

# Working Instructions Translation

Heating element butt welding machine

**WIDOS 10000**



Keep for further use!

Model:	Heating element butt welding machine
Type:	WIDOS 10000
Serial number, year of construction:	see type lable

### Customer Entries

Inventory-No.:	
Place of working:	

### Order of spare parts and after sales service:

#### Address of manufacturer

#### WIDOS

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## Purpose of the document

These working instructions give you information about all important questions which refer to the construction and the safe working of your machine.

Just as we are, you are obliged to engage in these working instructions, as well.

Not only to run your machine economically but also to avoid damages and injuries.

Should questions arise, contact our service team in the factory or in our subsidiary companies.

We will help you with pleasure.

According to our interest to continuously improve our products and working instructions, we kindly ask you to inform us about problems and defects which occur in exercise.

Thank you.

## Structure of the working instructions

This manual is arranged in chapters, which belong to the different using phases of the machine.

Due to this structure, the searched information can be easily found.



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<b>1. DESCRIPTION OF THE PRODUCT .....</b>	<b>6</b>
<b>1.1. Usage and purpose-oriented use .....</b>	<b>6</b>
<b>1.2. Safety measures .....</b>	<b>6</b>
<b>1.3. Conformity .....</b>	<b>6</b>
<b>1.4. Machine overview .....</b>	<b>7</b>
<b>1.5. Designation of the product .....</b>	<b>7</b>
1.5.1. Technical data.....	7
1.5.1.1. WIDOS 10000 General data .....	8
1.5.1.2. Basic frame .....	8
1.5.1.3. Heating element.....	8
1.5.1.4. Hydraulic aggregate.....	9
1.5.1.5. Planer.....	9
1.5.1.6. Reception box.....	9
<b>1.6. Accessories: .....</b>	<b>9</b>
<b>2. SAFETY RULES .....</b>	<b>10</b>
<b>2.1. Explanation of the symbols and indications .....</b>	<b>10</b>
<b>2.2. Obligations of the owner .....</b>	<b>11</b>
<b>2.3. Obligations of the worker .....</b>	<b>11</b>
<b>2.4. Measures of organisation .....</b>	<b>11</b>
<b>2.5. Information about safety precautions .....</b>	<b>11</b>
<b>2.6. Instructions for the staff .....</b>	<b>11</b>
<b>2.7. Dangers while handling the machine .....</b>	<b>12</b>
<b>2.8. Dangers caused by electric energy .....</b>	<b>12</b>
<b>2.9. Dangers caused by the hydraulics .....</b>	<b>12</b>
<b>2.10. Specific dangers.....</b>	<b>12</b>
2.10.1. Danger of stumbling over electric / hydraulic wires .....	12
2.10.2. Danger of being burnt by heating element, reception box and welding area .....	13
2.10.3. Danger of catching clothes by the planer.....	13
2.10.4. Danger of squeezing by clamping devices and guideways .....	13
2.10.5. Risk of injury by noise .....	13
<b>2.11. Structural modifications on the machine .....</b>	<b>14</b>
<b>2.12. Warranty and liability .....</b>	<b>14</b>
<b>3. FUNCTIONAL DESCRIPTION .....</b>	<b>15</b>
<b>4. OPERATING AND INDICATING ELEMENTS .....</b>	<b>16</b>
<b>4.1. Elements on the aggregate .....</b>	<b>16</b>
<b>4.2. Elements at heating element .....</b>	<b>17</b>
<b>4.3. Separating device for heating element.....</b>	<b>17</b>
<b>4.4. Elements at planer .....</b>	<b>18</b>

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4.4.1.	Protective motor switch at the planer .....	18
<b>5.</b>	<b>STARTING AND OPERATING .....</b>	<b>19</b>
5.1.	Safety indications .....	19
5.2.	Replacing the reduction inserts .....	20
5.3.	Connection of machine .....	20
5.4.	Setting the heating element temperature .....	20
<b>6.</b>	<b>WELDING PROCESS .....</b>	<b>21</b>
<b>7.</b>	<b>WELDING LOG AND TABLES .....</b>	<b>24</b>
<b>8.</b>	<b>MAINTENANCE AND REPAIR .....</b>	<b>26</b>
8.1.	Maintenance and inspection, repair .....	26
8.2.	Storage .....	26
8.3.	Cleaning the machine .....	26
8.4.	Clamping elements .....	26
8.5.	Checking the hydraulic oil level .....	27
8.6.	Venting the hydraulic cylinders .....	27
8.7.	Planer .....	28
8.8.	Protect machine parts against corrosion .....	28
8.9.	Disposal .....	28
<b>9.</b>	<b>TRANSPORT .....</b>	<b>29</b>
<b>10.</b>	<b>HYDRAULIC AND ELECTRIC DIAGRAMS .....</b>	<b>30</b>
<b>11.</b>	<b>SPARE PARTS LIST .....</b>	<b>36</b>
<b>12.</b>	<b>DECLARATION OF CONFORMITY .....</b>	<b>37</b>

# 1. Description of the product

This chapter gives important basic information about the product and its prescribed use.

All technical details of the machine are put together as a general arrangement.

## 1.1. Usage and purpose-oriented use

The WIDOS 10000 has been designed for heating element butt welding of pipes and fittings with a diameter range of  $\varnothing = 500 - 1000\text{mm}$ , 00

(standard diameters: 500 / 560 / 630 / 710 / 800 / 900 / 1000 mm).

Pipes of OD 1000 mm are clamped without reducer inserts.

It is a machine for construction sites and particularly designed for the usage on-site, as well as in the workshop.

For this reason, the frame is kept small so that it can be used even under difficult conditions (e.g. ditch).

All use going beyond is not purpose-oriented.

The manufacturer is not responsible for damages caused by misuse.

The risk is held only by the user.

Also part of the purpose oriented use is

- respecting all the indications of the working instructions and
- performing the inspection and maintenance works.

## 1.2. Safety measures

In case of wrong use, wrong operation or wrong maintenance, the machine itself or products standing nearby can be damaged or destroyed.

Persons being in the endangered area may be injured.

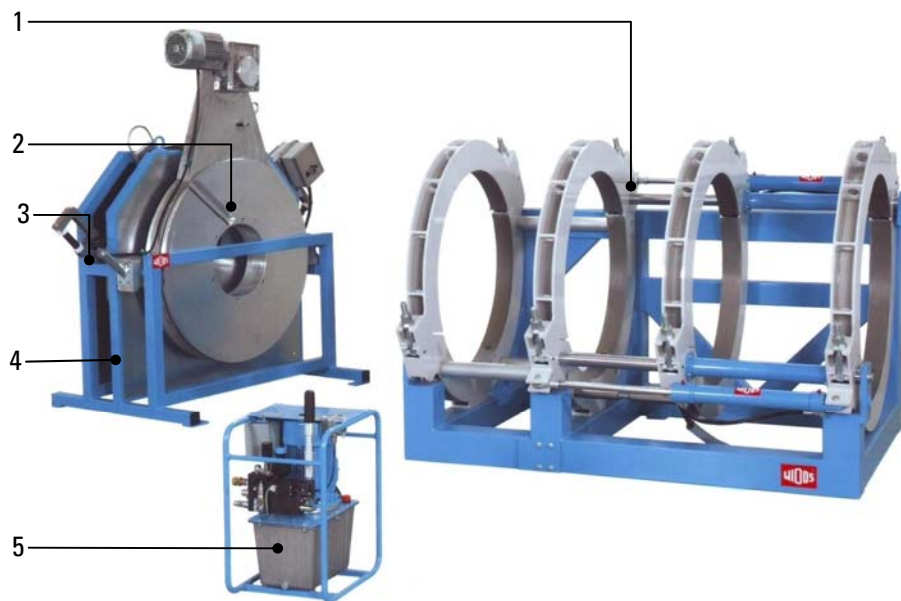
Therefore these working instructions have to be thoroughly read and the corresponding safety regulations must be necessarily adhered to.

## 1.3. Conformity

The machine corresponds in its construction to the valid recommendations of the European Community as well as to the according European standard specifications.

The development, manufacturing and mounting of the machine were made very carefully.

## 1.4. Machine overview



<i>Nr.</i>	<i>Benennung</i>
1	Basic machine
2	Planer
3	Heating element
4	Reception box
5	Hydraulic aggregat
no picture	Crane (optional)

## 1.5. Designation of the product

The product is designated by two type labels which are attached at the aggregate and at the basic machine.

