
8F		<ul style="list-style-type: none"> ▶  Turn the JOG KEY (10) to select desired machine. ▶  Push the JOG KEY (10).

DISPLAY	STEP	DESCRIPTION
» PROGRAM ADMINISTRATION WITH USB DONGLE		
9F YES/NO OVERWRITE	▶  Turn the JOG KEY (10) to select YES or NO . ▶  Push the JOG KEY (10) to confirm your selection.	
F-2 	NOTICE! The following has changed COPY ALL PROGRAMS FROM USB TO MACHINE (AVAILABLE FOR VERSIONS 1.29 AND UP)	
7F	Copy all sewing programs from the desired sewing machine (for example with serial number 1667) to a USB dongle.	
8F	Insert the USB dongle into the appropriate sewing machine (for example with machine number 1399). → USB recognizes machine and automatically creates a folder 1399 on the USB dongle.	
9F	Plug the USB dongle into a computer: All data (sewing programs) from the sewing machine folder (serial number 1667) on the USB dongle must be copied to the new folder of the sewing machine (serial number 1399).	
10F	Now all newly copied sewing programs can be copied from the USB dongle to the corresponding sewing machine (serial number 1399).	
	NOTE: For reasons of technical feasibility, the procedure „Copy all programs from USB dongle to machine“ as of software version 1.30 and up, must be carried out in this way.	
G DELETE ALL PROGRAMS		
6G All programs Delete	▶  Push the JOG KEY (10) .	
7G YES/NO Delete	▶  Turn the JOG KEY (10) to select YES or NO . ▶  Push the JOG KEY (10) to confirm your selection.	
All programs Delete	Display will show DELETE ALL PROGRAMS .	
H ADJUSTMENTS FROM MACHINE TO USB		
	ADVICE! All the basic parameter settings can be stored on the USB-dongle. The original settings can be re-established fast after repair work or exchange of parts.	
6H Configuration Machine --> USB	▶  Push the JOG KEY (10) .	All data will be transferred to the USB dongle.
7H YES/NO OVERWRITE	▶  Turn the JOG KEY (10) to select YES or NO . ▶  Push the JOG KEY (10) to confirm your selection.	




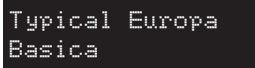


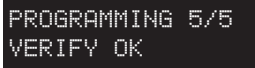
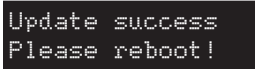


05. PROGRAMMING

07. PROGRAM ADMINISTRATION WITH USB DONGLE

-5-5

DISPLAY	STEP	DESCRIPTION
» PROGRAM ADMINISTRATION WITH USB DONGLE		
I ADJUSTMENTS FROM USB TO MACHINE		
6I Configuration USB --> Machine	 Push the JOG KEY (10).	All data will be tranfered to the machine.
7I Processing... PLEASE WAIT	NEVER remove the USB dongle while data is being transferred.	
Configuration USB --> Machine	Display will show CONFIGURATION USB ---> MACHINE.	

Program updates are available for download on our website under www.vetrontypical.com.
Copy the current software update onto your USB dongle and proceed as follows:

DISPLAY	STEP	DESCRIPTION
» UPDATE THE OPERATING PROGRAM		
		Insert your DONGLE, with the current status, into the USB port.
1	 ADVICE Machine must be turned off!	
2		Turn the machine on and press the JOG KEY a second later.
3		»  Confirm.
4		Press the " PARAMETER " button: » 
5		Appears. Machine automatically updates the 5 steps. 1/5: Update 1of 5
6		Update completed.
7		Appears.
8		Turn machine off!
9		Turn machine on again. Now the machine with the new update can be operated on.
	 INFO: If there is no information on DONGLE, „Error“ appears!	

05. PROGRAMMING

At the time of printing, all information and illustrations in this document were up-to-date.

Technical changes without prior notice!

