

Walltherm – Frequently Asked Questions

1. What are the chimney requirements ?

The chimney is a very important component with the Walltherm.
The draft should be 12-15 Pa.
The diameter is 6-8", the length should be 20ft or more.

For more information please have a look here:

www.walltherm.ca/cms/admin/dokumente/d1/Chimney-Requirements-Walltherm.pdf

2. The exhaust temperature is about 110° -120°C. Will I have an issue with creosote ?

No.

In the beginning we work with high temperatures up to 350°C.

This will heat and dry the chimney. First this done the stove is working with lower temperatures.

A perfect gasification process will create a very clean burning which will not create creosote.

If the smoke temperature drops under 110°C there will be a draught problem which has to be solved.

If the smoke temperature is between 120° and 150°C there should be a good draught.

You can increase draught by sealing the gaps between the double wall stainless steel smoke pipes with high temperature silicon.

3. Which wood should be burned ?

The wood shall be well seasoned - less than 20% moisture content.

The maximum length is 35 cm - 14 inches and the maximum diameter 4 inches.

It can be soft wood or hard wood.

Customers say a good length is 12". This refers also to the 8 ft length.

4. How long will one filling be ?

The burning time depends on the wood.

Soft wood (3.5 h) will not burn as long as hart wood (5 h).

One load is up to 50 liters.

The filling of the stove runs parallel to the heat output.

You will have full heating capacity by filling the stove up to the top and reduced heating output by filling it only half.

5. Will smoke come out of the stove when filling it with more wood ?

Before filling the stove again open the flap to the damper first



Wait a moment because the smoke has to change the direction from down-draught to working like a regular stove up to the smoke pipe and to move the smoke from the upper combustion chamber.

Then open the door of the upper combustion chamber slowly and fill it again with wood. After doing this you can close the flap again.

It's recommended to fill the stove again when wood burning is lower than the glass door.

6. How often do you remove the ash ?

The grates should be cleaned before starting the stove. The ash should be removed every day.

7. How often do I have to clean the flues ?

The delivery includes special steel brushes.

To clean the flues with these brushes open the flap in the back on top of the stove and push and pull them through every flue up to the bottom of the lower combustion chamber. This should be done every 6-8 weeks.

8. What are spare parts and how often should they be substituted ?

Spare parts are:

Spare parts	Estimated lifetime
Seals and gaskets (doors, hot plate ...)	2 years and more
Injector	2-4 years (depending on operating hours)
Grates	3-5 years (depending on operating hours)
Bricks	5-7 years (small cracks are no issue)

We use our stove now (January 2017) the 6th winter and what we first replaced were the grates after five winters.

9. How big should be the storage tank ?

We recommend a 1000 liter / 265 gallon storage capacity. In some cases 600 liter / 130 gallon are possible.

10. What is a combi-storage-tank ?

A combi-storage-tank can be used for domestic hot water and space heating parallel. In combination with a combi tank the Walltherm can be used for both heating options. The combi tank works with two coils. One coil for a solar thermal system and a second one which is a corrugated stainless steel pipe for Domestic Hot Water.

11. Why do I need the K36E ?

The K36E is a zone module. The K36E includes a bypass which makes sure you have 60°C in the return back to the stove to avoid condensate in the stove. If the return water would be too cold condensation couldn't be avoided and the second flame wouldn't work.

12. Which diameter should I use for supply and return ?

Ideal would be 1 inch copper pipe. If the pipe length between stove and pump station and tank is less than 30 ft ¾ " -pipe can be used.

13. What are the requirements for the Walltherm to install it ?

- a) Chimney 6 inches
- b) Weight 300 kg / 660 lbs
- c) Supply and return pipe (insulated), waterline for the cooling element, drainpipe
- d) Cable for the thermostat / aqua-stat
- e) Optional external air supply

14. What are the clearance requirements ?

The clearance requirements are Canadian Standard for wood burning stoves. Please have a look here:
www.walltherm.ca/cms/admin/dokumente/d6/Walltherm_information.pdf

15. Is it possible to cover the stove ?

It is possible to cover the stove by respecting special requirements. It must be possible to clean the stove and the access to the fittings on the right side must be insured. The model Wilder Kaiser has the doors 11 cm / 4 inches in front to cover it with tiles, stones or ceramic. Please have a look at the special requirements.

