INSTALLATION AND USER MANUAL

FREE STANDING WOODSTOVE

TYPE:

DYNAMIC V

Foreword

Congratulations on the purchase of your new RENY stove. Your choice proves that you care about quality and a functional design.

RENY was founded in 1975 and spent the first years specializing in the classic fireplaces. Since 1981 fireplace inserts and freestanding stoves have been manufactured. RENY is unique compared to other companies because of its innovative developments, which are always achieved using the latest technology. Everything is manufactured in our own factories, which guarantees that you, as a client, receive a truly Dutch product of the highest possible quality.

In this era of rapid developments and frenetic lifestyle, there is an increasing need for a central location in houses, used for people to relax. This is why the ancient custom of using a wood stove is experiencing a true revival. In addition, heating using wood is a very sound choice environmentally. Heating using wood is CO_2 neutral. When incinerated, the wood releases the same substances that the tree extracted from the air. A cycle in balance with nature. In addition to an atmospheric appearance, a stove also creates heat in every season, exactly where it's required. This also results in significant energy savings.

In order for your stove to provide you pleasure and heat for a long period of time, we recommend that you read this installation- and user manual carefully. It contains important directions and useful tips.

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1 Description

The RENY DYNAMIC V combines comfort and an efficient heat release. During development, very high quality materials were used. It's not for nothing that RENY offers no less than 5 years of warranty regarding her products. This is reflected in a solid and functional construction with sublime finishing. Simplicity, soundness and the appealing design are the foundation of the pure enjoyment of the extreme comfort associated with an ambient wood fire.

1.1 Construction

of the stove is composed out of hot rolled construction steel. The way RENY applies stove steel is unique and far ahead of its time. This material, mainly used in heavy industrial applications, addresses all future demands with regards to wood stoves. In order to achieve an extremely efficient and clean heat release, the inside of the incineration compartment is coated with a vermiculite coating and an extra thick steel bottom grid. The flue system has a diameter of Ø 150mm. The stove can be equipped both with a top connection and a rear connection. (see paragraph 2.3). The stove can easily be operated using the stainless steel handle. The coating of the stove consists of a heat resistant coating (Anthracite, color code 930). The stove was manufactured completely in our own factory using the most modern techniques. A team of professionals has constructed, manufactured and verified the stove with the greatest possible care. This guarantees a product with the quality you've come to expect of RENY.

1.2 SGI-system

Reny was the first manufacturer to introduce the Schoon Glas Injectie (Clean Glass Injection) system. The stove has been designed in such a way that airflow is created just alongside the windowpane. This creates optimal burning at that location, which prevents windows from becoming charred and instead keeps them extremely clean. This allows you to keep enjoying the atmospheric flame interaction. However, soot can not always be prevented. Staining depends on a number of factors, such as:

- Operation
- Chimney draught
- Outdoor temperature
- Weather conditions
- Wood quality.

1.3 LVB-system

Houses are insulated increasingly well. Chinks in windows and doors are a thing of the past. This means that much less outside air enters the house than before. A conventional stove would not perform well in these energy efficient houses. The stove can not burn very well and the flue is drawn into the house. The required oxygen for incineration is unavailable which means that a vacuum may occur. This is why RENY has developed the Lucht Van Buiten (LVB) system (Outside Air system). This allows an external aeration supply so that a closed system is established. This closed system ensures that the entire primary, secondary and tertiary aeration can be supplied with fresh air from outside. This creates a perfect incineration, without air being extracted from your living area, which allows the stove to perform optimally in any situation.

1.4 Heat transfer

The transfer of heat by the stove consists of convection- and radiation heat. The convection heat is caused by cold ambient air flowing between the outer sheath and the incineration compartment through the back of the stove in the double-walled circuit. When passing the incineration compartment, this air is heated. This heated air is then released into the environment through the convection gaps above the door. This system guarantees an even heat release to the entire area. The radiation heat is distributed through the heated glass surface in the door. The stove can be equipped with a fan cabinet with two radial fans. The overcapacity of the fan ensures the provision of sufficient air output at a low speed. This means that the production of additional noise is minimized. The speed of the fans can be adjusted using a controller. This way the natural convection is enhanced and the heat will be distributed over a larger surface.

