

Cool Breeze Plus



reducing
the risk of
over-heating
in residential
properties



Cool Breeze Plus



The **Cool Breeze Plus** has been designed to provide an effective solution for mitigating overheating in larger residential properties, particularly during summer months. It meets the standards used in **CIBSE TM59** assessments and **Approved Document O** of the Building Regulations.

Designed for seamless integration with the **Vectaire Maxi Plus MVHR** range, the **Cool Breeze Plus** offers a compact, energy-efficient, and compliant approach to indoor temperature regulation.

The **self-contained, sealed-for-life system**, delivers up to **4.3 kW of total cooling capacity** without the need for an external condenser.

The **Cool Breeze Plus** automatically senses the room temperature and that of the incoming fresh air to determine when cooling is required.

It removes heat from the supply air allowing the MVHR to distribute the cooled air throughout the property, providing a consistently comfortable indoor environment for residents.

The Vectaire range of MVHRs has been designed to ensure good indoor air quality in every type of domestic environment. They comply with UK Building Regulations for mechanical ventilation with heat recovery.

The system is ideally suited for use in new-build and retrofit applications where regulatory compliance and system efficiency are critical.

HOW THE COOL BREEZE PLUS WORKS



above temperatures for reference only

Cool Breeze Plus



COOL BREEZE PLUS FEATURES

- Up to 4.3 kW of total cooling provided
- Fresh air supply is lowered by up to 20°C
- Uses R290 - eco friendly, natural refrigerant - over 225 times more environmentally friendly than R32
- **COP up to 6.5**
- **GWP Rating 3**
- **EER up to 4.6**
- Automatic control of supply temperature via integral sensor - no false activation from poorly sited external thermostat
- Optional manual override for user preference
- Universal handing via intelligent software
- Very quiet integral condenser
- Front access for servicing
- Wall or floor installation (with appropriate wall bracket or floor stand)

MAXI PLUS MVHR FEATURES

- High quality, energy efficient EC motors with low specific fan power
- 89% efficient counter-flow heat exchanger
- Very low noise levels
- Enhanced acoustic option available
- Fully automatic summer bypass
- Intelligent software for independent motor control
- 0-10V connections can be used for:
 - BMS - for remote motor shut-off
 - CO₂ detector
 - home automation system
- Tool free front filter access
- External pre-heater option
- Passive House Certified option
- **Manufactured in the UK**
- **Cool Breeze Registered Design**

INSTALLATION OPTIONS

Wall



Floor



Cool Breeze Plus



COOLING DATA

External Temperature 27°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.39	1.52	1.65	1.78	1.92	2.04	2.15	2.23	2.30
	Supply Air °C	12.6	13.0	13.4	13.6	13.8	14.1	14.3	14.7	15.1
	Total Cooling Power @ 50%RH (kW)	1.76	1.93	2.08	2.26	2.43	2.58	2.72	2.83	2.92
24°C	Combined Cooling Power (kW)	1.36	1.48	1.60	1.74	1.89	1.99	2.08	2.16	2.23
	Supply Air °C	13.0	13.4	13.8	13.9	14.0	14.4	14.7	15.1	15.5
	Total Cooling Power @ 50%RH (kW)	1.72	1.87	2.02	2.21	2.39	2.52	2.64	2.73	2.82
25°C	Combined Cooling Power (kW)	1.32	1.45	1.57	1.69	1.80	1.90	2.00	2.07	2.13
	Supply Air °C	13.4	13.7	14.0	14.3	14.6	14.9	15.2	15.6	16.0
	Total Cooling Power @ 50%RH (kW)	1.67	1.83	1.99	2.14	2.28	2.41	2.53	2.62	2.70
26°C	Combined Cooling Power (kW)	1.31	1.43	1.54	1.63	1.71	1.84	1.97	2.01	2.03
	Supply Air °C	13.5	13.9	14.3	14.8	15.2	15.3	15.4	16.0	16.5
	Total Cooling Power @ 50%RH (kW)	1.65	1.81	1.95	2.06	2.17	2.33	2.49	2.54	2.57
27°C	Combined Cooling Power (kW)	1.28	1.40	1.51	1.60	1.67	1.75	1.83	1.88	1.92
	Supply Air °C	13.8	14.2	14.5	15.0	15.5	15.9	16.2	16.7	17.1
	Total Cooling Power @ 50%RH (kW)	1.62	1.77	1.91	2.02	2.11	2.22	2.32	2.38	2.43

