Chest heated ironers

CL300/1800
UL300/1800

Technical specifications
Installation instructions
Operating instructions
Maintenance

Instruction manual

Part No. D1384
June 2012
This manual contains information on installation, operation and maintenance. The operator should read this manual carefully and become familiar with the machine regulations before the machine is commissioned. In this document we have attempted to answer any questions you may have. For further information or explanation, please contact our after-sales department.

This machine was developed only for use in industrial surroundings. The illustrations, drawings and text are as accurate as possible. Discrepancies may occur as a result of technical improvements or special options ordered by you. The design explanations in this manual are intended only for the user of the machine and under NO circumstances may they be disclosed to third parties.

This manual will help you get the best out of your machine.

**Location of serial number plate**

Always quote the machine identification number when requesting information or ordering parts.

Machine No. plate + CE plate can be found on the front at the bottom right.
WE CAN’T GIVE ANY WARRANTY TO THE FOLLOWING ELEMENTS:

- The padding
- The feed bands.
- Chains
- Oil change.
- Transport damage.
- Components damaged by poor maintenance.
- Spare parts who are placed by a technician who is not trained or schooled by LACO.
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PART 1  INSTALLATION

1.1 Handling of the machine.

- Lift the machine.
- Devide the weight so that the machine does not hang crooked.
- Make sure nobody walks under the load.
- Lift the machine carefully and without impacts. Move regularly and without sudden movements.
- Put the load on the ground as soon as possible.
- Make sure there are no obstacles in the way.
1.2 Technical data and dimensions.

<table>
<thead>
<tr>
<th></th>
<th>M300/1800</th>
<th>D300/1800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>300 mm</td>
<td>300 mm</td>
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<tr>
<td>Length</td>
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<tr>
<td>Height</td>
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<td>Depth</td>
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<td>Temperature</td>
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</tr>
<tr>
<td>Min</td>
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<td>150°C</td>
</tr>
<tr>
<td>Max</td>
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<td>185°C</td>
</tr>
<tr>
<td>Motors</td>
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<td></td>
</tr>
<tr>
<td>Roll</td>
<td>0.18 kW</td>
<td>0.18 kW</td>
</tr>
<tr>
<td>Suction</td>
<td>34 W</td>
<td>34 W</td>
</tr>
<tr>
<td>Electr. Connection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D curve)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable section</td>
<td>380V / 50 Hz</td>
<td>380V / 50 Hz</td>
</tr>
<tr>
<td>Speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min - 25 Hz</td>
<td>1.5 m / min</td>
<td>1.5 m / min</td>
</tr>
<tr>
<td>Max – 50 Hz</td>
<td>4 m / min</td>
<td>4 m / min</td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual moisture</td>
<td>60kg</td>
<td>60kg</td>
</tr>
<tr>
<td>Temperatur 180°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour outlet</td>
<td>Diameter</td>
<td>Diameter</td>
</tr>
<tr>
<td></td>
<td>60 mm</td>
<td>60 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Kg</td>
<td>Kg</td>
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<td></td>
<td>250kg</td>
<td>250kg</td>
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<td>Packaging</td>
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<tr>
<td>Height</td>
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<td>1350 mm</td>
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<tr>
<td>Width</td>
<td>2350 mm</td>
<td>2350 mm</td>
</tr>
<tr>
<td>Depth</td>
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<td>850 mm</td>
</tr>
<tr>
<td>Noise</td>
<td>Decibel</td>
<td>Decibel</td>
</tr>
<tr>
<td></td>
<td>60-65dB</td>
<td>60-65dB</td>
</tr>
</tbody>
</table>

*Max. temperature for polyester is 175°C
Max. temperature for nomex is 190°C
1.3 Installation.

1. The machine has to be unloaden according the regulations.
   
   See 1. Transport of the machine.

2. Remove all packing material such as plastics and cardboard. Clean the bed before heating the machine. Use for this no explosive products.

