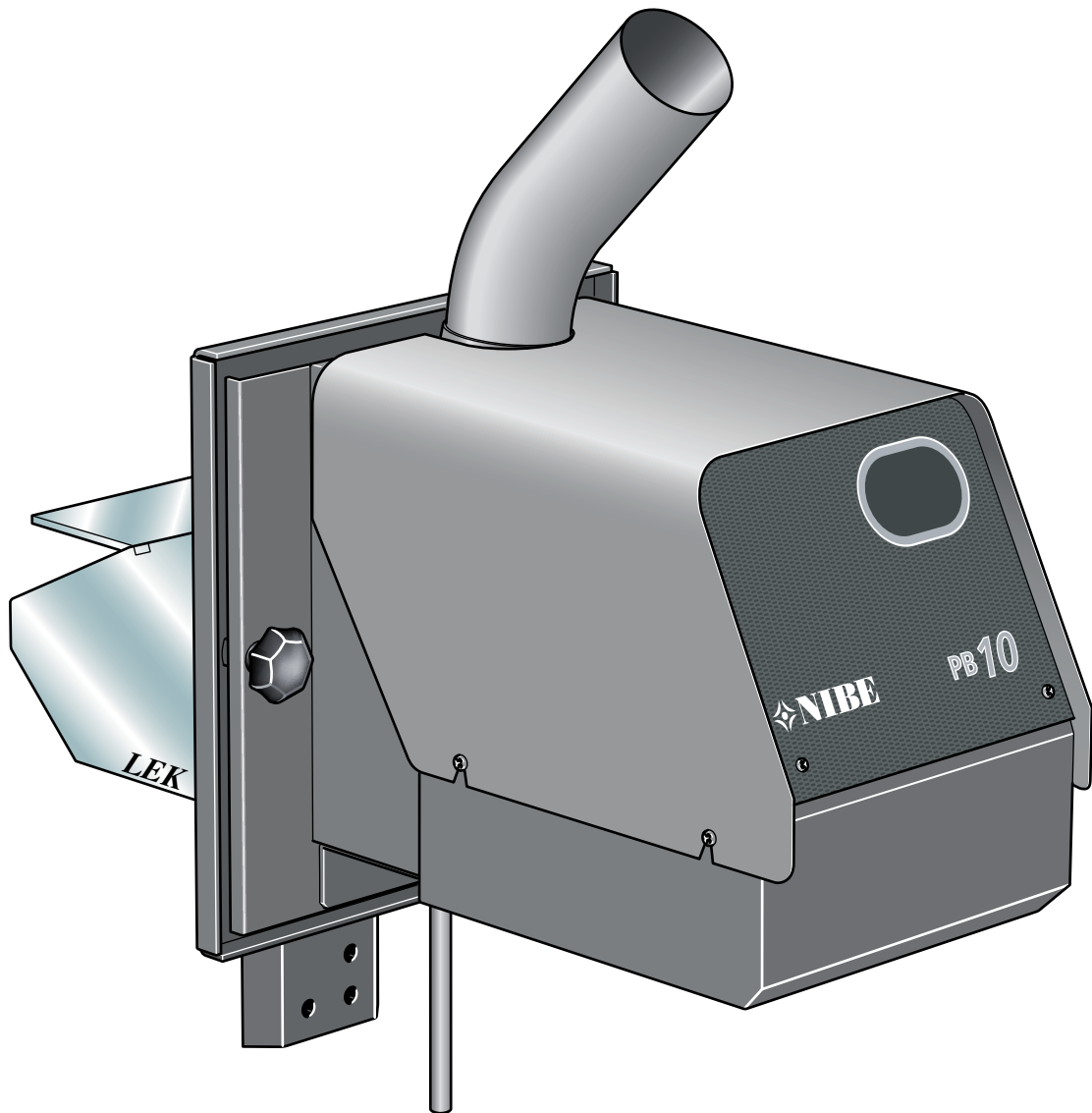




MOS GB 0951-2
PB 10
511891

INSTALLATION AND MAINTENANCE INSTRUCTIONS

NIBE PB 10



User guide

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General

Pellet firing equipment NIBE PB 10 is intended for use with wood pellets after the equipment has been docked to the boiler.

The pellet firing equipment PB 10 must not be lit with other combustible materials.

The pellet firing equipment PB 10 is installed in boiler rooms that meet Boverket's norms.

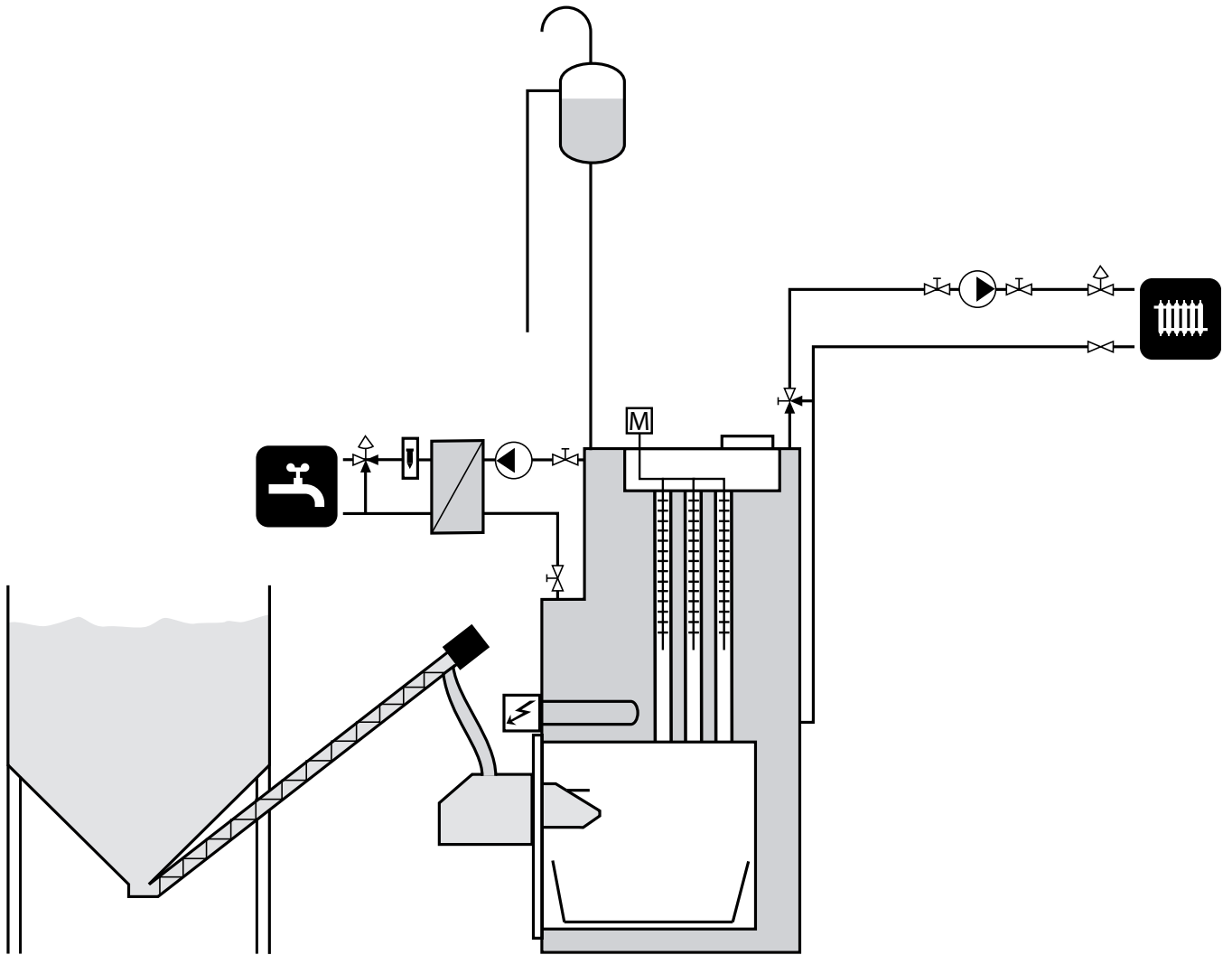
The rights to make any design modifications are reserved

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Safety

- The installation must not be test run or operated until it has been connected to the heating boiler and the smoke has free passage to the outside through the flue or chimney. The boiler's flue gas damper must not be closed due to the risk of "ignition puffs" in the event of changing weather, therefore, the draft limiter should be installed to ensure an even draft in the boiler and prevent back burning accidents.
The vacuum in the boiler hearth must be a minimum of 5 – 6 Pa (0.5 – 0.6 mm VP)
- The pellets must be stored in a dry and well-ventilated place.
The installation is designed to only be fired using wood pellets of Ø6 – Ø10 mm in size.
- **Note!** Always use a mask when handling pellets.
- The boiler room where the pellet equipment is installed must meet the current edition of the Boverkets Building regulations, section: Fire prevention.
- **WARNING!** Electrical installations must only be carried out by an authorised technician!
- The pellet firing equipment must not be modified, changed or redesigned without written permission from the manufacturer.
- Non original spare parts, which do not correspond to the manufacturer's specifications, can affect the safety of the pellet firing equipment and must therefore not be installed without written permission from the manufacturer.
- The pellet firing equipment must not be installed in combustible environments.
- Combustible material must not be stored close to the installation.
- Welding work must not be carried out on the installation before the power is cut and the circuit board removed.
- Do not open any boiler doors during operation.

System diagram



General information for the installer

The boiler room where the equipment is to be installed must be in accordance with the applicable fire safety regulations.

Check points before installation:

- Contact a chimney sweep to obtain approval that the chimney can be used for pellet firing, and that the location of the installation meets the applicable fire safety regulations.
- Contact the building and environmental office in your district for basic building permits/notices about the installation.

