

TROPICAIR HEATING Ltd

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over 40 years experience in heating manufacture

INSTALLATION INSTRUCTIONS

for the **Tropicalair DUO and DUO Wet**

Rev 2.3 (29/5/2019)

Tested & complies with AS/NZS 2918:2001 and 2918:2001, App E

Tested & complies with AS/NZS 4013:2014 EMISSIONS Rate: 0.1 g/Kg Dry ~ 0.2 g/kg Wet

Tested & complies with AS/NZS 4012:2014 Thermal EFFICIENCY: 79% Avg Dry ~ 77% Avg Wet

Tested & complies with CM1 (CM v1.4) 0.35g/kg & 74% Avg Eff Dry ~ 0.48g/kg & 73% Avg Eff Wet

This appliance is a ULEB as tested to CM1

WARNING: THE HEATING APPLIANCE & FLUE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZS 2918 & THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODES

WARNING: APPLIANCES INSTALLED IN ACCORDANCE WITH THIS STANDARD SHALL COMPLY WITH THE REQUIREMENTS OF AS/NZS 4013 WHERE REQUIRED BY THE REGULATORY AUTHORITY i.e. THE APPLIANCE SHALL BE IDENTIFIABLE BY A COMPLIANCE PLATE WITH THE MARKING 'TESTED TO AS/NZS 4013'

ANY MODIFICATION OF THE APPLIANCE THAT HAS NOT BEEN APPROVED IN WRITING BY THE TESTING AUTHORITY IS CONSIDERED TO BE IN BREACH OF THE APPROVAL GRANTED FOR COMPLIANCE WITH AS/NZS 4013.

CAUTION: MIXING OF APPLIANCE OR FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATIONS OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS.

WHERE SUCH ACTIONS IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: CRACKED or BROKEN COMPONENTS e.g. DOOR GLASS or CERAMIC TILES MAY RENDER THE INSTALLATION UNSAFE or INEFFICIENT.

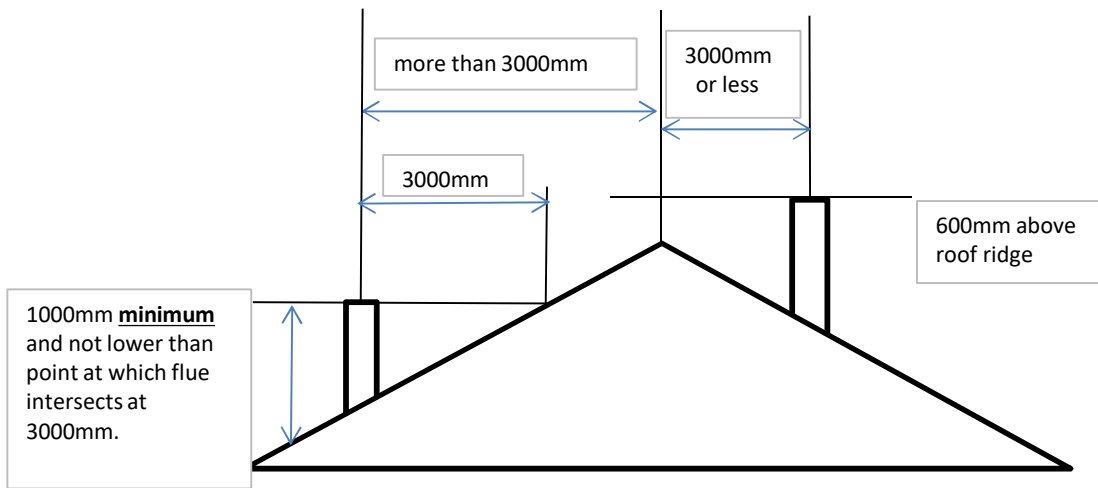
WARNING: DO NOT STORE OR USE INFLAMMABLE VAPORS OR LIQUID IN THE VICINITY OF THIS APPLIANCE.

WARNING: DO NOT CONNECT TO AN UNVENTED HOT WATER SYSTEM.

INSTALL IN ACCORDANCE WITH AS 3500.4.1 or NZS 4603 & APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODES.