External Temperature 28°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.44	1.61	1.78	1.90	2.02	2.14	2.25	2.35	2.44
	Supply Air °C	13.1	13.2	13.3	13.7	14.1	14.4	14.7	15.1	15.4
	Total Cooling Power @ 50%RH (kW)	1.83	2.04	2.25	2.41	2.55	2.71	2.85	2.98	3.09
24°C	Combined Cooling Power (kW)	1.43	1.60	1.75	1.87	1.97	2.08	2.17	2.28	2.38
	Supply Air °C	13.2	13.4	13.5	14.0	14.4	14.8	15.2	15.5	15.7
	Total Cooling Power @ 50%RH (kW)	1.81	2.02	2.22	2.37	2.50	2.63	2.74	2.88	3.01
25°C	Combined Cooling Power (kW)	1.39	1.55	1.69	1.81	1.92	2.01	2.10	2.20	2.28
	Supply Air °C	13.6	13.8	14.0	14.4	14.8	15.2	15.6	15.9	16.2
	Total Cooling Power @ 50%RH (kW)	1.76	1.96	2.14	2.29	2.43	2.55	2.66	2.78	2.89
26°C	Combined Cooling Power (kW)	1.36	1.51	1.65	1.75	1.84	1.93	2.02	2.11	2.19
	Supply Air °C	13.9	14.2	14.4	14.9	15.3	15.7	16.1	16.4	16.7
	Total Cooling Power @ 50%RH (kW)	1.73	1.91	2.08	2.22	2.33	2.45	2.55	2.67	2.77
27°C	Combined Cooling Power (kW)	1.31	1.45	1.59	1.68	1.77	1.86	1.95	2.04	2.13
	Supply Air °C	14.5	14.7	14.9	15.4	15.8	16.2	16.5	16.8	17.0
	Total Cooling Power @ 50%RH (kW)	1.65	1.83	2.01	2.13	2.24	2.36	2.47	2.58	2.70

External Temperature 30°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.62	1.76	1.90	2.02	2.13	2.26	2.37	2.49	2.59
	Supply Air °C	13.3	13.8	14.3	14.8	15.3	15.7	16.0	16.3	16.6
	Total Cooling Power @ 50%RH (kW)	2.05	2.23	2.40	2.56	2.70	2.86	3.00	3.15	3.28
24°C	Combined Cooling Power (kW)	1.57	1.73	1.88	1.98	2.08	2.20	2.32	2.41	2.50
	Supply Air °C	13.8	14.2	14.5	15.1	15.7	16.0	16.3	16.7	17.1
	Total Cooling Power @ 50%RH (kW)	1.99	2.18	2.37	2.51	2.63	2.79	2.94	3.06	3.16
25°C	Combined Cooling Power (kW)	1.50	1.65	1.79	1.91	2.02	2.13	2.24	2.33	2.42
	Supply Air °C	14.5	14.9	15.2	15.7	16.1	16.5	16.8	17.2	17.5
	Total Cooling Power @ 50%RH (kW)	1.90	2.09	2.27	2.42	2.55	2.70	2.83	2.95	3.06
26°C	Combined Cooling Power (kW)	1.44	1.60	1.74	1.86	1.97	2.07	2.15	2.24	2.32
	Supply Air °C	15.1	15.4	15.6	16.0	16.4	16.9	17.3	17.7	18.0
	Total Cooling Power @ 50%RH (kW)	1.83	2.02	2.21	2.36	2.50	2.62	2.72	2.84	2.94
27°C	Combined Cooling Power (kW)	1.38	1.54	1.69	1.79	1.87	1.97	2.07	2.16	2.25
	Supply Air °C	15.7	15.9	16.0	16.6	17.1	17.5	17.8	18.1	18.4
	Total Cooling Power @ 50%RH (kW)	1.75	1.95	2.14	2.27	2.37	2.50	2.62	2.73	2.84

