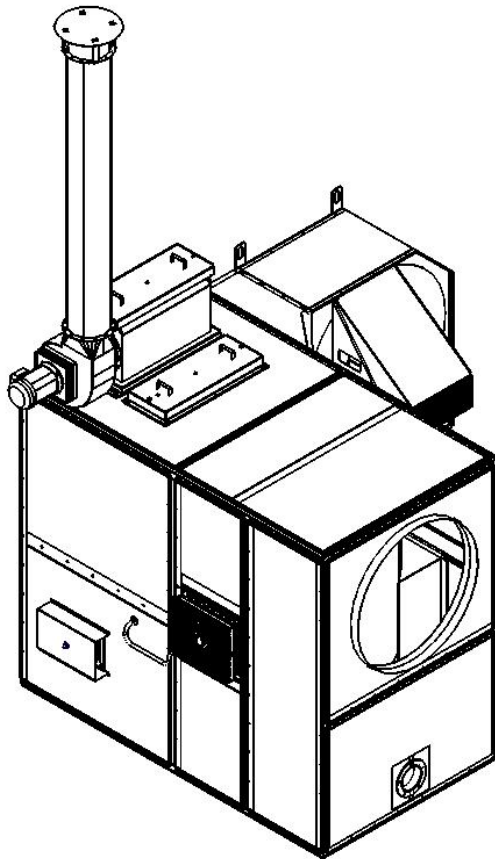


D00160 2011 v.1

BIO-FURNACE



USER MANUAL



Bio 650 kW

To the user of the Mepu product

Thank you for choosing the high-quality product made by Mepu OY.

Over 25 years, Mepu products have proved to be practically efficient and reliable work machines. Thorough knowledge of the device's operating principles and technology is a prerequisite for safe and economical use. Please read this manual carefully, as the complete knowledge of the device, the right settings, different usage situations, thorough care and maintenance guarantee both the user's safety and the reliable operation of the device.

However, operating malfunctions, spare parts needs or other problems may still arise during the device's use, when assistance is needed.

When necessary, contact Mepu Oy's maintenance service:

