



 fresh-r®  
BY VAVENTIS

For an indoor  
atmosphere  
that makes you  
feel good



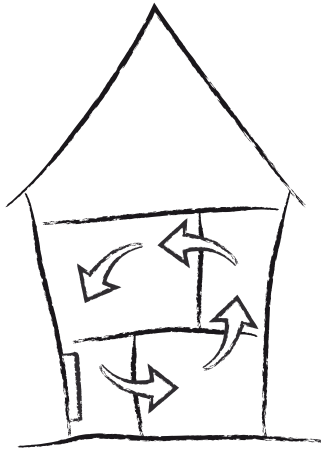
Fresh air makes you feel good. And so does saving energy.

You want to let fresh air in and keep the chill out.

That's exactly what the fresh-r<sup>®</sup> does.

Decentral ventilation with heat recovery  
for always fresh air everywhere





## Benefits

Continuous monitoring and regulation of temperature and CO<sub>2</sub> for comfort and well-being

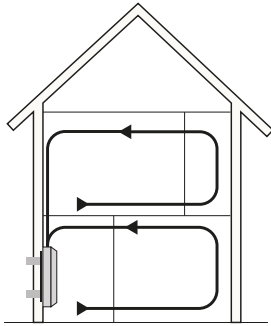
Helps making central heating unnecessary, using less energy than a LED-light

No ducts, so no build up of bacteria and fungi

Low maintenance, no filter replacement needed

Patented heat exchanger that refreshes 120 m<sup>3</sup> per hour with temperature conservation of 83% and leakage of less than 3%

Officially certified by the German Passive House Institute



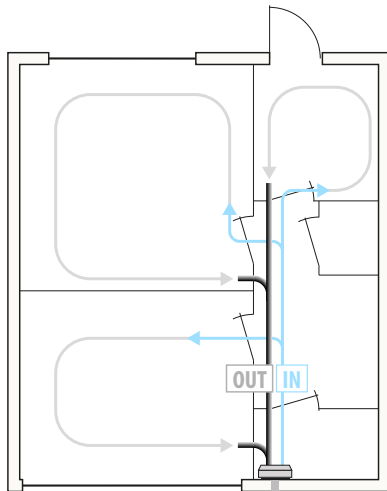
## Fresh air everywhere

With the **fresh-r everywhere**<sup>®</sup> you can ventilate multiple rooms with just one fresh-r<sup>®</sup> by creating air circulation between the rooms. This air circulation system is the preferred Passive House cascade system.

A duct is connected to the fresh-r<sup>®</sup>, to extract air from the most central areas so air is drawn in from adjacent areas, creating a ventilation cascade and refreshing air everywhere.

You do not breathe through ducts that can become dirty, because there are no supply ducts, only extraction ducts.

The **fresh-r everywhere**<sup>®</sup> can be mounted on the in-the-wall unit with the extract ducts placed in-the-wall and on-the-wall with unit and extract ducts on the wall.



fresh-r® is proud to be the only decentral Ventilation System that is passive house certified. Passive House is a building standard that is truly energy efficient, comfortable, affordable and ecological at the same time.

The vast energy savings in Passive Houses are achieved by using especially energy efficient building components and a quality ventilation system: There is absolutely **no cutting back on comfort**; instead the level of comfort is considerably increased.





## How does the fresh-r<sup>®</sup> work

fresh-r<sup>®</sup> improves in-home atmosphere with smart ventilation to make homes more healthy, while saving energy.

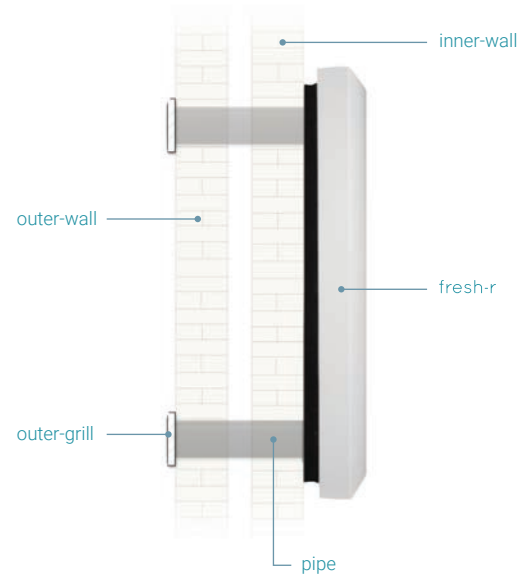
Air quality is constantly measured (in ppm CO<sub>2</sub>)

fresh-r<sup>®</sup> takes in fresh air from outside (flow F), while expelling old air (flow O), with a capacity of 120 m<sup>3</sup> per hour.

