

# ARITERM

*For a sustainable future.*

## INSTALLATION, OPERATION AND MAINTENANCE

♦ BioComp 40 - 150 kW



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## ■ General

The BioComp-series bio boiler is economical, manageable and environmentally friendly. All the boilers in the series are available as either right or left handed, with maintenance and ash removal hatches in front. The boiler is equipped with an integrated ash chamber as standard. The boiler can be equipped with Ariterm Multijet-, BioJet- and HakeJet burners, or Axon-pellet burner. The fuels that can be used with the boiler, depending on the burner, are wood chip, pellet, peat, sawdust etc.

The standard package of the BioComp -boiler includes an automatic convection part cleaning, a flue gas fan and a plate heat exchanger with pump. The automatic convection part cleaning significantly aids/reduces maintenance work required and guarantees good efficiency. The flue gas fan ensures the required underpressure in the fire chamber. Large maintenance and cleaning hatches facilitate the cleaning of the BioComp -boiler. Available accessories include e.g. fire chamber ash screw and ash box.

| <b>This manual applies to models:</b> | <b>Left</b> | <b>Right</b> |
|---------------------------------------|-------------|--------------|
| BioComp 40 kW                         | 5033589     | 5033590      |
| BioComp 60 kW:                        | 5033591     | 5033592      |
| BioComp 80 kW:                        | 5033593     | 5033594      |
| BioComp 120 kW:                       | 5033595     | 5033596      |
| BioComp 150 kW:                       | 5033597     | 5033598      |

## ■ Contents of delivery (Page 23)

### The boiler delivery includes:

- Bio boiler with hatches
- Cleaning equipment
- Smoke duct and flue gas fan
- Automatic convection cleaning
- Plate heat exchanger and pump

### Accessories:

- Arimatic 151 control centre
- BioComp 40 -control (automatic cleaning, heat exchanger pump, flue gas fan)
- Fire chamber ash screw and ash box
- Fire chamber ash screw with extra length
- Secondary ash screw
- Convection part ash screw and ash box
- Electric resistance with thermostat 6 or 9 kW (to be installed on the boiler's electric resistance connection)
- Oil burner equipment (hatch set for BioComp 60 kW model)
- Axon/PX52 pellet burner equipment (hatch set for BioComp 40 model)
- BeQuem 40 pellet burner set BioComp 40 kW-malliin (burner flange)
- BioJet/HakeJet adapter flange (BioComp 60/80/120/150-models)

## ■ TRANSPORTATION, STORAGE AND OPENING THE PACKAGE

### ■ Reception

The boiler is delivered in a wooden frame. It is on a platform from which the boiler can be lifted safely. The package should be opened as close to the installation site as possible. The boiler has been insured against possible transport damage from the factory to the first point of storage by the manufacturer. It is important for the receiver of the boiler to check the condition of the boiler before accepting the delivery. In case of damage, the dealer should be contacted immediately.

### ■ Storage

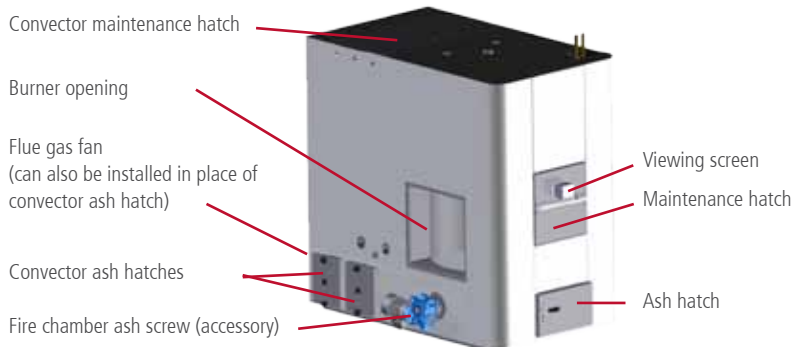
The boiler can be stored outside if it is covered from the rain. However, the recommended storage of the boiler is indoors.

### ■ Opening the package

After opening the package, use the equipment list to check that all the accessories have been delivered.

Disposing of the package: the plastic hood is landfill waste, the planks can be burned.