3. Electrical connections.

4. Attach and isolate complety the suction pipe! (Temperature 120°).

   *Note: The maximum distance of these pipes is indicated about 5 meters as in enclosed plan. For longer distances one must take a larger diameter (e.g. 125 mm instead of 75 mm or 90 mm.)*

5. Isolate all lines outside of the machine. Protect hot parts where you can burn yourself by contact.

6. The machine can be used only in the required industrial surroundings that satisfy the safety and connections rules.

7. The machine is now finished for the work.
PART 2  SERVICE INSTRUCTIONS

2.1 General

- The service life of an ironing machine with a steel ironing bed is approximately 15 years with normal maintenance.
- This is an estimate. It is not binding.
- No compensation may be claimed for a shorter service life.
- Noise level: 60-65 dB depending on speed.

2.2 Daily checkpoints

2.2.1 Daily checkpoints before starting

- Check the direction of rotation of all motors.
- Are all safety guards in position and closed?
- Check the functioning of the finger guard and its correct adjustment.
- This means the opening between the finger guard and feed bands must not exceed 15 mm.
- Check the operation of the emergency stop buttons.
- Before starting, make sure that nobody is in a dangerous area.
- Check that there are no extraneous objects between the roll and bed of the ironing machine.
- Check the condition of the padding.
- Also check the condition of the feed bands.
- Clean dust from the machine.
- Check the machine for leaks.

2.2.2 Normal use

- The machine is suitable for ironing all sorts of flat linen such as sheets, drawsheets, towels, pillow cases, handkerchiefs etc.
- The maximum temperature is 175°.
- The minimum temperature is 145°.
- The padding should be adjusted to the operating temperature (polyester max. 175°C or nomex max. 190°C).
- The machine settings for installation, ironing pressure, installation of the padding etc should be in accordance with the regulations described in the manual.
- The machine must be maintained regularly as described in the manual.
- Only spare parts supplied by the manufacturer may be used.
  The manufacturer accepts no liability for defects and accidents due to incorrect use of the machine or spare parts that he has not supplied.
- Do not allow any hard parts to turn between the roll and bed.
- Do not allow any fusible materials to turn in the roll.
- Take account of all safety regulations.
2.2.3 Abnormal use

- Ironing items that are not flat.
- Allowing the machine to run empty (without feeding linen).
- Temperatures in excess of 190°.
- Cleaning the beds with hard materials (can cause irreparable damage).
- Working without taking safety precautions.
- Failure to comply with safety regulations.

2.2.4 Continued risks with the machine - measures to take.

All pipes outside the machine for the roll exhaust, pose a real risk of burns. For this reason, all these pipes must be properly insulated and protected against direct contact.

Staff using the machine must be trained in how to handle emergency situations e.g. how to free someone who is trapped, what to do in the event of a fire, breakdown of the machine etc.

The hot linen emerging from the machine can cause burns. For this reason, it is necessary to wear personal protection such as gloves when handling the linen.

As far as possible, non-flammable materials have been used in the design of the machine. However, flammable materials will still always be present in the form of the padding, feed bands and the oil in the machine. However, the greatest risk is posed by dust. Under certain conditions, dust can create a highly explosive mixture. Therefore it is essential to clean the machine regularly. Also create an equipotential link so that no potential differences arise between the machine and the surrounding metal structures to prevent sparkover.

2.3 Control panel

Temperature Settings

Start Roll

Stop Roll

Potentiometer Roll speed
2.4 Operation instructions

2.4.1 Operations instructions

MAIN SWITCH ON

- BED IS PRESSED AGAINST THE ROLL
- ROLL TURNS AFTER 4 SEC.

PRESS FINGER PROTECTION STRIP

- ROLL STOPT IMMEDIATE
- BED IS STILL PRESSED AGAINST THE ROLL

START

- ROLL STARTS AFTER 4 SEC

STOP

- THE BED GOES OPEN
- ROLL STOPT IMMEDIATE
The machine can be trained only used by staff with the necessary physical requirements!