Assembly

The equipment must be positioned so that there is sufficient space for cleaning and sweeping the burner, boiler and flue.

The internal diameter of the chimney should be at least 125 mm. The recommended minimum chimney height for this diameter is 6 m at 18 – 20 kW output.

Before installing the mounting frame (A) in the suitable door opening on the boiler, the mounting holes for attachment to the boiler must be drilled in the mounting frame, screw the supplied counter sunk screws securely to the mounting frame. If the swing arm is to be used, install it on the mounting frame, then screw the mounting frame securely to the boiler.

Install the burner in front of the boiler's water jacket. The burner has an extended cover that directs the flame forward. For installation in boilers without a spacer connector, the extended cover can be cut to direct the flame upwards. The distance from the bed of embers to the nearest boiler surface must be 200 – 250 mm. This is so that the flame has enough space and for optimum combustion.

Screw the burner to the cover frame using the supplied knobs.

The connection between the burner and boiler must be sealed, to prevent drafts and flue gas escaping.

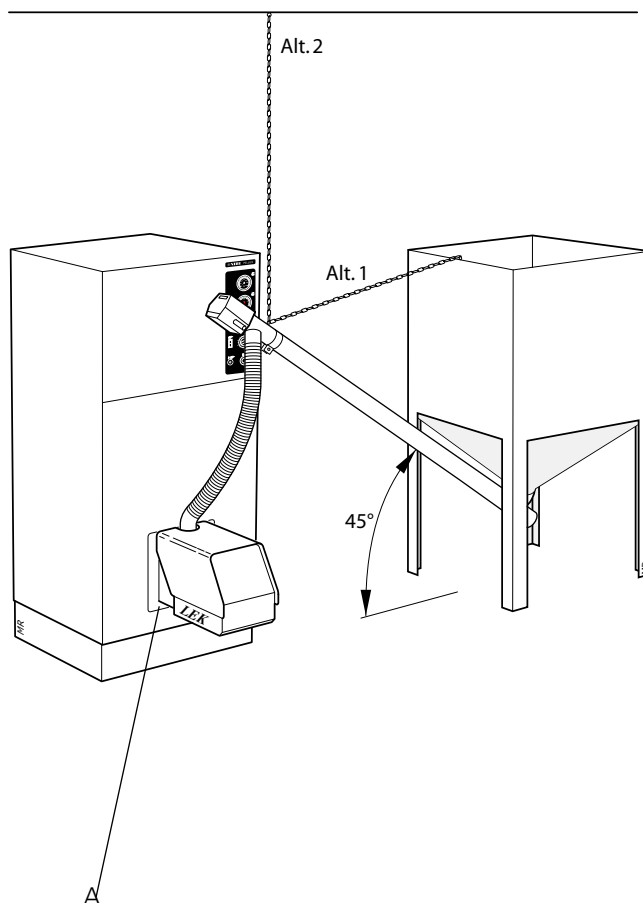
The burner is set at the factory for 8 mm pellets of good quality, approx. 12 kW supplied output at a screw angle of 45°.

The hose must be bent slightly and the hose connections offset slightly from each other.

After the screws have been placed in the pellet reservoir or store, refill with pellets and start the installation.

When the burner is installed on the boiler, an authorised electrician must connect the electrical terminals to the boiler's double thermostat according to the supplied wiring diagram, (see wiring diagram) the power supply cable can be separated. All connections to the burner must be made via contacts in the chassis.

After the screws have been placed in the pellet reservoir or store with pellets and start the installation. See "Commissioning and adjusting".



Checks

Check for a risk of condensation in the flue by reading off the flue gas temperature 1 m down from the chimney top.

If the temperature drops below 80 °C during the winter, there is a risk of condensation. If the flue gas temperature only falls below 80 °C by a few degrees, it may be enough to install a counter-draft hatch on the flue, between the boiler and chimney, in the boiler room. If the flue gas temperature drops below 75 °C, an insert pipe should be installed the entire length of the chimney.

Note!

Make adjustments to the burner using a flue gas analysis instrument for optimal combustion.

Adjustment with the instrument should also be carried if the pellet size or quality is changed.

There must not be any overpressure in the fireplace at any time, i.e. during ignition, operation or extinguishing.

This can be checked by unscrewing the sight glass and checking that smoke does not enter the boiler room.

Control device

Starting:

Start the installation by setting the boiler's main switch to 1 or on. Increase boiler's double thermostat to the desired boiler temperature.

Stopping:

Lower the boiler thermostat.

Emergency stop:

Set the main switch of the boiler to 0 or off.

Care and maintenance

Pellet firing equipment PB 10 has been developed for minimal maintenance.

The majority of input required is to check the quality and size of the pellets to be used.

Pellets must be stored in a dry and protected area.

! WARNING!

Before starting servicing and maintenance work, power to the installation must be cut by cutting the main power supply.

Cleaning/Ash management:

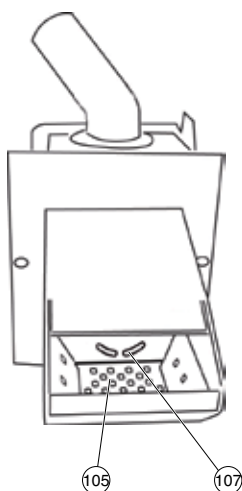
When burning wooden pellets the residue is approx. 0.5 – 1 % ash.

The combustion area in combination with the fuel and the consumption gives an idea of how often the burner should be cleaned.

The ash must be stored in a closed container. Clean the grate after burning about 400 litres of pellets or once a week. The interval may be prolonged to every other week depending on the pellet quality.

- Lower the thermostat and allow the fan to run for 4 minutes (post combustion time).
- Cut the power and allow the burner to cool down to prevent the risk of burning injuries.
- Remove the knobs and pull/pry out the burner from the boiler, remove any connection cables from the burner.
- Remove and clean the grate (105).
- Remove the ash from the burner and any from the boiler.
- Remove any cinders from the ignition pod plate (107) and clean the grate.

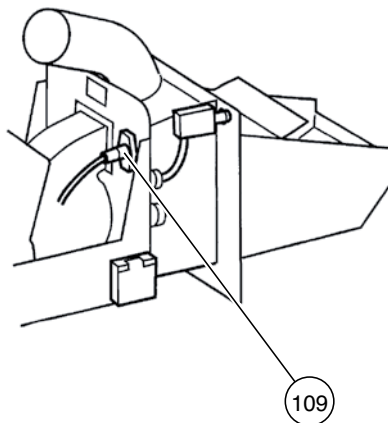
Note! The flat part of the grate must be slid in as far as possible under the ignition pod plate.



Photocell

If necessary, clean the photocell (109) as follows:

- Pull the photocell straight out.
- Clean the photocell from soot, use a damp cloth if necessary.
- Check the position of the compression ring.
- Reinstall the photocell in the groove.



Note!

Welding work must not be carried out on the installation before the power is cut and the circuit board removed!

Maintenance schedule

- | | | |
|----|-------------------|--|
| 1. | 2 – 4 times/month | Remove ash and residue. (Depending on pellet quality). |
| 2. | 2 – 4 times/month | Clean the boiler's flues and convection parts (the more often this is done the more economic use becomes). |
| 3. | 1 time/month | Clean drop shaft and drop pipe. |
| 4. | 1 time/year | Check the burner installation using special tools (carried out by the dealer or installer). |

Note!

Ash can still contain glowing embers after a long time. Therefore, always use a non-flammable container when emptying ash and soot.

Commissioning and adjusting

Feeding pellets

Start the pellet screw by inserting the plug in a wall socket. It takes about 10-20 minutes before the pipe is filled to the brim. This time applies for 1.5 meter screws and for an angle of about 45°. Once the pellets have reached the brim of the screw, allow it to run for about 2 minutes to fill the pipe and for even feeding.

(Allow the pellets to drop into a bucket for easy return to the store). Then transfer the plug to the burner's socket and install the hose between the screw pipe and the pellet burner.

Normal start (for factory settings)

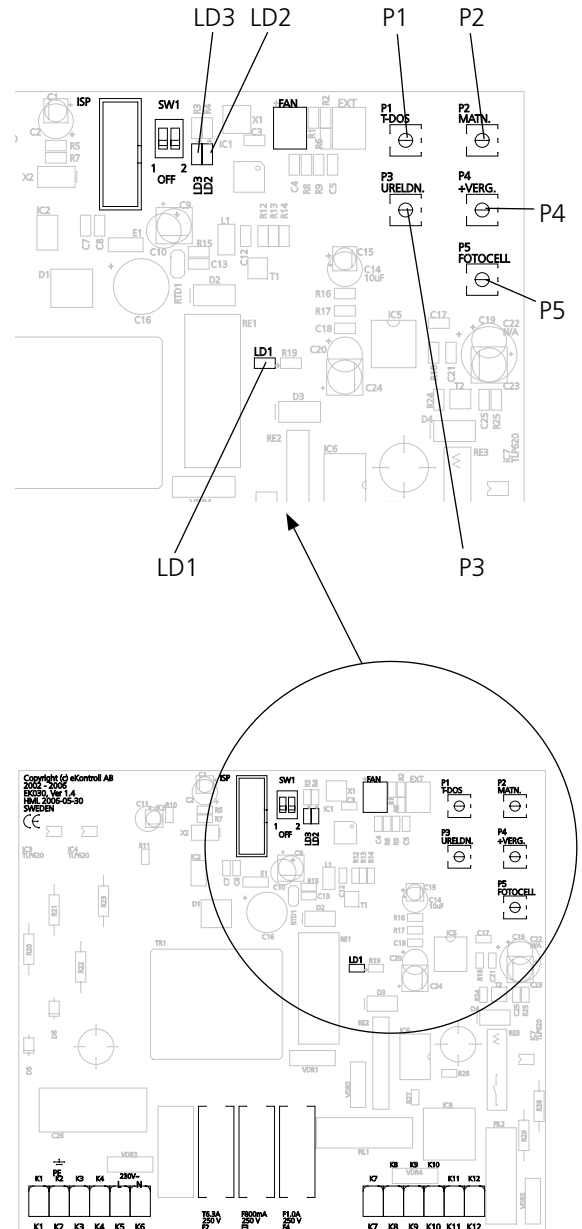
1. Switch on the boiler's power switch and turn the boiler's thermostat to the desired temperature.
2. The thermostat requests heat.
3. The fan starts and vents the boiler and chimney for 15 seconds.
4. The fan slows to 1500 rpm, start dose supplies the burner for 75 seconds.
5. The fan continues at 1500 rpm, until the photocell registers fire in the burner.
6. When the photocell has registered fire in the burner, ignition is delayed for 15 seconds and the first batch of pellets are fed in at 25 % of the set value on P2.
7. Overrun time is activated, the fan speeds up and the burner supplies the desired amount of pellets at each feed interval for 270 seconds.
8. After these 270 seconds the burner runs at 3.7 seconds pellet feeding at each feed sequence, which is 15 seconds. The burner runs in this mode until the thermostat has reached its cut-off temperature.
9. At thermostat cut-off, the fan continues to run until the photocell no longer registers fire. The extinguishing time is activated in this mode, which corresponds to 150 seconds.
10. After extinguishing is complete, the burner can be restarted.

