

COMMERCIAL VENTILATION



NEW



VORT NRG HE RANGE

Cross flow heat recovery units



Suitable for a network of hotel bathrooms, flats or apartment, requiring part-time ventilation, school classrooms, office meeting room, periodically occupied by a variable number of people.

- **7 models: 4 running at constant pressure, 3 at constant airflow.**
- Maximum efficiency >90% at nominal airflow rate (model 500).
- Maximum efficiency >85% at nominal airflow rate (model 1000 -1500 - 2000).
- Extruded aluminium frame and sandwich panels.
- Crossed Counter-Flow Heat Exchanger, made of PS (Polystyrene).
- Electronically controlled EC brushless motors, mounted on anti-vibration dampers, offer optimal performance and extremely low power consumptions.
- Electronically controlled bypass and no-frost.
- LCD control panel for machine set up device and monitoring.
- All models are equipped with a differential pressure switch indicating need for filter replacement
- Equipped with 100% filtered bypass.
- F5 and F7 filters.
- Condensation collection and drainage tank.
- Protection rating: IP44 (IP motor 22) for model 500, IP54 (IP motor 24) for model 1000 - 1500 - 2000.
- Insulation class: I. Ⓢ

Wiring diagrams shown from page 458

TECHNICAL DATA

Models	Code	V ~ 50 Hz	W max	A max	N° of speed/1' max	Max Airflow		Residual pressure at nominal flow Pa	Fans		Lw dB(A) supply to internal	Lw dB(A) breakout	Max °C
						m³/h max	l/s max		W max	A max			
VORT NRG HE P 500	45123	230	280	2.2	3	600	167	100	120	0.94	39.2	62.8	60
VORT NRG HE P 1000	45122		1000	4.7		1700	472	260	500	2.35	47.2	58.1	45
VORT NRG HE Q 1000	45126		1100	5.0		2100	583	165	550	2.5	25.9	59.4	
VORT NRG HE P 1500	45121												
VORT NRG HE Q 1500	45125		1800	8.6		2700	750	150	870	4.5	35.1	62.3	60
VORT NRG HE P 2000	45120												
VORT NRG HE Q 2000	45124												



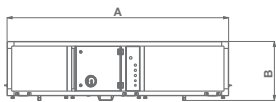
Models		Lw dB(A)						Lw dB(A)	Lp dB(A) 3 m***	
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz			8000 Hz
VORT NRG HE P 500	Supply to internal	20.7	28.4	27.0	27.7	25.5	12.0	4.0	39.2	18.7
	Extract from internal	22.4	31.4	21.7	25.1	23.9	14.0	4.0	42.9	22.4
	Breakout	41.2	48.8	46.9	46.7	46.2	42.4	27.7	62.8	42.3
VORT NRG HE P 1000 VORT NRG HE Q 1000	Supply to internal	30.6	38.8	36.3	37.1	33.9	28.1	17.4	47.2	26.7
	Extract from internal	19.3	27.4	27.3	23.8	21.2	11.3	12.0	37.3	16.8
	Breakout	43.3	52.1	47.3	42.5	42.9	36.1	26.8	58.1	37.6
VORT NRG HE P 1500 VORT NRG HE Q 1500	Supply to internal	17.8	21.5	22.2	22.7	22.5	11.0	10.0	25.9	5.4
	Extract from internal	27.2	30.7	35.7	30.4	29.4	14.6	10.0	45.0	24.5
	Breakout	42.8	46.1	43.0	43.1	40.5	30.4	28.5	59.4	38.9
VORT NRG HE P 2000 VORT NRG HE Q 2000	Supply to internal	23.6	29.3	20.5	28.3	18.0	11.2	9.0	35.1	14.6
	Extract from internal	28.7	30.3	30.0	32.2	25.8	15.8	10.0	44.6	24.1
	Breakout	44.4	52.3	48.0	48.3	46.3	34.6	30.8	62.3	41.8

* Tests carried out using sound intensity measurement in a semi-anechoic chamber. long-cased appliance in delivery mode, in accordance with standard EN ISO 9614.

** Data not available.

*** Sound pressure level measured at 3 m in free field conditions with

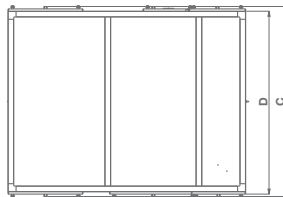
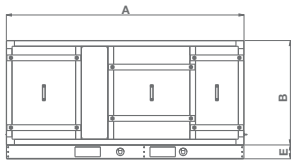
DIMENSIONS



Models	A	B	C	Kg
VORT NRG HE P 500	1570	340*	1380	152
VORT NRG HE P 1000	1920	511*	1420	242
VORT NRG HE Q 1000	1920	470	1420	

Dimensions (mm)







* For models intended for ceiling installation, measurement B includes the size of the handles, which contributes an overall figure of 40 mm.

