

**Part 2: Installation manual CI. N291**

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# 1. General information

## 1.1 Safety instructions



For your special attention!  
The mains voltage and the nominal voltage specified on the motor name plate must be identical.

Any work on the electrical equipment must only be performed by authorized personnel and with pulled out mains plug.

Observe the safety instructions!

## 1.2 Machine operation without material

Prior to operating the machine without material the feet must be locked in their lifted position. Also the smallest foot stroke must be adjusted.

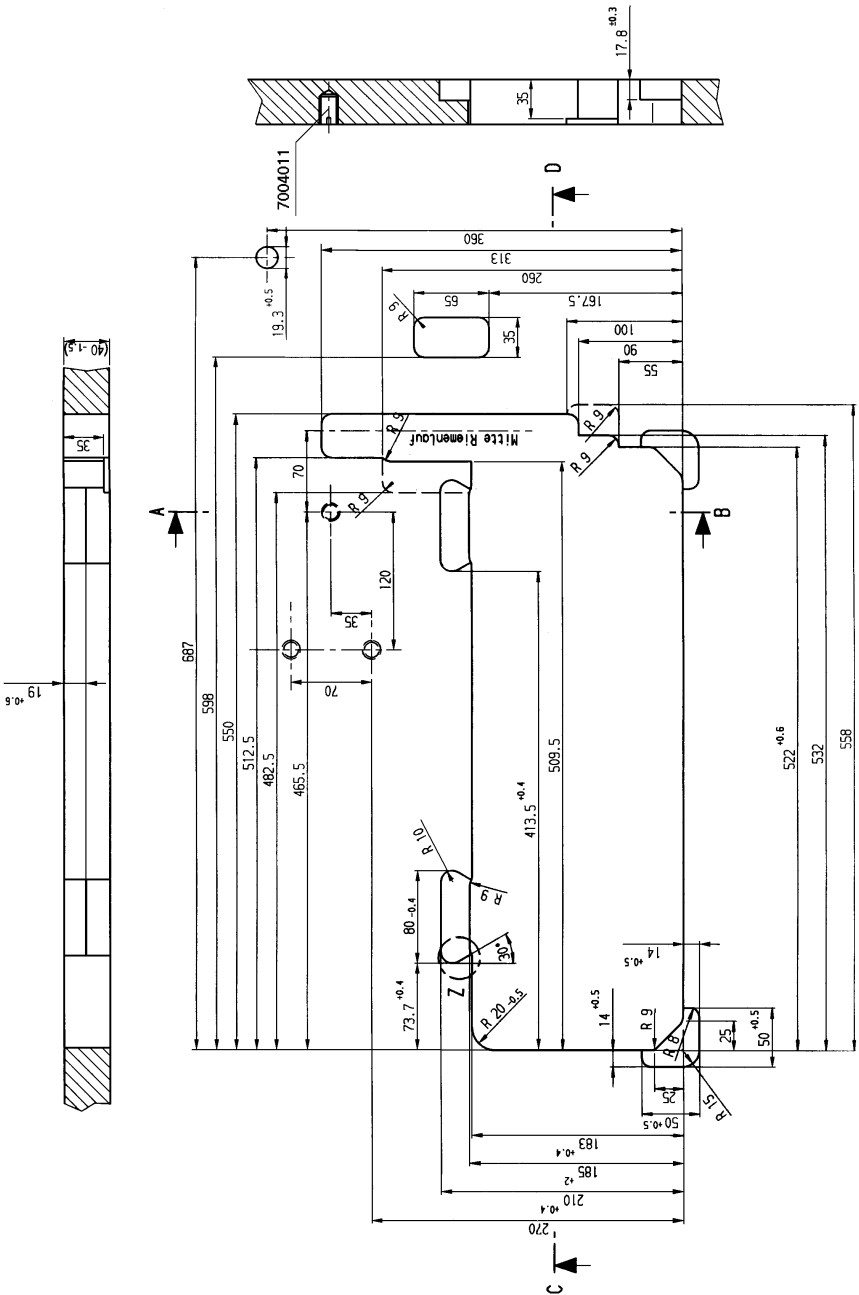
## 1.3 Table tops

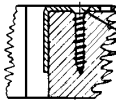
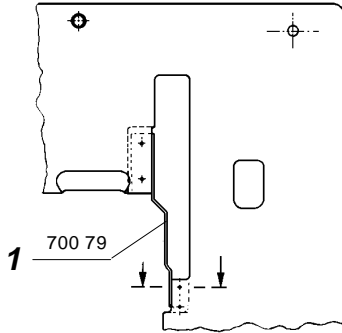
The cutouts of self-manufactured table tops must be dimensioned as specified in the sketches on page 4 and 5.  
The table tops must also have sufficient carrying strength and rigidity.

## 1.4 Parts of the sewing unit

The sewing unit incorporates the following components:

Thread stand 1  
Machine head 2  
Belt guard 3 and 7 for the machine head and motor  
Synchronizer 4  
Control panel 5  
Main switch 6 with cables  
Sewing machine motor 8  
Knee switch 9  
Maintenance unit 10  
Machine stand 11  
Rods 12  
Pedal 13  
Drawer 14  
Possibly sewing lamp  
V-ripped belt  
Miscellaneous small parts in the accessories

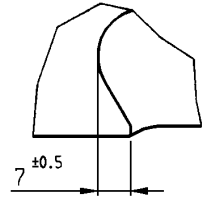




**240 1023**

Aspa-Spanplattenschraube 5x30 DIN 97  
Aspa-Chip board screw 5x30 DIN 97

Einzelheit **Z**  
Detail





## 2. Assembling the stand

Assemble the stand parts as shown in the figure on page 2 and make sure that the stand rests on all 4 points. To do this, turn the screw at the machine stand (right-rear) accordingly.