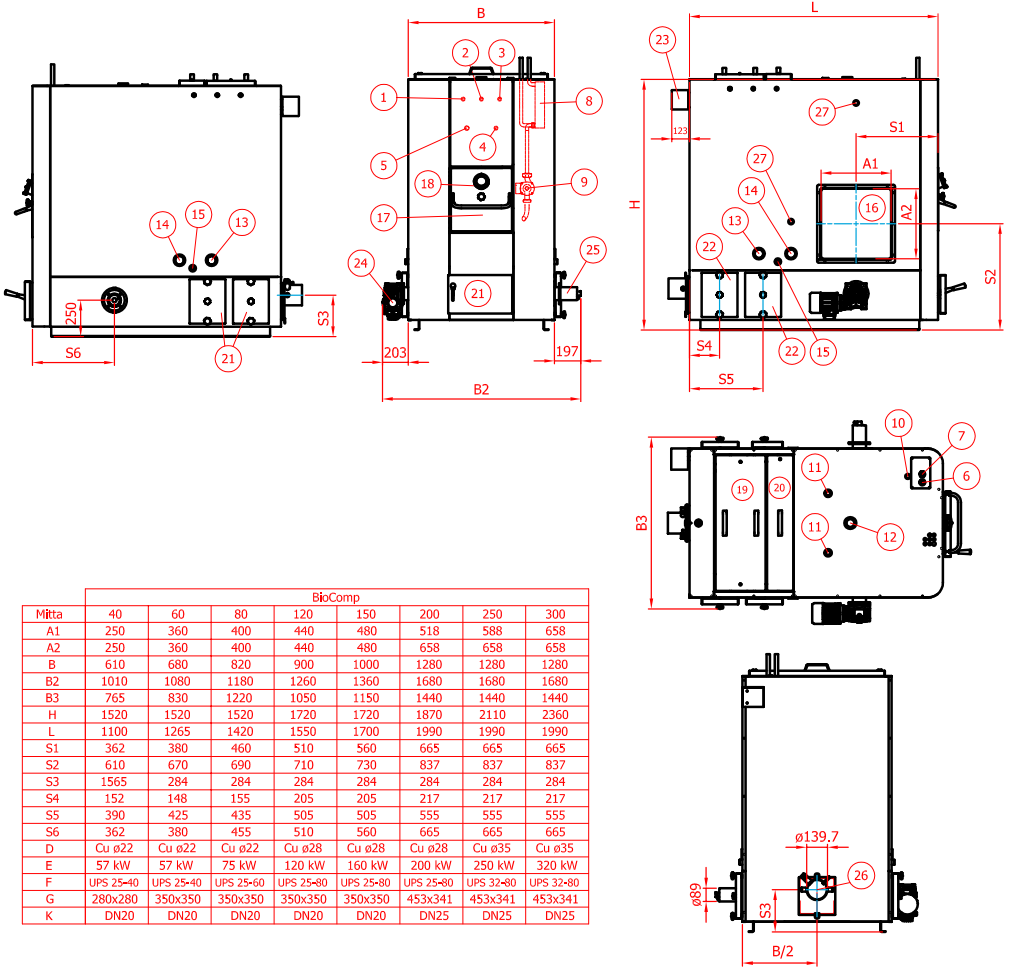
## TECHNICAL DATA



| Boiler                      | BioComp 40 | BioComp 60 | BioComp 80 | BioComp 120 | BioComp 150 |
|-----------------------------|------------|------------|------------|-------------|-------------|
| Power, kW                   | 40         | 60         | 80         | 120         | 150         |
| Weight, kg                  | 495        | 640        | 786        | 1035        | 1193        |
| Volume, l                   | 175        | 280        | 330        | 448         | 567         |
| Max operating pressure, bar | 3,0        | 3,0        | 3,0        | 3,0         | 3,0         |
| Max operating temp., °C     | 130        | 130        | 130        | 130         | 130         |

| Fire chamber measurements            | BioComp 40 | BioComp 60 | BioComp 80 | BioComp 120 | BioComp 150 |
|--------------------------------------|------------|------------|------------|-------------|-------------|
| Height, mm                           | 895        | 895        | 895        | 1095        | 1095        |
| Diameter, mm                         | 430        | 500        | 640        | 720         | 820         |
| Volume, m <sup>3</sup>               | 0,13       | 0,18       | 0,29       | 0,45        | 0,58        |
| Fire surface load, kW/m <sup>2</sup> | 11,1       | 10,6       | 10,5       | 10,8        | 10,5        |
| Burner opening, mm x mm              | 250x250    | 360x360    | 400x400    | 440x440     | 480x480     |
| Chimney duct, Ø mm                   | 139        | 139        | 139        | 139         | 139         |
| Chimney, min Ø, mm                   | 150        | 150        | 150        | 200         | 200         |
| Chimney min length, m                | 5          | 5          | 5          | 5           | 5           |
| Flow/Return, DN                      | 50         | 50         | 50         | 50          | 50          |
| Expansion connection, DN             | 25         | 25         | 25         | 25          | 25          |
| Thermostat connection, DN            | 15         | 15         | 15         | 15          | 15          |
| Heat exchanger, power kW             | 57         | 57         | 75         | 120         | 150         |
| Heat exchanger pump                  | UPS 25-40  | UPS 25-40  | UPS 25-60  | UPS 25-80   | UPS 25-80   |

# DIMENSIONS



- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Boiler water overheating protection DN 15</li> <li>2. Spare DN 15</li> <li>3. Boiler water temperature sensor DN 15</li> <li>4. Fire chamber sensor connection DN 15 (BC40 DN 20)</li> <li>5. Fire chamber sensor connection DN 20 (BC40 DN 15)</li> <li>6. Cold water Ø 22 Cu</li> <li>7. Warm water Ø 22 Cu</li> <li>8. Plate heat exchanger</li> <li>9. Heat exchanger pump</li> <li>10. Bleeding screw for the water network</li> <li>11. Expansion / relief valve DN 25</li> <li>12. Flow to network DN 50</li> <li>13. Return from network DN 50</li> </ol> | <ol style="list-style-type: none"> <li>14. Electric resistance connection DN 50</li> <li>15. Drain connection DN 20</li> <li>16. Burner opening, right or left side</li> <li>17. Maintenance hatch</li> <li>18. Viewing screen</li> <li>19. Front convector cleaning hatch</li> <li>20. Rear convector cleaning hatch</li> <li>21. Ash hatch</li> <li>22. Cleaning hatch</li> <li>23. Convector cleaner motor</li> <li>24. Ash screw motor</li> <li>25. Ash screw</li> <li>26. Smoke duct Ø 139</li> <li>27. Biojet cooling connections</li> </ol> |
|---|--|

## ■ BOILER INSTALLATION

The installation of the boiler can only be conducted by a professionally qualified installer. The installation should be carried out so that it fills at least the country's minimum requirements applicable to heating systems in question. The boiler's electrical installations can only be carried out by a professional with the required proficiencies.

