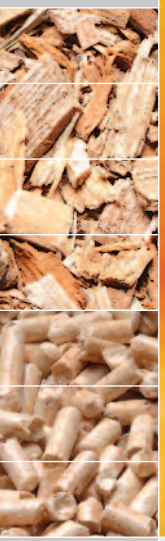
... the solution for **large properties**

YOUR RELIABLE PARTNER
Herz since 1896
Present on the market for over 110 years



BioFire

500 - 1500

- Large buildings
- Hotel complexes
- Housing estate projects

Herz®

Competence is our success...

HERZ **FACTS:**

- 22 companies
- Group headquarters in Austria
- Research & development in Austria
- Austrian owned
- 1,600 employees in more than 75 countries
- 11 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 117 years. With 6 sites within Austria, another 5 in Europe and more than 1,600 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 - 1500

BioFire is the answer for large properties.

The option of cascade connection
enables projects of up to 4.000 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:
  - **woodpellets according to**
    - EN 14961-2: property class A1
    - Swisspellet, DINplus, ENplus or ÖNORM M7135
  - **woodchips M40 (water content max. 40%) according to**
    - EN 14961-1/4: property class A1, A2, B1 and particle size P16B, P31,5 or P45A
    - ÖNORM M7133: G30-G50

- 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.

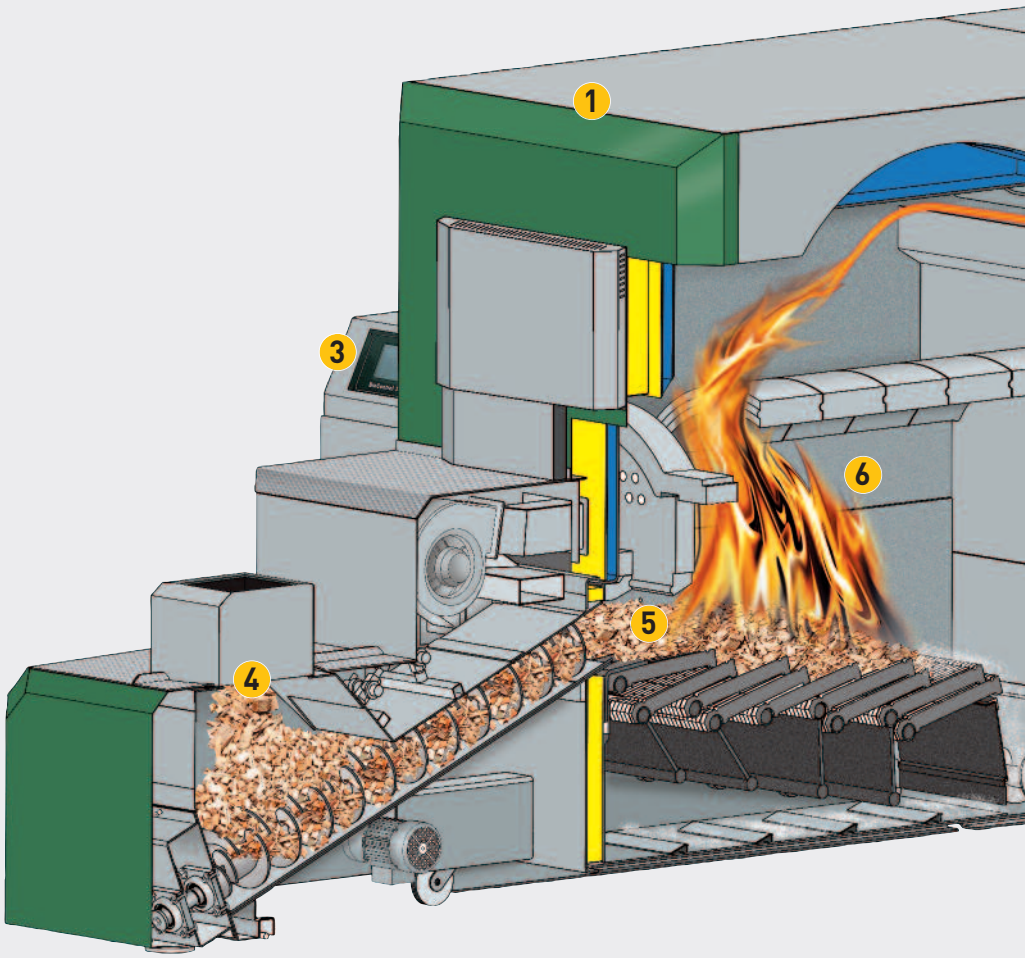
Remote heating in Neckenmarkt, heating of 117 properties
Equipment: 2 x 400 kW BioMatic and 1 x 800 kW BioFire

