Turboheat
Wood fire ducted heating

Turboheat Install Manual

Turboheat Freestanding System

Turboheat Inbuilt System

Turboheat
3/2 Glenville Drive, Melton Victoria 3337
Ph: 03 8088 0348
Email: admin@turboheat.net.au

Turboheat - *Components*

TH - 275 - Heat Exchanger Air Intake

TH - 275 - Heat Exchanger Air Intake

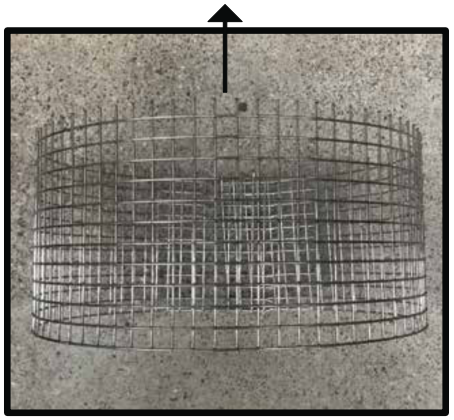
TH - 275 - Heat Exchanger Air intake no mesh

TH - 007SS - Locking Band

TH - 027 - Step Clamp 6

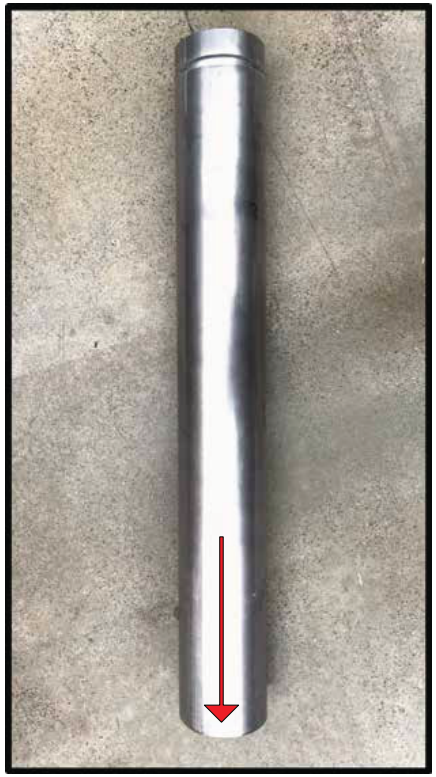
TH - 275 - Heat Exchanger Air Intake

TH - 023 - Intake Air Mesh



TH - 010 - Active Flue

1st Length no crimp.



Insert into the spigot of the wood heater

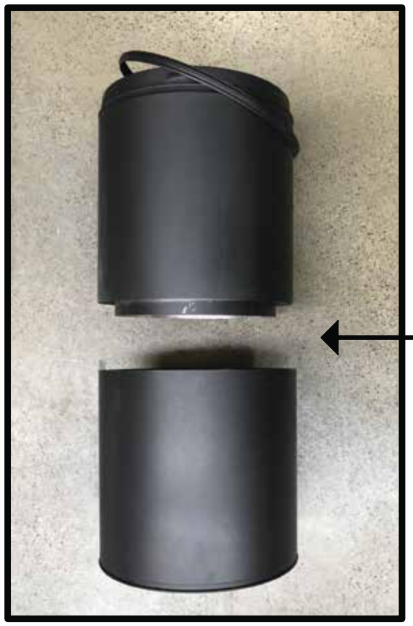
TH - 0068 - Heat Exchanger Painted 1200

TH - 007B - Locking Band

TH - 291 - Flat Clamp 6

TH - 291 - Flat Clamp 6

TH - 008 - Heat Exchanger Painted 300-500



TH - 007B - Locking Band

Attach the 2 pieces together Top slides over the bottom

TH - 014 - Heat Release Door

TH - 007SS - Locking Band

TH - 014 - Heat Exchanger Control Box

TH - 007SS - Locking Band

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TH - 002 - Heat Exchanger Tee

TH - 007SS - Locking Band

TH - 002 - Heat Exchanger Tee

Thermostat probe

TH - 003 - Heat Exchanger Cap

TH - 007SS - Locking Band

TH - 003 - Heat Exchanger Cap

TH - 010 - Active Flue

3rd Length - No rib on the top of flue

This is the piece of Flue the head component slides down

TH - 006SS - Insulated Flue 1200

TH - 007SS - Locking Band

TH - 006SS - Insulated Flue 1200

TH - 017 -Turboheat Cowl

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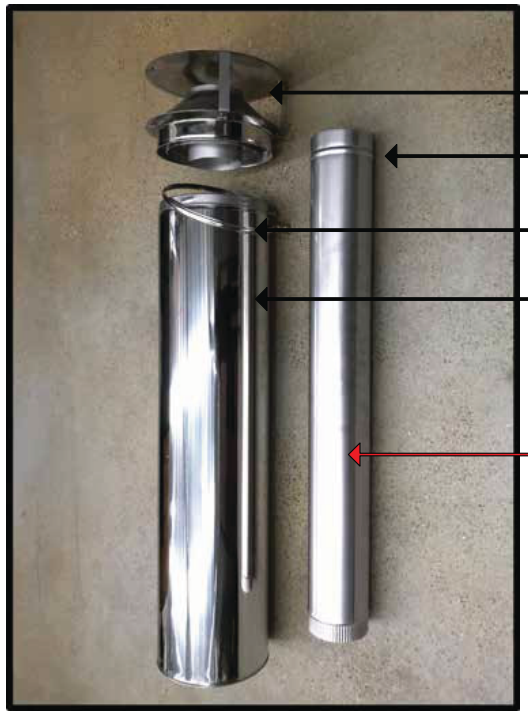
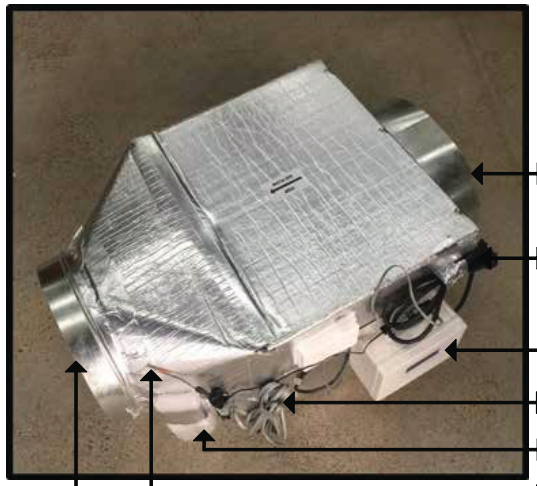