1.5 Attention to the environment

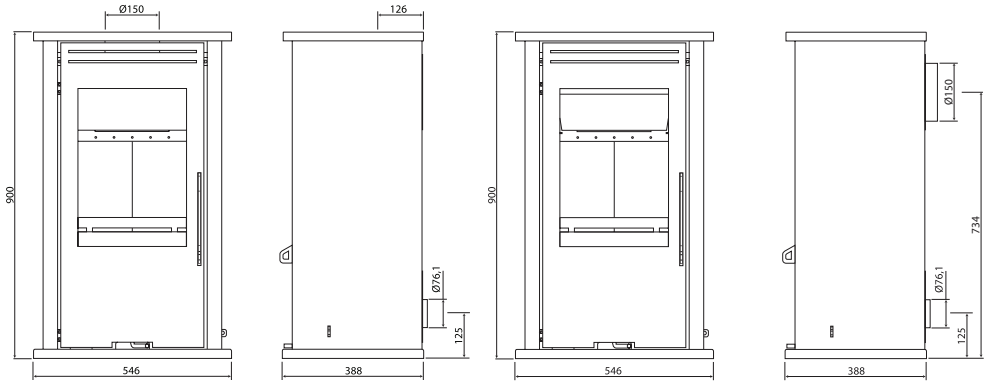
Heating with wood is a responsible choice. When properly and optimally burnt, wood doesn't affect the environment in a more negative way than if it would have died in a natural way. During the incineration of wood, the amount of CO_2 released is equal to the tree's air consumption. A cycle in balance with nature, that doesn't contribute to the greenhouse effect. The RENY incineration system aims for optimal incineration using primary, secondary and tertiary aeration. The specially designed incineration compartment has been equipped with a heat shield. This ensures that the flue makes an extra round in the incineration compartment. Therefore, not all flues disappear directly into the smoke channel, but an additional afterburning is created combined with the tertiary aeration. This creates a very high efficiency combined with extremely low emission values. Furthermore, a stove generates heat in every season exactly where needed, this in addition to the atmospheric appearance. This leads to a significant energy saving.

2 Installation

Have your stove installed by a recognized installer only. He is able to assess your specific situation and provide you with an appropriate advice.

2.1 Dimensions

Top connection ***Rear connection***



2.2 Chimney

One of the main components of the stove is the chimney. Together with the chimney, the stove is one unit. The stove can only perform properly if the stove and the chimney have been aligned correctly. Therefore you should have these inspected by the installer in advance. In addition, the chimney should be clean and leak-proof and have a minimal diameter of Ø 150 mm over the entire length. A properly functioning chimney prevents a lot of issues such as:

- Poor heat transfer
- Soot on the windows
- Smoke in the room
- Chimney fires.

In case of a chimney fire you need to immediately seal all air supply channels (primary, secondary and tertiary). Then, you should immediately call the fire department. After the fire has been extinguished, the stove and the chimney should be inspected again by your installer.

2.3 Converting from top to rear connection

The stove is equipped with a top connection in the factory. The construction of the stove allows an easy conversion to a rear connection. Attachment 1 shows plans that will further explain the different components. The conversion is done as follows:

1. **Remove the wood collector.**
   a. Slide the wood collector up in the doorway.
   b. Then the wood collector can be easily removed by rotating it 90°.
2. **Remove the bottom grid.**
   a. The bottom grid is not attached and can be removed without problems.
3. **Remove the vermiculite panels**
   a. First slide the panels on the side downwards.
   b. Then rotate these 90° to be able to remove them through the doorway.
   c. Now the rear panels can be removed.
4. **Remove the seal plate in the incineration compartment.**
   a. Unscrew seven M6 countersunk hexagon screws.
   b. Remove the seal plate.
5. **Remove the smoke channel in the incineration compartment.**
   a. Unscrew seven M6 countersunk hexagon screws.
   b. Remove the smoke channel.
6. **Remove the inner disc from the lid of the outer sheath.**
   a. Break loose the three micro joints.
   b. Remove the disc.
   c. Mount the smoke channel.
7. **Mount the smoke channel.**
   a. Place the smoke channel through the incineration compartment at the rear.
   b. Note that the fiberglass rope is positioned correctly so that it creates proper sealing.
   c. Screw seven M6 countersunk hexagon screws.
8. **Mount the seal plate**
   a. Place the seal plate through the incineration compartment at the top.
   b. Note that the fiberglass rope is positioned properly so that it creates proper sealing.
   c. Screw seven M6 countersunk hexagon screws.
9. **Place the lid cover.**
   a. Place the lid cover at the top in the opening of the cover.
   b. Press it tight so that it is at the same level of the cover.
10. **Place the vermiculite panels back into position.**
    a. First place the bottom panel at the rear.
    b. The top rear panel is no longer required.
    b. Afterwards, the sides can be placed back into position.
11. **Place the bottom grid back in position.**
    a. The bottom grid can be placed back in position without fixing.
12. **Place the wood collector back in position.**
    a. Rotate the wood collector inwards through the doorway.
    b. Lower the wood collector.
13. **The conversion is complete and the stove is ready for use.**

