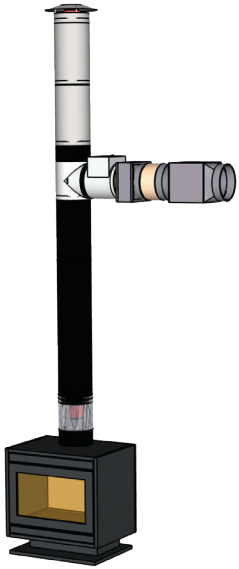
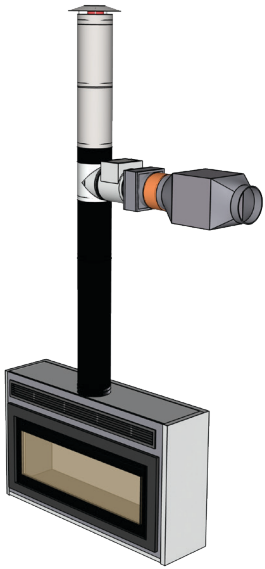
Turboheat
Wood fire ducted heating

Customer User Manual

For Your Turboheat Product.



Reference Photo 1.



Reference Photo 2.

Turboheat
3/2 Glenville Drive, Melton Victoria 3337
Ph: 03 8088 0348
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AUSTRALIAN SOLID FUEL TESTING
ASFT

Certificate of Compliance

for

SOLID FUEL HEATERS

This is to certify that the Flue System stated on this certificate has been tested for Thermal Clearances in accordance with the Australian / New Zealand Standard(s) detailed below

Manufacturer	**Turbo Heat**
Make	**Turbo Heat**
Model	**Heat Exchanger flue System**
Category	**Flue System**
Test Report No	**ASFT20035-1**
National Standards	**AS/NZS 2918 – Appendix F (2018)**

ASFT hereby grants to:

Turbo Heat

of

Factory 3, 2 Glenville Drive, Melton VIC, Australia, 3337

Certificate No.: **ASFT20C070** Certified Date: **8 September 2020**
Issue Date: **8 September 2020** Expiry Date: **29 June 2028**

Steve Marland
Managing Director of ASFT

ASFT performs compliance testing of Solid Fuel Appliances to the relevant Australian/New Zealand standards. This certification is subject to the conditions set forth in the characteristics above and is not to be construed as any recommendation, assurance or guarantee by ASFT of the product acceptance by Authorities having jurisdiction.

Australian Solid Fuel Testing, 3 Garden Street, Morwell, Victoria, Australia 3840
ABN 46 610 154 768

Introduction:

Thank you for your purchase of Turboheat ducted heating system. We trust it will be everything you hoped it would be in regards to heating your home. Included in this pack are details on operation of your Turboheat product and some problem solving techniques for minor technical issues. Turboheat advises that any modifications and or alterations outside these recommended procedures is against our advice and holds no warranties and no responsibilities to any personal injuries and or property damage from the modified Turboheat product. Our product has been suitably tested by the relevant authorities and is proven safe and effective in its use, over time as well. We hold no responsibility for poor installation of our product unless it was installed directly by us. At a minimum an annual flue clean is required, this means getting someone to clean the inside of the active flue. Contact Turboheat in regards to an annual service checklist.

Safe Operation of Turboheat Product:

For safe operation of Turboheat, please ensure everything is connected and installed correctly before use, and is signed off by installer or Turboheat representative. Use the wood heater ONLY when power is available to the Turboheat unit, it is designed to run with the electricity on. If there is a power outage shut down the wood heater, and only use it completely shut down, that is with the air slide closed, or until the wood burns out. If you are really concerned there is a manual relief door in the roof cavity attached to the Turboheat system, between the "T section" and baffle box, **(refer photo 3 & photo 5)** there is a tool attached to it to unlock the door. Please unlock the relief door and open fully to release the captured hot air **(refer photo 4).** If the power resumes please enter the roof space again and close the relief door and lock it. It is NOT recommended that you use the wood heater without Turboheat on, as you can damage components, and/or damage ducting and the fan motor.

What a fire needs and what Turboheat needs to operate:

For a fire to ignite it needs 3 elements; these are: **(refer photo 6 or watch the links below)**

https://youtu.be/NkqG1tDrlq4

1/. Fuel - Fire needs a source of fuel in this case we are using wood or logs, either split or whole depending on the user. These two factors create great fuel (wood):

- Seasoned - The seasoning process is collection of the wood, and storing it in an open dry place for a minimum of 12-18 months.
- Dry - Saying wood looks dry is commonly mistaken as dead, and not actually dry. Even seasoned and dead wood can be wet internally. Wood is a porous material and acts similar to a sponge, it will soak in moisture from the ground or even air. It is important to make sure your wood moisture content is less than 15%, preferably less than 10%. To achieve this please keep under shelter from the elements and off the ground like on a pallet or hard floor. Covering the wood before using in the next 2-3 weeks minimum is always beneficial.

