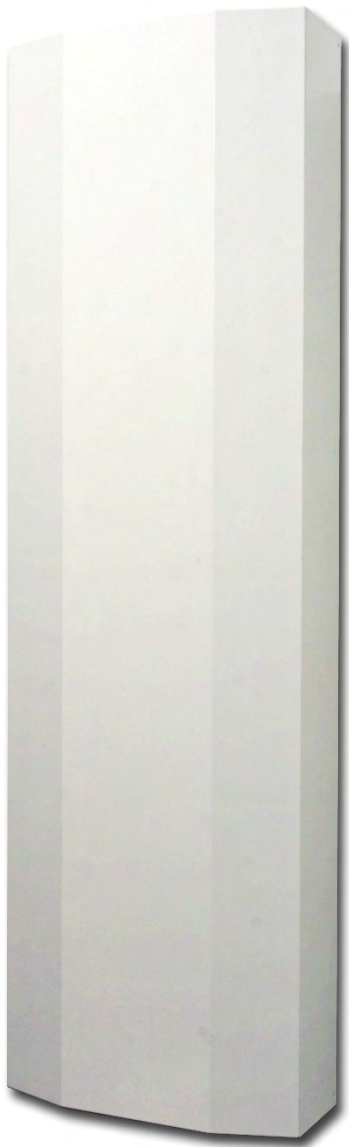




Fresh-r
Smart indoor
air care



fresh-r On-The-Wall

Installation manual



IMPORTANT: Read this manual carefully before installing the fresh-r
Keep this manual for future use.



Installation manual

Foreword

Installation manual for the contractor/owner installer

Dear contractor,

Thank you for purchasing the fresh-r On-The-Wall. This manual is intended for professionals and contains all the necessary installation information.

To install the fresh-r correctly and safely, it is essential that you read this information carefully and familiarize yourself with the fresh-r before you start. The fresh-r requires a fused 220V mains electricity supply with earth and must be connected by a qualified electrician.

The information in this manual is important for the correct and safe installation of the fresh-r. With the table of contents, you'll be able to find the right information in the manual quickly.

This is the installation manual. Besides this manual there is also a user manual available which covers operation and maintenance.

NOTICE

This manual covers installation of the Fresh-r On-The-Wall ONLY. It does not include the Everywhere version

Some illustrations might differ from the actual model and options that you have purchased.

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1. Intended use

The fresh-r On-The-Wall is a decentral ventilation unit with heat recovery. The fresh-r takes heat from the stale air it expels and uses it to warm up the fresh air it brings in from outside.

It improves air quality for a healthy indoor air quality and at the same time reduces your energy bill. No ducting is needed for this unit, which makes installation easier than a conventional HRV system. The fresh-r is equipped with CO², RH and temperature sensors and has an intelligent control system.

The fresh-r has been set-up and tested prior to delivery. Other than checking/ensuring correct installation there is no requirement for commissioning.

The fresh-r On-The-Wall may only be installed on an external wall.




2. Target group

The manual describes how to install the fresh-r. The installation must be done by contractors who are familiar with local building regulations.

Connecting the fresh-r to the mains electricity supply must be done by a qualified electrician.

3. Symbols used in this manual

3.1 Safety symbols

	Indicates an immediate risk of irreversible injury or death when not observed.
	Indicates that the product may be damaged if the procedures are not followed carefully.
	Alerts the user to additional information and possible problems.

3.2 Other symbols



CE marking: This is the CE logo indicating that the fresh-r meets the legal requirements.

4. General safety instructions

⚠ DANGER

- Connecting the fresh-r to the mains electricity supply must be done by a qualified electrician.
- Risk for electric shocks or electrocution. Turn off the mains electricity supply in the distribution box before connecting the fresh-r electrically.
- The person responsible for installing the fresh-r should be familiar with the local building regulations.