MEPU OY

Mynämäentie 59

FIN-21900 YLÄNE

Ph. (02) 275 4444

Fax (02) 256 3361

service@mepu.com

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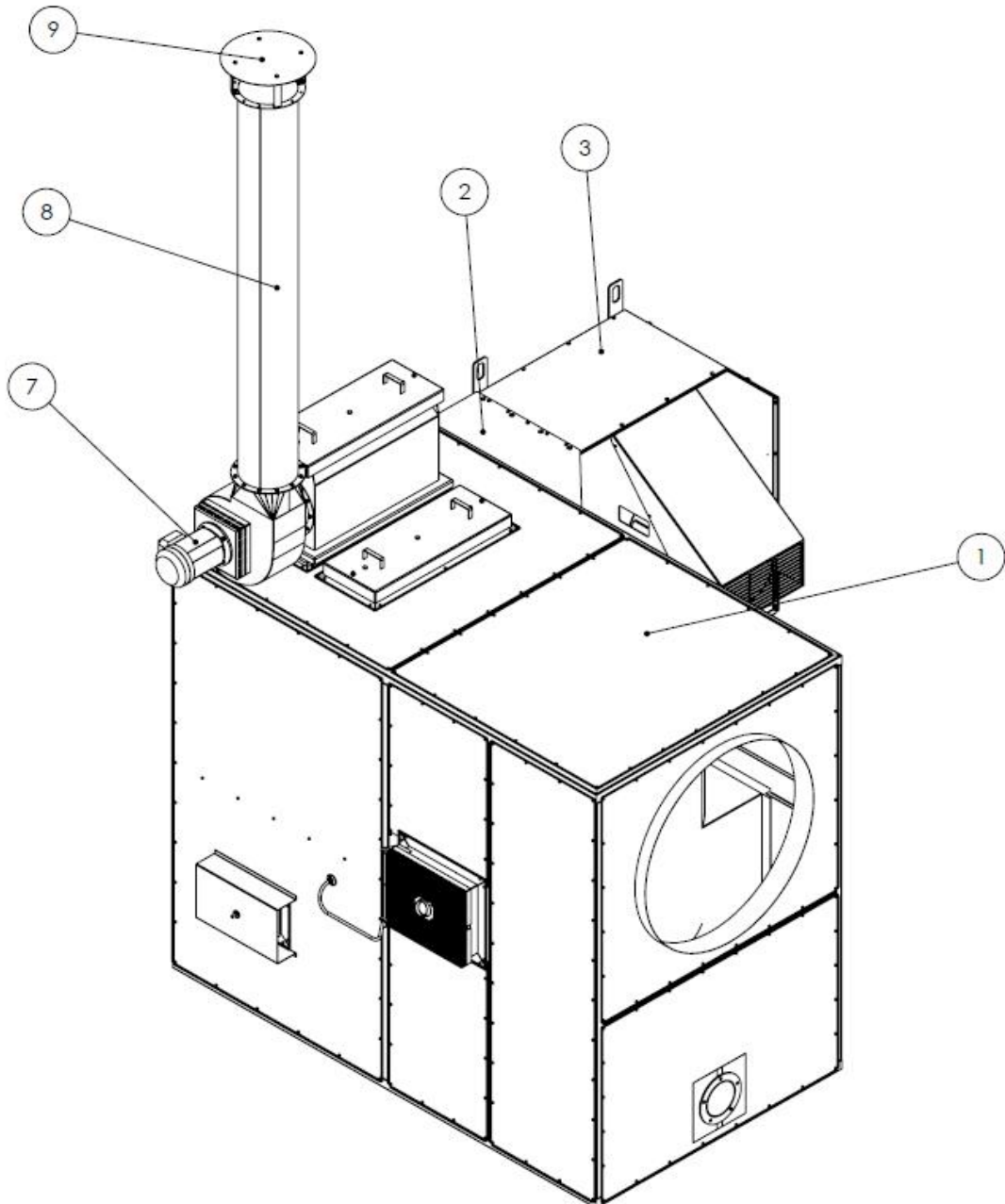
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1. IMPORTANT INFORMATION

- Always read the user manual before installation and first use.
- When installing the furnace, use protective gear such as helmets, gloves, and safety boots.
- Perform the installation carefully; attach the furnace securely onto its base.
- The installation of the furnace requires the approval of the fire authority.

