+PELLET STORAGE

SINCE 1921
windhager
HEAT WITH VISION

PLANNING STORAGE THE RIGHT WAY

STORAGE AND TRANSPORT SOLUTIONS
FOR WINDHAGER PELLET BOILERS

NOW THERE'S EVEN AN APP TO
HELP PLAN YOUR STORAGE


W I N
windhager
D H A
G E R

HEATING SINCE 1921

For almost 100 years, Windhager have been renowned for innovative technical solutions, making heating convenient, safe and cost-effective. Strong demand for our products has allowed us to grow constantly and develop numerous innovations in the heating market. We are now one of Europe's leading manufacturers of boilers for renewable energies and have suitable heating systems for every fuel and solar energy.

Award-winning "made in Austria" quality

The secret to our success? First-class products which satisfy the most demanding of requirements and deliver durability and reliability. We produce our boilers to strict criteria and use only high-quality materials. Our products are only manufactured in Austria, at our company headquarters in Seekirchen, near Salzburg. Independent test institutes regularly recognise our premium quality.

We always focus on the needs of our customers. We don't deliver run-of-the-mill solutions, but instead a heating system tailored to your needs.

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+ OUT WITH FOSSIL FUELS, IN WITH PELLETS

It's worth making the switch

Pellets, a renewable, domestic raw material, are the ideal solution for people who want to watch their heating costs and at the same time contribute toward protecting the environment. Our experience shows that it is possible to convert from a heating system fuelled by fossil fuels to a pellet boiler in only a matter of days. In the event of an old oil heating system, the oil tank room can be quickly converted into a pellet storage room. Structural changes are rarely necessary; existing radiators or underfloor heating can still be used as before.

App-based planning

The Windhager storage room app makes planning your wood pellet storage room incredibly simple. You simply have to enter the length, width and height of the space available and you receive a tailored, scaled 2D view (view from front and above) in an instant. It also includes all important dimensions and technical data. The plans can be converted into PDF files at the touch of a button and can then be emailed or printed out. The app can be downloaded for free from app stores.