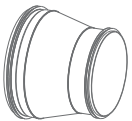
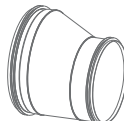
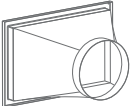


Models	A	B	C	D	E	Kg
VORT NRG HE P 1500	2060	605	2050	1970	120	422
VORT NRG HE Q 1500		905	1645	1555	120	473
VORT NRG HE P 2000						
VORT NRG HE Q 2000						

Dimensions (mm)

PRODUCT ACCESSORIES

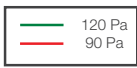
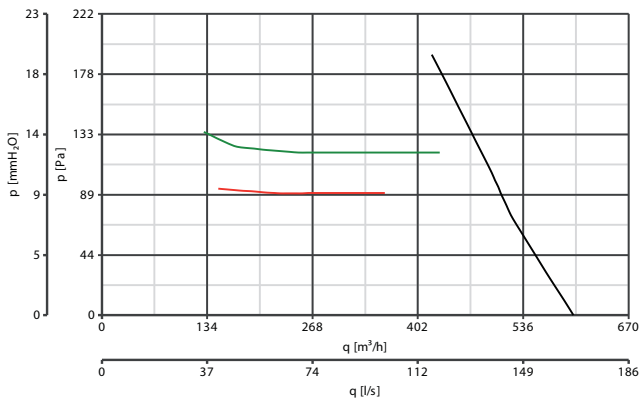
Models	Description	Code	Product						
			VORT NRG HE P 500 code 45123	VORT NRG HE P 1000 code 45122	VORT NRG HE Q 1000 code 45126	VORT NRG HE P 1500 code 45121	VORT NRG HE Q 1500 code 45125	VORT NRG HE P 2000 code 45120	VORT NRG HE Q 2000 code 45124
	C HCS Environmental sensor for humidity	12994	●	●	●	●	●	●	●
	C PIR Passive infrared sensor	12998	●	●	●	●	●	●	●
	C SMOKE Environmental sensor for air quality	12993	●	●	●	●	●	●	●
	C TEMP Environmental sensor for temperature	12992	●	●	●	●	●	●	●
	C TIMER Adjustable over-run timer	12999	●	●	●	●	●	●	●
	NRG ABC 500 Expulsion sleeve	22296	●						
	NRG ABC 1200/2000 Expulsion sleeve	22298		●	●	●	●		
	NRG ABC 2500/3000 Expulsion sleeve	22299							●
	PRE-HEATER Ø 200 3 KW NRG HE	24167	●						
	PRE-HEATER Ø 315 6 KW NRG HE	24168		●	●				
	PRE-HEATER Ø 315 9 KW NRG HE	24169				●	●		
	PRE-HEATER Ø 355 12 KW NRG HE	24170						●	●
	F5 FILTER - VORT NRG HE 500	21015	●						
	F5 FILTER - VORT NRG HE 1000	21016		●	●				
	F5 FILTER - VORT NRG HE 1500	21017				●	●		
	F5 FILTER - VORT NRG 4000-5000	21006						●	●
	NRG HE DUCT SENSOR CO₂	12804	●	●	●	●	●	●	●
	HR NRG HE PROPORTIONAL SENSOR	12805	●	●	●	●	●	●	●
	NRG HE RRC 1500 Rain cover	24092				●	●		
	NRG HE RRC 2000 Rain cover	24093						●	●

Models	Description	Code	Product													
			VORT NRG HE P 500 code 45123	VORT NRG HE P 1000 code 45122	VORT NRG HE Q 1000 code 45126	VORT NRG HE P 1500 code 45121	VORT NRG HE Q 1500 code 45125	VORT NRG HE P 2000 code 45120	VORT NRG HE Q 2000 code 45124							
	FB 500 Ø 200 Filter box	24139	•													
	FB 1200 Ø 315 Filter box	24141		•	•											
	FB 2000 Ø 315 Filter box	24142				•	•									
	FB 2500/3000 Ø 350 Filter box	24143						•	•							
	RCLU Ø 200 - 250 NRG HE Coaxial adapter	24171	Can be used to allow the use of components for appliances with a different diameter, after checking the conditions in wich they are used.													
	RCLU Ø 315 - 250 NRG HE Coaxial adapter	24173														
	RCLU Ø 355 - 315 NRG HE Coaxial adapter	24175														
	RCLU Ø 400 - 355 NRG HE Coaxial adapter	24177														
	RLU Ø 200 - 250 NRG HE Eccentric adapter	24172														
	RLU Ø 315 - 250 NRG HE Eccentric adapter	24174														
	RLU Ø 355 - 315 NRG HE Eccentric adapter	24176														
	RLU Ø 315 - 400 NRG HE Eccentric adapter	24178														
	NRG HE F 500 Adapter square-rong	24179								•						
	NRG HE F 1000 Adapter square-rong	24180									•	•				
	NRG HE F 1500 Adapter square-rong	24181				•	•									
	NRG HE F 2000 Adapter square-rong	24182						•	•							
	DHW 500 Ø 200 Post - water heating	24148	•													
	DHW 800 Ø 250 Post - water heating	24149		•	•											
	DHW 1500 Ø 315 Post - water heating	24150				•	•									
	DHW 3000 Ø 355 Post - water heating	24151						•	•							
	DCW 500 Ø 200 Post - water cooling	24153	•													
	DCW 800 Ø 250 Post - water cooling	24154		•	•											
	DCW 1500 Ø 315 Post - water cooling	24155				•	•									
	DCW 3000 Ø 355 Post - water cooling	24156						•	•							

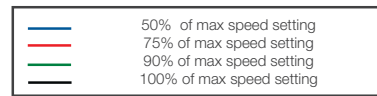
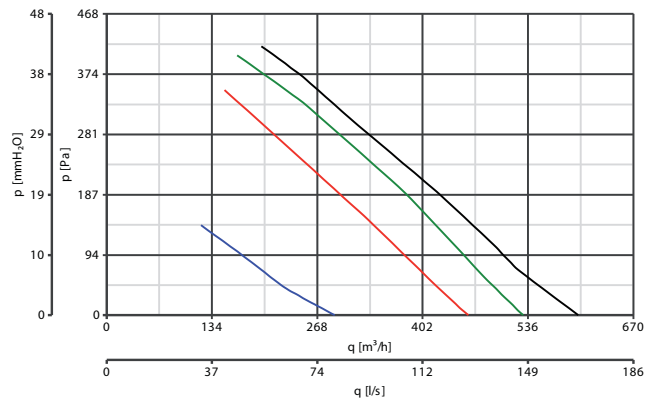
Description and sizes on page 236; System components on page 330.

