Working Instructions
Translation

Heating element butt welding machine

WIDOS 2500 / OD 160
### Product identification

<table>
<thead>
<tr>
<th>Type:</th>
<th>WIDOS 2500 / OD 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial number / year of construction:</td>
<td>see type label</td>
</tr>
</tbody>
</table>

### Customer entries

<table>
<thead>
<tr>
<th>Inventory-No.:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of working:</td>
<td></td>
</tr>
</tbody>
</table>

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

**Address of manufacturer**

WIDOS  
Wilhelm Dommer Söhne GmbH  
Einsteinstrasse 5  
D-71254 Ditzingen  

Phone: ++49 7152 9939 0  
Fax: ++49 7152 9939 40  
info@widos.de  
http://www.widos.de
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.
1. Description of the product

The 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 2500 / OD 160 has been designed for heating element butt welding of pipes and fittings out of PE, PP and PVDF with a diameter range of OD = 50 – 160 mm, standard diameters: 50 / 63 / 75 / 90 / 110 / 125 / 160 mm.
(OD 20 / 25 / 32 / 40 mm, option).

The following pipes are weldable: OD 50 to 160 mm → SDR 7,25.

The basic clamping device is swivelling up to 15° on each side for welding segmented bends and fittings.

All use going beyond is not purpose-oriented.

The machine is only to be used in a technically perfect condition, as well as purpose-oriented, safety- and danger-conscious in compliance with the working instructions and the relevant safety regulations (especially the regulations for the prevention of accidents).

The described plastic welding machine may only be operated, maintained and repaired by persons who are trained and informed about the dangers.

The manufacturer is not responsible for any damages caused by inexpert handling or operation.

For personal injuries, material and immaterial damages resulting herefrom, only the user is responsible!

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. Designation of the product

The product is marked by a type-label at the basic frame.
It contains the type, the serial number and the year of construction of the machine.

1.4.1. Technical data

1.4.1.1. **WIDOS ASM 2500 / OD 160 General data**

<table>
<thead>
<tr>
<th>Dimensions of pipes:</th>
<th>Outside-Ø = 50 - 160 mm (20 – 40 mm option)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material:</td>
<td>PP, PE 80, PE 100</td>
</tr>
<tr>
<td>Fuse protection:</td>
<td>16 A</td>
</tr>
<tr>
<td>Wire cross section:</td>
<td>1.5 mm²</td>
</tr>
</tbody>
</table>
| Emissions            | - The sound intensity level is appr. 86 dB (A)  
|                      | - When using the named plastic materials and when welding within the temperature range up to 260° C no toxicant damp arises. |

| Environment           | - Take care for cleanliness (no dust at the welding area)  
|                      | - Do not weld below 5° C, if necessary preheat  
|                      | - Avoid humidity, if necessary use a welding tent  
|                      | - Avoid strong sun rays influence  
|                      | - Protect from wind, shut the pipe ends |

1.4.1.2. **Heating element**

<table>
<thead>
<tr>
<th>Power:</th>
<th>800 Watt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current:</td>
<td>3.5 A (± 10 %)</td>
</tr>
<tr>
<td>Voltage:</td>
<td>230 V (± 10 %)</td>
</tr>
<tr>
<td>Frequency:</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Surface:</td>
<td>Nonstick-coated</td>
</tr>
</tbody>
</table>
| Attached elements:   | - Electronic temperature control  
|                      | - Control lamp                              
|                      | - Connecting cable with plug                 |
1.4.1.3. Planer

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power:</td>
<td>950 Watt</td>
</tr>
<tr>
<td>Current:</td>
<td>4.1 A (± 10 %)</td>
</tr>
<tr>
<td>Voltage:</td>
<td>230 V (± 10 %)</td>
</tr>
<tr>
<td>Frequency:</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Attached elements:</td>
<td>- connecting cable with plug</td>
</tr>
</tbody>
</table>