They contain the type, the serial number and the year of construction of the machine.

### 1.5.1. Technical data

All important technical data of each single component are displayed. They allow a rapid information about the working capacity and the structure.

### 1.5.1.1. WIDOS 10000 General data

Pipe diameter range:	$\varnothing_{\text{outside}} = 500 - 1000 \text{ mm}$
Material which can be welded:	PP, PE80, PE 100
Weight (without accessories):	appr. 2200 kg
Emissions	<ul style="list-style-type: none"> <li>- Noise exceeding 80 dB (A) may occur; during planing it is obligatory to wear ear protection!</li> <li>- When using the named pipe materials and when welding below 260°C no toxicant damp arises</li> </ul>
Ambient conditions in the welding area	<ul style="list-style-type: none"> <li>- take care for cleanness (no dust at the welding area);</li> <li>- If secured by an appropriate measurement that allowed conditions for welding are indicated, it is possible to work in any outside temperature condition as far as the welder is not constrained in its manual skill;</li> <li>- avoid humidity, if necessary use a welding tent;</li> <li>- avoid strong sun rays influence;</li> <li>- protect from wind, shut the pipe; ends</li> </ul>

### 1.5.1.2. Basic frame

Material frame:	Structural steel
Material reduction inserts:	Steel
$\varnothing$ cylinder / $\varnothing$ piston rod:	63 / 32
Cylinder stroke length:	450 mm
Max. force (F=P*A):	46 kN (bei 100 bar)
Weight	appr. 1300 kg

### 1.5.1.3. Heating element

Power:	23 kW
Voltage:	400V (+-10%)
Mains plug:	CEE 63 A
Frequency:	50 Hz
Outside- $\varnothing$ :	1100 mm (usable surface)
Inside- $\varnothing$	220 mm
Surface:	nonstick-coated
Attached elements:	<ul style="list-style-type: none"> <li>- Electronic temperature control</li> <li>- Control lamps, on/off-switch</li> <li>- Connecting cable with plug</li> </ul>
Weight:	appr. 95 kg



#### 1.5.1.4. Hydraulic aggregate

Feed:	CEE 16 A phase converter
Power:	1,5 / 2,0 kW
Voltage:	400 V ( $\pm 10\%$ )
Nominal current	5,2 / 4,0 A
Frequency:	50 Hz ( $\pm 10\%$ )
Displacement of phase:	appr. 18°
Hydraulic oil tank:	appr. 10 l
Insulation system	IP 54
Electromotor and pump:	
Speed:	1450 / 2900 rpm
Max. working pressure of pump:	appr. 160 bar
Working pressure:	0-160 bar adjustable
Volume velocity:	3,8 l/min
Weight:	appr. 47 kg

#### 1.5.1.5. Planer

Motor:	Three-phase alternating current motor
Power:	3,0 kW
Voltage:	400 V (+-10%)
Mains plug:	CEE 16 A-motor protective
Frequency:	50 Hz (+-10%)
Speed n1 of motor:	appr. 1440 rpm
Gear of motor	Transmission 30:1
Chain wheel gearing:	Transmission 7,9:1
Speed n2 of motor:	appr. 6,1 rpm
Weight:	appr. 170 kg

#### 1.5.1.6. Reception box

Material frame:	Structural steel
Dimension:	appr. 1330 x 1000 x 1130 mm
Weight:	appr. 80 kg

See spare parts list for order numbers and single parts

## 1.6. Accessories:

Following tools and accessories are part of the delivery:

1	Socket spanner size 46
1	Hexagonal socket screw key size 14 with T-grip
1	Fork wrench, size 19
1	Wire rope with hook (J9994)
1	Torx screw driver T10

## 2. Safety rules

The base for the safe handling and the fault-free operation of this machine is the knowledge of the basic safety indications and rules.

- These working instructions contain the most important indications to run the machine safely.
- The safety indications are to be followed by all persons working on the machine.

### 2.1. Explanation of the symbols and indications

In the working instructions, following denominations and signs are used for dangers:



This symbol means a possibly danger for the life and the health of persons.

- The disrespect of these indications may have heavy consequences for the health.



This symbol means a possible dangerous situation.

- The disrespect of these indications may cause slight injuries or damages on goods.



This symbol means a possible dangerous situation by moving parts of the machine

- The disrespect of these indications may cause heavy crushings of parts of the body resp. damages of parts of the machine.



This symbol means a possible dangerous situation due to hot surfaces.

- The disrespect of these indications may conduct to heavy burns, respectively to self-ignition or even fire.



This symbol means a possible risk of injury by noise exceeding 80 dB (A).

- Ear protection is obligatory



This symbol gives important indications for the proper use of the machine.

- The disrespect of these indications may conduct to malfunctions and damages on the machine or on goods in the surrounding.



Under this symbol you get user tips and particularly useful information.

- It is a help for using all the functions on your machine in an optimal way and helps you to make the job easier.

**The regulations for the prevention of accidents are valid (UVV).**

## 2.2. Obligations of the owner

The owner is obliged only to let persons work at the machine, who

- know about basic safety and accident prevention rules and are instructed in the handling of the machine, as well as who
- have read and understood the safety chapter of this manual and certify this by their signature.

***The safety-conscious working of the staff has to be checked in regular intervals.***

## 2.3. Obligations of the worker

All persons who are to work at the machine are obliged before working:

- to follow the basic safety and accident protection rules.
- to have read and understood the safety chapter and the warnings in this manual and to confirm by their signature that they have well understood them.
- to inform themselves about the functions of the machine before using it.

## 2.4. Measures of organisation

- All equipment required for personal safety is to be provided by the owner.
- All available safety equipment is to be inspected regularly.

## 2.5. Information about safety precautions

- The working instructions have to be permanently kept at the place of use of the machine. They are to be at the operator's disposal at any time and without effort.
- In addition to the manual, the common valid and the local accident protection rules and regulations for the environmental protection must be available and followed.
- All safety and danger indications on the machine have to be in a clear readable condition.
- Every time the machine changes hands or is being rent to third persons, the working instructions are to be sent along with and their importance is to be emphasized.

## 2.6. Instructions for the staff

- Only skilled and trained persons are allowed to work at the machine.
- It must be clearly defined who is responsible for transport, mounting and dismounting, starting the operation, setting and tooling, operation, maintenance and inspection, repair and dismounting.
- A person who is being trained may only work at the machine under supervision of an experienced person.

## 2.7. Dangers while handling the machine

The machine WIDOS 10000 is constructed according to the latest technical standard and the acknowledged technical safety rules. However, dangers for the operator or other persons standing nearby may occur. Also material damages are possible.

The machine may only be used

- according to the purpose-oriented usage
- in safety technical impeccable status

*Disturbances, which may affect the safety of the machine must be cleared immediately*

## 2.8. Dangers caused by electric energy



Only skilled persons are allowed to work at electrical appliances!

- The electrical equipment of the machine has to be checked regularly. Loose connections and damaged cables have to be replaced immediately.
- If works at alive parts are necessary, a second person has to assist who can disconnect the machine from the mains if necessary.
- All electric tools (heating element, planer and aggregate) have to be protected from rain and dropping water (if need be use a welding tent).
- According to VDE 0100, the use on construction sites is only allowed with a power distributor with a FI-safety switch.

## 2.9. Dangers caused by the hydraulics



System parts and pressure hoses should be made pressureless before beginning of any repair works. Even if the machine is switched off, pressure may be in the hydraulic accumulator!

There is a danger of injuring the eyes by hydraulic oil squirting out.

- Damaged hydraulic hoses have to be immediately replaced.
- Make a visual inspection of the hydraulic hoses before each work beginning.
- The hydraulic oil is inedible!

## 2.10. Specific dangers

### 2.10.1. Danger of stumbling over electric / hydraulic wires

- Make sure that no person has to step over the wires.
- Lay the wires in such a way that the danger is kept to a minimum.

### 2.10.2. Danger of being burnt by heating element, reception box and welding area



You can burn yourself, inflammable materials can be ignited.

The heating element temperature is heated up to more than 250°C !

- Do not touch the surfaces of the heating element.
- Do not leave the heating element unsupervised.
- Take enough safety distance to inflammable materials.
- Do wear safety gloves.
- Always put the heating element back into the reception box after and before each use.
- Transport the heating element at the handle only.
- When cleaning the hot heating element with detergents (e.g. with PE cleaner) there is the danger of inflammation. For this reason, please take care that the inflammation point is above the actual temperature of the heating element. Do not bring any fire sources (e.g. cigarettes) close thereto.

