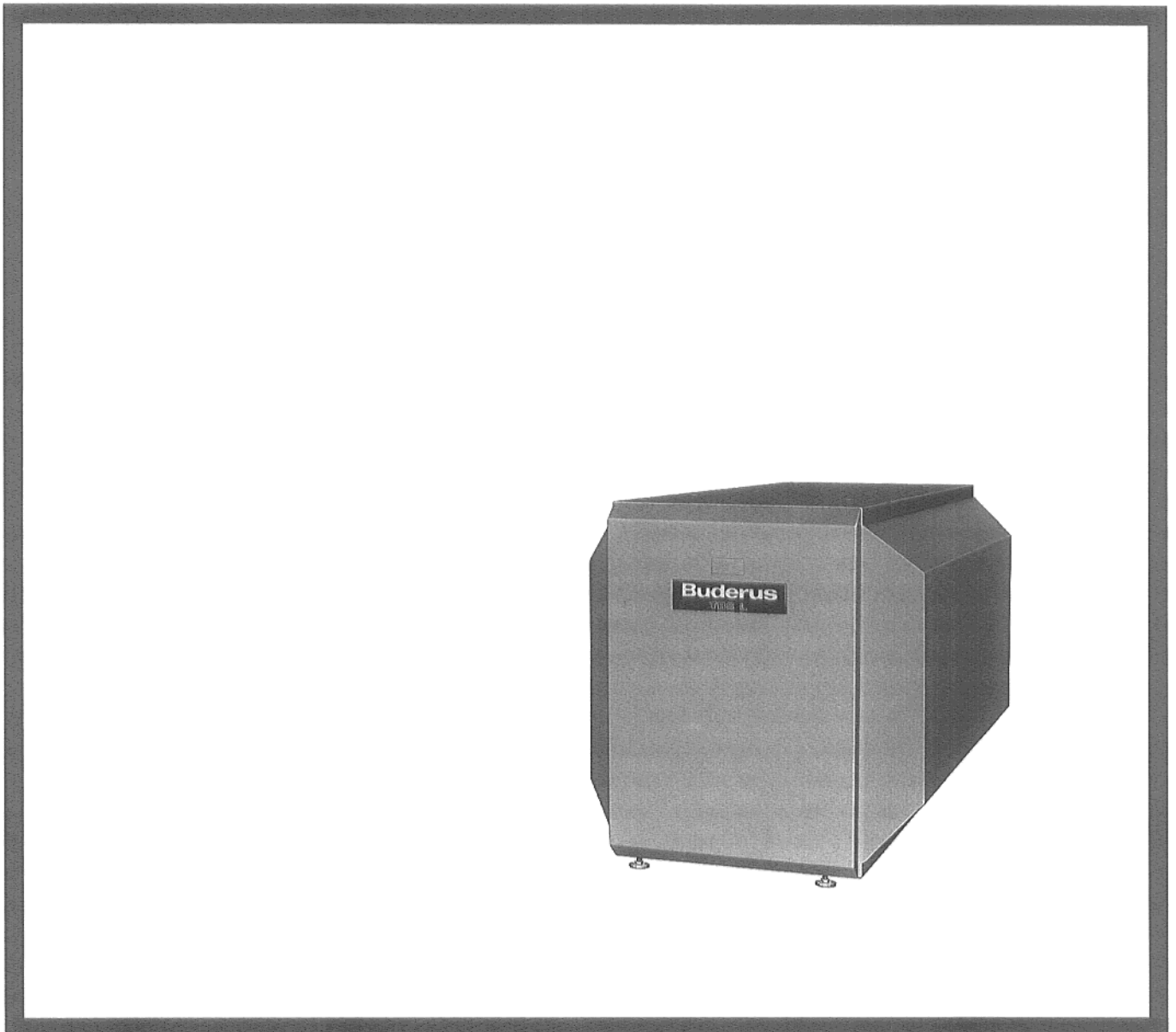


Installation and maintenance manual

Indirect-fired water heater L 135–200



Please save these instructions!

1. General

The indirect-fired water heaters of the L series are installed at floor level underneath a boiler.

A fastening bracket* for installing the boiler on the indirect fired domestic hot water tank is provided with the tank.

The indirect-fired water heater is delivered assembled.

It consists of the storage tank with high-resistance foam insulation and an outer jacket.

To protect the indirect-fired water heater against corrosion, the inner walls and heating coils are thermoglazed.