Note:

During the operation of the emergency stop key `S1' all motors as well as the heating of the bed are stopped. For a new start its only possible by turning back the emergency stop key `S1' and again press the start button `S3'

Note:

After you pressed the finger protection strip the bed remains pressed against the roll, it is therefore to recommend the roll to start as soon as possible or stop the machine completely(otherwise felt burns).

2.4.2 Additional points.

- Run a wax cloth though the ironing machine 2 to 4 times a day to wax the bed. If this is not done, the bed will glide less smoothly and static electricity may occur, resulting in poor ironing quality.
- Clean the ironing bed regularly with a special cleaning cloth (available as an option with the machine).

2.5 Security instructions

<table>
<thead>
<tr>
<th>Dangerous places</th>
<th>What you must not do</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Hot bed</td>
<td>- Do not move with the hands under that the finger protection strip or between the intake belts.</td>
</tr>
<tr>
<td>- The entrance of the bed and the roll.</td>
<td>- Attempt no parts to withdraw those already are entered.</td>
</tr>
<tr>
<td>- Hot linnen at the exit of the roller.</td>
<td>- Avoid loose clothes, loose hair, bracelets, rings, etc.</td>
</tr>
<tr>
<td>- Intake wedge of the intake belts.</td>
<td>- Never start the machine whitout a screening or collateral inspection of the safety borders of the machine</td>
</tr>
<tr>
<td>- Drive components.</td>
<td>- It is forbidden to climb on the machine.</td>
</tr>
</tbody>
</table>
**Regulations.**
- Examine daily the working of the different security safety

- Teach the personnel as to be behaved in emergencies.

- Close loose clothes. Bind loose hair up. No decoration.

- With repair and maintenance: Secure the machine before working on it.

- With repair on parts, carry safety clothes

- Clean the machine only in a cold and switched off condition

- Switch off the engine when working on the machine

- Read the service manual before working with the machine.

- Carry gloves with the treatment of the laundry

- Announce immediate damages
2.6 What to do in emergency situations.

**Situation 1: Emergency stop fails**

- Stop the machine with the main switch.
- Check the operation of the emergency stop button and the finger guard regularly as part of preventive maintenance.

**Situation 2: A person is trapped between the roll and the bed.**

- Press the red stop button or the emergency stop button.
- The bed will lower from the roll and the trapped person can be released. Call the emergency services and give first aid.

**Situation 3: Turning with the feed bands.**

- Press the emergency stop button
- Cut the feed bands.

**Situation 4: Fire**

- Press the emergency stop button and immediately switch off the power supply.
- Call the emergency services.

**Situation 5: Electrocution**

- Immediately disconnect from power supply and only then release the person. Otherwise you run the risk of being electrocuted yourself. Give first aid. Call the emergency services immediately.
PART 3: MAINTENANCE INSTRUCTIONS.

3.1 Maintenance instructions.

Daily:

- Pass a wax cloth (cleaning cloth) through the ironing machine 2 to 4 times a day.
  (4 times when the linen doesn’t enter smoothly the chest, or when there are creases in
  the linen.) (1 x wax $\Rightarrow \pm 5\text{min.}$)

- Clean the machine with a vacuum cleaner or with air pressure. (1 person $\Rightarrow \pm 10\text{min.}$)

4 x per year

- Clean the suction wings of the drive. (1 person $\Rightarrow \pm 30\text{min.}$)

2 x per year:

- Check chain and tension of feed bands.