To save energy the incoming fresh air is pre-warmed by the outgoing air through the patented heat exchanger, without the mixing the airflows. Temperature conservation is above 83%.



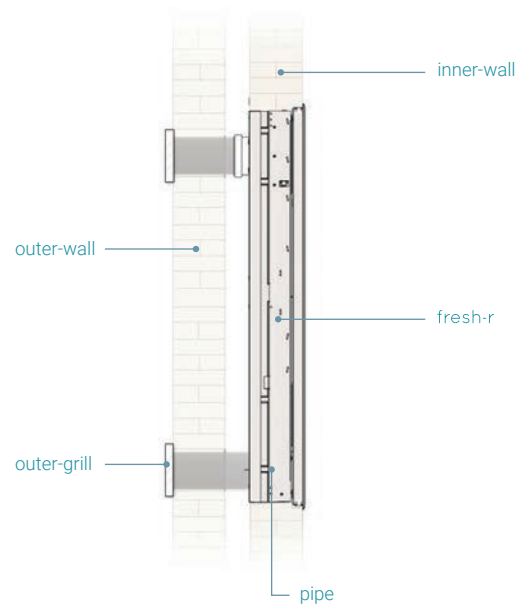
## On-the-wall unit

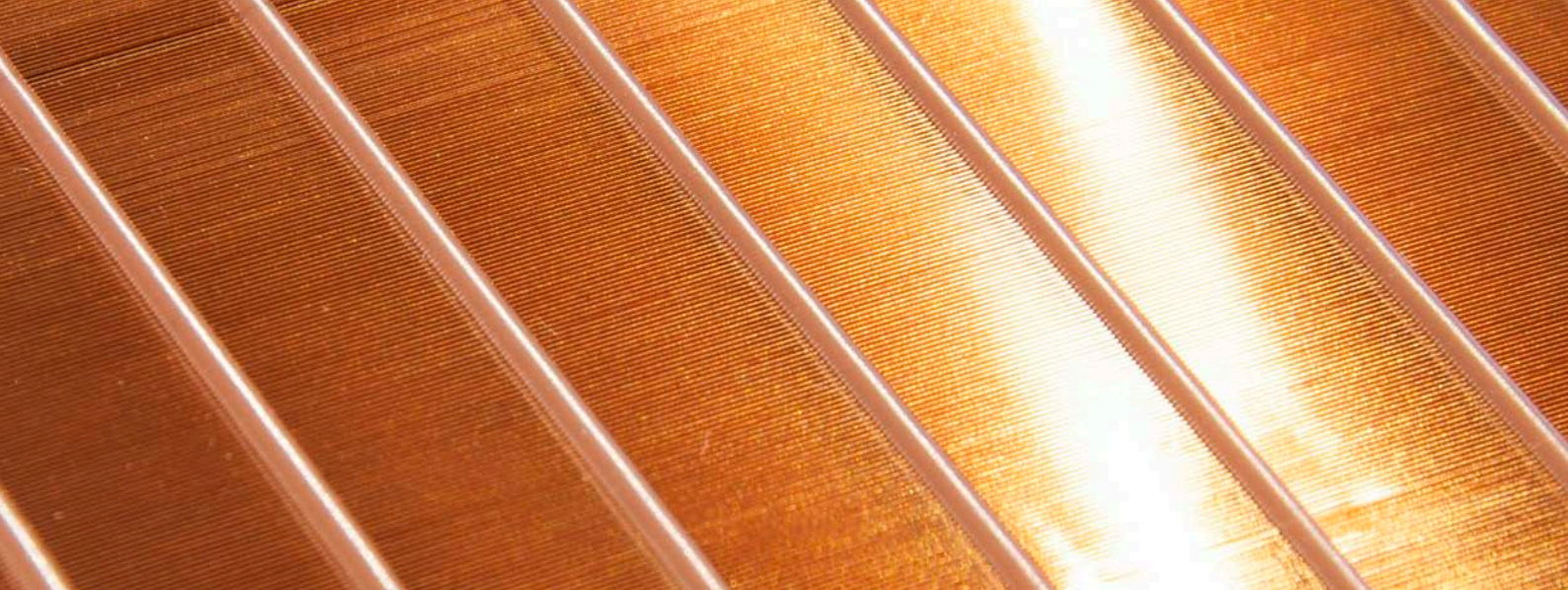






## In-the-wall unit





The core of the fresh-r® is a patented fine wire heat exchanger that consists of 8 km ultra thin copper wire with a total weight of less than 0.5 kg. With a heat transfer coefficient of 400 W/mK copper transfers heat 1000 times better than polyethylene of which traditional heat exchangers are made.

Combined with intelligent controls it has a higher overall efficiency, which results in more comfortable air coming in and a shorter payback time of the fresh-r®.



# Specifications and Product information





## Specifications

Flow range	0-120m <sup>3</sup> /hr
Working range *	-20°C to 50°C
Max. power consumption	45 Watt
Avg. power consumption	6 watt
Noise	30 dB(A) at 65 m <sup>3</sup> /hr
Efficiency	87% true eff.
Control	automatic (on basis of CO <sub>2</sub> ppm)
Certification	CE / SAP / Passive House / EPC

\* The world's first HRV to work at sub-zero temperatures without adding energy.

Tested at BRE (UK) and Cauberg-Huygen (NL).



## Product information

- Product includes
- All hardware for plug and play installation
  - Installation manuals, drilling template and mounting kit
  - Complete unit, with on-the-wall or in-the-wall front cover
  - Heat exchanger and smart controls (RH, Temp, CO<sub>2</sub>)
  - 2 x outside grilles
  - 2 x Ø125 mm x 37 cm PVC pipe to outside
  - Extract duct connection available (fresh-r<sup>®</sup> everywhere<sup>®</sup> compatible)
  - Packed for delivery within the EU
- Lead time 8 weeks (Order-to-on-site delivery)

Please contact [sales@fresh-r.eu](mailto:sales@fresh-r.eu) for a quotation.