### 2.10.3. Danger of catching clothes by the planer



You can cut yourself or even get bones broken!

- Only wear clothes tight to the body.
- Do not wear rings or jewellery during the work.
- If necessary, wear a hair-net.
- Always put the planer back into the reception box after and before each use.
- Transport the planer at the handle only. Do not touch the surfaces.
- Switch the planer on only for usage.

### 2.10.4. Danger of squeezing by clamping devices and guideways



There is a danger of serious injuries: on the one hand between the inner clamping devices and on the other hand between the outer clamping device and the end of the guideway.

- Do not stand or put hands between clamped pipe ends.
- Do not stand or put hands between the inner clamping tools with not yet clamped pipes.
- Do not block opening and closing of the machine slides.

### 2.10.5. Risk of injury by noise



Noise exceeding 80 dB (A) may occur; during planing it is obligatory to wear ear protection!

## 2.11. Structural modifications on the machine

- No modifications, extensions or reconstructions may be made on the machine without permission of the manufacturer.
- Machine parts which are not in a perfect condition are to be replaced immediately.
- Only use original **WIDOS** spare and wear parts.
- In case of purchase orders please always state the **machine number!**

## 2.12. Warranty and liability

Fundamentally our "General Sales and Delivery Conditions" are valid.

They are at the owner's disposal latest when signing the contract.

Guarantee and liability demands referring to personal injuries or damages on objects are excluded if they are caused by one or several of the following reasons:

- not using the machine according to the prescriptions
- inexpert transport, mounting, starting, operating, and maintenance of the machine
- running the machine with defective or not orderly mounted safety appliances
- ignoring the information given in this manual
- structural modifications on the machine without permission
- unsatisfactory checking of parts of the machine, which are worn out
- repairs performed in an inexpert way
- In case of catastrophes and force majeure

### 3. Functional description

Basically, the international and national process guidelines are to be followed !

The plastic pipes are clamped in the clamping devices. Then the front sides of the pipes are cut plane and parallel by means of the **planer** and the misalignment of the pipes is checked.

The cleaned and heated heating element is inserted and the pipes are pressed against the heating element under defined adjusting pressure. This process is called "**adjusting**".

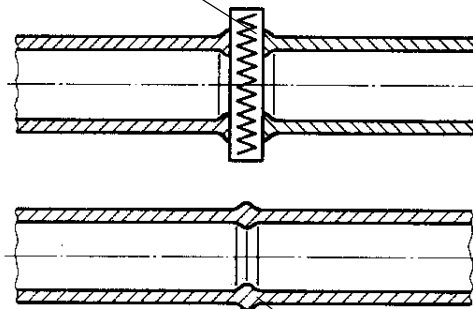
After the prescribed bead height being reached, pressure is reduced, the **heating time** begins. The function of this time is to heat up the pipe ends.

After expiration of the heating time, the slides are opened, the heating element is removed quickly and the pipes are driven together again. The time gap from the removal of the heating element to joining the pipes is called **change over time**.

The pipes are joined under prescribed welding pressure and then cool down under pressure (**cooling time**).

The welded joint can be unclamped, the welding process is finished.

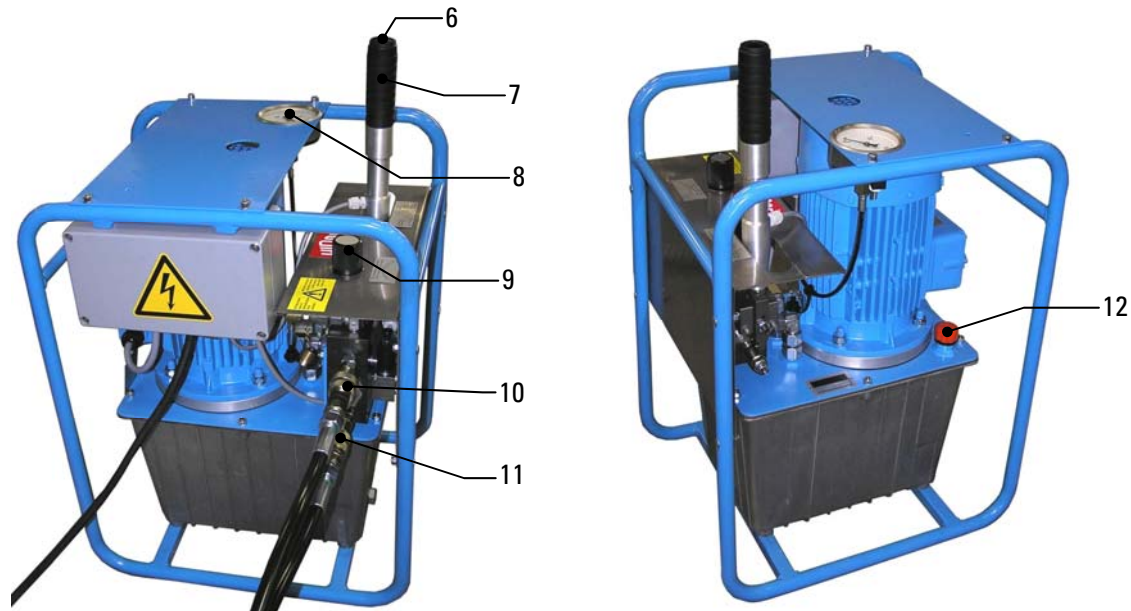
Heating element heats the pipes up to welding temperature



Finished welding with internal and external bead

## 4. Operating and indicating elements

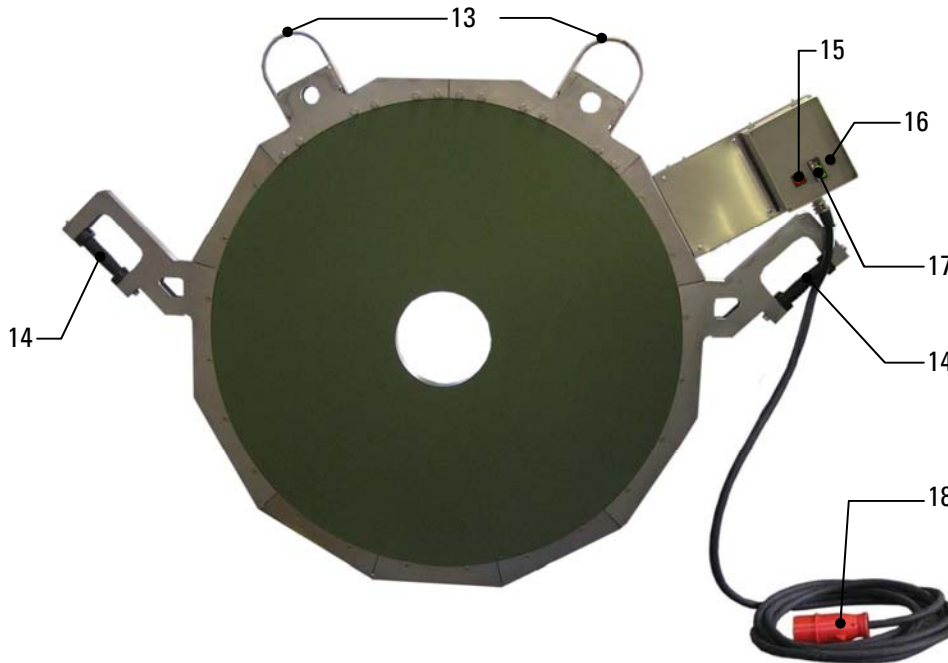
### 4.1. Elements on the aggregate



No.	Name	Function
6	Push-button	- By pressing the push-button the motor switches over to high speed
7	Valve lever	Opening the slides. There are 4 different positions: - <b>to the left side</b> : slides close. - <b>in the middle</b> (usual position): the pressure which is currently achieved is kept (also by means of the built-in hydraulic accumulator) - <b>slightly to the right side</b> (position pressureless): a possibly existing pressure is released without moving the slides. Due to the hydraulic accumulator, it takes about 10 s until the pressure is completely released. - <b>to the right side</b> : slides open
8	Pressure gauge	Display of the hydraulic pressure
9	Setting screw for pressure relief valve	- Limitation of the pressure to the desired value.
10	Hydraulic connection for closing the slides	- Non-dropping quick-acting coupling
11	Hydraulic connection for opening the slides	- Non-dropping quick-acting coupling
12	Screw with oil dipstick	- checking the oil level - oil filler neck