The burner did not ignite at the first attempt:

1. The thermostat still requests heat.
2. The fans speeds up for 15 seconds.
3. The fans slows to 1500 rpm and new start dose of 37.5 seconds (50% of first set start phase) is supplied to the burner. If the photocell registers light within 300 seconds, the process continues normally according to step 6 (Normal start).

The burner did not ignite at the second attempt:

If no fire is registered at the second ignition attempt after 300 seconds, the burner extinguishes according to the set value on P4. The burner gives an alarm via LD2 yellow LED (lights continuously), the burner stops.



Before the burner is started again, the cause of the failed ignition attempt must be established by trouble shooting. The burner is reset by interrupting the current for at least 5 seconds, this allows the burner to be restarted.

The photocell loses light during firing:

If the photocell loses light for more than 30 seconds the fan runs for a further 30 seconds, the burner then carries out normal extinguishing according to the set value on P4. When the extinguishing time has been reached, the process starts again as for normal thermostat start operation. If the burner does not ignite on this attempt the burner sends an alarm via LD3 green LED (lights continuously).

If the default settings of the burner need changing, information can be found under "Adjusting control electronics and Adjusting the burner".

Settings

Adjusting the burner

The burner must be adjusted even if the burner is factory set. This depends on different operating conditions (boiler manufacturer, draft, pellet diameter mm).

The circuit board's supply times can be altered depending on the pellet diameter, output and screw angle (max 45°). The factory set times are marked in the table in the section called "Adjusting control electronics", as well as on the inside of the burner's protective cover. If the times have been changed, note the new times in the manual.

Indication via LED

| Indicators | Explanation |
|---|--|
| Continuous yellow light on LD2 | Not able to ignite after two attempts. |
| Continuous green light on LD3 | Lost light 30 seconds when firing and unsuccessful reignition. |
| Continuous yellow and green light at the same time on LD2 and LD3 | Fault on screw supply. |
| Flashing yellow light on LD2 | Photocell fault |
| Flashing red light on LD1 | Fan fault |

Changing times and fan damper etc.

If the conditions are altered after the installer trimmed the burner with the flue gas instrument, a new reading must be taken for good combustion and pellet economy.

The flue gas temperature can be changed by increasing, respectively, reducing, the supply intervals for the pellet screw and continuing with the fan damper (for increased supply open the damper and reduced supply less open fan damper). The required flue gas temperature depends on the type of chimney the boiler is connected to. Masonry chimneys require higher temperatures than steel chimneys, usually, a masonry chimney drops in temperature by 15 – 20 °C/ meter and a steel chimney by 5 – 10 °C/ meter. The temperature should be around 80 °C one meter below the top, this prevents condensation and frost damage in the chimney.

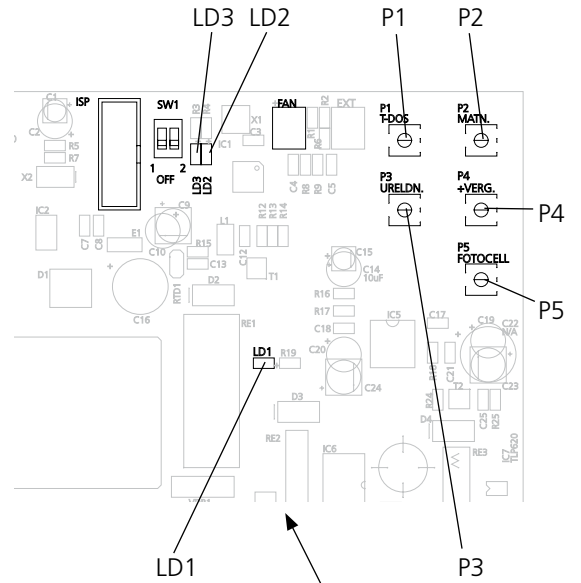
Adjusting control electronics

Potentiometers P1-P5 are adjustment potentiometers for trimming the functions of the burner. The potentiometers are designated with the relevant abbreviations (P1-P5).

The circuit board has 3 LEDs (LD1,LD2,LD3).

Functions P1-P5

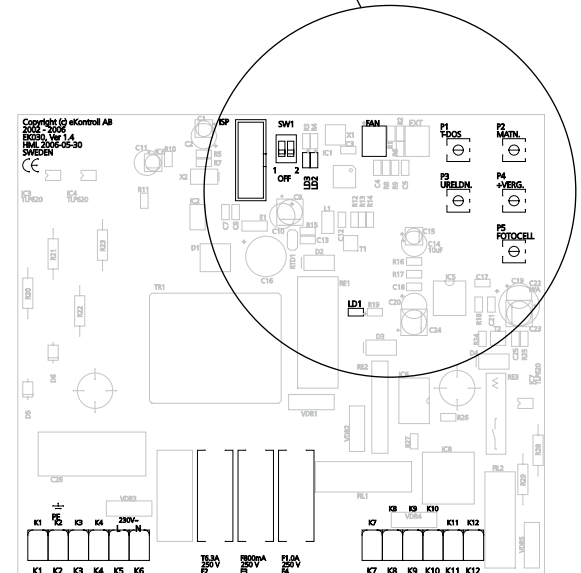
| Pot | Function | Seconds | Comments |
|-----|--------------------------------------|-----------|--|
| P1 | Feed time ignition dose (start fuel) | 30 – 165 | Pellets must just cover the upper ignition hole on the ignition plate. |
| P2 | Firing supply | 1,5 – 8,2 | Pellets fed every 15 seconds. |
| P3 | Extinguishing time | 30 – 300 | The time the fan runs after the photo-cell has lost light in the burner. |
| P4 | Overrun time (at 25% supply) | 45 – 450 | Time between ignition and normal operation. |
| P5 | The sensitivity of the photocell | 0 – 9 | 9= max fire/light intensity, 0= min fire/light intensity. |



Reading off potentiometers

To see how a potentiometer is set, the relevant potentiometer flashes first on LD3 (green) and then the value which is set on LD2 (yellow) flashes. This occurs continuously, 1,2,3,4,5,1,2,3..... regardless of whether the burner is in operation or not.

Example: If the photocell loses light for more than 3 seconds the fan runs for a further 6 seconds, the burner then carries out normal extinguishing according to the set value on P4.



! WARNING!

*Do not adjust the burner during operation
- High voltage circuit-board!*

Commissioning and adjusting

Adjustment template

| | P1 Supply time | P2 Firing supply | P3 Extinguishing time | P4 Overrun time | P5 Photocell |
|-----------------|-------------------|---------------------|-----------------------------|--------------------|-----------------|
| 0 Flashes | 30 seconds | 1.5 seconds | 30 seconds | 45 seconds | 0 sensitivity |
| 1 Flashes | 45 seconds | 1.7 seconds | 60 seconds | 90 seconds | 1 sensitivity |
| 2 Flashes | 60 seconds | 1.8 seconds | 90 seconds | 135 seconds | 2 sensitivity |
| 3 Flashes | 75 seconds | 2.2 seconds | 120 seconds | 180 seconds | 3 sensitivity |
| 4 Flashes | 90 seconds | 2.8 seconds | 150 seconds | 225 seconds | 4 sensitivity |
| 5 Flashes | 105 seconds | 3.7 seconds | 180 seconds | 270 seconds | 5 sensitivity |
| 6 flashes | 120 seconds | 4.8 seconds | 210 seconds | 315 seconds | 6 sensitivity |
| 7 Flashes | 135 seconds | 6.2 seconds | 240 seconds | 360 seconds | 7 sensitivity |
| 8 Flashes | 150 seconds | 7.5 Seconds | 270 seconds | 405 seconds | 8 sensitivity |
| 9 Flashes | 165 seconds | 8.2 seconds | 300 seconds | 450 seconds | 9 sensitivity |
| Factory setting | 75 seconds | 3.7 seconds | 150 seconds | 270 seconds | 5 sensitivity |

Default setting is shaded

Adjusting the burner

- Check the pellet level. During operation the holes on the grate must be covered with pellets.
- Pellet supply changed using P2 on the circuit board (increased clockwise and reduced anti-clockwise). Also check the air damper and flue gas temperature.
- In the event of the pellet level being too high, increase the air supply by opening the damper on the fan or reducing the pellet supply (P2).
- Check the flue gas temperature (normally between 170–240 °C). If the temperature is too high reduce the pellet supply with P2.
- If the temperature is too low, increase the air supply with the air damper.
- In the event of low fuel level in the burner. Check the flue gas temperature as above, reduce the air supply or increase the pellet supply (P2).