5. Main components

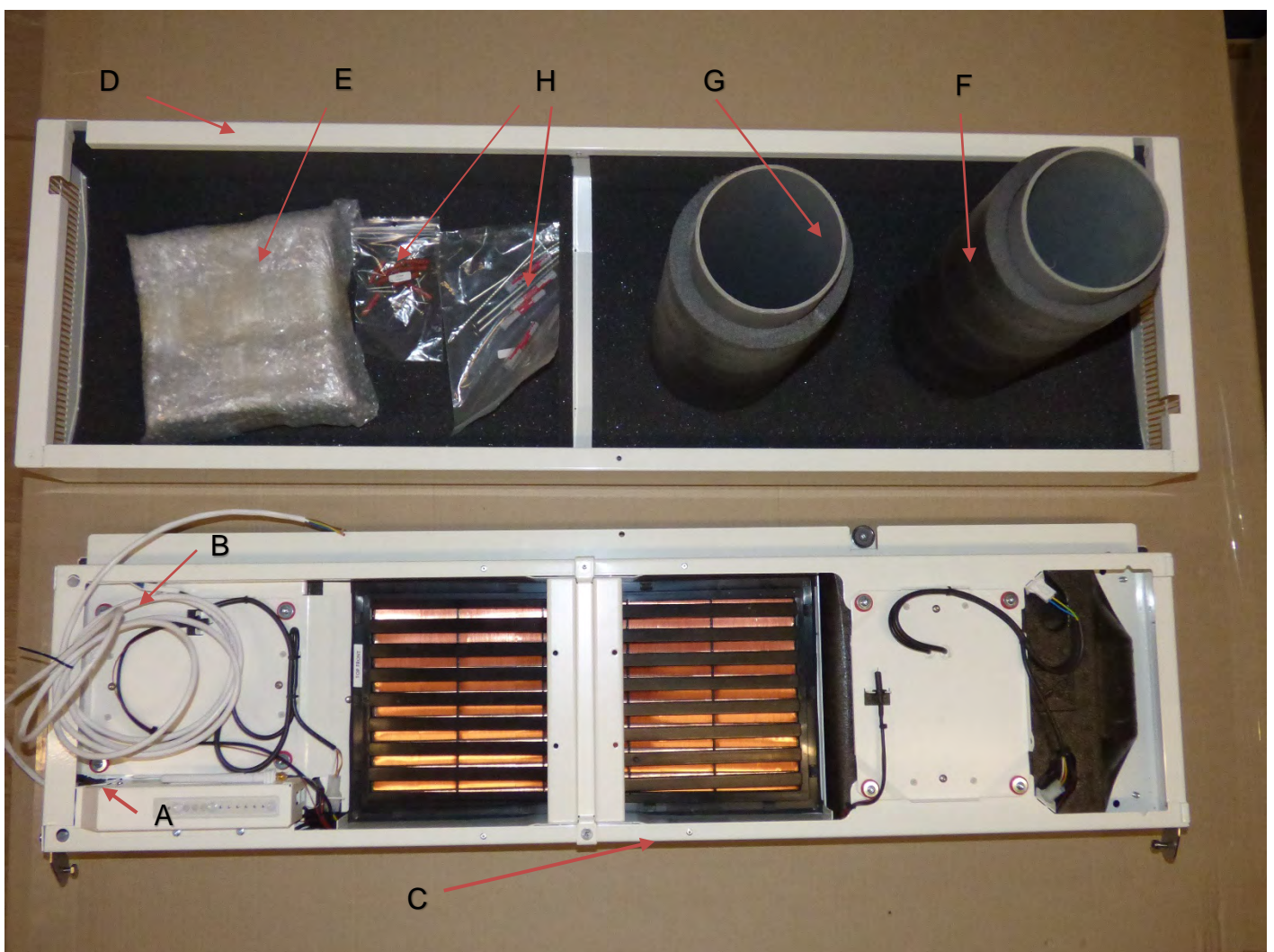


Figure 1 Main components

- | | |
|----------------------------------|--------------------------------------|
| A. ON/OFF switch | E. Grille x 2 pieces |
| B. Power connection wire 3 meter | F. Duct pipe EPP covers |
| C. Unibody | G. Duct pipes |
| D. Front door | H. Installation screws and raw plugs |

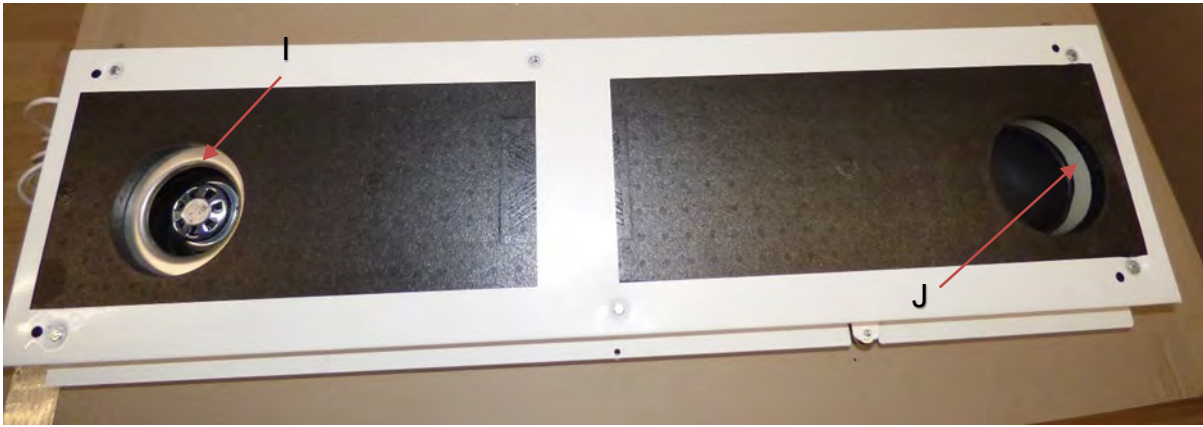


Figure 2 Rear view of fresh-r unibody

- I. Fresh air input socket, with fan (for upper duct pipe)
- J. Stale air output socket (for lower duct pipe)

6. Tools needed for the installation

- Equipment to drill 2 round holes (\varnothing 160 mm) in the wall (typically water-cooled diamond core drill)
- Torx 25 screwdriver
- 8 mm masonry drill
- PVC cement (this is standard glue for hard PVC)
- Spirit level (or another tool to check for a perfect vertical position)
- Deburring or grinding tool, such as a file
- EPP Glue (Bison Polymax) and expanding foam

7. How to install the fresh-r

⚠ DANGER

The person responsible for installing the fresh-r should be familiar with the local building regulations.

7.1 Prepare the wall

You will need two round holes (**\varnothing 160 mm**) in the outer wall of the building, for the air pipes; **the lowest hole needs to have a slope of 2 degrees**. You also need four holes in order to attach the fresh-r on the wall with four screws 6 x 160.

For efficient ventilation place the unit centrally in the room, ideally at approximately 80cm from the floor level, but not too high. You should be able to see the user controls easily, which are mounted at the top left corner of the unit.

⚠ CAUTION

1. The duct pipes are 16mm off center to the right.
2. The duct pipe core holes must be drilled from inside to outside any slight misalignment can be concealed when installing the grilles on the outside.

