

PELLETS

# Pellet Storage Solutions

Storage and transport solutions  
for all Windhager pellet boilers

windhager

HEAT WITH VISION



MULTIPLE  
SOLUTIONS

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# Heat with vision

For more than 90 years, we have been keeping homes comfortably warm for families throughout Europe. We have been gathering valuable experience for decades and have become the expert in the field of environmentally friendly heating solutions. Our knowledge is the basis of trailblazing technologies. Our heating solutions prove this by providing reliable comfort not only today, but also tomorrow. Every customer gets a heating system tailor made to his needs which will provide reliable warmth in his house for decades.

We produce our high-quality boilers exclusively in Seekirchen am Wallersee, a small town near Salzburg. Our innovative products impress not only our customers, but also independent testing institutes, which regularly document our premium quality.





# It couldn't be easier

## Out with fossil fuels, in with pellets

Pellets are the ideal alternative to expensive fossil fuels. Conversion to a pellet heating system requires little time and can be completed within just a few days.

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### Tip:

Take advantage of government incentives! Find out more at [windhager.co.uk](http://windhager.co.uk)

Fossil fuels such as oil and gas are not only costly for heating, but also an expensive proposition. 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.

Converting to a pellet heating system is easy and hassle free. Structural changes are rarely necessary; existing radiators or underfloor heating can still be used as before.

Of course, you should have your chimney inspected by an expert before purchasing a heating system. If it turns out that the flue does not meet the requirements, it can easily be retrofitted with a stainless-steel flue system.



## Converting to pellets quickly and easily

Our experience demonstrates that switching to a pellet heating system is fast and easy.

### Day 1

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

### Day 2

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

### Day 3

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



# The optimal storage room



## The classic storage room with masonry walls

The ideal pellet store is dry, offers sufficient room for a year's supply of pellets and is located on an exterior wall.



### Dry pellet store

Moisture causes pellets to swell up and degrade the pellet storage room must therefore be dry.

### Sealed and solid

The walls and ceiling must correspond to the respective fire-resistance classes.

### No exposed cables or pipes

There must not be any 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 that the pellets do not press against the door.

### Fire protection doors

Doors and entry openings must be sealed, open outwards and be configured as fire protection doors.



## The fully automated pellet feed

To ensure reliable new supplies of pellets, Windhager has developed a fully automatic feed system in which the wood pellets are carefully transported on an air current.

- Unequaled flexibility
- Completely maintenance free
- Quick and simple installation process

The pellet suction system, which is patented throughout Europe by Windhager, offers you many advantages: The pellet storage room need not be located next to the boiler room, because the hoses allow for transport distances of up to 25 metres. Pellets are transported to the boiler carefully and without raising dust. Moreover, no electrical cables or motors are required in the pellet storage room. The system is completely maintenance free. We offer you three fully automatic models individually tailored to your pellet store: a single-, a triple-, and an eight-probe solution.

	8 probes	3 probes	1 probe with agitation
<b>Configuration recommendation</b>	<ul style="list-style-type: none"> <li>• Brick-walled storage room, at least 4 m<sup>2</sup></li> <li>• 2 separate stores (zones)</li> <li>• Storage room special configurations: e.g. L-shaped</li> </ul>	Rectangular storage room with masonry walls, up to 6 m <sup>2</sup>	Square storage room with masonry walls, up to 4 m <sup>2</sup>
<b>Inclined floor</b>	Not usually necessary	Often a good idea	Often a good idea
<b>Safety function</b>	Automatic, "Rinsing and changing over"	Automatic, "Rinsing and changing over"	Automatic, agitation
<b>Reliable suction up to</b>	Up to 25 m	Up to 25 m	Up to 25 m
<b>Pellet store dimensions</b>	Heat load <sup>1)</sup> in kW x 0.75 = storage room volume in m <sup>3</sup>	Heat load <sup>1)</sup> in kW x 0.9 = storage room volume in m <sup>3</sup>	Heat load <sup>1)</sup> in kW x 0.9 = storage room volume in m <sup>3</sup>

<sup>1)</sup> Simply put, the heat load indicates how much energy must be put into the building so that on the coldest day of the year a constant inside temperature of 20°C can be maintained. This is the boiler output.