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COOLING DATA

External Temperature 32°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.68	1.86	2.02	2.16	2.29	2.42	2.54	2.68	2.81
	Supply Air °C	14.6	15.0	15.3	15.8	16.2	16.6	17.0	17.3	17.5
	Total Cooling Power @ 50%RH (kW)	2.13	2.35	2.56	2.74	2.90	3.07	3.22	3.39	3.55
24°C	Combined Cooling Power (kW)	1.66	1.83	2.00	2.14	2.27	2.38	2.49	2.63	2.77
	Supply Air °C	14.8	15.2	15.5	16.0	16.4	16.9	17.3	17.5	17.7
	Total Cooling Power @ 50%RH (kW)	2.11	2.32	2.53	2.70	2.87	3.02	3.15	3.33	3.50
25°C	Combined Cooling Power (kW)	1.60	1.78	1.96	2.10	2.22	2.34	2.46	2.57	2.67
	Supply Air °C	15.5	15.7	15.8	16.3	16.7	17.1	17.5	17.9	18.2
	Total Cooling Power @ 50%RH (kW)	2.02	2.25	2.48	2.65	2.81	2.97	3.11	3.25	3.38
26°C	Combined Cooling Power (kW)	1.58	1.75	1.92	2.04	2.15	2.28	2.41	2.51	2.61
	Supply Air °C	15.7	15.9	16.1	16.7	17.2	17.5	17.8	18.2	18.5
	Total Cooling Power @ 50%RH (kW)	2.00	2.22	2.44	2.59	2.72	2.89	3.04	3.18	3.31
27°C	Combined Cooling Power (kW)	1.54	1.69	1.83	1.94	2.05	2.18	2.30	2.40	2.50
	Supply Air °C	16.1	16.5	16.9	17.4	17.9	18.2	18.4	18.8	19.1
	Total Cooling Power @ 50%RH (kW)	1.95	2.14	2.31	2.46	2.59	2.76	2.92	3.04	3.16

External Temperature 34°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.84	2.05	2.25	2.42	2.58	2.76	2.93	3.09	3.25
	Supply Air °C	15.0	15.2	15.4	15.8	16.2	16.5	16.7	17.0	17.2
	Total Cooling Power @ 50%RH (kW)	2.33	2.59	2.85	3.07	3.27	3.49	3.71	3.92	4.12
24°C	Combined Cooling Power (kW)	1.82	2.03	2.23	2.40	2.56	2.72	2.88	3.03	3.18
	Supply Air °C	15.2	15.4	15.6	16.0	16.4	16.7	17.0	17.3	17.6
	Total Cooling Power @ 50%RH (kW)	2.30	2.56	2.82	3.03	3.23	3.44	3.65	3.84	4.02
25°C	Combined Cooling Power (kW)	1.81	2.00	2.19	2.35	2.50	2.64	2.78	2.92	3.06
	Supply Air °C	15.3	15.6	15.9	16.4	16.8	17.2	17.6	17.9	18.2
	Total Cooling Power @ 50%RH (kW)	2.29	2.54	2.77	2.97	3.16	3.35	3.52	3.70	3.87
26°C	Combined Cooling Power (kW)	1.77	1.95	2.12	2.29	2.45	2.58	2.69	2.84	2.98
	Supply Air °C	15.7	16.1	16.5	16.8	17.1	17.6	18.1	18.4	18.6
	Total Cooling Power @ 50%RH (kW)	2.24	2.47	2.68	2.90	3.11	3.27	3.41	3.60	3.77
27°C	Combined Cooling Power (kW)	1.71	1.89	2.07	2.23	2.38	2.50	2.61	2.73	2.85
	Supply Air °C	16.3	16.6	16.9	17.3	17.6	18.1	18.6	19.0	19.3
	Total Cooling Power @ 50%RH (kW)	2.17	2.40	2.62	2.82	3.01	3.17	3.30	3.46	3.60