PERFORMANCE CURVES

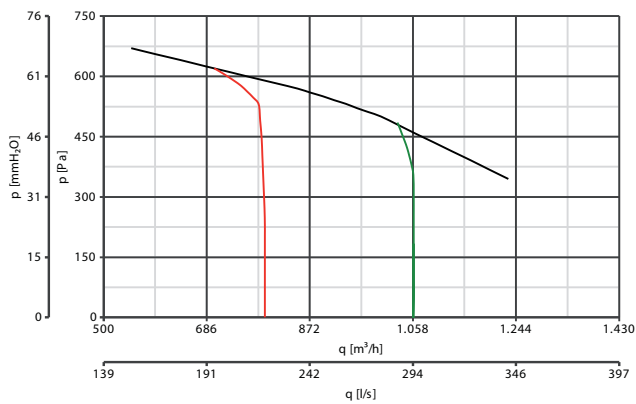
VORT NRG HE 500 - Operation at constant pressure



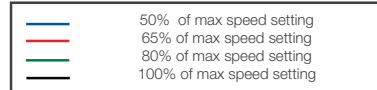
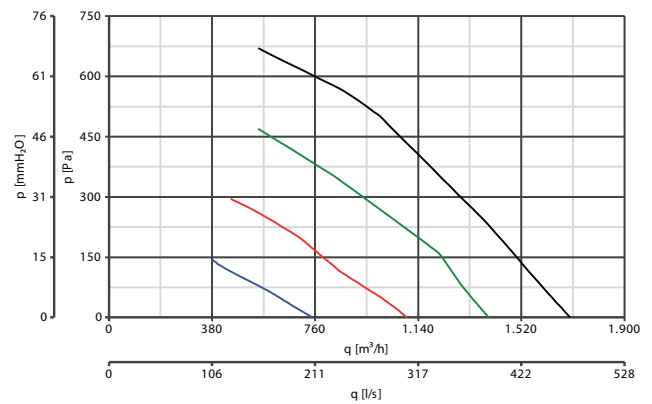
VORT NRG HE 500



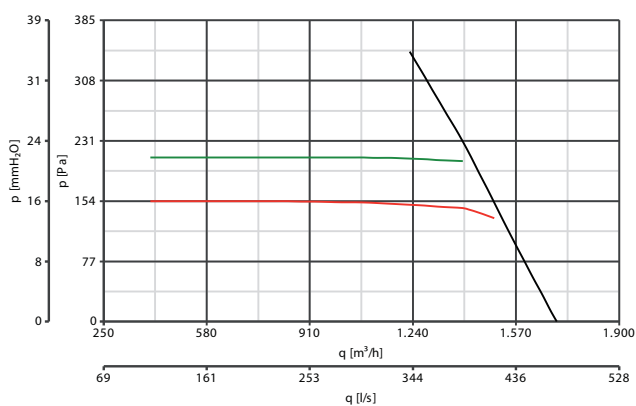
VORT NRG HE 1000 - Operation at constant pressure



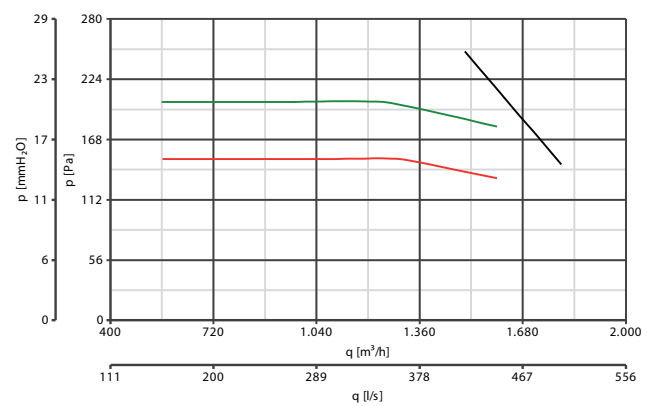
VORT NRG HE 1000



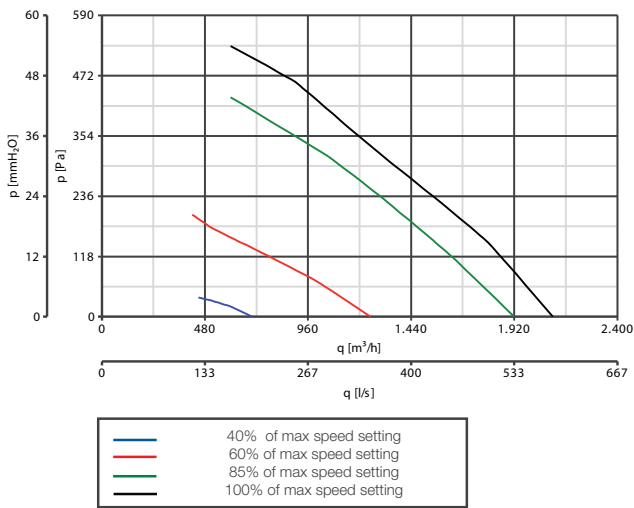
VORT NRG HE 1000 - Operation at constant airflow



