

... the solution for **large properties**



BioFire

500 - 995

- Large buildings
- Hotel complexes
- Housing estate projects



Competence is our success...



HERZ FACTS:

- 35 companies
- Group headquarters in Austria
- Research & development in Austria
- Austrian owned
- 1,500 employees in more than 70 countries
- 8 production sites



Decades of experience

- In-house development and test centre
- Austrian quality with Europe-wide sales
- Comprehensive services
- ISO 9001 certification
- FMEA-approved boiler production

HERZ Armaturen GmbH – The company

Founded in 1896, Herz has been continuously active in the market for more than 110 years. With five sites within Austria, another three in Europe and more than 1,500 employees at home and abroad, HERZ Armaturen GmbH is the only Austrian manufacturer that produces equipment for the entire heating and installation industry and is one of the most important internationally.

HERZ Energietechnik GmbH

HERZ Energietechnik employs more than 200 staff in production and sales. At the company sites in Pinkafeld, Burgenland and Sebersdorf, Styria, there is state-of-the-art production as well as a research institute for new, innovative products. For a number of years, HERZ has worked with local research and training

institutes. Over the years, HERZ has established itself as a specialist in renewable energy systems. HERZ places a great importance on modern, cost-effective and environmentally friendly heating systems with the highest level of convenience and user-friendliness.

HERZ for the environment

All HERZ furnace systems fall below the strictest emission regulations. Numerous environmental endorsements bear witness to this.

HERZ quality

HERZ designers are in constant contact with recognised research institutes in order to improve the very high standards even further.

Austrian quality products...



HERZ customer service:

In cooperation with Herz Armaturen GmbH and with branches in all European countries, our partners and factory representatives are in a position to give the optimum competent support to our customers at any time.



- Advice during the planning phase
- Planning of energy centre and fuel storage room
- Planning of chamber discharge according to customer requirements and local conditions
- Planning of installation according to customer requirements
- Comprehensive services

HERZ training:

- for the machine operator
- for planners
- for technical offices
- for installers
- for assemblers
- as well as continuous training of the maintenance staff

The level of performance...

BioFire

500 - 995



BioFire is the answer for large properties.

The option of cascade connection enables projects of up to 2.000 kW to be implemented.

- Boilers in modular design
- Fast installation due to completely pre-assembled modules
- Low thermal mass (water cooled combustion chamber instead of fireclay) and therefore fast availability of heat
- High power to mass ratio and extremely compact design
- Step grate with 2 controllable zones
- Automatic cleaning of the combustion chamber and the pipe heat exchanger
- Suitable for 6 bar operating pressure
- Option of automatic ash discharge into external containers
- Applicable fuels:
 - Pellets according to ÖNORM M 7135, DINplus seal of approval or Swisspellet
 - G30-G50/W40 wood chips according to ÖNORM M 7133
- IBS-checked safety (Institute for fire protection technology and safety research)

...in real life

HERZ BioFire – can be used individually in...

- Large buildings: Hospitals, schools, public buildings, etc.
- Hotel complexes: Heating buildings as well as heating for swimming pools, Wellness areas, fitness and spa areas
- Housing estate projects: District heating, family homes, etc.
- Timber processing plants: Joinery, furniture producers, etc.

Remote heating in Neckenmarkt, heating of 117 properties
Equipment: 2 x 400 kW BioMatic and 1 x 800 kW BioFire



The greatest advantages and the details...

Control with HERZ BioControl 3000



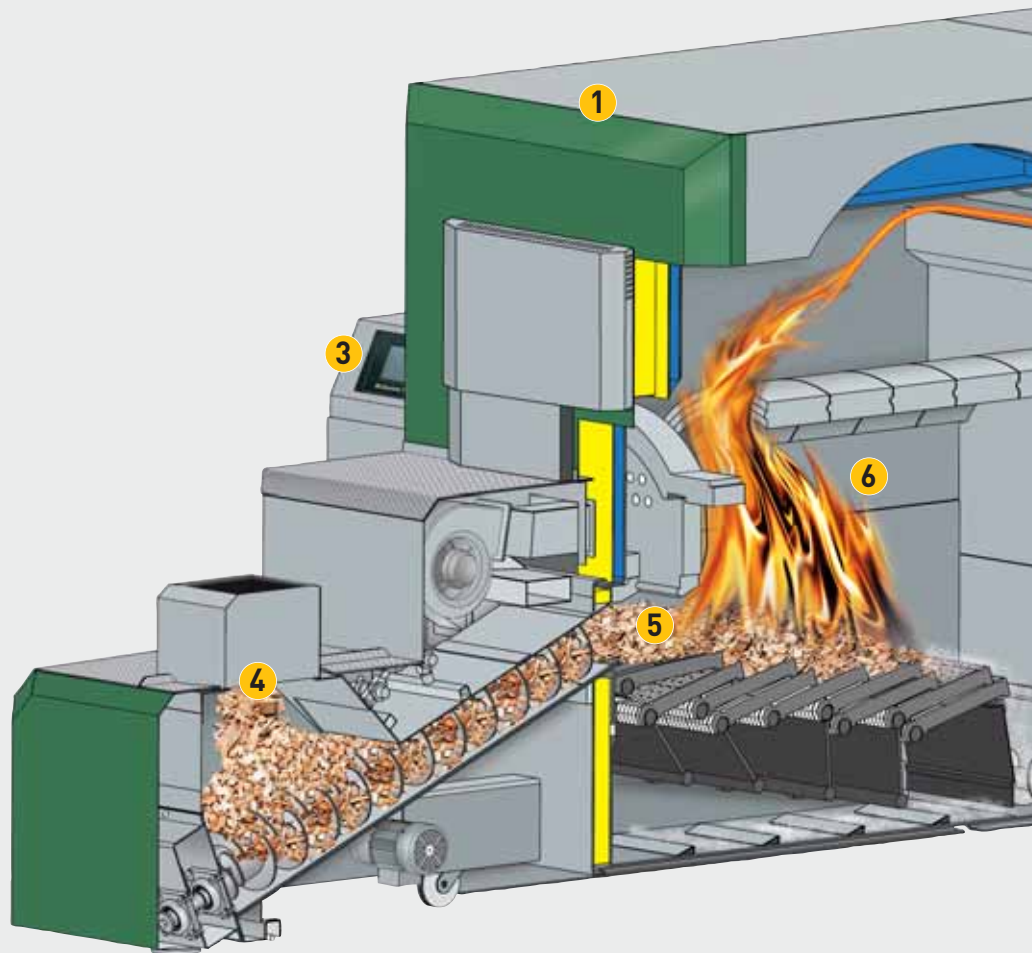
- Simple screen design and convenient menu guide
- Controls are integrated within the boiler so that there is no need for complex wiring