1.1. Delivery specification

1. Furnace
2. Aerator cone
3. Furnace fan
7. Flue gas cleaner
8. Flue gas pipe
9. Weather guard

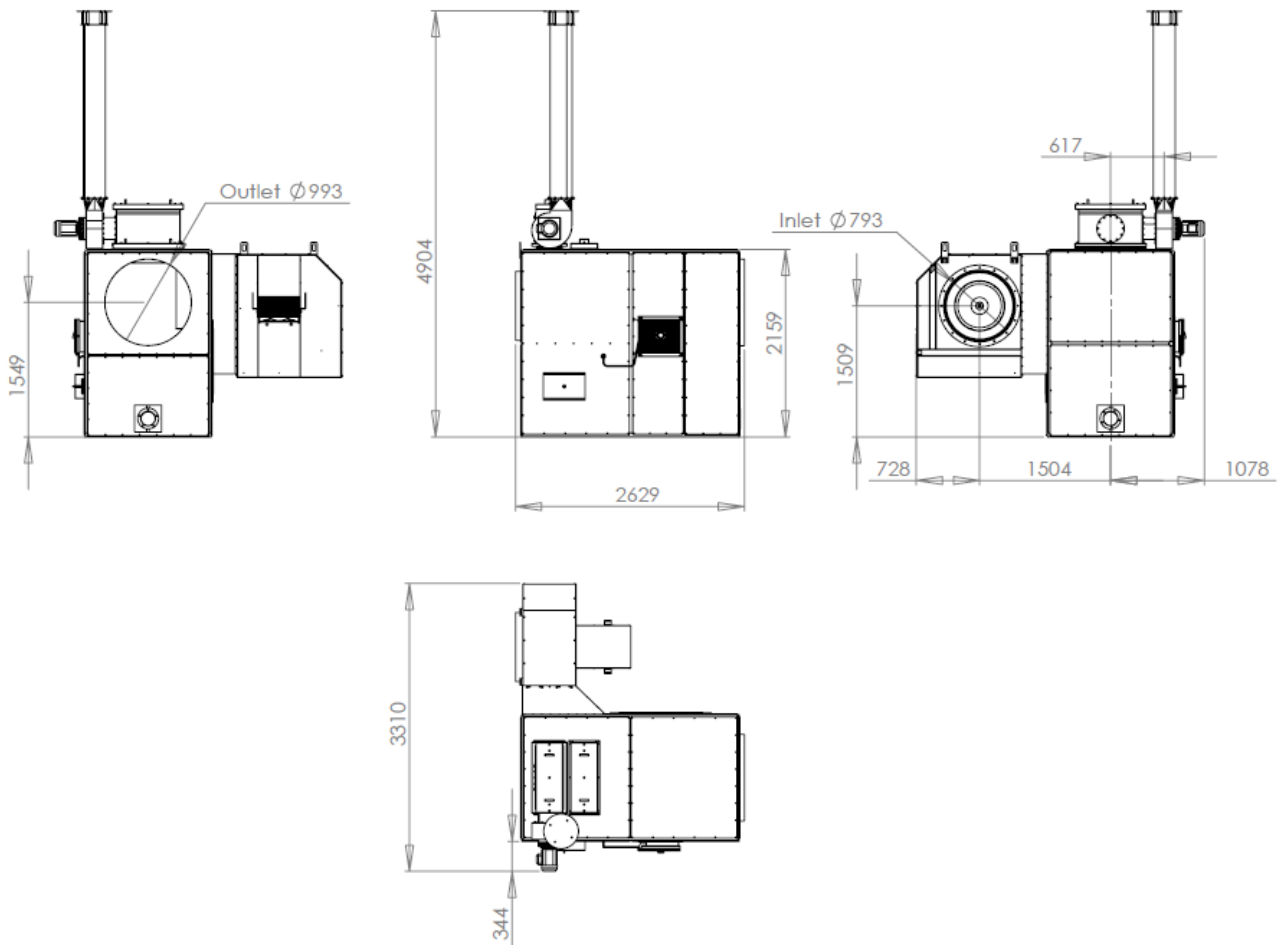


2. TECHNICAL DATA

Heating capacity: 650 kW (max.)
 Air flow: 32 500 m³/h (max.)
 Air pressure: 500 Pa (max.) excess pressure
 Voltage: 380 V/50 Hz
 Electric power: 20,5 kW

Pellet humidity: 40 % (max.)
 Size of burned material: Ø 60 mm (max.) chips, pellets, peat