1.4.2. Equipment and accessories

The following tools and accessories are part of the first delivery:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tool bag for 10 parts</td>
</tr>
<tr>
<td>1 each</td>
<td>Allan key with T-grip, size 4 / 5 / 6 for mounting / dismounting the reduction inserts</td>
</tr>
<tr>
<td>1 each</td>
<td>Allan key tilted, size 5 / 6 / 8</td>
</tr>
<tr>
<td>1</td>
<td>Fork wrench size 13 (for clamping devices)</td>
</tr>
<tr>
<td>1</td>
<td>Torx screw driver T10</td>
</tr>
</tbody>
</table>

For article no. and component parts please see the „spare parts list“, in case of order please always give the machine number!
2. Safety rules

The base for the safe handling and the fault-free operation of this machine is the knowledge of the basic safety advises 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 due to hot surfaces.
- The disrespect of these indications may conduct to heavy burns, respectively to self-ignition or even fire.

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. Measure 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 much 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, and starting the operation.
- 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 2500 / OD 160** 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 use
- in safety technical impeccable status

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

- 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.
- Protect the heating element from rain and dropping water.
- According to VDE 0100, the use on construction sites is only allowed with a power distributor with a FI-safety switch.

2.8. Specific dangers

2.8.1. Danger of stumbling over electric wires

- Make sure that no person has to step over the wires of the heating element and the planer.

2.8.2. Danger of being burnt by heating element 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 leave the heating element unsupervised.
- Do not touch the surfaces of the heating element.
- Take enough safety distance to inflammable materials.
- Do wear safety gloves.
- Take care that no person is standing in the swivelling area of the heating element.
- When cleaning the hot heating element with detergents (e.g. with PE cleaner) there is the danger of inflammation. For this reason 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.
2.8.3. Danger of Cutting and Catching Clothes by the Planer, Danger of Squeezing at the Guide Rods

You can cut yourself or even get bones broken.

- Only wear clothes tight to the body.
- Do not wear jewellery during the work.
- If necessary, wear hair-net.
- Do not touch the faces of the planer.
- Take care that no person is standing in the swivelling area of the planer.
- Do not grip between clamped pipe endings.

2.9. Structural modifications on the machine

- No modifications, extensions or reconstructions may be made on the machine without permission of the manufacturer. In cases of non-compliance, any guarantee and liability demands expire.
- 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 and version number!

2.10. Cleaning the machine

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

- when cleaning with solvents
- when lubricating with oil and grease

2.11. 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, starting and operation of the machine and maintenance.
- Ignoring the information given in this manual.
- Structural changes 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 by means of 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 heating element is inserted and the pipes are pressed against the heating element under defined adjusting pressure. This process is called „**adjusting**“. The applied force can be read on the scale mounted at the machine.

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.

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**Heating element heats the pipes up to welding temperature**

![Diagram](image-url)
4. Operating and indicating elements

4.1. Elements on the basic machine

<table>
<thead>
<tr>
<th>No.</th>
<th>Denomination</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clamping device, left-hand</td>
<td>- Clamping the pipe / fitting</td>
</tr>
<tr>
<td>2</td>
<td>Heating element</td>
<td>- Heating up the pipes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can be swivelled in and out</td>
</tr>
<tr>
<td>3</td>
<td>Pipe support, left-hand</td>
<td>- Supporting the pipe / fitting</td>
</tr>
<tr>
<td>4</td>
<td>Scale</td>
<td>- Display of the applied welding force</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- max. display: 150 daN (kp)</td>
</tr>
<tr>
<td>5</td>
<td>Tension lever</td>
<td>- Arresting the support</td>
</tr>
<tr>
<td>6</td>
<td>Clamping device, right-hand</td>
<td>- Clamping the pipe / fitting</td>
</tr>
<tr>
<td>7</td>
<td>Planer</td>
<td>- Planing the pipes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can be swivelled in and out</td>
</tr>
<tr>
<td>8</td>
<td>Pipe support, right-hand</td>
<td>- Supporting the pipe / fitting</td>
</tr>
<tr>
<td>9</td>
<td>Cross handle</td>
<td>- Opening / closing the support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Application of the adjusting force and of the jointing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>force.</td>
</tr>
</tbody>
</table>
### 4.2. Elements at the heating element