TH - 070 - EMC Fan



TH - 015 - Ceiling Collar

TH - 027 - Step Clamp 6

TH - 007SS - Locking Band

TH - 291 - Flat Clamp 6

TH - 007B - Locking Band

TH - 012 - Worm Clamp 6

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Turboheat Heat exchanger/ Flue Components

Heat Exchanger Components

Flue Components

BEFORE ANY WORK IS TO TAKE PLACE MAKE SURE THERE ARE NO OBSTRUCTIONS ABOVE THE WOOD HEATER AND ON TOP OF THE ROOF

NEW

New Heater Install with Turboheat System
Place Heater into position.
Check roof space for and obstruction for where you are going to install the heat exchanger.
Check on top of roof for more obstructions. Eg. Solar if clear cut out your holes.
*Note: Make sure heater clearances are followed, refer to heater manual.

RETRO

Retro to existing heater
Remove all of the existing flue before assembling the Turboheat system.
*Note: Make sure heater clearances are followed, refer to heater manual and Turboheat Clearances on page

INBUILT

Inbuilt heater and Turboheat Installation.
Screw and glue together the Zero Clearance Box for the inbuilt heater. Refer to installation of zero clearance Box for that particular heater.

1. Must have a return air grill to allow air to enter into the Turboheat system.
2. The inbuilt cavity must be sealed off from the roof cavity.

CLEARANCES TURBOHEAT

1. **30mm Gap from combustible material**
2. **Same goes with roof penetration**

Turboheat Clearances
Turboheat's clearance is 30mm from combustible material.

Wood heaters installation Clearance
Must comply to wood heater clearances.
**Note all wood heaters have there own clearances, every heater is different.

STEP1

Wood heater
Place Heater into position.

STEP2

Ceiling penetration
1. Plumb from ceiling to centre of the wood heater spigot.
2. Mark ceiling. Cut a 350mm diameter hole in ceiling.

**Again Make sure there is no obstructions above the wood heater and on top of the roof.

STEP3

Roof Penetration
1. Using Tin snips or angle grinder cut out a 350 mm hole in the roof.

**No bends

STEP4

***TH - 275 - Heat Exchanger Air Intake* (refer page 2)**
1. Remove **Mesh** and **Locking Bands**
2. Place **Heat Exchanger Air Intake** on top of wood heater above the Spigot.

STEP5

***TH - 0068 - Heat Exchanger Painted 1200* (refer page 3)**
1. Place **Heat Exchanger Painted 1200** onto the **Heat Exchanger Air Intake.**
2. Twist and lock clockwise.
3. Place **Painted Locking Band** around the join of the 2 components.
4. Clip & lock together

STEP6

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Measurements)
1. Measure from top of the **Heat Exchanger Painted 1200** to the top of the bottom cord of the truss.
2. Adjust your **Heat Exchanger Painted 300-500** to the measured height.

STEP7A

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Insulation)

1. Take a small amount off the thickness of the insulation. This helps you insert the insulation in the **Heat Exchanger Painted 300-500 easier**.

STEP7B

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Assemble)

1. Connect and sleeve the 2 pieces together to make the **Heat Exchanger Painted 300-500.**

Unwrap insulation and insert into Heat Exchanger Painted 300-500 if needed. This is According to your measurements.

STEP7C

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Assemble)

1. Adjust it to the right height for your **Heat Exchanger Tee** to fit in the roof.

STEP7D

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Assemble)

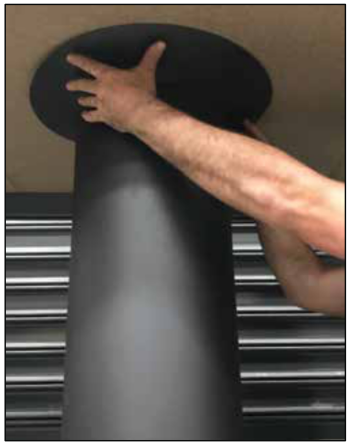
1. Lower **Heat Exchanger Painted 300-500** through the ceiling and onto the **Heat Exchanger Painted 1200**.
2. Twist and lock clockwise

STEP7E

TH - 008 - Heat Exchanger Painted 300-500 (refer page 4)
(Assemble)

1. Place **Painted Locking Band** around the join at the bottom of the **Heat Exchanger Painted 300 - 500** & the top of the **Heat Exchanger Painted 1200**.
2. Clip & lock together

STEP8A



TH - 015 - Ceiling Collar (refer to page 8)

1. Wrap **Ceiling Collar** around **Heat Exchanger Painted 300 - 500**
2. Push it up to the ceiling
3. Finger tighten Bolts and nuts together at the back of it.

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STEP8B

TH - 015 - Ceiling Collar (refer to page 8)

Use a 10mm spanner or ratchet to tighten up the nuts and bolts.

STEP9

TH - 002 - Heat Exchanger Tee (refer to page 5)

1. Place **Heat Exchanger Tee** onto **Heat Exchanger Painted 300 - 500**
2. Twist and lock clockwise.
3. Place **Painted Locking Band** around the join at the bottom of the **Heat Exchanger Tee** & the top of the **Heat Exchanger Painted 300 - 500.**
4. Clip & lock together.

STEP10

***TH - 291 - Flat Clamp 6* (refer page 8)**

1. Using the **Flat Clamp 6**
2. Place clamp evenly over ribs and the join.
3. Clamp tight.

STEP11A

Joining Active flue pipe.
***TH - 291 - Flat Clamp 6* (refer page 8)**

1. Join 2-3 lengths of **Active flue** together with **Flat Clamp 6**
2. Tighten with 14mm ratchet Gun or socket.

**MUST BE DONE UP TIGHT SO THERE IS NO SMOKE LEAK.

STEP11B

Example of how the 2 Active Flues connected and clamp should look like.