Every year

- Lubricate the chain. (1 person $\Rightarrow \pm 5\text{min.}$)

Every 2 years:

- Change thermal oil every 2 year or every 3500 hours.
  (1 person $\Rightarrow \pm 6\text{hours}$)

Alternative oil:

<table>
<thead>
<tr>
<th>SYNLUBE</th>
<th>Lubriplate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSCAL</td>
<td>BP Marine</td>
</tr>
<tr>
<td>SHELL CASSIDA</td>
<td>Fluid HT</td>
</tr>
</tbody>
</table>

Other:

- Cleaning the chest and changing the roll padding.
  (1 person $\Rightarrow \pm 5\text{hours}$) (2 persons $\Rightarrow \pm 4\text{hours}$)

- If scale occurs on the beds (deposits of water salts at the entrance to the bed), it should
  be cleaned with the special cleaning cloth that is available.

- Maintenance should be performed in accordance with the enclosed maintenance plan.

- It should be performed when the machine is stopped and cold.

- The manufacturer accepts no liability for defects or accidents due to failure to
  perform maintenance or poor maintenance or due to the use of spare parts that he has
  not supplied.
The possible risks of poor maintenance are.

- Rapid wear of sprockets or bearings in the case of insufficient lubrication.
- If insufficiently lubricated, bearings may become hot resulting in a risk of fire.
- If the safety equipment is not checked daily, faults in the machine may lead to serious accidents.
- Waiting too long before replacing the padding can lead to irreparable damage to the bed.
- Dust on the machine can lead to fire and even explosions
- Worn or missing feed bands can cause a risk of fingers or the linen that has been fed in becoming trapped.
3.2 Troubleshooting guide.

3.2.1 The machine does not reach temperature after pressing the start button.

Possible cause.

A. No power  
B. Main switch broken  
C. Emergency stop button pressed.  
D. Fuses failed.

Solution.

A. Examine current supply  
B. Replace main switch  
C. Deactivate emergency stop button.  
D. Reset or replace fuses.

3.2.2 Machine is at temperature but ironing bed does not close

Possible cause.

A. Push button is defective.  
B. Cylinder defective.

Solution.

A. Replace push button  
B. Replace Cylinder.

3.2.3 The ironing bed closes but the roll does not turn

Possible cause.

A. Finger guard pushed.  
B. Frequency control is defective.  
C. Contact pressure too highly

Solution.

A. Check or replace contact (FDC2) .  
B. Replace frequency control.  
C. Adjust contact pressure
3.2.4 Roll suction does not work.

Possible cause.

A. Motor defective  
B. Contactor K1 defective.  
C. Fuse F4 defective

Solution.

A. Replace drive.  
B. Replace contactor K1  
C. Replace fuse F4

3.2.5 No control voltage.

Possible cause.

A. Transfo defective  
B. Main switch defective.  
C. Fuse defective.

Solution.

A. Check op replace the transfo.  
B. Check or replace the main switch  
C. Check or replace the fuse

3.2.6 Creases in the linen.

Possible cause.

A. Temperature of the ironing bed too low (below 150°)  
B. Ironing bed is very dirty.

Solution.

A. Set higher operating temperature (normally 175°)  
B. Clean and wax ironing bed.
3.3 Adjustment off the contact.

3.4 Drive feeding belts.

3.4.1 M300

3.4.2 D300
3.5 Temperature settings.

Regulation of the digital temperature meter

![Digital Temperature Meter]

**WARNING !!!**

The temperature can be adjusted to 190°C, if by manufacturing a higher temperature is set, that will cause either physically or materially damage, the manufacturers is not responsible for the damage.

**Adjustment off the temperature:**

Press at the same time the key 3 and key 2 to adjust the temperature, now you the established temperature when you warm up the machine.

To changes the nature of the entities press the key 3 or key 4, confirms thereafter with key 2.

To changes the nature of the hundreds press the key 3 or key 4, confirms thereafter with key 2.

To changes the nature of the thousands press the key 3 or key 4, confirms thereafter with key 2.