- 1 The installation must comply with local council regulations & Should be installed by trained & NZHHA qualified installers, who work in accordance with good trade practise.
- 2 The appliance should be installed in such a manner that parts are accessible for inspection & maintenance.
- 3 A clearance of at least 1 metre must be between the front of the unit and any building structure or substantial immovable structure.
- 4 For Lowbase, Heat sensitive floors must be protected with an approved **46mm Insulated** hearth.
- 5 The appliance must be seismically restrained (including the hearth) 8mm Masonry anchors are recommended for concrete floors or 14g High Tensile Wood Techs of appropriate length for wooden floors.
- 6 Any appliance shall not be connected to a flue common with an open fireplace.
- 7 Duo must be fitted with the following Wet or Dry Damper control advice label as appropriate for model.
Wet Model: After 21 min. Following light up the downdraft slide should be closed
Dry Model: After 15 min. Following light up the downdraft slide should be closed

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE



Total flue length must also be not less than 4.6m in height from floor protector.

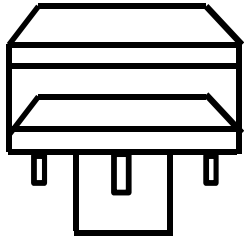
Installation of Tropicair Duo & Flue System

- 1 Position the hearth & appliance on the floor. Drop a plumbline from the ceiling to the centre of the duo's flue outlet to mark the position where the flue will pass through ceiling.
- 2 Cut a 300mm x 300mm Square hole in the ceiling & roof above, & frame timber around 300mm ceiling hole to support heat shield liners. Frame roof penetration if/as required. 40x40mm angles are supplied to support liners at purlin/roofline level.
- 3 Fix 300mm diameter x 240mm long shield (provided in 3 parts in flue kit) to timber framing. Allow the shield to penetrate inside room for 15mm. The shield has internal tabs to locate the liner correctly and external bendable tabs to allow easy alignment 15mm below ceiling.
- 4 Position the 250mm liner inside the 300mm shield & fasten to shield though 13mm holes.
- 5 Fasten the flue together with stainless steel pop-rivets or self-tapping screws (swagged end of the flue at bottom) & drop through liner into the heater spigot. At this stage the ceiling plate should be fitted over flue & can be lifted up & screwed on. **500mm x 500mm x 15mm** ceiling plate must be used. **900mm double skinned shield must be used**, fit at this point.
- 6 Flash the roof to galvanized liner with an appropriate flashing method accepted by local council.
- 7 Where the chimney extends more than 1.3m (as per NZBC) above roof penetration, it **Will** require restraining stays. We recommend 16mm Aluminium tubing for stays.
- 8 After installation of flue, ensure the unit is level & fixed through the Hearth to the floor using seismic restraints. Use 8mm Masonry anchors or High tensile 14 Gauge timber techs dependant on floor.

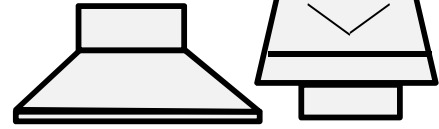
See flue installation diagram on the next page to further aid your installation.

Note: Other brand flue systems may be fitted to the Duo provided a 500x500x15mm ceiling plate and a double skinned 900mm high flue shield are fitted as per tested assembly. See other brand flue detail for specific component fitment instructions.

Tropicair Heat Optimiser flue system 'for open cavity ceiling'