External Temperature 35°C		Airflow l/sec								
Internal Temp		80	90	100	110	120	130	140	150	160
23°C	Combined Cooling Power (kW)	1.91	2.12	2.32	2.52	2.72	2.90	3.08	3.26	3.43
	Supply Air °C	15.3	15.6	15.8	16.1	16.3	16.6	16.8	17.1	17.3
	Total Cooling Power @ 50%RH (kW)	2.41	2.68	2.94	3.19	3.44	3.67	3.90	4.12	4.34
24°C	Combined Cooling Power (kW)	1.88	2.09	2.30	2.50	2.69	2.84	2.98	3.16	3.33
	Supply Air °C	15.6	15.8	16.0	16.3	16.5	17.0	17.4	17.6	17.8
	Total Cooling Power @ 50%RH (kW)	2.38	2.65	2.91	3.16	3.40	3.59	3.77	4.00	4.22
25°C	Combined Cooling Power (kW)	1.84	2.04	2.24	2.42	2.60	2.75	2.90	3.05	3.19
	Supply Air °C	16.0	16.3	16.5	16.8	17.1	17.5	17.9	18.2	18.5
	Total Cooling Power @ 50%RH (kW)	2.33	2.58	2.83	3.07	3.29	3.48	3.67	3.86	4.04
26°C	Combined Cooling Power (kW)	1.80	2.00	2.19	2.36	2.53	2.68	2.83	2.96	3.08
	Supply Air °C	16.4	16.7	16.9	17.3	17.6	18.0	18.3	18.7	19.1
	Total Cooling Power @ 50%RH (kW)	2.28	2.53	2.77	2.99	3.20	3.39	3.58	3.74	3.90
27°C	Combined Cooling Power (kW)	1.76	1.94	2.12	2.28	2.44	2.60	2.74	2.87	2.98
	Supply Air °C	16.8	17.2	17.5	17.9	18.2	18.5	18.8	19.2	19.6
	Total Cooling Power @ 50%RH (kW)	2.23	2.46	2.68	2.89	3.09	3.29	3.47	3.63	3.77

Cool Breeze Plus



TECHNICAL DATA		
FLC - Amps	Power - Watts	Max Cooling Capacity - Kilowatts
5.5	815	4.3

SOUND DATA *		Sound Power Levels, L_W - dB-Octave Bands Frequency Hz								Sound Pressure dBA @ 3m
Curve Ref		63	125	250	500	1k	2k	4k	8k	
100% 175 l/s	Extract	67	63	66	64	64	61	58	54	45
	Supply	72	68	71	69	69	66	63	59	
	Breakout	70	65	65	59	54	56	52	33	
80% 150 l/s	Extract	63	58	61	59	58	55	51	46	42
	Supply	68	63	66	64	63	60	56	51	
	Breakout	67	59	61	53	47	47	42	30	
60% 110 l/s	Extract	58	52	53	61	51	48	43	35	41
	Supply	63	57	58	56	56	53	48	40	
	Breakout	67	54	58	46	41	40	34	27	

* data from our own laboratory

MAXI PLUS - RESULTS for SAP CALCULATIONS						
ENERGY LEVEL PERFORMANCE - using rigid ducting only						
Exhaust Terminal Configuration	2009 Data		2012 Data		SAP 10 Data	
	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency	Specific Fan Power [W/l/sec]	Heat Exchange Efficiency
Kitchen + 1 additional wet room	0.75	89%	0.56	89%	0.56	89%
Kitchen + 2 additional wet rooms	0.56	89%	0.47	89%	0.47	89%
Kitchen + 3 additional wet rooms	0.46	89%	0.50	88%	0.50	88%
Kitchen + 4 additional wet rooms	0.46	88%	0.56	87%	0.56	87%
Kitchen + 5 additional wet rooms	0.49	88%	0.66	86%	0.66	86%
Kitchen + 6 additional wet rooms	0.55	87%	0.78	85%	0.78	85%
Kitchen + 7 additional wet rooms	0.63	86%	0.94	84%	0.94	84%