Apple iOS

Android

A QUICK AND EASY CHANGE

Day 1

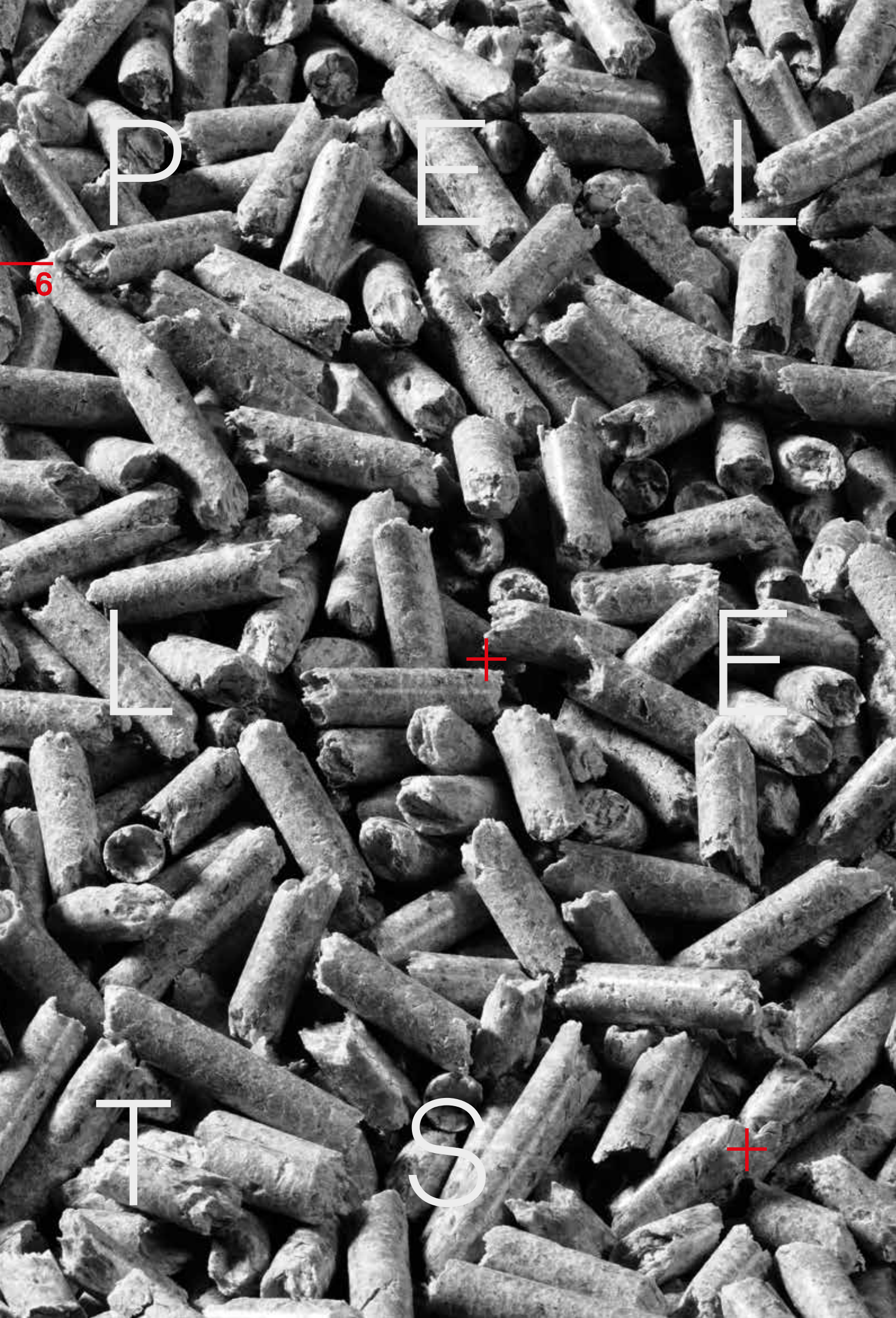
The installer removes the old boiler and oil tank, and replaces valves and parts of the boiler control system, as well as old pumps and pipes. Should chimney modernisation be necessary, a stainless sheet-steel chimney system can be retrofitted. The suction probes and filling pipes are fitted in the wood pellet storage room.

Day 2

The hydraulics and new boiler are installed. The hose system for transporting wood pellets is installed and the new pellet hopper is prepared.

Day 3

The electronic components can now be connected, and the pellets blown into the storage room. A function check of the new heating system guarantees correct operation.


P E L L E T S
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THE FUEL WITH A FUTURE

Heating with wood pellets helps reduce the greenhouse effect and CO_2 emissions. The compacted wood pellets contain low levels of sulfur dioxide and are carbon neutral when burned. Unlike fossil fuels, such as gas or oil, wood pellets do not exacerbate the greenhouse effect. Wood is a renewable raw material and readily available. The fuel quality must be consistant. For this reason, pellets are required to conform to strict international criteria.

Wood pellets do have another benefit. they are economic and have enjoyed price stability for many years. This is why pellets are the perfect alternative to fossil fuels.

Environmentally friendly
Renewable and sustinable
Inexpensive and stable in price

THE OPTIMAL STORAGE ROOM

The classic storage room with masonry walls

The ideal wood pellets storage area is dry, contains sufficient room for up to a year's supply of pellets, and is located on an exterior wall.

- **Dry pellet store**
  Moisture causes pellets to swell up and degrade. Therefore, the pellet storage room must be dry.
- **Sealed and solid**
  The walls and ceiling must correspond to the respective fire-resistance classes.
- **No exposed cables or pipes**
  There must be no exposed electrical cables, fuse boxes, water pipes, or light sources in the pellet store.
- **Door protection**
  Wooden boards (which can be removed individually), must be mounted on the inside of the door so the pellets do not press against the door.
- **Fire protection doors**
  Doors and entry openings must open outwards, be securely sealed, and be configured as fire protection doors.

YOUR PELLET STORAGE

No matter whether you have a special room for your pellets or a hopper, we have the suitable suction system for every kind of store, which transports your pellets gently in an air current. Your storage room does not need to be located next to the boiler room, transport distances of up to 25 metres and 7 metres in height can be catered for. Individually matched to your pellet storage room, you can choose from a one, three or eight probe solution.