Weight: 1850 kg
 Air inlet hole: Ø 800 mm
 Air outlet hole: Ø 1000 mm

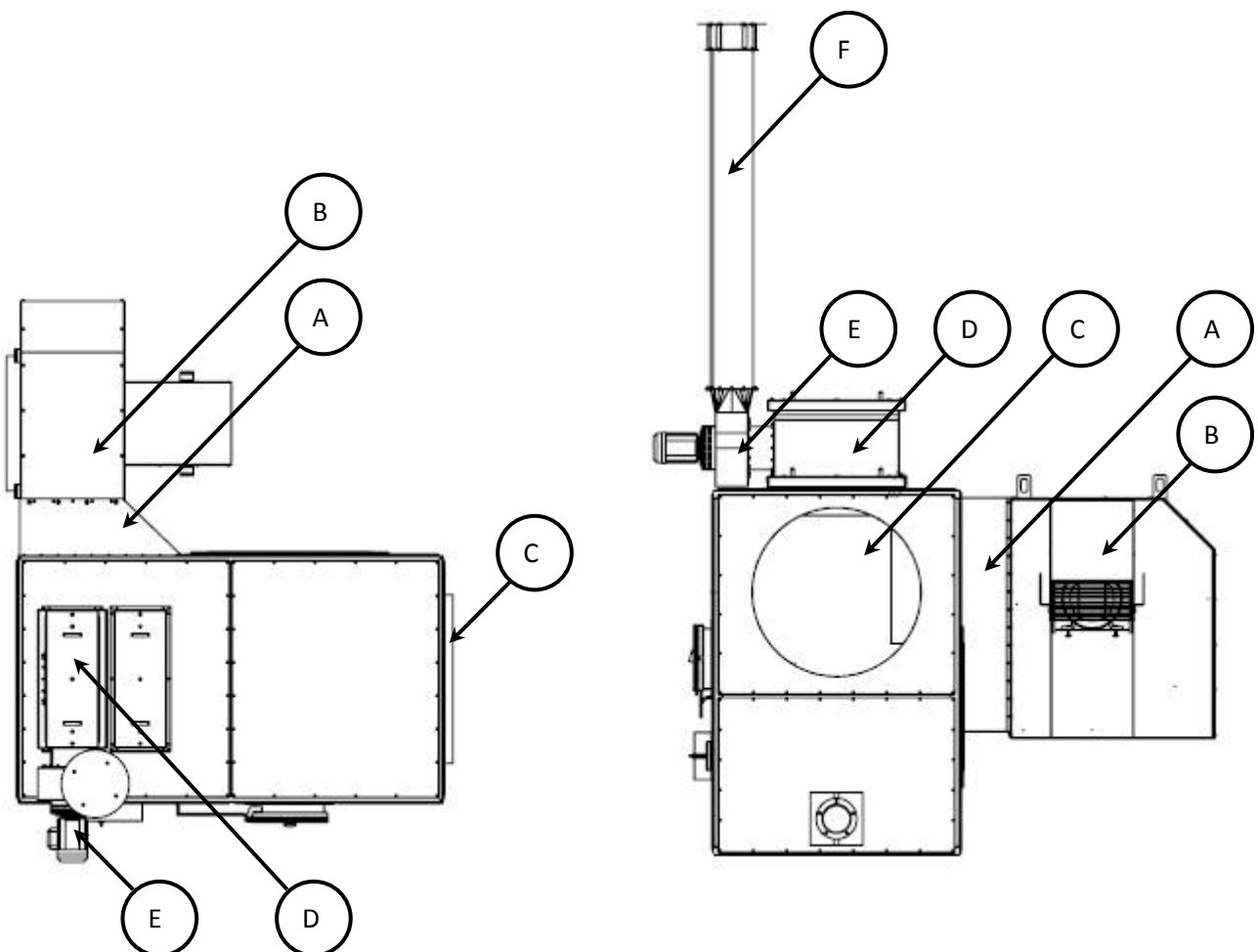


3. INSTALLATION OF THE FURNACE

The furnace must be installed on a straight and fire proof base, preferably a concrete slab. When installing the furnace, the following aspects must be taken into consideration:

- The furnace ventilator and the air ducts have been installed securely. Ensure that the ventilator receives enough air.
- The flue gas cleaner and the pipeline have been securely installed and properly supported.
- The flue gas pipeline has been installed according to the instructions from the fire authority.
- Make sure that there are no flammable materials near the furnace.

1. Place the furnace in its place of use and attach it to its base.
2. Attach the aerator cone **A** and the furnace fan **B** to the furnace, use a sealant on the connection areas.
3. Install an outlet pipe to the \varnothing 1000 mm outlet hole **C**. Ensure it is sufficiently tight, insulate the pipe if necessary (recommended) for improved efficiency.
4. Attach the suction box **D** to the furnace's heat exchanger and plug the flue gas cleaner **E** to it.
5. Attach the flue gas pipeline **F** to the cleaner, adhering to the fire authority's instructions when installing the pipe.