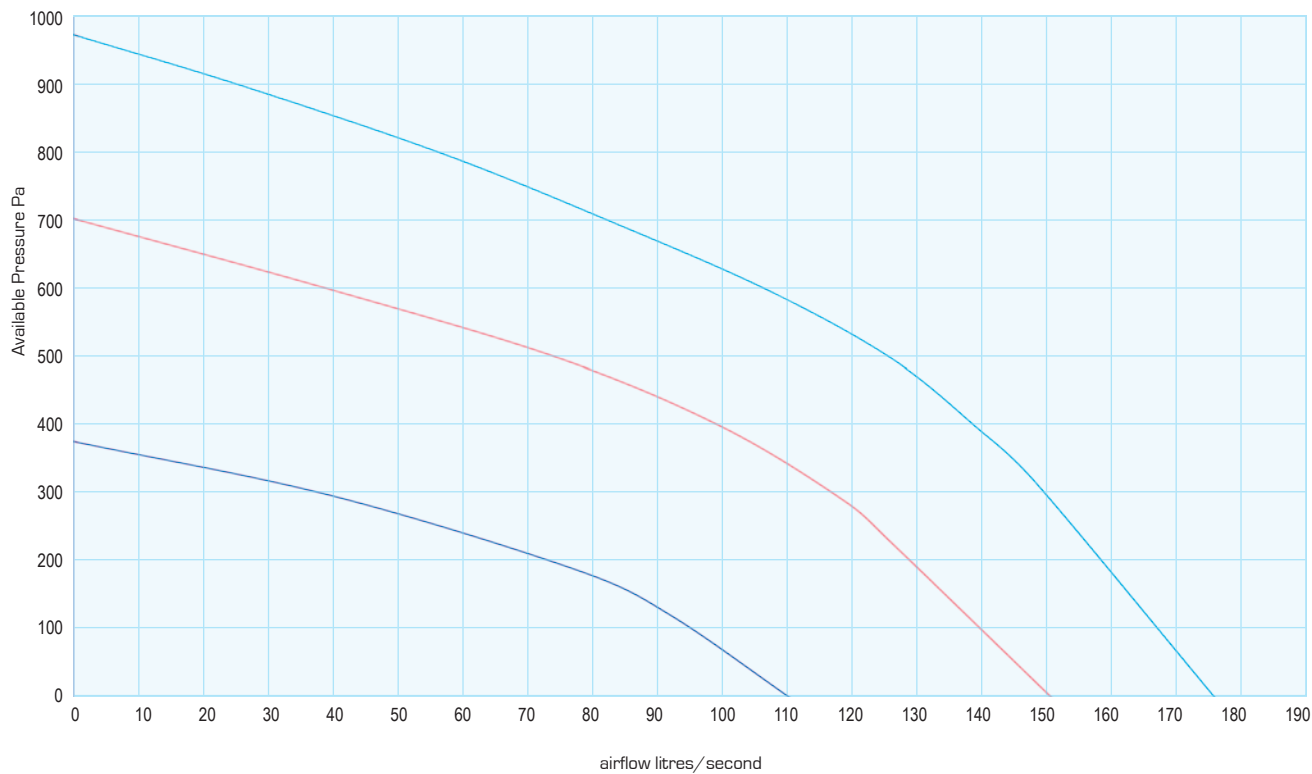
Figures at minimum flow rate conditions

Mitigating over-heating

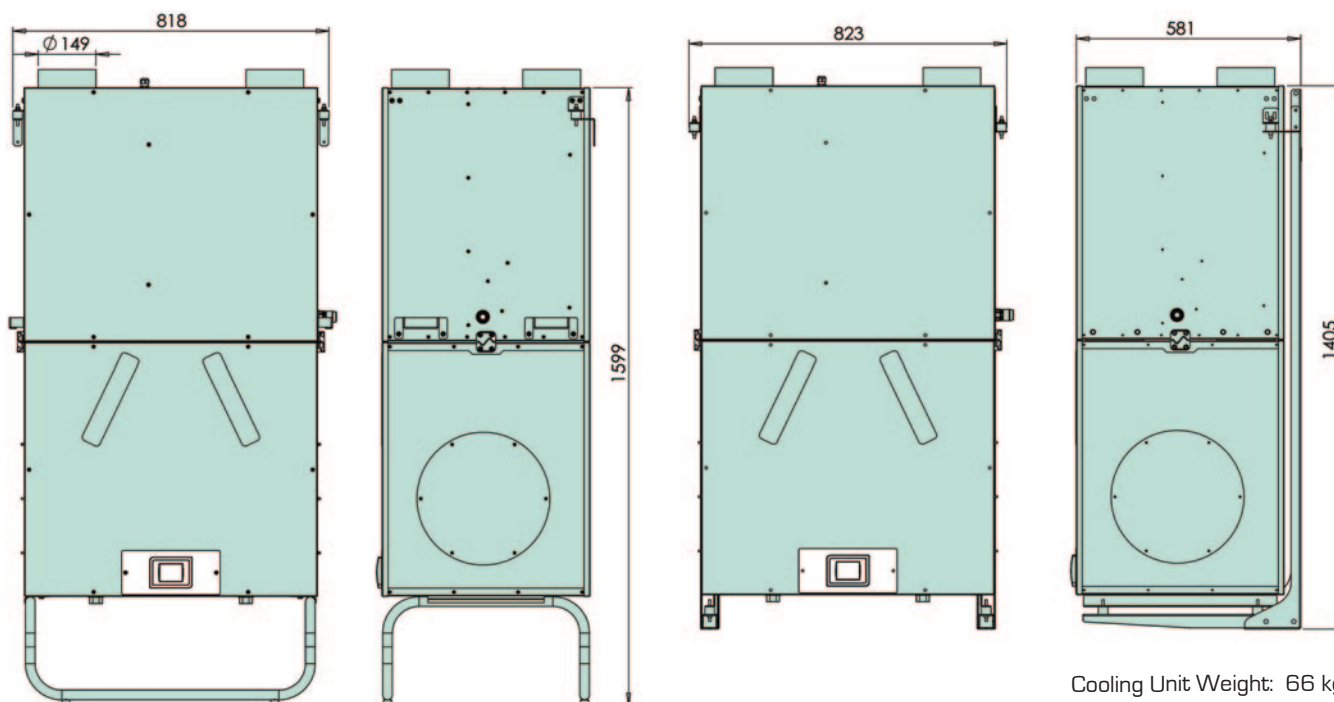
Cool Breeze Plus



COOL BREEZE PLUS PERFORMANCE (curves are for guidance only)

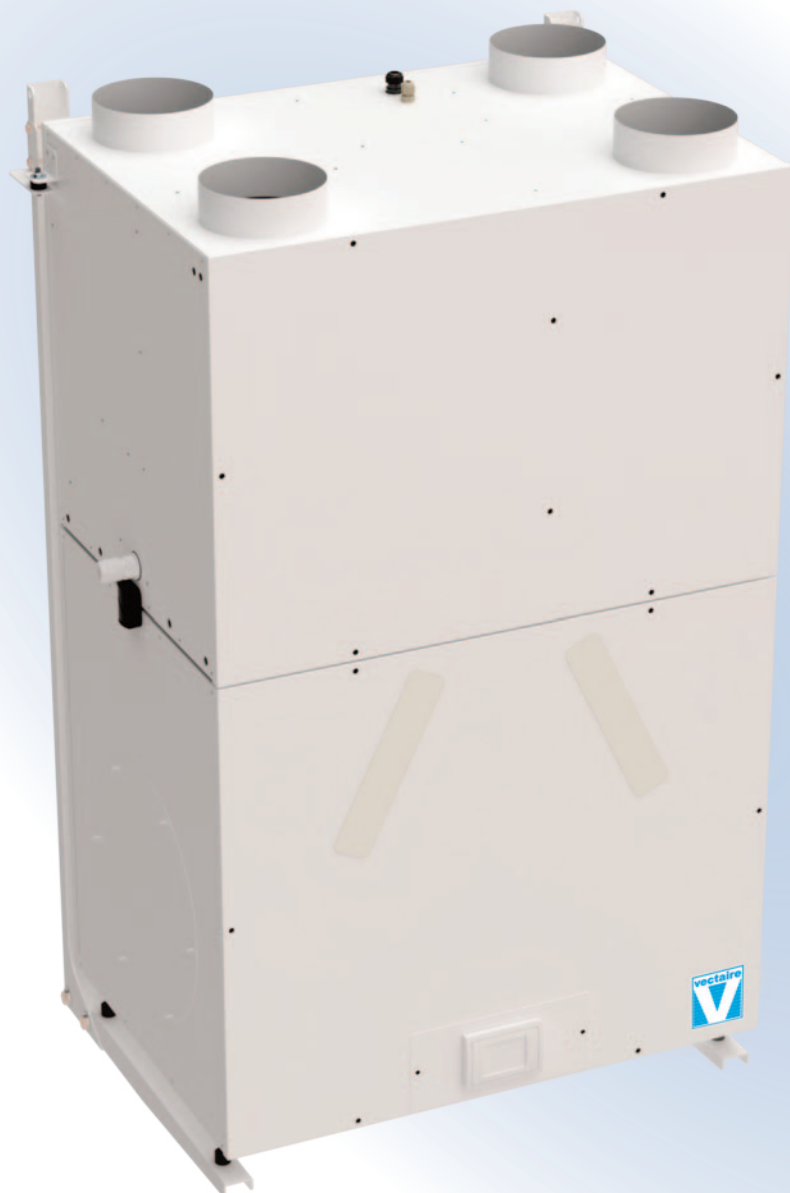


COOL BREEZE PLUS DIMENSIONS with MAXI PLUS - mm



Cooling Unit Weight: 66 kgs
Maxi Plus Weight: 37 kgs
Maxi Plus-AT Weight: 42 kgs

Cool Breeze Plus



reducing
the risk of
over-heating
in residential
properties



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