2.4 Installation

To ensure correct placement of the stove, the following points needs to be observed:

- The stove needs to be placed in compliance with national fire safety regulations.
- The stove is not suitable for connection to a combined flue system.
- Have the chimney swept and checked for quality and dimensions (diameter at least Ø 150 mm).
- In order to allow the stove to perform properly, a sufficient amount of oxygen is of great importance to the incineration. Mainly in case of well isolated houses with mechanical exhausts and / or air heating, this may cause problems. Therefore we recommend that you have a recognized installer

assess your situation and take proper measures. For instance, the stove can be connected to an external air supply (basement, cellar or crawling space).
- When placing the stove, a distance of at least 1 meter should be observed at the front. The walls next to and behind the stove cannot be made of inflammable material. In addition they also cannot be covered with such materials, unless the distance is more than 30 centimeters on the side and more than 20 centimeters at the rear.
- A surface underneath the stove made of flammable material such as wood, cork or carpet needs to be protected by a floor plate made of nonflammable material such as ceramic, stone, glass or metal. The floor plate needs to extend 50 centimeters at the front and 30 centimeters at both sides.

3 Use

3.1 Firewood

The incineration system was developed for burning deciduous wood in the form of split logs. It is important to burn only purely wind dry wood (moisture level 12 - 15 %). Never use waste, other flammable materials and / or flammable liquids. This will seriously damage your stove and chimney. Below you will find the various wood types with their average drying time.

Wood type	**Drying time**
Pine, Poplar	1 year
Lime, Willow, Spruce, Birch, Ash, Awl	1,5 years
Fruit tree, beech	2 year
Oak	2,5 years

3.2 Ventilation

Incineration requires air. Make sure you have sufficient supply of fresh air. For every kg of wood you burn (with the device door closed), you need an additional 10 m^3 - 15 m^3 of air. This means about an additional 30 m^3 per hour. Therefore ample aeration from the outside or through an other room or hallway is required.

3.3 First time stoking

A new woodstove needs to be put to use gradually. During the first two stokings, you need to limit operation to a tempered fire. This helps you prevent the following problems:
- Tearing of the vermiculite;
- Damaging the coating
- Deforming the material
- The rope seals getting stuck.

During the first stokings it is possible that you will notice some pungent odor and smoke. If this happens, make sure that you properly ventilate the area. During the next stokings, the stove can be used to its full extent. The ex works soft, scratch sensitive coating has now been completely hardened and burnt in completely.

3.4 Lighting

1. Fully open the air supply.
   a Primary aeration, slide the knob on the ashtray as far right as possible.
   b Secondary aeration, slide the tube at the bottom of the door as far right as possible.
   c Tertiary aeration, push the tube on the side of the stove inwards.
2. Build an airy stack of wind dry, pure wood with a few clots of paper around it and some kindling.
3. Light everything.
4. Leave the door slightly open (3 – 5 min).
5. When the wood is burning properly, the door can be closed. The fire should now be burning brightly and intensely.
6. Let the fire warm up properly and then adjust the incineration control.