Note!

Make adjustments to the burner using a flue gas analysis instrument for optimal combustion.

Note!

When changing from 8 mm to 6 mm pellets, the burner must be adjusted.

Trimming tips

P1. SUPPLY TIME – START FUEL

There must be sufficient pellets in the cup that one can just see the top edge of the uppermost holes on the ignition direction plate, default setting for 75 seconds (each flash corresponds to 15 seconds).

P2. FIRING SUPPLY

Default setting for 3 seconds, corresponds to 12 kW at 8 mm pellets and a screw angle of 45°.

P3. FAN OVERRUN

The time the fan runs after the operating thermostat has stopped and the photocell has lost light.

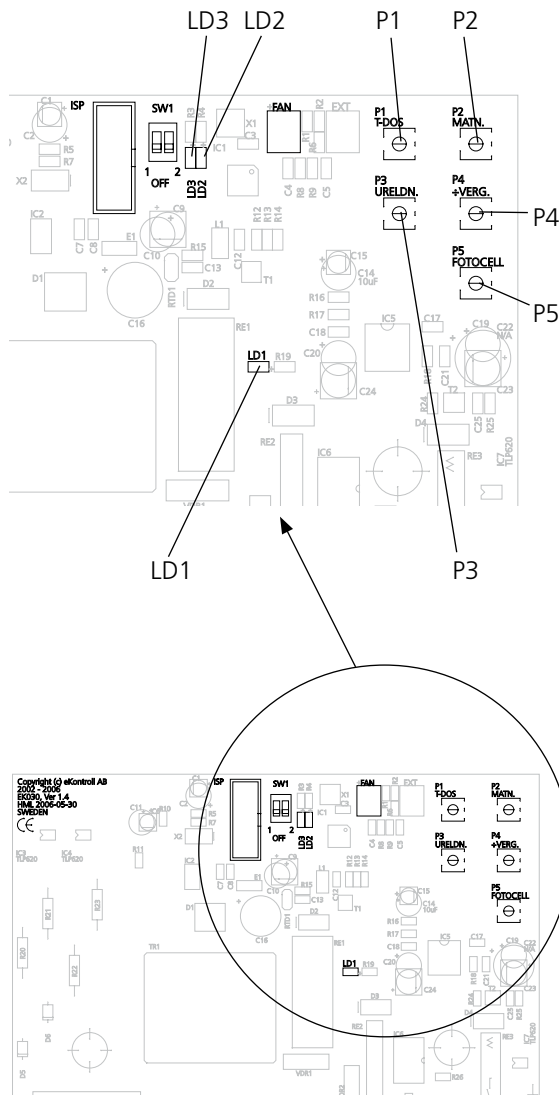
Default set for 150 seconds (each flash corresponds to 30 seconds).

P4. OVERRUN PHASE (Burn out time)

Time with 25% supply since the photocell has seen light (25% supply of set value on P2).

Default set for 270 seconds (each flash corresponds to 45 seconds).

P5. Photocell sensitivity (Factory set, should normally not be adjusted).



Check points after installation

The flue gas temperature must be checked (normally between 170–240 °C). In the event of a fault, adjust the flue gas temperature according to the manual.

Flue gas analysis (with flue gas analysis gauge, e.g. Testo 325M)

- **Flue gas temp.** 170–240 °C
If the flue gas temp. is too high, the amount of surplus air is too great. In the event of low temperatures, check the boiler's turbulators if the boiler is equipped with them. These can be removed or cut off if necessary.
- **CO₂-content** 10–12%
- **CO ppm** 500 and less
- **Air surplus (λ-value)** 1.7–2.4
Preferably less than 2 for the fuel economy and efficiency to be satisfactory.
- **O₂-content** 8–11%
- **Efficiency** 80% and more
Combustion efficiency
- **Vacuum in boiler**
15–20 Pa (1.5–2 mm Vp)
Readings taken from inside the boiler's flue connection
5–6 Pa (0.5–0.6 mm Vp)
Readings taken in fireplace area

Remarks: These values can be used as good starting values for a new boiler.

On an older unsealed boiler the supply air can be above 3. The vacuum in the fireplace must be at least 5–6 Pa.

Tip:

A flame from a match or similar can be used to check the seal of the doors on the boiler.

If any of the doors has a leak, the flame is drawn towards the boiler. If the fan damper is choked at installation on an unsealed boiler in order to obtain ideal values according to the table, cooling the photocell may not be sufficient whereupon the it may melt.

It may be necessary to make compromises for an older unsealed boiler.

Safety system against back burning

The pellet burner is equipped with two safety systems for protection against back burning and a flame retardant hose of "self-extinguishing" quality.

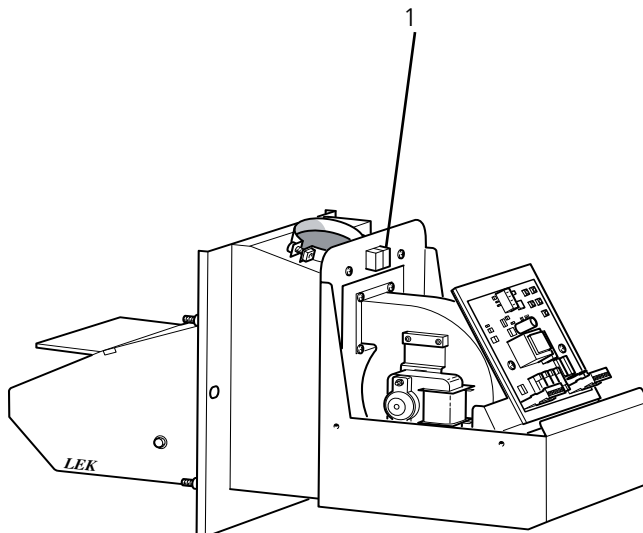
! WARNING!

Only use a self-extinguishing flame retardant hose.

DROP SHAFT cuts the pellet supply from the supply screw. The drop shaft on the burner is 250 mm. The screw is connected to the burner via a flame retardant, self-extinguishing hose. As the burner does not have an internal store area, there are only enough pellets in the burner to be burned on the grate.

HEATING CORE on the connection pipe. If the overheating protection on the connection pipe senses heat ($>90\text{ }^{\circ}\text{C}$), the supplier screw stops. If the overheating protection deploys, it must be reset. This is carried out by first cutting the main power and then unscrewing the cover on the connection pipe as well as pressing in the small "reset tab" (1) on the overheating protection. Before resetting, the cover must be screwed back into place.

The burner is also equipped with a switch on the door frame, the switch prevents the burner from starting when it is pulled out from the boiler for cleaning. A monitoring function for the fan and supply screw is integrated in the circuit board.



! WARNING!

The current must be cut before starting work on the heating core (230V).

Description of functions

If the burner is connected electrically, turn the thermostat down, switch on the main switch.

Note how the two uppermost LEDs flash (the burner's limit position switch must be pressed in).

One LED indicates the read off potentiometer and the other indicates the set value. Now look at the inside of the cover. The table found there shows how many flashes correspond to a certain value. The most important value to you as an installer is the firing supply (P2).

It controls the supplied output in the burner, the higher the output, the more flashes, the lower the output the fewer flashes.

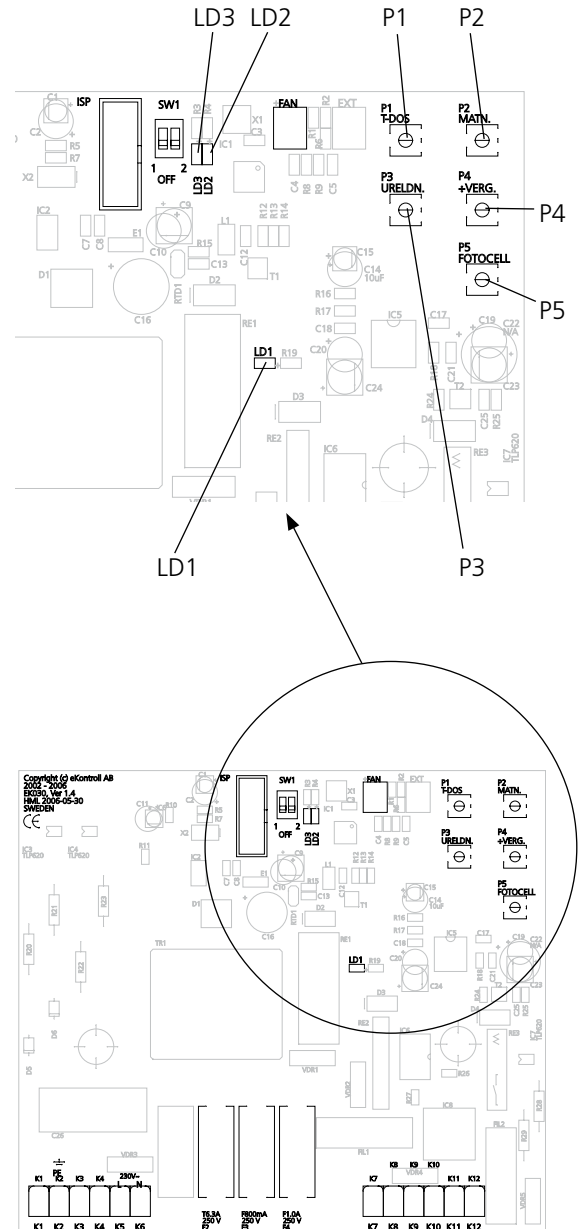
The function of the LEDs

LED LD3 (green) indicates the potentiometer that will be shown.