### ■ Space requirements

The boiler room must meet the local fire classification requirements. In the front and on one side of the boiler there should be approximately 1 m of free space for cleaning and maintenance operations. Above the boiler there should be at least the boiler's height of free space for cleaning the convection ducts. Furthermore, enough space should be left for the maintenance of the flue gas fan. In the space plan the space required by the attached burner and ash screws must also be taken into account.

### ■ Flue connection and combustion air opening

The BioComp boiler is equipped with a flue gas fan which ensures the required underpressure in the fire chamber. The standard boiler has a chimney duct at the back of the boiler but the duct can also be transferred to either side by changing places with the convector ash hatch.

**CHIMNEY RECOMMENDATION:** stainless or acid proof

|                               | BioComp 40                                      | BioComp 60                                      | BioComp 80                                      | BioComp 120                                     | BioComp 150                                     |
|-------------------------------|---|---|---|---|---|
| <b>Minimum Ø</b>              | Ø 150 mm  | Ø 150 mm  | Ø 150 mm  | Ø 200 mm  | Ø 200 mm  |
| <b>Minimum length</b>         | 5 m   | 5 m   | 5 m   | 5 m   | 5 m   |
| <b>Combustion air opening</b> | 200 cm <sup>2</sup><br>140 x 140 mm<br>Ø 160 mm | 300 cm <sup>2</sup><br>180 x 180 mm<br>Ø 200 mm | 400 cm <sup>2</sup><br>200 x 200 mm<br>Ø 230 mm | 600 cm <sup>2</sup><br>250 x 250 mm<br>Ø 280 mm | 750 cm <sup>2</sup><br>280 x 280 mm<br>Ø 300 mm |

### IMPORTANT!!

Availability of sufficient amount of combustion air is important for clean burning and sound functioning of the boiler. The combustion air opening must not be covered up. The free area of the combustion air opening must be approximately 500 cm<sup>2</sup> / 100 kW.

Keep the boiler room door closed when adjusting the burner! This ensures that the combustion air supply corresponds to the normal operating situation.

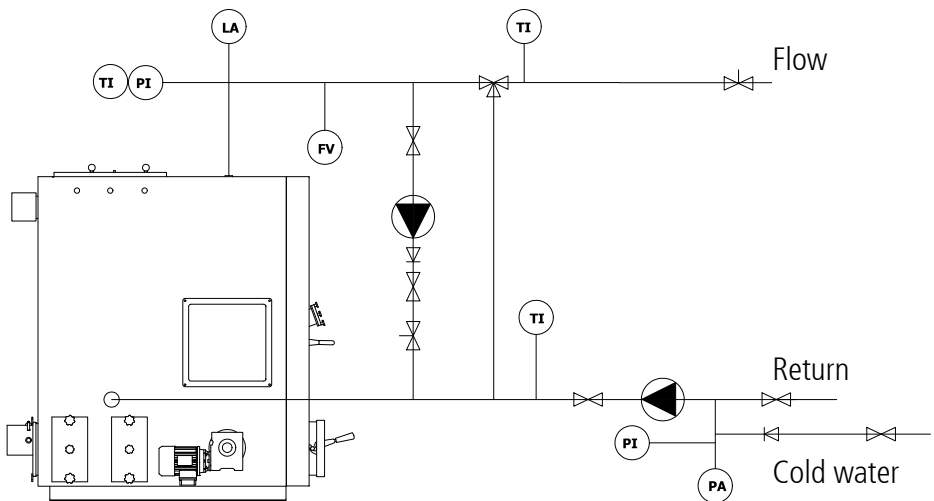
# PIPE INSTALLATION

## Pipe installations

The BioComp -boiler has been designed to operate without an accumulator tank. The boiler has a large water capacity and it has its own heat exchanger for production of domestic hot water. It is, however, possible to install an accumulator tank if the boiler is used intermittently or momentary peaks in consumption such require. The thermostats, overheating protection equipment and other safety devices are installed according to the burner instructions. Before the boiler installation, the heating network must be flushed and tested using a hydraulic pressure test. The sealing of the connections must be checked after the installation. The factory is not responsible for damage caused by leaking connections.

**NOTE!** The boiler circulation ensures that the return water temperature is high enough (min 70 °C.). This is important in order to ensure good combustion conditions and to prevent corrosion to the boiler body caused by the cold return water (see installation example below).