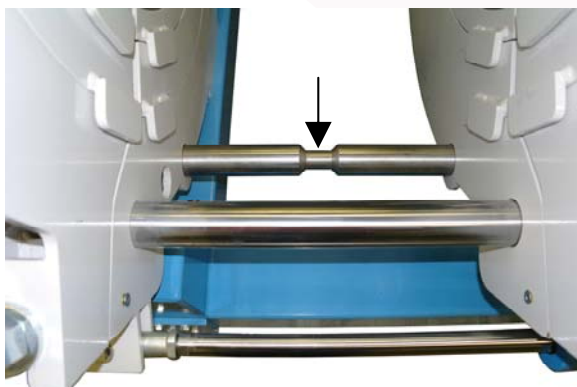


### 4.2. Elements at heating element



No.	Name	Function
13	Suspension	- For lifting-off the heating element
14	Supporting bolt	- Insert the heating element with supporting bolts on the clamping beams / on the reception box
15	Controller	- Setting the heating element temperature
16	Fuse	- Fuse to regulate the temperature
17	Temperature regulator	- Regulator of temperature
18	Connecting cable with plug	- Connect the heating element to the power supply

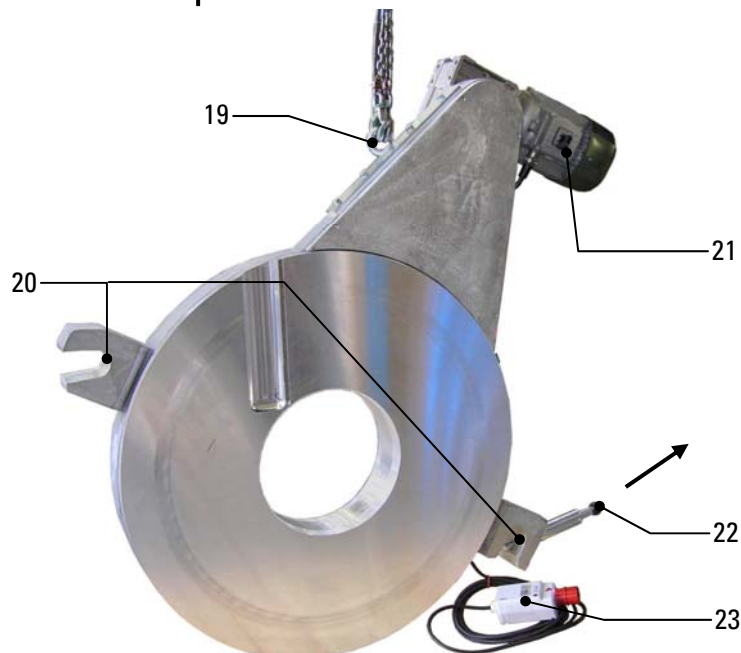
### 4.3. Separating device for heating element



There is a tear-off bar mounted between the movable and the fixed clamping shells on the basic machine. It prevents the heating element from sticking to the heated-up pipe ends.

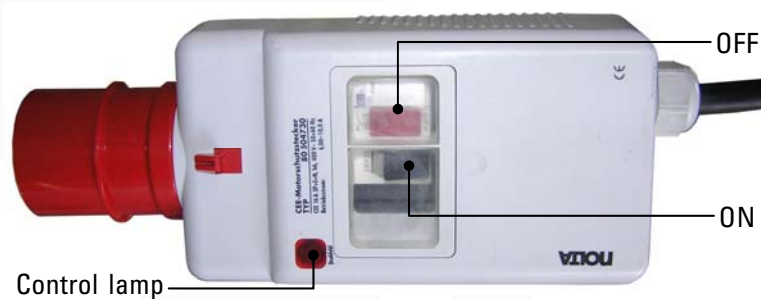
When inserting the heating element take care that it lies in the zone of the throat of the tear-off bar (see arrow).

#### 4.4. Elements at planer



No.	Name	Function
19	Lifting eye nut	Possibility to suspend the planer
20	Eye	To suspend from the basic machine
21	Switch	To switch the planer on / off
22	Locking device	To secure planer in the basic machine
23	Connecting cable	Power supply for planer with plug

#### 4.4.1. Protective motor switch at the planer



**Always** activate/deactivate the planer with the switch at the motor.

Switching-off the planer at the motor protective plug should only happen in exceptional circumstances since the red push button works as overload protection at the same time.

This means if e.g. the pressure of the planer is too high, it shuts off automatically.

In this case reduce the pressure on the planer and start the planer by the power switch at the protective motor switch.



If the red control lamp lightens, the planer turns in the wrong direction. Necessarily change the turning direction.

## 5. Starting and operating

The instructions of this chapter are supposed to initiate in the operation of the machine and lead during the appropriate starting of the machine.

This includes:

- the safe operation of the machine
- using all the possible options of the machine
- economic operation of the machine

### 5.1. Safety indications



The machine may only be operated by initiated and authorized persons.

For the qualification, a plastic welding exam can be taken according to DVS and DVGW. In situations of danger for persons and the machine, the mains plug has to be unplugged immediately.

In case of power failure, there may still be pressure in the hydraulic system. Therefore release pressure if need be.

After completion of the welding work and during breaks the machine has to be switched off. Further take care that no unauthorized person has access.

Protect the machine from wetness and humidity!

According to VDE 0100, the use on construction sites is only allowed with a power distributor with a FI-security protective switch.



Check the oil level of the hydraulic system before each starting of the control unit in order to avoid damages on the pump. The oil level must be between the two marks at the oil dipstick.

If necessary, add hydraulic oil of the quality HLPD 32.



The heating element surfaces must be clean, especially non greasy, therefore they need to be cleaned shortly before each welding or in case of dirtiness by means of a **fibre-free paper** and a cleaning agent (e.g. PE cleaner or pipe cleaning tissues which are available at the WIDOS company).

The anti-adhesive coating of the heating element must remain undamaged in the working area.



Take care that all hydraulic and electric connections are connected.



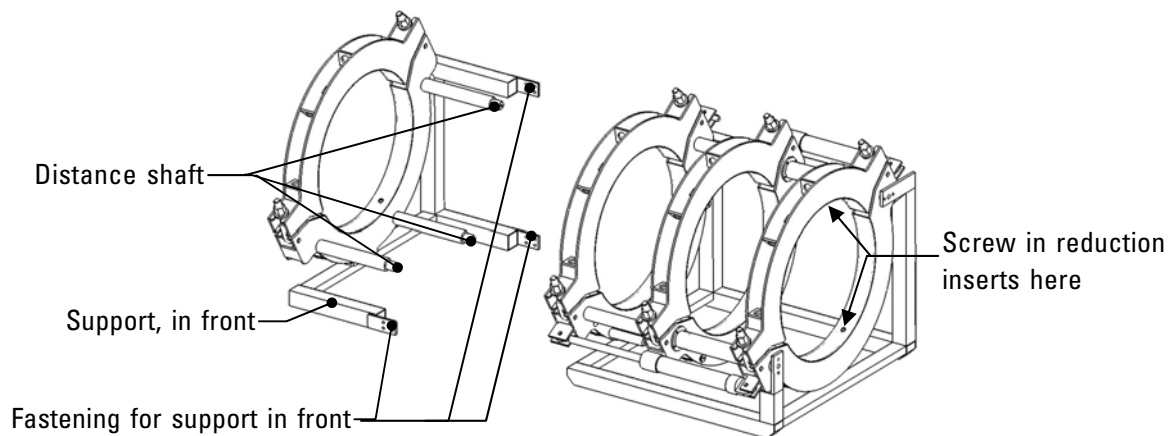
Make sure that pump and planer are connected in a way that they turn in right-hand direction.

- Take into account the surrounding conditions:
  - The welding may not be performed under direct sun rays influence.
  - Use a welding umbrella if necessary.
- If the surrounding temperature is under 5°C, measures have to be taken:
  - Use a welding tent or preheat the pipe ends if necessary.

In addition, take measures against rain, wind and dust.

## 5.2. Replacing the reduction inserts

- Pipes with OD 800 have to be clamped in the basic clamping devices.
- Unscrew the mounted reduction inserts by means of the provided Allan key.
- Screw the reduction inserts with the corresponding diameter into the clamping devices.
- If necessary (e.g. for T-pieces) the outer fixed clamping device can be dismantled by unscrewing the three hexagon socket screws for distance shaft, and the 3 x 4 fastening screws for support in front.