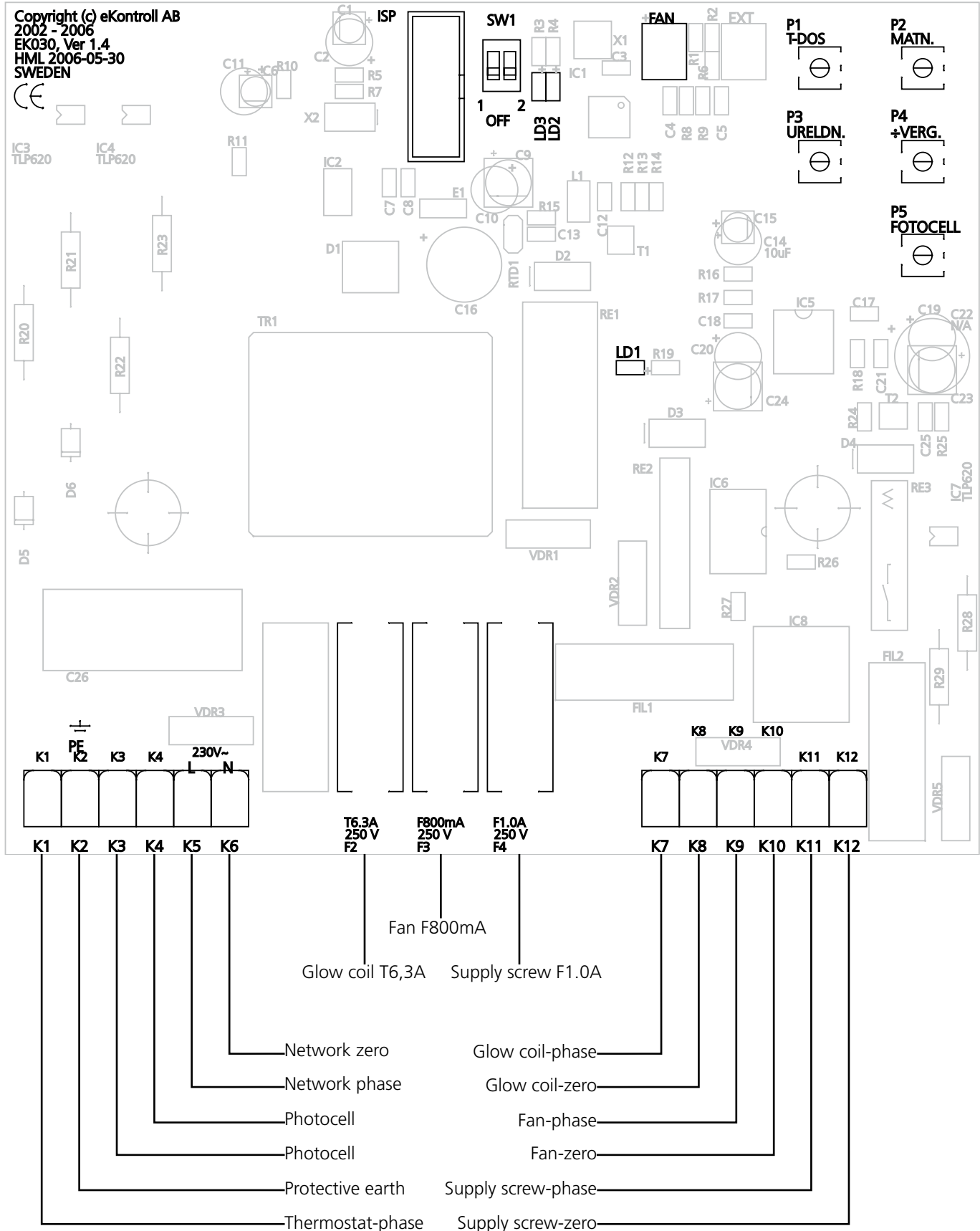
LED LD2 (yellow) flashes the amount of times that the potentiometer is set at.

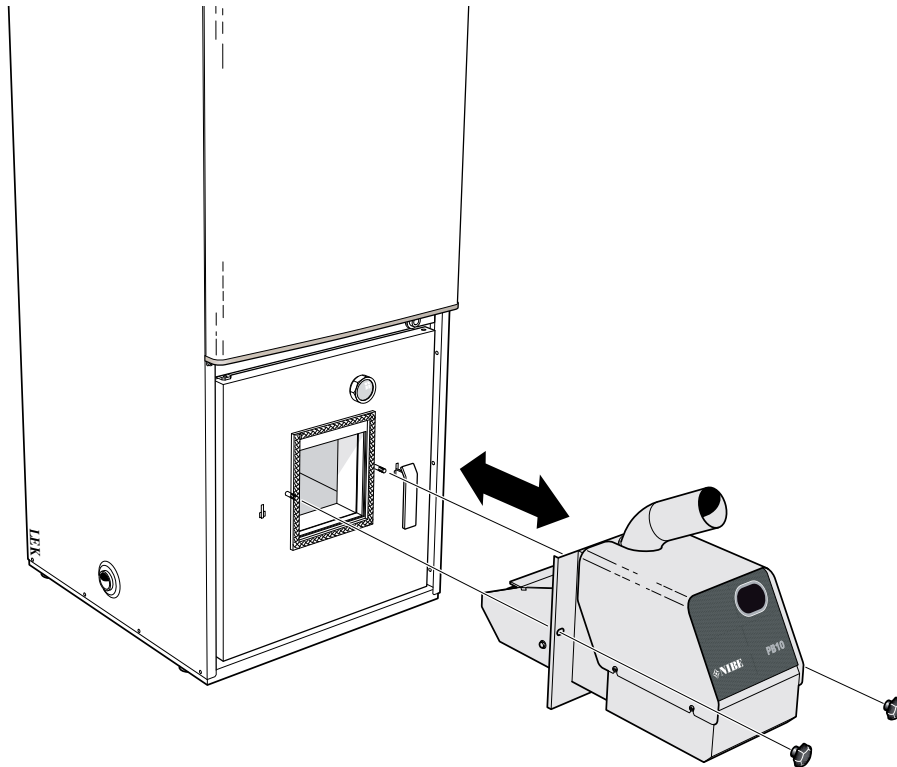
LED LD1 (red) comes on when the photocell registers light. Flashes occur regardless of whether the burner is in operation or not.

Look at the table on the inside of the cover, to determine the time for just that potentiometer.



Wiring diagram





Hang the burner on the swing arm and slide it into place.
Secure the burner using the screw knobs.

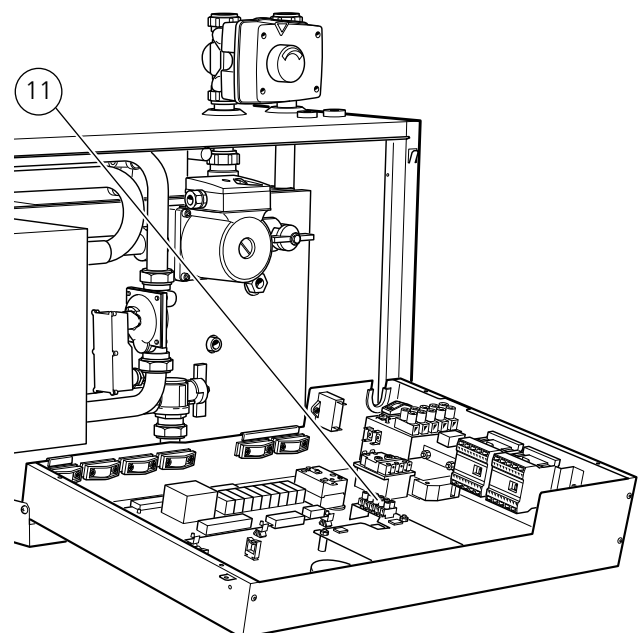
Electrical connection of PB 10 to PELLUX 200