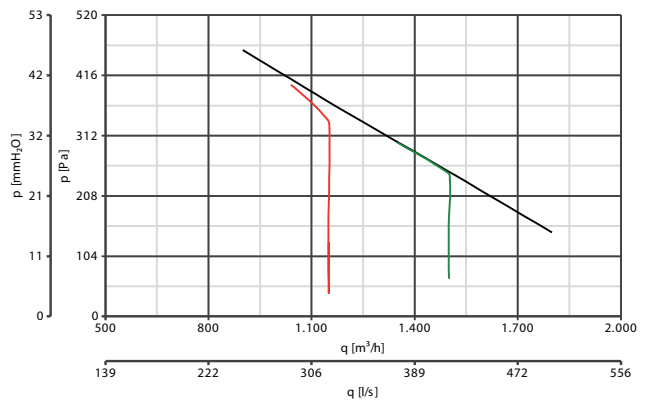
VORT NRG HE 1500 - Operation at constant pressure



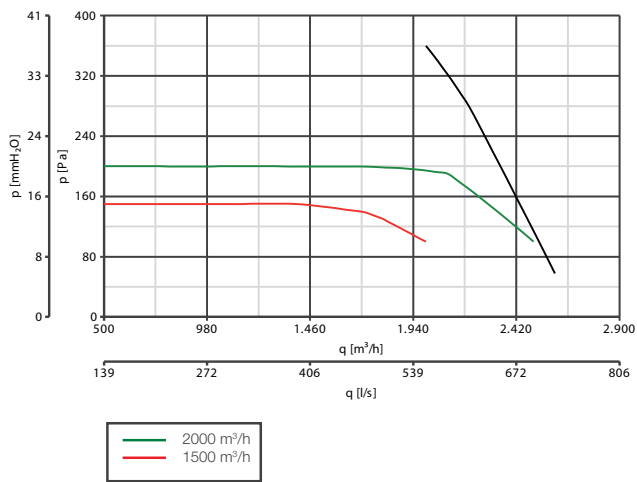
VORT NRG HE 1500



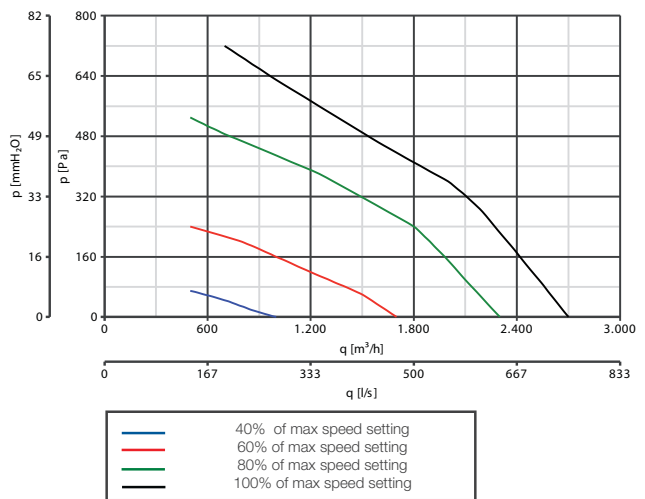
VORT NRG HE 1500 - Operation at constant airflow



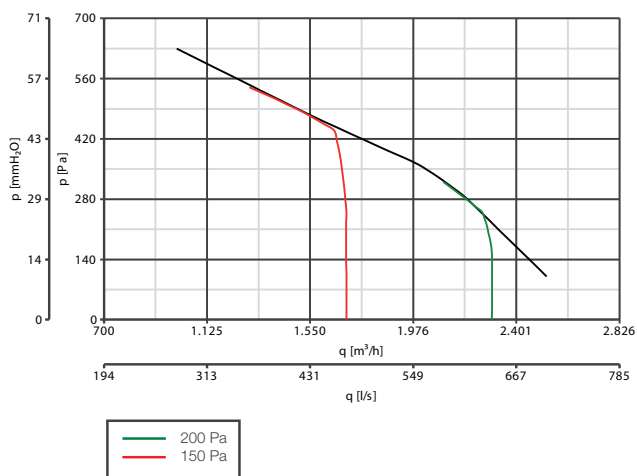
VORT NRG HE 2000 - Operation at constant pressure



VORT NRG HE 2000



VORT NRG HE 2000 - Operation at constant airflow





VORT NRG RANGE

Cross flow heat recovery units for horizontal installation

Suitable for commercial applications such as:
bars, pubs, restaurants, canteens, offices, meeting rooms,
shops, dancing hall etc.



- **9 models: 32 possible configurations.**
- Extruded aluminium frames and galvanised steel sandwich panels (18/25 mm thick) with expanded polyurethane insulation.
- AC single-phase motors (230V – 50 Hz), two or four poles, four speeds (Mod. 500 – 800 – 1200), 3 speeds (Mod. 2000 – 2500 – 3000).
- AC three-phase motors (400V – 50 Hz), four poles, one speed (Mod. 4000 – 5000 – 6000).
- Aluminium cross-flow heat exchanger (efficiency higher than 50%).
- Circular spigots on outlet and inlet panels.
- Interchangeable panels to allow outlet and inlet spigots positioning on preferred sides.
- Centrifugal impellers mounted on interchangeable panels.
- Supply and exhaust fans can be individually adjusted.
- Provided with F5 filters (F7 optional).
- Possibility of pressure sockets to measure filters pressure housing.
- Condensation drainage system.
- Regulators, components for external installation, coils (hydronic) for post-heating or post-cooling, coils (electric) for pre- or post- heating available as accessories on request.
- Protection rating: IP20.
- Insulation class: I. ⊕