## 5.3. Connection of machine

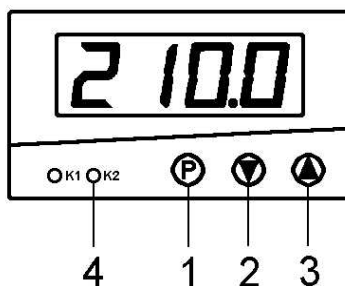
- Put the hydraulic hoses of the basic machine into the quick-acting couplings of the hydraulic aggregate.
- Connect the aggregate to the mains supply (400 V / 16 A / 50 Hz / right hand rotary field).
- Connect planer to the mains supply (400 V / 16 A / 50 Hz / right hand rotary field).
- Connect the heating element to the mains supply (400 V / 32 A / 50 Hz ).



Lay the hydraulic and electric wires carefully (danger of stumbling)

## 5.4. Setting the heating element temperature

Display = Display of the actual value



Push shortly the button P (1), the display shows <SP>, change desired value with buttons ▲ (3) ▼ (2). Push shortly the button P (1), actual temperature is displayed again (or automatic change after 30s). During heating up to desired value, the control lamp K2 (4) is on, having reached the desired temperature, the control lamp K2 (4) is blinking.

## 6. Welding process

The respectively valid welding prescriptions (ISO / CEN / DVS...) are to be basically followed.



There is the danger of serious bruising.

On the one hand between the inner clamping devices, on the other hand between the outer clamping device and the end of the guide bar.



Do wear safety gloves as a protection against burning !



There is the danger that the planer pulls in clothes!

Do not hold the planer on its front sides in any case.



You may run the machine quickly in order to drive the slides back and forth as well as for the change-over by:

- Pressing <button> (Chapter: 4.1, Nr. 6) and <control lever> on „FORWARDS“ or „BACKWARDS“.

In order to carry out planing and for the joining you must select the slow speed:

- With <control lever> on „FORWARDS“ or „BACKWARDS“ without pressing <button>.
- A stop-watch must be available for recording the actual times for heating and cooling.
- A welding table must be available from which the parameters for the pipe dimensions to be welded prescribed by the welding prescriptions may be taken.
- The heating element are to be clean and, above all, free from grease. Therefore they are to be cleaned with non-fraying paper and detergent (e.g. PE - cleaner) before every welding or if they are dirty. The anti-stick coating of the heating element is to be undamaged in the working area.
- Connect the heating element and set the heating element temperature (see chapter 5.4).
- Screw in the reduction inserts according to the outside diameter of the pipes to be welded.
- Lay the pipes to be welded into the clamping devices, tighten firmly the clamping nuts and align the pipes with respect to each other. In case of long pipe ends, use WIDOS roller stands for that purpose.
- For the face-cutting the pipes must be clamped-in in such a way that the pipes come out of at least 110 mm on the left and right from the clamping ring (towards the inner side).
- Close the slides <valve lever> on „FORWARDS“ thereby reading the **drag pressure** on the pressure gauge.  
The drag pressure is displayed exactly when the slide with the clamped pipe passes over into its movement.
- Open slides <valve lever> on „BACKWARDS“.
- Lift planer with a crane between the clamping tools and fix it with the planer locking device into the basic machine.



Noise exceeding 80 dB (A) may occur; during planing it is obligatory to wear ear protection!

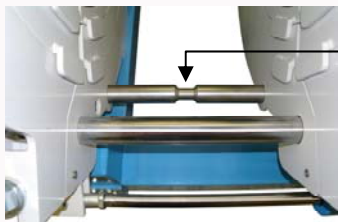
- Switch the planer on and cut the pipes until a surrounding (triple) chip is formed. The pressure onto the planer may not **exceed 15 bars of the respective drag pressure**.



In case there are too many chips stop planer and remove them.

Necessarily take care that no chips will be drawn-in between the planer discs.

- You must carry out planing as long as a revolving chip (three times) has formed.
- Separate the pipes, with <control lever> on „BACKWARDS“ until the chip will tear off, **only then** switch off planer.
- Detach the planer locking device and lift crane out of the machine again. Remove the produced chips without contacting the worked surfaces.
- Shut slides, <valve lever> on „FORWARDS“.
- Check pipe mismatch and gap on the joining pipe ends. According to DVS 2207, the mismatch on the pipe outer side must not exceed 0.1 x pipe wall thickness, the admissible gap must not exceed 0.5 mm. The mismatch compensation is carried out by further tightening or releasing of the clamping nuts. In case mismatch compensation was carried out, planing must be repeated afterwards.
- The adjustment pressure for the pipe dimension to be welded can be gathered from the welding table. Add the movement pressure.
- Set the resulting pressure value at the pressure relief valve and check it by actuating the valve lever.
- Open slides again slightly, <valve lever> on „BACKWARDS“.
- Gather heating time, maximum change over time, cooling time and bead height for the pipe dimension to be welded from the table.
- Move the heating element, which has been cleaned and brought to desired temperature, between the pipes.



**Take care that it lies in the zone of the throat of the tear-off bar, if required displace the shaft.**

- Shut slides smoothly to the set adjustment pressure, <valve lever> on „FORWARDS“.
- When the prescribed revolving bead height is reached, reduce pressure. For this purpose, move the <valve lever> „Pressure release“ until the desired heating pressure is built up (heating pressure = approx. 10% of the adjustment pressure).
- The heating up time starts now. Press the stop-watch and compare the actual time with the nominal time taken from the table.
- After expiration of the heating time, open the slide quickly with button on valve lever and <valve lever> on „BACKWARDS“, remove the heating element as quickly as possible. Then close the slide smoothly, <valve lever> on „FORWARDS“.

The maximum time frame for this process is predetermined by the value for the change over time taken from the table.

- When the welding pressure is built up, press the stop-watch and keep the <valve lever> for approximately 10s on position „FORWARDS“ so that the hydraulic accumulator can be filled. During the cooling time re-adjust pressure, if necessary (the pressure for cooling is the same as the set adjustment pressure).

- After expiration of the cooling time release pressure with <valve lever> on „Pressure release“ and open the upper reducer inserts.
- Remove the welded part.
- Open the slide with <valve lever> on „BACKWARDS“.

## 7. Welding log and tables



You can access our website and select our welding tables via the qr code shown here. Select "WIDOS 10000-12000" and the corresponding material (PE / PP /PVDF).





## 8. Maintenance and repair

### Goal of the chapter is:

- Keeping the nominal state and the operation capacity of the machine.
- Increasing the efficiency by avoiding non-planned outage.
- Efficient planning of the maintenance works and the maintenance tools.

### 8.1. Maintenance and inspection, repair



All maintenance and repair works have to be basically performed with the machine in off position.

During this the machine has to be secured against unauthorized switching on.

Prescribed maintenance and inspection works should be performed in time.

The DVS gives the advice of inspection works after 1 year.

For machines with a specially high usage percentage the testing cycle should be shortened.

The works should be performed at the WIDOS GmbH company or by an authorized partner.

- The operating staff has to be informed before the starting of the maintenance works.
- Check the tightness of loosened screws.
- Check the function of the safety devices after completion of the maintenance works. Especially insulation, tension resistance and protective cables resistance.

### 8.2. Storage

- The cylindrical waves of the basic machine are to be kept free from dirtiness and need to be covered with a thin oil film if they are not being used.
- Store dry.

### 8.3. Cleaning the machine

The used materials and cloths are to be handled properly and to be disposed of, especially:

- during cleaning with solvents.

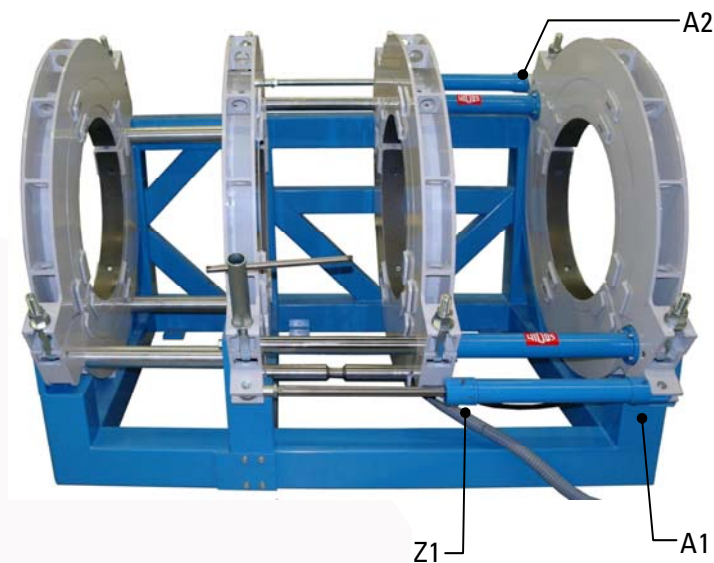
### 8.4. Clamping elements

- For a long service life clean and grease regularly the threaded spindles and the joint parts which are used for clamping the pipes.