Electrical connection PB10

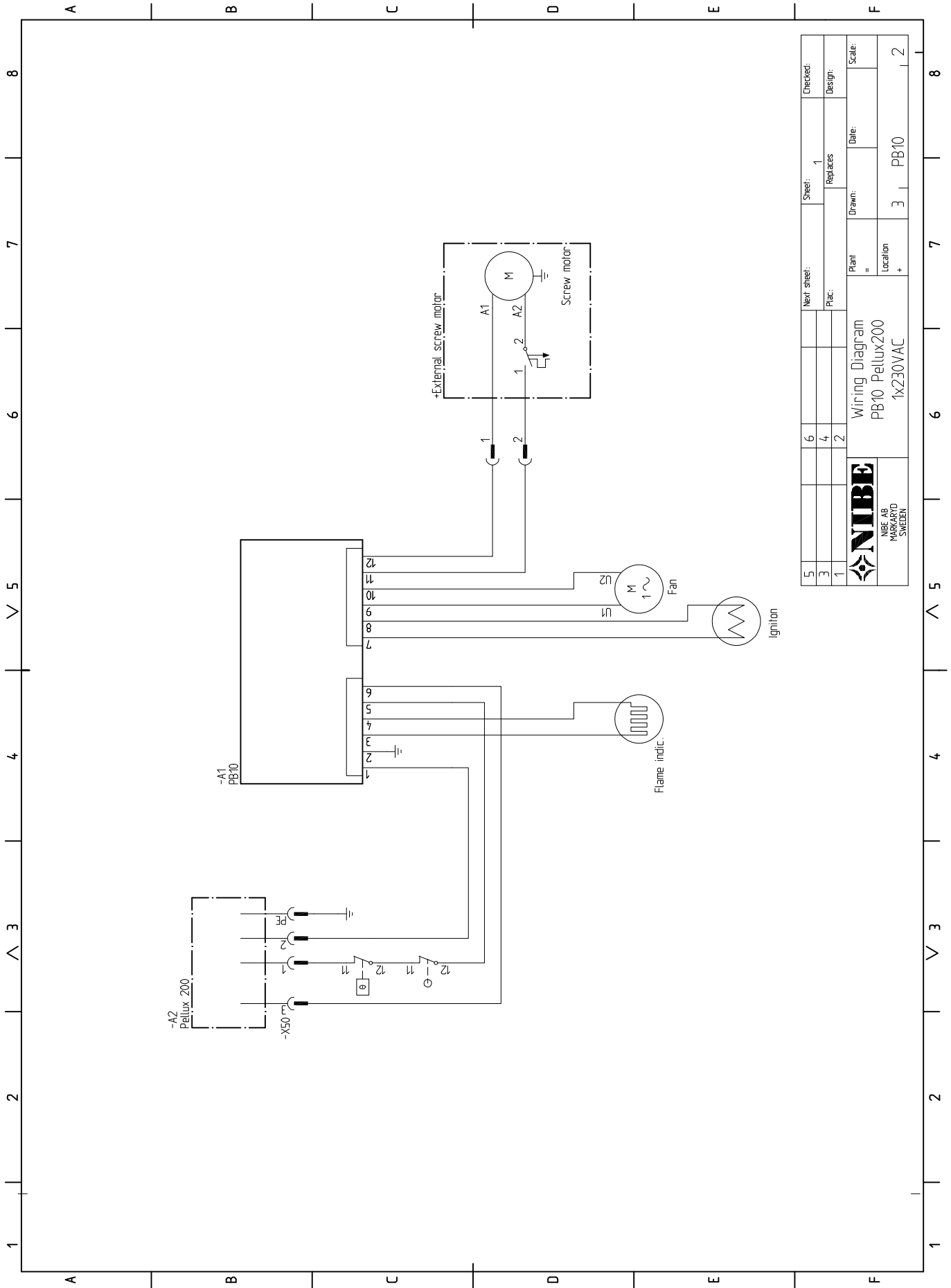
- Connect the black wire to terminal 1 in the plug.
- Connect the brown wire to terminal 2.
- Connect the blue wire to terminal N.
- Connect the earth wire to earth in the plug.

Electrical connection PELLUX 200

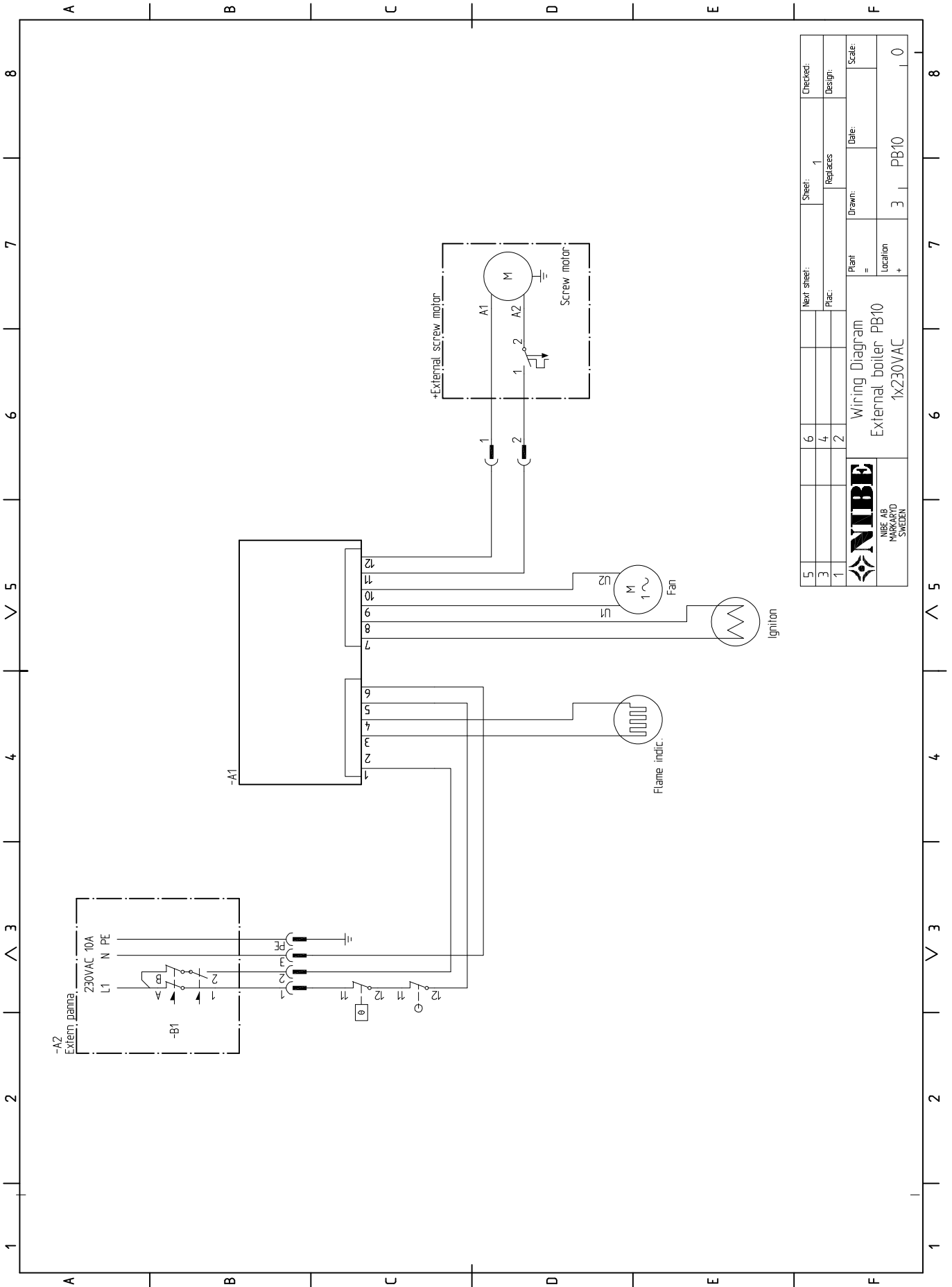
- Connect the burner cable's black wire to plinth 11 terminal 3
- Connect the blue wire to plinth 11 terminal 2
- Connect the brown wire to plinth 11 terminal 1
- Take the switch supplied with the burner.
- Connect the burner cable's black wire to terminal 1 in the plug socket.
- Connect the brown wire to terminal 2.
- Connect the blue wire to terminal N.
- Connect the earth wire to earth in the plug socket.




Electrical connection of PB 10 to PELLUX



| | | | | |
|-----------------------------------|---|--|----------|----------|
| 5 | 6 | Next sheet: | Sheet: | Checked: |
| 3 | 4 | | 1 | |
| 1 | 2 | Plac: | Replaces | Design: |
| NIBE AB MARKARYD SWEDEN | | Wiring Diagram PB10 Pellux200 1x230VAC | | |
| | | Plant = | Drawn: | Date: |
| | | Location + | 3 | PB10 |
| | | | | Scale: 2 |



| | | | | | | |
|---|--|--|----------------------|--------|-------|----------|
| 5 | | | Next sheet: | Sheet: | 1 | Checked: |
| 3 | | | Replaces: | | | Design: |
| 1 | | | Plant: | Drawn: | Date: | Scale: |
|  NIBE AB MARKARYD SWEDEN | | | Wiring Diagram | | | |
| | | | External boiler PB10 | | | |
| | | | Location | 3 | PB10 | 0 |

Troubleshooting

The unit has stopped:

When the unit has stopped, before cutting the current, check what LD1, LD2 or LD3 indicates, this is of great help when troubleshooting.

- Check that there are pellets in the container/storage area.
- Check that the external screw works (feeds in pellets).
- Clean the grate.
- Restart.

The unit does not start:

- Check the door frame switch.
- Check the boiler thermostat.
- Check that the unit is powered. Also check the separable contact.
- Check the fuses in the fuse box.
- Cut the current and press in the reset button on the overheating protection. Reinstall the protection and switch on the current to the unit.

Fan and ignition ok, but pellets not fed in:

- The thermal screw motor protection may have deployed. Cut the current and wait 10 minutes.

Cut the current and check the glass fuses (20 x 5 mm), and, if necessary, replace them (see control electronics board).

- Ignition/glow coil 6.3A slow.
- Fan 800 mA quick.
- Supply screw 1.0A quick.