Control options for:

- Return flow temperature bypass (pump and mixer valves)
- Buffer management
- Up to 4 controlled heating circuits (pump and mixer valves)
- Solar circuit control
- Hot water preparation
- Frost protection monitoring
- Holiday mode

Safety devices:

- Burn-back protection, currentless closing airtight flap
- Independent extinguishing device, sprinkler device with water tank
- Spark-back protection, fuel barrier layer
- Pressure monitoring in the combustion chamber
- Temperature monitoring in the combustion chamber
- Temperature monitoring sensor in the storageroom



1. Combustion chamber module

2. Heat exchanger module

3. BioControl 3000 control central control unit

4. Interim container with drop shaft and dual feed screw and fuel barrier layer

5. Automatic ignition using hot air fans

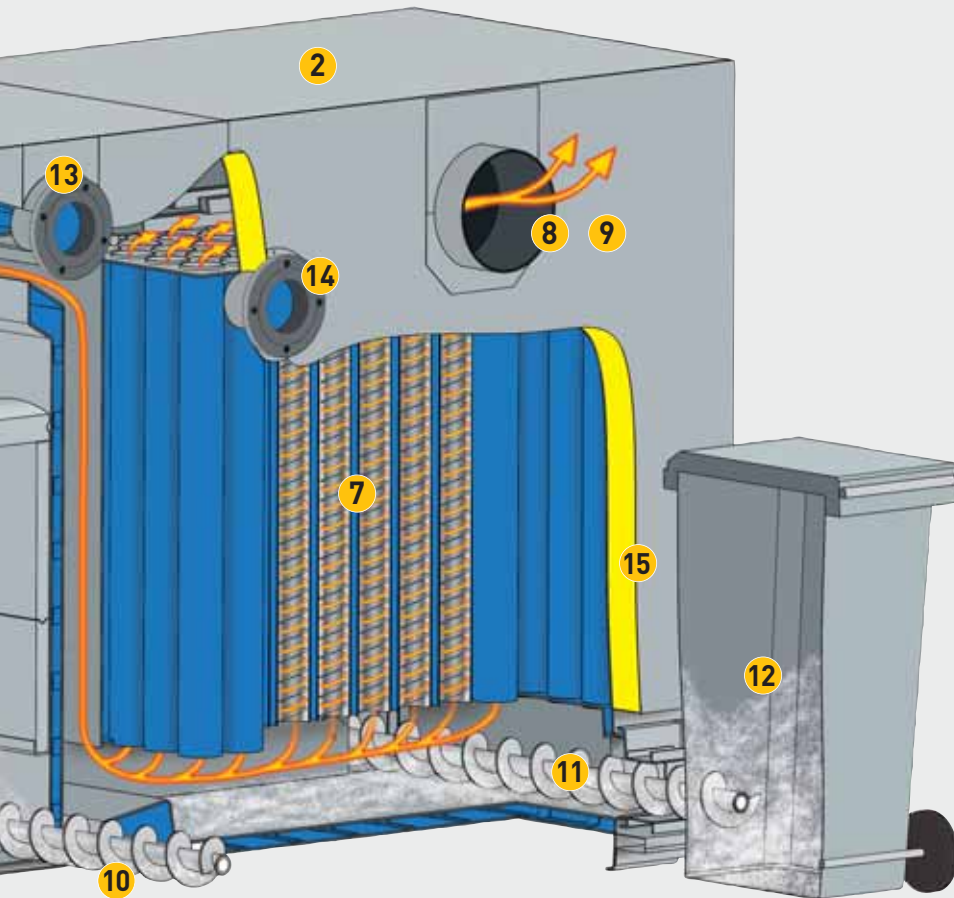
6. Combustion chamber made of SiC fireproof concrete (Temperature resistance up to 1550°C) with step grate (2 zones) made of solid cast chromium steel. The fuel feed interval and 2 primary air zones can be controlled separately. The grate bars can be changed individually. Furthermore, the combustion chambers have 2 secondary air zones.

7. Standing pipe heat exchangers with turbulators and cleaning mechanism

8. Automatic flue and combustion monitoring via lambda probe control

9. Frequency converter controlled induced draught fan (on the dust chamber) with vacuum control in the combustion chamber

...of the HERZ BioFire



Automatic cleaning of the heat exchanger



- The heat exchanger tubes are automatically cleaned by the integrated turbulators, even during heating operation and are therefore kept clean without manual effort.
- Constant high efficiency due to cleaned heat exchanger surfaces means low fuel consumption.
- The falling ash is transported via the screw in the ash container.