## 8.5. Checking the hydraulic oil level

- To avoid damages check the oil level of the control unit before each starting.
- Unscrew the cover of the tank groove (with integrated oil level bar).
- Clean the oil bar with a non-fibring cloth and insert it again in the tank groove.
- Remove the oil bar again and check the oil level by means of the two marks on it (the oil level should be between both marks).
- If the oil level is under the lower mark, then hydraulic oil of the quality HLPD 32 should be added.
- The oil level should not be over the upper mark because otherwise there is a risk of inundation.
- After completion of the works, close the tank cover again.
- Do not cant the hydraulic, since the cover of the hydraulic tank does not close totally and oil can run out.

## 8.6. Venting the hydraulic cylinders



- Venting the hydraulic cylinder is not required, if
  - the hoses have been disconnected from the quick-action couplings at the control unit because the remaining oil in the hose is being kept by valves and for this reason no air can enter.
- The hydraulic cylinder **must be vented** if
  - there has been too less oil in the tank and air has been attracted.
  - there were leaky spots at the hoses or in the connections.
  - the hoses were unscrewed from the basic machine.
- Eliminate the cause of the air entrance.
- Open the machine completely.
- First unscrew the lower „vent screw (Z1) for closing“ (lefthand side).
- Connect the transparent venting hose and insert it in the collecting vessel of the aggregate.

- Close until there is no more air visible in the venting hose, then tighten again the vent screw.
- Close the machine completely.
- Unscrew the lower „vent screw (A1) for opening“ (righthand side).
- Connect the transparent venting hose and insert it in the collecting vessel of the aggregate.
- Open until there is no more air visible in the venting hose, then tighten again the vent screw.
- When the venting process at the lower vent screws is completed, repeat the process at the upper „vent screw (Z2) for closing“ (lefthand side), as well as at the upper „vent screw (A2) for opening“ (righthand side).

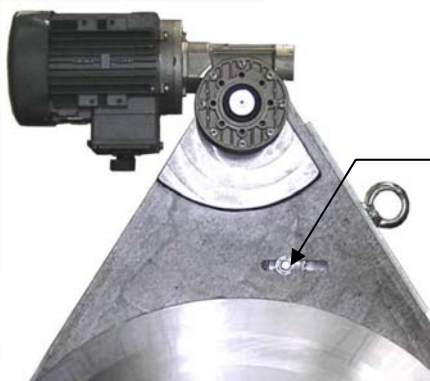


The lower vent screws always have to be vented at first because there is a direct connection between the upper and the lower cylinders.

- If air remains in the lower cylinder, it will ascend in the upper cylinder when pressure is applied.

### 8.7. Planer

- Check the stress of the drive chain in the planer and grease it regularly. The cover of the planer can be screwed off by means of the provided socket spanner.
- Do not lay the planer on its blades.
- Check the blades of the planer for sharpness, turn them if necessary (grinded on both sides, max. thickness of the shavings: 0,2 mm !).



Screw for clamping the driving chainge. (Open the planer on the rearside)

### 8.8. Protect machine parts against corrosion

In case of air humidity of > 85 % and / or high temperatures you must treat the untreated steel parts of the machine with anti-corrosive protecting agent (e.g. AVILUB NCI 9840).

### 8.9. Disposal



At the end of the life time, the machine has to be disposed of properly, non-polluting and in accordance with the national laws of waste disposal.

## 9. Transport

- The hydraulic hoses at the basic machine should not be unscrewed (air penetration). Make sure that they are not squeezed.
- The sensore integrated in the machine are sensitive high precision devices which need to be carefully handled in order to guaranty a longer live.
- Do not cant control unit (Hydraulic oil can run out).
- Prevent from heavy chocs.
- Be always carreful while using automatic handling and carrying machines.



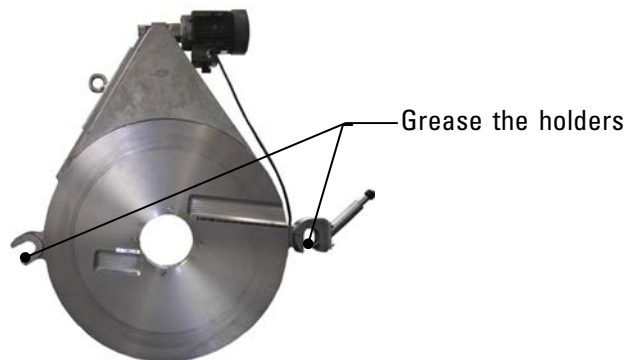
Transport the planer in the reception box.

If the planer is transported in the basic machine grease the holders with PTFE-spray because otherwise damages at the drag rod may occur.

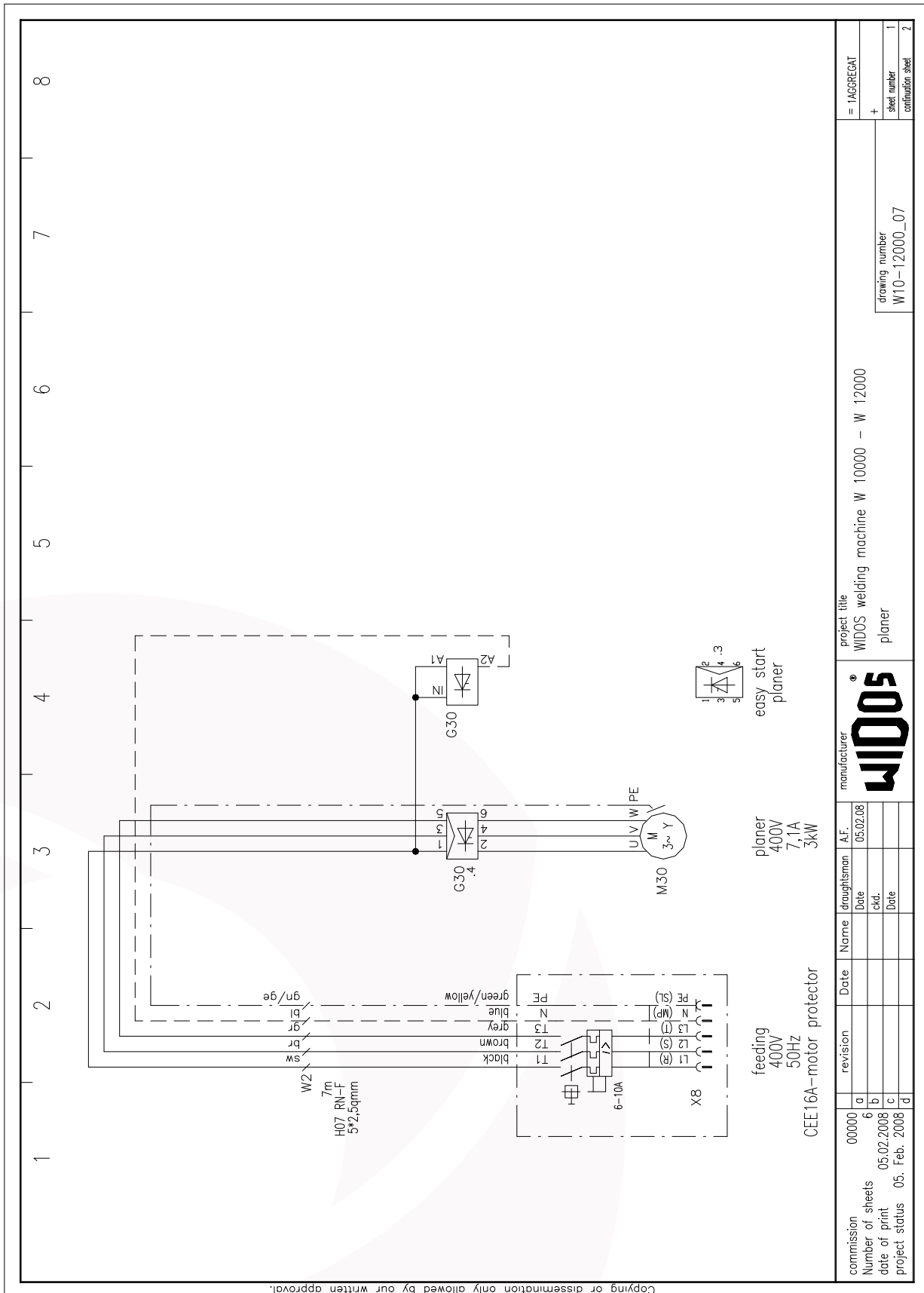


Transport the planer in the reception box.