Fuel is supplied, but ignition does not occur:

| Checks | Corrective action |
|--|-------------------|
| - fuse (6.3 A) on circuit board blown | - replace |
| - glow coil does not become hot | - replace |
| - glow coil electrical connections damaged | - repair |

Pellets feed in and ignite, but fan does not start:

| Checks | Corrective action |
|---|-------------------|
| - blown fan motor fuse on circuit board | - replace |
| - fan motor faulty | - replace |

Pellets feed in, ignite and fan starts, but the screw does not restart:

| Checks | Corrective action |
|---------------------|-------------------|
| - photocell dirty | - clean |
| - photo cell faulty | - replace |

Unit stops, but works after restart:

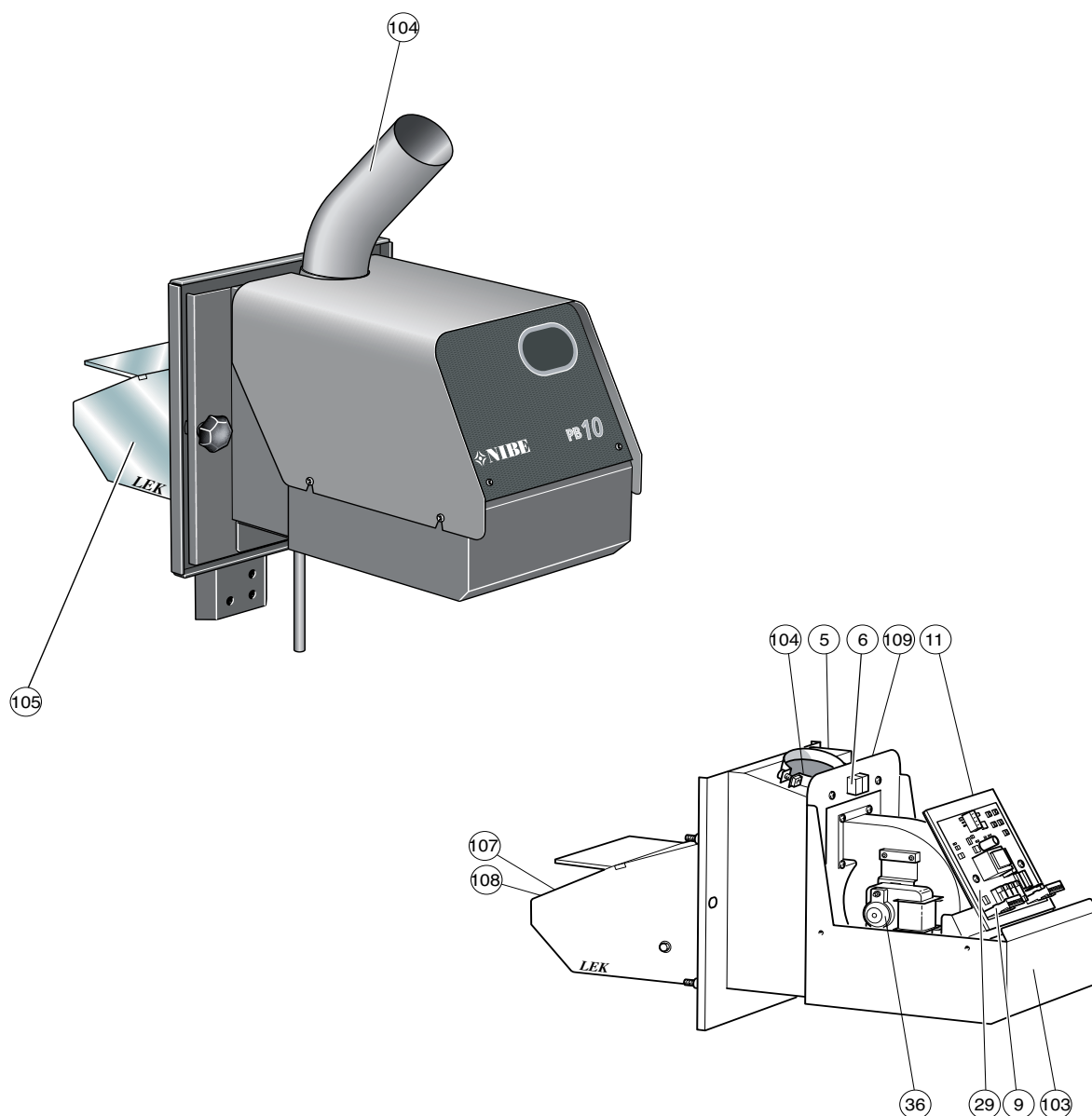
The photo cell has been affected due to incorrect combustion

| Checks | Corrective action |
|---------------------|---|
| - sensitivity on P5 | - check LD1 when firing (LD1 must come on when the burner is lit) |

Note!

Work behind screwed covers may only be carried out under the supervision of a qualified electrician.

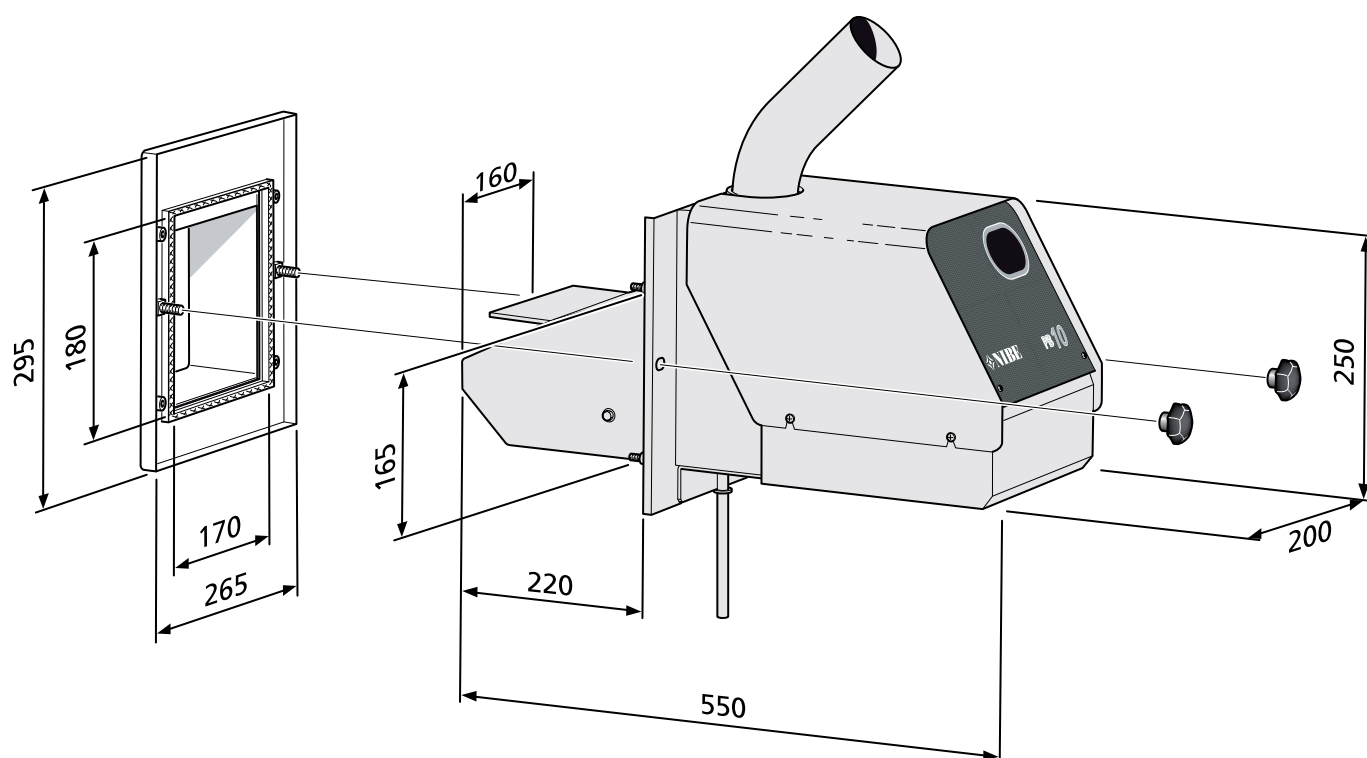
Component locations



List of components

- 5. Doorframe switch
- 6. Overheat protection
- 9. Connection, supply
- 11. Connection, pellet screw
- 29. Relay card
- 36. Fan
- 103. Serial number plate
- 104. Feed pipe
- 107. Ignition pod
- 108. Glow coil
- 109. Photocell

Dimensions



Leave approximately 750 mm free area around the burner to facilitate service and maintenance.

Technical specifications

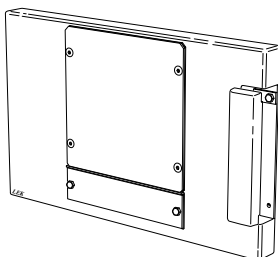


| Model | PB 10 |
|-------------------------------------|--|
| Burner | Wood pellets 6 - 10 mm |
| Output area | 10 - 20 kW |
| Boiler size | For boilers with lighting surface up to 3 m ² |
| Fuel reservoir | External (not included) |
| Fuel feed | External screw (not included) |
| Electrical connections | 230V/10 A |
| Installation | Electrical Authorisation |
| Fuel volume: | External container 250 litres. (accessory). |
| Dimensions | |
| Length: | 570 mm. |
| Height: | 470 mm. (incl. filler pipe) |
| Width: | 200 mm. (fan cover) |
| External screw: | L=1.5 or 2.5 m |
| Weight | |
| Burner | 17 kg (excl. packaging) |
| Screw 1.5m | 9 kg (excl. packaging) |
| Screw 2.5m | 11 kg (excl. packaging) |
| Electrical specifications: Standard | |
| Voltage: | 230 V 1-phase |
| Fuse: | 10 A |

Accessories

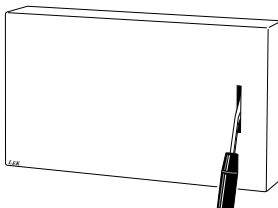
Pellet burner door for VEDEX 1000/3300

Part no. 089 878



Pellet burner door for VEDEX 3000

Part no. 089 868



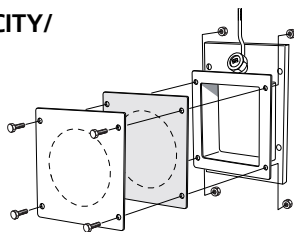
Pellet burner door with spacer conector for CITY/ ATTACK/COMBI VX (before 2005)

Part No 420 088

CITY, COMBI VX

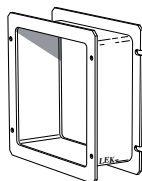
Part No 420 089

ATTACK



Pellet connector

Part no. 089 869



Draft limiter

The draft is dependent on the chimney's cross-section, height, position of the building, wind conditions, outdoor temperature, boiler output, flue gas temperature and soot build-up.