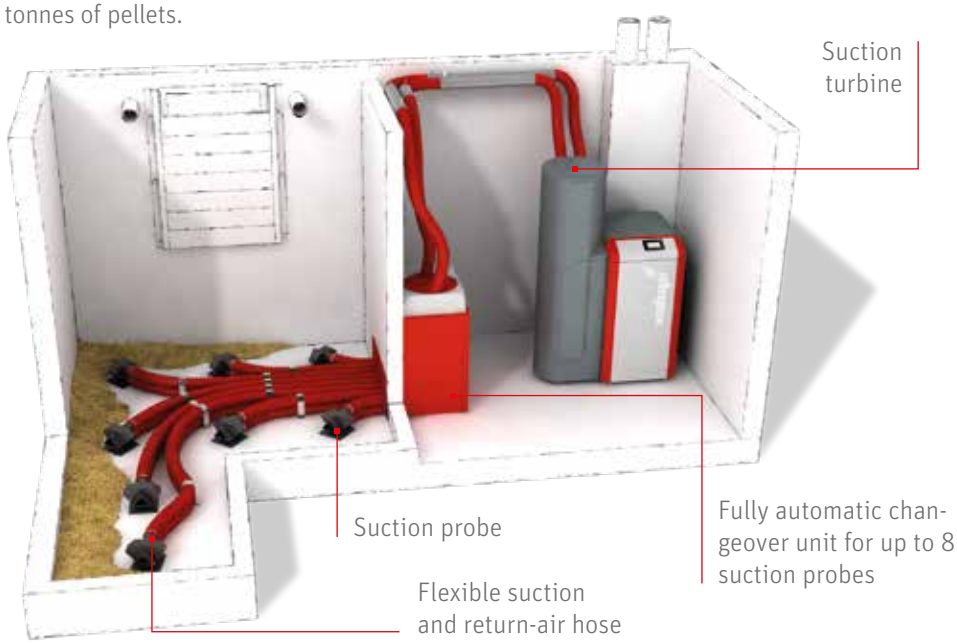
	8 probes	3 probes	1 probe with agitation
Recommended use	Block built storage room, at least 4 m², 2 seperate stores (zones), storage room	Rectangular storage room with block walls, up to 6 m²	Square storage room with block walls, up to 4 m²
Inclined floor	not usually necessary	often a good idea	often a good idea
Function	automatic, 'Purge and Change Over'	automatic, 'Purge and Change Over'	automatic, agitation
Reliable suction distance	25 m	25 m	25 m
Storage room dimensions	Heat load[1)] in kW x 0,75[2)] = storage room volume in m³	Heat load[1)] in kW x 0,9[2)] = storage room volume in m³	Heat load[1)] in kW x 0,9[2)] = storage room volume in m³

1) The heat load refers to the amount of energy required to keep the interior of a building at a constant level of 20°C on the coldest day of the year.
2) Excl. sloping-floor factor of 0,75, incl. sloping-floor factor of 0,9.

Unequalled flexibility
Completely maintenance free
Fast and simple installation process

8-PROBE SUCTION SOLUTION

We recommend the 8-probe solution for pellet storage rooms with no inclined floors and an area between 4 and 8 m². Inclined floors are only required in storage rooms with areas greater than 8 m². Storage rooms may cover a maximum area of 24 m², which corresponds to a volume of approximately 26 tonnes of pellets.



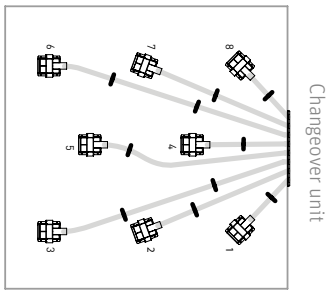
Advantages

- Cost and time savings on installing side slopes in the storage room
- The position of the storage room is independent of that of the heating room
- At least 1/3 more space in the storage room
- Up to eight removal probes make the system incredibly reliable
- Patented, completely maintenance-free system
- Option also available to use two separate storage rooms