In order to regulate the adjusted temperature hold the key 2 at the same time press the key 3. Then release both keys and the adjusted temperature is stored.
3.6 How to put in the linnen on a M300 – D300.
3.7 Thermo-oil change M300 – D300

**Note:** The exchange of the thermal oil may only happened if the oil is cold. (approx. 20 °C)

1. Shut down the machine with the main switch..

![Main switch image]

2. Turn the stop of the valve loose

![Turn the stop loose]

3. Turn the valve open and let all the old oil out of the system in a bucket or barrel

![Turn the valve open]

4. Remove the plug above on the bed so that air can fill in the bed and all the oil can escape.

![Plug]

5. Fill the container with oil with a pump under the container. Fill the container with oil, so that the ventilation hole overflows.
6. Remove the pump and the oil and ceases 1.5L oil of the system so that the machine does not overflow at warming up.

7. Examine whether all openings are free of the teflonshoses. If the case is not, these must be replaced!!!!
8. Clean up the bed and the expantion tank and exmanie that everthing is reacttached.
9. Turn on the main switch on

10. examines the machine for leaks at a temperature of 40°C. If there is a leak, then solve first of all the leak before continue working with the machine.
Note : Be carefull that you do not burn yourselves during the implementation of this work!!

If there are no leaks, its possible, to warm the machine up further. Do this in the steps of 20 degrees. If you come at the 100°C, you must watch out for possible calmly cooked condens in the oil. As soon as you reached the point of 110°C, you can to 180°C. far you warm.
3.8 Cleaning of the bed.

- There is no doubt that the life of all ironer clothing depends largely on the condition of the beds. A clean smooth bed increases the life of any clothing and improves the quality of the ironed linen.

A typical ironing problem like creasing on the leading edge is almost always due to a dirty bed. Though not always visible residuals and salts will build up on the bed surface.

- Before cleaning the bed the causes of the deposit should be located. These are usually to be found in the washing process:
  - too hard water (lime deposit)
  - PH value higher or lower than the ideal 6.5
  - too high rest moisture (too much water to evaporate)
  - bad rinsing (soap residuals).

- Cleaning of the bed:

1. When there is only build-up at the bed inlet, it can be removed by hand and with Scotch-Brite (only when bed is cold).

2. When there is build-up on the whole bed:
   - Drop the bed.
   - Let the machine cool down (100°C).
   - Open the scrapers.
   - Wrap a cloth around the roll which will protect the padding against dust.
   - Wind strips of Scotch-Brite around the rollers in wide lanes.
   - Lower hydraulic pressure to 15 Bar.
   - Push the slightly heated (100°C) bed against the roll and turn the roll for 2 to 3 hours.
   - Keep watching to make sure the Scotch-Brite does not get loose.
   - Remove all dust, then the Scotch-Brite and the cloth.
   - Restore the original hydraulic pressure.
   - Heat the bed and pass a wax cloth to grease the bed.

* Wax should be applied regularly but then sparingly (not too much) so as not to clog up the suction clothing. Always use the cloth and never apply wax between roll and bed. It may cause spots in the ironed items as then the padding takes the wax.

Attention: On oil heated ironers (temperatures higher than 185°C) too much wax constitutes a fire hazard.

- For long time storage (seasonal work) prepare machine as follows:
  - let the padding dry out
  - Pass a wax cloth with much wax to prevent rusting
  - keep carrying out the annual maintenance (oil change, greasing...).

Before starting the ironer again: clean the bed!
3.9 Roll padding replacement.

If the ironing machine is delivering reduced output and poorer ironing quality after a period of time (1 year), this means the padding is worn.

The old padding is easily removed using a reversing switch located in the electrical connection box.

- First clean the bed. (See cleaning of the bed).
- Open the bed. (machine at rest)
- Disassemble the covers.
- Cut or detach the cords on the side of the padding.
- Turn the scrapers away of the padding as shown in the drawing.