2./ Oxygen - When trying to ignite your fire or increase combustion oxygen is vital to the combustion process, having not enough oxygen can starve the fire and suffocate it until it eventually goes out. Having too much can cause over firing and not combusting properly. Always use the air intake slide on fire or open the door slightly to create better combustion.

3./ Heat - How do you have heat when you don't have a fire going? Well this is a time factor and the ignition process needs to take place to provide heat over time. As your fire burns it creates its own heat, the more heat in the bed of the fire (hot coals) the better your fire will produce "energy" or better known as "heat". We sometimes make the mistake of not reloading our fires soon enough to keep the heat in the fire, this gives an inefficient fire. It might be going but may not necessarily produce "Heat". Always keep a good hot bed of red hot coals going and reload regularly to keep a fire producing "Heat".
These 3 elements when done correctly will produce a great intense and efficient fire going within your fire box, In turn it will create great "Energy" or "Heat" for the Turboheat system to utilise and heat your home.

Usage of your new Turboheat product please note the following:

For the maximum heat output and economical consumption of wood, it all depends on how you operate your wood fireplace. **https://youtu.be/5i3x91Eo3mk**

It may take a couple days or a week to understand how it is working in your house. Here is the recommended operation of the system. The fan should never run continuously, only 40mins to an hour per burn period of wood (from reload of wood to next reload of wood) and you shouldn't have to operate the heater to make it run continuously. Allowing it the system to turn on and off allows it to reheat, and run at higher temperatures. This will be more beneficial to the heat out-put of Turboheat, rather than trying to keep the fire burning hot to maintain the fan operation.

Operation Tips:

If the fire is reloaded before the fan has stopped working, the air flow will keep the flue and the metal inside Turboheat cooler then desired, this will waste all the heat that could've been generated. However, if you wait until the Turboheat fan has stopped, please refer to your wall controller. The wall controller has 3 modes. **(refer photo's 10 & 11 & 12)** It should be flashing in the 'Auto' mode, you would find that it will heat up the active flue and the internal area of the heat exchanger to a higher temp before starting up again. I recommend not reloading the wood heater whilst the fan is running, instead allow the system to turn off. Once it is off, then reload the wood heater with wood and allow it to heat up to desired temperature, this is set by the installer, in the electronics of the fan, when installed to suit wood heater and the performance of Turboheat.

Reloading the wood heater whilst the fan on the Turboheat unit is going will mean only a maximum temperature output as high as 36 degrees and not 40+ degrees and the running period will be cooler and shorter.

However, allow the fan to turn off on the Turboheat unit, to then reload the wood before the fan turns back on. Allow the whole system to reach optimum elevated temperatures to heat up the home. It can be as high as 48-50 degrees once it starts up again. The running period will be hotter, longer, more efficient and effective in heating your house. To know if the fan is working on the Turboheat unit, look for a 'solid green light' on the 'Auto' function on the wall control unit. If it is 'Flashing green' the system is in a 'Standby' mode which means the Turboheat fan is 'Off' waiting to reheat to operate again. You will find fan speed increase will have a big difference on airflow and temperature increase in the house and running of the wood heater itself. This is all set by the installer when installing the Turboheat system. Some adjustments may be needed, to obtain maximum benefits of your Turboheat product after installation, due to weather conditions when Turboheat was installed. **(refer photo 7)**

How to Control your home inside temperature:

Using the wood fire in the ways explained, allows you to control the inside desired temperature of your home by the use of the air control slide on the wood heater. Once your house is at desired temperature, allow the control of the Turboheat unit to be done through the use of the wood heater air controls. Open it up to get maximum heat output, and shut it down to lower the heat output of Turboheat. They sync together as one operation. By opening maximum air intake into the fire box generates an intense combustion of the fire, this creates intense heat through all the metal used in the flue and heat exchanger which creates energy or radiant heat, the greater energy or radiant heat generated the quicker and hotter the air is as it passes through to the fan and the longer the fan will run for. This process of distribution out to the home will increase the internal temperature within the home. Obviously the reverse will happen when you shut down the air intake which will cool and shorten the run time of the distribution process.