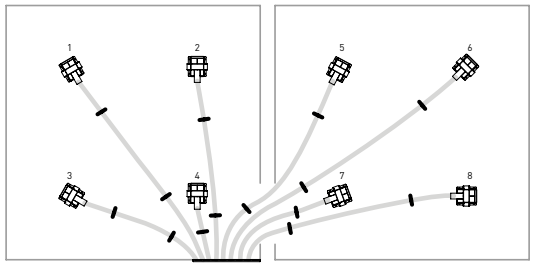
SPACE USAGE ★★★★★
FLEXIBILITY ★★★★★
STOREAGE ROOM SIZE

STORAGE ROOM OPTIONS

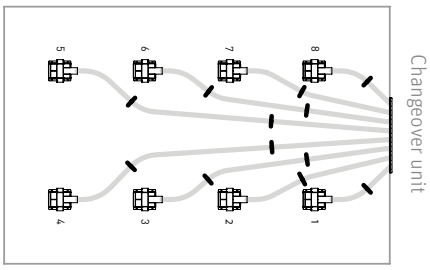
Square storage room

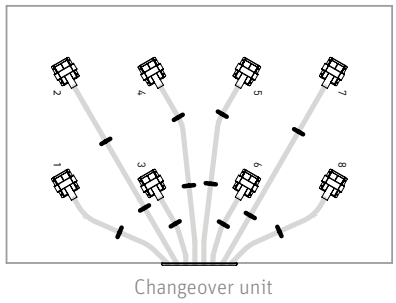


2 separate storage rooms

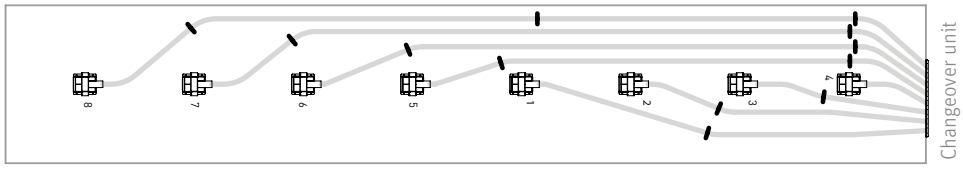


Rectangular storage room (double row)



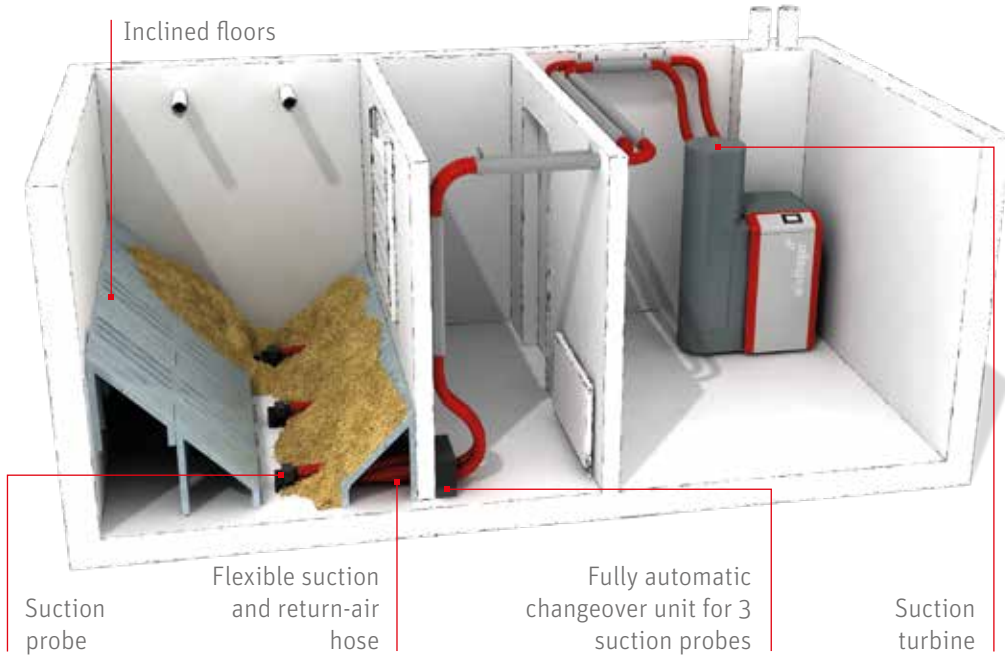


Rectangular storage room (single row)



+ 3-PROBE SUCTION SOLUTION WITH INCLINED FLOORS

We recommend the 3-probe solution for rectangular storage rooms with areas of 2.5 m² or more. The maximum area is 6 m², corresponding to a volume of approximately 7 tonnes of pellets.



