Efka variostop modular

Efka dc modular

MONITOR MODULAR

V720 * V720-1

INSTRUCTION MANUAL

No. 402009 english

CONTENTS

SOME PRELIMINARY REMARKS page 3

OPENING OF THE TECHNICIAN LEVEL page 4

ADJUSTMENT AND STORAGE OF POSITIONS page 5

BASIC POSITION page 5

NEEDLE POSITIONS page 6

ADDRESSING AND PROGRAMMING OF PARAMETERS page 8

TECHNICIAN LEVEL page 8

ADDRESSING AND PROGRAMMING OF PARAMETERS page 9

OPERATOR LEVEL page 9

CONNECTION AND DISCONNECTION OF FUNCTIONS page 13

MATCHING OF SPEEDS (only for DC MODULAR) page 14

ACCESSORIES page 15

SOME PRELIMINARY REMARKS

The monitors MODULAR V720 and V720-1 serve for programming the controls VARIOSTOP MODULAR and DC MODULAR as well as for selecting the desired machine functions. The input values and connection states are stored in the control whereby sewing is also possible with removed monitor.

Types V720 and V720-1 differ in the form of their housings and in some of the symbols assigned to the pushbuttons. Attention should be paid to the fact that the pushbuttons named with P and E in the following descriptions are only marked with these letters in case of type V720, whereas in the instructions for type V720-1 the symbol -> is used instead of P and the term Enter instead of E.

The instruction manual includes a separate parameter list prepared for this type of control stating all adjustable parameters (i.e. stitch numbers, speeds, countings, times, steps, switching functions). The parameters are divided between several access levels whereof the OPERATOR LEVEL and the TECHNICIAN LEVEL which are required for the daily sewing operations are accessible. The TECHNICIAN LEVEL which is superiour to the OPERATOR LEVEL can only be opened via a code number and also allows access to the OPERATOR LEVEL located below.

IMPORTANT REMARK! IN ANY CASE, THE ADDRESSING AND PROGRAMMING OF THE PARAMETERS IS ONLY POSSIBLE IMMEDIATELY AFTER THE MACHINE HAS BEEN SWITCHED ON OR AFTER A PRECEDING TRIMMING OPERATION.

THE SETTINGS ARE TRANSFERRED INTO THE MEMORY OF THE CONTROL AFTER TERMINATED ADJUSTMENT OPERATION BY SHORT START OF SEWING. THE MACHINE MAY ONLY BE SWITCHED OFF AFTERWARDS AS OTHERWISE THE PREVIOUSLY ADJUSTED VALUES WILL GET LOST.

After having been mounted to the machine and after adjustment of the positions the motor is immediately ready for operation since the machine specific parameters have already been programmed according to the specifications of the machine manufacturer resp. the supplier.

It is recommended for the DC MODULAR motor to initiate an automatic matching of the sewing speed, and that on the first putting into operation of the machine, after an exchange of the control and after the replacement of the machine head by that from another class or another brand. The matching considers the dynamic behaviour of the machine and optimizes the speed accuracy.

OPENING OF THE TECHNICIAN LEVEL

The adjustment of the positions as well as the addressing and programming of the parameters with restricted access are performed on the TECHNICIAN LEVEL which has first to be opened according to the following description.

(1) Press pushbutton P and switch on the machine with pushbutton depressed.

- LED above pushbutton P is illuminated
- display indicates: C-0000

(2) Input the code number for the TECHNICIAN LEVEL (see parameter list) with pushbuttons 1...0.

- display indicates: .... (= code number)

(3) Press pushbutton E.

- display indicates: F-100
- control is ready for acceptance of the parameter number

or

- display indicates: C-0000
Error 0
- repeat input since a wrong code number has been used

The disired parameter number can now be input with push-buttons 1...0 or all available parameters successively addressed with pushbutton E.