Energy-saving combustion via the lambda probe



- Due to the installed lambda probe, which continuously monitors the exhaust values and responds to different fuel qualities, it is always possible to obtain perfect combustion and the lowest emission values.
- The lambda probe corrects the necessary fuel quantity and amount of secondary air, thereby guaranteeing the cleanest combustion, even for partial load operation.
- The results are low fuel consumption and the lowest emission values even with the most diverse fuel qualities

- 10. Ash discharge screw**
from the combustion chamber,
including push rod floor conveyor
- 11. Ash discharge screw**
from the heat exchanger module
- 12. Ash container with wheels**
enable simple and convenient
emptying of the ash.
Central ash discharge is optional
(see page 9)

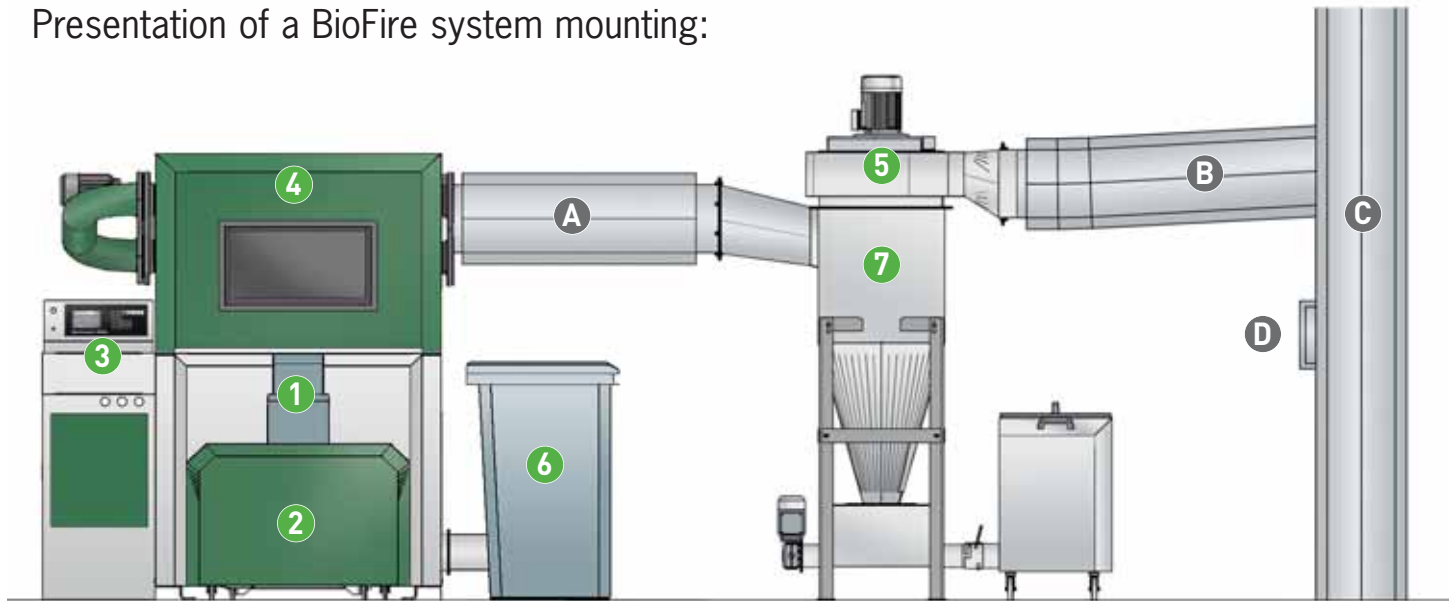
- 13. Advance flow connection**
on either side
- 14. Return flow connection**
on either side

Opposite the advance flow and return flow connection is the hydraulic connection between the combustion chamber and the heat exchanger module

- 15. Efficient heat insulation**
for low radiation losses

Dust chamber and drive engineering...

Presentation of a BioFire system mounting:



- 1 Falling chute with burn back protection device
- 2 Interim container with double feed screw including independent extinguisher device and spark-back protection
- 3 BioControl 3000 control
- 4 Boiler (combustion chamber and heat exchanger module)
- 5 Frequency-driven draught induced fan with vacuum control
- 6 Ash container
- 7 Flue gas dust extractor (dust chamber)

Flue pipe connections (ex-factory):

- A flue pipe connection
- B Chimney connection with rising flue pipe
- C Chimney not sensitive to moisture
- D Draft regulator with explosion relief

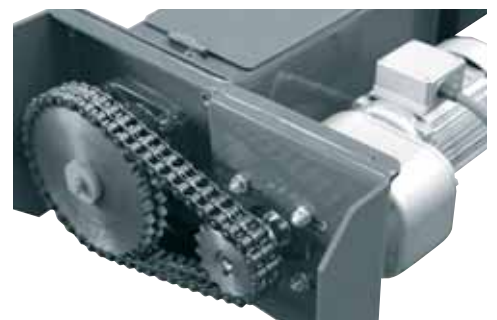
HERZ fuel feeder technology – all parts under the same roof!



Stable screw feeder system for wood chips and pellets. The special "C-trough" shape enables stable transportation of fuel.