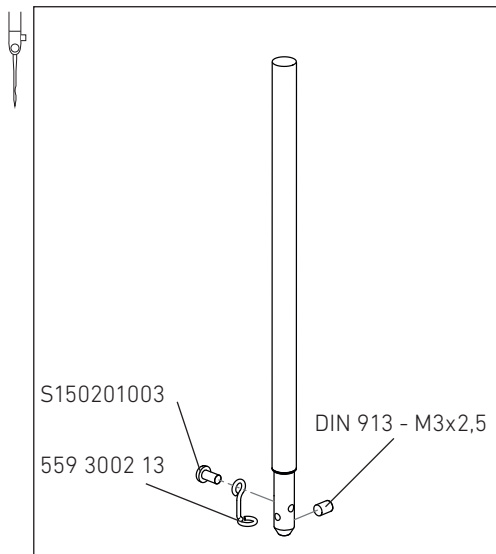
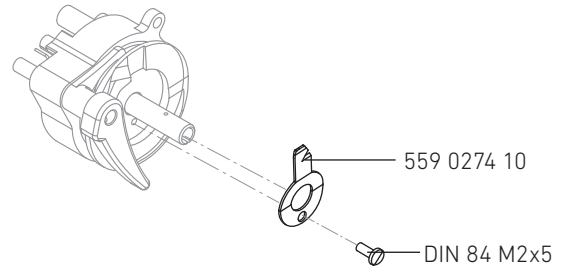
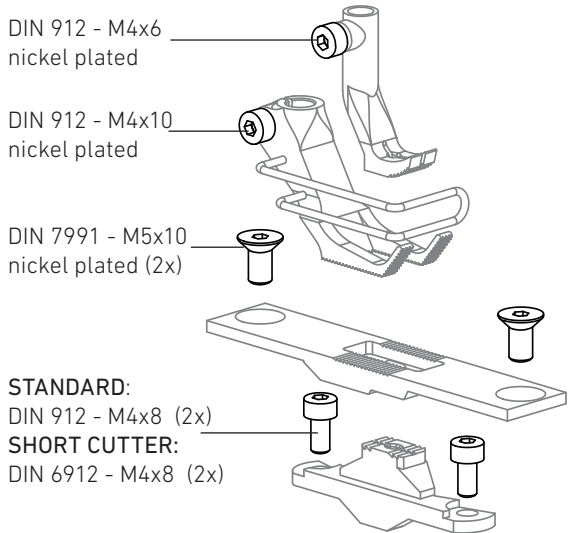


ADVICE!

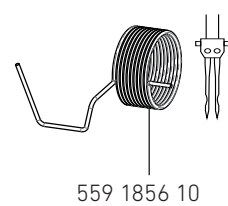
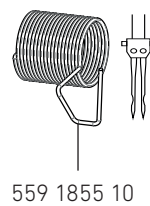
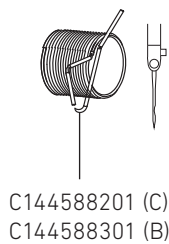
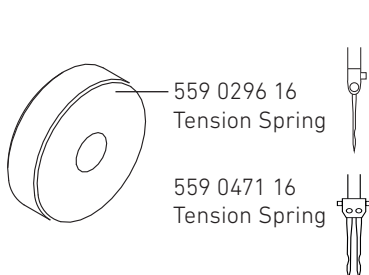
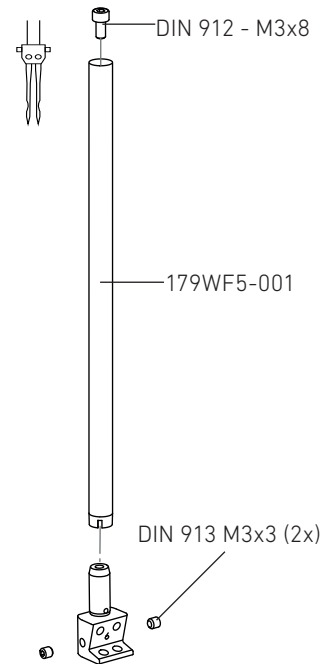
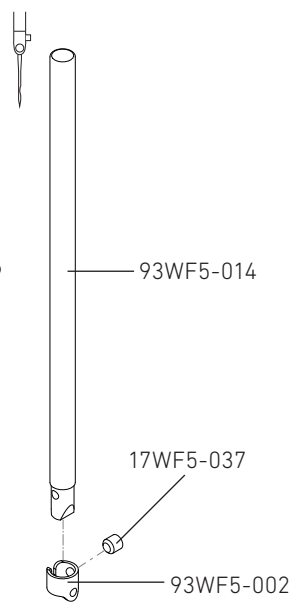
- » Please remember that we are not liable for spare parts and accessories not purchased from us. These parts were neither examined by us, nor released. Consequently, the installation or use of these products can have a negative influence on features and your workflow of the machine.
- » We accept no liability for any damage caused by the use of non-original parts.
- » This Wear Parts List shows the main parts of the machine. A detailed list for the complete machine is available on our website www.vetrontypical.com and can also be ordered as a manual.