3.5 Stoking

As soon as the stove has warmed up (after about 15 minutes) the incineration can be controlled. The following points are important:

- The primary aeration can be partly closed. This additional full air supply is only required during the stoking of the stove. Slide the knob at the front of the ashtray to the left. **Continuous stoking with the primary air supply fully open causes a fiercely white-hot fire that can damage the stove. Prevent white glow and over-firing.**
- The secondary aeration provides the stove with the SGI system. This should never be fully closed during the incineration, in order to prevent soot on the windows. In addition this slide allows for the provision of less or more air.
- The tertiary aeration controls the afterburning process. This aeration ensures that the unburnt gasses, emerging from the wood, are provided with additional oxygen. At higher temperatures, up from ± 550°C these gasses are additionally afterburnt. This considerably improves the efficiency of the stove. Therefore we recommend that, once the stove has warmed up, the aeration is left completely open. You can do this by sliding the tube at the side of the stove inwards.
- When controlling the incineration it is important that there will be no incomplete incineration. An incomplete incineration occurs if oxygen is supplied insufficiently, due to the fact that the primary, secondary and tertiary air supply controllers have been closed too soon. An incomplete incineration can be identified by:
  - An increase of smoke development in the incineration compartment;
  - The fire going out;
  - Soot on the window.

  The flue from the chimney also tells something about the incineration: white or colorless smoke indicates a proper incineration. If the smoke is grey, grey blue or black, the incineration is incomplete. A larger air supply will improve incineration. **Avoid overloading (white burning glow), caused by lengthy burning with primary air fully open or by burning too much wood in one go. The stove can then become overheated. This may damage the stove.**

3.6 Optimal stoking

Burning with wood is highly environmentally responsible and also most efficient if you have a hot but quietly burning fire. The ash should mildly glow red and orange, and should certainly not be glowing as bright as a blacksmith's fire. A solid fire burns fast and fiercely which allows no time for full incineration. You achieve maximum efficiency if:

- You don't burn during foggy and windless weather.
- You make sure that you use pure dry wood.
- You only burn with the door closed. This increases the temperature in the incineration compartment, which leads to better incineration.
- You ensure there is a significant ash layer (2 to 3 centimeters) on the bottom grid. Not only does this form protection, it also leads to a significant decrease of the wood consumption and an easier ignition of the added wood.
- You take care of a homogenous wood bed. Place the blocks loosely, well distributed and horizontally on the ash bed, separated from each other and a few centimeters away from the walls. This way the incineration process is able to better obtain the required oxygen.
- In case of a nominal capacity of 7,7 kW 1,6 kg beech wood suffices for a burning time of about 45 minutes. Refill only when the charcoal phase has been achieved. Keep the door open for a short period of time during this.
- You ensure a regular burning process by:
  - Primary aeration 50% opened ➔ place knob on ashtray in the middle.
  - Secondary aeration 50% opened ➔ place tube below door in the middle.
  - Tertiary aeration 100% opened ➔ push tube at the side inwards as far as possible.

3.7 Firewood consumption

The table below indicates the heating value of the different wood types. This concerns pure wind dry wood with a moisture level between the 12% and 15%.

Wood type	Heating value/kg (kWh)
Birch	4,3
Beech	4,0
Oak	4,2
Ashen	4,2
Larch	4,4
Robine	4,1
Fir	4,5
Spar	4,5

The details above combined with the efficiency and power of the stove, allows for a calculation of the wood consumption. Below you will find a more extensive example based on the use of beech wood.

Calculation example:

Heating value 1 kg beech	= 4,0 kWh.
Efficiency Dynamic	= 81,3%.
Rated power	= 8,0 kW.
Efficiently utilized heating value	= 4,0 x 0,813 = 3,25 kWh.
Wood consumption per hour	= 8,0 / 3,25 = 2,5 kg.

3.8 Safety

With a RENY wood stove, you have purchased a comfortable and safe heat source. The fire safety starts with a proper installation and a correctly working chimney. In addition the following points are important when it comes to to safe heating:

- Do not place any inflammable objects within 80 cm in the radiation area of the device. Be careful with regard to decoration close to the stove.
- For safe operation, a distance of 20 cm between the side and wall and 15 cm between rear and wall needs to be observed.
- In case of an inflammable floor, a fire proof heating plate must be applied underneath the device. Towards the front and side, one must observe a minimal distance for the heating plate of respectively 50 and 30 cm with regard to the stove.
- When using your stove, the outside will get hot. When operating the stove you should use the glove included. Protect yourself and others (children!) from getting burnt. Don't leave children alone with a burning stove.
- Be careful regarding to clothing. Synthetic clothing in particular may easily catch fire and burn intensely.
- Prevent inflammable materials or liquids from being placed in the vicinity of the device. Working with solvents, glues etc in the area where the stove is burning, may be very dangerous.
- Know the condition of your smoke channel. Tears in the channel may cause critical moisture, pollution of the walls, penetration of smoke, but it can also impede the drainage of flue. Please request professional advice from your dealer or a specialized company.
- Prevent chimney fire. Have the smoke channel swept clean at least once a year, and more often if it is used intensely. Prevent excessive soot within the channel, therefore never burn freshly chopped wood, but always clean and dry split wood.
- Never use the stove as a barbecue. This causes (flammable) grease deposit in the channel and accelerates the process of the channel getting silted up. Prevent pollution of the channel (bird nests etc), by placing a proper hood on the chimney.
- Follow the directions of the local fire department. The stove can only be used if all national and local installation directives, directives of the local fire department and the necessary architectural provisions have been met.

4 Maintenance

4.1 Seals
The applied seals consist of ceramic fiberglass tape and cord. Aggressive detergents may corrode these materials. Depending on the frequency of use, these components will wear out. The fiber seals can burn away and / or come loose which may lead to the stove priming 'false air'. Take care of a timely replacement of these seals to allow the stove to remain functioning optimally.

4.2 Bottom grid and ash tray
Empty the ashtray regularly. Prevent that the amount of ash ending up in the ashtray is so large that the ash touches the bottom of the bottom grid, since it would lead to the bottom grid being unable to cool down, which instead may cause it to burn. Swipe the ashtray housing clean regularly. Please observe that the removal of the ash from the ashtray is done only when it has cooled down. The color and nature of the ash also is a good indication of the incineration process. During an optimal incineration, fine white ash is created. A dark color indicates an incomplete burning process. Always leave a few centimeters of ashes lying at the bottom of the incineration compartment. During the heating process of the stove, this starts to glow and helps the stove to warm up more easily.

4.3 Out of use
When the stove will not be used for a longer period of time, it needs to be preserved to prevent bad performance and corrosion of the stove. Ventilate the stove and, if necessary, place moisture absorbers in the fireplace.

4.4 Rotating parts
All rotating parts, such as the hinges and lock need to be mildly lubricated at least once a year. This can be done with graphite or copper grease.

4.5 Warranty
When purchasing the stove, make sure that is has been equipped with a completely filled out warranty certificate. This certificate contains the explanations associated warranty provisions. (see attachment 3).
When replacing the parts, only the use of original components is allowed. Warranty lapses when non-original components are used.
The device cannot be modified. Also, the warranty lapses in case of modification of whatever nature.

4.6 Glass
Do not wait too long with regard to cleaning the glass when there is soot on it. This way you prevent the soot from burning in. The glass can be cleaned using a moist cloth, non-scratching detergent or special window detergent available at your retailer. To prevent cracking, the glass can only be cleaned when it has cooled down.

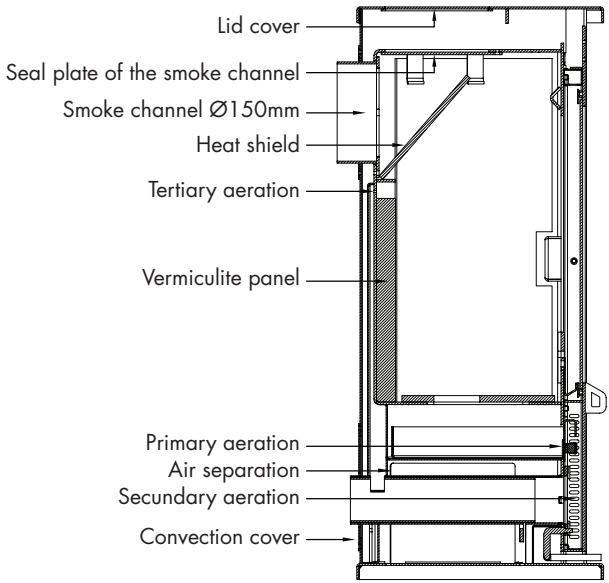
4.7 Coating
Damage and / or discolorations to the stove and / or smoke channel can be remedied using special heat resistant coating. These spray cans are available at your dealer. Standard delivered ex works in color anthracite color code 930.