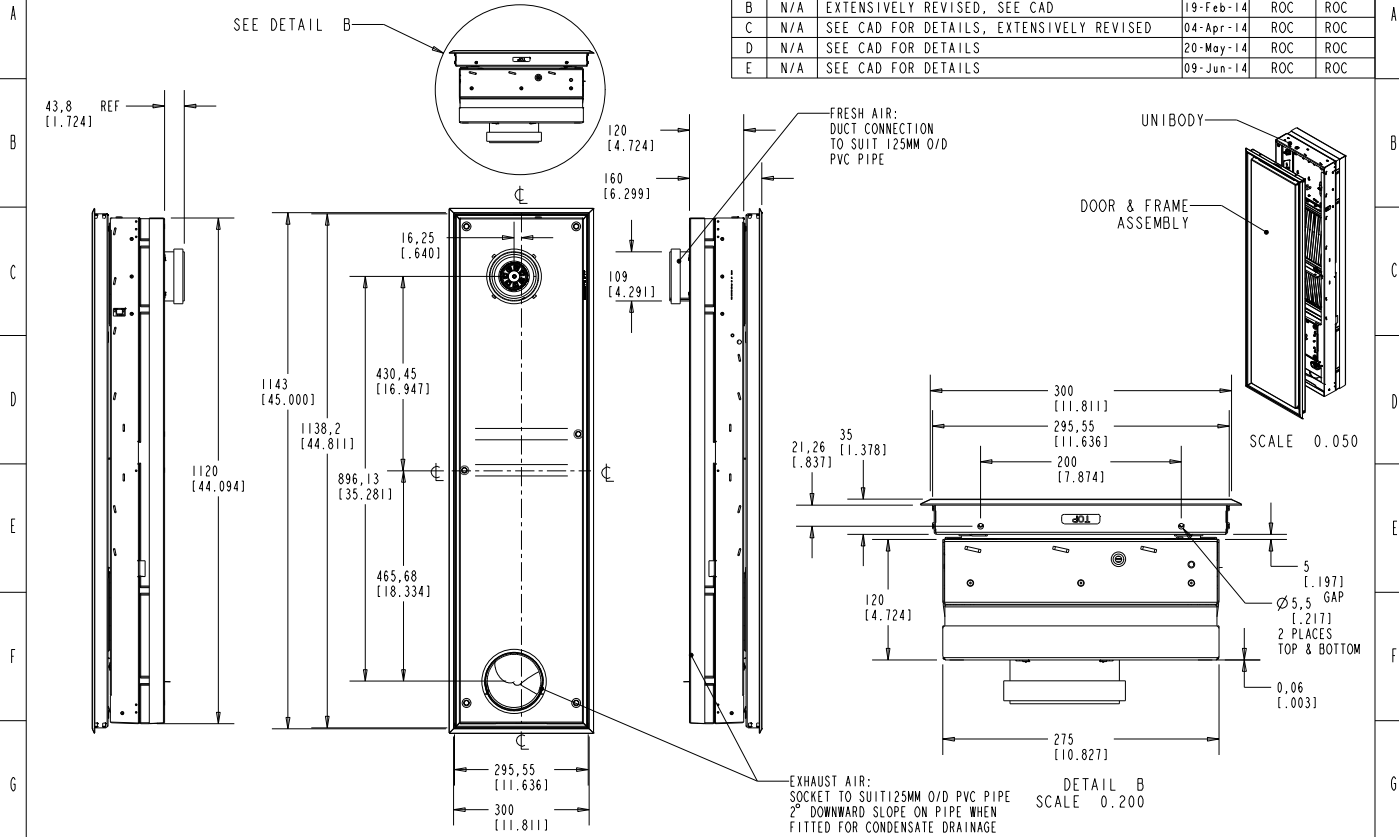
# Technical and Installation detail



1 2 3 4 5 6 7 8 9 10

VAVENTIS MFG. NOTES  
 1 N/A

REV.	EC #	REVISION DESCRIPTION	DATE	D.ENG.	CHECKER
A	N/A	INITIAL PROTOTYPE RELEASE	02-Nov-13	ROC	ROC
B	N/A	EXTENSIVELY REVISED, SEE CAD	19-Feb-14	ROC	ROC
C	N/A	SEE CAD FOR DETAILS, EXTENSIVELY REVISED	04-Apr-14	ROC	ROC
D	N/A	SEE CAD FOR DETAILS	20-May-14	ROC	ROC
E	N/A	SEE CAD FOR DETAILS	09-Jun-14	ROC	ROC



in-the-wall unit

<b>VAVENTIS B.V. DISCLOSURE</b> THIS DOCUMENT IS THE PROPERTY OF VAVENTIS B.V. ITS USE IS AUTHORIZED BY VAVENTIS B.V. ONLY. ALL QUESTIONS MUST BE REFERRED TO VAVENTIS B.V. PERSONNEL: DESIGN ENG., MFG. ENG., AND / OR PURCHASING. ANY PRINTED COPY IS UNCONTROLLED AND TO BE USED FOR