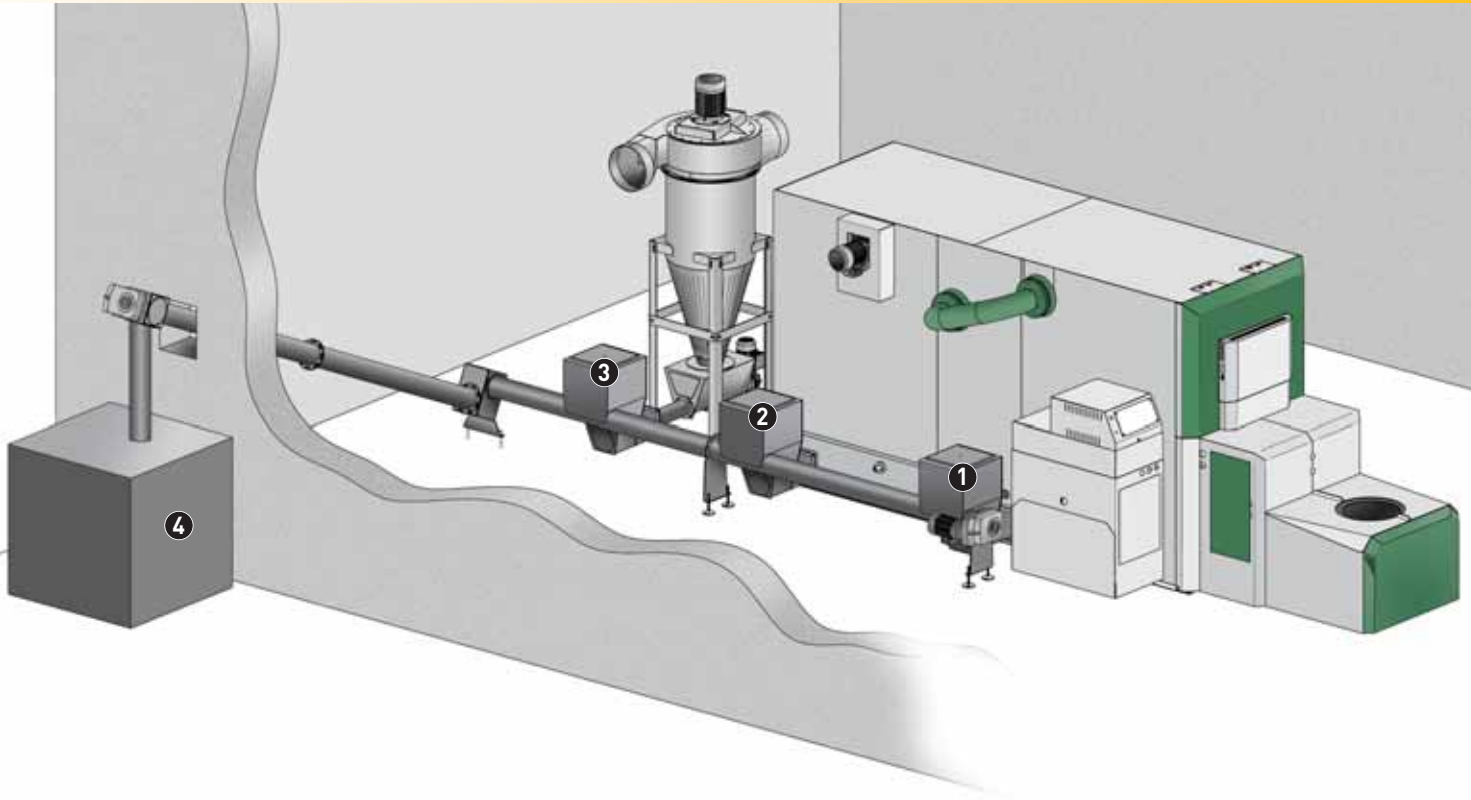


Robust agitator with heavy gearing and pressure discharge for reliable operation.



High-quality drive motors with chain drive (dual chain). High starting torque and low power consumption.

HERZ ash discharge system...



Ash discharge using a screw:

The ash from the combustion and fly ash containers (1+2) as well as that of the dust chamber (3) is automatically carried away via the screw system in an ash container available on-site (4).

The advantage for the operator is less frequent cleaning intervals as well as the convenient removal of ash. The central ash discharge system is designed around the project; each system is bespoke.

Countless projects have already been completed where ash is transported over longer distances and differing levels to the large collection container.

YOUR ADVANTAGE:

Lower building costs as no structural measures are required such as an ash cellar or floor recess.



This image shows the ash container of a 2 HERZ boiler cascade solution connected via the screw system.

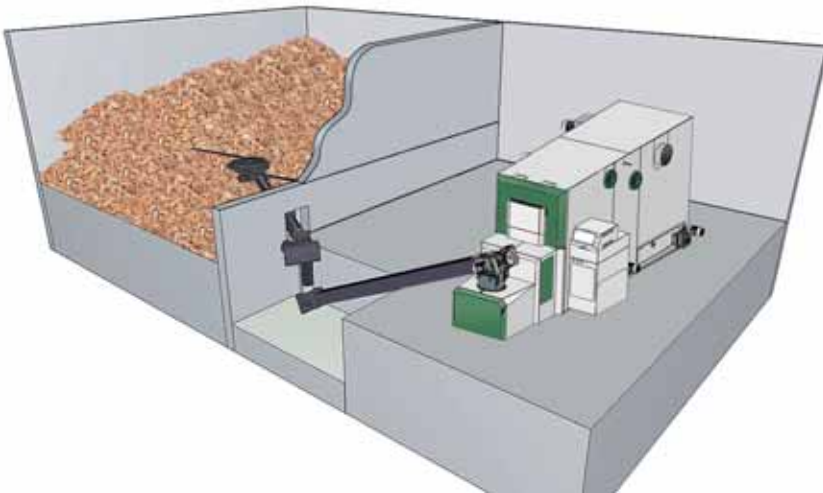


For example, this ascending worm screw carries the falling ash from 2 HERZ systems over a height of approximately 4m, to a 2m³ sized ash container which is placed outside the heating facilities.

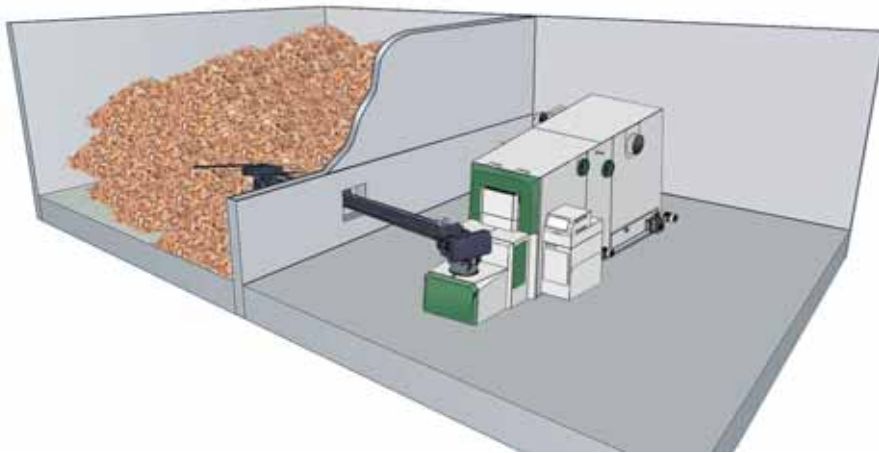
Discharge systems...

HERZ room discharges enable diverse storeroom configurations.