06. WEAR PARTS

02. LISTING

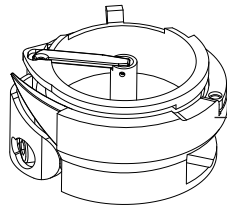


559 3001 09



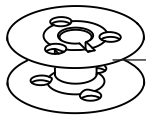
06. WEAR PARTS

02.01. LISTING

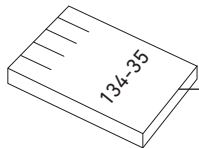


STANDARD:
559 0960 09 (26mm)
559 0961 09 (32mm)

SHORT CUTTER:
559 2656 09 (26mm)
559 1834 09 (32mm)



STANDARD / SHORT CUTTER
559 2679 10 (26mm)
559 0827 30 (32mm)



Needle-System 134-35

DIN 913 M6x8 (2x)

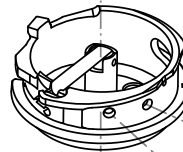
DIN 912 M3x6 (2x)

DIN 912 M3x6

559 3242 10 (26mm)
559 3243 10 (32mm)



559 3226 10 (0,35)
559 3227 10 (0,45)
559 3228 10 (0,45-Spring is not clamped in the bobbin case)



559 3233 10

559 3234 10



STANDARD:
559 3235 11 (26mm)



559 3236 11 (32mm)



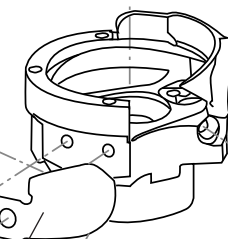
SHORT CUTTER:
559 2743 10 (26mm)



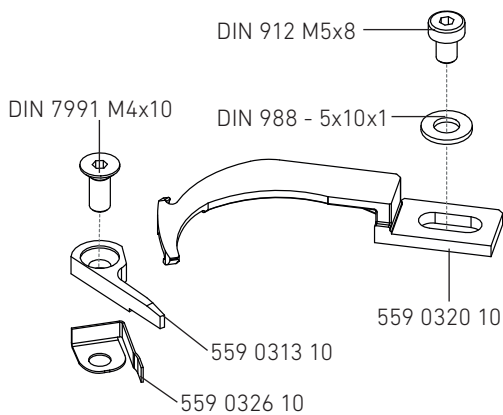
559 2744 10 (32mm)



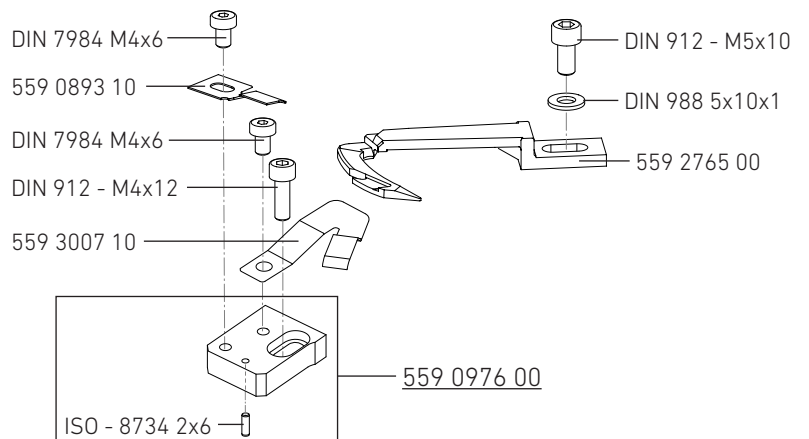
SHORT CUTTER:
559 1842 10 (32mm)