Always try to use the driest wood possible, most dry hard wood can have up to 10-15% moisture content which means every kilo of wood, it contains 100ml of water, and as we all know water isn't too good for a fire. You couldn't run a car with 10-15 % of water in the fuel and expect it to operate properly, the same goes for your wood burner. Try to cover your wood heap whenever possible and make sure it is not green or laying out in the open, the wood can draw moisture from the air and ground like a sponge. **(refer photo 8)**

https://www.Youtube.com/watch?v=4OPx1HwGzB8&t=62s

A quick how to use your Turboheat guide:

1. Check the wall controller panel "Auto" is flashing green. This indicates it's in "Standby Mode" **(refer photo 10).**
2. Load Heater with a good amount of dry or seasoned kindling, it is very important to create a fast, rapid heat, essentially to first create a good foundation of heat for when more fuel needs to be added. Have the air vent on the heater opened fully.
3. Follow the wood heater instruction manual for operational instructions. The wood heater determines how much heat will be provided to the Turboheat system. So, the more you add to the wood box the warmer it will get.

   Or check the web link for further information of lighting and using your wood heater.

   https://youtu.be/NkqG1tDrlq4

   *Please Note: Temperatures vary from each house and the wood heater type.
4. Do Not open the heater door whilst Turboheat system is operational. If you want to load wood go to the wall control panel and press off. This will stop the system and allow you to add wood to the fire.

   DO NOT FORGOT TO TURN BACK TO AUTO (refer photo 10.)

Troubleshooting issues:

If my Turboheat system is not performing?

- It could only mean a few things.
- The fire is not combusting properly or being used properly. It's either wet or unseasoned wood or a lack of any of 3 elements stated above. Not using your fire correctly or an issue with the fire or exhausting process of the smoke. e.g. blocked flue.
- Please watch Youtube Link for more information.

  https://youtu.be/5i3x91Eo3mk
- Or there is no power to the Turboheat system. **(refer photo 9)**

Troubleshooting: NO POWER

- Check power to house is on or off
  - Power is off

i) If power is off shut down heater & do not add wood to heater until power is back on

ii) If you have an inspection door with the system you can go into the roof and open the door and release all the trapped heat.

Power is on in the house but NO power to the Turboheat System

i) Shut down heater & do not add wood to heater

ii) Check wall controller, if no lights flashing or solid

-may need to check fan unit in roof cavity (has the power plug come out)

Red Light or Beeping on Wall Controller. If red light is present there is a fault. Fault is displayed on the electronics LCD screen located in the Fan. Fan is located in the roof cavity near the flue.

i) Get code and contact Turboheat representative.

ii) Or contact Turboheat for more instructions

Smoke smell

I) Is there power to the unit **Yes:** Go to next step **No:** Shut down heater & call Turboheat

II) Make sure the heater door is closed and open windows/doors to remove smell from rooms. (Remember turn system off if wanting to load wood into fire)

C) Check wall controller setting is on 'Auto'

D) If a Wood heater was installed at the same time as the Turboheat please allow curing time of the heater, the smell will be gone within approx. 3 burns.

V) Check cowl outside hasn't collapsed choking the flue

VI) Check baffles inside heater box aren't buckled or bent upward

VII) If smoke still present, shut down heater and call Turboheat for more assistance

No air coming out of some vents

i) Check power to wall controller

ii) Do all vents have no air?

Yes: The main core duct from Flue to Fan box may have come off or has collapsed due to over heat exposure, or faulty manufacturing of the ducting or has something laying on it.

No: Only some vents. Then go to next step

c) 1 or 2 vents have no air? **Yes:** below are some reasons why.

1. There may be a duct in the roof that has collapsed and may need replacing.
2. Could have a kink in the ducting or something on ducting blocking flow. (May just need to check ducting in roof to make sure they are ok)
3. The tape that joins the ducting together to the plastic fittings may have come off or been accidentally pulled off.
4. Rodents have been known to chew through ducting before so there could be rodent damage to the ducting.

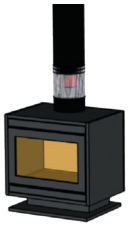
Low heat or No heat. Refer to **What a fire needs and what Turboheat needs to operate:**

Warranties:

There is a 10 year warranty on the flue system only. There is a 5 year warranty on all metal and flexible ducting and 1 year warranty on the electronics and fan unit.

All warranties are null and void if there is evidence of miss use/modifications or tampering. Also warranties are voided if it is installed by anyone other than a licensed plumber with the appropriate training in Turboheat installation or a licence installer for Turboheat directly. Proof of compliance must be provided as evidence and date of installation to the supplier of the Turboheat system then forwarded to Turboheat directly.

Thank you from Turboheat.

Photo 1 	**Photo 2** 	**Photo 3**
Photo 4 	**Photo 5** 	**Photo 6** https://www.youtube.com/watch?v=5i3x91Eo3mk
Photo 7 	**Photo 8** https://youtu.be/4OPx1HwGzB8	**Photo 9** **No Lights showing**
Photo 10 **Auto Mode Light flashing or solidly on.**	**Photo 11** **Manual Mode Light on.**	**Photo 12** **Off Mode Light on.**

Notes:

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