# Storage room with masonry walls

## 8-probe suction solution

We recommend the 8-probe solution for use in pellet store rooms with no side slopes and with an area of between 4 and 8 m<sup>2</sup>. Side slopes are required only in storage rooms with an area of greater than 8 m<sup>2</sup>. Storage rooms may cover a maximum area of 24 m<sup>2</sup>, which corresponds to a volume of approximately 26 tonnes of pellets.

### Advantages:

- Save the costs and time associated with installing side slopes in the storage room
- 30% more pellet store space
- The position of the pellet storage room is independent to that of the boiler room
- Up to 8 suction probes make the system incredibly reliable
- Patented, completely maintenance-free system
- Reliable suction power up to 25 metres
- Possible to employ two separate storage rooms
- Additional "Purging" safety function to prevent blockages



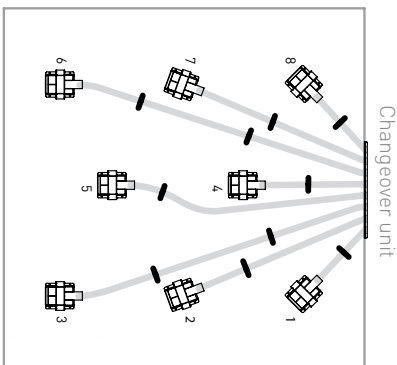
**SPACE USAGE** ★★★★★  
**FLEXIBILITY** ★★★★★  
**STORAGE-ROOM SIZE**



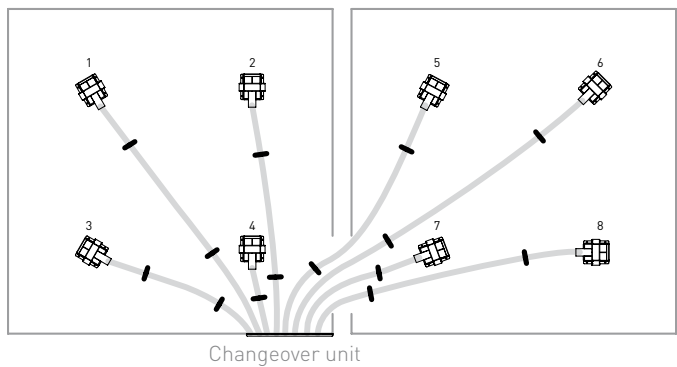


## Your store options

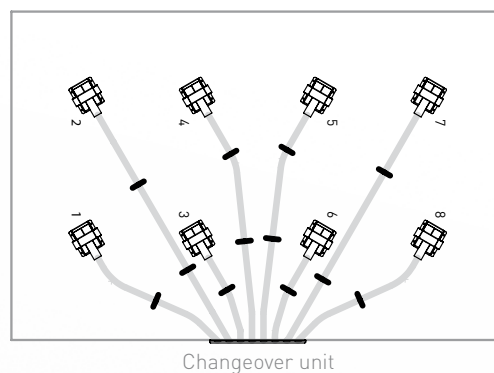
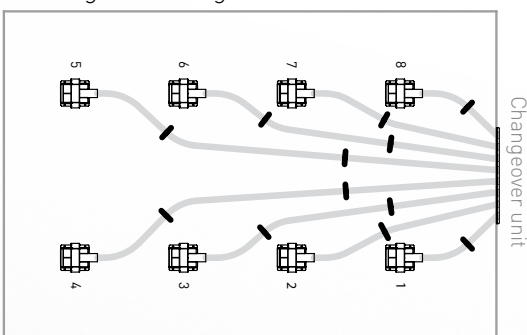
Square storage room