REFERENCE ONLY. REFER TO VAVENTIS B.V. CAD SYS. FOR VERIFICATION. Form No. 1001 Rev. A		<b>MATERIAL:</b> FINISH: IF APPLICABLE PLACE SECOND FINISH AND DESCRIPTION HERE ALL INNER BEND RADI $\geq 1$ mm BOTTOM BEND UNLESS OTHERWISE STATED TOLERANCES, UNLESS OTHERWISE STATED: DECIMAL .xxx $\pm$ .020 HOLES .xxx $\pm$ .003 TOLERANCES FOR CNC FLAT .xxx TOLERANCE .xx $\pm$ .030 ANGLES $\pm$ 1° REF EXCLUDING HOLE DIA. +/- .010	N/A BEND DEDUCTION N/A N/A COSMETICS PER VAVENTIS B.V. SPEC Q-1 SEE CAD FOR DIMS. NOT SHOWN BREAK ALL SHARP EDGES ALL DIMENSIONS ARE IN INCHES FIRST USED ON EG2R-230-133-04 DESIGN ENG. ROC DATE 02-Nov-13 E# VAVENTIS REVISION E SHEET 1 of 1	<b>PART NO.</b> EG2R-230-133-04 <b>TITLE</b> BW PROTO #3 
---	--	---	---	---