The TECHNICIAN LEVEL respectively remains accessible until the machine is switched off without renewed input of the code number. After a sewing operation the pedal merely has to be completely heeled back and pushbutton P depressed.
The LED above pushbutton P now lights up again and the number of the parameter addressed at last appears on the display. After pushbutton E has been pressed this parame-ter is addressed again and the input value or connection state can be corrected, if required.

ADJUSTMENT AND STORAGE OF POSITIONS

The machine positions are registered by the position transmitter in steps (increments) of approx. 0,7° and are indicated on the display of the monitor in two incremental steps respectively. A complete revolution of the handwheel is divided into 512 increments.

The counting starts from a basic position which reasonably is the position of the needle when penetrating the needle plate.

Once memorized, the needle positions will also remain stored if another position transmitter is used, merely the basic position will have to be readjusted.

BASIC POSITION

(1) Input parameter number 170 with pushbutton 1...0.

- display indicates: F-170

(2) Press pushbutton E.

- LED beside pushbutton 3 blinks
- display indicates: F-170
  Sr1

(3) Press pushbutton 3.

- LED beside pushbutton 3 is dark
- display indicates: PoSition
  0

(4) Turn the handwheel by at least 1/8 revolution and position it in a way that the needle just starts to penetrate the needle plate (= basic position).

Now, the adjustment can either be finished by step (5) or - if, in addition to the basic position, also the needle position shall be adjusted - continued as described in chapter "NEEDLE POSITIONS", step (2).

(5) Press pushbutton P twice.

- the display is off and the LED above pushbutton P is dark
- the adjustment is finished

NEEDLE POSITIONS

(1) Input parameter number 171 with pushbutton 1...0.

- display indicates: F-171

(2) Press pushbutton E.

- LED beside pushbutton 3 blinks
- display indicates: F-171
  Sr2

(3) Press pushbutton 3.

- LED beside pushbutton 3 is dark
- display indicates: PoSition
  1 ... (... = formerly adjusted number of increments)

(4) Turn the handwheel until the indicated number of increments changes, then adjust lower needle position (= position 1).

(5) Press pushbutton E.

- a switch-over to the next position is performed
- display indicates: PoSition
  2 ... (... = formerly adjusted number of increments)

(6) Turn the handwheel until the indicated number of increments changes, then adjust upper needle position (= position 2).

(7) Press pushbutton E.

- a switch-over to the next position is performed
- display indicates: PoSition
  1A ... (... = formerly adjusted number of increments)

Positions 1A, 2A, 3 and 3A only have to be adjusted if they are required for the functional sequence of the control. In this case, a respective note is made in the parameter list. If they are not required, the adjustment can be finished by step (8) after position 2 has been adjusted.

(8) Press pushbutton P twice.

- the display is off and the LED above pushbutton P is dark
- the adjustment is finished

Any inaccuracy of positioning will be recognized by the control during the first test run and will automatically be corrected.

Changing Of Needle Positions

For changing a needle position the adjustment has to be repeated. The positions which are not to be changed can unmodified be taken over by pressing pushbutton E (there will be a simultaneous switch-over to the next position).

The position to be corrected can either mechanically be readjusted or displaced by increasing resp. decreasing the indicated number of increments with pushbuttons + (= later) or - (= earlier).

ADDRESSING AND PROGRAMMING OF PARAMETERS

TECHNICIAN LEVEL

As an example for all other parameters the addressing and programming of the parameters "INITIAL BACKTACKING SPEED (F-112)" and "SOFTSTART (F-134)" are described hereafter. The number and short designation of the parameter respectively addressed will be indicated on the display.

(1) Input the desired parameter number with pushbuttons 1...0 (here 112).

- display indicates: F-112

(2) Press pushbutton E.

- parameter "INITIAL BACKTACKING SPEED" is addressed
- display indicates: F-112
  n3 .... (.... = formerly adjusted speed value)

(3) Increase or decrease the indicated speed with pushbut ton + or -.

(4) Press pushbutton P.

- LED above pushbutton P blinks
- display indicates: F-112
- control is ready for acceptance of the next parameter number

(5) Input the next desired parameter number with pushbuttons 1...0 (here 134).