Fresh-r On The Wall Drilling Template

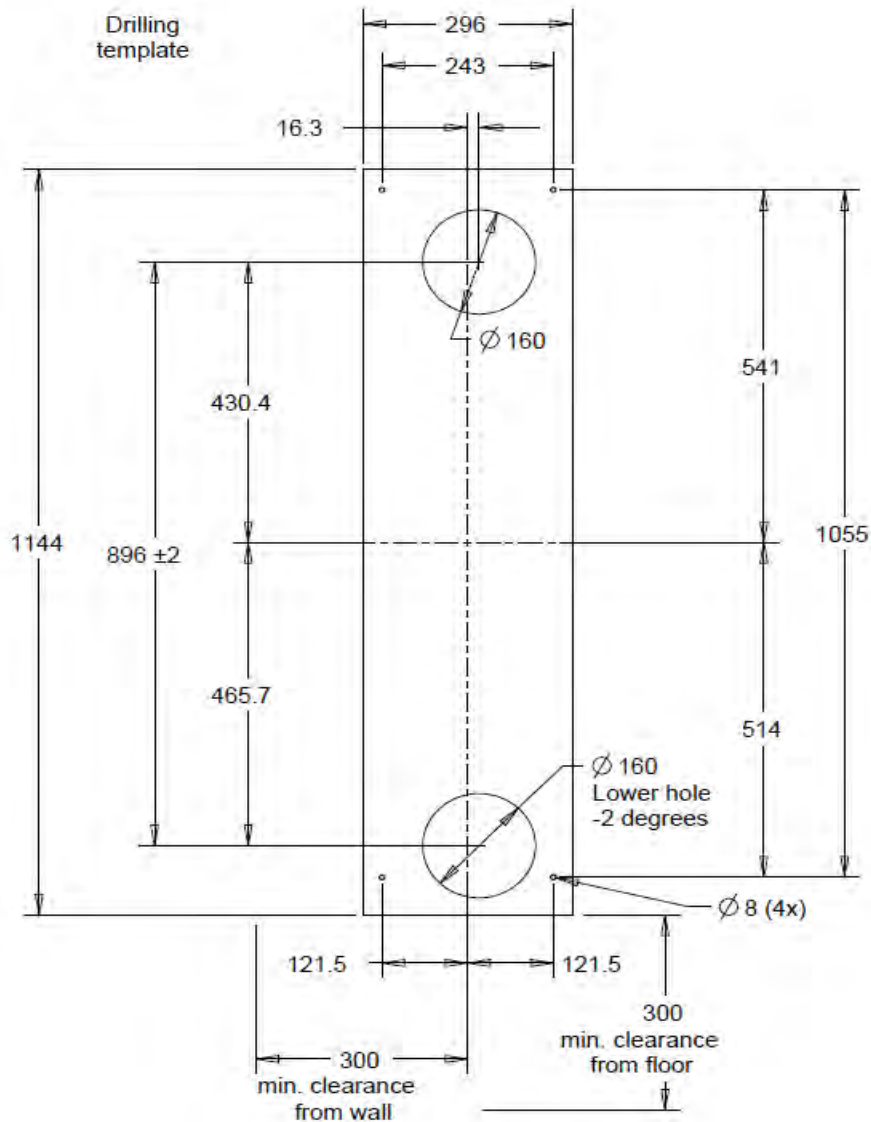


Figure 3 Drilling dimension diagram

7.2 Drilling the 160mm duct holes

To drill the **lower** big hole (**160 mm**), do the following:

1. Drill from inside through both the inner wall across the cavity (if present) and through outer wall at a downward angle of 2 degrees. This is to allow the condensate to drain towards outside.

To drill the **upper** big hole (**160 mm**), do the following:

2. Drill from inside through both the inner wall across the cavity (if present) and through outer wall
3. Remove dust and other materials from the holes.

- 4 Get a duct pipe (this is the grey PVC pipe) with EPP cover (this is a foam tube) and try if it fits the holes.

7.3 The four corner holes

To drill the four corner holes, do the following:

- Check the dimensions as shown in fig. 6.
- Drill the four corner holes. Use an 8 mm masonry drill, drill 90mm depth
- Place red/grey raw plugs into the four corner holes.

8. Prepare the fresh-r unit

8.1 Cut the duct pipes to length

To cut the duct pipes, do the following:

1. Remove the EPP covers.
2. Cut the upper duct pipe (input fresh air) to the total width of the wall (D1) + 25mm
3. Cut the lower duct pipe (output stale air) to the total width of the wall(s) (D1) + 65mm

Tip: Use a wide tape or two paper sheets taped together to mark the duct pipes and get a perpendicular cut.

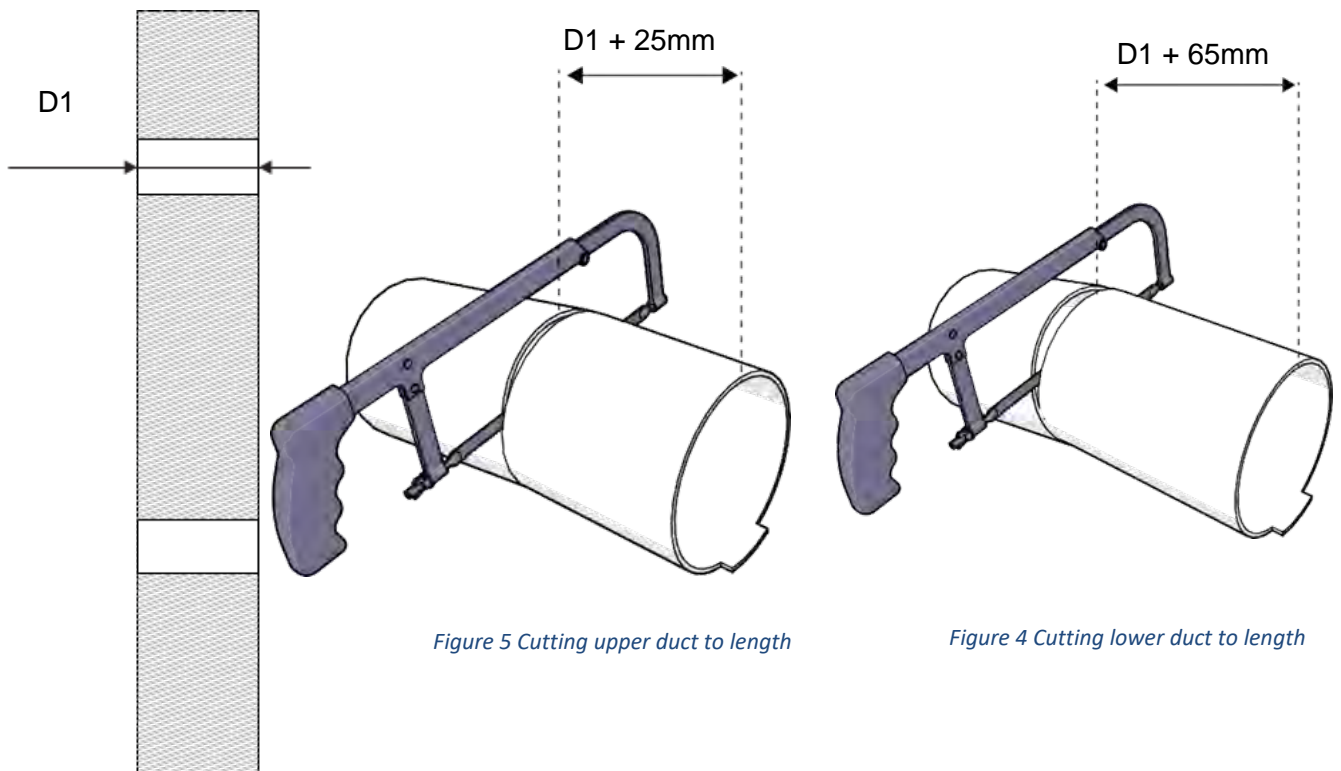


Figure 5 Cutting upper duct to length

Figure 4 Cutting lower duct to length

Figure 6 Measuring the wall thickness

4. Deburr and chamfer the end of the duct pipes that will be inserted into the Fresh-r. Use a deburring tool, such as a file.