## Installation example



|       |                            |
|-------|----------------------------|
| TI/PI | Thermometer/Pressure gauge |
| TI    | Thermometer                |
| FV    | Safety valve               |
| PA    | Expansion tank             |
| LA    | Low-water cut off device   |



## ■ PIPE INSTALLATION

### ■ Safety valve installation (not included in the delivery)

The valve must be CE-marked with the maximum opening pressure of 3,0 bars and the minimum size of DN 25. The safety valve must be chosen according to the highest pressure class of the device combination. Do not install a closing device (valve or similar) between the valve and the boiler. The outlet pipe must be measured and installed so that it does not limit the outlet capacity of the valve or cause a dangerous situation when the valve is in operation.

**WARNING!** Hot pressurised steam comes out of the valve when it is in operation!

### ■ Expansion tank

The size of the expansion tank is chosen as follows:

Closed system: According to the instructions of the expansion tank manufacturer

| System capacity (litres) | Opening pressure (bars) | Pre-pressure (bars) | Tank capacity (litres) |      |
|--------------------------|-------------------------|---------------------|------------------------|------|
|                          |                         |                     | 70°C                   | 90°C |
| 500                      | 3,0                     | 0,5                 | 35                     | 80   |
| 1000                     | 3,0                     | 0,5                 | 80                     | 140  |
| 1500                     | 3,0                     | 0,5                 | 80                     | 140  |
| 2000                     | 3,0                     | 0,5                 | 140                    | 200  |

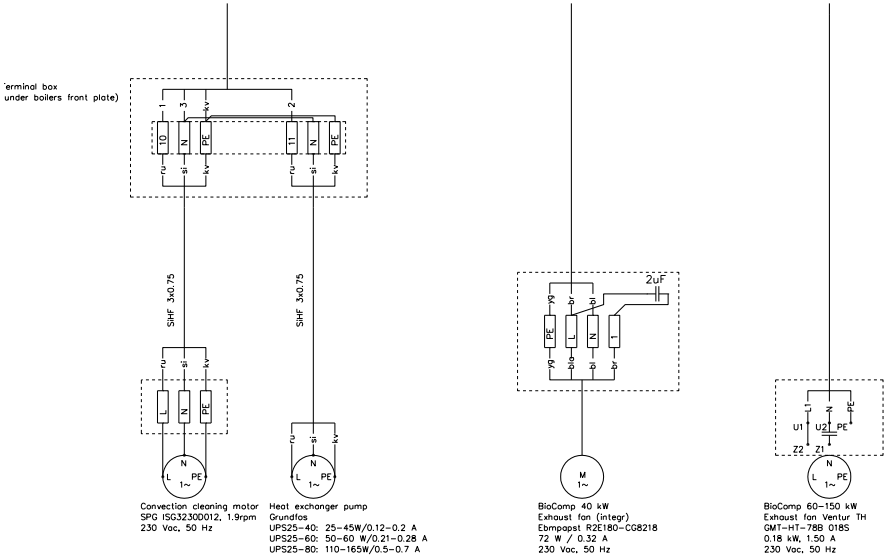
System capacity = boiler capacity (+ accumulator capacity) + pipe capacity + radiator capacity

### ■ Domestic hot water production

The BioComp -series boilers have an efficient plate heat exchanger for domestic hot water production which means that a separate accumulator is not usually needed. The pressure capacity of the plate heat exchanger is 10 bars. An external heat exchanger of a desired capacity can also be connected to the system.

The standard features of the BioComp -boiler include a heat exchanger pump and an automatic cleaning. These have been connected to the terminal box at the factory. The flue gas fan is also a standard feature. The fan can in 60-150 kW models be installed either at the back of the boiler or on the side instead of the ash hatch. The 40 kW model has an integrated flue gas fan at the back of the boiler. The functions can be controlled by Arimatic 151 -control center or with BioComp 40/60-150 kW -control centres.

# WIRING DIAGRAM



## Terminal box



1. Open the two screws at the bottom of the front panel of the boiler.



2. Open the front panel fastening screws located on the top of the boiler.



3. Cleaning motor (10) and heat exchanger pump (11) terminal box.



## ■ FLUE GAS FAN INSTALLATION

The boiler is supplied with a flue gas fan. Install the fan on suitable side of the boiler (either at the back or on either side instead of the rearmost convector ash hatches).

Delivery includes:

- Flue gas fan (includes capacitor case)
- Flue pipe between the boiler and the fan (including bolts)
- Flue duct extension pipe from fan to chimney

### ■ Installation



Attach the flue pipe to the boiler with two M10x60 bolts.



Install the flue gas fan to the flue pipe. As a sealant heat resistant mass or sealing strip can be used.



Tighten the fan locking bolt and install the flue duct extension pipe.



Flue gas fan alternative installation position on the side of the boiler. Detach the convection part ash hatch and install the flue gas fan instead.

## ■ BURNER INSTALLATION

The burner is installed to the burner opening on the side of the boiler. MultiJet burner fits directly to the opening. Burner flanges for BioJet and HakeJet burners, Axon/PX52-pellet burners and oil burners (BioComp 60 only) are available as accessories.

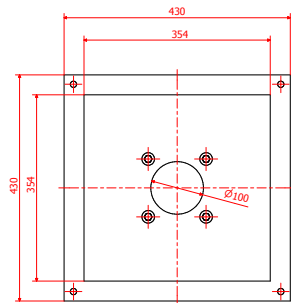
The gap between the burner and the flange must be sealed with heat resistant sealant paste. Burner installation and use according to burner manual.