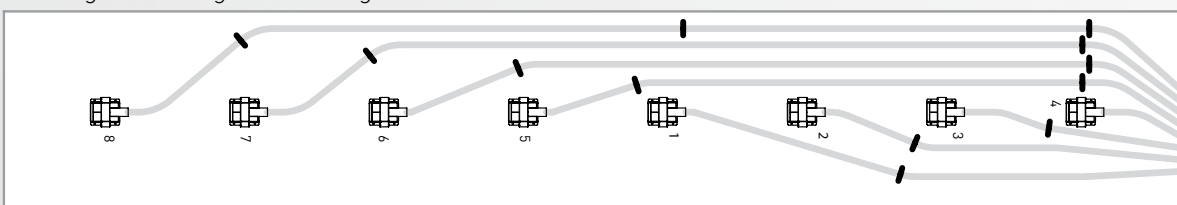
2 separate storage rooms



Rectangular storage room (double row)



Rectangular storage room (single row)



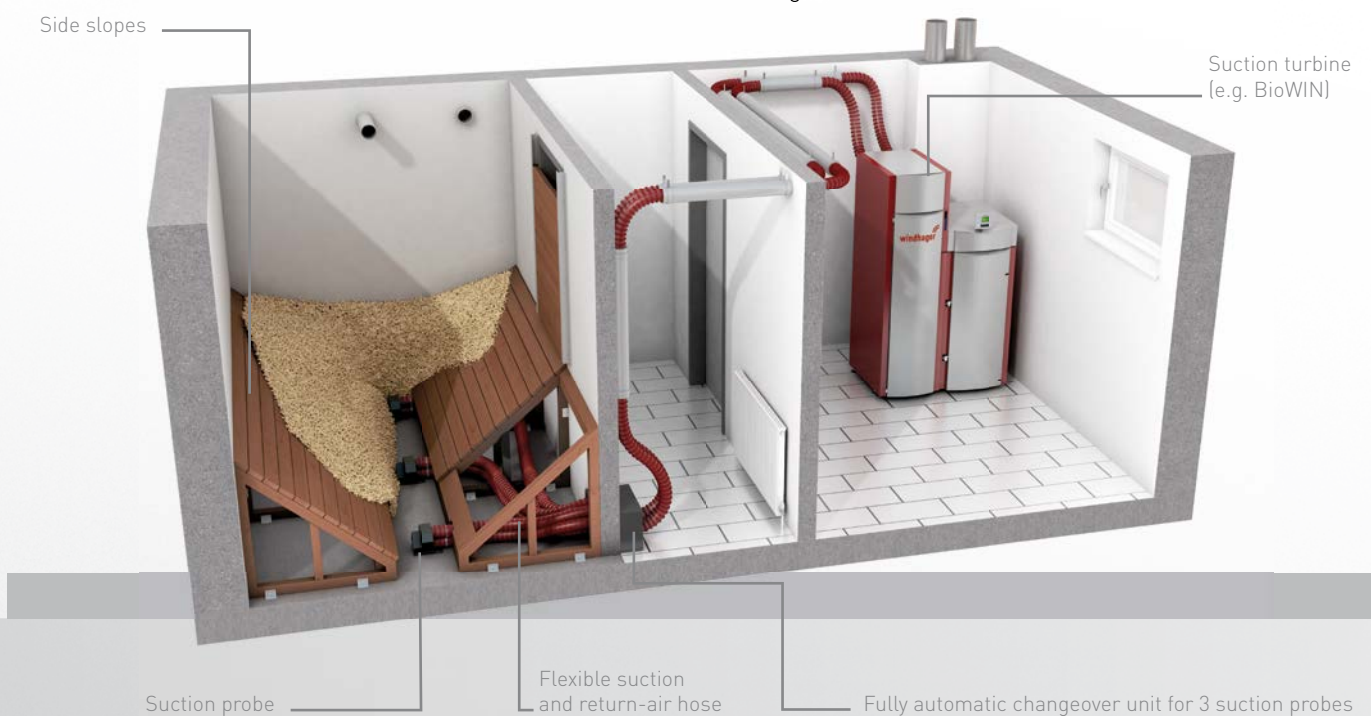
# Storage room with masonry walls

## 3-probe suction solution with side slopes

We recommend the 3-probe solution for rectangular storage rooms with an area of 2.5 m<sup>2</sup> or more. The maximum area is 6 m<sup>2</sup>, which corresponds to a volume of approximately 7 tonnes of pellets.