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

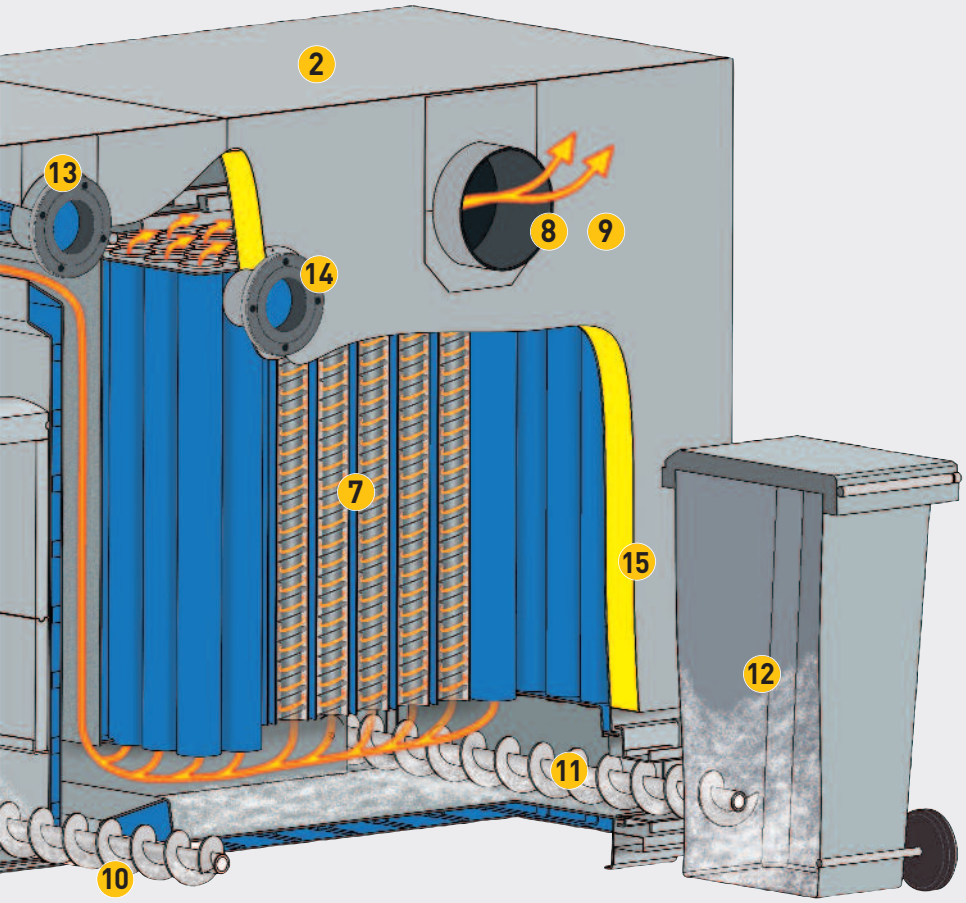


Safety devices:

- 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

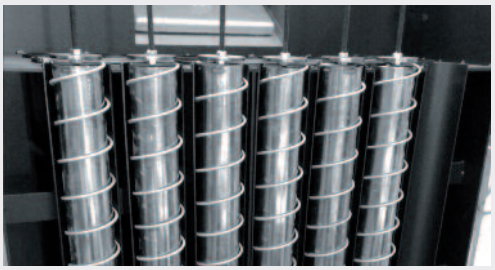
...of the HERZ BioFire



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

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.

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

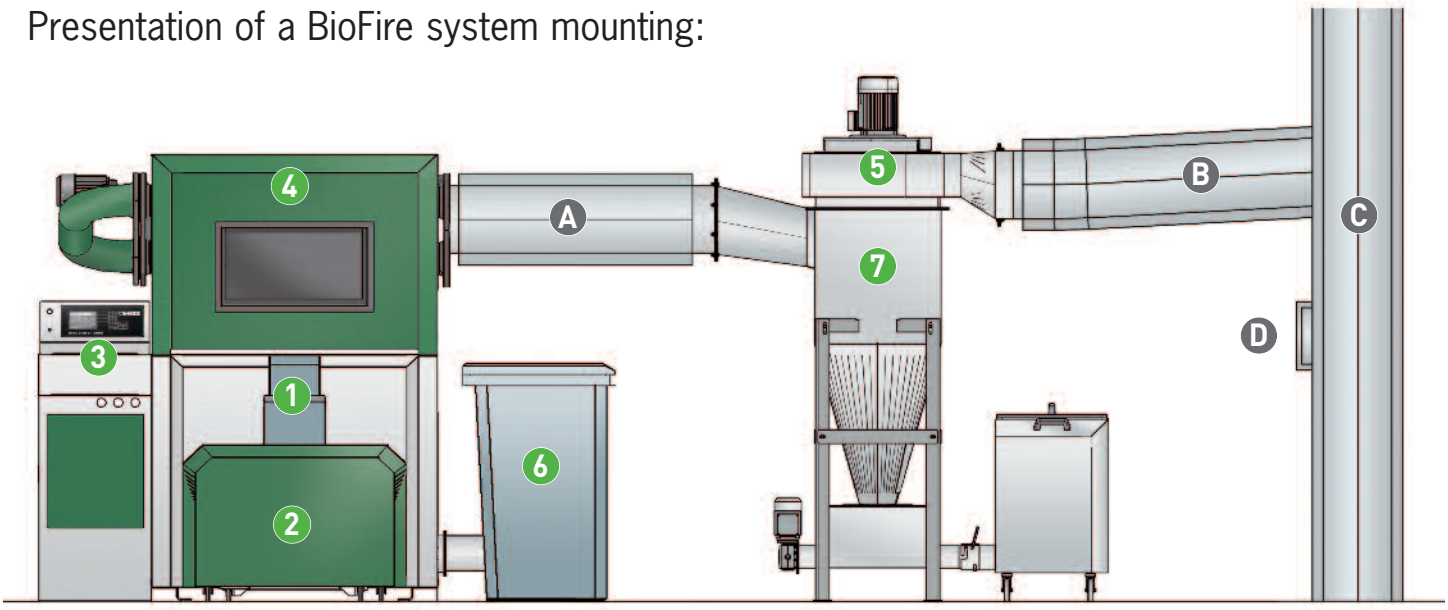
Opposite the advance flow and return flow connection is the hydraulic connection between the combustion chamber and the heat exchanger module

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

Herz®

Dust chamber and drive engineering…

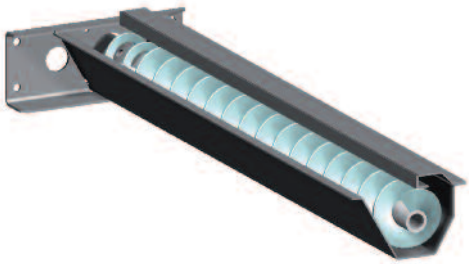
Presentation of a BioFire system mounting:



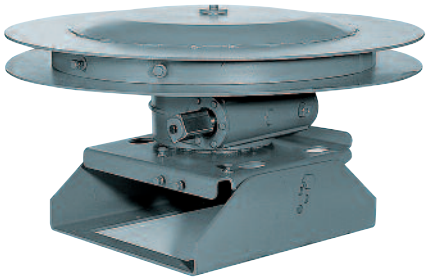
1 Falling chute with burn back protection device
2 Interim container with double feed screw including independent extinguisher device and spark-back protection
3 BioControl 3000 control
4 Boiler (combustion chamber and heat exchanger module)
5 Frequency-driven draught induced fan with vacuum control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

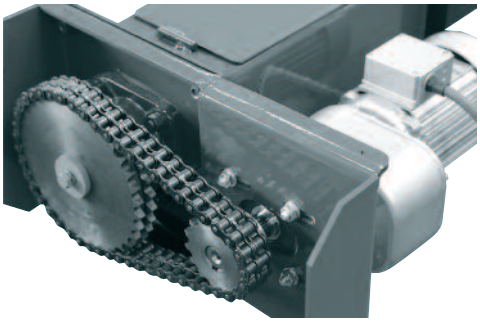
HERZ fuel feeder technology – all parts under the same roof!



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

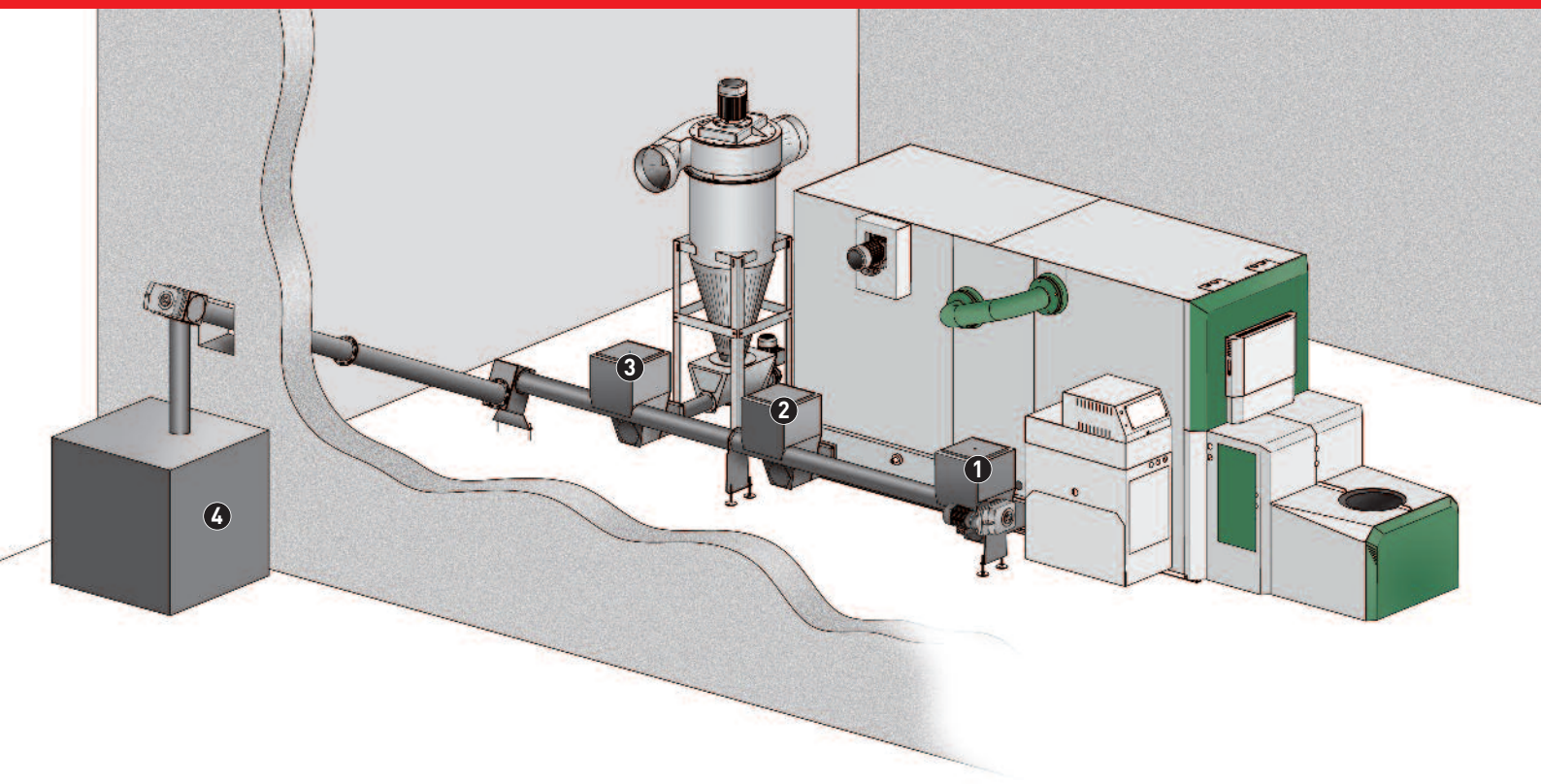


Robust agitator with heavy gearing and pressure discharge for reliable operation.



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.