- Let the roll turn backwards (with the switch) and take the padding so it rolls of the roll. Note that the scrapers don’t falter in the padding, and that the padding doesn’t damages the feedingplate.
- Check dimensions of the new delivered padding. (length, width)

<table>
<thead>
<tr>
<th>Mod.300</th>
<th>Padding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ø Length (mm)</td>
</tr>
<tr>
<td>1800</td>
<td>1900</td>
</tr>
</tbody>
</table>

- Put a knot in the rope at both sides, so the rope can’t get out of the padding.

- Set the temperature at min. 120°C.
Glue (type Vitabond VB100)

- Put the padding straight on the roll + push the padding against the roll. Place the padding on the roll with the ropes at the bottom.

- Lower speed (potentiometer), then let the roll turn with the switch in the power box (clockwise) (Counterclockwise for Muraal).

Spray glue over the entire length with a width of 10cm.
- While turning, make sure the padding is tensionned.

- When the padding enters the bed, stop the roll. (position switch “0”). Close the bed (working pressure max. 15Bar!) and let the roll turn. You can do this by pushing the start button. Check that nothing rolls bad or keeps faltering. If you want to stop the roll, push the fingerscreen or the footpedal. (option)

- Make sure the ropes are not on the padding when the roll turns.

- Press the sides with a stump object. That prevents that something should halter / hang.
- When the padding is completely on the roll (2 turns), increase working pressure and let the roll turn for 15 min. at a temperature of min. 120°C and a higher speed. Let the roll turn when the padding is too short (max. 1 hour). If the padding is too long, stop the roll and cut the padding. (Cut when 3rd turn begins.) You can feel where the padding is laying double. It is recommended to check the length of the padding after 1 or 2 weeks and if necessary cut the padding.

  - Brush the padding (positioning of the padding by turning the roll with the switch). Make sure the bed is open. The brushing happens best with a steel brush or a drill with a radial steel brush. Put something under the padding, like a wooden plank. So you can’t damage other things.
- Then use the steelbrush to create a smooth transition.

- Turn the roll.

- Stop the roll, and make 3 knots in the ropes at the sides of the padding. (Tighten the knot as hard as possible.)

  Take the ropes.

  Make 3 knots in it.
Cut the ends.

Push het ends and the knots back with a stump object.
- Let the roll turn and place the scrapers back in the correct position.

- Mount the covers.
- If there are no comments, the padding is ready for use.

**Never turn the roll with pressure on the bed when the bed is cold!**
### 4.1 Electrical equipment

#### 4.1.1 Roll drive.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Rolldrive</td>
<td>0.12 kW/1500rpm 9 Upm/min</td>
<td>2LE.NV.1250</td>
<td><img src="image1.png" alt="Rolldrive" /></td>
</tr>
<tr>
<td>U4</td>
<td>Frequency inverter</td>
<td>‘TE’ ATV11HU05M2 0.18 kW</td>
<td>E ML T402</td>
<td><img src="image2.png" alt="Frequency Inverter" /></td>
</tr>
<tr>
<td>R2</td>
<td>Speed potentiometer</td>
<td>‘TE’ SZ1RV1202 2k2</td>
<td>E ML T114</td>
<td><img src="image3.png" alt="Speed Potentiometer" /></td>
</tr>
</tbody>
</table>

#### 4.1.2 Lift bed (Excentriek)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>Motor</td>
<td>0.12 kW/1500rpm 9 Upm/min</td>
<td>2LE.NV.1250</td>
<td><img src="image4.png" alt="Motor" /></td>
</tr>
<tr>
<td>C2</td>
<td>Contactor</td>
<td>‘TE’ LC1 D09</td>
<td>2LE C 0110</td>
<td><img src="image5.png" alt="Contactor" /></td>
</tr>
<tr>
<td>E2</td>
<td>Thermal overload</td>
<td>LRD 04</td>
<td>E RL R004</td>
<td><img src="image6.png" alt="Thermal Overload" /></td>
</tr>
</tbody>
</table>
### 4.1.3 Roll suction drive.