### Advantages:

- The position of the pellet storage room is independent of that of the boiler room
- Reliability ensured by three pellet suction probes
- Patented, completely maintenance-free system
- Reliable suction power up to 25 metres
- Additional "Purging" safety function to prevent blockages



<b>i</b>	<b>SPACE USAGE</b> ★★★★★
	<b>FLEXIBILITY</b> ★★★★★
	<b>STORAGE-ROOM SIZE</b>



## 3-probe suction solution without side slopes

We recommend the 3-probe solution without side slopes for rectangular pellet storage rooms with an area of 1.5 m<sup>2</sup> or more. If side slopes are not used, the storage room should have a maximum area of 3 m<sup>2</sup>, which corresponds to approximately 4 tonnes of pellets.

### Advantages:

- Save the costs and time associated with installing side slopes in the pellet storage room
- The position of the storage room is independent of that of the boiler room
- Reliability ensured by three suction probes
- Patented, completely maintenance-free system
- Reliable suction power up to 25 metres
- Additional "Purging" safety function to prevent blockages
- Also suitable for use with Windhagers range of sheet steel pellet hoppers

Flexible suction and return-air hose



Suction turbine (e.g. BioWIN)

Suction probe

Fully automatic changeover unit for 3 suction probes

<b>i</b>	<b>SPACE USAGE</b> ★★★★★
	<b>FLEXIBILITY</b> ★★★★★
	<b>STORAGE-ROOM SIZE</b>

# Stores for new buildings

## 1-probe suction solution

We recommend the 1-probe suction solution for small pellet storage requirements. The floor of the pellet storage room should ideally be square with an area of no more than 4 m<sup>2</sup> (approx. 4.5 tonnes of pellets). If the area is less than 2 m<sup>2</sup>, no side slopes are necessary.

### Advantages:

- Ideal for small pellet storage requirements and new buildings
- Economical starter solution for fully automatic pellet transport
- The position of the storage room is independent of that of the boiler room
- Patented, completely maintenance-free system
- Reliable suction power up to 25 metres
- Also suitable for use with Windhager range of sheet steel and fabric pellet hoppers





## Direct auger with extraction port\*

We recommend a direct auger with extraction port for our VarioWIN and VarioWIN XS pellet boilers. This solution is ideal for small pellet requirements and new buildings.

### Advantages:

- Ideal for small pellet requirements and new buildings
- Economical starter solution for fully automatic pellet transport
- Extended, pulsating pellet metering auger minimises energy consumption
- Easy connection to sheet steel pellet hoppers or pellet stores with masonry walls
- Can be installed directly in the boiler room



\*) Available for VarioWIN and VarioWIN XS only

i	<b>SPACE USAGE</b> ★★★★★
	<b>FLEXIBILITY</b> ★★★★★
	<b>STORAGE-ROOM SIZE</b> ▲

# Alternatives to stores

## Sheet-steel pellet hopper

A sheet-steel pellet hopper is the alternative to constructing a pellet store room. The hopper can also be installed directly in the boiler room.

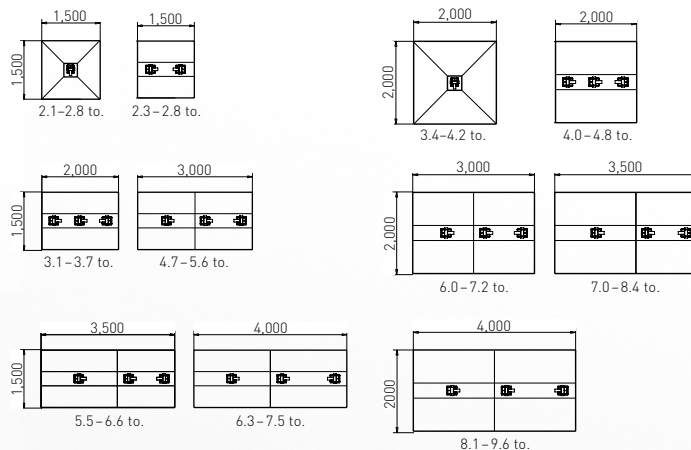


Suction probe with agitation or multiple probes with change-over unit

Flexible suction and return-air hose

### Advantages:

- Flexible adaptation to site conditions\* (22 types and up to approx. 10 tonnes)
- Can be installed directly in the boiler room
- High stability and mechanical strength
- Store solution ideal for damp installation rooms
- Reliable suction up to 25 m