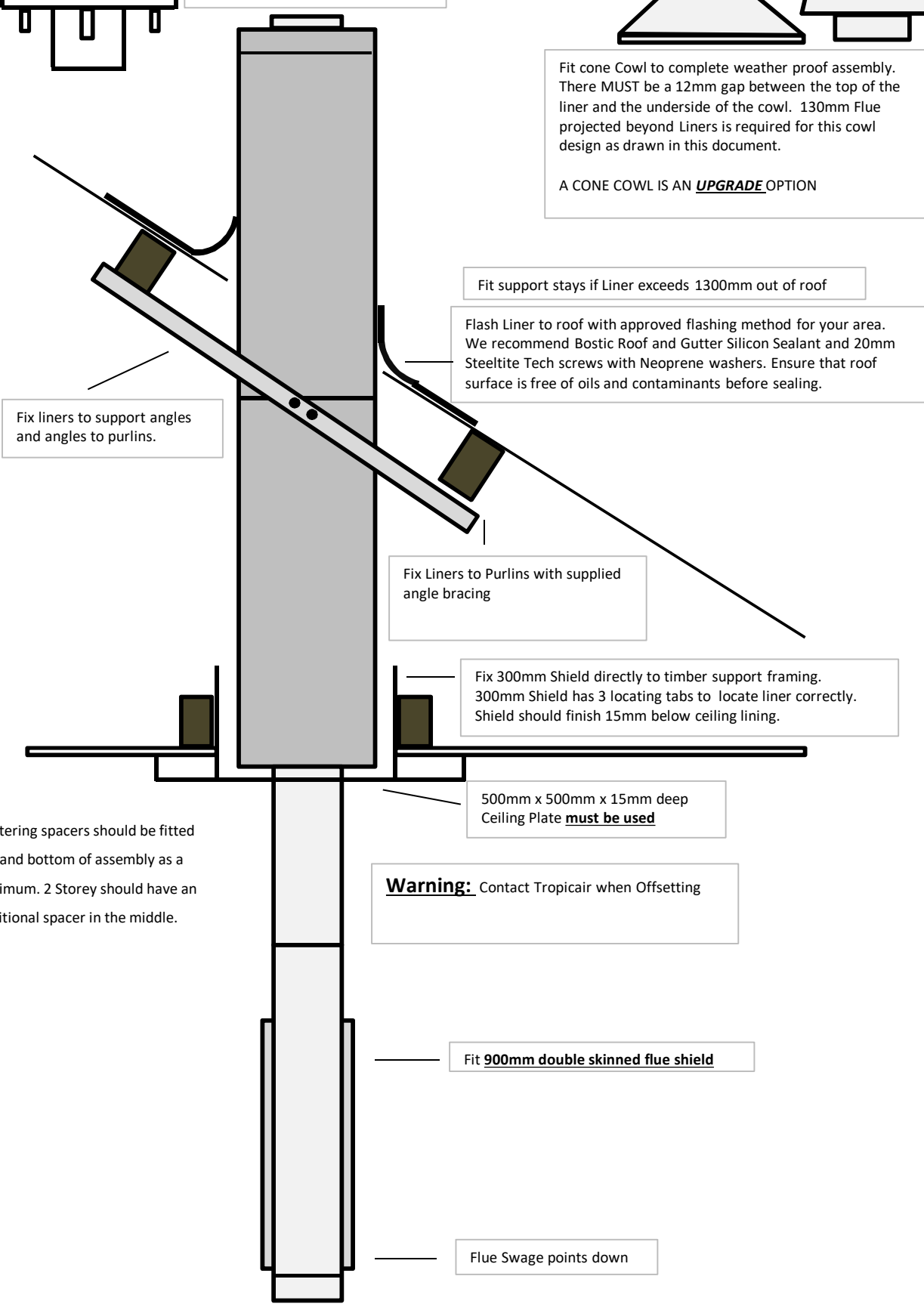


Standard Cowling. Flue should finish between 0mm and 20mm above liners. This Cowl has mounting tabs for correct airgap.



Fit cone Cowl to complete weather proof assembly. There **MUST** be a 12mm gap between the top of the liner and the underside of the cowl. 130mm Flue projected beyond Liners is required for this cowl design as drawn in this document.

A CONE COWL IS AN **UPGRADE** OPTION



Fit support stays if Liner exceeds 1300mm out of roof

Flash Liner to roof with approved flashing method for your area. We recommend Bostic Roof and Gutter Silicon Sealant and 20mm Steeltite Tech screws with Neoprene washers. Ensure that roof surface is free of oils and contaminants before sealing.

Fix liners to support angles and angles to purlins.

Fix Liners to Purlins with supplied angle bracing

Fix 300mm Shield directly to timber support framing. 300mm Shield has 3 locating tabs to locate liner correctly. Shield should finish 15mm below ceiling lining.