In addition, the in-built magnesium anode serves to prevent corrosion. An inert anode can also be installed in place of the magnesium anode.

For installing the piping between the indirect-fired water heater and the boiler, the applicable installation instructions have to be followed.

All the information necessary for operating can be found in the operating manual for the control system and the boiler.

The testing and replacement of the magnesium anode are described in the replacement instructions.

* except for the G 124 X

Transportation

Note:

Notes on the transportation, removal of packaging and for installing the adjustable screw-on feet are found on the last page of this installation manual.

The transportation of the indirect-fired water heater can be made easier by screwing transportation aids* into the connection piece on the inspection port lid and the storage supply and return connections (Fig. 1).

During transportation, the side panels and the front panel can be removed (Fig. 15).

* field-installed; not provided by Buderus

Dimensions and weight

model number	storage tank size gall.	length L inches	weight lb.
L-135	35	32	198
L-160	42	36 1/4	230
L-200	52	42 3/8	256

Load capacity of all storage tank sizes max. 1100 lb.

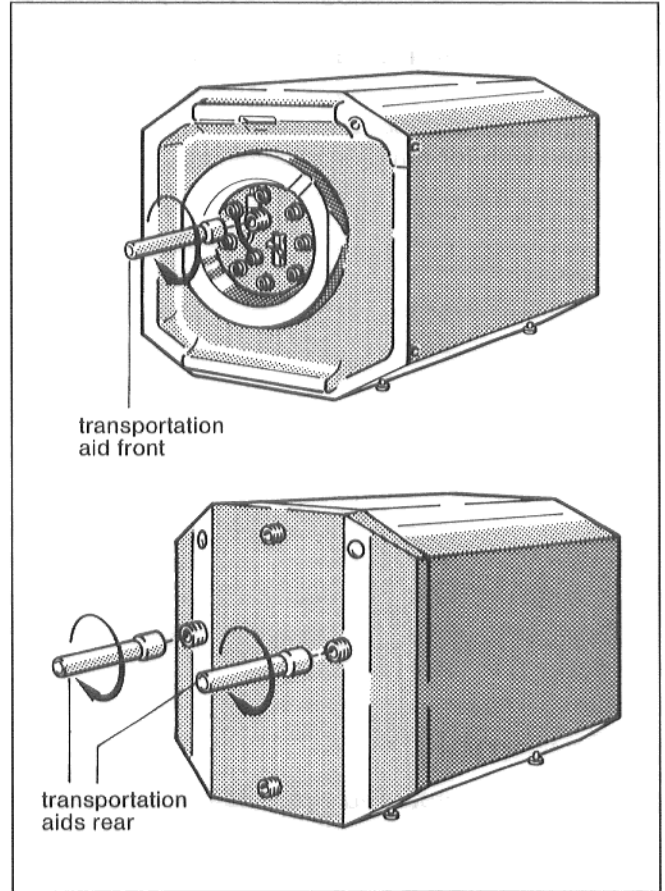


Fig. 1

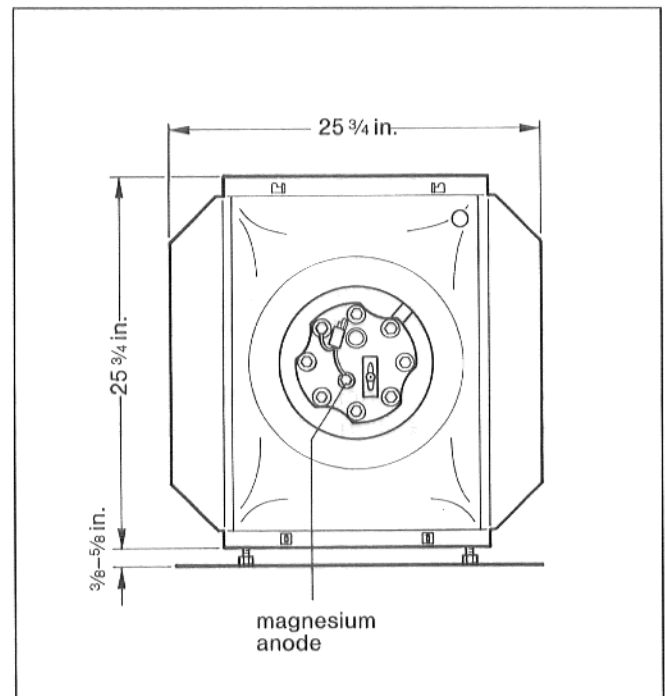


Fig. 2

2. Locating the water heater

The indirect-fired water heater must be installed indoors in a location heated to a minimum temperature of 32 °F.