- display indicates: F-134

(6) Press pushbutton E.

- parameter "SOFTSTART" is addressed
- LED above pushbutton P is illuminated
- display indicates: F-134
  SSt ... (... = formerly adjusted connection state: ON or OFF)

(7) Connect SOFTSTART with pushbutton +, disconnect SOFTSTART with pushbutton -.

Further parameters can analogously be addressed and programmed.

(8) Press pushbutton P twice.

- the display is off and the LED above pushbutton P is dark
- the adjustment is finished

ADDRESSING AND PROGRAMMING OF PARAMETERS

OPERATOR LEVEL

As an example for all other parameters the addressing and programming of the parameters "BACKWARD INITIAL BACKTACKING STITCHES (Arr)" and "STITCHES FOR SEAMS WITH STITCH COUNTING (Stc)" is described hereafter. The parameter respectively addressed is indicated on the display with its short designation (the parameter number will only be indicated if the parameter was addressed from the TECHNICIAN LEVEL).

(1) Switch on the machine.

- display indicates: --720--- (= type of monitor)
  ..... (= type of control)

(2) Press pushbutton P.

- LED above pushbutton P blinks

(3) Press pushbutton E.

- LED above pushbutton P is illuminated

(4) Address desired parameter (here: BACKWARD INITIAL BACKTACKING STITCHES) with pushbutton E (through-addressing) or pushbutton 7 (direct addressing) as follows:

Repeatedly press pushbutton E or pushbutton 7 until

- the lower LED beside pushbutton 7 blinks
- the display indicates: Arr ... (... = formerly adjusted stitch number)

(5) Increase or decrease indicated stitch number with pushbutton + or -.

(6) Address next desired parameter (here: STITCHES FOR SEAMS WITH STITCH COUNTING) with pushbutton E (through-addressing) or pushbutton 1 (direct addressing) as follows:

Repeatedly press pushbutton E or pushbutton 1 until

- the LED beside pushbutton 1 blinks
- the display indicates: Stc ... (... = formerly adjusted stitch number)

(7) Increase or decrease indicated stitch number with pushbutton + or -.

Further parameters can analogously be addressed and programmed. For explanations regarding some other parameters see chapter "Particularities".

(8) Press pushbutton P.

- the display is off and the LED above pushbutton P is dark
- the adjustment is finished

Particularities

Parameter "PROGRAMMED SEQUENCE OF SEWING OPERATIONS"

By sewing a master seam (teach-in) up to 10 seam sections with all functions respectively available can be programmed. The memorized program will also remain stored if the machine is switched off and can be called at any time with pushbutton 2.

Programming is only possible on the OPERATOR LEVEL; a superiour access level may not be open.

(1) Press pushbutton P.

- LED above pushbutton P blinks

(2) Press pushbutton E.

- LED above pushbutton P is illuminated

(3) Press pushbutton 2.

- LED beside pushbutton 2 blinks
- parameter "PROGRAMMED SEQUENCE OF SEWING OPERATIONS" is addressed, control is ready for being programmed
- display indicates: 01 --- (01 = 1st seam section
  --- = parameter "SEAM WITH STITCH COUNTING" is not connected)

or

- display indicates: 01 ..., (01 = 1st seam section
  ... = formerly programmed stitch number for the parameter "SEAM WITH STITCH COUNTING" which is connected)

(4) Connect the functions (parameters) desired for the 1st seam section with pushbuttons 1...9 (see chapter "CONNECTION AND DISCONNECTION OF FUNCTIONS") or disconnect undesired functions.

- LED beside the pushbuttons actuated for connecting the functions are illuminated

Those parameters which are not accessible from the OPERATOR LEVEL, are transferred to the seam section according to their present state of connection unless they have been reprogrammed before.

(5) Sewing of the 1st master seam section.

- When stopping, the number of stitches sewn until then appears behind the seam section number 01 on the display; it can be changed with pushbuttons + and -.