4. USING THE FURNACE

The Mepu Bio- furnace is a heating unit (air-air type), solid fuel furnace, suitable for burning chips, pellets and peat. The furnace contains moving mechanical parts such as the furnace fan and the flue gas cleaner. The Mepu furnace does not include a burner for the solid fuel; instead, these parts are delivered in co-operation with another manufacturer, depending on the order.

The furnace can also be fitted to be a combination furnace, where an Oilon – oil/gas burner can act as a substitute power source.

Mepu Oy recommends following the furnace's care and maintenance instructions as well as becoming acquainted with the user manuals and maintenance instructions of the burner and other included devices.

4.1. Warranty

The warranty period is one (1) year from the product's delivery. The warranty covers unusual wear and tear; or mistakes that occur due to a manufacturing error. Based on the warranty, faulty parts are replaced by new or repaired parts. Warranty repair works can be carried out by maintenance companies authorized by Mepu Oy, in case the matter is discussed with the warrantor beforehand. The warranty does not extend to installation and transportation costs, or indirect expenses or losses. The warranty does not extend to errors that have occurred due to improper use or installation.

4.2. Ash Screw



Operating the ash screw must be timed in such a way that there is always 100 – 200 mm of ash acting as an insulation material on top of the screw. Failure to do so will probably result in damaging the screw, if ash cannot be collecting on it.



If the furnace is used after lighting or removing soot, ensure that a sufficient amount of ash can start collecting on the screw so that the screw will not be damaged due to the heat.

5. CARE AND MAINTENANCE

- Removing soot from the furnace once a week (depending on the fuel).
- Inspecting the flue gas cleaner whenever removing soot from the furnace.
- Removing soot from the flue gas pipeline every 3 – 6 months (depending on the fuel).

5.1. Removing soot from the furnace

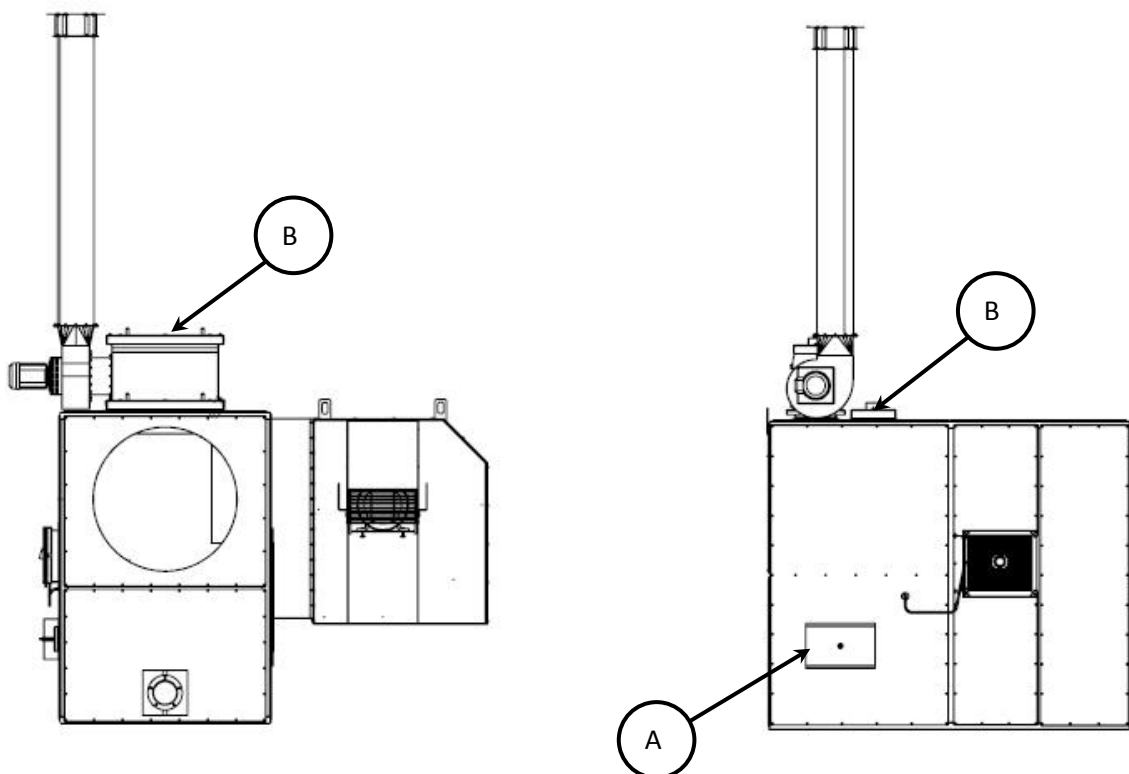
- Detach the lower soot removal hatch **A** on the side of the furnace, and the heat exchanger's soot removal hatches **B** on top of the furnace.
- Remove soot from the ridges in the heat exchanger with a \varnothing 40 mm brush and remove ash from the lower soot removal hatch with a rake.