The majority of today's boilers are installed on and connected to older chimneys. Sometimes the chimneys have a cross-section and insulation that is not suitable for replacement between different fuels.

Great deviations in draft can cause different conditions in the boiler's firebox. To minimize this as well as the risk of any damage caused by condensation in the chimney, there is draft limiter available as an accessory that can be installed on the boiler's flue pipe.

Part No 089 864

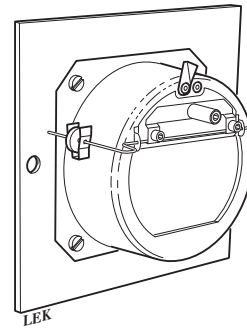
RSK No. 621 07 41

Installing the draft limiter for chimneys

The draft limiter has a newly developed design that makes installation on the flue pipe possible in all positions. Vertical, angled as well as horizontal. The draft limiter is installed on an adjustable panel that replaces the existing soot door.

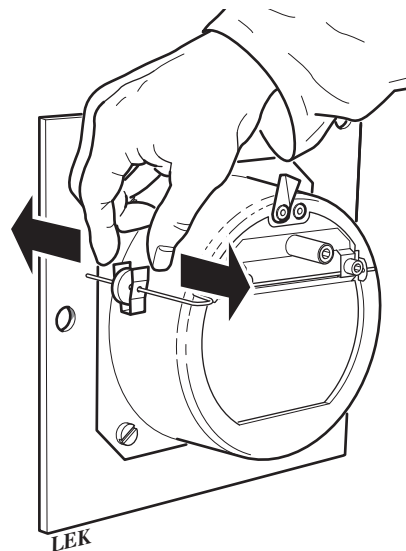
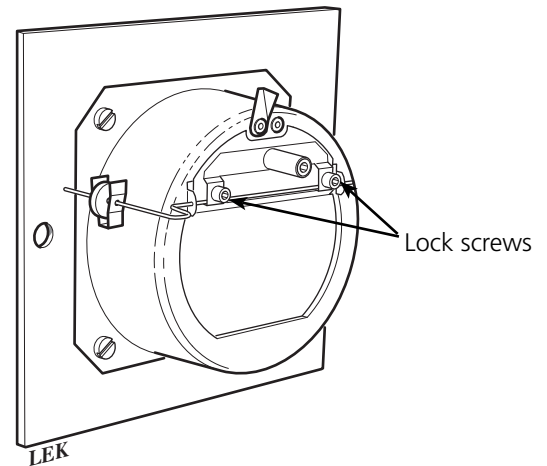
Adjusting vacuum

Adjust the vacuum when the door is opened by pressing the clamp together in which the weight is located and move it along the shaft. Alter the vacuum by 1 Pa per 2 mm, when moving the weight. These are approximate values and must be checked using a draft gauge if exact values are required. Upon delivery, the door is set at 10 Pa. At the correct setting, the door must open smoothly and evenly when the burner is not in operation.



Adjusting the balance shaft

After installation, slacken off the two locking screws slightly and turn the balance shaft so that it is horizontal when the door is closed. Then tighten the screws.



Pellet screw

Supply screw 1.5 m
Part no. 618 905

Supply screw 2.5 m
Part no. 618 906

Installing the pellet screw in "weekly store"

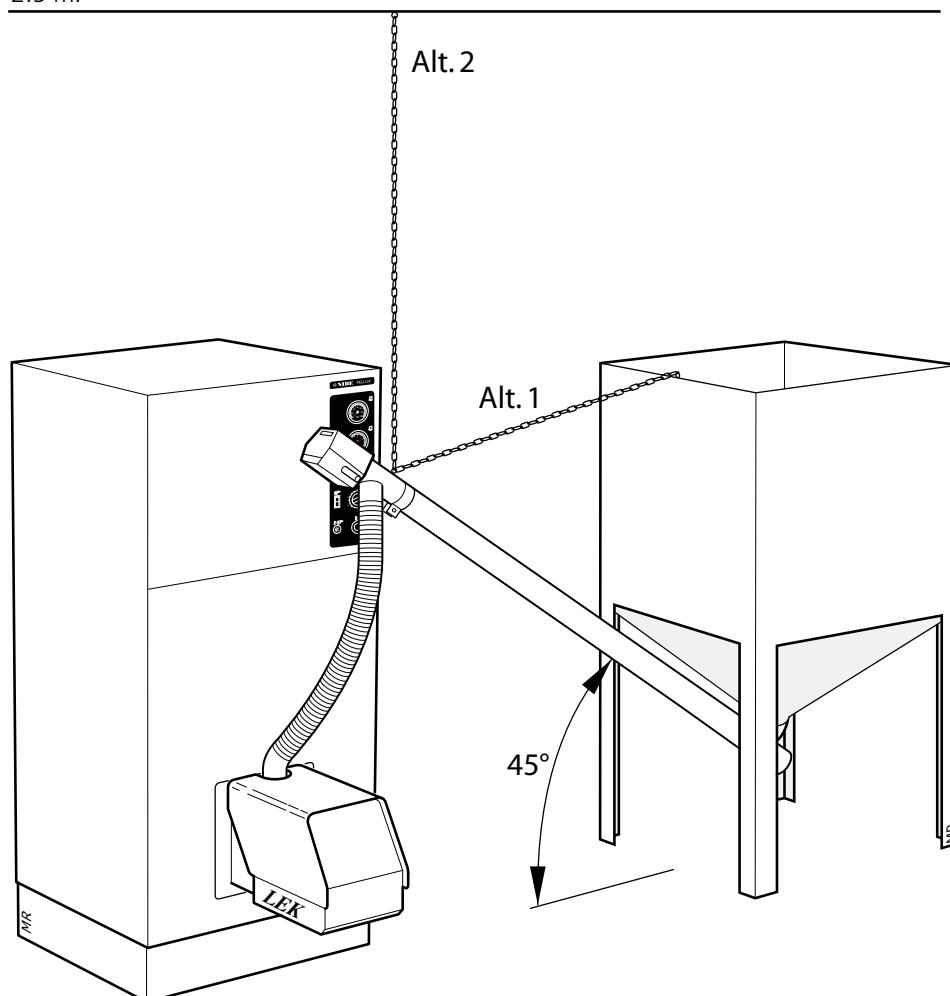
1. Check that all component parts are supplied upon delivery.
2. Place the pellet screw in the pellet store at a maximum angle of 45° from the level of the floor.
3. Install one end of the chain in the mounting eyelet on top of the drop pipe, with the supplied quick link.
4. Stretch the chain to a suitable length and secure it in the pellet store (alt.1) or in the roof (alt.2) using suitable screws or hooks. If the chain is secured in the pellet store, a hole must be drilled through the front of the container.
5. Install the hose and hose clamps on the screw's outlet pipe and inlet pipe of the burner.
6. Make any necessary post adjustments to the screw angle and hose length. The hose should have gently sloping bends to prevent fine particles from collecting inside it. The outlet section of the screw must be slightly recessed in relation to the inlet side of the burner.
7. Detach the hose from the inlet pipe and run the pellet screw in the wall socket to feed in pellets. When the pellets drop through the hose and into, for example, a bucket, run for a few more minutes to ensure an even supply.
8. Reinstall the hose on the inlet pipe and connect the pellet screw's contact to the burner.
9. Start the burner.

Maintenance instructions:

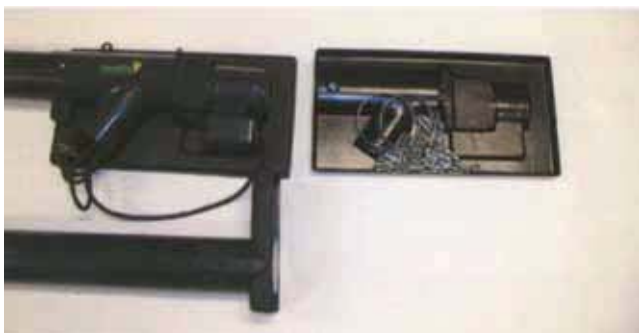
The store must be emptied of swarf/fine particles 2–4 times a year

Pellet screw component parts 1.5 or 2.5 m:

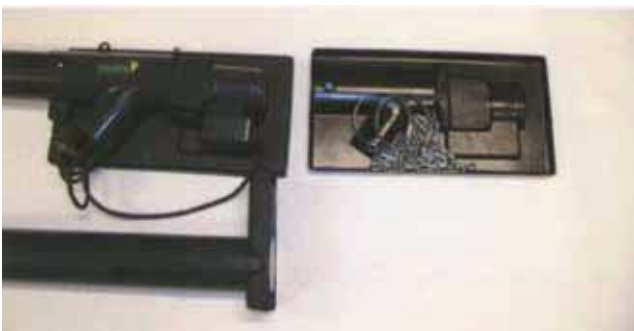
- 1 x pellet screw
- 1 x chain 1.3 m
- 1 x hose $\varnothing 65$ mm L= 1 m
- 2 x quick link 4 mm
- 2 x hose clamp 58–75 mm



Installation of NIBE pellet screw 2.5m



1. Remove the plastic panel that covers the motor section (drive section).



2. Remove the end panel from the pipe without the motor



3. Remove the strap that holds the drive section and the joint pipe, bend out the joint pipe. Take care as the coil is tensioned.



4. Pull off and turn the joint pipe. Slide the drive section and the joint pipe so that the end with socket is at the end of the screw. Slide the drive section and joint pipe until they bottom. Turn the joint pipe so that the socket in the joint pipe is on the opposite side (180 degrees) as the drive section's outlet.
5. Use the supplied drill to make a hole straight through



the joint sleeve and joint pipe and tighten using the supplied screw.

6. Connect to a 220/230 V power source and test run.







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