500mm x 500mm x 15mm deep Ceiling Plate **must be used**

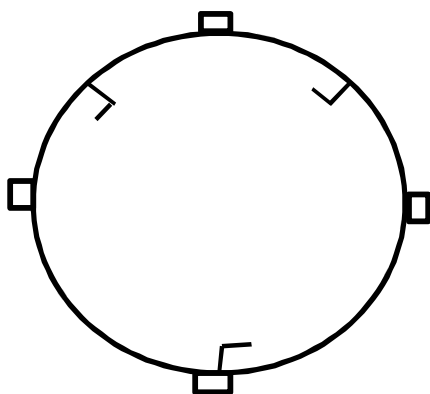
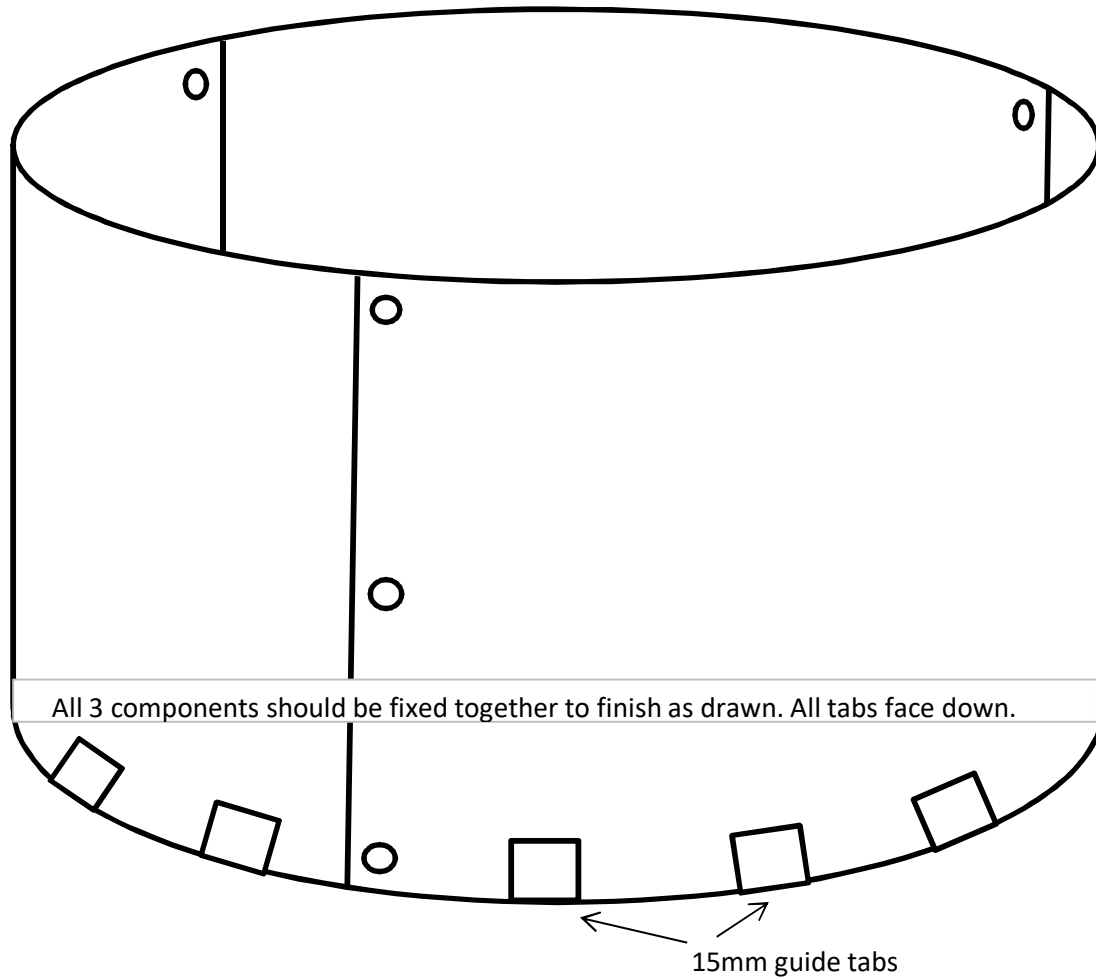
Centering spacers should be fitted top and bottom of assembly as a minimum. 2 Storey should have an additional spacer in the middle.