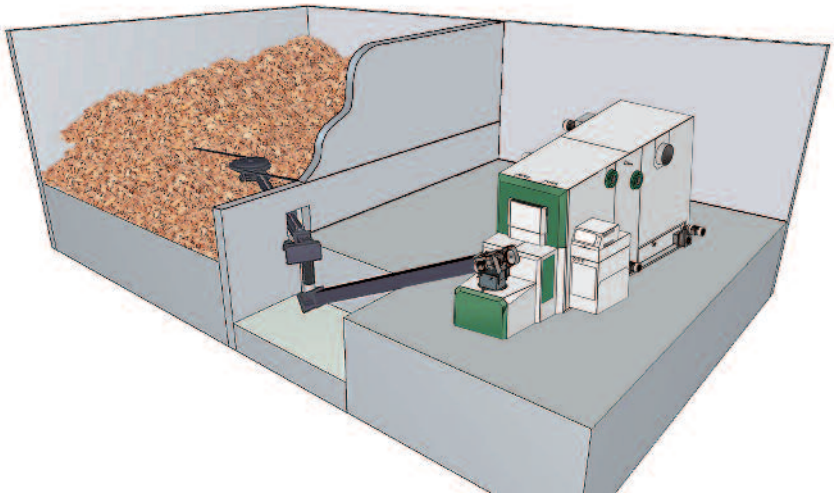
This image shows the ash container of a 2 HERZ boiler cascade solution connected via the screw system.

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.

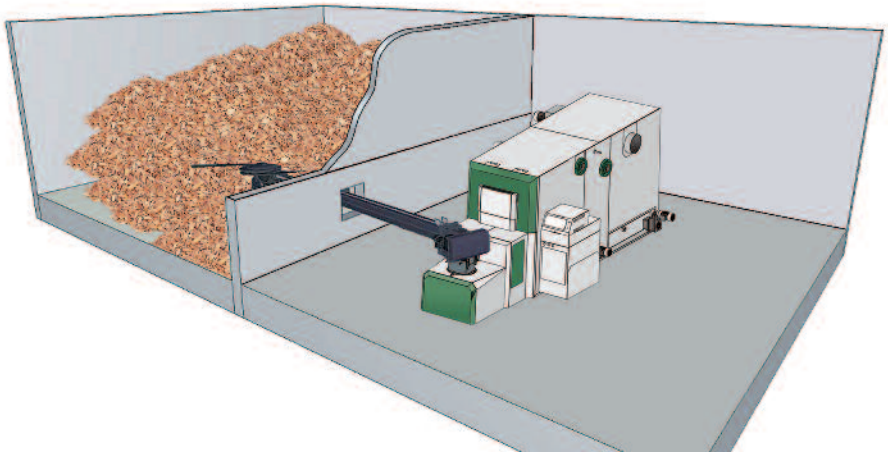
Discharge systems…

HERZ room discharges enable diverse storeroom configurations.

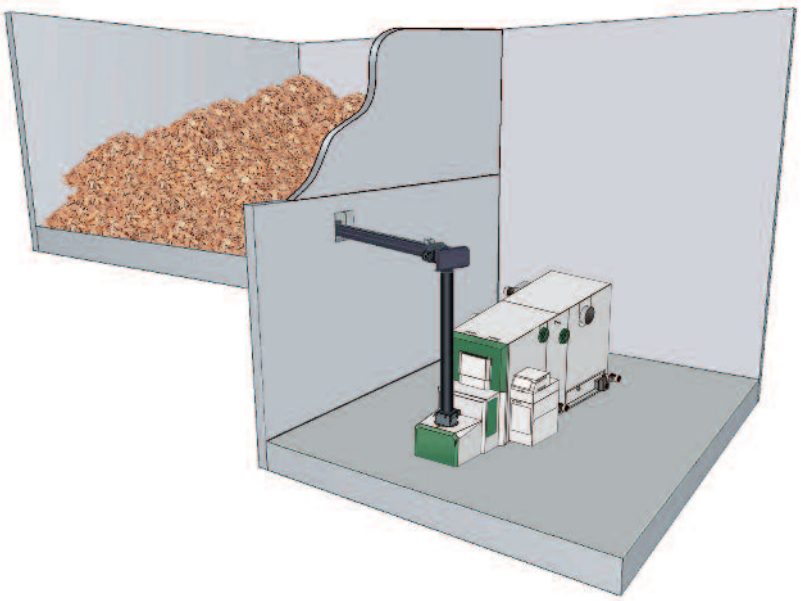
Operation with wood chips is particularly suitable for contracting models in which the wood supplier also functions as the energy supplier.



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.