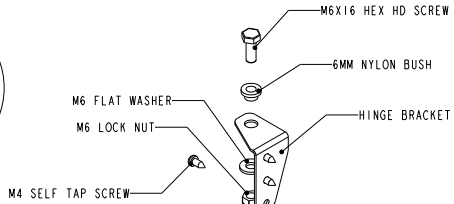
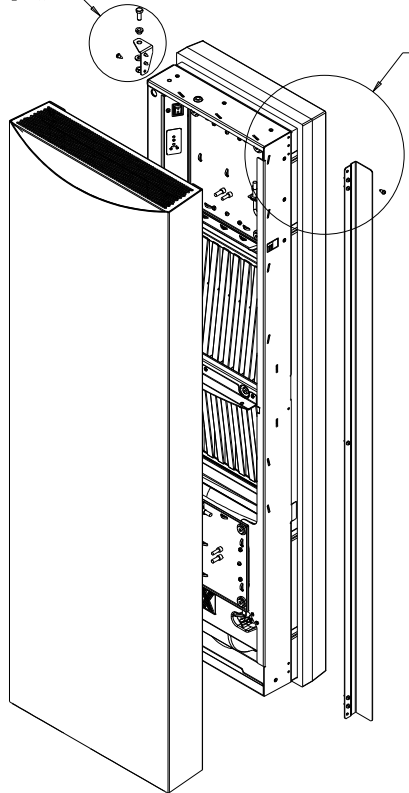
1 2 3 4 5 6 7 8 9 10

1	2	3	4	5	6	7	8	9	10
VAVENTIS MFG. NOTES									
1. DIMENSIONED DRAWING ON SHEET 2-2									

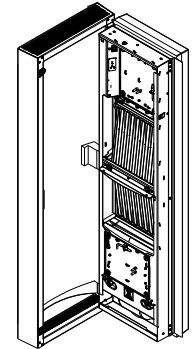
REV.	EC #	REVISION DESCRIPTION	DATE	D. ENG.	CHECKER
A	N/A	INITIAL PROTOTYPE RELEASE	28-May-14	ROC	ROC

SEE DETAIL A

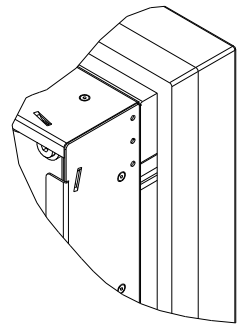
SEE DETAIL B



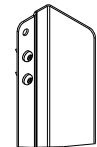
DETAIL A  
SCALE 0.330  
HINGE BRACKET  
TOP & BOTTOM



SCALE 0.060  
COVER HINGED FROM  
LEFT OR RIGHT SIDE  
ASSEMBLE HINGE BRACKETS &  
SEALING ANGLE AS REQUIRED



DETAIL B  
SCALE 0.330  
SEALING ANGLE  
FIX IN PLACE AS  
REQUIRED ON OPPOSITE  
SIDE TO HINGE BRACKETS



M4 SELF TAP SCREW  
6 PLACES

on-the-wall unit

**VAVENTIS B.V. DISCLOSURE**  
THIS DOCUMENT IS THE PROPERTY OF VAVENTIS B.V. ITS USE IS AUTHORIZED BY VAVENTIS B.V. ONLY. ALL QUESTIONS MUST BE REFERRED TO VAVENTIS B.V. PERSONNEL: DESIGN ENG., MFG. ENG., AND / OR PURCHASING.  
**CAUTION:** ANY PRINTED COPY IS UNCONTROLLED AND TO BE USED FOR REFERENCE ONLY. REFER TO VAVENTIS B.V. CAD SYS. FOR VERIFICATION.  
Form No. 1001 Rev. A