STANDARD



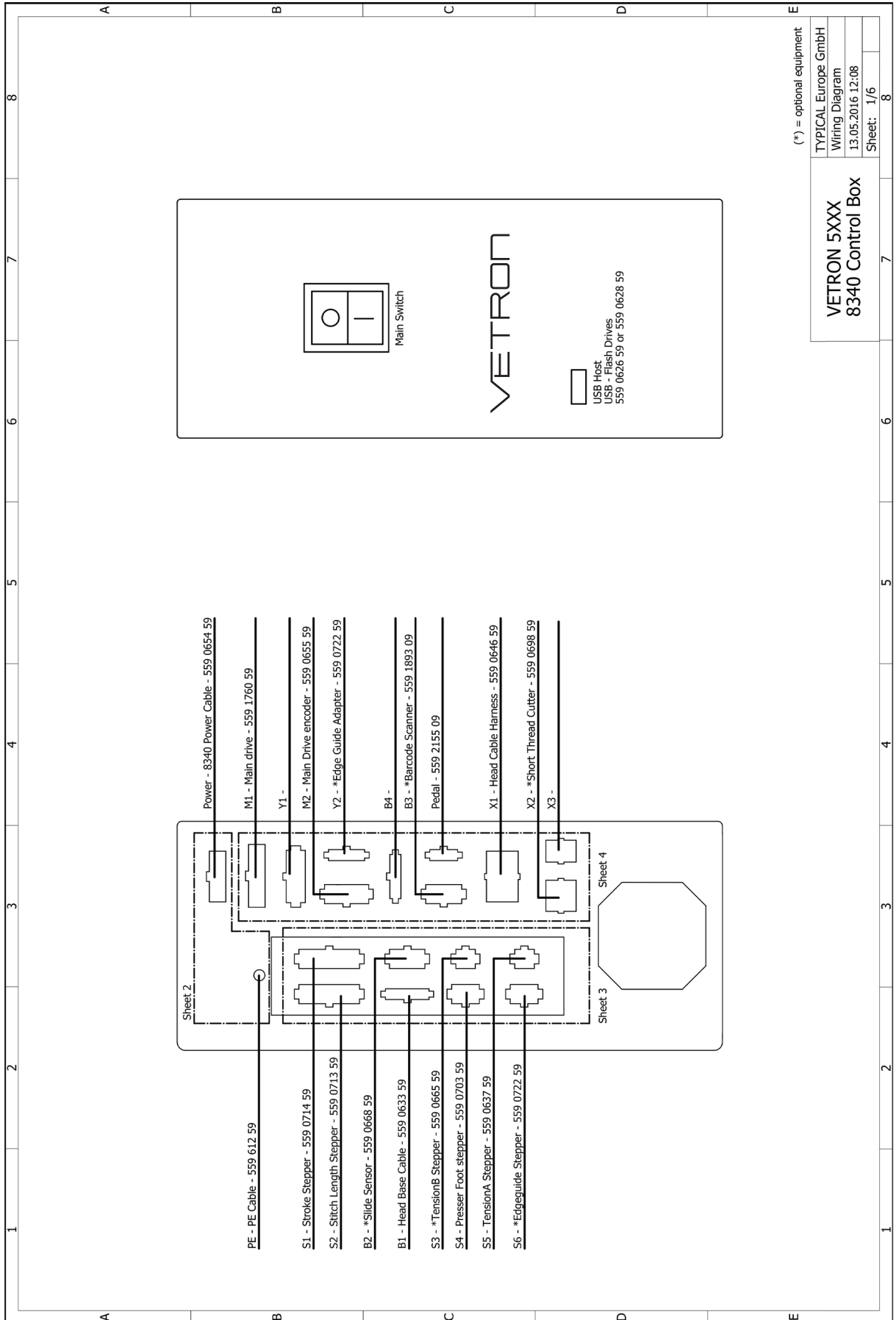
SHORT CUTTER



06. WEAR PARTS

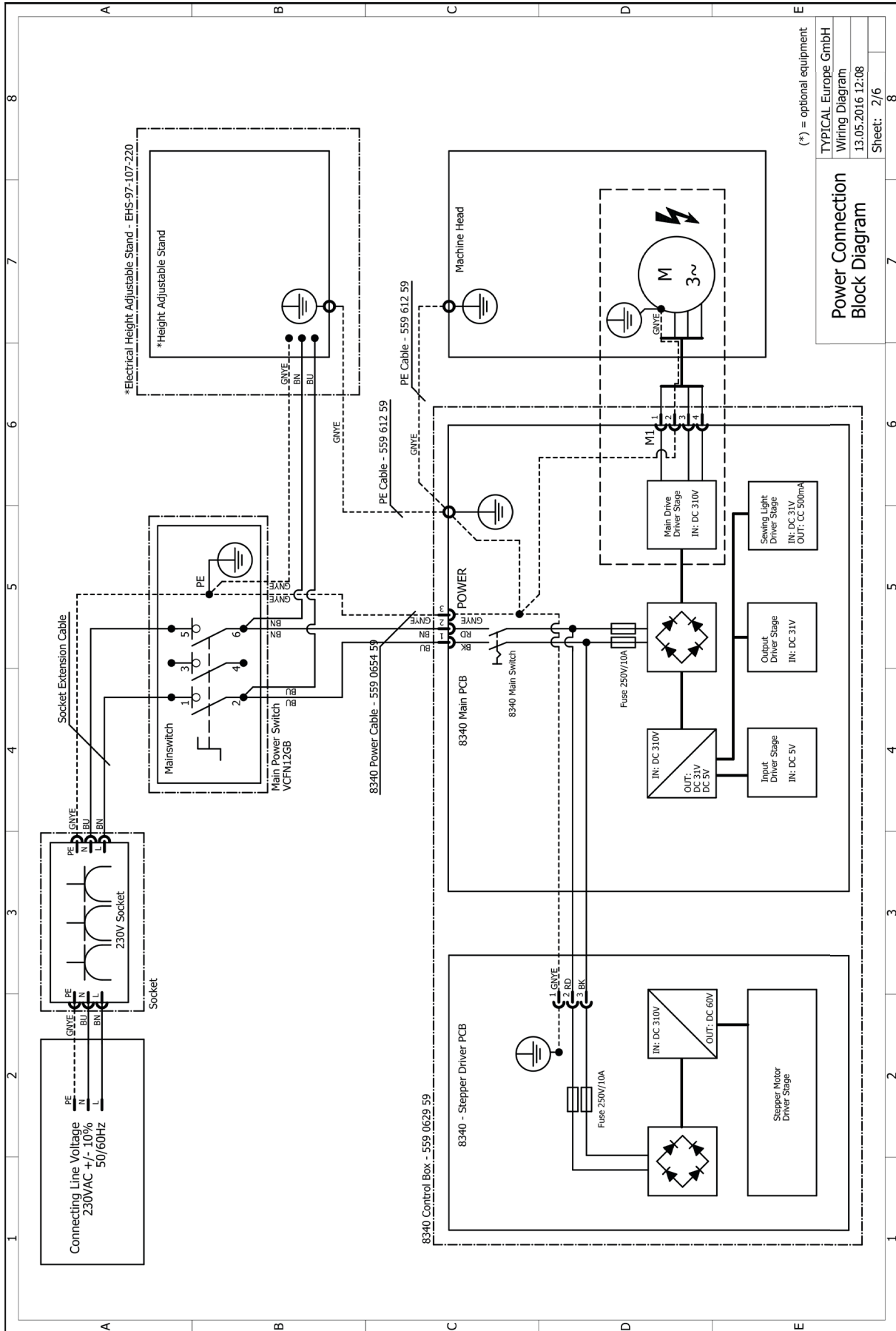