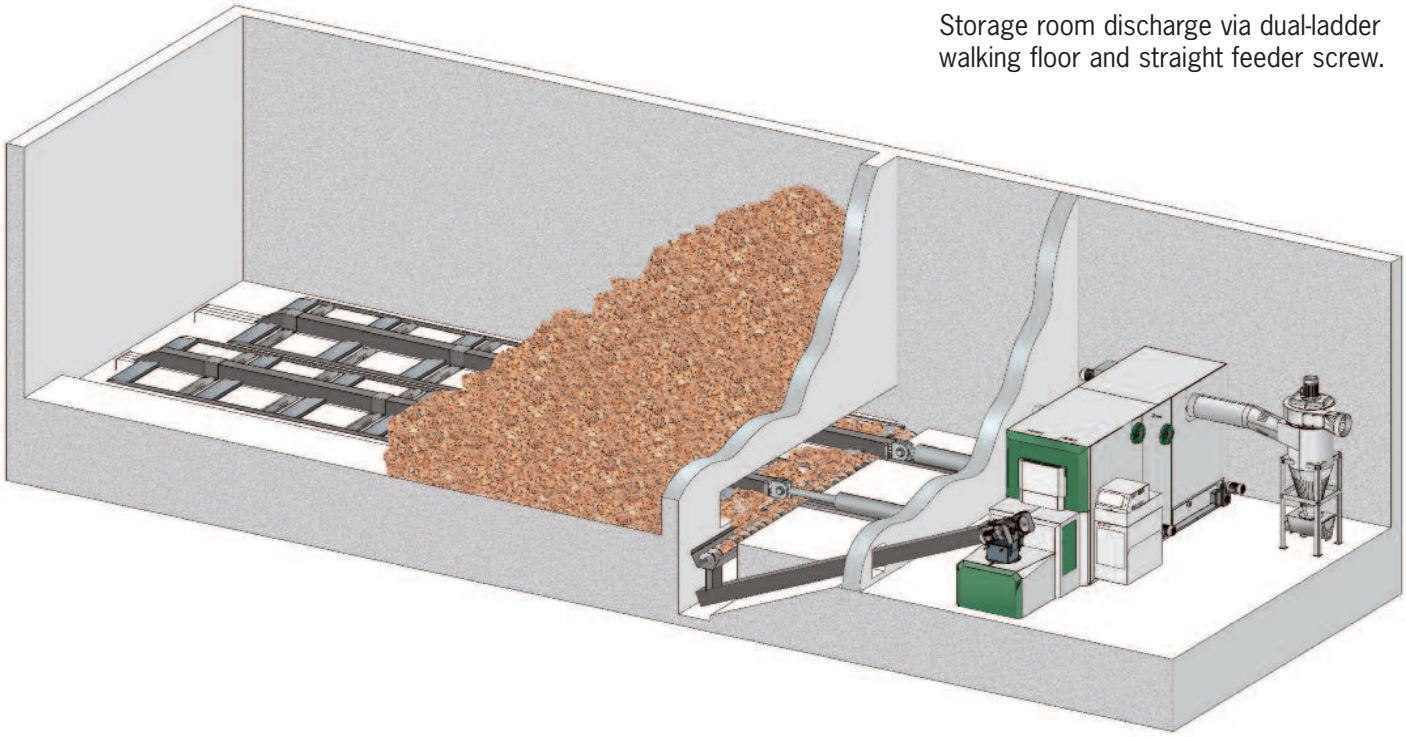


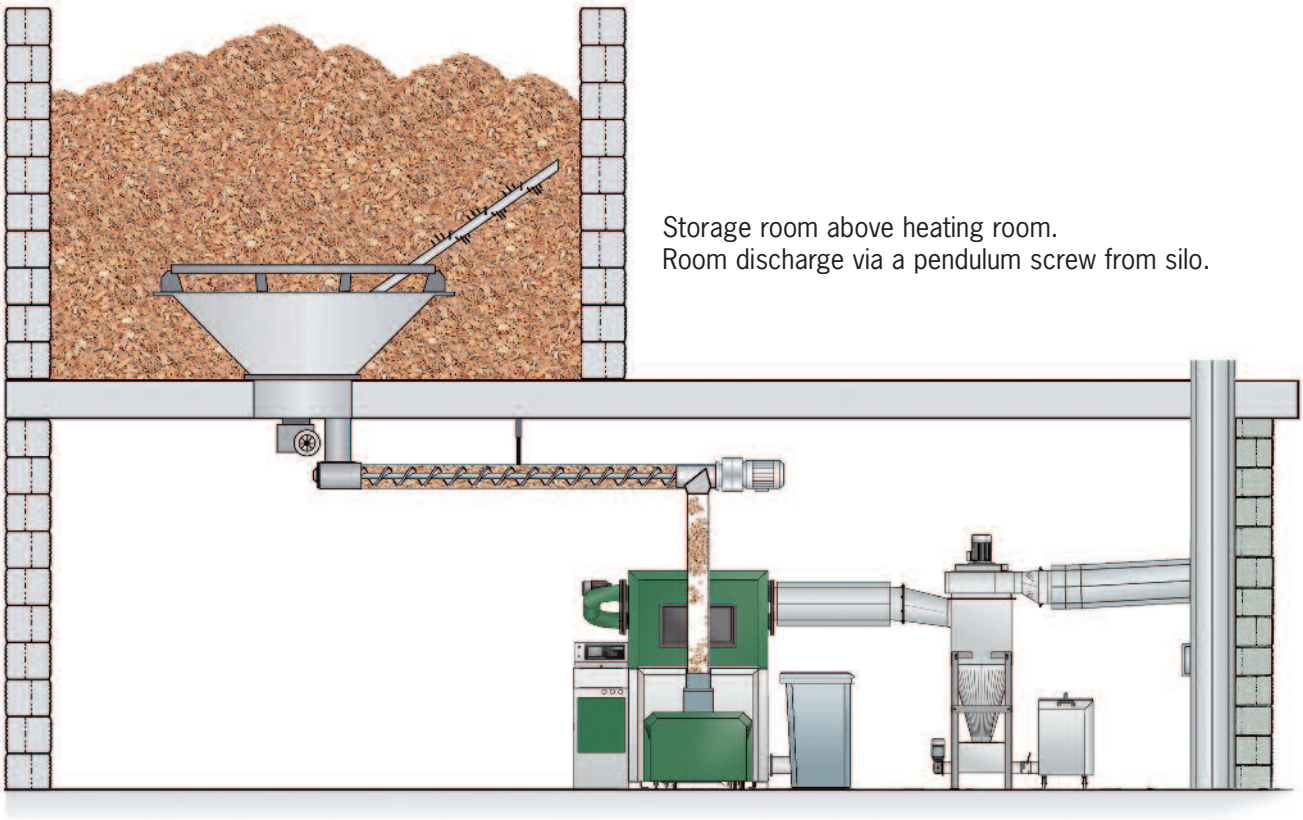
Storage room and heating room are on different levels. Horizontal discharge with spring agitator and falling chute.