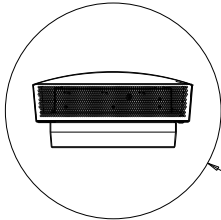
<b>MATERIAL:</b>	N/A	<b>BEND DEDUCTION:</b>	N/A
<b>FINISH:</b>	N/A	<b>COSMETICS PER VAVENTIS B.V. SPEC 0-1</b>	
<b>IF APPLICABLE PLACE SECOND FINISH AND DESCRIPTION HERE</b>	SEE CAD FOR DIMS. NOT SHOWN		
<b>ALL INNER BEND RADI:</b>	1 mm	<b>BOTTOM BEND UNLESS OTHERWISE STATED</b>	BREAK ALL SHARP EDGES
<b>TOLERANCES, UNLESS OTHERWISE STATED:</b>	ALL DIMENSIONS ARE IN TWICHES		
DECIMAL .xxx ± .020	HOLES .xxx ± .003	TOLERANCES FOR CNC FLAT .xxx	
TOLERANCE .xx ± .030	ANGLES ± 1° REF	EXCLUDING HOLE DIA. +/- .010	

<b>PART NO.</b>	EG2R-230-133-06
<b>TITLE</b>	CURVED ON WALL UNIT
<b>FIRST USED ON</b>	EG2R-230-133-06
<b>DESIGNING:</b>	ROC
<b>DATE:</b>	13-Aug-14
<b>ENG.</b>	VAV
<b>REVISION</b>	A
<b>SHEET</b>	1 of 2

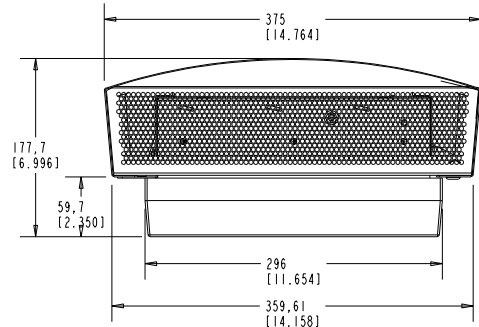
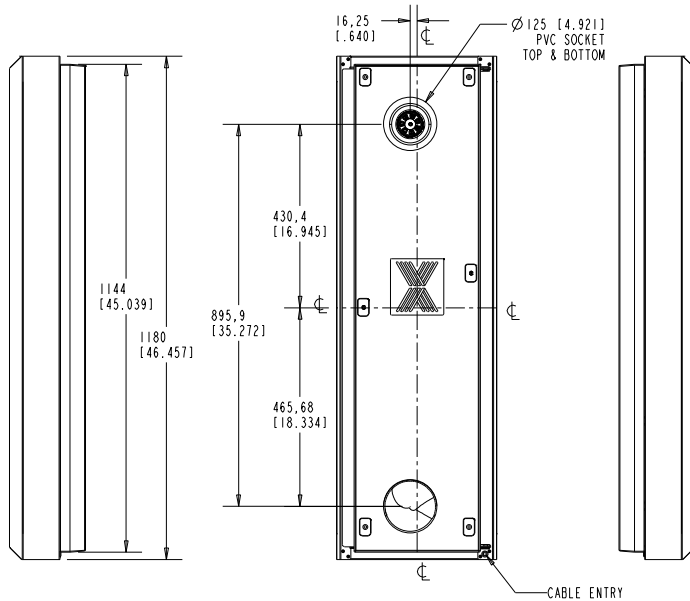




1 N/A



SEE DETAIL C



DETAIL C  
SCALE 0.200

on-the-wall unit

<p><b>VAVENTIS B.V. DISCLOSURE</b></p> <p>THIS DOCUMENT IS THE PROPERTY OF VAVENTIS B.V. ITS USE IS AUTHORIZED BY VAVENTIS B.V. ONLY. ALL QUESTIONS MUST BE REFERRED TO VAVENTIS B.V. PERSONNEL: DESIGN ENG., MFG. ENG., AND / OR PURCHASING.</p> <p>ANY PRINTED COPY IS UNCONTROLLED AND TO BE USED FOR REFERENCE ONLY. REFER TO VAVENTIS B.V. CAD SYS. FOR VERIFICATION.</p> <p>Form No. 1001 Rev. A</p>		<p><b>MATERIAL:</b> N/A</p> <p><b>FINISH:</b> SEE SHEET 1</p> <p>IF APPLICABLE, ENTER SECOND FINISH AND DESCRIPTION HERE</p> <p>ALL INNER BEND RADI: = 1mm BOTTOM BEND UNLESS OTHERWISE STATED</p> <p>ALL DIMENSIONS ARE IN INCHES</p>		<p><b>BEND DEDUCTION:</b> N/A</p> <p>COORNICS PER VAVENTIS B.V. SPEC 0-1</p> <p>SEE CAD FOR DIMS. NOT SHOWN</p> <p>BREAK ALL SHARP EDGES</p>		<p><b>PART NO.:</b> EG2R-230-133-06</p> <p><b>TITLE:</b> CURVED ON WALL UNIT</p> <p><b>FIRST USED ON:</b> EG2R-230-133-06</p>	
<p><b>CAUTION:</b></p>		<p>TOLERANCES UNLESS OTHERWISE STATED:</p> <p>DECIMAL .xxx ± .020 HOLES .xxx ± .003 TOLERANCES FOR CNC FLAT .xxx</p> <p>TOLERANCE .xx ± .030 ANGLES ± 1° REF EXCLUDING HOLE DIA. +/- .010</p>		<p>DESIGN ENG. ROC</p> <p>DATE 13-Aug-14</p> <p>REV VAV</p>		<p>REVISION A</p> <p>SHEET 2 of 2</p>	