STEP11C

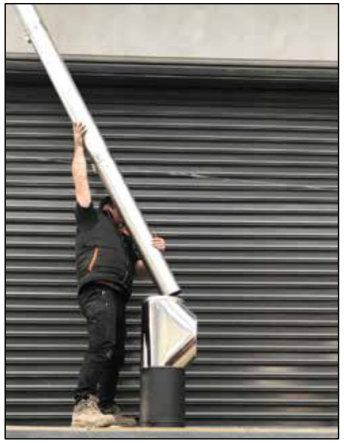
Photo example of how the first 3 pieces of Active Flue are joined together with the Flat Clamp 6.

1st Length - No crimp.

2nd Length - Active standard flue

3rd Length - No rib on the top of flue

STEP12A



3 x *TH - 010 - Active Flue* joined together with *TH - 291 - Flat Clamp 6*

1. Lower down **Active Flue** from the roof through **Heat Exchanger Tee**, down through the **Heat Exchanger Air Intake** sleeve & into the spigot of the wood heater.

STEP12B

6" Active flue pipe 1200mm Length (refer page 16)

1. Guide the **Active Flue** through the Heat Exchanger Air Intake and into the spigot
2. Open wood heater, remove baffles
3. Make sure the **Active Flue** is in the spigot

STEP13

***TH - 003 - Heat Exchanger Cap* (refer page 5)**

1. Slide the **Heat Exchanger Cap** down the **Active Flue** and onto the **Heat Exchanger Tee.**
2. Twist and lock clockwise.
3. Place **Painted Locking Band** around the join at the bottom of the **Heat Exchanger Cap** & the top of the **Heat Exchanger Tee**. Clip & lock together.

STEP14

***TH - 027 - Step Clamp 6* (Refer page 8)**
(Heat Exchanger Cap)
Where the **Active Flue** goes through the sleeve of the **Heat Exchanger Cap**

1. Wrap around the **Stepped Clamp 6** over the sleeve of the **Heat Exchanger Cap.**
2. Tighten using a 14mm spanner/ ratchet. **This stops air leaks & smoke

STEP15A

***TH -027-Step Clamp 6* (Refer page 8)**
(Heat Exchanger Air Intake)
Where the **Active Flue** goes through the sleeve of the **Heat Exchanger Air Intake.**

1. Wrap around the **Stepped Clamp 6** over the sleeve of the **Heat Exchanger Air Intake.**
2. Half of the **Stepped Clamp 6** should be on the sleeve & the other half on the **Active Flue**

STEP15B

***TH - 027 - Step Clamp 6* (Refer page 8)**
(Heat Exchanger Air Intake)
Where the **Active Flue** goes through the sleeve of the **Heat Exchanger Air Intake.**

1. Wrap around the **Stepped Clamp 6** over the sleeve of the **Heat Exchanger Air Intake.**
2. Tighten using a 14mm spanner/ratchet. **This stops air leaks & smoke

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STEP15C

***TH - 023 - Intake Air Mesh* (Refer page 2)**

1. Wrap the **Air Intake Mesh** tightly around the return air where the 4 poles are.
2.

STEP15D

***TH - 023 - Intake Air Mesh* (Refer page 2)**

1. Place 2 **Locking Bands** around the Mesh.
2. 1 at the top of the **Air Intake Mesh** and the other at the bottom. Make sure half of the **Locking Band** is on the **Air Intake Mesh** and the other half is on the **Heat Exchanger Air Intake**
3. Clip and Lock

STEP15E

***TH - 023 - Intake Air Mesh* (Refer page 2)**

1. Make sure all locking band clips are facing the back

**Locking bands are to clamp Return Air Mesh to the Heat Exchanger Air Intake.

STEP16A

***TH - 012 - Worm Clamp 6* (Refer page 8)**

1. Attach the next **Active Flue** to the previous **Active Flue** which penetrated **Heat Exchanger Cap**
2. Use a **Worm Clamp** for this.

STEP16B

***TH - 012 - Worm Clamp 6* (Refer page 8)**

1. Attach the next **Active Flue** to the previous **Active Flue**.
2. Again use a **Worm Clamp** for this.

STEP16C

***TH - 012 - Worm Clamp 6* (Refer page 8)**

Example of how it should look

STEP17

TH - 006SS - Insulated Flue 1200 **(Refer page 6)**

1. Slide **Insulated Flue 1200** over the Active Flue and onto the **Heat Exchanger Cap**
2. Twist and Lock clockwise
3. Place S/S **Locking Band** around the join at the bottom of the **Insulated Flue 1200** & the top of the **Heat Exchanger Cap**. Clip & lock together.

STEP18

TH - 006SS - Insulated Flue 1200 **(Refer page 6)**

1. Slide **Insulated Flue 1200** over the **Active Flue** and onto the other **Insulated Flue 1200**
2. Twist & Lock clockwise
3. Place S/S **Locking Band** around the join at the bottom of the **Insulated Flue 1200** & the top of the other **Insulated Flue 1200**. Clip & lock together.

STEP19

Dek Tight

1. Cut out 300mm hole in dek tight & slide down over the t **Insulated Flue 1200** till it comes in contact with the roof.
2. Install dek tight to roof according to roof penetration & regulations

STEP20

TH - 017 -Turboheat Cowl **(Refer page 6)**

1. Cut off excess **Active Flue** till 100mm above the top of the **Insulated Flue 1200**
2. Slide the cowl sleeve inside the **Active Flue**
3. Twist & Lock clockwise
4. Place locking band around the 2 & clip.

This will provide the right height for the cowl to be attached

STEP21A

TH - 014 - Heat Release Door **(Refer page 4)**

1. Place **Heat Release Door** on to the front of the **Heat Exchanger Tee**
2. Twist & Lock
3. Place locking band around front of the Heat Exchanger Tee & the Back of the Heat Release Door.
4. Twist & Lock clockwise

Make sure inspection door is facing up.