Wiring diagrams shown from page 458

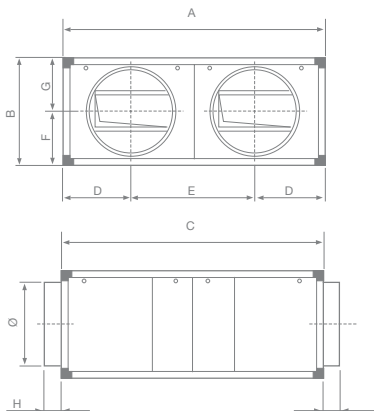
TECHNICAL DATA

Models	Code	Models				Heat Recovery Unit**		Filters	Fans						Sound pressure radiated - Lp dB(A) 1 m max. speed	
		m³/h*	Pa*	m³/h	A	°C	%		°C	W	Poles	A	Fan speed	Insulation class		V/ph/Hz
VORT NRG 500	45150	430	100	500	1.2	45	50.1	7.5	F5	140x2	2	0.6x2	4	F	230/1/50	42
VORT NRG 800	45151	800	165	900	2.7		52.3	8.1		310x2		1.35x2		F		49
VORT NRG 1200	45152	1200	155	1250	4.0		52.3	8.1		450x2		2.0x2		F		53
VORT NRG 2000	45154	1800	200	2300	6.6	40	51.3	7.8	F5	720x2	4	2.7x2	3	F	49	51
VORT NRG 2500	45155	2500	95	2500	9.0		51.2	7.8		970x2		4.5x2		F		
VORT NRG 3000	45156	3000	170	3500	7.8	45	50.1	7.5	F5	900x2	4	3.9x2	1	F	46	54
VORT NRG 4000	45157	4000	260	4500	6.0		54.6	8.7		1650x2		3.0x2		F		
VORT NRG 5000	45158	5000	376	5000	8.2	40	53.4	8.4	F5	2200x2	4	4.1x2	1	F	400/3/50	56
VORT NRG 6000	45159	5800	400	6500	9.8		54.1	8.5		2900x2		4.9x2		F		

* Values refer to nominal airflow through filters and heat exchanger.

** Values refer to nominal airflow in the following conditions: T ext. air -5 °C (80% RH), Ambient T +20 °C (55% RH).

DIMENSIONS



Models	A	B	C	D	E	F	G	H	Ø	Kg
VORT NRG 500	630	324.5	630	167.5	295	148	176.5	50	200	33
VORT NRG 800	800	346	800	210	380	181	165	50	250	45
VORT NRG 1200	1000	396	1000	235	530	198	198	50	315	67
VORT NRG 2000	1100	516	1100	275	550	300	216	50	315	105
VORT NRG 2500	1240	536	1240	282	676	319	217	50	355	131
VORT NRG 3000	1240	536	1240	282	676	319	217	50	355	135
VORT NRG 4000	1400	660	1550	330	740	330	330	50	450	200
VORT NRG 5000	1400	660	1550	330	740	330	330	50	450	200
VORT NRG 6000	1400	860	1550	330	740	430	430	50	450	225

Dimensions (mm)

PRE-POST HEATING

Pre – electrical heating

Models	Vort NRG 500 code 45150	Vort NRG 800 code 45151	Vort NRG 1200 code 45152	Vort NRG 2000 code 45154	Vort NRG 2500 code 45155	Vort NRG 3000 code 45156
DEH battery model	500 Ø 200 code 24158	800 Ø 250 code 24159	1500 Ø 315 code 24160	1500 Ø 315 code 24160	3500 Ø 355 code 24161	3500 Ø 355 code 24161
Nominal power - kW	2	3	6	6	7.5	7.5
Voltage - V	230	230	400 (Y)	400 (Y)	400 (Δ)	400 (Δ)
Phases - no.	1	1	3	3	3	3
Power draw - A	8.7	13	8.7	8.7	10.8	10.8
Temp. air entering heat exchanger - °C	-2.1	-4.6	-1.1	-5.7	-6.7	-8.1

Values refer to nominal air flow with external air temperature = -15°C

Post – electrical heating

Models	Vort NRG 500 code 45150	Vort NRG 800 code 45151	Vort NRG 1200 code 45152	Vort NRG 2000 code 45154	Vort NRG 2500 code 45155	Vort NRG 3000 code 45156
DEH battery model	500 Ø 200 code 24158	800 Ø 250 code 24159	1500 Ø 315 code 24160	1500 Ø 315 code 24160	3500 Ø 355 code 24161	3500 Ø 355 code 24161
Nominal power - kW	2	3	6	6	7.5	7.5
Voltage - V	230	230	400 (Y)	400 (Y)	400 (Δ)	400 (Δ)
Phases - no.	1	1	3	3	3	3
Power draw - A	8.7	13	8.7	8.7	10.8	10.8
Temp. Air outlet - °C	20.9	18.4	21.9	17.3	16.3	14.9

Values refer to nominal air flow with air inlet temperature = +8°C

Post – water heating

Model	Vort NRG code 45150	Vort NRG code 45151	Vort NRG code 45152	Vort NRG code 45154	Vort NRG code 45155	Vort NRG code 45156	Vort NRG code 45157	Vort NRG code 45158	Vort NRG code 45159
DHW HOT WATER COIL	500 Ø 200	800 Ø 250	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355	5000 Ø 450	5000 Ø 450	5000 Ø 450
	code 24148	code 24149	code 24150	code 24150	code 24151	code 24151	code 24152	code 24152	code 24152
No. rows	1	1	1	1	1	1	1	1	1
Thermal output - kW	4.04	6.89	11.3	14.4	22.7	25.2	39.5	45.2	49.4
Temp. Air outlet - °C	35.0	32.8	35.0	31.1	34.2	32.2	36.4	34.0	32.5
Loss in load air side - Pa	9	14	9	17	11	15	8	11	14
Loss in load water side - kPa	8.1	25.9	13.2	20.9	22.8	27.8	17.2	22.3	26.4