<table>
<thead>
<tr>
<th>Name</th>
<th>Discription</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>Rolldrive</td>
<td>34 W 2500upm</td>
<td>2LT YA 0970</td>
<td><img src="image" alt="M2 Picture" /></td>
</tr>
<tr>
<td>R3</td>
<td>Relay</td>
<td>‘TE’ RXN 41 G11 B7</td>
<td>2 LE RK T010</td>
<td><img src="image" alt="R3 Picture" /></td>
</tr>
</tbody>
</table>

### 4.1.4 Fuses

<table>
<thead>
<tr>
<th>Name</th>
<th>Discription</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-S-T</td>
<td>Main fuse</td>
<td>3 x 16 A</td>
<td>E Z1 3016</td>
<td><img src="image" alt="R-S-T Picture" /></td>
</tr>
<tr>
<td>F1 - F2</td>
<td>Primary fuse</td>
<td>2 x 2 A</td>
<td>E Z1 3002</td>
<td><img src="image" alt="F1-F2 Picture" /></td>
</tr>
<tr>
<td>F3</td>
<td>Secondary fuse</td>
<td>1 x 2 A</td>
<td>E Z1 3002</td>
<td><img src="image" alt="F3 Picture" /></td>
</tr>
</tbody>
</table>
### 4.1.5 Control panel.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1 - S2</td>
<td>Emergency</td>
<td>ZB4 BS54 +</td>
<td>E.SD.Z215 +</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZB4 BZ102 (= contact NC)</td>
<td>E.SD.Z231</td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>Push button ‘start’</td>
<td>ZB4BW0B33 ZB4BW333</td>
<td>E SD Z227</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>(green)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S4</td>
<td>Push button ‘stop’</td>
<td>ZB4BW0B42 ZB4BW343</td>
<td>E SD Z224</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>(red)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U3</td>
<td>Temperature regulation</td>
<td>Comeco RT 38</td>
<td>E.V3.1058</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

- **F4 - F5 - F6**: Fuse to lift the bed.
  - Type: 3 x 2 A
  - Order No: E Z1 3002

- **F7**: Frequency inverter
  - Type: 1 x 2 A
  - Order No: E Z1 3002

- **F8/F9/F10**: Heating
  - Type: 3 x 12 A
  - Order No: E Z1 3012
### 4.1.6 Other.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Main switch</td>
<td>VBF1 32A</td>
<td>2LE.SV.5038</td>
<td><img src="image1.png" alt="Main switch" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VZ11 N-pool</td>
<td>E SV 5042</td>
<td><img src="image2.png" alt="N-pool" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VZ14 PE-pool</td>
<td>E SV 5044</td>
<td><img src="image3.png" alt="PE-pool" /></td>
</tr>
<tr>
<td>TR2</td>
<td>Transfo</td>
<td>‘Eliwell’ 220V – 12V – 8V</td>
<td>2LE B0 0010</td>
<td><img src="image4.png" alt="Transfo" /></td>
</tr>
<tr>
<td>TR1</td>
<td>Transfo</td>
<td>‘TE’ ABL6TS06B 220V–400V/24V 100 VA</td>
<td>E.B0.0631</td>
<td><img src="image5.png" alt="Transfo" /></td>
</tr>
<tr>
<td>FDC2</td>
<td>Contact finger guard</td>
<td>XCI ZP 2105</td>
<td>E SA T010</td>
<td><img src="image6.png" alt="Contact finger guard" /></td>
</tr>
<tr>
<td>FDC4</td>
<td>Foot pedal</td>
<td>‘TE’ XCI ZP 2105</td>
<td>E SA T010</td>
<td><img src="image7.png" alt="Foot pedal" /></td>
</tr>
</tbody>
</table>
### 4.1.7 Heating