Warning: Contact Tropicair when Offsetting

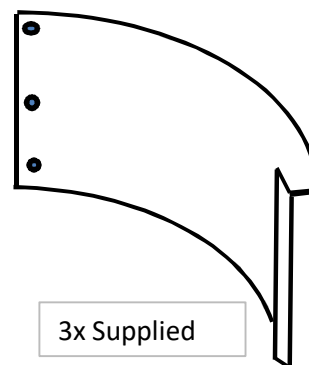
Fit **900mm double skinned flue shield**

Flue Swage points down

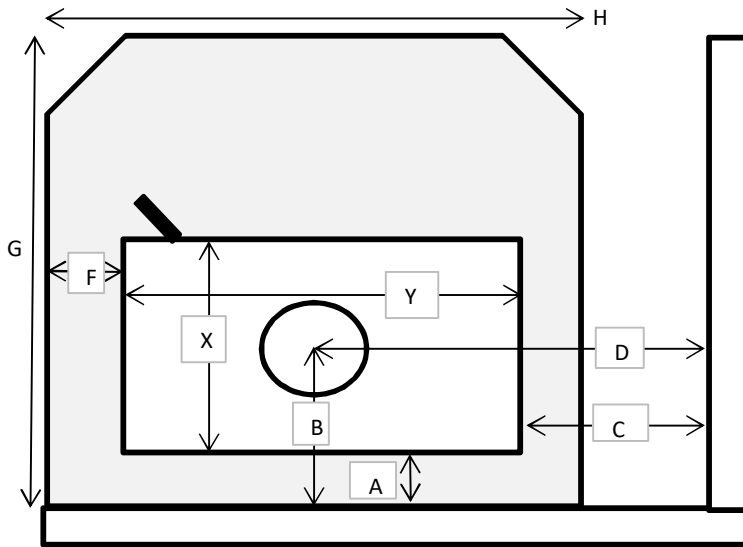
Once assembled from the 3 supplied semi-circle parts. Fold out 4 opposing 15mm guide tabs, These are a quick guide to line the mountup with the ceiling lining to ensure mount is level. This mount can be screwed directly to framing where it touches on 4 sides.



Birds eye view of how completed assembly should look once fastened

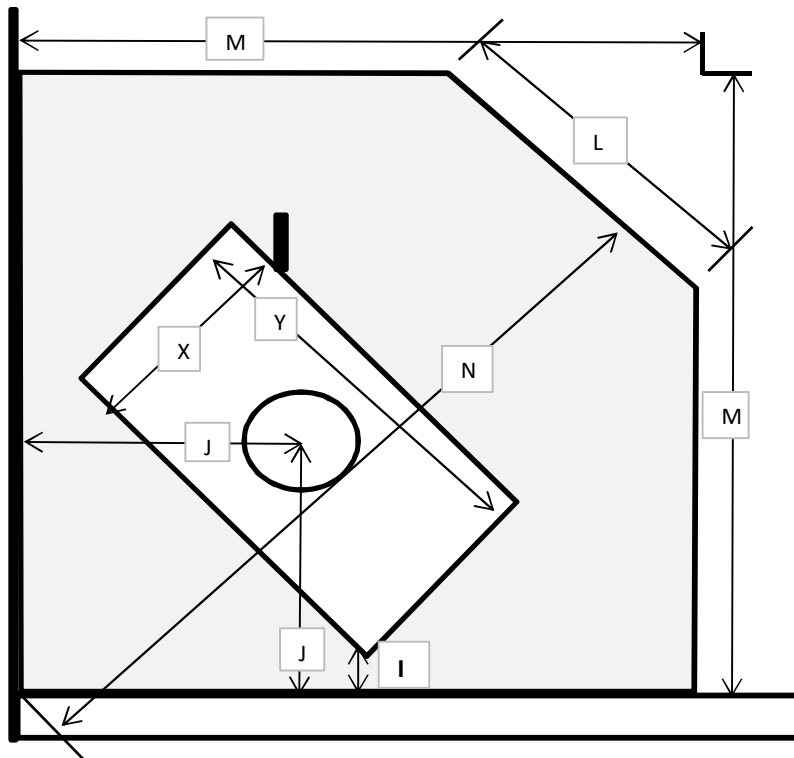


Tropicair Duo LowBase Clearances



Clearance in mm to combustibles	
A	65
B	250
C	380
D	690
F	110
G	835
H	823
X	365
Y	620
Standard Orientation	