Values refer to nominal air flow with air inlet temperature = +8°C and water temperature = 80/70°C

Post – water cooling

Model	Vort NRG code 45150	Vort NRG code 45151	Vort NRG code 45152	Vort NRG code 45154	Vort NRG code 45155	Vort NRG code 45156	Vort NRG code 45157	Vort NRG code 45158	Vort NRG code 45159
DCW COLD WATER COIL	500 Ø 200	800 Ø 250	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355	5000 Ø 450	5000 Ø 450	5000 Ø 450
	code 24153	code 24154	code 24155	code 24155	code 24156	code 24156	code 24157	code 24157	code 24157
No. rows	4	4	4	4	4	4	4	4	4
Thermal output - kW	3.11	5.68	9.49	12.5	17.9	20.3	33.2	38.9	42.9
Temp. Air outlet - °C	19.3	19.9	18.5	20.1	19.6	20.3	17.7	18.7	19.3
Loss in load air side - Pa	34	52	51	104	65	91	39	56	72
Loss in load water side - kPa	8.8	34.0	39.7	66.1	13.3	16.8	24.7	33.0	39.6

Values referred to nominal air flow with air inlet temperature = +32°C and water temperature = 7/12°C

THERMAL YIELD

Thermal yield of hot water coil - DHW 500

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
430	-15	9	19.1	5.60	0.49	14.8	14.7	4.87	0.21	2.9	6.1	3.46	0.15	1.5	9.1	3.94	0.35	7.9
430	-10	9	22.3	5.20	0.46	13.0	18.1	4.52	0.20	2.6	9.7	3.16	0.14	1.4	12.3	3.59	0.32	6.6
430	-5	9	25.5	4.81	0.42	11.0	21.6	4.18	0.18	2.1	13.3	2.88	0.13	1.2	15.6	3.25	0.29	5.5
430	0	9	30.0	4.63	0.41	10.4	25.0	3.86	0.17	1.9	15.9	2.46	0.11	0.9	18.9	2.92	0.26	4.5
430	5	9	33.1	4.26	0.38	9.0	28.4	3.55	0.16	1.7	18.8	2.08	0.09	0.6	21.4	2.48	0.22	3.2
430	10	9	36.3	3.89	0.34	7.3	31.9	3.24	0.14	1.3	22.5	1.85	0.08	0.5	24.8	2.19	0.19	2.4

Thermal yield of hot water coil - DHW 800

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
800	-15	14	16.2	9.50	0.84	48.0	13.2	8.60	0.38	10.5	4.9	6.07	0.27	5.6	6.9	6.67	0.595	25.1
800	-10	14	19.5	8.83	0.78	41.6	16.7	7.99	0.35	8.9	8.6	5.56	0.24	4.5	10.3	6.07	0.53	20.4
800	-5	14	22.9	8.17	0.72	35.7	20.2	7.40	0.33	8.0	12.3	5.06	0.22	3.8	13.8	5.49	0.448	16.9
800	0	14	26.9	7.72	0.68	31.9	23.8	6.82	0.30	6.6	15.9	4.58	0.20	3.2	17.2	4.94	0.43	13.7
800	5	14	30.8	7.26	0.64	28.4	27.3	6.27	0.28	5.8	18.8	3.87	0.17	2.3	20.6	4.40	0.39	11.3
800	10	14	34.1	6.64	0.59	24.2	30.8	5.73	0.25	4.7	22.5	3.45	0.15	1.8	24.1	3.88	0.34	8.7



Thermal yield of cold water coil - DCW 500

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
430	25	23	15.4	1.61	0.28	2.6	430	-10	21	31.0	6.59	0.29	2.5	32.1	6.77	0.59	9.7
430	30	31	18.1	2.71	0.46	6.7	430	0	20	34.7	5.36	0.24	1.7	36.1	5.57	0.49	6.8
430	35	37	21.0	3.78	0.65	12.9	430	10	20	37.7	4.11	0.18	1.0	39.2	4.33	0.38	4.2

Thermal yield of cold water coil - DCW 800

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
800	25	40	15.8	3.26	0.56	12.1	800	-10	33	29.6	11.90	0.52	9.3	30.1	12.00	1.05	35.4
800	30	49	18.7	5.02	0.86	27.1	800	0	32	33.8	9.70	0.43	6.5	34.4	9.88	0.87	24.7
800	35	57	21.7	6.75	1.16	47.6	800	10	31	37.1	7.49	0.33	3.9	37.9	7.71	0.68	15.5

Thermal yield of cold water coil - DCW 1500

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
1200	25	38	14.8	5.43	0.93	13.9	1200	-10	31	33.5	19.50	0.86	10.5	33.9	19.70	1.73	39.3
1200	30	48	17.4	8.31	1.43	31.0	1200	0	30	36.9	15.90	0.70	7.1	37.4	16.10	1.41	26.7
1200	35	56	20.1	11.40	1.96	56.0	1200	10	29	39.9	12.40	0.54	4.4	40.5	12.60	1.11	17.0
1800	25	80	16.0	7.26	1.25	24.1	1800	-10	65	28.8	26.10	1.15	18.2	29.4	26.50	2.33	69.0
1800	30	98	18.9	11.00	1.89	52.5	1800	0	63	32.8	21.50	0.93	12.2	33.5	21.70	1.91	47.3
1800	35	114	22.1	14.90	2.56	92.7	1800	10	61	36.6	16.50	0.72	7.5	37.4	17.00	1.49	29.6