The indirect-fired water heater must not freeze. If there is danger of freezing, it must be protected or emptied.

The floor must be level and capable of bearing a load.

The minimum distances shown in Fig. 3 must be complied with for maintenance tasks.

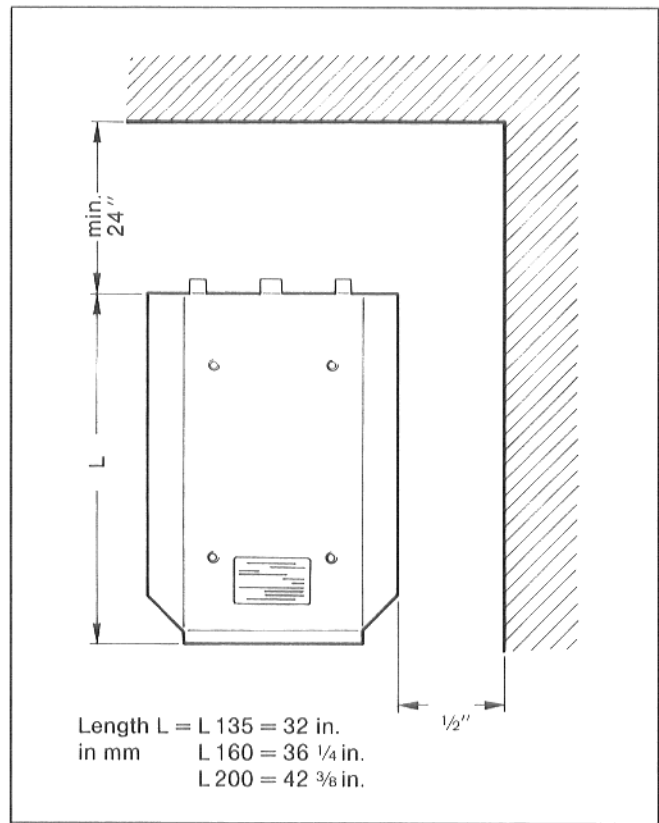


Fig. 3

3. Assembly

- Align the indirect-fired water heater with a slight tilt toward the rear by adjusting the screw-on feet (Fig. 4).

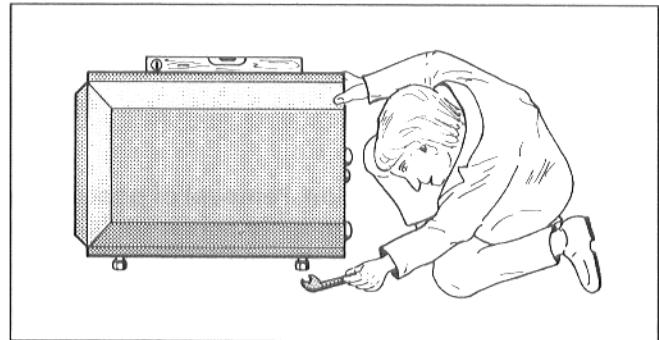


Fig. 4

Installing the sensor

- Pull the front panel of the storage tank toward the front and detach from the hooks on the storage tank (Fig. 5).
- Remove the front panel toward the front and take out the high-resilient foam insulating disk (Fig. 12).

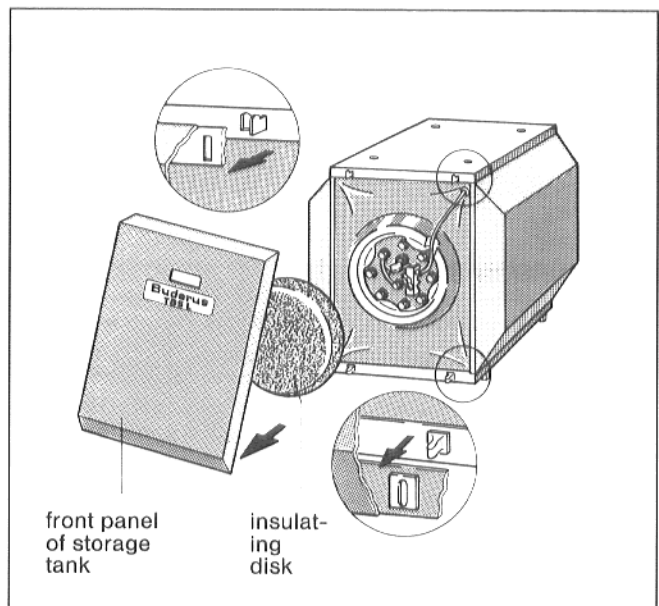


Fig. 5

- Insert domestic hot water sensor* into the cable channel from the rear of the storage tank (Fig. 6).