Minimum Vertical clearance from cooktop 1130mm



Clearance in mm to combustibles	
I	45
J	385
L	523
M	996
N	1146
X	365
Y	620
Corner Orientation	

Low base model requires an 46mm thick Insulating hearth.

Tropicair advises that hearth and clearance to combustibles are absolute minimums. Where practical these should be exceeded.

Side clearance is measured from the cook top plate edge.

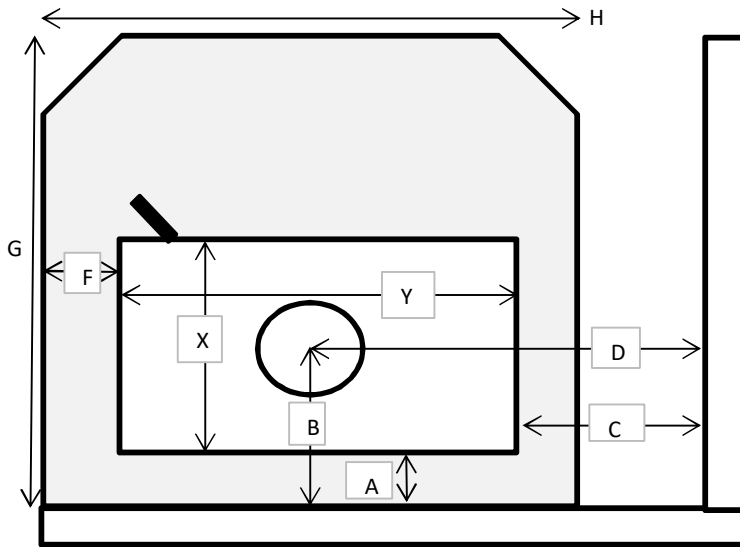
Rear clearance is measured from the rear of the heat shielded casing.

Corner clearance is measured from rear corners of the heat shielded casing.

When offsetting backward towards wall or corner, the ceiling plate must be increased by the same amount (EG: Offsetting 100mm to the rear. Standard ceiling plate of 500 x 500 x 15mm must now be increased by 100mm at the front. 350mm from center to the front edge of ceiling plate).

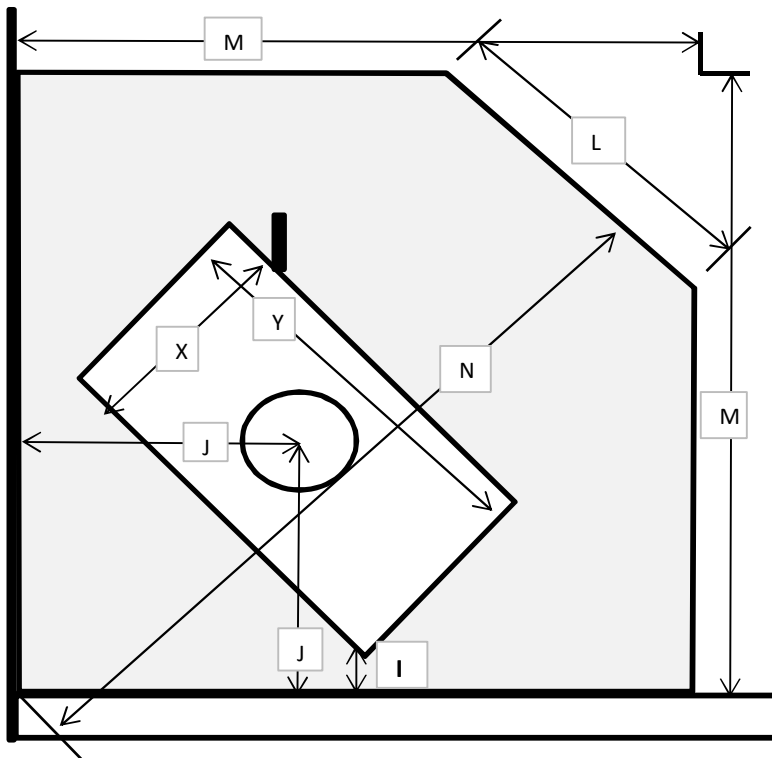
5 Contact Tropicair if further clarity is required. 03 3790 438 or www.tropicair.co.nz