### ■ Alternative heating methods

#### With an oil burner:

An oil or gas burner can be installed into the burner hatch with oil burner accessories. A flange with a brick is available for BioComp 60 kW. The brick has an opening which is 100 mm in diameter.

*Note! An oil burner cannot be used simultaneously with a bio burner.*



#### With electricity:

An electric resistance (6 or 9 kW) can be installed into the DN 50 connection on the side of the boiler (drawings on page 6, position 14). The electric resistance is equipped with a regulating/overheating thermostat TY3. More detailed installation instructions are supplied with the thermostat.

Fuse sizes: 6 kW resistance 3x10 A and 9 kW resistance 3x16 A.

Power supply: 400 V, 3~, 50 Hz

**NOTE!** A safety switch must be installed to the resistance power supply.



1. Installation of the resistance

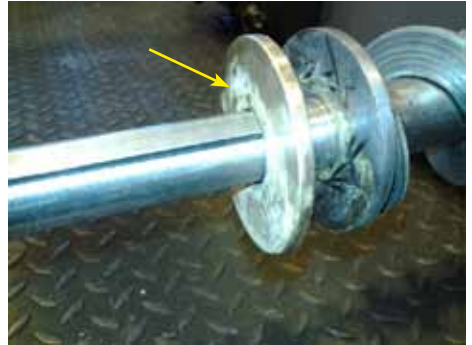


2. Installation of the thermostat

## ■ ASH SCREW INSTALLATION



Push the primary ash screw inside the boiler.



Install the ash screw thrust bearing.



Install the motor adapter flange with four M8x25 countersunk screws.



Install the ash screw adapter flange onto the motor adapter flange.



Insert the motor into the primary screw shaft.

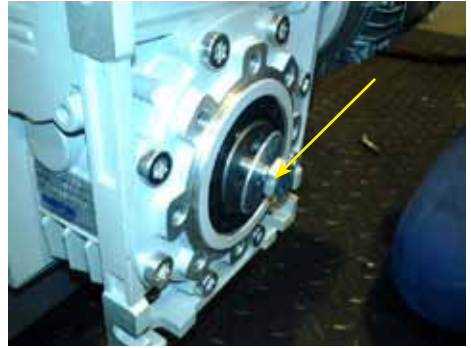


Push the motor into the mounting flange.

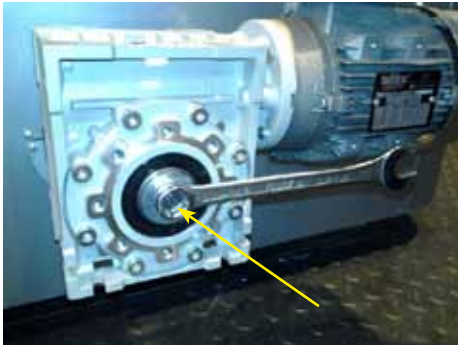
## ■ ASH SCREW INSTALLATION



Fasten the motor with four M10 hex nuts into the mounting flange



Fasten the motor into the ash screw shaft with M10x20 hex nut.



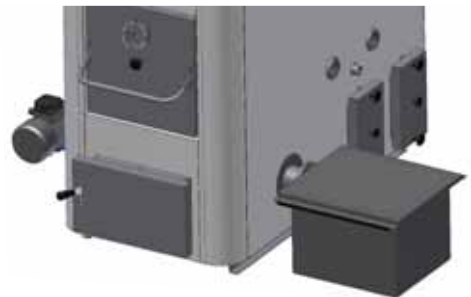
Tighten the hex nut carefully.



Install the bearing cover plate.



Ash screw with extension piece.



Ash screw with ash box.



## ■ COMMISSIONING

Before starting up the heating system the following must be checked:

- the heating network and the boiler are full of water, pressure at least 0,5 bar
- the damper plate is open, if applicable
- the circulation pump is in operation
- the network valves are open
- the combustion air opening is open
- the safety valve has an unobstructed connection to the boiler and is in working order

Start the burner and test its operation as instructed in the burner manual. Make sure that the circulation is working and remove the air that has accumulated in it.

Adjust the flue gas fan power so that the under pressure in the fire chamber is about 10-30 Pa whilst the burner is in operation (check the recommended under pressure from the burner manual). The operating intervals for the ash screw and the automatic convection part cleaning can be adjusted from the Arimatic control centre. Detailed instructions can be found from the control centre user manual.

### ■ Daily use and maintenance

The daily use of the boiler is dependent on the chosen fuel and the heating requirements. Arimatic control centres control the burning automatically. A prerequisite for a well-operating system is correctly adjusted burning equipment and a sufficient underpressure in the fire chamber.

**WARNING:** When changing fuel quality, always readjust the system! If necessary, check the suitability of the fuel from the equipment supplier!

**NOTE!** The maintenance interval of the system depends greatly on the chosen fuel and the correct adjustments of the burner. On the average, the boiler needs to be cleaned every 2-4 weeks.

**NOTE!** When field biomass or corresponding fuel with higher risk of corrosion is used it is important to ensure that the boiler water temperature is kept high enough to avoid condensation. The return water temperature must not fall below 70 °C. Furthermore, regular checks that no condensation occurs on the fire and convection surfaces must be performed.