<table>
<thead>
<tr>
<th>No.</th>
<th>Denomination</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Switch on/off with lamp</td>
<td>- As soon as the heating element is switched on, it is heated up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The red lamp lightens when the heating element is connected to the mains.</td>
</tr>
<tr>
<td>11</td>
<td>Control lamp, green</td>
<td>- There are three different states:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- off: signalizes that the heating element is not heated up at the moment or that it cools down</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- blinking: the heating element temperature is maintained by a certain pulse-position ratio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- on: signalizes that the heating element is heated up at the moment. It has not yet reached the desired temperature</td>
</tr>
<tr>
<td>12</td>
<td>Adjusting screw</td>
<td>- Setting the temperature of the heating element.</td>
</tr>
<tr>
<td>13</td>
<td>Grip</td>
<td>- Swinging the heating element into / out of the machine</td>
</tr>
</tbody>
</table>

### 4.3. Elements at the planer

<table>
<thead>
<tr>
<th>No.</th>
<th>Denomination</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Taster</td>
<td>- Wenn der Planhobel eingeschaltet ist und der Taster gedrückt wird, dreht sich die Fräderscheibe</td>
</tr>
<tr>
<td>15</td>
<td>Ein / Aus - Schalter</td>
<td>- schaltet den Planhobel ein / aus</td>
</tr>
</tbody>
</table>
4.4. Elements for welding bends- / fittings

There are several bore holes on the machine slide as well as an engraved scale for welding bends / fittings. Tee angles have three bore holes and one long hole.

View onto left table:

When welding straight pipes, the pieces with the following bore holes are screwed together:
- Table 1 with angle 6
- Table 2 with angle 7

When welding bends 0 – 7,5°, the following bore holes are screwed:
- Table 5 with angle 8
- Table 3 with angle 9

When welding bends 7,5 – 15°, the following bore holes are screwed:
- Table 4 with angle 8
- Table 3 with angle 9

View onto left angle:

Tee desired can be read at the reading edge.
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. Starting

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 DVWG.

- In situations of danger for persons and the machine, the mains plug has to be unplugged immediately.
- 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.
- Connect the heating element to the mains (230 V / 50 Hz).

Lay electric lines thoroughly (danger of stumbling)!

- Take into account the surrounding conditions:
  - The welding may not be performed under direct sun rays influence.
- If the surrounding temperature is under 5° C, measures have to be taken:
  - If need be, heat-up the pipe ends.
- In addition, take measures against rain, wind and dust.
5.2. Welding process

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

- Do wear safety gloves as a protection against burning!
- A stop-watch must be available for recording the actual times for heating up and cooling.
- A welding table is to be available from which the parameters (times and forces) for the pipe dimensions to be welded prescribed by the welding prescriptions may be taken.
- The heating element surfaces are to be clean and, above all, free from grease. Therefore they need to be cleaned with fibre-free paper and a cleaning agent (e.g. PE cleaner) before each welding or in case of dirtiness. The anti-adhesive coating of the heating element must remain undamaged in the working area.
- Switch on the heating element and set the necessary welding temperature at the adjusting screw at the handle.
  - If the control lamp blinks, the nominal temperature has been reached and is kept constant by means of a defined pulse-position ratio.
- Screw in the reduction inserts according to the outside diameter of the pipes to be welded.
- Lay the workpieces into the clamping devices, tighten firmly the clamping nuts and align the pipes with respect to each other.
- Swivel the planer between the ends of the workpieces, switch it on and keep the on-key pressed. Plane with low pressing force. Planing has to be carried out until a revolving cutting has been formed on both sides.
- Open again the support and swivel out the planer.
- Remove the produced cuttings without touching the worked surfaces.
- Close the support.
- 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 adjusting pressure for the pipe dimension to be welded can be gathered from the welding table.
- Open support again slightly.
- Gather heating time, maximum change over time, cooling time and bead height for the pipe dimension to be welded from the table.
- Swivel in the heating element which has been cleaned and brought to desired temperature. If necessary wait until the control lamp at the heating element is blinking in regular intervals.
Starting and operating  