Tropicair Duo Woodbase Clearances



Clearance in mm to combustibles	
A	65
B	250
C	380
D	690
F	110
G	905
H	823
X	365
Y	620
Standard Orientation	

Minimum Vertical clearance from cooktop 1130mm



Clearance in mm to combustibles	
I	45
J	385
L	523
M	1045
N	1216
X	365
Y	620
Corner Orientation	

Woodbase Model can use an ash hearth

Tropicair advises that hearth and clearance to combustibles are absolute minimums. Where practical these should be exceeded.

Side clearance is measured from the cook top plate edge.

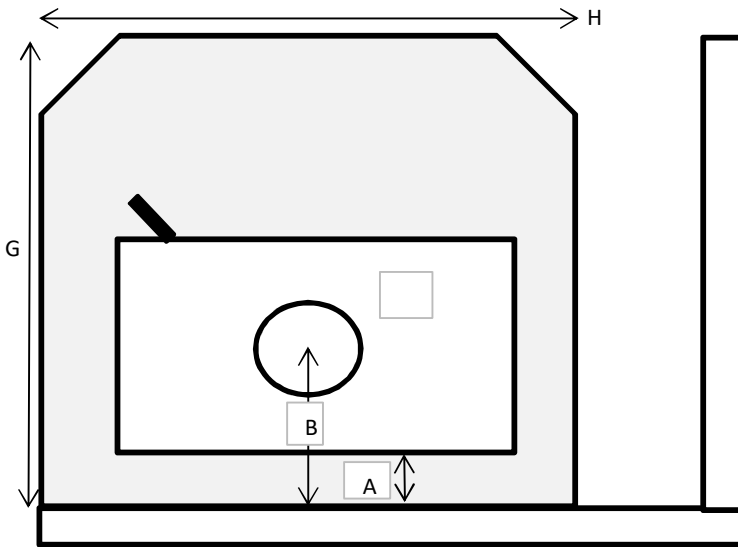
Rear clearance is measured from the rear of the heat shielded casing.

Corner clearance is measured from rear corners of the heat shielded casing.

When offsetting backward towards wall or corner, the ceiling plate must be increased by the same amount (EG: Offsetting 100mm to the rear. Standard ceiling plate of 500 x 500 x 15mm must now be increased by 100mm at the front. 350mm from center to the front edge of ceiling plate).

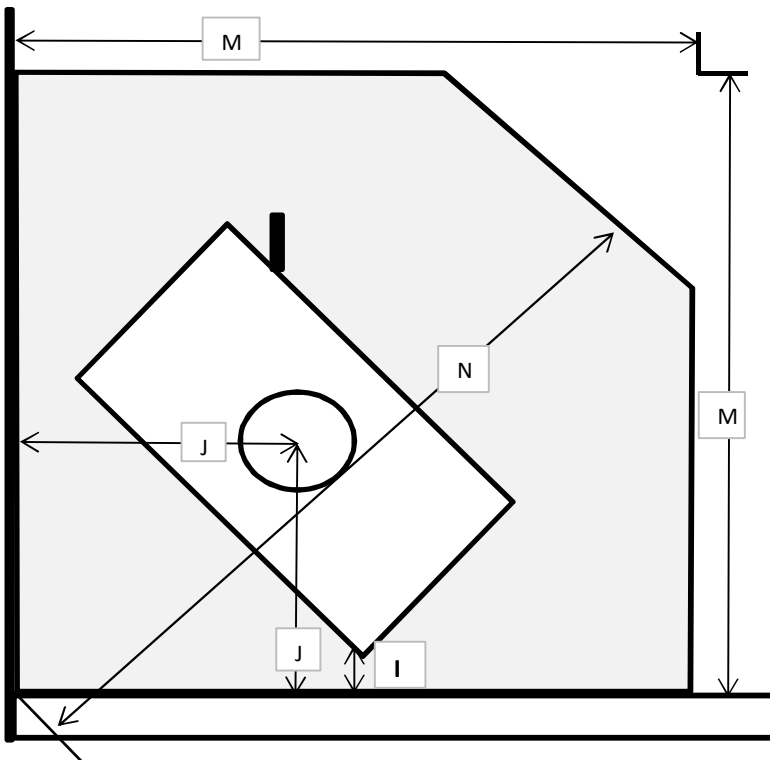
6 Contact Tropicair if further clarity is required. 03 3790 438 or www.tropicair.co.nz