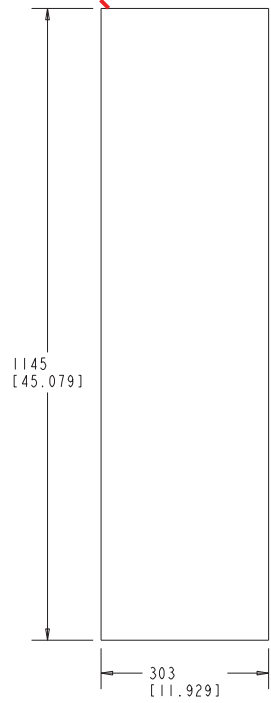
1 2 3 4 5 6 7 8 9 10

VAVENTIS MFG. NOTES  
 1 N/A

REV.	EC #	REVISION DESCRIPTION	DATE	D.ENG.	CHECKER
A	N/A	INITIAL PROTOTYPE RELEASE	09-Apr-14	ROC	ROC
B	N/A	MODIFIED TEMPLATE	09-Jun-14	ROC	ROC



- VIEW FROM INSIDE OF BUILDING
- WALL CUT-OUT SHOULD BE NOMINAL DIMENSION ± 2mm



Note:  
 a wall-cut template will be provided with the unit.

inner wall template  
 (for in-the-wall unit only)

<b>VAVENTIS B.V. DISCLOSURE</b> THIS DOCUMENT IS THE PROPERTY OF VAVENTIS B.V. ITS USE IS AUTHORIZED BY VAVENTIS B.V. ONLY. ALL QUESTIONS MUST BE REFERRED TO VAVENTIS B.V. PERSONNEL: DESIGN ENG., MFG.ENG., AND / OR PURCHASING. ANY PRINTED COPY IS UNCONTROLLED AND TO BE USED FOR REFERENCE ONLY. REFER TO VAVENTIS B.V. CAD SYS. FOR VERIFICATION. <small>Form No. 1001 Rev. 0</small>		<b>MATERIAL:</b> N/A <b>FINISH:</b> N/A IF APPLICABLE PLACE SECOND FINISH AND DESCRIPTION HERE ALL INNER BEND RADI: 1mm BOTTOM BEND UNLESS OTHERWISE STATED TOLERANCES, UNLESS OTHERWISE STATED: DECIMAL .xxx ± .020 HOLES .xxx ± .003 TOLERANCES FOR CNC FLAT .xxx EXCLUDING HOLE DIA. +/- .010 TOLERANCE .xx ± .030 ANGLES ± 1° REF	<b>BEND DEDUCTION:</b> N/A COSMETICS PER VAVENTIS B.V. SPEC Q-1 SEE CAD FOR DIMS. NOT SHOWN BREAK ALL SHARP EDGES ALL DIMENSIONS ARE IN INCHES	<b>PART #:</b> INNER-WALL-TEMPLATE <b>TITLE:</b> INNER WALL TEMPLATE <b>FIRST USED ON:</b> EG2R-230-133-04 <b>DESIGN ENG.:</b> ROC <b>ORIG. DATE:</b> 09-Apr-14 <b>BY:</b> VAVENTIS	
		<b>REVISION</b> B <b>SHEET</b> 1 of 1			