5.2. Inspecting the flue gas cleaner

- It is recommended to always perform the inspection of the flue gas cleaner in connection with removing soot from the furnace.
- Do a visual check whether the ventilation air flow is sufficient.
- If the engine is rattling or making unusual noise, check the condition of the impeller. Dirt and ash attached to it can cause an imbalance in the impeller.
 - Check that the impeller is securely attached to the engine's axle.
 - Note that the engine's connection screws are tightened.
 - Read the engine's user manual and maintenance instructions.



Before removing soot, always turn the mains power off and wait for the furnace to cool down.



6. DECLARATION OF CONFORMITY

Vaatimuksenmukaisuusvakuutus
Declaration of conformity
Garanti av motsvarighet



Laite, Machine, Maskin

Hakeumi, Woodchip furnace, Flispannan

Laitteen tyyppimerkintä, Type of machine, Typmärkning

200, 300, 400, 500, 650

Sarjanumero, Serial number, Serienummer

Direktiivit, Directives, Direktiv

2006/42/EC, 2004/108/EC, 2006/95/EC

Standardit joita on sovellettu (tai niiden osia/kohtia), (part/clauses of) standards that has been used, (delar/paragrafer av) standarder som har använts

SFS-EN 292-1, SFS-EN 292-2+A1, SFS-EN 953, SFS-EN 294

Sisäisellä laadunvalvonnalla on varmistettu, että tässä eritelty laite vastaa nykyisten direktiivien ja standardien vaatimuksia.

Trough our internal quality control it is ensured that the product which this declaration relates is in conformity with the current directives and standards.

Genom inre kvalitetsgranskning försäkras att de produkter som nämns i detta certifikat är i enlighet med de nuvarande direktiv och standarder.

Akreditointi yksikkö, Accredited unit, Ackrediterade

DNV certification OY, Espoo, Finland

Teknisen tiedoston laatija, Person who is authorized to compile the technical file, Person som är behörig att ställa samman den relevanta tekniska dokumentationen

Mepu Oy, Juho Rastas, Mynämäentie 59, 21900 Yläne Finland

Arto Sairio, Toimitusjohtaja, Managing Director, Verkställande Direktor

Aika ja paikka, Time and place, Tid och platsen,

28.4.2010 Yläne

Tätä osittain valmista konetta ei saa ottaa käyttöön ennen kuin lopullinen kone, johon se on määrä liittää, on tarvittaessa vakuutettu olevan konedirektiivin (2006/42/EC) säännösten mukainen. This partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC, where appropriate. Denna delvis fullbordade maskin får inte tas i drift förrän den fullständiga maskin den ska byggas in i har försäkrats överensstämma med bestämmelserna i direktiv 2006/42/EC, där så är tillämpligt.

Valmistaja, Manufacturer, Tillverkare

Mepu Oy

Mynämäentie 59

21900 Yläne Finland