Advantages

- The pellet storage room location is independent of the boiler room location.
- Reliability is ensured by three pellet suction probes.
- Patented, maintenance free system.

SPACE USAGE ★★★★☆
FLEXIBILITY ★★★☆☆
STOREAGE ROOM SIZE

+ 3-PROBE SUCTION SOLUTION WITHOUT INCLINED FLOORS

We recommend the 3-probe solution without inclined floors for rectangular wood pellet storage rooms with areas of 1.5 m² or more. Without inclined floors, the storage room should have a maximum area of 3 m², corresponding to approximately 4 tonnes of pellets.

Advantages

- Cost and time savings on installing side slopes in the storage room
- The position of the storage room is independent of that of the heating room
- Three removal probes make the system incredibly reliable
- Patented, completely maintenance-free system

SPACE USAGE ★★★★★
FLEXIBILITY ★★★★☆
STOREAGE ROOM SIZE

1-PROBE SUCTION SOLUTION

We recommend the 1-probe suction solution for small wood pellet storage requirements. The floor of the pellet storage room should ideally be square with an area of no more than 4 m² (approx. 4.5 tonnes of pellets). If the area is less than 2 m², no inclined floors are necessary.

Advantages

- Ideal for small wood pellet storage requirements and new buildings.
- Economical starter solution for fully automatic wood pellet transport.
- The wood pellet storage room location is independent of the boiler room location.
- Patented, maintenance free system.
- Also suitable for use with sheet steel pellet hoppers.

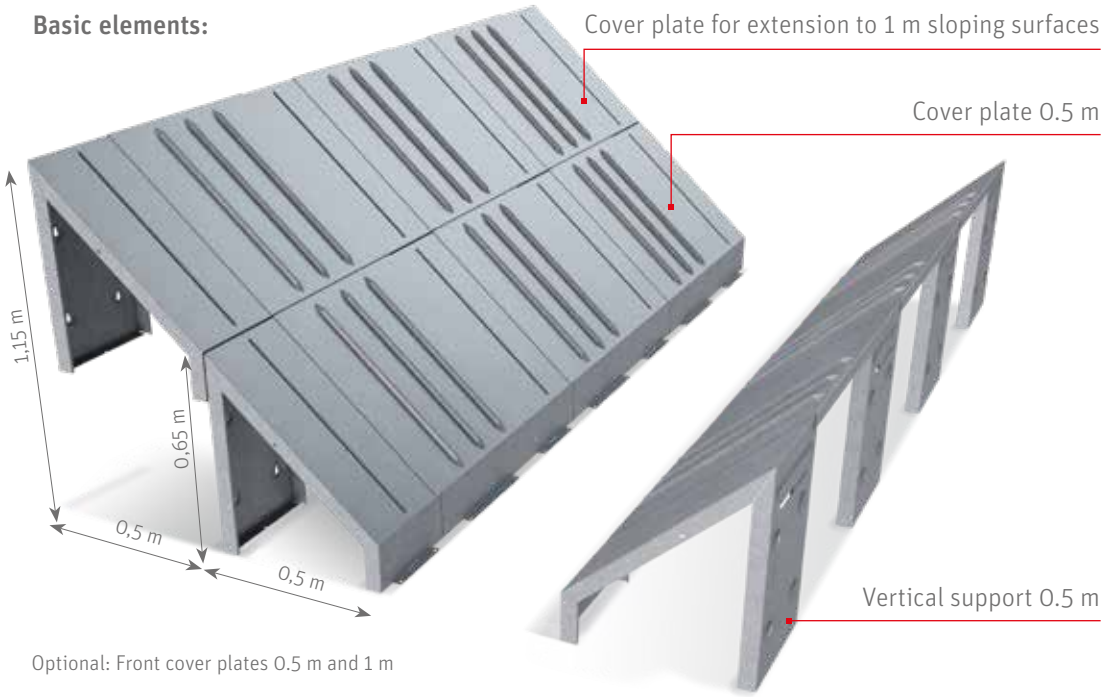
SPACE USAGE	★★★★☆
FLEXIBILITY	★★★☆☆
STOREAGE ROOM SIZE	