Figure 7 Deburr and chamfer the duct pipes making insertion into the white ring possible

8.2 Install the duct pipes into the fresh-r



Figure 9 DO NOT USE PCV GLUE Top of Fresh-r unit

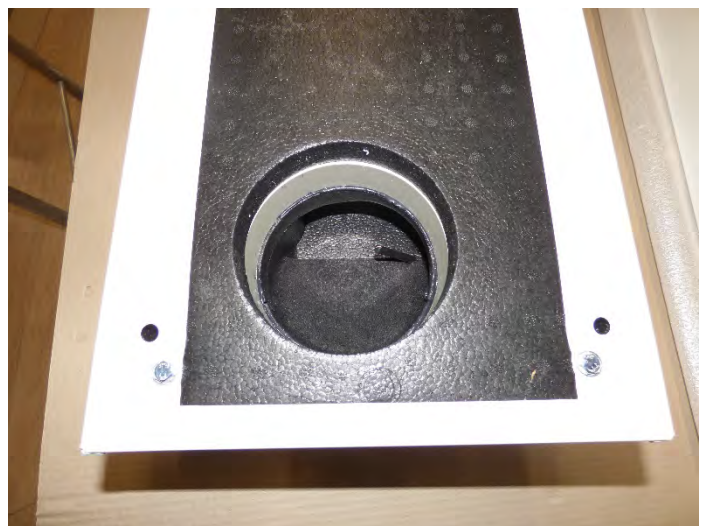


Figure 8 Bottom outlet of Fresh-r USE Hard PVC glue to ensure water tight seal

1. Use PVC glue to seal the lower pipe into the white ring. The lower duct pipe is the condensate drain and needs to be water tight. Apply PVC glue to the last 3 cm of the duct and to the white ring.



Figure 11 Hard plastic PVC glue – critical function



Figure 10 Use plenty – move fast as it sets quickly like contact glue

2. After applying PVC glue, insert the chamfered end into the white ring and firmly push until it completely bottoms out against the black EPP material. You need to move fast because the PCV glue sets quickly. You will not be able to move the pipe at all withing approx. 30 seconds – so do not pause during this operation.

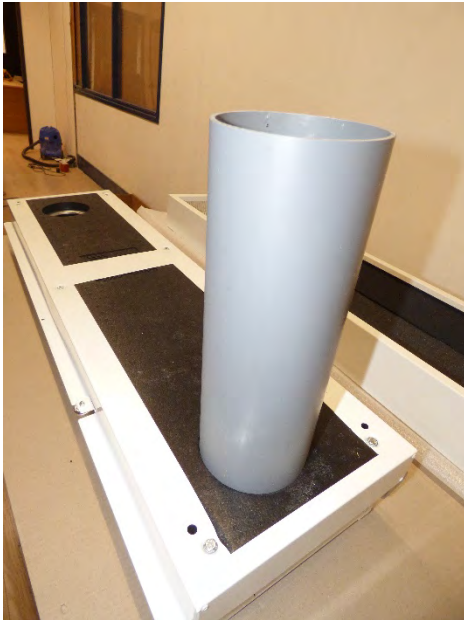


Figure 13 Insert the duct into the white ring



Figure 12 Slide the insulating cover over the duct pipe – use Polymax to make an air tight connection

3. Install the upper duct pipe in the same way. Do not glue the grey pipe into position but do glue the insulating cover in the same way as the lower duct pipe.
4. Apply polymax around the outside of the insulator so that it will seal the hole in the wall when installed.
5. Insert the fixation screws from the front (160 x 6mm) 2 at the top and 2 at the bottom



Figure 14 Internal wall sealing



Figure 15 Insert the fixation screws from the front

9. Install the fresh-r

9.1 Mount the unit onto the wall

1. Lift the fresh-r complete with fitted duct pipe and insulators to the prepared wall.
2. Correct orientation is with the electrical control panel upper left.

3. Guide the duct pipes into the 160mm holes in the wall
4. When the unit is approximately 5cm from the wall you can guide the screws individually into the raw plugs
5. Use a Torx 25 and start all screws. Then push the fresh-r unit firmly to the wall.
6. Tighten the screws incrementally so as not to distort the fresh-r until the unit is held firmly against the wall with equal tension on each screw. It is important that all 4 screws are functional i.e., properly tightening into the raw plugs and holding fast.



Figure 17 Fresh-r prepared for mounting on to the wall

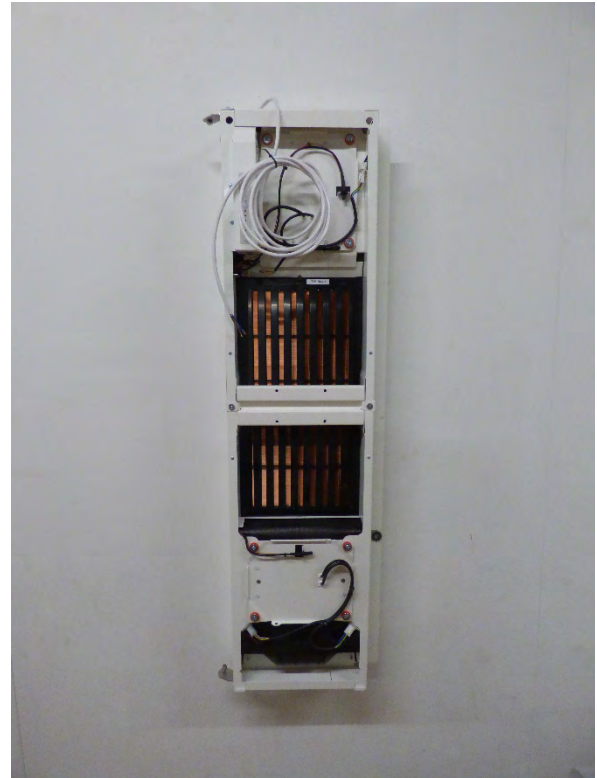


Figure 16 Fresh-r mounted without Door

9.2 Install the door on to the mounted fresh-r

The door has been configured in the factory to open in the direction chosen at the time of purchase. This orientation cannot be changed on site by swapping the hinges around.