* supplied with control system

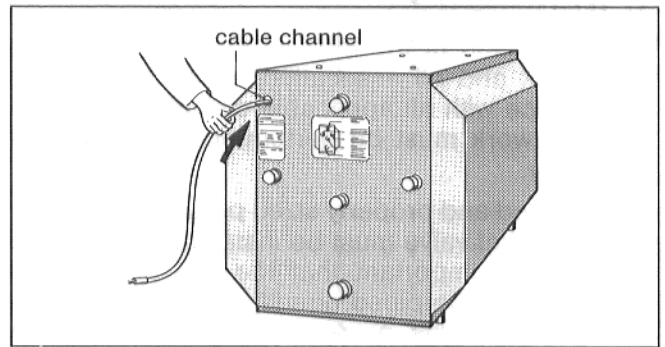


Fig. 6

- Pull the sensor out of the cable channel on the front of the storage tank and take it on to the sensor fastener on the inspection port lid (Fig. 7).
- Remove the blank plate in the front panel of the storage tank.
- Feed the sensor for the domestic hot water thermometer* (FB) from the front through the removable piece in the front of the jacket and insert the thermometer housing in the break-out piece (Fig. 7).
- Unroll the sensor cable and take it through the slit in the thermal insulation to the sensor fastener on the inspection port lid (Fig. 7).

* accessory

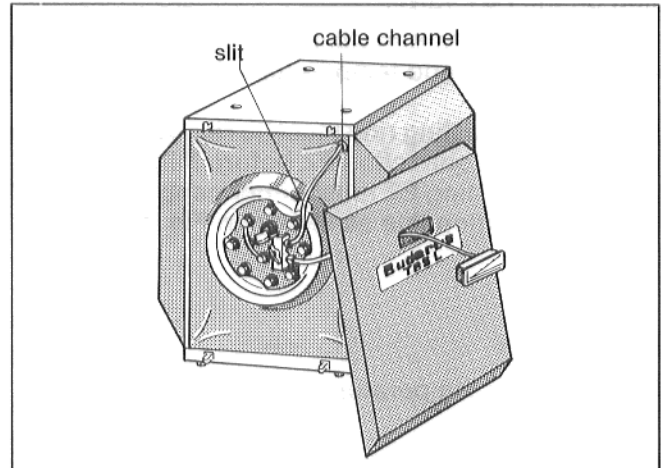


Fig. 7

- Loosen the wing-nut of the sensor fastener, insert the sensor into the mounting plate to match its geometrical shape (Fig. 8).
- Tighten the wing-nut.

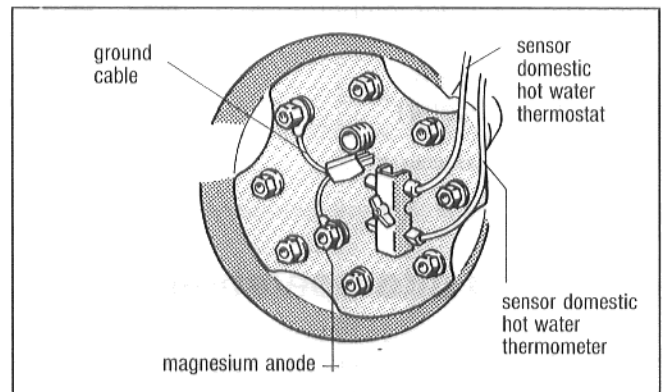


Fig. 8

Magnesium anode

- Check whether the ground lead of the magnesium anode is connected to one of the fastening screws of the inspection port lid (Fig. 8).

Control panel Ecomatic 4000

- Connect the plug on the ground lead with the cable from the control panel (Fig. 8).
For other control panels, the plug is not used.
- Insert insulating disk in front of the inspection port lid (Fig. 9).
- Fit the front panel of the storage tank with the two slits onto the hooks on the body of the storage tank (Fig. 9).