It is therefore good to acknowledge that the fuel type has an effect on the boiler's lifetime.

## ■ MAINTENANCE

### ■ Maintenance intervals

The following maintenance intervals are indicative and may vary considerably according to the chosen fuel and the heat load. Note that keeping up a very small fire stains the boiler heavily.

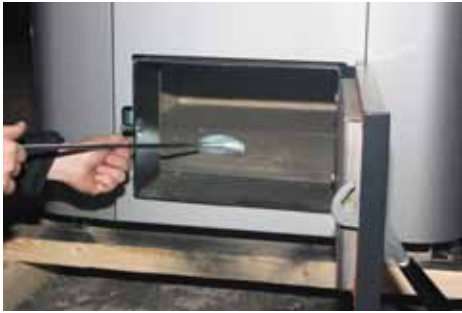
At first the maintenance is to be performed more regularly in order to determine the suitable interval for the maintenance. If the fuel quality changes the maintenance interval must be redetermined. During winter the heating requirement is greater than in the summer and therefore the maintenance interval may be shortened compared to summer.

| <b>BioComp -series</b>   | <b>Interval*)</b>  |
|--|--|
| <b>Sweeping the convection part</b>  | Every 4-6 months. Spirals to be removed from the convection part before the sweeping.            |
| <b>Sweeping the fire chamber</b>   | Once a year.   |
| <b>Ash removal from the fire chamber</b>   | Inspection: 1-2 times a month. If the system has fire chamber ash screws the interval is longer. |
| <b>Ash removal from under the convection part</b>                                | Inspection: Once a month. If the system has convection part ash screws the interval is longer.   |
| <b>Visual inspection of the boiler</b>   | Inspection: Once a month (pipe connections).   |
| <b>Checking the safety valves</b>  | Twice a year.  |
| <b>Checking the tightness of the sealings and hatches (replace if necessary)</b> | Inspection: Once a month.  |
| <b>Burner maintenance according to the burner manual</b>                         |  |

\*) Using fuel that creates a lot of ash will naturally increase the amount of ash and thus shorten the maintenance interval.

## ■ MAINTENANCE

### ■ Ash removal from fire chamber



Check the fire chamber ash compartment 1-2 times a month and remove the ash with an ash rake if required. The cleaning interval of the ash compartment depends on the fuel used and the power needed.

If the boiler is equipped with an ash screw the maintenance interval lengthens. However, from time to time the ash from the sides of the ash compartment should be removed.

### ■ Ash removal from convection part



Check the ash compartments of the convection part once a month and remove the ash with the ash rake if required. The cleaning interval of the ash compartment of the convection part depends on the fuel used and the power needed.

If the boiler is equipped with an ash screw the maintenance interval lengthens.

### ■ Sweeping the fire chamber



Clean fire chamber surfaces at least once a year. Use bent brush arm and round brush.

## ■ MAINTENANCE

### ■ Checking the convection part



The boiler has been equipped with an automatic convector cleaning but the convection part should be checked 2-3 times a year. Open the convector maintenance hatch and lift it aside. **NOTE! The hatch is heavy.**

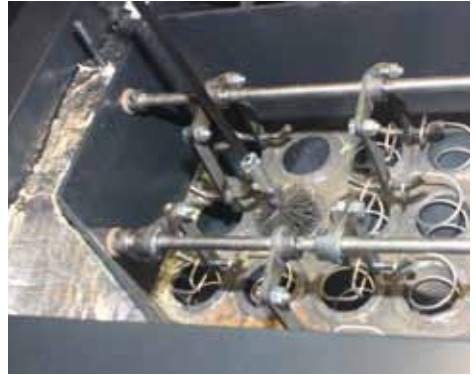


Check the pipes of the convector and remove fly ash from the surfaces. Test that the spirals move freely in the pipes. If the convection pipes look clean no manual sweeping is required.

### ■ Sweeping the convection part



If the pipe surfaces look sooty they must be swept manually. Lift the spirals off the convection pipes.



Use straight brush arm and tube brush. Check through every convection pipe. Push the brush all the way through to the ash compartment then it is easy to pull back. Put the spirals back and close the maintenance hatch.

## ■ WARRANTY, DECOMMISSIONING & CONTACT INFORMATION

### ■ Warranty

Ariterm Oy grants the equipment it delivers a one-year warranty. The warranty is valid for one year from the commissioning date or at maximum 18 months from the delivery date. The warranty for the pressure vessels manufactured by Ariterm is 5 years from the date of delivery.

Ariterm will deliver new parts to replace the faulty ones and the warranty applies to possible manufacturing and material defects. The warranty does not cover consumables or travel costs.

The warranty does not cover faults caused by incorrect designing, installation, maintenance or operation, or faults caused by off-specification fuel.

Spare part warranty is 12 months. Ariterm will deliver new parts to replace the damaged ones. Unless there are mandatory laws, no other warranty is included in the contract. This paragraph determines exhaustively the Seller's liability for defects and buyer's legal remedies in defect situations.

### ■ Decommissioning

A worn-out boiler can be scrapped.