...of the HERZ BioFire

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

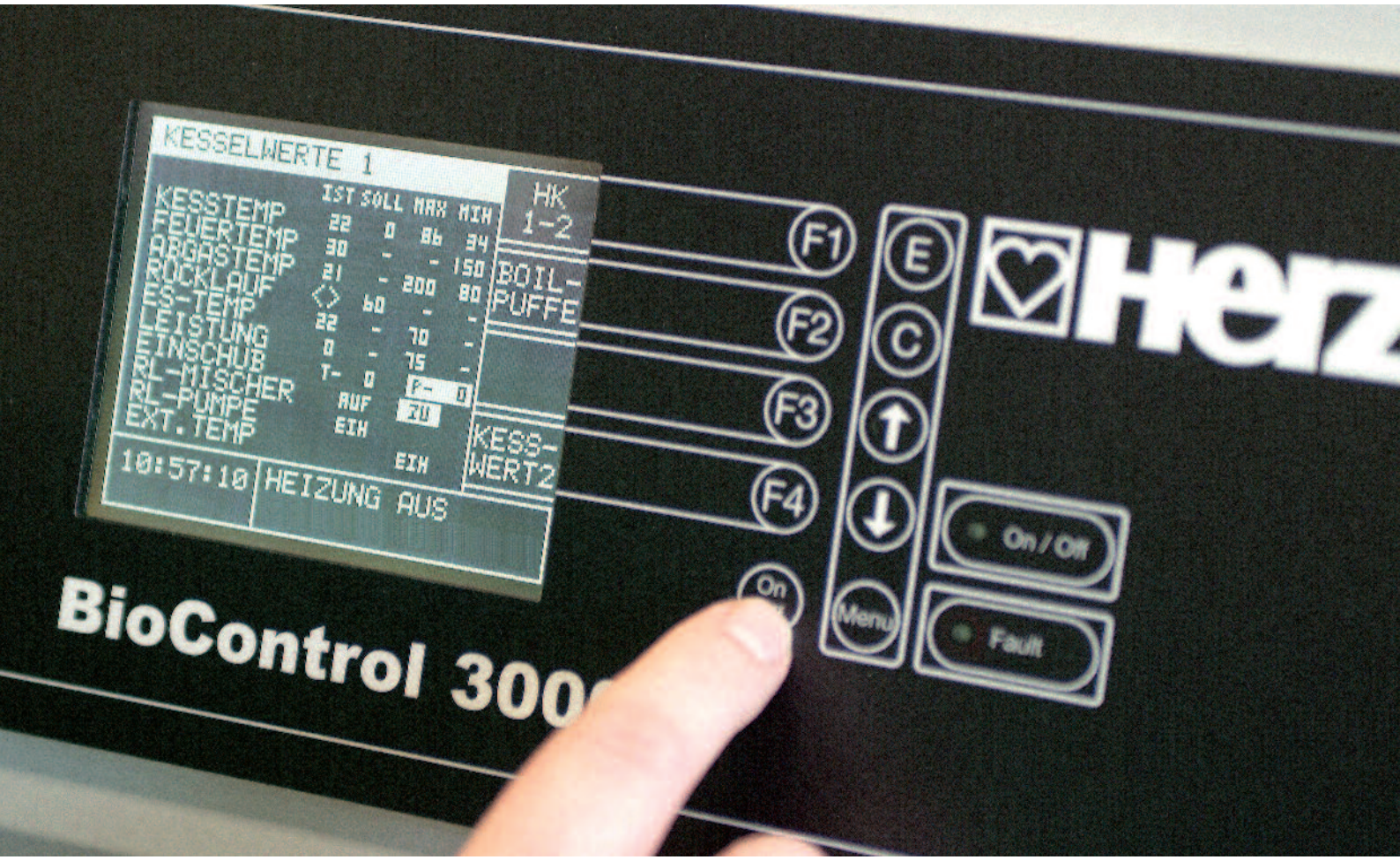
Storage room discharge via dual-ladder walking floor and straight feeder screw.