4.8 Smoke channel
Have the smoke channel inspected and cleaned by a recognized chimneysweeper at least once a year.

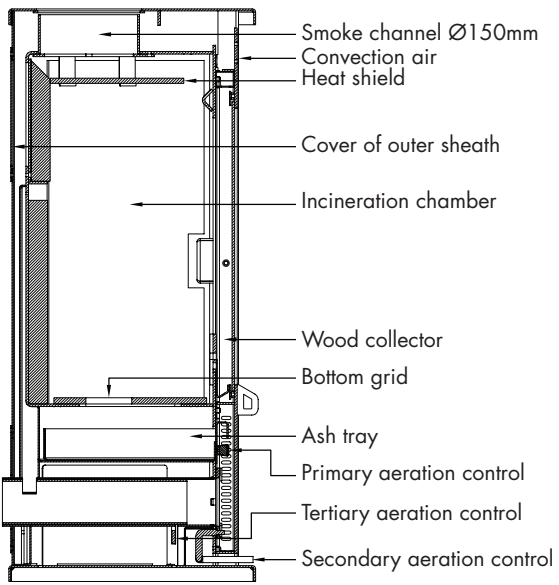
4.9 Fans
Clean the fans once a year. These are accessible through the rear of the stove. Remove the fan house. Make sure at all times that the fans are no longer connected to the power network while doing this.

Attachment 1: Cross-section stove

REAR CONNECTION



TOP CONNECTION



Attachment 2: Technical details

Technical details

Power	7,4 kW
Flue system	Ø150 mm
Content incineration compartment	0,05 m^3
Surface bottom incineration compartment	0,09m^2
Weight	110 kg

Firewood (beech wood)

Filling	1,6 kg
Primary air	50%
Secondary air	50%
Tertiary air	100%
Burning time firewood	45 min.

Flue value

Flue amount	4,9 g/s
Flue temperature	355 °C
Vacuum	12 Pa
Efficiency	81,3%
CO at 13% O_2	0,09 vol%

Attachment 3: Warranty Certificate

Stove / fireplace

Type: ....

Serial number:.....

Date of purchase: .....

Dealer

Name: .....

Street: .....

Zip code: .....

City: .....

Country: .....

Phone: .....

Fax: .....

E-Mail: .....

Signature:

.....

User

Name: .....

Street: .....

Zip code: .....

City: .....

Country: .....

Phone: .....

Fax: .....

E-Mail: .....

Signature:

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Warranty provisions

Reny Openhaardenindustrie b.v. guarantees a proper operation of the complete device for a period of 5 years.
The device needs to be placed and installed by a recognized installer. The installation needs to occur in compliance with the national directives or the installation and user manual attached.
Complaints can only be processed when they have been submitted through the dealer to Reny, together with the fully completed warranty certificate and the purchase receipt. We will handle your damage case with care and we will determine whether a warranty claim can be made.
If, despite normal use in accordance with the installation and user manual a malfunction occurs during the set warranty period, which is the result of a material and or manufacturing error, the defective component is replaced with a new one through the dealer.
For those materials that are covered by warranty, no wages and material costs are charged. Any transportation costs will not be compensated. Repairs will be executed at our factory.

The components listed below have a deviating warranty period:

- Glass no warranty
- Electrical components 1 year
- Vermiculite coating 1 year
- Coating no warranty
- Ceramic fiber seals 1 year

Warranty lapses if:

- The conditions listed above have not or only partly been met
- The installation was not performed in compliance with the national directives or the installation and user manual attached
- The device has been neglected or treated roughly
- The directions of the installation and user manual were not followed
- Wrong fuel was used
- The stove / fireplace was not installed by a Reny selected dealer.

Attachment 4: ECO label

Output **Capacity and CO-emission** Manufacturer: Model:	**Woodstove** **Reny Dynamic V**
Nominal capacity:	**7,4 KW**
Output classes High output ≥75% A 70 - 75% B 65 - 70% C 60 - 65% D 50 - 60% E <50% F Low output	A
CO-emission Low emission Class 1 Class 2 Class 3 Class 4 High emission	Class 1
Foundation capacity shield hearth and stove Ede - The Netherlands	

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