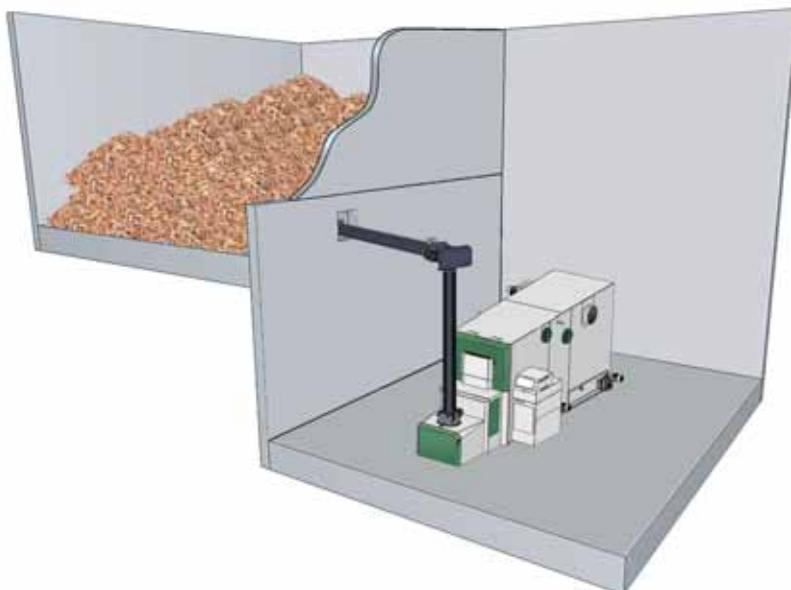
Operation with wood chips is particularly suitable for contracting models in which the wood supplier also functions as the energy supplier.



Room discharge via horizontal spring agitator and connected feed screw for optimum use of the storeroom. This arrangement enables greater flexibility of boiler location.



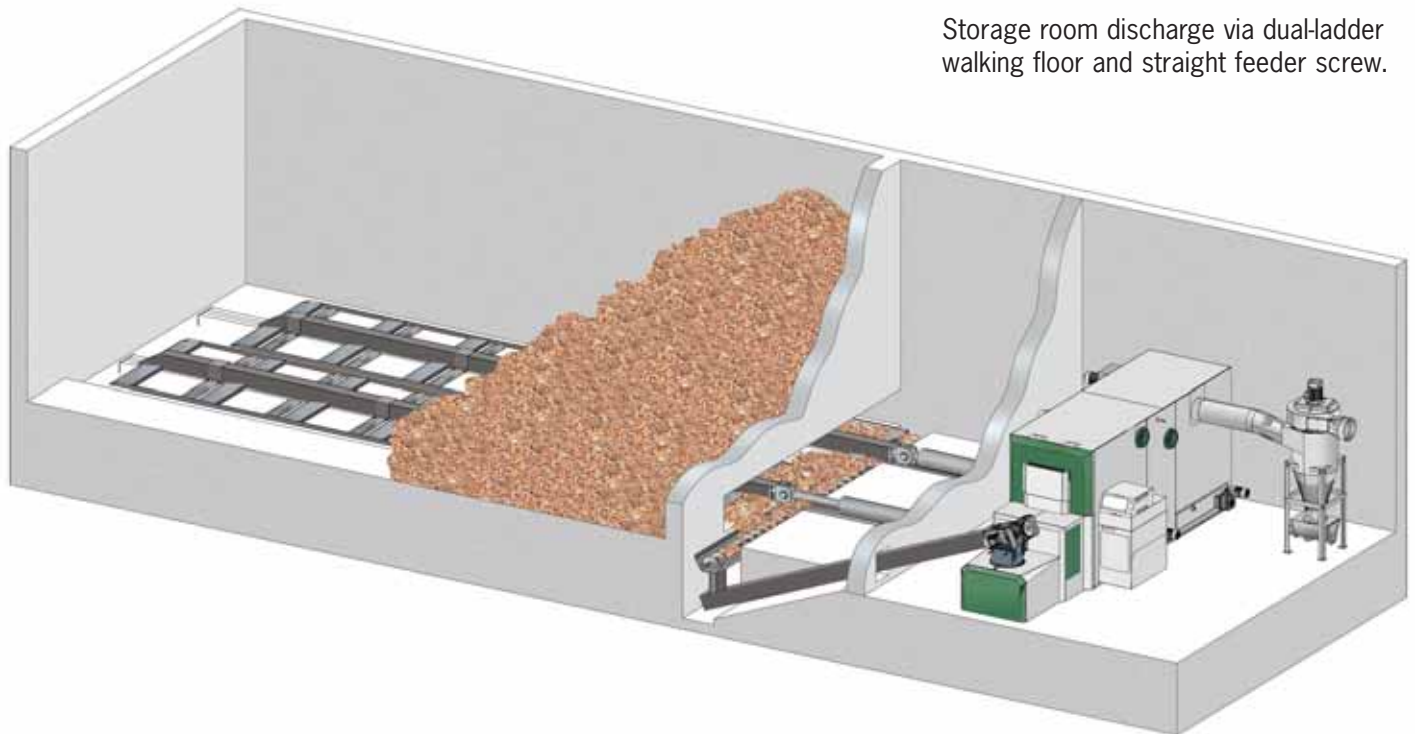
Storage room and heating room are on same level. Transverse discharge with spring agitator.