To mount the door, follow the steps below:

1. Prepare the hinge bolts
 - a. The door will hang on the bolt screwed into the top bracket and this bolt should be fully inserted for beneath
 - b. The bottom hinge bracket has a socket headed screw inserted from the top – this screw should be started in the thread but not protruding



Figure 19 Top hinge with screw fully inserted



Figure 18 Bottom hinge bracket with screw not protruding

2. Lift the door and present the protruding bolt into the plastic bush fitted into the top side of the door.
3. Swing the bottom of the door so that the plastic bush is directly beneath the hinge bracket and align the hole with the hinge bolt.
4. Screw the hinge bolt through the hinge bracket and into the plastic bush – this can be done without tools. Hand tight is sufficient.



Figure 20 fresh-r OTW installed complete with door

10. Installing the outer grilles

10.1 Trim the pipes to length if needed

The top pipe does not need to protrude

The **lower pipe** needs to protrude by 20mm so that the condensate will fall away from the wall surface and into the catch tray of the grille

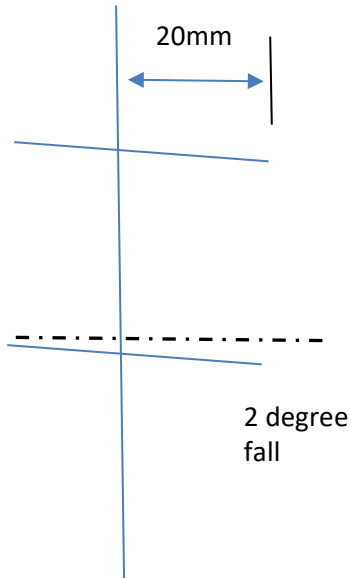


Figure 22 diagram of lower pipe – 2 degree fall and 20mm protrusion

10.2 Seal the outer wall for both the upper and the lower duct pipe

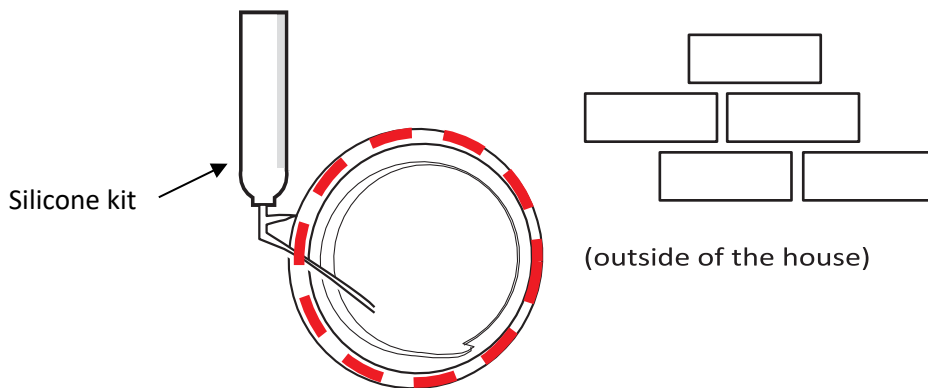


Figure 23 seal the Outerwall

10.3 To install the grilles do the following:

The grilles are 198mmX 195mm, which gives an allowance of 35mm to mask core drill misalignment.

1. Mark the best center line out that allows the grilles to properly cover the duct pipe and core drill hole keeping the grilles in vertical alignment for best visual appearance.