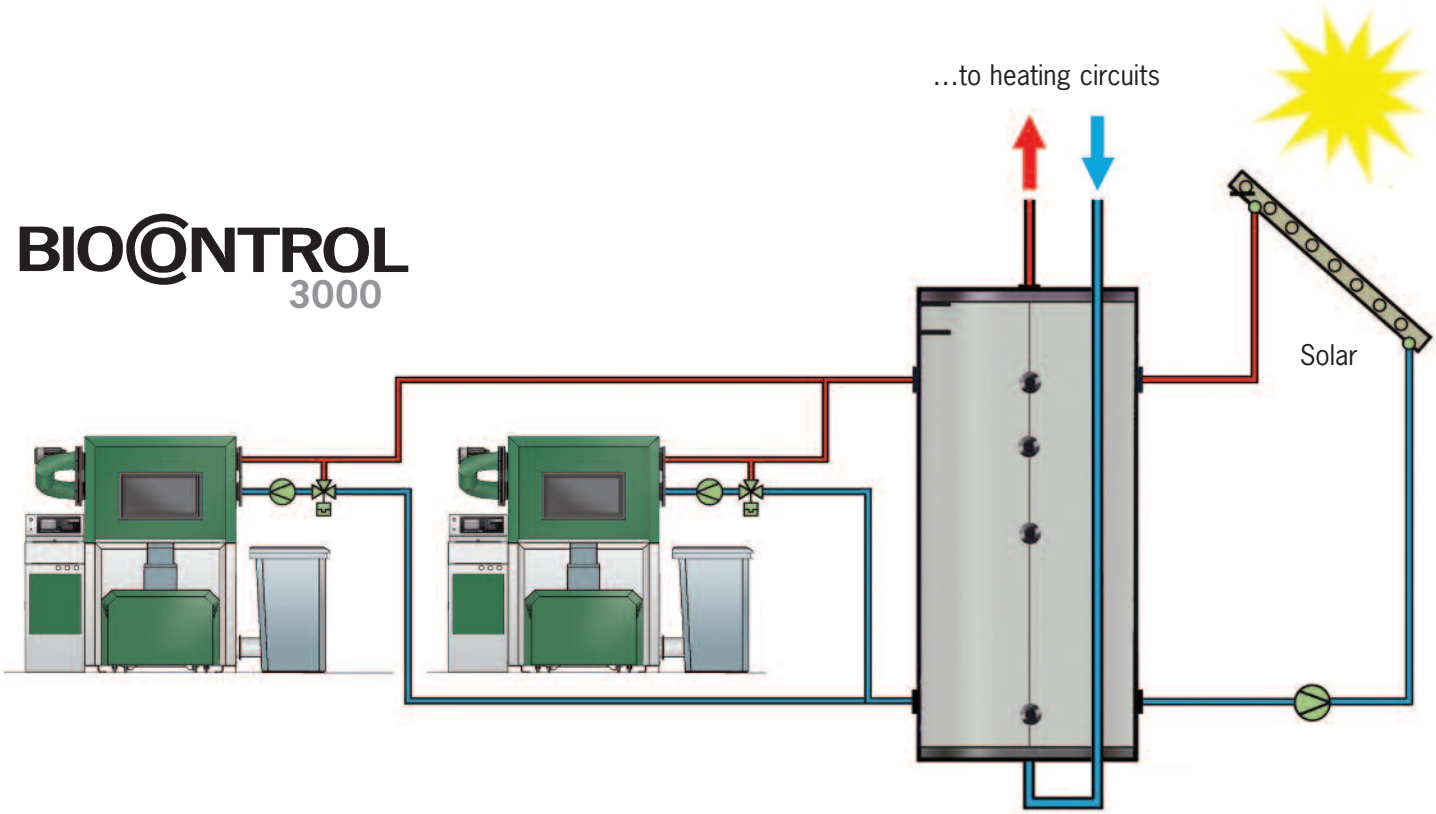


Storage room above heating room.
Room discharge via a pendulum screw from silo.

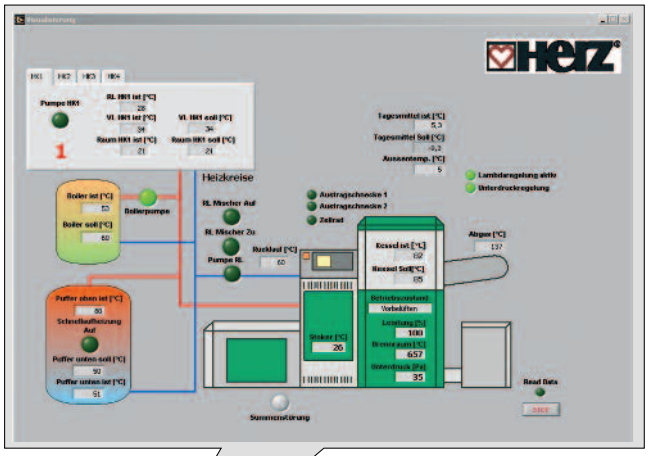
Central control unit – BioControl



With HERZ BioControl 3000 heating circuits,...



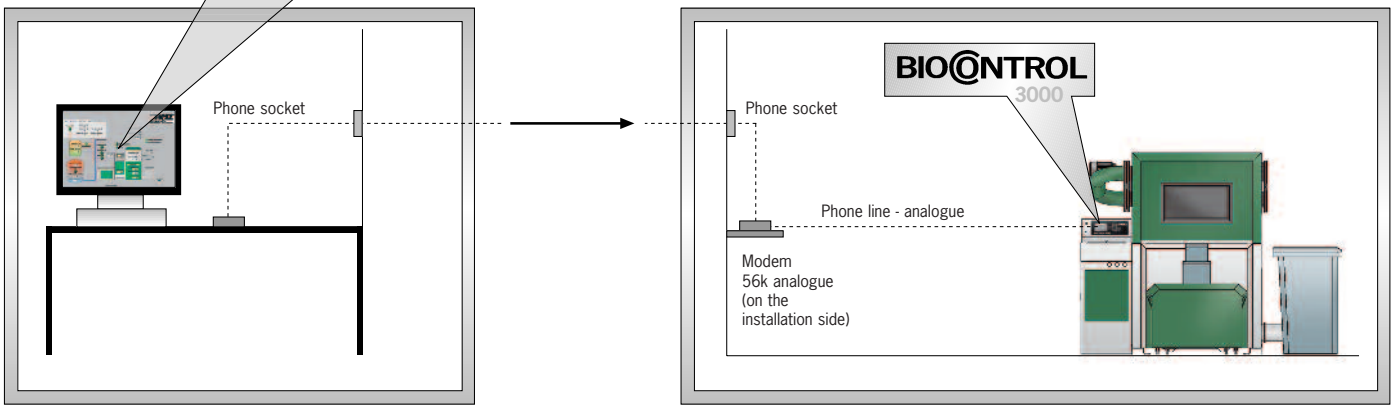
Remote monitoring and remote maintenance



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.