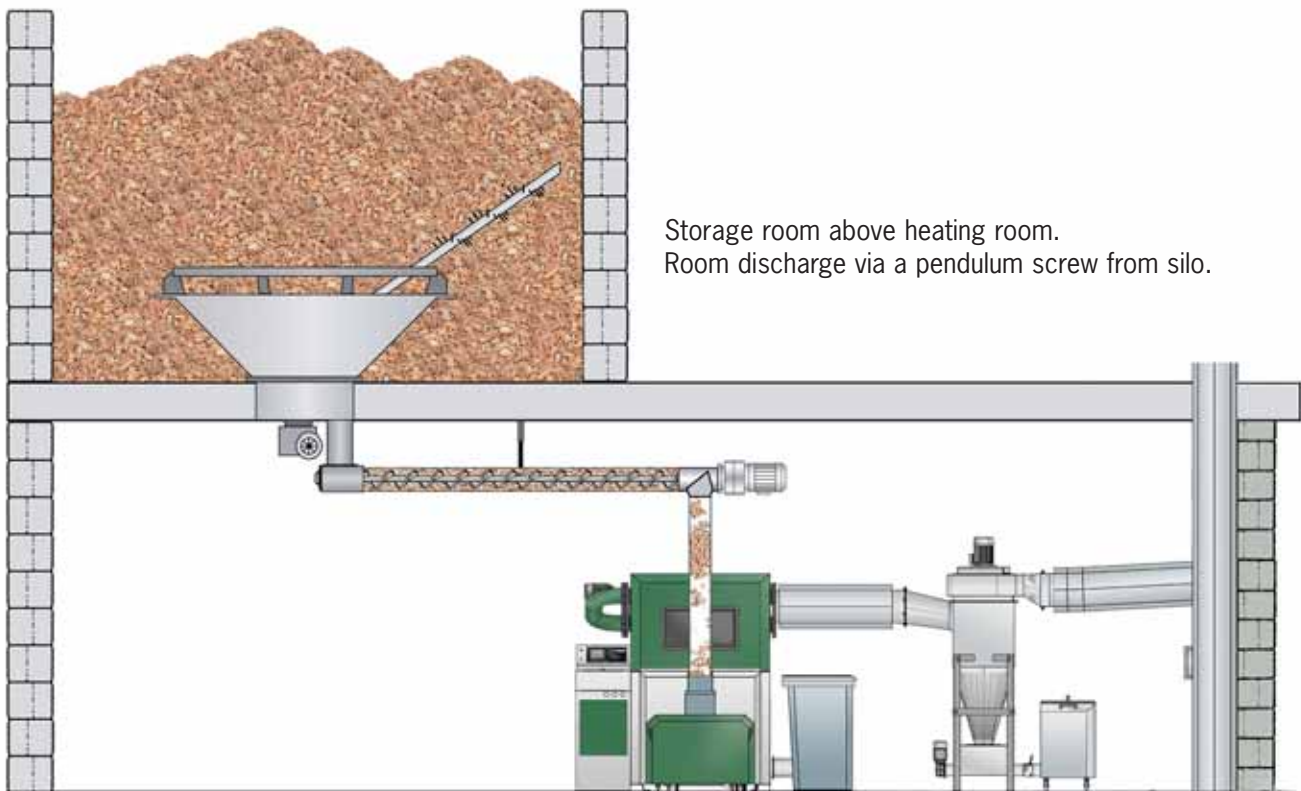
Storage room and heating room are on different levels. Horizontal discharge with spring agitator and falling chute.

...of the HERZ BioFire

HERZ BioFire: Bio-energy for heating residential complexes, schools, kindergartens, agricultural properties and commercial properties.



Storage room discharge via dual-ladder walking floor and straight feeder screw.