(6) Press pushbutton E or heel pedal completely back for a moment.

- programming of the 1st seam section is finished
- a switch-over to the 2nd seam section is performed
- display indicates: 02 --- or 02 ...

Now program the 2nd and all subsequent (if desired) seam sections as described for the 1st seam section. The programming is terminated by pressing pushbutton P whereby

- a switch-back to the 1st seam section is performed
- the display goes out
- the LED beside pushbutton 2 is illuminated

With pushbutton 2 the function "PROGRAMMED SEQUENCE OF SEWING OPERATIONS" can now be disconnected and, if required, connected again.

Parameter "OCCUPATION OF PUSHBUTTON 3 WITH A PARAMETER FROM THE TECHNICIAN LEVEL (-F-)"

Pushbutton 3 is permanently occupated with one of the parameters from the TECHNICIAN LEVEL stated in the parameter list. If the parameter is addressed, the LED beside pushbutton 3 will blink and the display will indicate F - . (. = reference number of the function connected to the pushbutton). With pushbuttons + and - another function may be connected instead.

Parameters "FORWARD INITIAL BACKTACKING STITCHES (Arv)"
"BACKWARD INITIAL BACKTACKING STITCHES (Arr)"

With pushbutton 7 both parameters can be called. After the first pressure the upper LED beside the pushbutton blinks and the parameter "FORWARD INITIAL BACKTACKING STITCHES" is addressed. After the second pressure the lower LED blinks and the parameter "BACKWARD INITIAL BACKTACKING STITCHES" is addressed. A switch-over from one parameter to the other and vice versa may be performed at will.

Parameters "BACKWARD FINAL BACKTACKING STITCHES (Err)"
"FORWARD FINAL BACKTACKING STITCHES (Erv)"

With pushbutton 8 both parameters can be called. After the first pressure the upper LED beside the pushbutton blinks and the parameter "BACKWARD FINAL BACKTACKING STITCHES" is addressed. After the second pressure the lower LED blinks and the parameter "FORWARD FINAL BACKTACKING STITCHES" is addressed. A switch-over from one parameter to the other and vice versa may be performed at will.

CONNECTION AND DISCONNECTION OF FUNCTIONS

With pushbuttons 1...9 the following functions can be connected resp. disconnected:

pushbutton 1 - SEAM WITH STITCH COUNTING

OFF (LED dark)
ON (LED illuminated)

pushbutton 2 - PROGRAMMED SEQUENCE OF SEWING OPERATIONS

OFF (LED dark)
ON (LED illuminated)

pushbutton 3 - PROGRAMMED FUNCTION
(see parameter "OCCUPATION OF PUSHBUTTON 3 WITH A PARAMETER FROM THE TECHNICIAN LEVEL")

OFF (LED dark)
ON (LED illuminated)

pushbutton 4 - NEEDLE POSITION AT STOP BEFORE TRIMMING

DOWN (LED dark)
UP (LED illuminated)

pushbutton 5 - PRESSER FOOT AT STOP BEFORE TRIMMING

DOWN (LED dark)
LIFTED (LED illuminated)

pushbutton 6 - PRESSER FOOT AT STOP AFTER TRIMMING

DOWN (LED dark)
LIFTED (LED illuminated)

pushbutton 7 - INITIAL BACKTACK*

OFF (no LED illuminated)
SINGLE (lower LED illuminated)
DOUBLE (upper LED illuminated)

pushbutton 8 - FINAL BACKTACK*

OFF (no LED illuminated)
SINGLE (upper LED illuminated)
DOUBLE (lower LED illuminated)

pushbutton 9 - THREAD TRIMMER AND THREAD WIPER

OFF (no LED illuminated)
ON (both LED illuminated)

ONLY THREAD TRIMMER

ON (lower LED illuminated)

*If it refers to chain stitch machines the stitch condensation at the start of the seam is connected resp. disconnected via pushbutton 7, at the end of the seam via pushbutton 8, and that by addressing connection state SINGLE and OFF (in this case, connection state DOUBLE is of no importance).