Tropicair Duo Wetback Clearance Changes



Clearance in mm to combustibles	
A	100
B	285
Lowbase Insulated Hearth	
G	870
H	823
Woodbase Ash hearth	
G	940
H	823
Standard Orientation	

Minimum Vertical clearance from cooktop 1130mm



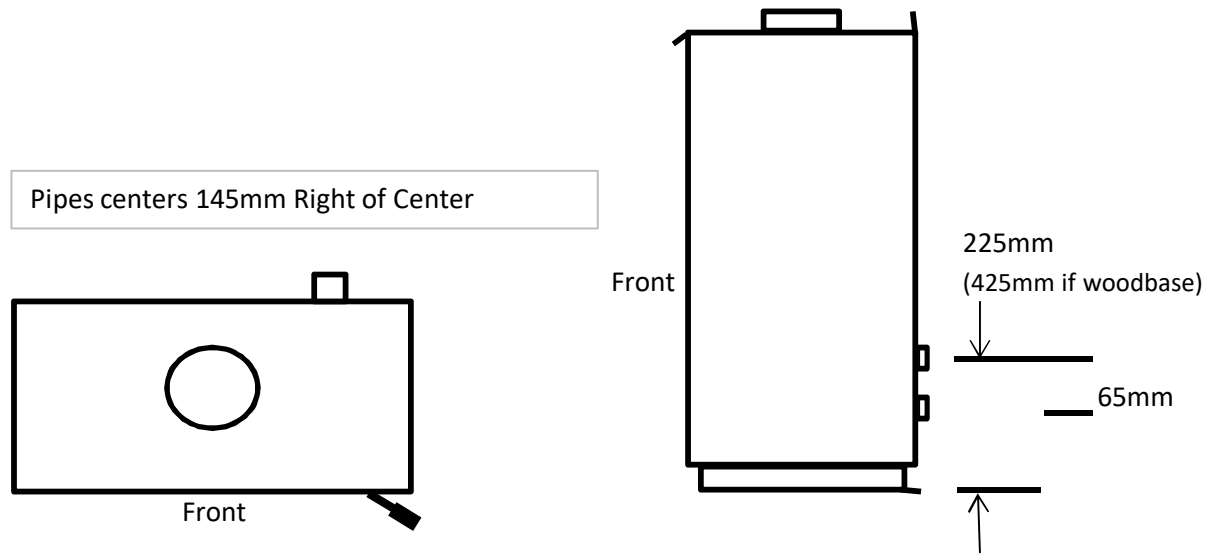
Clearance in mm to combustibles	
I	100
J	440
Lowbase Insulated Hearth	
M	1051
N	1224
Woodbase Ash Hearth	
M	1100
N	1294
Corner Orientation	

AS/NZS2918:2001 states:

All wetback appliances must have 100mm working room for maintenance.

As the Duo has clearances less than 100 mm, the above **MUST** be allowed for when installing.

Duo Wetback Prepipe information.



Always remember to factor hearth height in addition to these measurements

All Measurements as written are from the top of the hearth

Under AS/NZS2918:2001 MINIMUM clearance with a wetback is 100mm for access.
This WILL effect minimum hearth sizes.