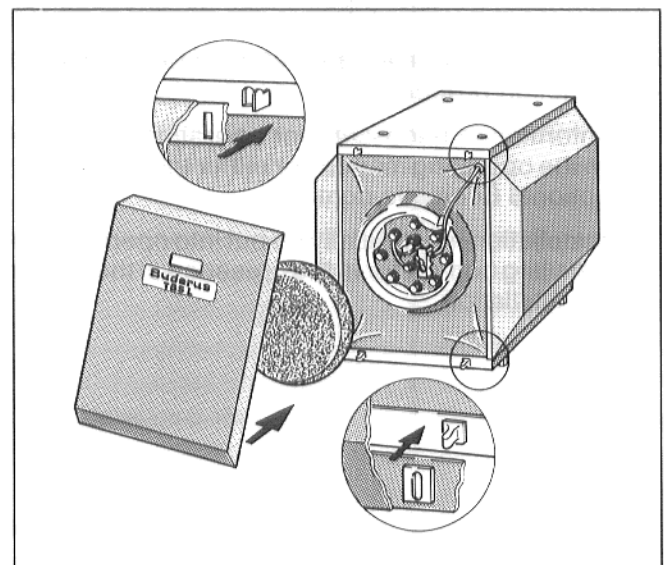


Fig. 9

4. Installation

The installation of the indirect-fired domestic hot water tank and all associated piping must be in accordance with all applicable codes and regulations. All work must be performed by a licensed contractor.

An approved and properly sized pressure and temperature relief valve must be installed as shown in Fig. 10. It is important that the P&T relief valve discharge line be piped directly to a drain without any shutoff valves or restrictions, and that the discharge line be the same diameter as the connection on the P&T valve.

It is advisable to periodically check the operation of the pressure and temperature relief valve.

NOTE: The hoisting ring must be removed from the recirculation connection EZ before filling the tank. Connection fitting EZ must either capped or piped to a recirculation line as shown in Fig. 10.

Safety limits

heating water temperature.	max. 160 °C (320 °F)
operating pressure (hot water) . . .	max. 25 bar (362 psi)
domestic hot water temperature . . .	max. 95 °C (203 °F)
operating pressure.	max. 10 bar (145 psi)*

* 100 psi max. in Massachusetts

5. Putting into operation

A check must be made to confirm that the indirect-fired water heater is filled and that cold water can flow into the storage tank.

All connections and pipes must be checked for leaks.

The magnesium or inert anode* must be connected and function properly.

The information necessary for operating is contained in the operating manual for either the SP-34 D or the optional Ecomatic control.

The installation must initially be put into operation by the installing contractor in the presence of the owner of the installation.

* accessory

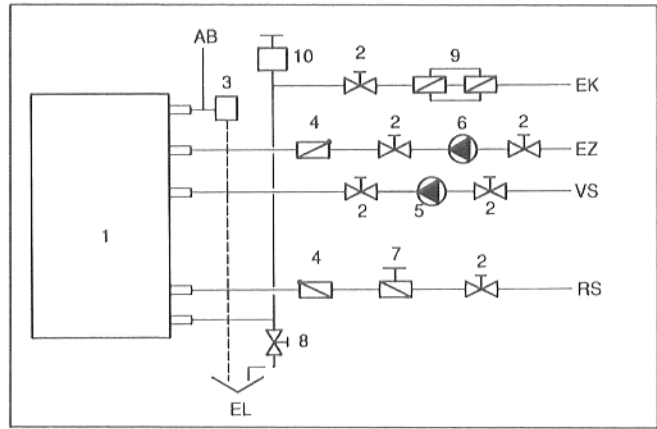


Fig. 10

- | | |
|--|-----------------------------------|
| 1 indirect fired domestic hot water tank | AB = domestic hot water out |
| 2 service valve | EK = domestic cold water in |
| 3 P & T valve | EZ = domestic water recirculation |
| 4 flow check | VS = boiler water supply |
| 5 circulator | RS = boiler water return |
| 6 optional recirculator | EL = drain |
| 7 air purge valve | |
| 8 drain valve | |
| 9 backflow preventer | |
| 10 vacuum relief | |