STEP21B

TH - 014 **- Heat Exchanger Control Box (Refer page 4)**

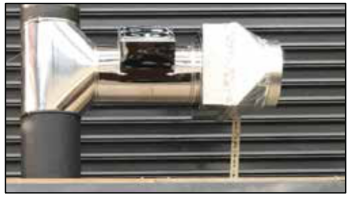
1. Attach **Heat Exchanger Control Box** to the front of the **Heat Release Door.**
2. Push in Tight.

STEP21C

TH - 014 **- Heat Exchanger Control Box (Refer page 4)**

1. Make sure the the top is facing up on the **Heat Exchanger Control Box.**
2. Locate pre drilled holes and put 4 tek screws in to hold it in place.
3. Place S/S **Locking Band** around the join at the back of the **Heat Exchanger Control Box** & the front of the **Heat Release Door**. Clip & lock together.

STEP21D



TH - 014 - Heat Release Door **(Refer page 4)**

1. Brace **Heat Exchanger Control Box** **<u>or</u>** **Heat Release Door** to the ceiling or the roof.

STEP32

TH - 068 - Heat Exchanger Temp Sensor **(refer to page 7)**

1. Un-wind **Thermostat lead**
2. Take probe and locate it into the thermostat well which is situated in the **Heat Exchanger Tee**
3. Push the Thermostat probe into the well, dab a small amount of **silicone** at the top entrance to hold the **Thermostat** in place.

STEP22

TH - 070 - EMC Fan & TH - 029 - EMC Electronics Box (Refer page 7)

Refer to Fan Setting.

1. When installing fan in the roof, place a sheet of chip board 1800mm x 600mm down first then place fan unit on chipboard.
2. Fix chipboard to trusses.
3. ECM Fan unit can be hung as well.

**The chipboard is not supplied by Turboheat.

STEP23

TH - 016 - Zero4 - R1350

1. Duct tape the Silent flex **Zero4** to the front of the **Heat Exchanger Control Box.**
2. Cut silent flex **Zero4** to size.
3. Duct take the other end of the silent flex **Zero4** to the back of the fan.
4. Refer to step 25 fan install.

No more then 6m in length between the **Heat Exchanger Control Box & the **ECM Fan** unit. This is governed by the **Thermostat** lead which is 6m long.

STEP24

TH - 317 - Wall Control Lead **(refer to page 7)**

1. Un-wind **control lead.**
2. Locate where you are wanting to situate the **controller** from inside the house.
3. Make sure it is visible and situated in the same room as the **wood heater**

There is only 15m of **controller lead.

STEP25

***TH - 319 - Wall Touch Screen* (refer to page 7)**

1. Position **Controller** in position & mark out holes. Screw in the **Wall mates.**
2. Cut out hole in plaster.
3. Feed **Control lead** down the wall & plug it in.
4. Screw controller to the wall.

STEP26

Power lead (refer to page 7)

Plug power lead in to the 240volt GPO Plug in the roof.

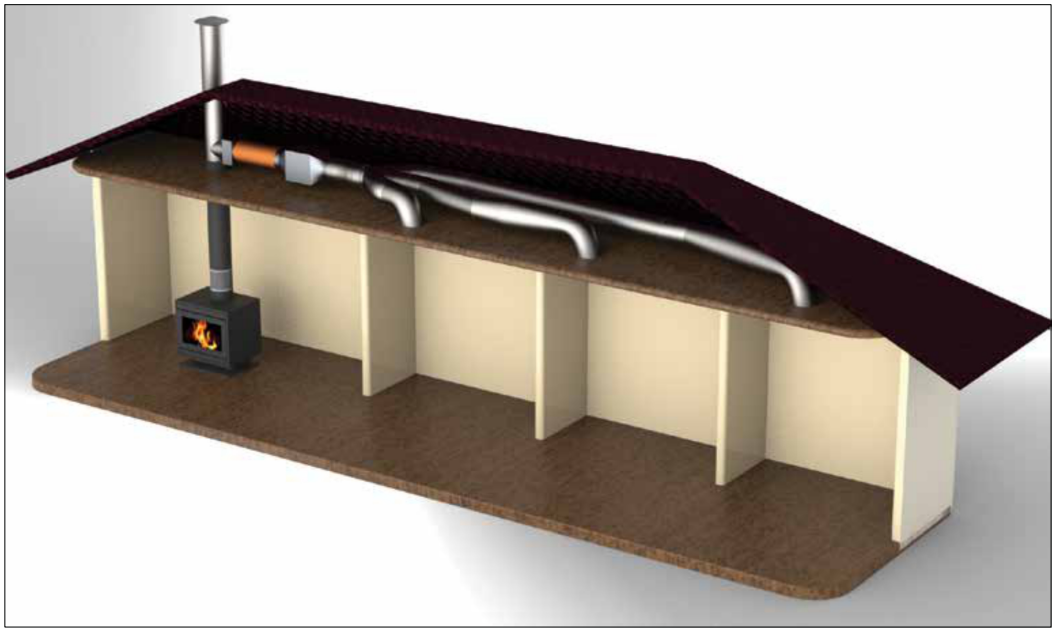
240volt GPO plug is need in the roof to power the **Turboheat System.

STEP27

Ducting (refer to page 27 & 28)

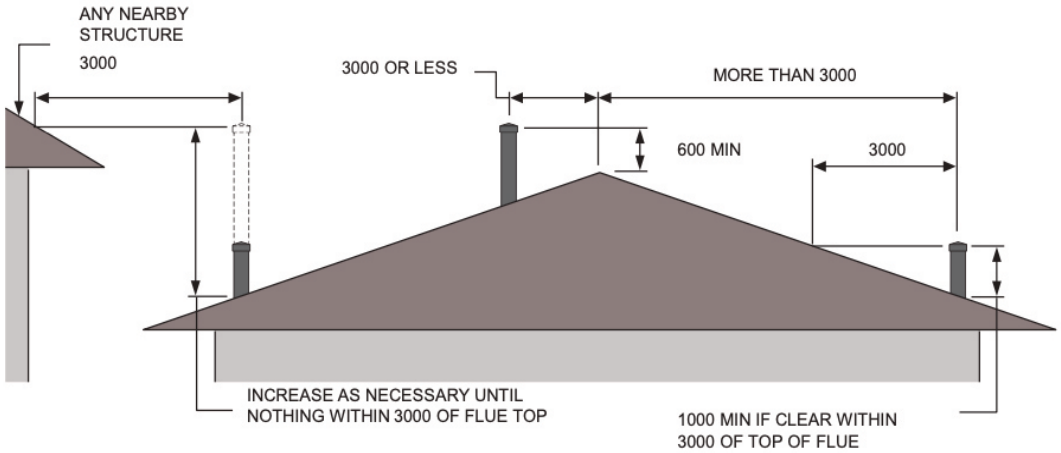
Ducting requirements.
Always use ducting suited to the AUS/NZL building standards, which is R1 or R1.5 insulated ducting.
Make sure flows are correct, runs are balanced and there are no kinks in the lines.