MODULAR SHEET STEEL SLOPING FLOOR

Advantages

- Very easy to install – arrange them, screw them into place, and you're done!
- Custom-fit sloping floor solution for all storage room sizes
- Simple and self-explanatory construction with only three basic elements
- Galvanised sheet steel ensures easy sliding of pellets and a long service life
- Tested stability up to a room height of 3 metres
- Standard cut-out for feed-through of suction pipes

Basic elements:



Optional: Front cover plates 0.5 m and 1 m

+ SHEET STEEL HOPPER

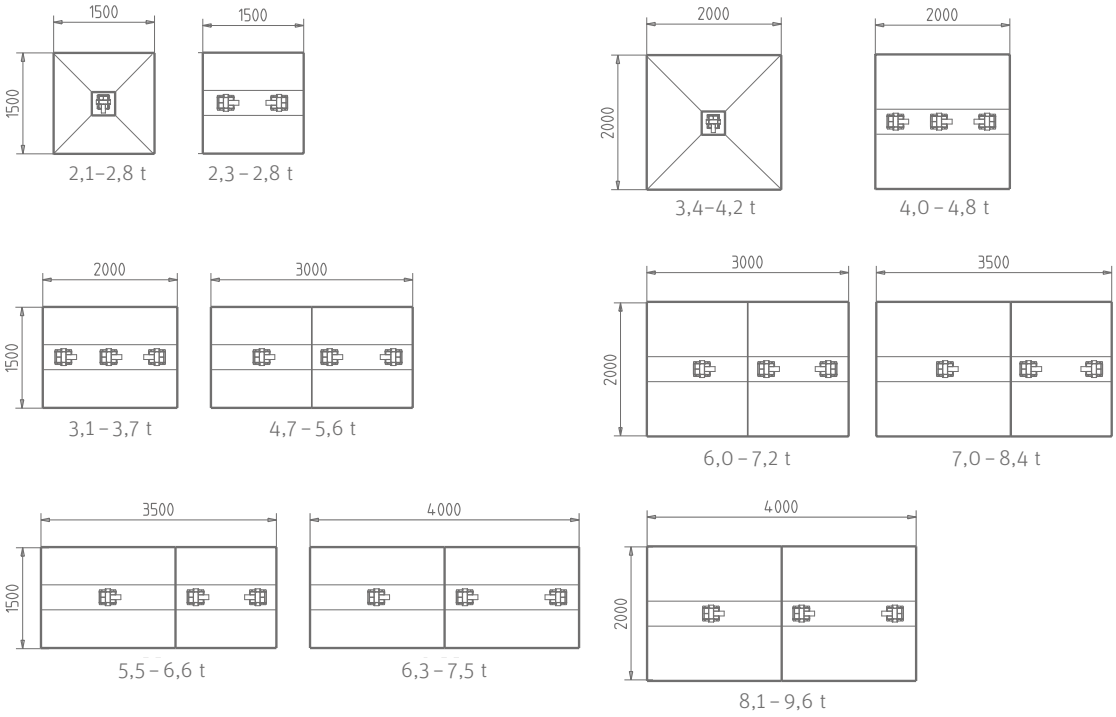
SPACE USAGE	★★★☆☆
FLEXIBILITY	★★★★☆
STOREAGE ROOM SIZE	

Sheet steel hopper – the alternative storage solution for damp spaces

The hopper can also be installed directly in the boiler room as it is made entirely of galvanised sheet steel sections.

Advantages

- Flexible adaptation to circumstances[1] (22 types and up to approx. 10 tonnes in volume)
- Can also be installed directly in the boiler room
  (legal specifications and distances must be maintained)
- High stability and mechanical strength
- Ideal for damp installation rooms



Please note: All specified contents depend on bulk weight and fill level. For this reason, the weight may deviate by up to 15 percent. Please be aware that the hopper cannot be completely emptied automatically (residual volume).

[1] Available in heights of 1.9 and 2.2 metres.