Thermal yield of cold water coil - DCW 3000

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
2500	25	46	15.6	9.60	1.65	4.2	2500	-5	41	30.5	37.80	1.66	3.7	31.5	38.80	3.41	14.2
2500	30	60	18.4	15.50	2.66	10.2	2500	0	40	34.0	30.50	1.34	2.5	35.2	31.60	2.78	9.7
2500	35	72	21.3	21.60	3.71	19.0	2500	10	38	37.1	23.40	1.03	1.5	38.7	24.70	2.17	6.1
3000	25	65	16.1	11.00	1.89	5.4	3000	-5	57	28.3	42.90	1.88	4.7	29.5	44.30	3.89	18.2
3000	30	85	19.0	17.50	3.00	12.7	3000	0	56	32.2	34.70	1.52	3.1	33.5	36.10	3.17	12.4
3000	35	100	22.1	24.40	4.19	23.8	3000	10	54	35.8	26.70	1.17	1.9	37.2	28.20	2.48	7.8

Thermal yield of cold water coil - DCW 5000

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
4000	25	29	14.4	18.80	3.23	8.7	4000	-10	23	35.4	67.80	2.98	6.4	35.7	68.30	6.00	23.4
4000	30	37	16.8	29.00	4.98	19.3	4000	0	23	38.5	55.30	2.43	4.4	38.9	55.80	4.90	16.1
4000	35	43	19.4	39.80	6.83	34.5	4000	10	22	41.2	43.00	1.89	2.8	41.7	43.70	3.84	10.2
5000	25	42	15.0	22.20	3.81	11.8	5000	-10	34	30.8	79.90	3.51	8.7	33.3	80.90	7.11	32.1
5000	30	53	17.6	33.90	5.82	25.7	5000	0	33	36.3	65.10	2.86	5.9	36.8	66.10	5.81	22.0
5000	35	62	20.4	46.50	7.98	46.0	5000	10	32	39.3	50.60	2.22	3.7	40.0	51.80	4.55	14.0
5800	25	55	15.4	24.70	4.24	14.3	5800	-10	45	31.1	89.00	3.91	10.6	31.6	90.20	7.92	39.2
5800	30	68	18.2	37.60	6.45	31.0	5800	0	44	34.8	72.50	3.18	7.2	35.4	73.70	6.47	26.9
5800	35	79	21.1	51.30	8.80	55.1	5800	10	42	38.1	56.30	2.47	4.5	38.9	57.80	5.08	17.2



HEAT RECOVERY PERFORMANCE

Thermal yield of NRG heat recovery units

Models	Air flow	Indoor		Outdoor		Treated air	Efficiency
	m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
Vort NRG 500 code 45150	430	20	55	-10	80	5.6	51.9
				-5	80	7.5	50.1
				0	70	9.4	47.2
				5	60	11.7	44.7
Vort NRG 800 code 45151	800	20	55	-10	80	6.2	54.1
				-5	80	8.1	52.3
				0	70	9.9	49.4
				5	60	12.0	46.8
Vort NRG 1200 code 45152	1200	20	55	-10	80	5.9	53.0
				-5	80	7.8	51.2
				0	70	9.6	48.2
				5	60	11.9	45.7
Vort NRG 2000 code 45154	1800	20	55	-10	80	5.9	52.9
				-5	80	7.8	51.3
				0	70	9.7	48.3
				5	60	11.9	45.8
Vort NRG 2500 code 45155	2500	20	55	-10	80	5.9	53.0
				-5	80	7.8	51.2
				0	70	9.6	48.2
				5	60	11.9	45.7
Vort NRG 3000 code 45156	3000	20	55	-10	80	5.6	51.9
				-5	80	7.5	50.1
				0	70	9.4	47.2
				5	60	11.7	44.7
Vort NRG 4000 code 45157	4000	20	55	-10	80	7.0	56.7
				-5	80	8.7	54.6
				0	70	10.4	51.9
				5	60	12.4	49.3
Vort NRG 5000 code 45158	5000	20	55	-10	80	6.6	55.3
				-5	80	8.4	53.4
				0	70	10.1	50.6
				5	60	12.2	47.9
Vort NRG 6000 code 45159	5800	20	55	-10	80	6.8	56.1
				-5	80	8.5	54.1
				0	70	10.3	51.4
				5	60	12.3	48.9

THERMAL YIELD

Thermal yield - Vort NRG 500 code 45150

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
100	20	55	-10	80	7.6	58.5
			0	70	10.7	53.7
			10	50	15.0	49.9
			30	50	28.0	49.9
300	26	55	34	50	30.0	49.9
			-10	80	6.0	53.5
			0	70	9.8	48.8
			10	50	14.6	45.9
430	20	55	30	50	28.2	45.9
			34	50	30.4	45.9
			-10	80	5.6	51.9
			0	70	9.4	47.2
430	26	55	10	50	14.4	44.1
			30	50	28.2	44.1
			34	50	30.5	44.1
			34	50	30.5	44.1