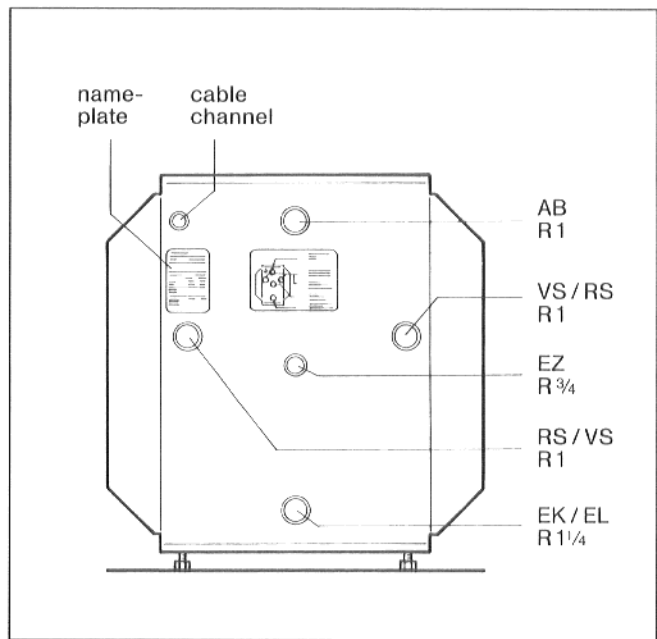


Fig. 11

- | | |
|-------------------------------------|-------------------|
| VS = boiler water supply | } interchangeable |
| RS = boiler water return | |
| AB = domestic hot water outlet | |
| EZ = circulation | |
| EK/EL = cold water inlet / drainage | |

6. Maintenance

If there is no written agreement to the contrary, the indirect-fired water heater may only be filled with drinking water.

In general it is recommended that a licensed contractor check and clean the indirect-fired water heater at least once every 2 years.

If the water supply is unfavorable (hard to very hard water) and the hot water demand is high, more frequent cleaning is necessary.

Cleaning

In most cases, mechanical cleaning is sufficient. It is carried out as follows:

- Drain the storage tank.
- Pull the front panel of the storage tank forward and lift up off the hooks on the body of the tank.
- Remove the front panel of the storage tank toward the front and take out the high-resilient foam insulating disk (Fig. 12).
- Unscrew the hexagonal head bolts from the inspection port lid and remove the lid with the magnesium anode and seal (Fig. 13).
- Hose out the storage tank with a powerful stream of cold water with approx. 58-73 psi pressure (circulating hot water through the heat exchanger will facilitate the removal of foreign material).
- If there is a lot of calcification, the residues should be removed with an industrial vacuum cleaner with a plastic suction tube.

Note: Never break up a calcified crust with a hard, sharp-edged object because this could damage the thermoglaze on the inner walls.

- Check magnesium anode and seal. If the anode has diminished to a diameter of 5/8 - 3/8 in., it should be replaced. Replace seal if necessary.
- Replace inspection port lid with magnesium anode and seal.
- Feed the sensor leads through the slit in the thermal insulation (Fig. 13).
- Insert the ring of the ground lead and screw in the hexagonal head bolts (Fig. 14).

Note: Screw in all hexagonal head bolts 'finger tight' and then tighten a three-quarter turn with a wrench (\approx the recommended tightening torque of 30 ft.-lb with a torque wrench.)

- Check inspection port lid for a tight fit.
- Insert thermal insulation in front of the inspection port lid and replace the front panel.

Inert anode accessory

The protective function of the inert anode is indicated by a green signal lamp on the control panel (shockproof plug).

If there is a malfunction (no protection against corrosion), the signal lamp flashes red.

If this is the case, please get in touch with your contractor or heating company right away.

The anode should not be soiled with oil or grease.