<table>
<thead>
<tr>
<th>Name</th>
<th>Discription</th>
<th>Type</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>C5</td>
<td>Contactor</td>
<td>Solid state relais</td>
<td></td>
<td><img src="image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td>R1</td>
<td>Capacitances</td>
<td>10 kW</td>
<td>E02 0610</td>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>Seal capacitances</td>
<td>O ring Viton inw 72x4</td>
<td>L.DO.0724</td>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
4.2 Mechanical Equipment

4.2.1 Roll drive.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Order No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bearing GSH 20 RRB</td>
<td>T.KW.0040</td>
<td></td>
</tr>
<tr>
<td>Bearing body flange pft 40</td>
<td>T.KU.CA47</td>
<td></td>
</tr>
<tr>
<td>Sprocker ½” x 5/16” x 60 t</td>
<td>2LT.U4.8570</td>
<td></td>
</tr>
<tr>
<td>- Chain sprocket ½” x 5/16” x 15 t</td>
<td>T.U4.8571</td>
<td></td>
</tr>
<tr>
<td>- taperlock 2012 – dia 20</td>
<td>T.P8.2020</td>
<td></td>
</tr>
<tr>
<td>Chain tensionner ½”</td>
<td>T US 4803</td>
<td></td>
</tr>
<tr>
<td>Chain tensionner sprocket ½” x 5/16” x 15t</td>
<td>T US 0012</td>
<td></td>
</tr>
<tr>
<td>Chain ½” x 5/16</td>
<td>T W1 0050</td>
<td></td>
</tr>
</tbody>
</table>
## 4.2.2 Roll.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Order No</th>
<th>Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Springs</td>
<td>Springpress type Z vz 12mm L.1200m</td>
<td>2LT.H0.0013</td>
<td><img src="image1.png" alt="Springs" /></td>
</tr>
<tr>
<td>Linnen scraper</td>
<td>Linnen scraper</td>
<td>S.RP.0002</td>
<td><img src="image2.png" alt="Linnen scraper" /></td>
</tr>
<tr>
<td>Feeding belts</td>
<td>88 x 600 (18 st)</td>
<td>050.T.3000</td>
<td><img src="image3.png" alt="Feeding belts" /></td>
</tr>
<tr>
<td>Padding</td>
<td>Nomex 800 gr/m²</td>
<td>050.002.3018NF8</td>
<td><img src="image4.png" alt="Padding" /></td>
</tr>
</tbody>
</table>

### Part 5: APPENDIX

5.1 Installation plan

5.2 Electrical diagram
### 5.1 Installation plan

**M300 E**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>052.601.0001/1</td>
<td>M300E</td>
<td></td>
</tr>
<tr>
<td>052.601.0001/1/1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>052.601.0001/1/1/1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Technical Specifications

- **Ironing speed**: 1.5 – 4 m/min
- **Motor**: 400 V - 1000 rpm
- **Electric heating**: 50 kW

#### Electrical Connection

- **Single-phase**: 400 V, 3 x 4 mm² + N + PE
- **Two-phase**: 3 x 6 mm² + N + NE

#### Mechanical Components

- **Electrical connection**: Ø60 mm
- **Exhaust outlet**: 250 kg, 2.67 kg/cm²

---

**Diagram**

[Diagram showing installation plan with numbered components and dimensions]
<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotary wheel</td>
<td>15 - 40 m/min</td>
</tr>
<tr>
<td>Motor ventilation</td>
<td>0.9 kW - 1000 rpm</td>
</tr>
<tr>
<td>Roller ventilation</td>
<td>0.04 kW - 2540 rpm</td>
</tr>
<tr>
<td>Electric heating</td>
<td>D300/830 : 15kW</td>
</tr>
</tbody>
</table>

**Technical Specifications**

- **Electrical**
  - 400V : 3 x 4mm² + N + PE (25A)

**Dimensions**

- 250 kg
- 267 kg/cm²

**Additional Notes**

1. Electric connection
2. Air outlet

**Machine Model**

IRONER 300
5.2 Electrical diagram