\*) Available in 1.9- and 2.2-metre heights

i

**SPACE USAGE** ★★★★★

**FLEXIBILITY** ★★★★★

**STORAGE-ROOM SIZE**



## Fabric pellet hopper

A fabric hopper is another solution for the storage of pellets. The fabric tank can also be installed directly in the boiler room.

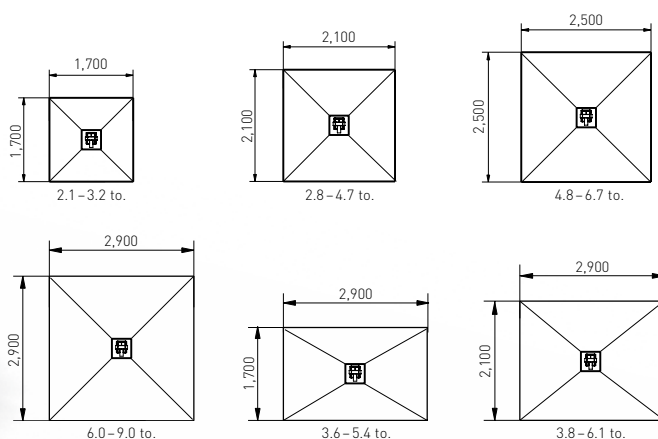
### Advantages:

- Flexible height adjustment from 1.8 to 2.5 m
- Available in 6 sizes (up to 9 tonnes in volume)
- Can be installed directly in the boiler room (maintain legal specifications and distances)
- Long service life thanks to galvanised frame construction and durable, anti-static plastic fabric
- Reliable suction up to 25 m



Suction probe with agitation

Flexible suction and return-air hose



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**SPACE USAGE** ★★★★★

**FLEXIBILITY** ★★★★★

**STORAGE-ROOM SIZE**

# Alternatives to stores

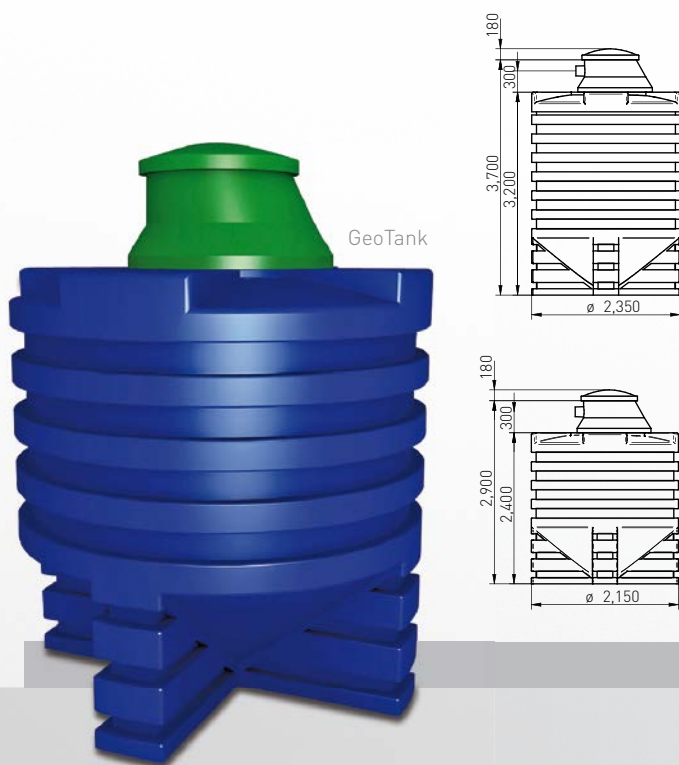


## Buried and outdoor tanks

Insufficient room for a pellet store either in your house or basement? Then a buried or outdoor tank is the solution for you.