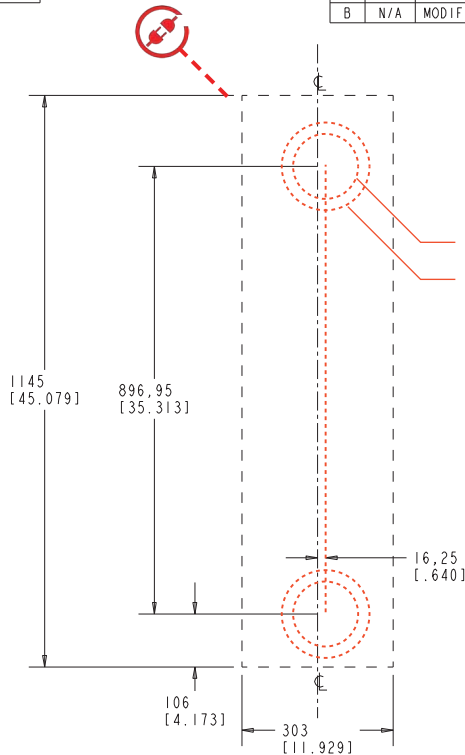
1 2 3 4 5 6 7 8 9 10

VAVENTIS MFG. NOTES

1 N/A

REV.	EC #	REVISION DESCRIPTION	DATE	D. ENG.	CHECKER
A	N/A	INITIAL PROTOTYPE RELEASE	09-Apr-14	ROC	ROC
B	N/A	MODIFIED TEMPLATE	10-Jun-14	ROC	ROC

- VIEW FROM INSIDE OF BUILDING
- WALL CUT-OUT SHOULD BE NOMINAL DIMENSION ± 2mm



For IN-THE-WALL fresh-r® (ITW) 2x Ø 130 mm.  
 For ON-THE-WALL fresh-r® (OTW) 2x Ø 150 mm.

Note:  
a drilling-template will be provided with the unit.

outer wall template

**VAVENTIS B.V. DISCLOSURE**  
 THIS DOCUMENT IS THE PROPERTY OF VAVENTIS B.V. ITS USE IS AUTHORIZED BY VAVENTIS B.V. ONLY. ALL QUESTIONS MUST BE REFERRED TO VAVENTIS B.V. PERSONNEL: DESIGN ENG., MFG. ENG., AND / OR PURCHASING.  
**CAUTION:** ANY PRINTED COPY IS UNCONTROLLED AND TO BE USED FOR REFERENCE ONLY. REFER TO VAVENTIS B.V. CAD SIS. FOR VERIFICATION.  
 Form No. 1000 Rev. A

**MATERIAL:** N/A  
**FINISH:** N/A  
**IF APPLICABLE PLACE SECOND FINISH AND DESCRIPTION HERE**  
 ALL INNER BEND RADIUS: 1mm BOTTOM BEND UNLESS OTHERWISE STATED  
**TOLERANCES, UNLESS OTHERWISE STATED:**  
 DECIMAL .xxx ± .020 HOLES .xxx ± .003 TOLERANCES FOR CNC FLAT .xxx  
 TOLERANCE .xx ± .030 ANGLES ± 1° REF EXCLUDING HOLE DIA. +/- .010

**BEND DEDUCTION:** N/A  
**COMPLIES PER VAVENTIS B.V. SPEC-0-1**  
**BREAK ALL SHARP EDGES**  
**ALL DIMENSIONS ARE IN INCHES**  
**PART:** OUTER-WALL-TEMPLATE  
**TITLE:** OUTER WALL TEMPLATE  
**FIRST USED ON:** EG2R-230-133-04  
**DESIGN ENG.:** ROC  
**DATE:** 09-Apr-14  
**CHECKER:** VAVENTIS



REVISION B SHEET 1 of 1



We have made every effort to ensure that the information in this brochure was correct at press time, but do not assume and hereby disclaim any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause.

📍 Energiestraat 28  
1411 AT Naarden  
The Netherlands  
☎ +31 612 08 9449  
✉ [sales@fresh-r.eu](mailto:sales@fresh-r.eu)  
🌐 [www.fresh-r.eu](http://www.fresh-r.eu)