Chapter 5

- Close the support smoothly to the set adjusting pressure.  
The applied force can be seen on the scale (3) at the left-hand support.  
By means of the tension lever (4), the support can be arrested and the adjusting pressure can be maintained.  
When the prescribed revolving bead height is reached, reduce pressure (heating pressure = approx. 10 % of adjusting pressure).

- The heating time starts now. Press the stop-watch and compare the actual time with the nominal time taken from the welding table.

- After expiration of the heating time, loose the tension lever, open the support, swivel out the heating element as quickly as possible and close the support smoothly.  
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, arrest the support and press the stop-watch.  
If necessary, re-adjust pressure during the cooling time (the pressure for cooling is the same as the set adjusting pressure).

- After expiration of the cooling time, release pressure, remove the welded parts and open the support.
5.3. Welding of angles

When welding angles, the welding surface of the pipe and thus the necessary pressure changes. Calculate the necessary pressure as follows:

- Take the prescribed value for adjusting or cooling from the table.
- Multiplicate the pressure value with factor /cos (angle).

This will give the following factors:

<table>
<thead>
<tr>
<th>Welding</th>
<th>Chamfered Pipe with</th>
<th>Pressure Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°</td>
<td>7,5°</td>
<td>1,01</td>
</tr>
<tr>
<td>22,5°</td>
<td>11,25°</td>
<td>1,02</td>
</tr>
<tr>
<td>30°</td>
<td>15°</td>
<td>1,04</td>
</tr>
<tr>
<td>45°</td>
<td>22,5°</td>
<td>1,08</td>
</tr>
<tr>
<td>60°</td>
<td>30°</td>
<td>1,15</td>
</tr>
<tr>
<td>90°</td>
<td>45°</td>
<td>1,41</td>
</tr>
</tbody>
</table>

- Add the motional pressure as usual.

All the other welding parameters remain as usual.

5.4. Welding segmented bends

Calculate the sawing angle to be set (corresponding to the required angle at the clamping tools or clamping inserts) as follows:

\[
\text{Sawing angle} = \frac{\text{Angle of the bend}}{\text{Number of all welding surfaces}}
\]

Example: 1 bend of 90°, 4 segments (6 welding surfaces)

\[
\begin{align*}
\text{Angle of the bend} &= 90° \\
\text{Sawing angle} &= \frac{90°}{6} = 15°
\end{align*}
\]

Example: 2 bend of 45°, 3 segments (4 welding surfaces)

\[
\begin{align*}
\text{Angle of the bend} &= 45° \\
\text{Sawing angle} &= \frac{45°}{4} = 11,25°
\end{align*}
\]
6. Welding log and tables

You can access our website and select our welding tables via the qr code shown here. Select "2500-ASM 160-315" and the corresponding material (PE / PP /PVDF).
# Report for heated plate welding of tubular components

- **Welding Log and Tables**
- **Chapter 6**
- **30.04.19 Working instructions WIDOS 2500 / OD 160 page 22 of 27**

<table>
<thead>
<tr>
<th>Weld no.</th>
<th>Date</th>
<th>Pipe size Φ d x s</th>
<th>Heating element temperature 1) °C min / max</th>
<th>Movement pressure bar</th>
<th>Joining pressure bar</th>
<th>adjusted heat-up bar</th>
<th>Joining pressure 2) bead-up bar</th>
<th>Heat-up time 3) s</th>
<th>time to complete joining pressure 3) s</th>
<th>Change-over time 3) s</th>
<th>Cooling time under joining pressure 3) s</th>
<th>Ambient temperature °C</th>
<th>Code no. Weather</th>
<th>Code no. protect measures</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