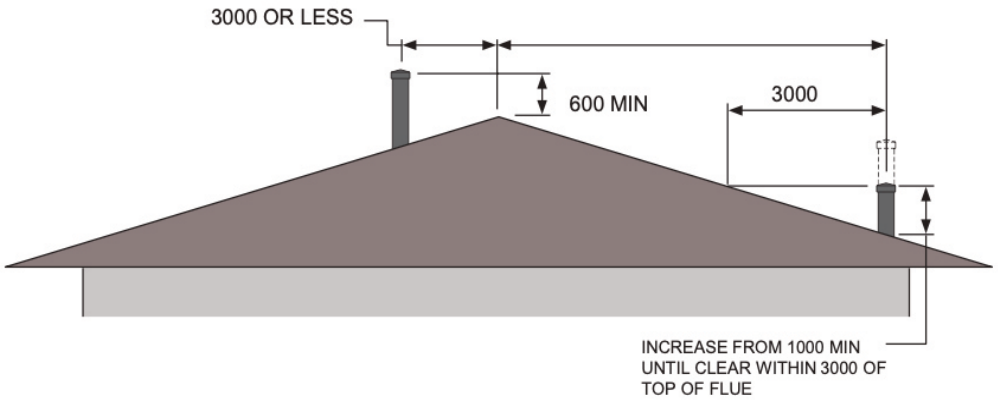
Turboheat - *Freestanding 3D View*



INSTALLATION INSTRUCTIONS

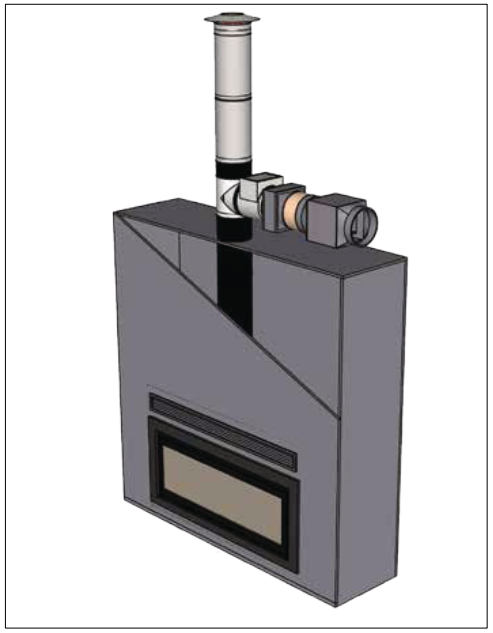
MINIMUM HEIGHT OF FLUE SYSTEM EXIT
INSTALLATION TO COMPLY WITH AS/NZS 2918