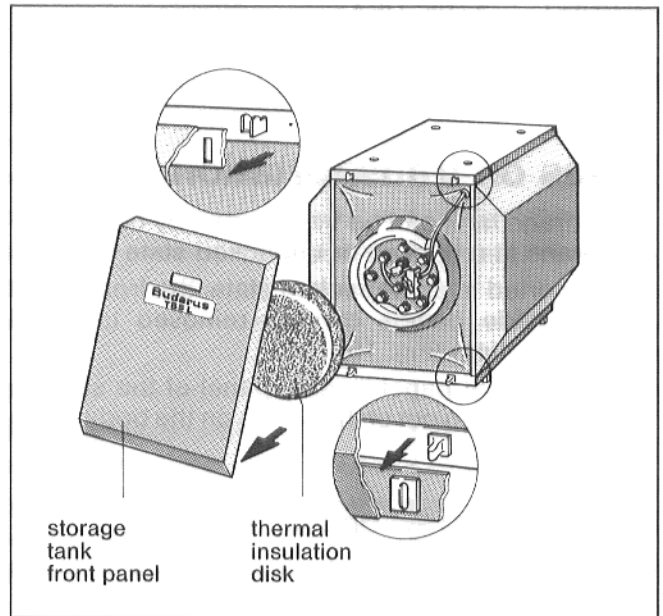


Fig. 12

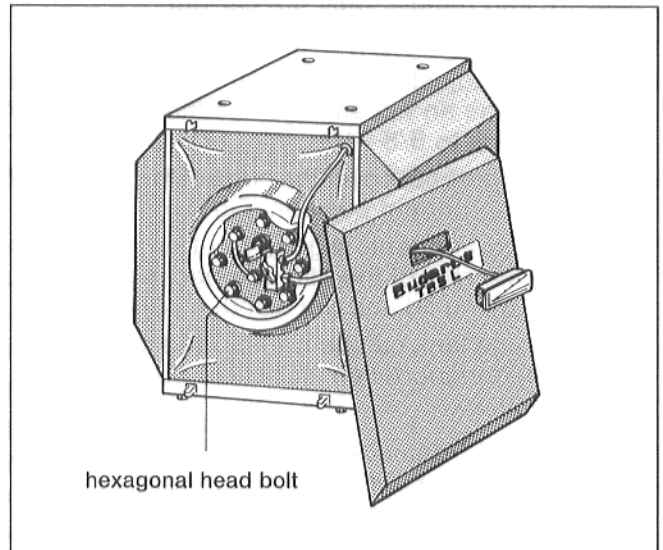


Fig. 13

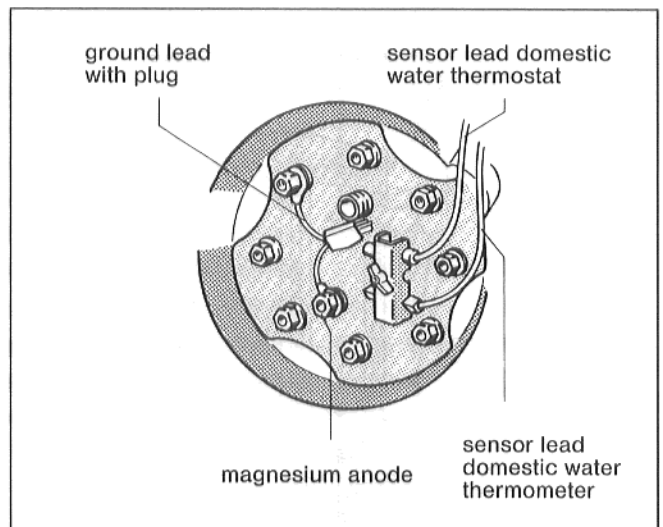


Fig. 14

Please save these instructions!

Notes on transportation

The storage tank can be transported by conventional means in a packed or unpacked state.

If transported in an unpacked state, the front panel and the side panels can be removed to avoid damage to them (Fig. 15).

- Pull the front panel or side panel of the storage tank and lift up out of the hooks on the body of the tank (Fig. 15).

Adjustable screw-on feet

Note: Screw-on feet and hexagonal head bolts are included as standard.

- Cut out the packaging film on the side of the water "Boiler-Storage tank connection" according to Fig. 16 and remove **only the cut-out**.
- Remove both wooden corner strips.
- Screw in 4 adjustable screw-on feet (packed with the boiler as an accessory) into the base of the storage tank to 5/8 – 1 in. (Fig. 17).
- Tilt the storage tank over the edge of the pallet and lift it into an upright position (Fig. 18).
- Lift the storage tank slightly front and rear and remove the rest of the film, the packaging base, the packaging lid and the wooden pallet.

The storage tank can be transported more easily by using transportation aids (field-installed) (Fig. 1, page 3).

Note: To avoid damaging the thermoglaze at the domestic hot water outlet (AB), cold water inlet (EK) and circulation (EZ), no sharp objects may be inserted at these points.