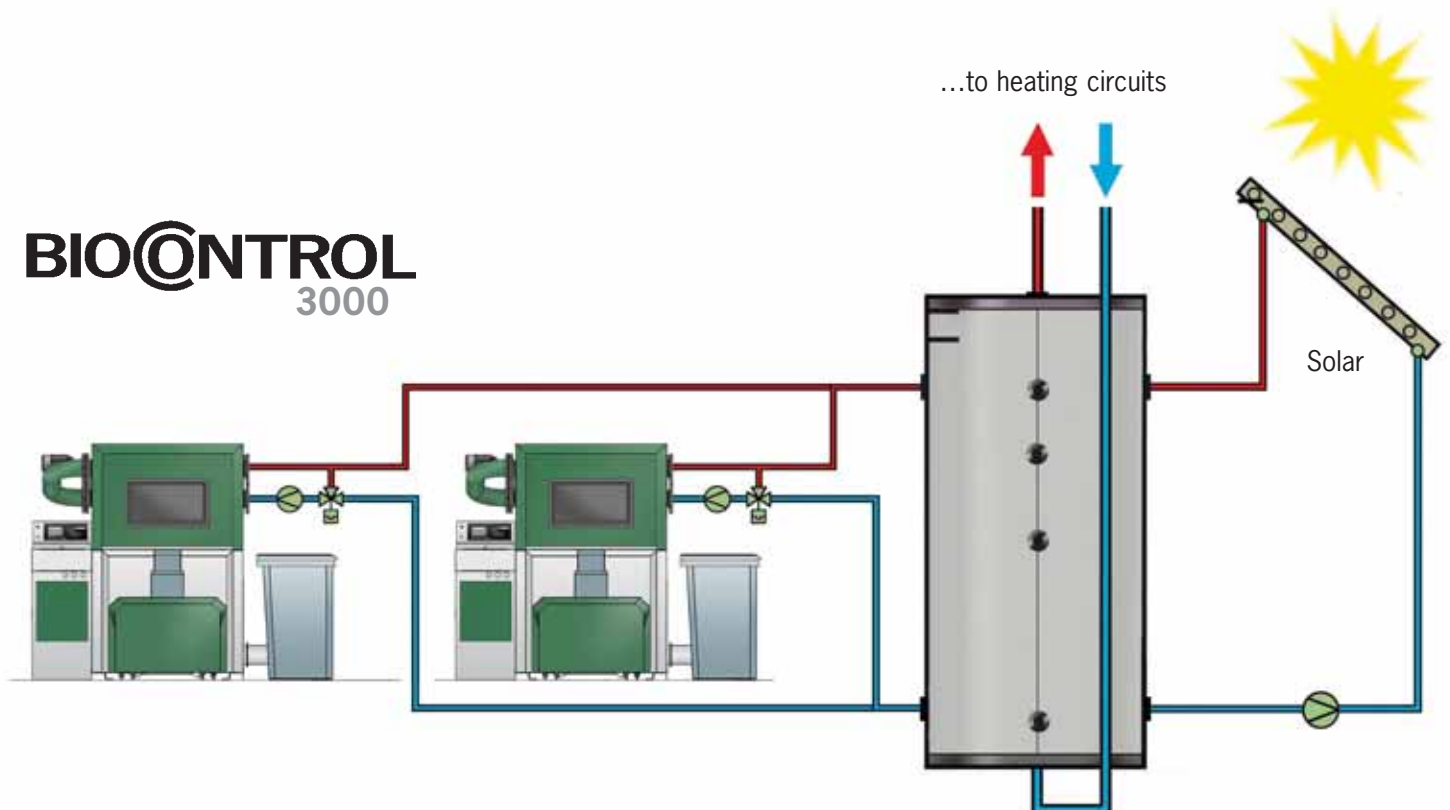


Storage room above heating room.
Room discharge via a pendulum screw from silo.

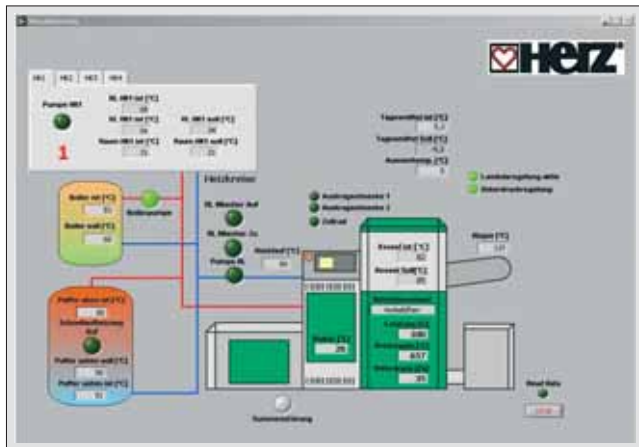
Central control unit – BioControl



With HERZ BioControl 3000 heating circuits,...



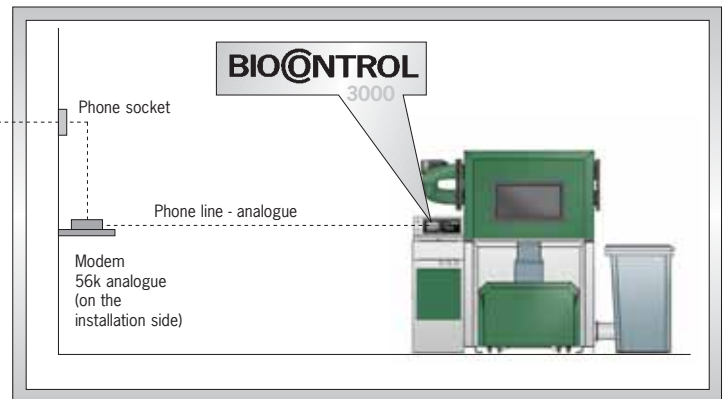
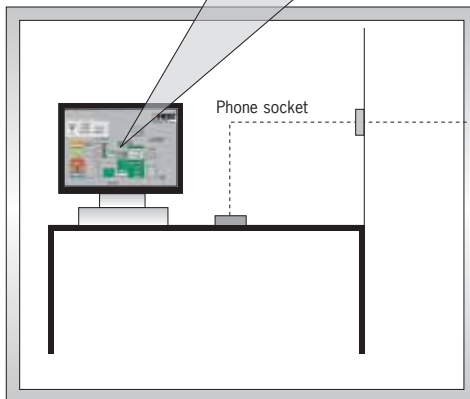
Remote monitoring and remote maintenance



HERZ remote monitoring and remote maintenance

Remote monitoring (visualisation):
Using this, the current boiler data can be checked on a PC.

Remote maintenance:
Parameters that are visible for remote monitoring can be modified on a PC.



...boiler, buffer and solar can be controlled.

Central control unit for:

- Buffer management
- Return flow temperature bypass (pump and mixer valve)
- Hot water preparation
- Controlled heating circuits (pump and mixer valve) for a maximum of 4 heating circuits (a maximum of 3 circuits for solar connections)
- Solar circuit control
- Frost protection monitoring and holiday mode
- Simple screen design and convenient menu guide

Cascade switching

With BioControl 3000 control, developed by HERZ, several HERZ boilers can also be switched as a cascade using BioControl.

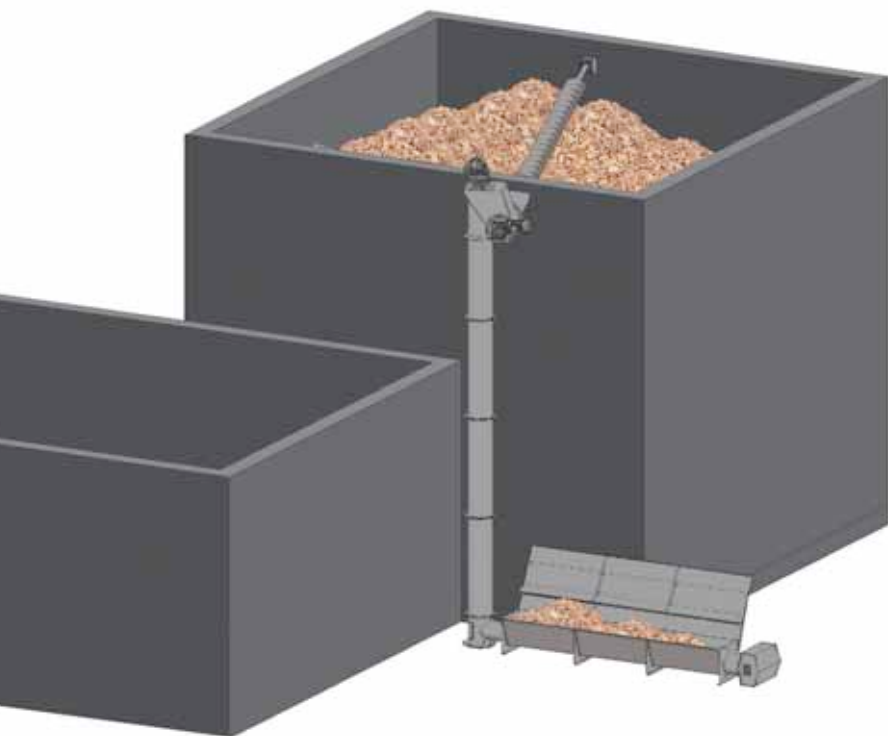
A particular advantage of cascade switching is the efficient use of the boiler when heat transfer is lower (e.g. in the transitional period).