07. WIRING DIAGRAM

01. VETRON 8340 CONTROL BOX



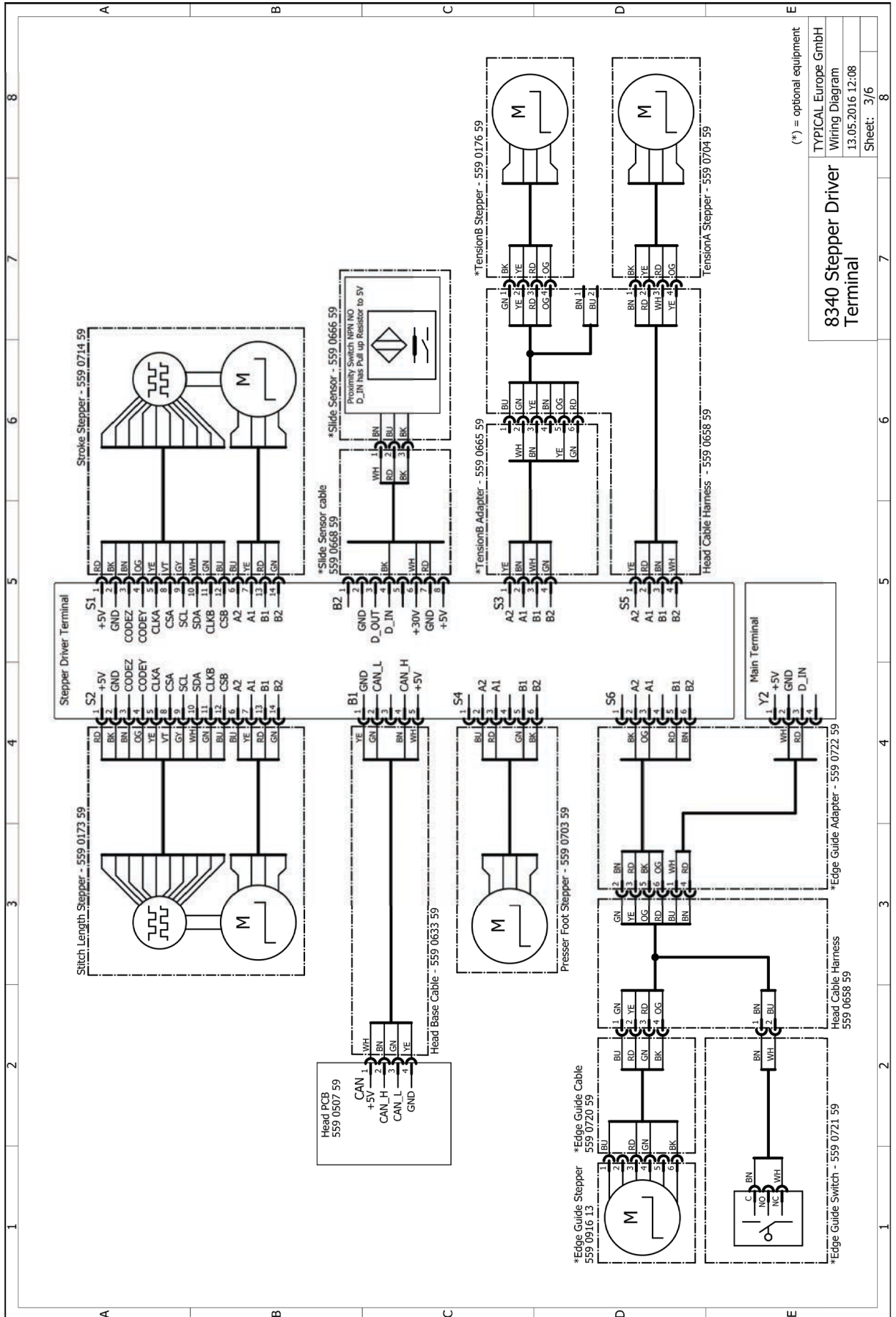
07. WIRING DIAGRAM