+ FABRIC HOPPER

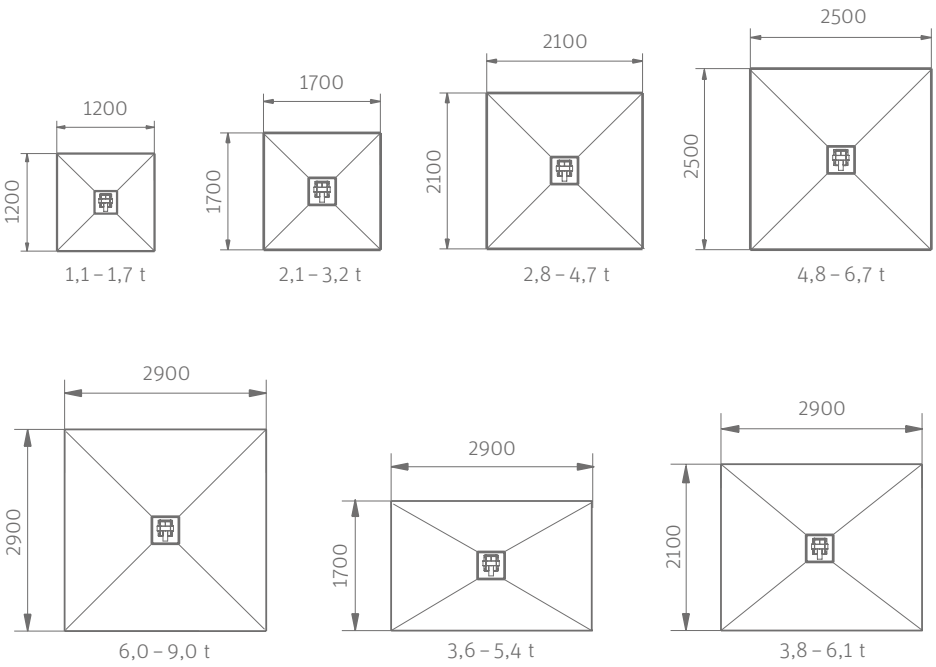
SPACE USAGE	★★★☆☆
FLEXIBILITY	★★★★☆
STOREAGE ROOM SIZE	

Fabric hopper – the alternative storage solution for damp spaces

A fabric hopper is another solution for damp installation rooms. The height-adjustable frame construction and conical base are also made of galvanised sheet steel. The outer shell is made of anti-static plastic fabric.

Advantages

- Flexible height adjustment from 1.8 to 2.5 metres
- Available in 7 sizes (up to 9 tonnes in volume)
- Can be installed directly in the boiler room (must maintain legal specifications and distances).
- Long service life thanks to galvanised frame construction and durable, anti-static plastic fabric
- Ideal for damp installation rooms
- Super quick installation involving just a few screw connections



Please note: All specified contents depend on bulk weight and fill level. For this reason, the weight may deviate by up to 15 percent. Please be aware that the tank cannot be completely emptied automatically (residual volume).

BURIED AND OUT-DOOR HOPPERS

Insufficient room for a wood pellet storage area in either your house or basement? A buried or outdoor hopper is the perfect solution for you.

Advantages

- Storage solution for use outside buildings.
- Dry, secure pellet storage regardless of weather
- Buried hoppers with up to 6 tonnes capacity delete (on request)
- External hopper with up to 7 tonne capacity

SPACE USAGE ★★★☆☆
FLEXIBILITY ★★★☆☆
STOREAGE ROOM SIZE

SPACE USAGE ★★★★☆
FLEXIBILITY ★★★☆☆
STOREAGE ROOM SIZE

+ MANUAL FILLING

Bagged material or bulk bags? – Storage rooms with masonry walls can also be used to manually fill pellet boilers. Should you later desire to install an automatic feeding boiler, our suction system can be retrofitted at any time.