Telephone fault detection device

Announces a pre-set text, voicemail or SMS message.

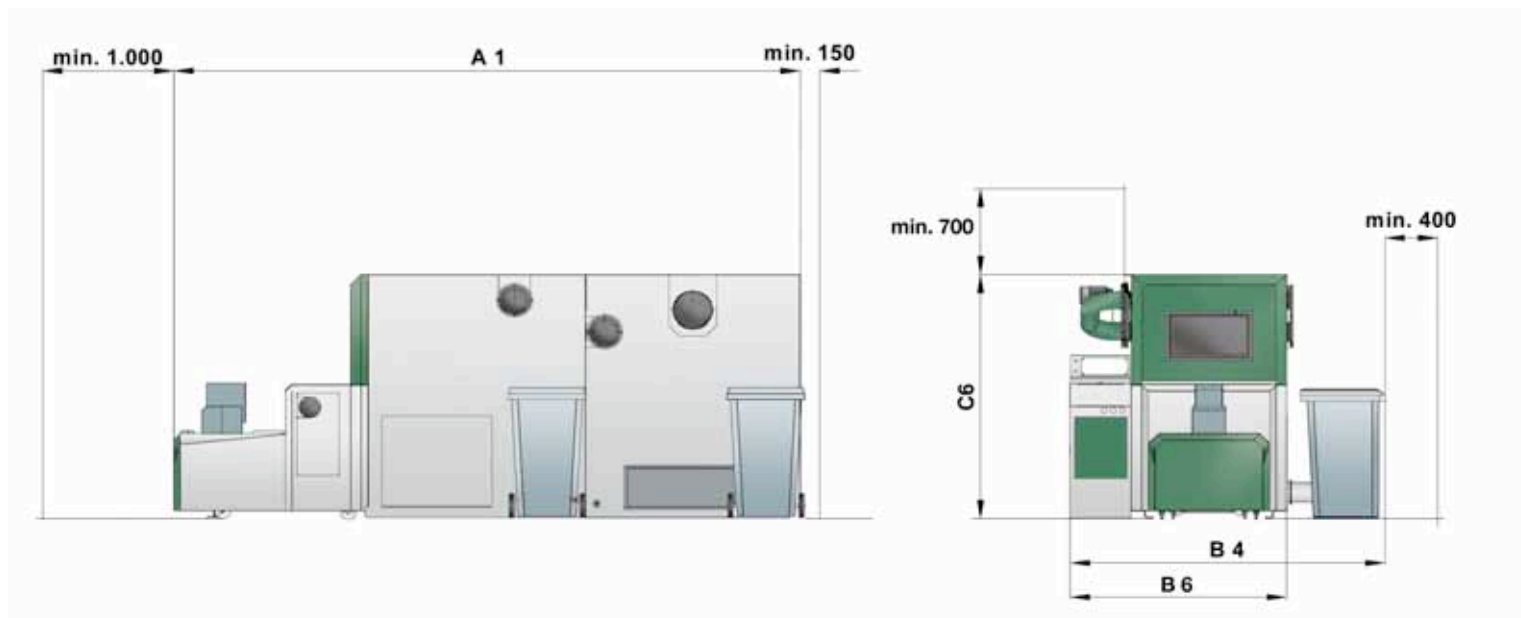
Vertical filler and technical data

Efficient storeroom filling.



The vertical filling system from HERZ offers the option of filling the wood chip room optimally.

Wood chips are fed via a vertical screw into the wood chip storeroom and are distributed optimally via a horizontal screw in the storeroom.



BioFire Power range [kW]	500 300-500	600 300-600	800 400-800	995 400-995
A 1 [mm]	4245	4735	4735	5240
C 6 [mm]	1977	1977	1977	2180
B 4 [mm]	2485	2485	2485	2485
B 6 [mm]	1735	1735	1735	1735
Weight [kg]	4716	5895	5895	7075

We reserve the right to make technical alterations.

HERZ Reference systems



VILA VITA Pannonia (4-star wellness- and family paradise in 200 hectares)

- HERZ BioFire 600 kW
- Heating of the main building with wellness park
- Restaurant, hotel & reception as well as seminar rooms
- 60 bungalows
- Indoor tennis centre
- 1.000m² function hall
- Staff village



The HERZ BioFire: Can be successfully operated individually.

- **Large buildings:**
Hospitals and schools,
Public buildings, etc.
- **Hotel complexes:**
Heating buildings as well as
heating for swimming pools,
Wellness areas, etc.
- **Housing estate projects:**
District heating,
Residential complexes, etc.
Multiple housing projects
- **Timber processing plants:**
Joinery, furniture producers, etc.



HERZ factory in Pinkafeld

- The BioFire 800 kW heats the entire factory consisting of technical area (research complex), offices and manufacturing area with state-of-the-art production
- Heated area: 12.000m²



Neckenmarkt remote heating

- 2 HERZ BioMatic, each 400 kW and a HERZ BioFire 800 kW
- Heating for 117 properties in Neckenmarkt



HERZ Customer-orientated...



- Advice during planning
- Planning of energy centre and fuel storage room
- Planning of chamber discharge according to customer requirements and local conditions
- Planning of installation according to customer requirements
- Comprehensive services
- HERZ training:
 - for the machine operator
 - for designers and technical offices
 - for pipe fitters and installers
 - as well as continuous training of the maintenance staff

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The right to make technical amendments is reserved. GB-11-2010

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