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16. What's the weight of the stove ?

The weight is: empty 270 kg / 600 lbs - filled with water 300 kg / 660 lbs

17. How much heat to the ambient air ?

The heat to the ambient air is about 30% of the total heat output rate - 4.5 kW / 15,000 BTU.

The recommended living space is minimum 40 m² / 430 ft².

18. Is it possible to reduce the heat to the ambient air ?

Yes, we have special sheet metals and soap stones and IR glass for the doors for 30% reduce.

For passive houses we use an insulation kit which reduces the heat to the ambient air by 50% and increases the heat to the water.

19. Is it possible to have an outside air supply ?

Yes, this is possible.

The air supply can be connected from the bottom or the back.

20. What happens during power outages ?

The Walltherm has three safety functions:

- a) The air supply is controlled by a thermostatic valve which closes the air supply
- b) If the temperature in the water jacket reaches 97°C cold water is flashed through a cooling element that cools down the water in the water jacket.
- c) Above 2 bar / 30 psi a pressure safety valve opens to a drain.

In any case it would be good to have a generator to support the pump, lights, fridge and freezer

or a battery backup with an inverter/charger.

21. What's about the insurance companies. Does the stove has the certifications ?

The Walltherm is tested to the following standards:

UL 1482, UL391, CSA B366.1, CAN/ULC-S627 and CSA B415.1-10

22. What's the guarantee on the stove ?

The guarantee for the stove body is 5 years, for spare parts, fittings and electrical parts 2 years.

23. Is it possible to use the Walltherm woodstove without the storage tank (in other words, with no water in the jacket at all)?

If there is a permanent heating demand which is as big as the heat output rate to the water you can use the stove without a storage tank.

It is not possible to run the stove without water in the jacket.

24. What is the maximum length for the external air supply ?

Up to 4 m / 13 ft the pipe diameter should be 125 mm / 5"

Up to 6 m / 20 ft the pipe diameter should be 150 mm / 6"

The pipes should be insulated to avoid condensate.

A flap to close the air supply from outside should be taken into account.

25. Can the stove be installed 'on slab' ?

Yes, it can be installed on slab.

If you have to run the supply and return pipe through the slab make sure these pipes are well insulated. We recommend copper pipes.

Make sure you use the pipe right diameter.

26. Can the Walltherm be used with baseboard radiators ?

This depends on the operating temperature of the baseboard radiators.

The stove cannot support permanent temperatures above 80°C.

Radiators which work with lower temperatures (up to 60°C) are possible.

27. Which size of a house can be heated with the Walltherm ?

This does not depend just on the size of the house.

It depends on the insulation (R-values) and tightness of the house and the difference between the inside and outside temperatures and according to Domestic Hot Water usage on the amount of people living in the house.

The houses of our customers are between 1,500 and 5,100 ft²

28. Which kind of heating system should be used with the Walltherm ?

Being a hydronic stove (boiler) it has to be a hydronic system like in-floor radiant or radiators (60°C).

Forced air systems are not recommended as long as they draw high volumes in short times.

The best solution is in-floor radiant because it works with low temperatures and creates a steady temperature in the heated area.

Additionally it can use the biggest temperatures difference between tank temperature and supply temperature of the system itself.

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Using the combi tank there should be always a reservoir for domestic hot water in the tank which is not used for space heating.

29. What is a PSES heating system ?

A PSES heating system is most flexible.

The whole system includes a stove, a storage tank and a solar thermal system and parts. It is also possible to have only one part of the system like the stove or just the tank or a tank and flat plate collectors plus parts.

Beside this it can be extended for backup with every hydronic heat source running on oil, gas or an electric heater.

All these possibilities make the PSES system most flexible and you can start with one component and add later other components to extend the system to your needs.