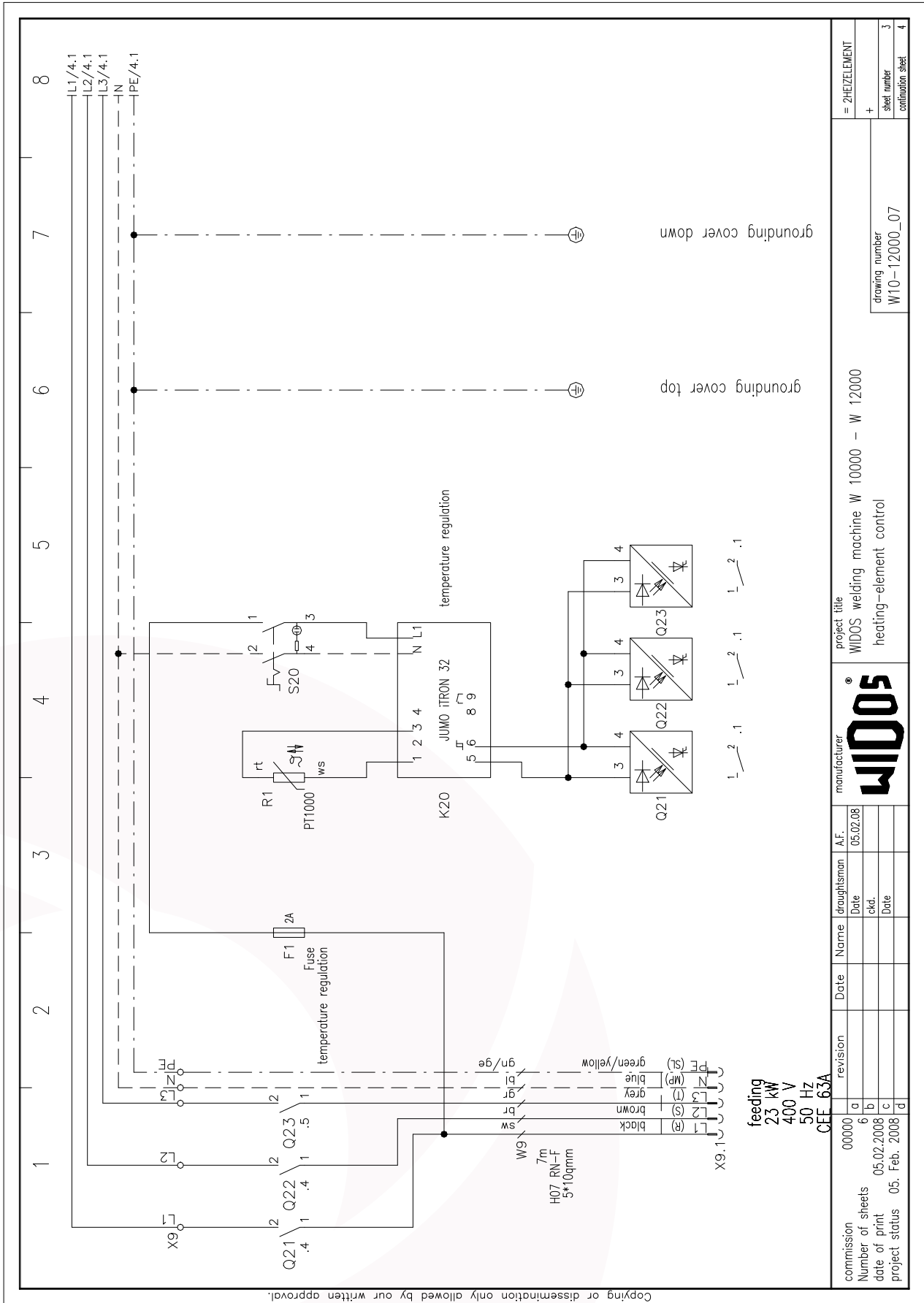
If the planer is transported in the basic machine grease the holders with PTFE-spray because otherwise damages at the drag rod may occur.