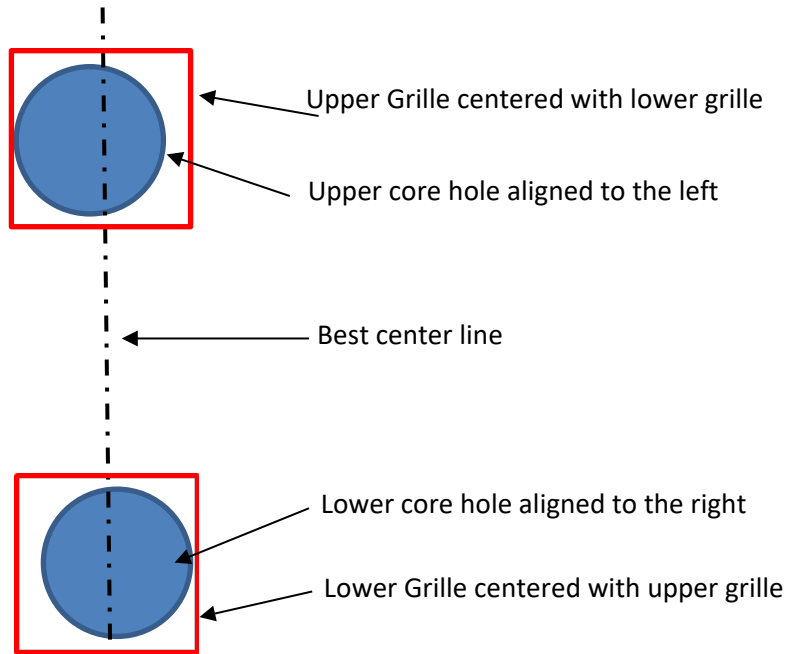


Figure 24 Outer grill alignment

2. Mark the holes for the raw plugs and drill 4 X 6mm @50mm depth holes for each grille

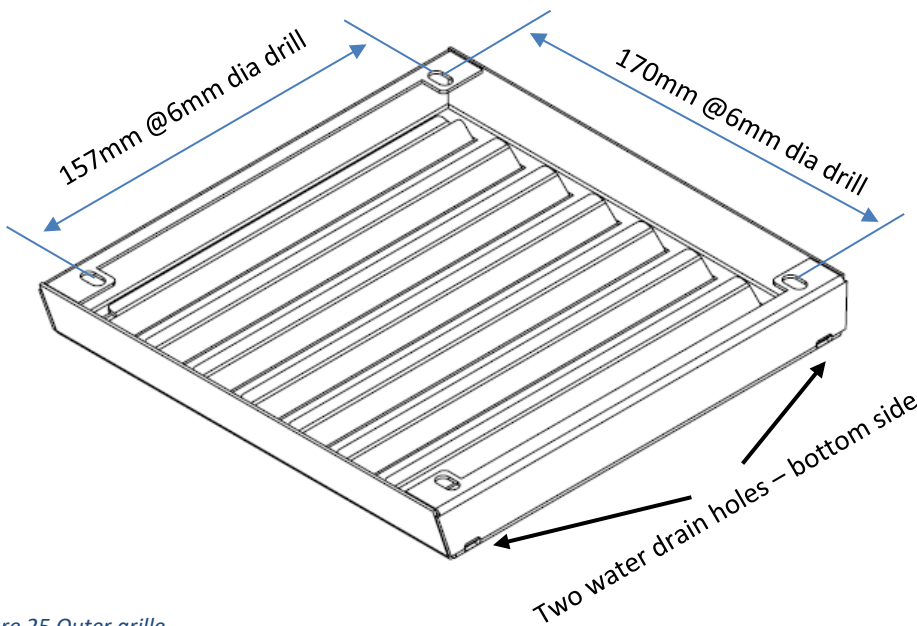


Figure 25 Outer grille

3. Insert the raw plus that have been supplied

4. Present the upper grille with the water holes at the bottom and fasten with the 4 screws (supplied). Do the same for the lower grille and ensure that the duct pipe is not so long that it prevents the grille from sitting flat on the wall.

11. Connect the fresh-r electrically and test its functionality

DANGER

- Connecting the fresh-r to the mains electricity supply must be done by a qualified electrician.
- Risk for electric shocks or electrocution. Turn off the mains electricity supply in the distribution box before connecting the fresh-r electrically.

11.1 Do the following:

5. Turn off the main electricity supply in the distribution box before attempting to wire in the fresh-r.
6. Make the electrical connection while the fresh-r is turned OFF. The electric cable location is on the left-hand top.
7. Turn the main electricity supply ON again at the distribution box.
8. Turn the fresh-r ON and wait for approximately 1 minute while the unit starts up.

If you see three illuminated lights and notice fans running, the unit is properly functioning.

If not:

Check the main electricity supply. If the product still does not work, turn the unit OFF and contact your supplier.

12. Connect the fresh-r to the internet

By connecting the fresh-r to the internet you will benefit from automatic software updates. You will also have access to data graphs showing actual performance values of the air temperature and quality.

To connect your fresh-r to the internet do the following.

1. Switch power of the fresh-r OFF and switch the power ON again.
2. After the unit has restarted - Press the middle button (increase fan speed) for approximately 5 seconds and release. You should hear a chime indicating that the unit is now in Wi-Fi access point mode.

The following actions must be done with your smartphone, laptop or tablet.

Do the following:

1. Start your device and go to settings.
2. Select Wi-Fi.
3. Select WiFly-EZX-XX from the list of Wi-Fi connections. Your device will now connect to the fresh-r Wi-Fi – no password is required,
4. Open the phone/laptop web browser and type 192.168.1.1 and press enter - The Microchip settings page opens.



Figure 26 Microchip config page

5. Press refresh list – all available networks will be listed. This may take 1 or 2 minutes.
6. Select your routers SSID
7. Enter the passphrase of the Wi-Fi SSID (found on the back of the router)
8. Press save and reboot – wait for the dialog requesting confirmation that you want to exit configuration and select OK.
9. Power off and on the Fresh-r and it should now be connected to the internet to receive updates and provide user data.
10. Send the serial number of your fresh-r (eg. E:237411/120001 – can be found on a silver label on the left-hand side of the unit) to sales@fresh-r.eu and request for user name and password for the www.fresh-r.me web application in which you will be able to check performance of the fresh-r.

13. Installation checklist

Use the following checklist after you have completed the installation. For a properly functioning fresh-r please make sure you can answer all questions with 'yes'.

Check the following	More information	Yes	No
Are the 4 mounting screws properly functioning?			
Is the bottom duct pipe water tight with PVC Glue			
Are the duct pipes sealed against the EPP back cover?			
Are the duct covers sealed against the EPP back cover?			
Are the duct pipes sealed against the inner wall?			
Are the duct pipes properly sealed at the outside wall?			
Does the unit sound normal?			
Does the door open and close properly?			
Is air blowing from the bottom part of the door?			
Is the CO2 indicator glowing green and if not is it green after 1/2 hour?			

14. Specifications

Type	On-The-Wall
Serial nr.	Can be found at the left side, above the middle
Flow range	0-120 m ³ /hr
Working range	-20°C to 50°C
Max. power consumption	5,3 Watt at 25 m ³ /hr 41,2 Watt at 120 m ³ /hr
Avg. power consumption	Approx. 8 – 10 Watt
Sound dB(A)	25 dB(A) at 35 m ³ /hr 45 dB(A) at 120 m ³ /hr
Heat recovery	87% Efficiency
Control	automatic (on basis of CO ₂ ppm)
Certification	CE
Weight	Less than 20 kg
Dimensions	H = 1195 mm W = 375 mm D = 205 mm
Capacity	up to 120m ³ /hr
Continues heat recovery at subzero temperatures	Yes, with automatic defrost mode
Fully automatic operation	Self-regulating flow control based on CO ₂ , RH

9. Declaration of conformity

as required by EC Directive

We

The manufacturer: Fresh-r BV
Address: Weleweg 417, 7548 PK Enschede
The Netherlands

declare under our sole responsibility that the following product

Equipment: Air handling unit with heat recovery
Brandname: Vaventis
Model/type: fresh-r

is in conformity with the following Directives

2006/95/EC Low Voltage (LVD)