### Advantages:

- Store solution for use outside the building
- Dry, secure pellet storage regardless of weather
- Buried tanks with 4 or 6 to. capacity (on request)
- Outdoor tank with 1.7 to. capacity



**i**

SPACE USAGE ★★★★★

FLEXIBILITY ★★★★★

STORAGE-ROOM SIZE

**i**

SPACE USAGE ★★★★★

FLEXIBILITY ★★★★★

STORAGE-ROOM SIZE





## Manual filling

Bagged material or bulk bags? Storage rooms with masonry walls can also be used to manually fill your Windhager pellet boiler. Should you desire to convert to automatic feed at a later date, our suction system can be retrofitted at any time.

### Advantages:

- Unique: All Windhager pellet boilers can also be filled manually
- Daily/weekly use container supplied as standard
- Heating system can be operated before the store is completed
- Suction/feed system can be retrofitted at any time

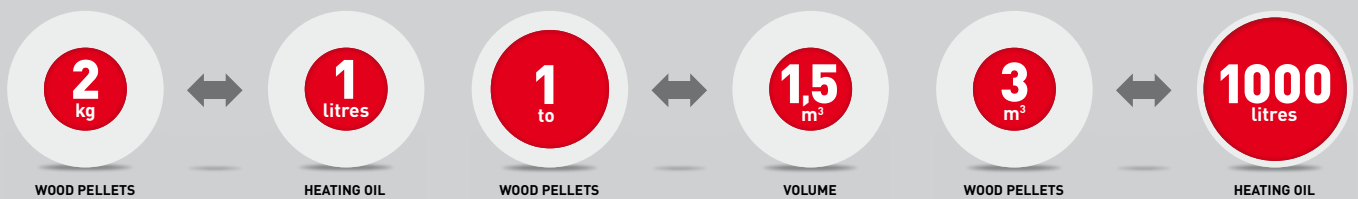
Cheaper fuel costs  
No carrying bagged material  
Reduced space requirements



# Planning aids



## Conversion formulas



## Fuel consumption<sup>1)</sup> and storage room design

Building heat load [kW]	Annual consumption [kg]	Annual volume required [m³]	1 probe without inclined surfaces	1 probe with inclined surfaces	3 probe without inclined surfaces	3 probe with inclined surfaces	8 probe without inclined surfaces	8 probe with inclined surfaces
3	1,200	1.8	Green					
5	2,000	3.1	Light Green	Green	Green			
8	3,200	4.9	Orange	Light Green	Light Green	Green		
10	4,000	6.2	Red	Yellow	Light Green	Light Green		
12	4,800	7.4		Orange	Orange	Light Green	Green	
15	6,000	9.2		Red	Orange	Orange	Light Green	
20	8,000	12.3			Red	Orange	Light Green	Green
25	10,000	15.4				Red	Orange	Light Green
35	14,000	21.5					Orange	Light Green
45	18,000	27.7					Red	Yellow
60	24,000	36.9						Yellow

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

- Energy use of stored pellet volume greater than 90 %
- Energy use of stored pellet volume less than 70 %



## Pellet heating solutions from Windhager

We have the right solution for every situation – from pellet boilers installed in the basement to central heating in the living area.



### BioWIN

Safe, clean and economical  
2.9 – 25.9 kW

- Pellet central heating for installation in basement/boiler room
- For single-family and multiple-family homes
- Available in four performance levels



### BioWIN Excel

The future for pellets  
10 – 60 kW

- Suitable for large-volume buildings
- Available in three power levels up to 60 kW
- Pellet feed system with up to eight probes



### VarioWIN XS

Perfect for small heat requirements  
1.7 – 6 kW

- Ideal for passive and minimum energy buildings
- Pellet central heating for the entire floor
- Can be installed anywhere from cellar to attic



### VarioWIN

Technology makes it possible  
3.6 – 12 kW

- Pellet central heating for the entire floor
- Can be installed anywhere from cellar to attic
- In two colours – red/grey and white



### FireWIN

Central heating with style  
4.7 – 12 kW

- Pellet central heating for the living area
- Fully automatic pellet feed available
- Available in three colours



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