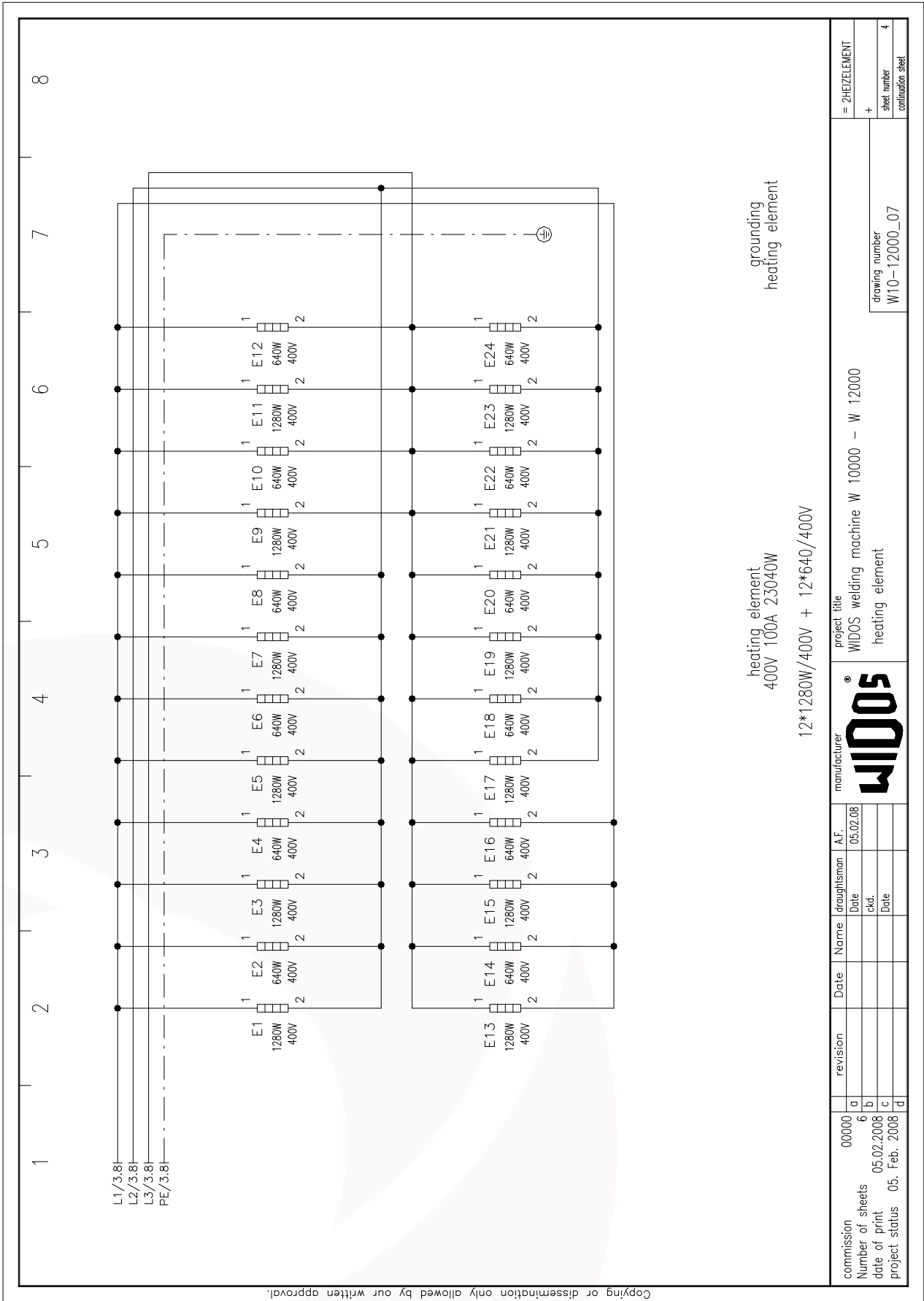
## 10. Hydraulic and electric diagrams







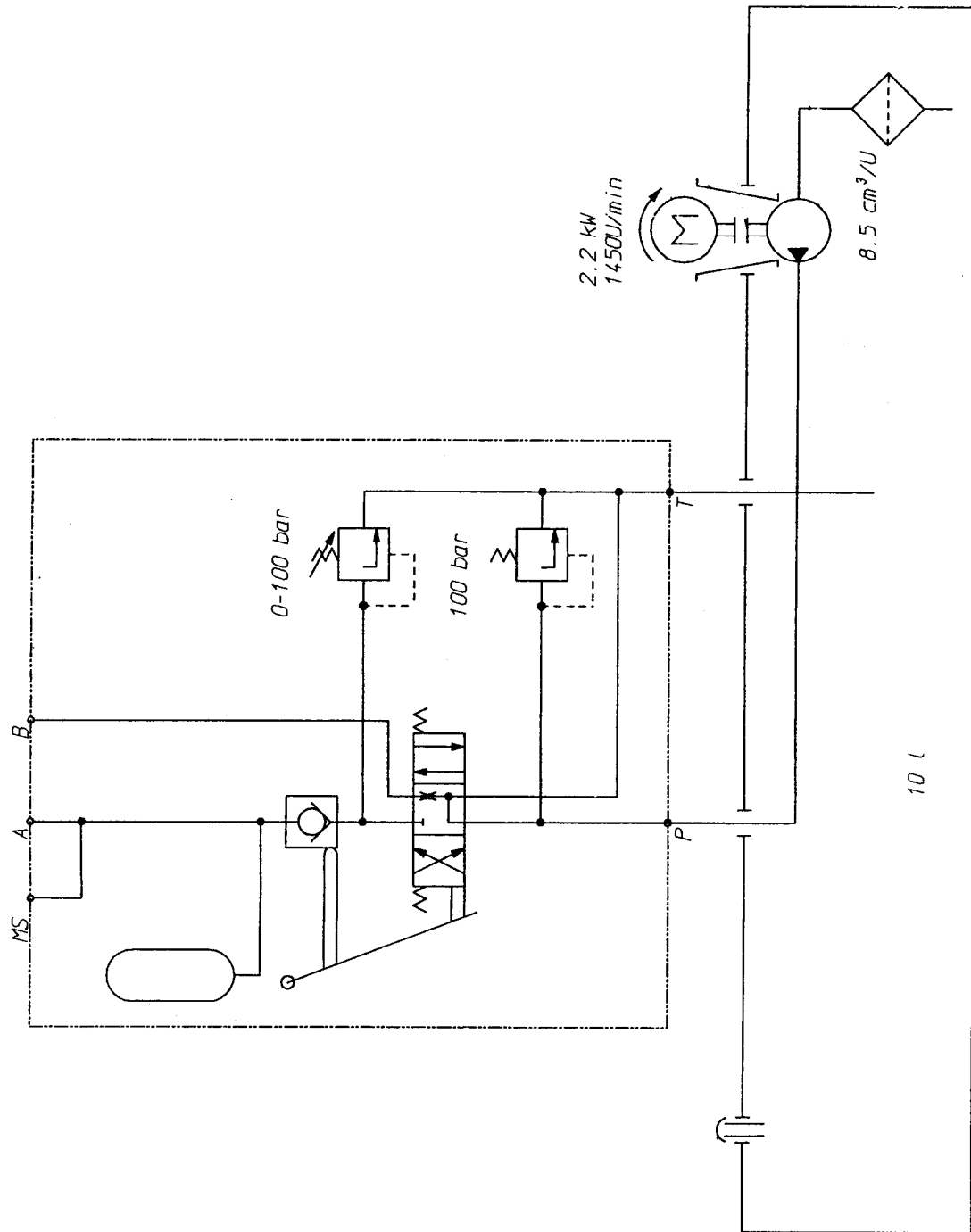




note	strip terminal = HEIZELEMENT-X9		cross-reference	jumper	terminal no.	to		No. model cross-section length	cable	conductor marking	note
	from					=installation +location -BIM:connection	=installation +location -BIM:connection				
cover down	X9.1:PE		3.2 3.7	●	PE	PE	PE heating element				heating element cover top
	PE cover down		4.8 3.6	●	PE	PE	PE cover top				
	X9.1:N		3.2		N	S2					
	V3:2		3.1	●	L3	L3					
conductor relay heating element L3	E15 + E16		4.3 4.6	●	L3	E23 + E24					heating element cartridge 23+24
heating element cartridge 15+16	E13 + E14		4.2 4.5	●	L3	E21 + E22					heating element cartridge 21+22
heating element cartridge 13+14	E11 + E12		4.6 4.5	●	L3	E19 + E20					heating element cartridge 19+20
heating element cartridge 11+12	E9 + E10		4.5 4.4	●	L3	E17 + E18					heating element cartridge 17+18
heating element cartridge 9+10	V2:2		3.1	●	L2						
conductor relay heating element L2	E7 + E8		4.4 4.6	●	L2	E23 + E24					heating element cartridge 23+24
heating element cartridge 7+8	E5 + E6		4.4 4.5	●	L2	E21 + E22					heating element cartridge 21+22
heating element cartridge 5+6	E3 + E4		4.3 4.5	●	L2	E19 + E20					heating element cartridge 19+20
heating element cartridge 3+4	E1 + E2		4.2 4.4	●	L2	E17 + E18					heating element cartridge 17+18
heating element cartridge 1+2	V1:2		3.1	●	L1						
conductor relay heating element L1	E7 + E8		4.4 4.5	●	L1	E9 + E10					heating element cartridge 9+10
heating element cartridge 7+8	E5 + E6		4.4 4.3	●	L1	E15 + E16					heating element cartridge 15+16
heating element cartridge 5+6	E3 + E4		4.3 4.2	●	L1	E13 + E14					heating element cartridge 13+14
heating element cartridge 3+4	E1 + E2		4.2 4.6	●	L1	E11 + E12					heating element cartridge 11+12
heating element cartridge 1+2											

commission	00000	revision	Date	Name	draughtsman	A.F.	project title	= HEIZELEMENT-X9 WIDOS welding machine W 10000 - W 12000 =HEIZELEMENT-X9 - 400V heating element	= 3KLEMMENPLAN + sheet number continuation sheet 100
Number of sheets	6					05.02.08	drawing number W10-12000_07		
date of print	05.02.2008								
project status	05. Feb. 2008								



## 11. Spare parts list



You can access our website and select our spare parts lists via the qr code shown here. Select "10000"

## 12. Declaration of conformity

Issuing the declaration of conformity with regard to complying with the basic requirements and assembling the technical documentation is in the sole responsibility of:	
Manufacturer / Installation company:	WIDOS Wilhelm Dommer Söhne GmbH
Address:	WIDOS GmbH Einsteinstr. 5 D-71254 Ditzingen

Subject of the present declaration is the following device:	
<i>Product name:</i>	<b>Heating element butt welding machine</b>
<i>Model name:</i>	WIDOS 4911
<i>Machine number:</i>	
<i>Year of construction:</i>	

For the stated device we herewith declare that it complies with the <b>basic requirements</b> stipulated in the following designated harmonizing regulations: <b>in the sense of the EC guideline EC-Machinery Directive 2006/42/EC</b>
--

Statement of the relevant <b>harmonizing standards</b> referred to, or indication of the specifications that the conformity is declared for:	
Standard	Title
DIN EN ISO 12100	Safety of machines, basic concepts, general layout guidelines
DIN EN 60204.1	Electric equipment of industrial machines
DIN EN 60555, DIN EN 50082, DIN EN 55014	Electro-magnetic resistance
DIN EN 1005-2	Safety of machinery- Human physical performance
DIN EN 614-1	Safety of machinery- Ergonomic design principles
EN 1037 (ISO 14118)	Safety of machinery - Prevention of unexpected start-up
EN ISO 4413	Hydraulic fluid power- General rules and safety requirements for systems and their components
DVS 2208	Welding of thermoplastics - Machines and devices for the heated tool welding of pipes, piping parts and panels
ISO 12176-1	Plastics pipes and fittings- Equipment for fusion jointing polyethylene systems – Part 1: Butt fusion

Entitled to compile the technical documentation:	
Name:	WIDOS Wilhelm Dommer Söhne GmbH
Address:	Einsteinstr. 5 D-71254 Ditzingen

Signed on behalf of the company:	
Name, first name:	Dommer, Martin
Function:	Technical director

Heimerdingen, 08.07.2019

Place / Date

Legally binding signature

This declaration is to certify the compliance with the mentioned harmonizing regulations, however does not include any assurance of properties.