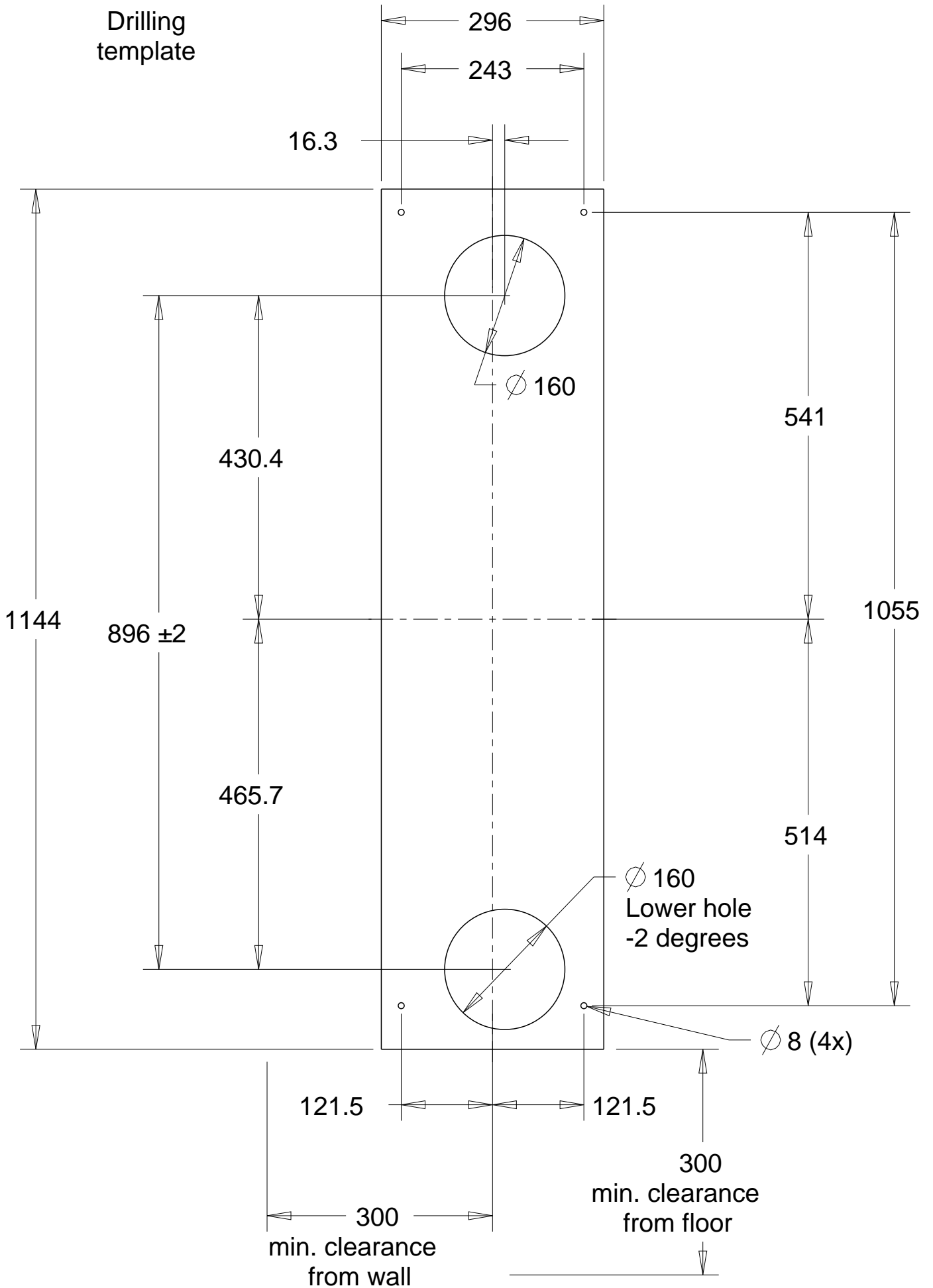
the product bears the CE label



.....
Woen Van Andel (Managing Director)