# DECLARATION OF CONFORMITY



## VAATIMUSTENMUKAISUUSVAKUUTUS

Valmistaja: ARITERM OY  
Osoite: PL 59, 43101 SAARIJÄRVI

Laite: **BioComp 40-150 kW**

- Valmistaja vakuuttaa,
- että tämän yksilön valmistuksessa on huomioitu Euroopan yhteisön neuvoston painelaitedirektiivin (97/23/EY) olennaiset turvallisuusvaatimukset.
  - että vaatimustenmukaisuuden arviointimenettelynä on käytetty H - moduulia. (ilmoitettu laitos 0424)
  - että riskinarviointimenettely on suoritettu konedirektiivin 2006/42/EY mukaisesti (standardi SFS-EN ISO 14121-1).
  - että valmistuksessa on noudatettu oheisten direktiivien vaatimuksia: EMC 2004/108/EY ja pienjännitedirektiivi 2006/95/EY.
  - että seuraavia standardeja on sovellettu: EN 303-5.
  - Toimitukseen ei sisälly varolaitteet.

## DECLARATION OF COMFORMITY - MANUFACTURERS DECLARATION

Manufacturer: ARITERM OY  
Address: P.O.BOX 59, FIN-43101 SAARIJÄRVI

Equipment: **BioComp 40-150 kW**

- Manufacturer assures,
- that in production of above mentioned example has been observed the essential safety demands of EC council's directive for pressure vessels (97/23/EC).
  - as estimation method of conformity has been used H - module. (notified body 0424).
  - that estimation method of risks has been carried out according to the machinery directive 2006/42/EC (standard SFS-EN ISO 14121-1).
  - that in the production following directives have been applied: EMC 2004/108/EC and low voltage directive (LVD) 2006/95/EC.
  - that the following standards have been applied: EN 303-5.
  - Safety device are not included in the delivery.

## FÖRSÄKRAN OM ÖVERENSSTÄMMELSE - TILLVERKAREDEKLARATION

Tillverkare: ARITERM OY  
Address: P.O.BOX 59, FIN-43101 SAARIJÄRVI

Apparat: **BioComp 40-150 kW**

- Tillverkare försäkrar,
- att vid tillverkningen av ovan nämnda exempel har man iakttagit väsentliga säkerhetskrav av EG rådets direktiv för tryckkärl (97/23/EG).
  - som värderingsmetod av överensstämmelse har använts H - modul. (notified body 0424).
  - att riskanalysmetod on utförd i enlighet med maskindirektiven 2006/42/EG (standard SFS-EN ISO 14121-1).
  - att vid tillverkningen har man iakttagit följande direktiven: EMC 2004/108/EG och lågspänningsdirektivet 2006/95/EG.
  - att följande harmoniserade standarder har tillämpas: EN 303-5.
  - Säkerhetsutrustning ingår inte i leveransen.

6.10.2011 Ariterm Oy

Petteri Korpioja  
Toimitusjohtaja  
Managing director  
Verkställande direktör

## STANDARD DELIVERY



| Nro | Component                                   | Prod. code/picture |
|-----|---|--------------------|
| 1   | Fire chamber brush                          | 3487               |
| 2   | Convection pipe sweeping brush              | 3489               |
| 3   | Sweeping brush arm                          | 3492               |
| 4   | Fire chamber brush arm                      | 1356               |
| 5   | Ash rake                                    | 8530               |
| 6   | Wall holder for cleaning equipment          |                    |
| 7   | Flue gas thermometer                        | 5883               |
| 8   | Temperature/pressure gauge, 1/2"            | 5885               |
| 9   | Flue gas fan Ventur TH (BioComp 60-150)     |                    |
| 10  | Adapter (Flue pipe) (BioComp 60-80)         | A3000-310d         |
|     | Adapter (Flue pipe) (BioComp 120-150)       | A3000-410d         |
| 11  | Flue duct extension d139mm (BioComp 60)     | TH2-040            |
|     | Flue duct extension d159mm (BioComp 80-150) | 165089             |

## ACCESSORIES

| <b>BioComp 40 kW accessories</b> |   | <b>Product code</b>      |
|----------------------------------|---|--------------------------|
|                                  | Primary ash screw (incl. motor 0,55 kW)                   | SBCOM40-230              |
|                                  | Primary ash screw with extra length (incl. motor 0,55 kW) | SBCOM400000              |
|                                  | BeQuem 40 flange  | A3040-469B och FJ50-154A |

| <b>BioComp 60 kW accessories</b> |   | <b>Product code</b> |
|----------------------------------|---|---------------------|
|                                  | Oil burner kit (incl. adapter flange, d100 mm opening, mountings) | A3060-478           |
|                                  | HakeJet / BioJet -kit (incl. adapter flange, mountings)           | A3060-600           |
|                                  | Primary ash screw (incl. motor 0,55 kW)                           | SBCOM60-230         |
|                                  | Primary ash screw with extra length (incl. motor 0,55 kW)         | SBCOM600000         |

| <b>BioComp 80 kW accessories</b> |   | <b>Product code</b> |
|----------------------------------|---|---------------------|
|                                  | HakeJet / BioJet -kit (incl. adapter flange, mountings)   | A3080-600           |
|                                  | Primary ash screw (incl. motor 0,55 kW)                   | SBCOM80-230         |
|                                  | Primary ash screw with extra length (incl. motor 0,55 kW) | SBCOM800000         |

| <b>BioComp 120 kW accessories</b> |   | <b>Product code</b> |
|-----------------------------------|---|---------------------|
|                                   | HakeJet / BioJet -kit (incl. adapter flange, mountings)   | A3120-600           |
|                                   | Primary ash screw (incl. motor 0,55 kW)                   | SBCOM120-230        |
|                                   | Primary ash screw with extra length (incl. motor 0,55 kW) | SBCOM120000         |

| <b>BioComp 150 kW accessories</b> |   | <b>Product code</b> |
|-----------------------------------|---|---------------------|
|                                   | HakeJet / BioJet -kit (incl. adapter flange, mountings)   | A3150-600           |
|                                   | Primary ash screw (incl. motor 0,55 kW)                   | SBCOM150-230        |
|                                   | Primary ash screw with extra length (incl. motor 0,55 kW) | SBCOM150000         |