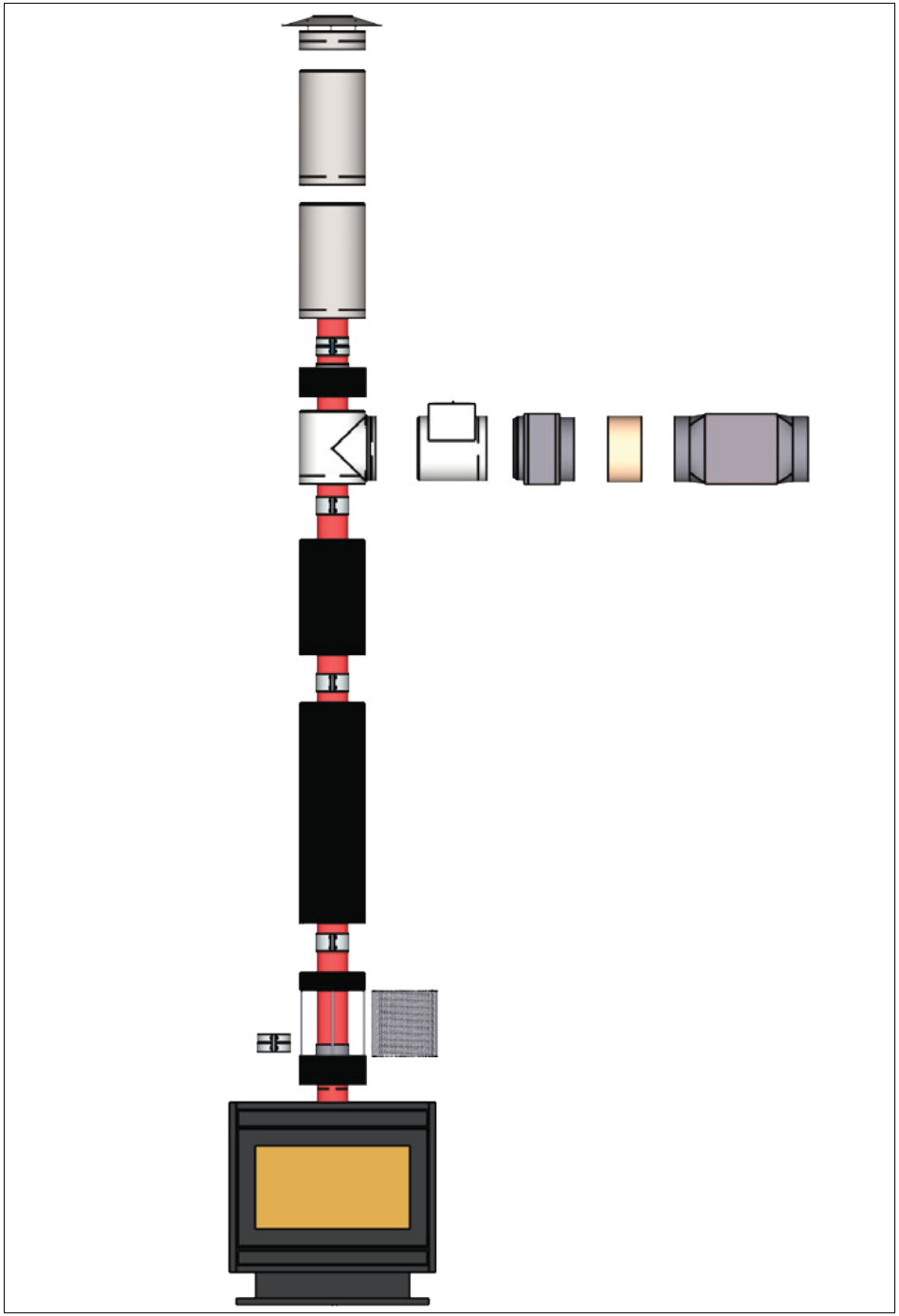


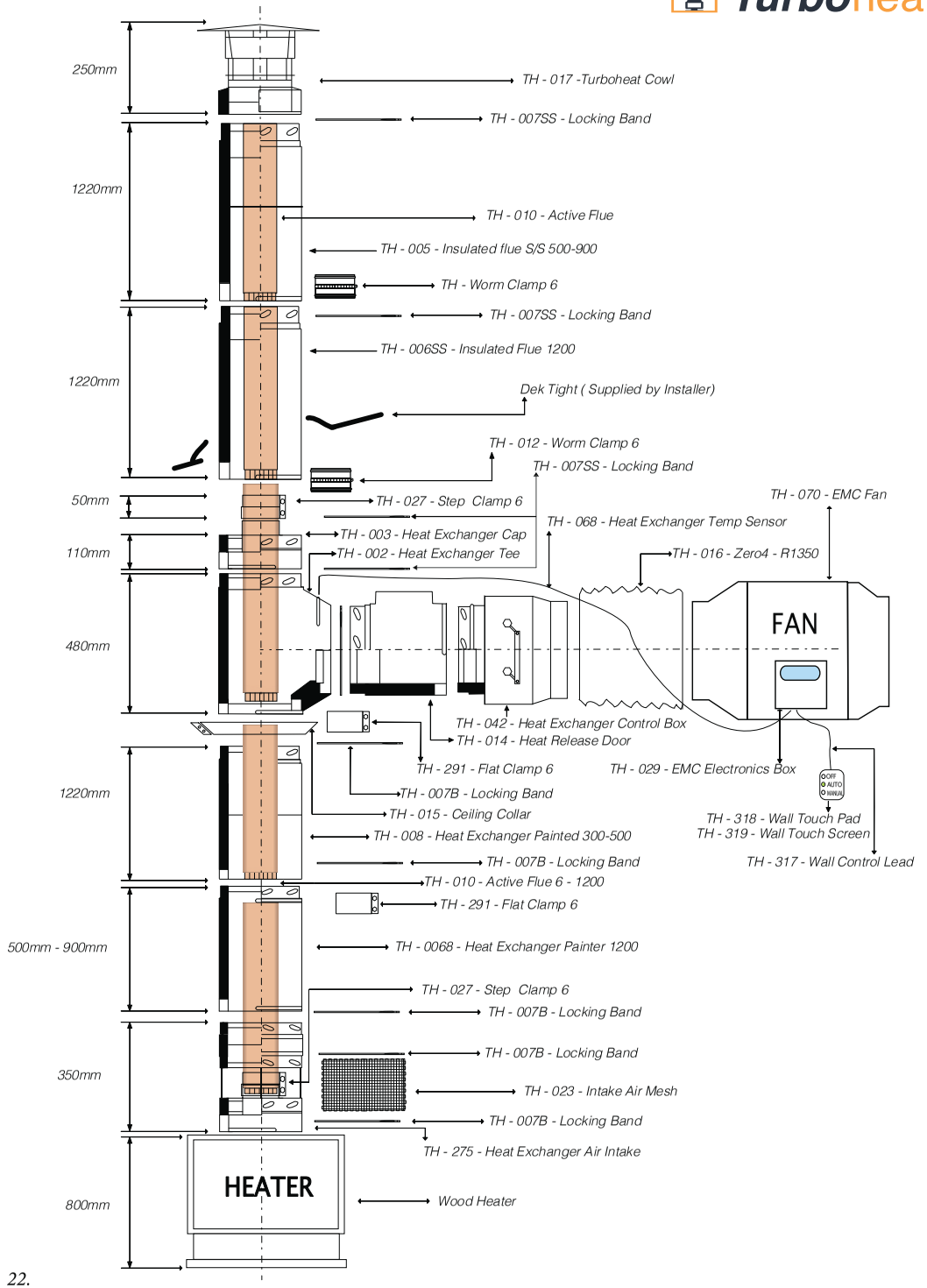
Turboheat - *Freestanding*

Turboheat - *Inbuilt With Zero Clearance Box*



Turboheat - *3D Exploded View*





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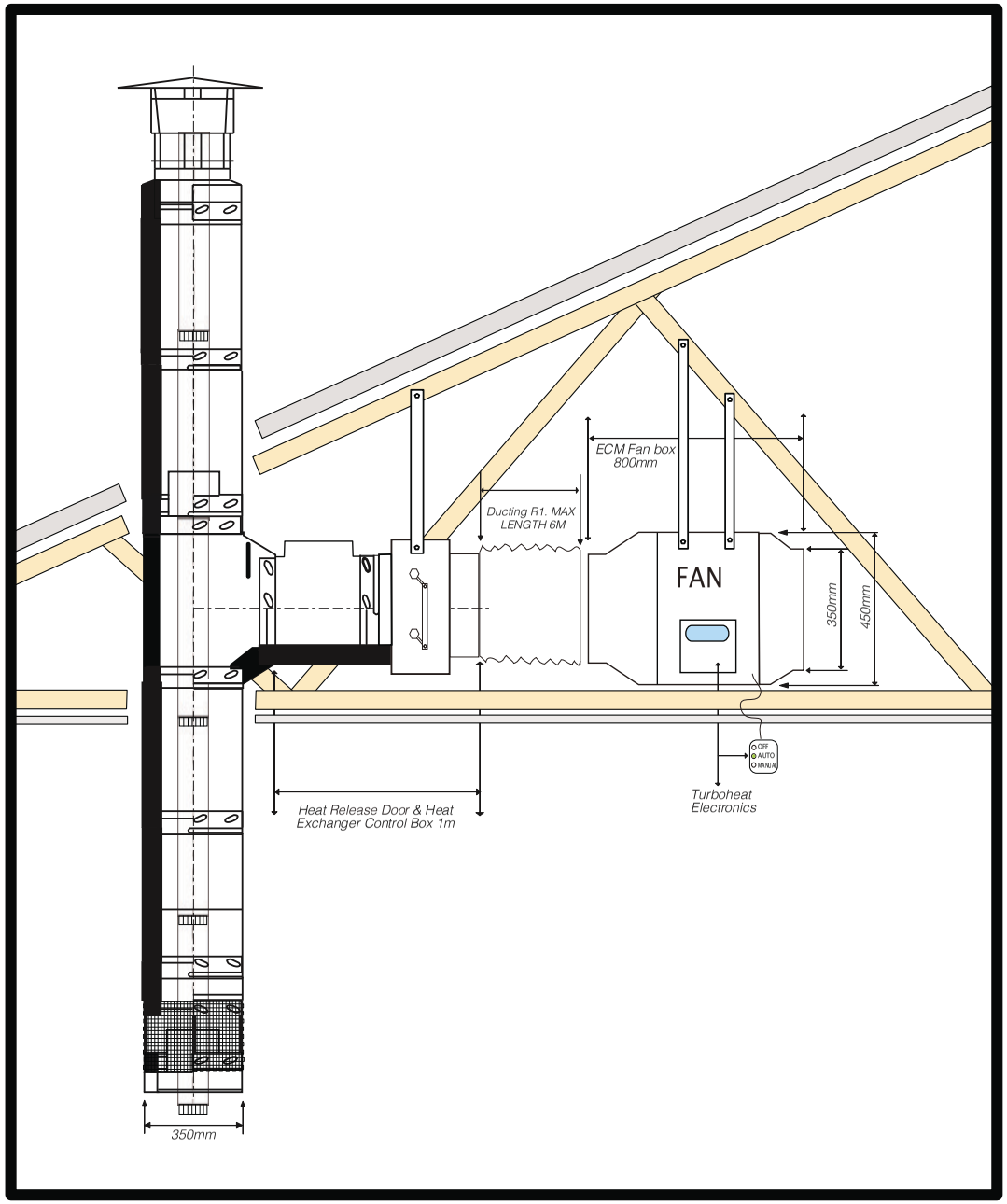
Turboheat - *Freestanding with Heights in Ceiling*



Fan - *Settings & Code*

CODE TO ENTER INTO THE CONTROLLS ARE AS FOLLOWED.
1.Hold down the auto button with your left hand, 2. With your right hand enter in a code which is;
3. Arrow up, arrow down, arrow up, arrow up. 4. Then take all your fingers off all buttons.
5. To go to the next setting just push the auto button

Max fan speed is how fast you want the fan to go when it is going. Recommendation for this setting is between 50% to 85%.This all depends on the anount of ducts you have.

Auto cycle initial fan speed is at what speed you want the fan to start up at. For example if max speed is 70% make this one start up at 60%. best if it is always 5%-10% lower than max fan speed setting. This alows the fan to slowely ramp up to the speed you want.

Auto cycle update intervals is when the fan/electronics will take a sample update on the temperature. This reading is then relayed back telling the fan/ electronics wheather to speed up or slow down. Recommendation is every 2 mins