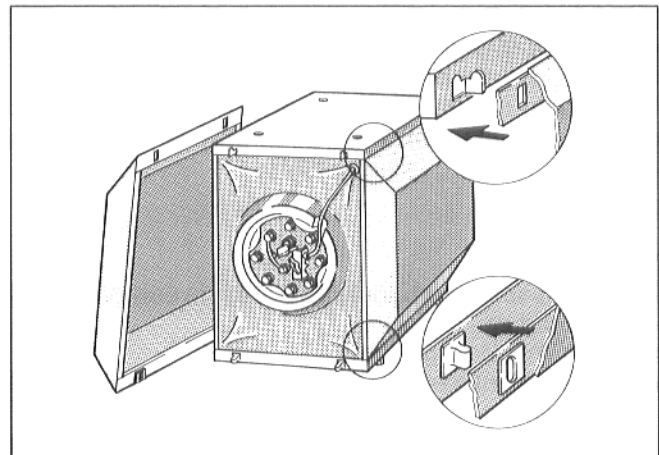


Fig. 15

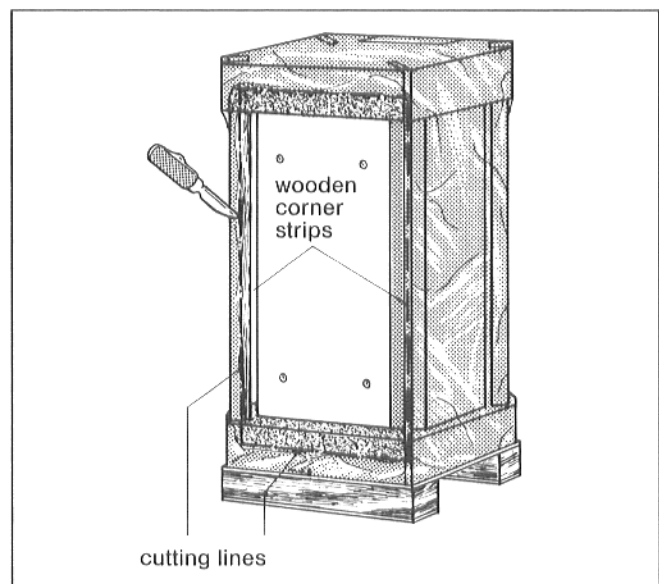


Fig. 16

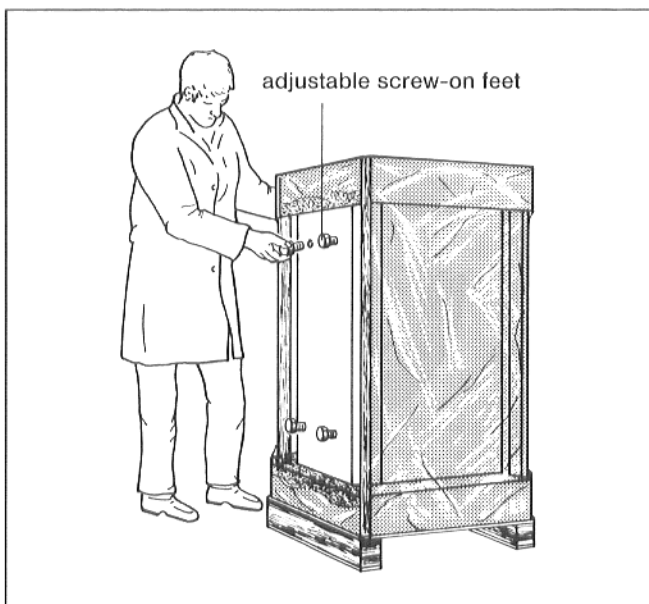


Fig. 17

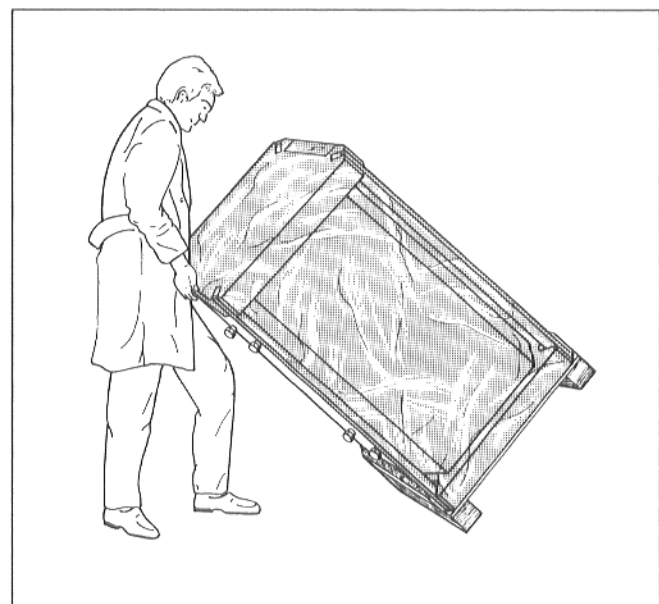


Fig. 18