MATCHING OF SPEEDS (only for DC MODULAR)

(1) Set minimum speed = positioning speed (parameter F-110) and maximum speed (parameter F-111).

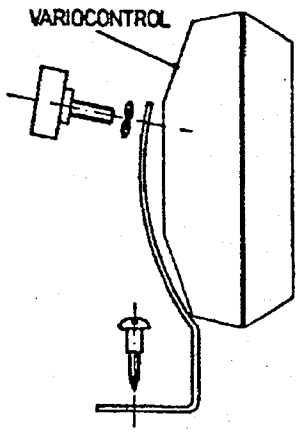
(2) Select parameter F-160 and set the indication on the display to "on".

(3) Press pushbutton P twice, move pedal forward and keep it in this position.

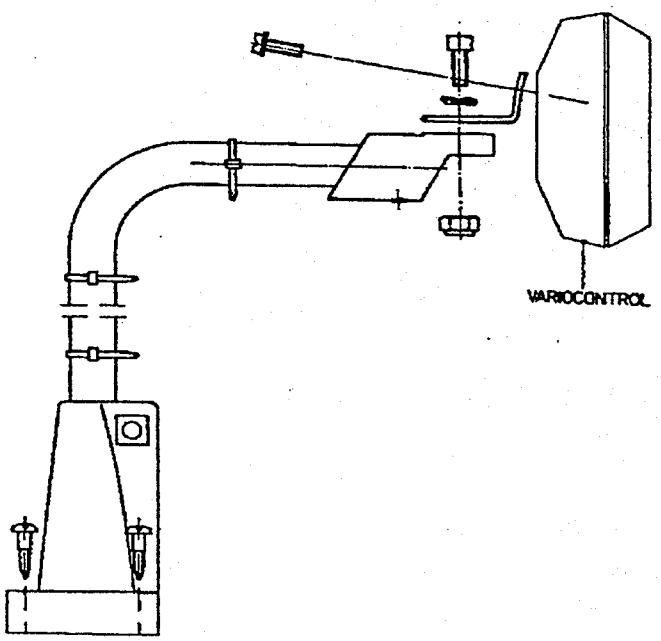
The machine begins to run with slowly increasing speed. At a medium speed the pedal must be moved back to the basic position. The speed automatically continues to increase until the maximum speed is reached. Thereafter the machine stops positioned.

(4) Heel pedal completely back and then start sewing for a moment.

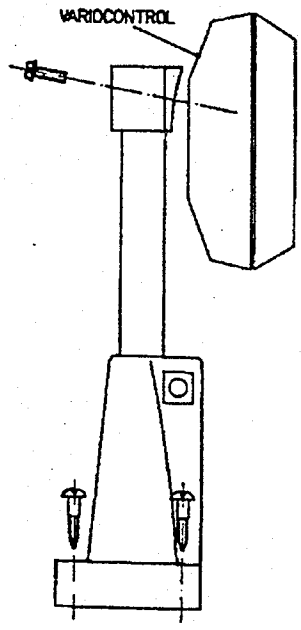
ACCESSORIES



Support complete Part No. 1107641



Stand complete Part No. (black) 1111334
(beige/black) 1111335



Stand complete Part No. (black) 1107639
(beige/black) 1108113

Twisting and fastening of the stand on the table clamp can be performed in steps of 90°.

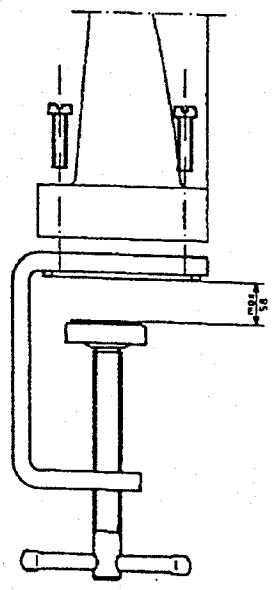


Table clamp complete Part No. (black) 1107448
(beige/black) 1108159

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