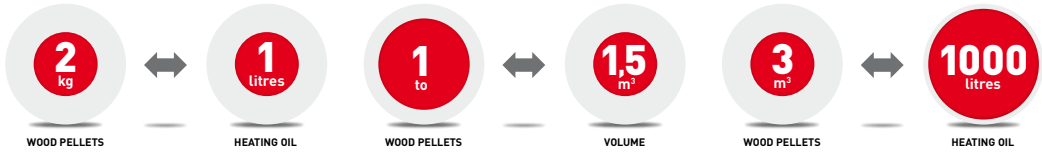
Cheaper fuel costs
No carrying bagged material
Reduced space requirements

Advantages

- Unique: all Windhager pellet boilers can also be filled manually.
- Heating system can be operated before the store is completed.
- Suction/feed system can be retrofitted at anytime.

+ PLANNING AIDS

Conversion Formulas



Fuel consumption and storage room design[1)]

Building heat load (kW)	Annual consump-tion (kg)	Annual volume required (m^3)	1 probe without inclined floors	1 probe with inclined floors	3 probe without inclined floors	3 probe with inclined floors	8 probe without inclined floors	8 probe with inclined floors
3	1.200	1,8						
5	2.000	3,1						
8	3.200	4,9						
10	4.000	6,2						
12	4.800	7,4						
15	6.000	9,2						
20	8.000	12,3						
25	10.000	15,4						
35	14.000	21,5						
45	18.000	27,7						
60	24.000	36,9						

Energy use of stored pellet volume greater than 90 %

Energy use of stored pellet volume less than 70 %

1) Approximation, without taking hot-water requirements into consideration

+ PELLET HEATING SOLUTIONS

From wood pellet boilers installed in the basement to central heating in the living area, we have the right solution for every situation.

BioWIN2 Touch

The pellet boiler
3,0 – 33 kW

- Minimum space requirements
- Intuitive touch and swipe operation
- The large mobile ash box only needs to be emptied an average of once or twice a year

BioWIN XL

The compact one among the higher output pellet boilers
10 – 60 kW, up to 240 kW in kaskade

- Space efficient as single boiler or in kaskade
- Wear-free double ignition element
- Remove ash less frequently – ashes from up to eight tonnes of pellets are collected inside the large ash box

FireWIN

Pellet heating for the living area, 4,7 – 12 kW

- Flexible pellet feed – by hand or with fully automated suction system
- Clear view of the fire thanks to XL window and patented air curtain
- Ash compression and heating surface cleaning as standard ensure extra-long cleaning intervals

DuoWIN

Combined heating with wood and pellets
4,3 – 30 kW

- Up to 25% more efficient in pellet operation
- PowerBoost function for a high output of up to 56 kW
- Pellets unit can be retrofitted

+ THE WINDHAGER PRINCIPLE

Accurate advice from our expert PARTNERS

Our expert PARTNERS are on hand to answer any questions you may have about our products. These experienced heating specialists work closely with us to ensure you receive the best possible service.

Quick and professional customer service

The heating professionals working in our extensive customer service network provide rapid, expert and solutions-based support day in, day out.

AUSTRIA
Windhager Zentralheizung GmbH
Anton-Windhager-Strasse 20
A-5201 Seekirchen near Salzburg
T +43 6212 2341 0
F +43 6212 4228
info@at.windhager.com

Windhager Zentralheizung GmbH
Carlbergergasse 39
A-1230 Wien

GERMANY
Windhager Zentralheizung GmbH
Daimlerstraße 9
D-86368 Gersthofen
T +49 821 21860 0
F +49 821 21860 290
info@de.windhager.com

Windhager Zentralheizung GmbH
Gewerbepark 18
D-49143 Bissendorf

SWITZERLAND
Windhager Zentralheizung Schweiz AG
Industriestrasse 13
CH-6203 Sempach-Station near Lucerne
T +41 4146 9469 0
F +41 4146 9469 9
info@ch.windhager.com

Windhager Zentralheizung Schweiz AG
Rue des Champs Lovats 23
CH-1400 Yverdon-les-Bains

Windhager Zentralheizung Schweiz AG
Dorfplatz 2
CH-3114 Wichtrach

ITALY
Windhager Italy S.R.L.
Via Vital 98c
I-31015 Conegliano (TV)
T +39 0438 1799080
info@windhageritaly.it

UNITED KINGDOM
Windhager UK Ltd
Tormarton Road
Marshfield
South Gloucestershire, SN14 8SR
T +44 1225 8922 11
info@windhager.co.uk

windhager.com

blog

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