02. POWER CONNECTION BLOCK DIAGRAM



07. WIRING DIAGRAM

03. 8640 STEPPER DRIVER TERMINAL

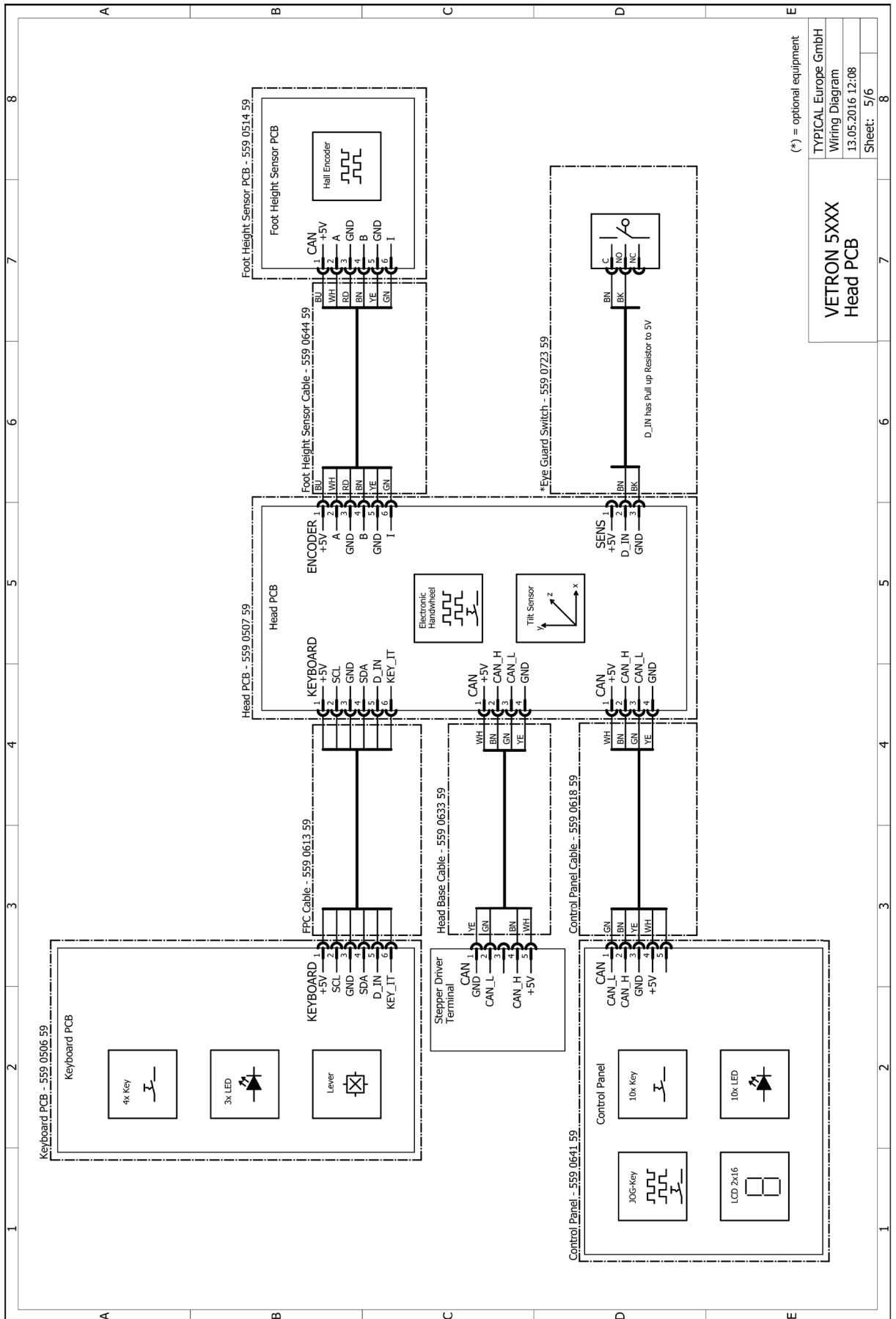


(*) = optional equipment
 TYPICAL Europe GmbH
 Wiring Diagram
 13.05.2016 12:08
 Sheet: 3/6