Auto cycle trigger temperature is the desired temperature you want the fan to commence. (providing there is a sufficent amount of heat within the system before starting the fan up). 70-80 degrees is recommended.

Auto cycle target temperature is the range you want to fluctuate the fan speed around. We recommend around 35-38 degrees.

Auto cycle stop temperature is for the temperature you wish to stop the fan at. This is vital because it allows the turboheat system to stop running and reheat. We recommend between 30 - 34 degrees.

THESE SETTINGS ARE ONLY IF YOU HAVE A DAMPER.
(Just push accept till you are back to the start if you dont have one)

Just push accept

Damper open temperature is the temperature you want to the damper flap to open. This allows the room temperature air to mix in with the turboheat heated air, allowing the air tomix to the right temperature. Recommend 5 degrees more than your trigger temperature

Damper close hysteresis is the degrees it will close the damper. For example if thetrigger temperature is 60 degrees than the damper open temp is 65. The difference between the 2 is 5% fo the close Hysteresis is 5%

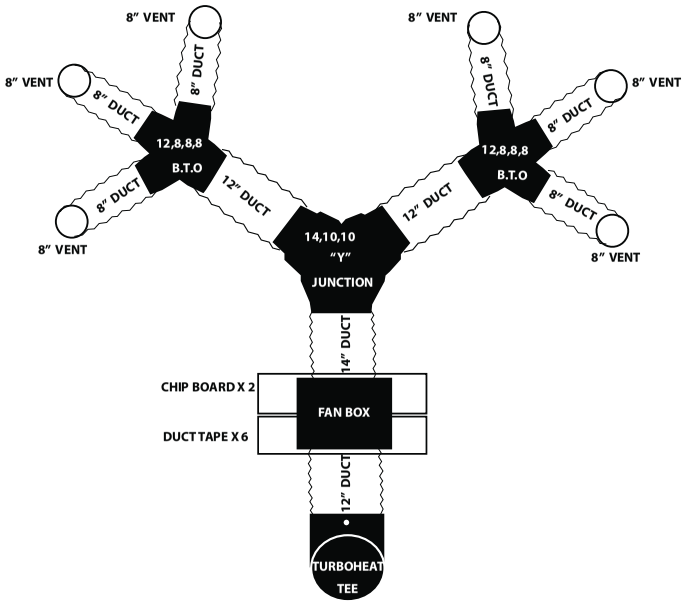
Fan Settings - *Example 8 - 10 Outlets*

CODE TO ENTER INTO THE CONTROLLS ARE AS FOLLOWED.
1.Hold down the auto button with your left hand, 2. With your right hand enter in a code which is;
3. Arrow up, arrow down, arrow up, arrow up. 4. Then take all your fingers off all buttons.
5. To go to the next setting just push the auto button