## 3. Completing and screwing on the table top

Screw the reinforcement strut 1 (page 5) between the cutouts for the machine head and motor belt.

To relieve the cables of strain, screw the cable duct and holder to the table top underside.

Screw on the main switch.

If necessary, attach the sewing lamp transformer.

Lay the electrical cables as far as possible.

Screw on the drawer with its holder.

Screw on the knee switch to activate the higher foot stroke.

Screw the table top on the stand using the wood screws B8 x 35.  
The positional relationship of table top and stand is determined by the centres at the table top underside.

Press the rubber pads for the hinges and the front rubber pads into the recesses of the table tops.

## 4. Connecting the sewing machine motor to the table top

### 4.1 General

Complete motor packages are available for the machine, consisting of the sewing machine motor, main switch with cables, V-belt pulleys, V-ripped belt and other parts.

The motor packages contain a second smaller motor pulley for V-ripped belts that can be used for sewing specifically thick and closely woven material. With this pulley up to 3000 spm (otherwise 4000) may be sewn.

The DC motors used on this sewing machine are operated with a "single phase AC voltage". In the case of several machines the terminals must be therefore distributed evenly among the phases of the three phase power supply. Otherwise some phases might be overloaded.

If the electrical equipment is not supplied by the factory, it must be manufactured and checked according to the EN 60204-3-1 or JEC 204-3-1.



## 4.2 Fastening the motor

Screw the base of the motor to the table top. To do this, turn the 3 hexagon head cap screws M8 x 35 with the washers into the inserts of the table top.

Fasten the potential sheet 3 such that it touches both, the motor base 1 and the hinge 2. The potential sheet conducts static charges of the machine head via the motor to the earth.

Fasten the V-belt pulley to the motor shaft.

Check the arrangement of the terminals in the transformer of the sewing machine motor, and if necessary, change. The arrangement must be adapted to the voltage supply.

## 5. Mounting the machine head, positioning the V-belt and fastening the pedal

Mount the machine head in the table top.

Position the V-ripped belt.

Adjust the tension of the V-ripped belt.

To do this, change the position of the motor with respect to the sewing machine such that the V-ripped belt can be pressed inwards by approx. 10 mm without great effort.

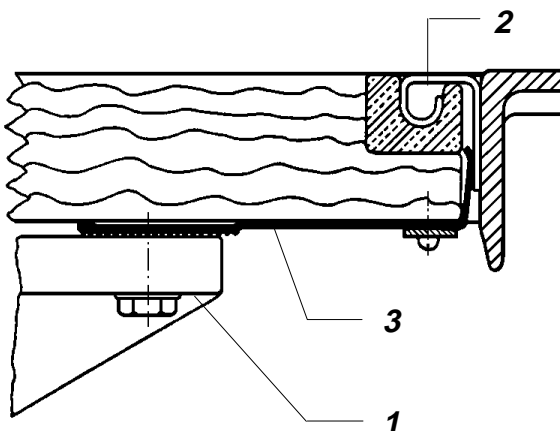
Screw on the belt guard, and thereby set its belt retainer cam such that the belt stays in the V-belt pulley when the sewing machine is tilted backwards.

Screw the belt guard to the machine head.

Mount the pedal and rods.

For ergonomic reasons, the pedal is to be aligned laterally and centred with respect to the needle.

Adjust the rods such that the released pedal is sloped by approximately 10 °.





## **Fastening the hand-wheel a. synchronizer**

To screw on the handwheel 4 proceed as follows:

Turn the arm shaft until the timing pin 2 that is slid through the hole 3 in the housing can be inserted right into the deepest slot of the disk on the arm shaft. Screw on the handwheel such that its mark "A" is level with the timing pin 2.

Screw on the synchronizer 5.

When the synchronizer must be screwed on again after a repair, it is necessary to redetermine its reference position (see point 9). This is however no longer necessary, when the following measures are taken:

Insert the pin of the accessories into the hole of the handwheel.

Bore an 8-mm-deep hole 6 into the synchronizer 5.

Screw on the synchronizer such that the pin of the handwheel is in its hole.

Fasten the thread stand.

Screw on the control panel.

## **7. Connecting the maintenance unit**

Screw the maintenance unit to the stand.

Connect the hose with the maintenance unit and the machine head.

## **8. Laying and connecting the electrical cables**

Lay the cables.

Connect the cable plugs that are mostly marked with symbols with the appropriate bushings.

## **9. Filling in the oil and readying the machine for service**

Pour the oil ESSO "SP NK 10" into the two reservoirs 1 and 7 up to the mark "MAX".

Pour the oil ESSO "SP NK 10" into the mist lubricator of the maintenance unit up to the "groove".

Connect the compressed air hose with the maintenance unit and the compressed air supply.

Set an operating pressure of 6 bar with the pressure regulator.

Connect the mains plug with the mains.

Determine the reference position of the synchronizer.

Proceed as described in the service manual and the instruction manual of the motor manufacturer, thereby referring the reference position to the position D of the handwheel.

After the reference position has been determined, the signals "1<sup>st</sup> position" and "2<sup>nd</sup> position" are correctly timed.

## **10. Making a sewing test and checking the supply of the mist lubricator**

With turned off machine, thread the needle thread and install the bobbin (see operation manual).

Make a sewing test with material.

To do this, operate the sewing machine for some minutes at low speed before sewing at maximum speed.

Check the supply (approx. 1 drop with 10 work cycles) of the mist lubricator and correct, if necessary.