8340 Stepper Driver Terminal

07. WIRING DIAGRAM

05. VETRON 5XXX HEAD PCB



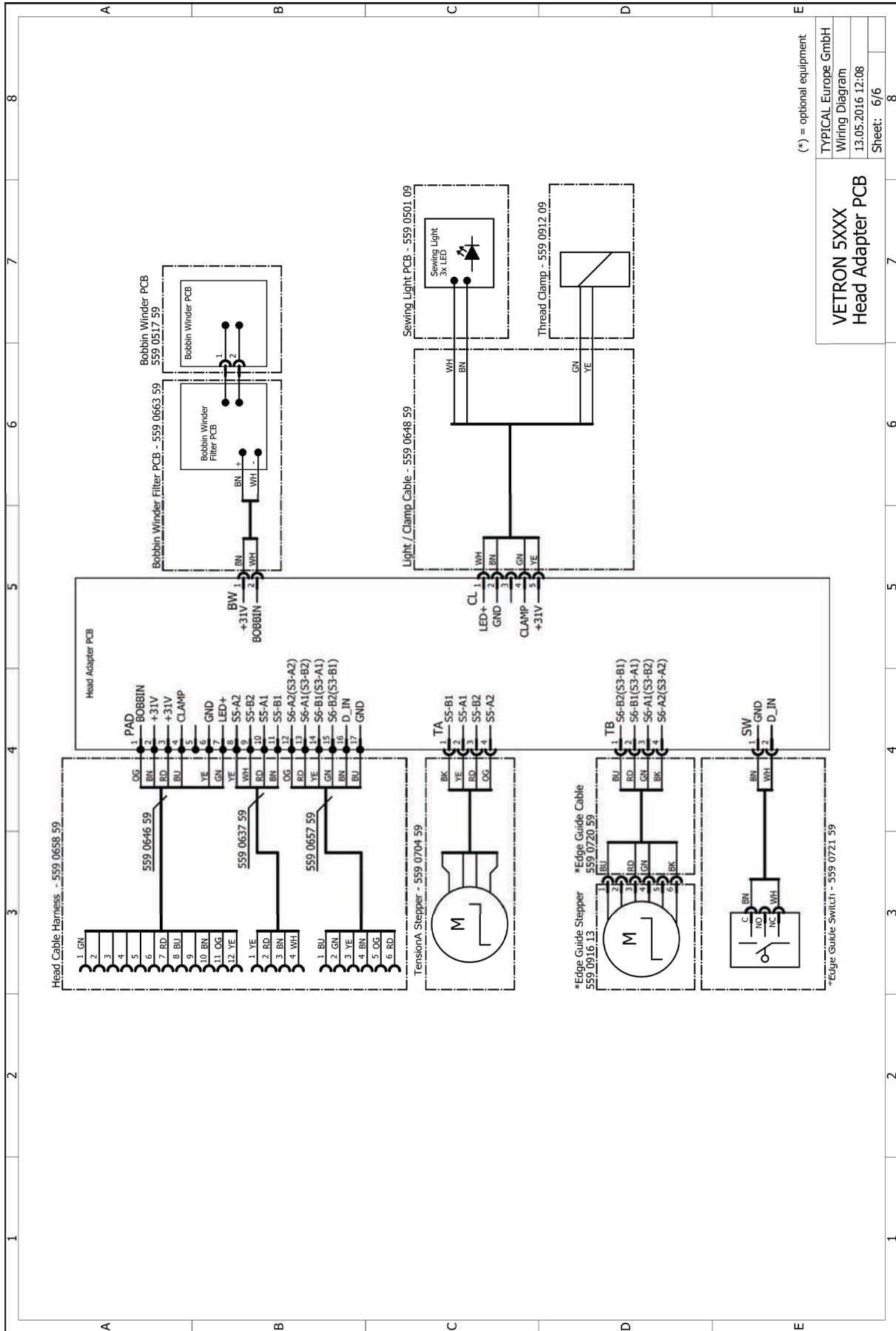
(*) = optional equipment

TYPICAL Europe GmbH	
Wiring Diagram	
13.05.2016 12:08	
Sheet: 5/6	

VETRON 5XXX
Head PCB

07. WIRING DIAGRAM

06. VETRON 5XXX HEAD ADAPTER PCB



(*) = optional equipment

TYPICAL Europe GmbH
Wiring Diagram
13.05.2016 12:08
Sheet: 6/6

VETRON 5XXX
Head Adapter PCB



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