Enschede, April 2021,

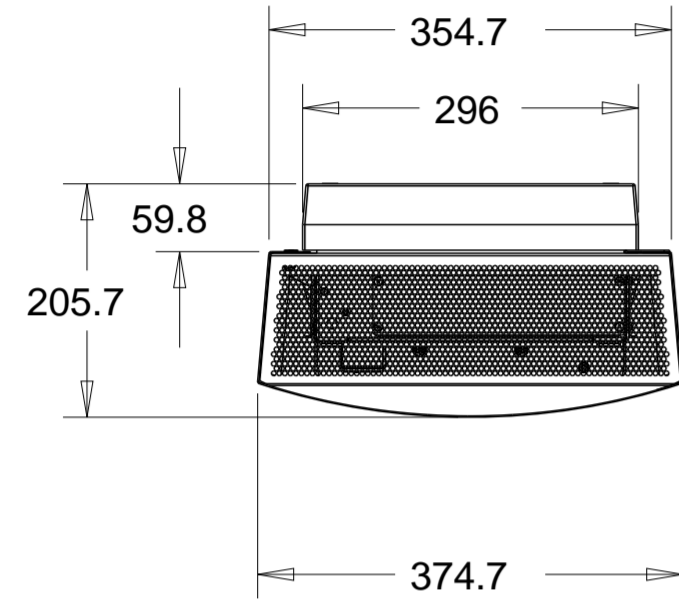
Fresh-r On The Wall Drilling Template



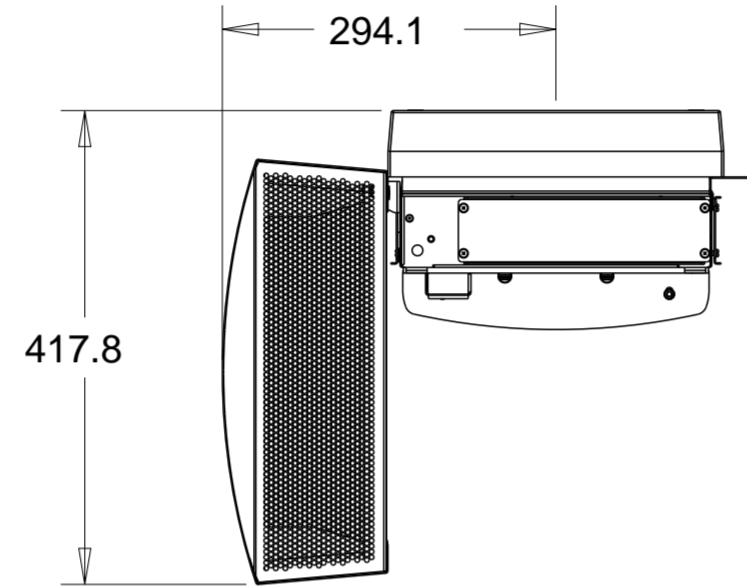
Fresh-r On The Wall

Please note the OTW can have the door switched to open in the opposite direction

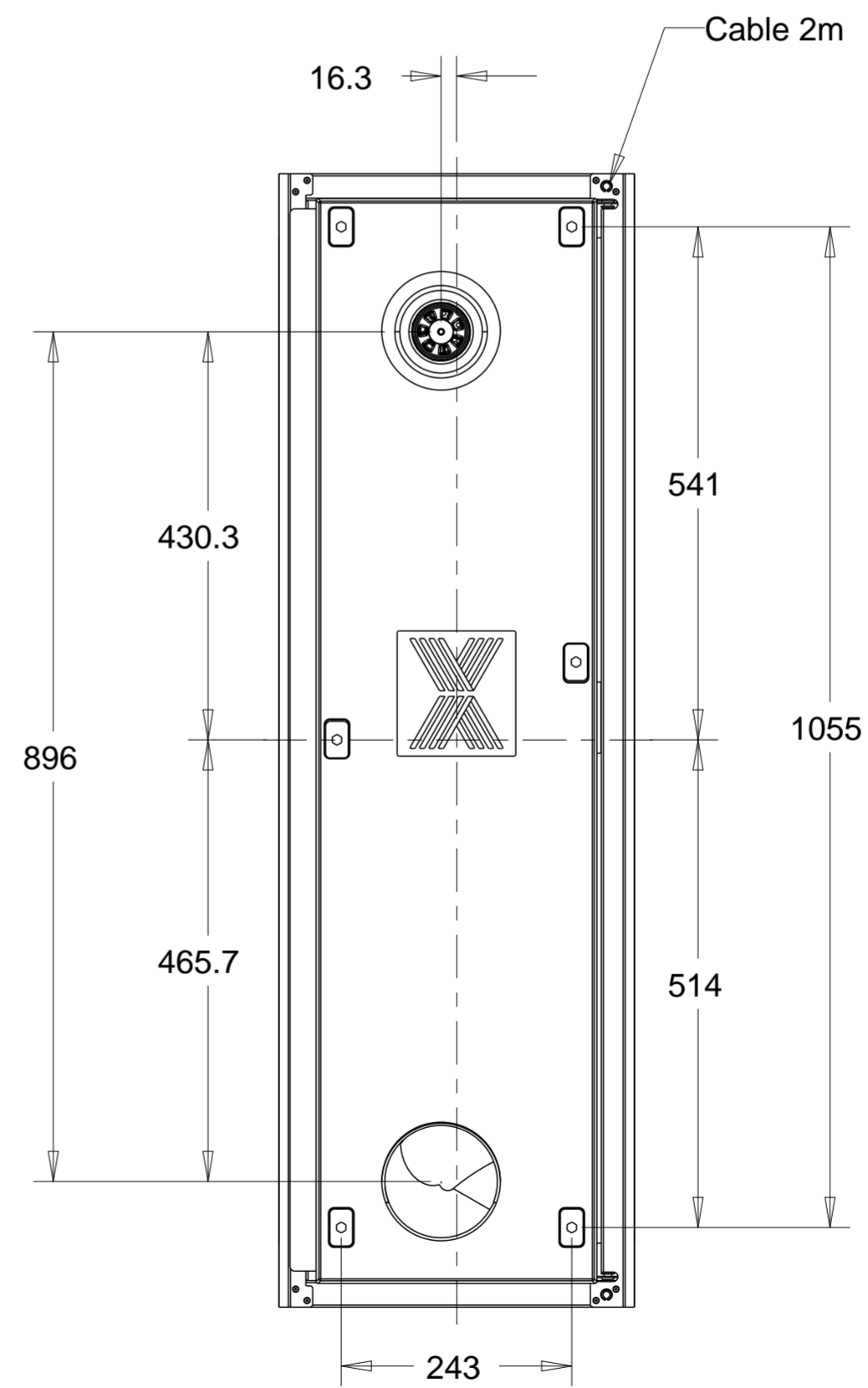
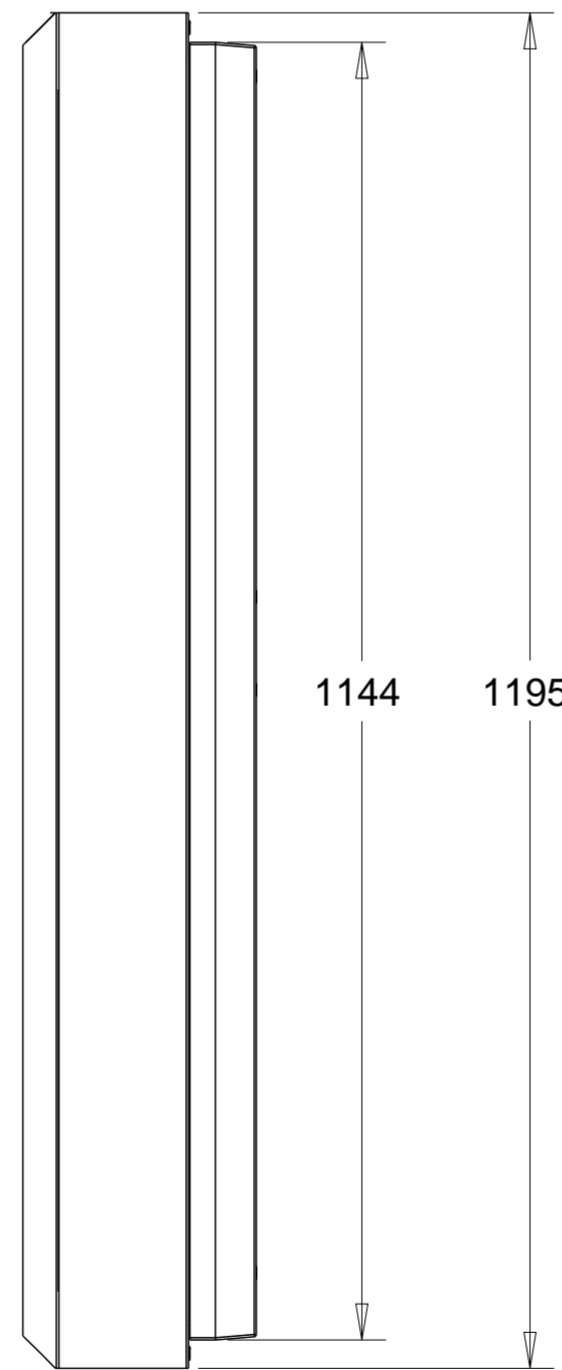
The opening side of the door can be positioned tight into a corner without effecting the door opening



Front view



Right view



Back view