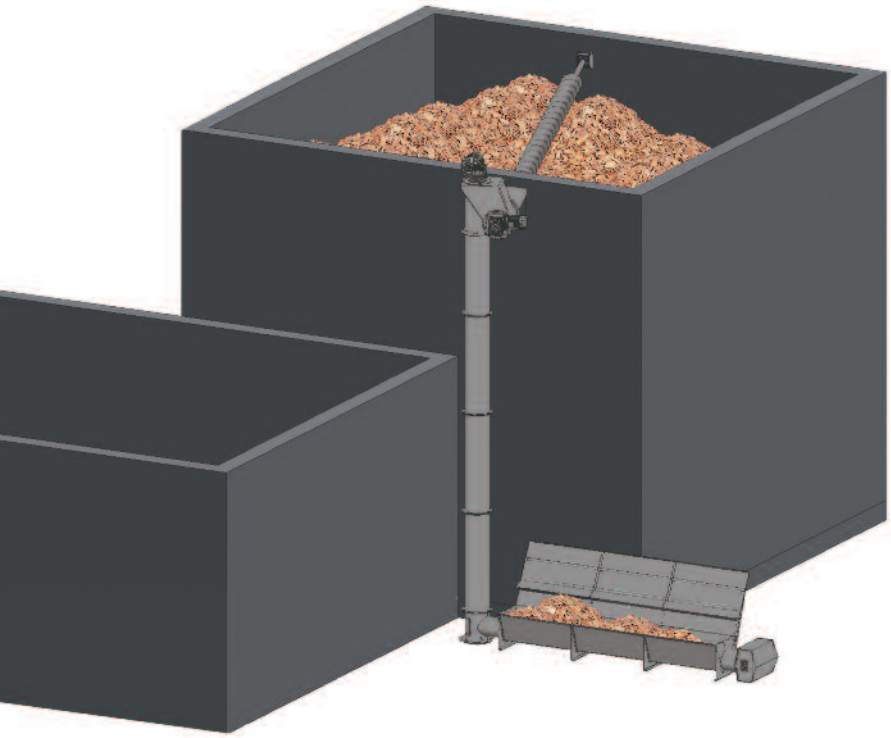
Central control unit for:
- Buffer management
- Return flow temperature bypass (pump and mixer valve)
- Hot water preparation
- Controlled heating circuits (pump and mixer valve) for a maximum of 4 heating circuits (a maximum of 3 heating circuits if a solar circuit is used)
- 1 solar circuit control
- 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.

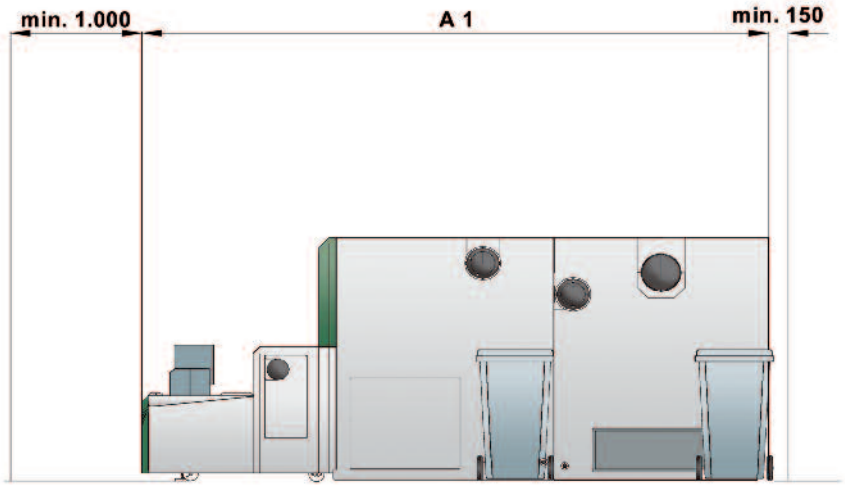
Vertical filler and technical data

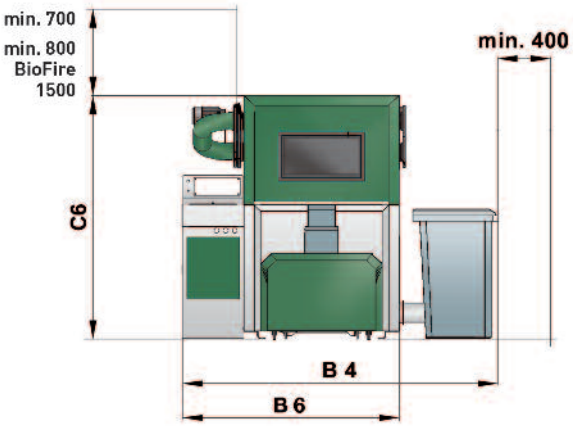
Efficient storeroom filling.



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 **150-500**	600 **180-600**	800 **240-800**	1000 **300-1000**	1500* **450-1500**
A 1 [mm]	4485	4975	4975	5280	5280
C 6 [mm]	1977	1977	1977	2177	2478
B 4 [mm]	2485	2485	2485	2505	2870
B 6 [mm]	1735	1735	1735	1755	2120
Weight [kg]	4716	5895	5895	7075	8500

We reserve the right to make technical alterations. * Available on request

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
- 1.000m^2 function hall
- Staff village

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: 12.000m^2

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.

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

Business partners in:

AUSTRIA
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CZECH REPUBLIC
DENMARK
ESTONIA
FINLAND
FRANCE
GERMANY
GREAT BRITAIN
GREECE
HUNGARY
IRELAND
ITALY
LATVIA
LITHUANIA
LUXEMBOURG
NETHERLANDS
NORWAY
POLAND
Portugal
ROMANIA
RUSSIA
SERBIA
SLOVAKIA
SLOVENIA
SOUTH TYROL
SPAIN
SWEDEN
SWITZERLAND
UKRAINE

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HERZ-Biomasse-kessel unterbieten die strengsten Emissionsvorschriften.