- **Material**
  - Laid above ground
  - Laid underground

- **Welding machine**
  - Make:
  - Type:
  - Machine no.:
  - Year of manufacture:

- **Weather conditions**
  - 1 = sunny
  - 2 = dry
  - 3 = rain or snowfall
  - 4 = wind

- **Protective measures**
  - 1 = none
  - 2 = screen
  - 3 = tent
  - 4 = heating

In the case of multiple designations follow the figures as above: (e.g. 34 = rain and wind)

---

**Signature of welder:**

**Date and signature of the welding inspector:**

1) From normal internal, frequency according to 4.2.
2) The settings are the sum of the movement pressure and the indications of the manufacturer of the welding machine concerning equalization and joining pressure.
3) The measured values must be entered.
7. Maintenance / storage / transport

7.1. General

- Replace damaged parts immediately, be particularly careful with electrical parts - dirt and wetness are very good current conductors.
- Only use original WIDOS-spare parts.
- Check the tightness of all screwed connections every three month.

! 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 company or by an authorized partner.

7.2. 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.

7.3. Planer

Never 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 cuttings: 0.2 mm!). Check the stress of the drive chain in the planer and grease it regularly. The cover of the planer can be screwed off for this purpose.

7.4. Cleaning the machine

The used materials and tissues are to be handled and disposed of properly, especially:
- when cleaning with solvents
- when lubricating with oil and grease.

7.5. Transport

- Handle the machine carefully.
- Protect it from heavy vibrations and shocks.

7.6. Disposal

At the end of their life time, the machine and the wear parts have to be disposed of properly and non-polluting, and in accordance with the national laws of waste disposal.
8. Electric diagram
9. Spare parts list

You can access our website and select our spare parts lists via the QR code shown here. Select “2500 – OD 160”
## 10. 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:

<table>
<thead>
<tr>
<th>Manufacturer / Installation company:</th>
<th>WIDOS Wilhelm Dommer Söhne GmbH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>WIDOS GmbH</td>
</tr>
<tr>
<td></td>
<td>Einsteinstr. 5</td>
</tr>
<tr>
<td></td>
<td>D-71254 Ditzingen</td>
</tr>
</tbody>
</table>

Subject of the present declaration is the following device:

<table>
<thead>
<tr>
<th>Product name:</th>
<th>Heating element butt welding machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name:</td>
<td>WIDOS 2500 / OD 160</td>
</tr>
<tr>
<td>Machine number:</td>
<td></td>
</tr>
<tr>
<td>Year of construction:</td>
<td></td>
</tr>
</tbody>
</table>

For the stated device we herewith declare that it complies with the **basic requirements** stipulated in the following designated harmonizing regulations:

*in the sense of the EC guideline EC-Machinery Directive 2006/42/EC*

Statement of the relevant **harmonizing standards** referred to, or indication of the specifications that the conformity is declared for:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN EN ISO 12100</td>
<td>Safety of machines, basic concepts, general layout guidelines</td>
</tr>
<tr>
<td>DIN EN 60204.1</td>
<td>Electric equipment of industrial machines</td>
</tr>
<tr>
<td>DIN EN 60555,</td>
<td>Electro-magnetic resistance</td>
</tr>
<tr>
<td>DIN EN 50082,</td>
<td></td>
</tr>
<tr>
<td>DIN EN 55014,</td>
<td></td>
</tr>
</tbody>
</table>

Entitled to compile the technical documentation:

<table>
<thead>
<tr>
<th>Name:</th>
<th>WIDOS Wilhelm Dommer Söhne GmbH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>Einsteinstr. 5</td>
</tr>
<tr>
<td></td>
<td>D-71254 Ditzingen</td>
</tr>
</tbody>
</table>

Signed on behalf of the company:

<table>
<thead>
<tr>
<th>Name, first name:</th>
<th>Dommer, Martin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function:</td>
<td>Technical director</td>
</tr>
</tbody>
</table>

Heimerdingen, 30.04.2019

**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.