## ■ ACCESSORIES

| Accessory                                  | Prod. code/Picture |
|--|--------------------|
| Electric resistance 6 kW<br>Thermostat TY3 | 5210<br>5212       |
| Electric resistance 9 kW<br>Thermostat TY3 | 5221<br>5212       |
| Secondary ash screw x.x m                  | SBCOM150-260       |
| Ash box                                    |                    |

## SPARE PARTS

| Prod. code | Cleaning equipment               | Boiler    |
|------------|----------------------------------|-----------|
| 1356       | Fire chamber brush arm d10 x M12 | 40-150 kW |
| 3487       | Fire chamber brush               | 40-150 kW |
| 3492       | Sweeping brush arm               | 40-150 kW |
| 3492       | Sweeping brush                   | 40-150 kW |
| 8530       | Ash rake                         | 40-150 kW |

| Prod. code | Electric components                    | Boiler       |
|------------|--|--------------|
| 5660       | Heat exchanger pump Grundfos UPS 25-40 | 40 - 60 kW   |
| 5661       | Heat exchanger pump Grundfos UPS 25-60 | 80 kW        |
| 5662       | Heat exchanger pump UPS 25-80          | 120 - 150 kW |
|            | Cleaner motor SPG ISG3230D012          | 60 - 150 kW  |
|            | Flue gas fan Ebmpapst R2E180-CG8218    | 40 kW        |
| 14876      | Flue gas fan Ventur TH                 | 60 - 150 kW  |
| 10536      | Ash screw motor 0,55 kW                | 40 - 150 kW  |

| Prod. code | Heat exchangers   | Boiler       |
|------------|---|--------------|
| 3868       | Plate heat exchanger 57 kW, E8THx26, 3/4", To be soldered | 40 - 60 kW   |
| 10243      | Plate heat exchanger 75 kW, IC8THx30/1P-SC-S 4x3/4" (20)  | 80 kW        |
| 14721      | Plate heat exchanger 120 kW, IC10THx30/1P-SC-S 3x1"(20)   | 120 kW       |
| 14720      | Plate heat exchanger 160 kW, IC10THx40/1P-SC-S 4x1"(20)   | 150 kW       |
| 14580      | Angle ball valve 3/4"                                     | 40 - 80 kW   |
| 14702      | Angle ball valve 1"                                       | 120 - 150 kW |

## SPARE PARTS

| Prod. code | Hatches  | Picture code | Boiler       |
|------------|--|--------------|--------------|
| Z10589     | Convection part ash hatch                      |              | 40 - 80 kW   |
| Z13610     | Convection part ash hatch                      |              | 120 - 150 kW |
|            | Convection part hatch BioComp 40               | BCOM40-36    | 40 kW        |
| Z19018     | Convection part hatch BioComp 60               | BCOM60-36B   | 60 kW        |
| Z19019     | Convection part hatch BioComp 80               | BCOM80-36B   | 80 kW        |
| Z19020     | Convection part hatch BioComp 120              | BCOM120-36   | 120 kW       |
| Z19021     | Convection part hatch BioComp 150              | BCOM150-36A  | 150 kW       |
| Z19037     | Maintenance hatch BioComp 40                   | BCOM40-70    | 40 kW        |
| Z19024     | Maintenance hatch BioComp 60                   | BCOM60-70C   | 60 kW        |
| Z19024     | Maintenance hatch BioComp 80                   | BCOM80-70B   | 80 kW        |
| Z19024     | Maintenance hatch BioComp 120                  | BCOM120-70B  | 120 kW       |
| Z19024     | Maintenance hatch BioComp 150                  | BCOM150-70B  | 150 kW       |
|            | Maintenance hatch reflection plate BioComp 40  | BCOM40-74B   | 40 kW        |
|            | Maintenance hatch reflection plate BioComp 60  | BCOM60-74B   | 60 kW        |
|            | Maintenance hatch reflection plate BioComp 80  | BCOM80-74B   | 80 kW        |
|            | Maintenance hatch reflection plate BioComp 120 | BCOM120-74B  | 120 kW       |
|            | Maintenance hatch reflection plate BioComp 150 | BCOM150-74B  | 150 kW       |

| Prod.code | Other   | Boiler     |
|-----------|---|------------|
| 13053     | Turbulence spring                                       | 40 - 80 kW |
| 13141     | Turbulence spring                                       | 120-150 kW |
| 11015     | Oil bronze bearing 12/18x12-24/3 (turbulence mechanism) | 40 -150 kW |











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