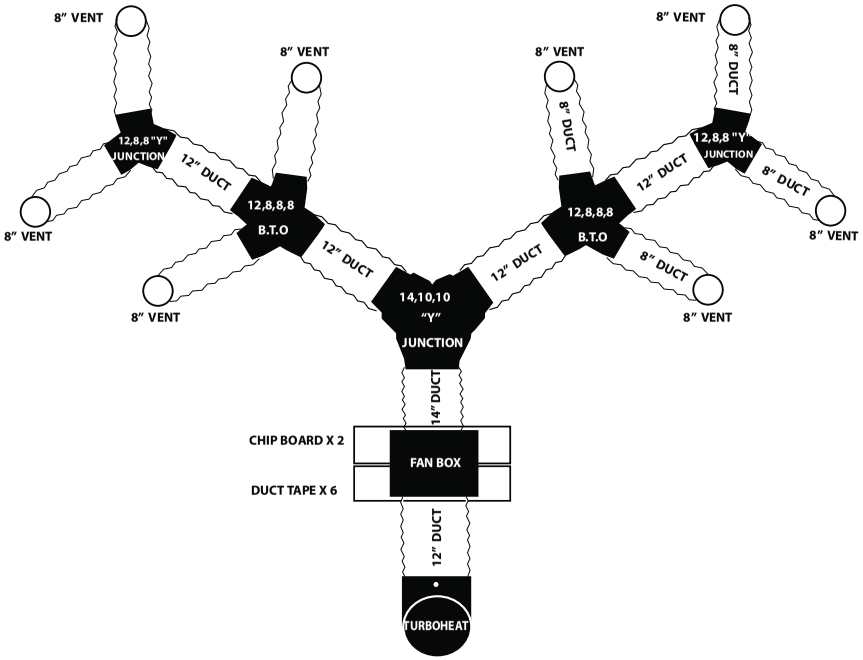
Settings for 8 - 10 vents	
Max fan Speed	100
Auto cycle initial fan speed	65
Auto cycle up date interval	10 min
Auto cycle step size	1 %
Auto cycle trigger temp	70
Auto cycle target temp	38
Auto cycle stop temp	34

Always Keep the wall controlller on auto. The turboheat works best when when left on Auto. The customer controlls the heat of the house by using the choke on the wood fire. If there is a good fire going you will have good heat for a long period. If there is a low fire there is still good heat but just not for along period.

Turboheat - *6 Duct Package*



Turboheat - *8 Duct Package*



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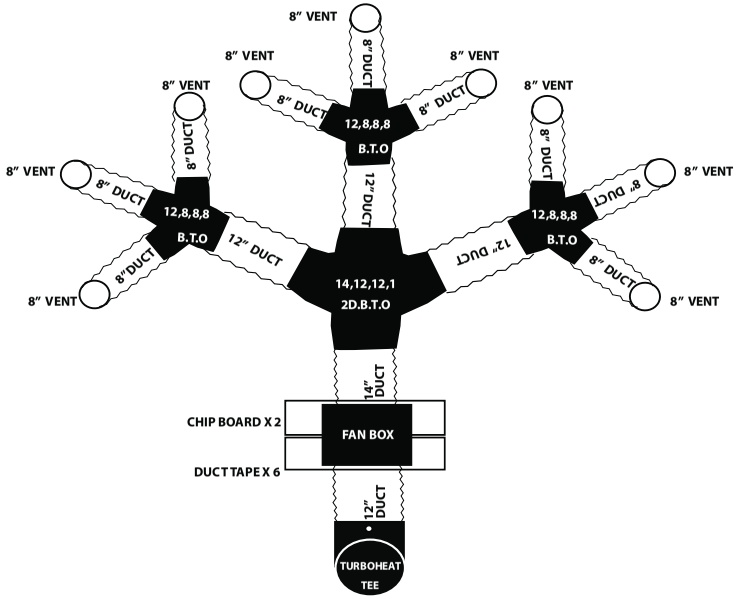
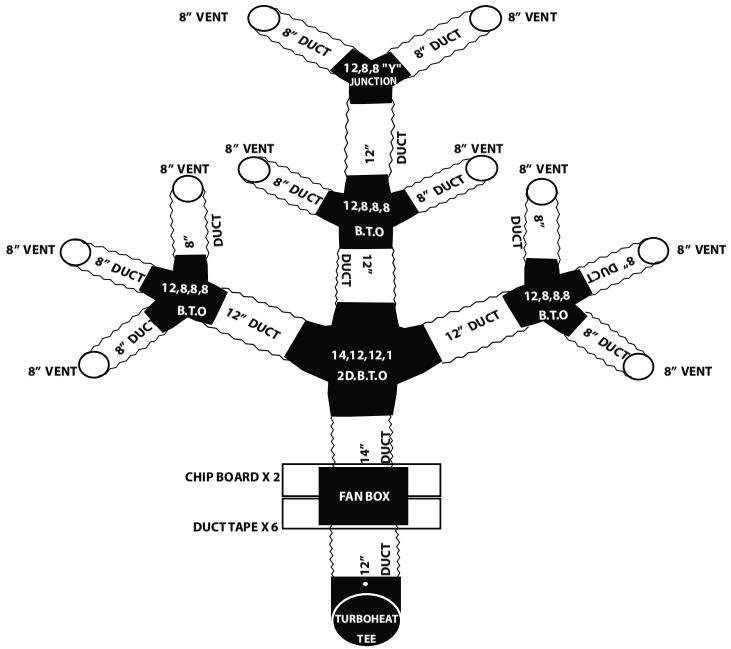
Turboheat - *9 Duct Package*



Turboheat - *10 Duct Package*



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