Thermal yield - Vort NRG 800 code 45151

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
300	20	55	-10	80	7.6	58.6
			0	70	10.7	53.7
			10	50	15.0	49.9
			30	50	28.0	49.9
550	26	55	34	50	30.0	49.9
			-10	80	6.7	55.7
			0	70	10.2	51.1
			10	50	14.8	47.5
800	20	55	30	50	28.1	47.5
			34	50	30.2	47.5
			-10	80	6.2	54.1
			0	70	9.9	49.4
800	26	55	10	50	14.6	46.0
			30	50	28.2	46.0
			34	50	30.3	46.0
			34	50	30.3	46.0

Thermal yield - Vort NRG 1200 code 45152

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
400	20	55	-10	80	7.4	57.9
			0	70	10.6	53.1
			10	50	14.9	49.4
			30	50	28.0	49.4
900	26	55	34	50	30.0	49.4
			-10	80	6.3	54.2
			0	70	11.3	49.5
			10	50	14.6	46.2
1200	20	55	30	50	28.1	46.2
			34	50	30.3	46.2
			-10	80	5.9	53.0
			0	70	9.6	48.2
1200	26	55	10	50	14.5	45.0
			30	50	28.1	45.0
			34	50	30.4	45.0
			34	50	30.4	45.0

N.B. The air flows considered in the tables below are examples of the heat exchange performance of the unit: the intervals studied are an indication of performance at logical operating points.

Thermal yield - Vort NRG 2000 code 45154

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
1000	20	55	-10	80	6.8	56.1
			0	70	10.3	51.4
			10	50	14.8	47.9
	26	55	30	50	28.0	47.9
			34	50	30.2	47.9
			-10	80	6.2	54.0
1500	20	55	0	70	9.9	49.3
			10	50	14.6	45.9
			30	50	28.1	45.9
	26	55	34	50	30.3	45.9
			-10	80	5.9	52.9
			0	70	9.7	48.3
1800	20	55	10	50	14.5	45.1
			30	50	28.1	45.1
	26	55	34	50	30.4	45.1
			-10	80	6.8	55.9

Thermal yield - Vort NRG 2500 code 45155

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
1500	20	55	-10	80	6.8	55.9
			0	70	10.2	51.2
			10	50	14.8	47.7
	26	55	30	50	28.0	47.7
			34	50	30.2	47.7
			-10	80	6.3	54.3
2000	20	55	0	70	9.9	49.6
			10	50	14.6	46.2
			30	50	28.1	46.2
	26	55	34	50	30.3	46.2
			-10	80	5.9	53.0
			0	70	9.6	48.2
2500	20	55	10	50	14.5	45.0
			30	50	28.1	45.0
	26	55	34	50	30.4	45.0
			-10	80	5.9	53.0

Thermal yield - Vort NRG 3000 code 45156

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
2000	20	55	-10	80	6.3	54.3
			0	70	9.9	49.6
			10	50	14.6	46.2
	26	55	30	50	28.1	46.2
			34	50	30.3	46.2
			-10	80	5.9	53.0
2500	20	55	0	70	9.6	48.2
			10	50	14.5	45.0
			30	50	28.1	45.0
	26	55	34	50	30.4	45.0
			-10	80	5.6	51.9
			0	70	9.4	47.2
3000	20	55	10	50	14.4	44.1
			30	50	28.1	44.1
	26	55	34	50	30.5	44.1
			-10	80	6.8	56.1

N.B. The air flows considered in the tables below are examples of the heat exchange performance of the unit: the intervals studied are an indication of performance at logical operating points.

Thermal yield - Vort NRG 4000 code 45157

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
2000	20	55	-10	80	8.3	60.9
			0	70	11.2	55.9
			10	50	15.2	51.9
			30	50	28.0	51.9
3000	26	55	34	50	31.1	51.9
			-10	80	7.5	58.4
			0	70	10.7	53.6
			10	50	15.0	49.8
4000	20	55	30	50	28.0	49.8
			34	50	31.0	49.8
			-10	80	7.0	56.9
			0	70	10.4	51.9
4000	26	55	10	50	14.8	48.2
			30	50	28.0	48.2
			34	50	30.9	48.2
			-10	80	7.0	56.9

Thermal yield - Vort NRG 5000 code 45158





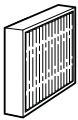
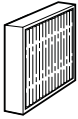
Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
3000	20	55	-10	80	7.5	58.4
			0	70	10.7	53.6
			10	50	15.0	49.8
			30	50	28.0	49.8
4000	26	55	34	50	32.0	49.8
			-10	80	7.0	56.7
			0	70	10.4	51.9
			10	50	14.8	48.3
5000	20	55	30	50	28.1	48.3
			34	50	31.9	48.3
			-10	80	6.6	55.3
			0	70	10.1	50.6
5000	26	55	10	50	14.7	47.1
			30	50	28.1	47.1
			34	50	31.9	47.2
			-10	80	6.6	55.3

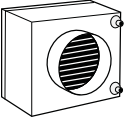
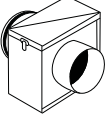
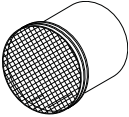
Thermal yield - Vort NRG 6000 code 45159

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
4000	20	55	-10	80	7.5	58.4
			0	70	10.7	53.6
			10	50	15.0	49.8
			30	50	28.0	49.8
5000	26	55	34	50	30.0	49.8
			-10	80	7.1	57.0
			0	70	10.5	52.3
			10	50	14.9	48.6
5800	20	55	30	50	28.1	48.6
			34	50	30.1	48.6
			-10	80	6.8	56.1
			0	70	10.3	51.4
5800	26	55	10	50	14.8	47.9
			30	50	28.1	47.9
			34	50	30.2	47.9
			-10	80	6.8	56.1

N.B. The air flows considered in the tables below are examples of the heat exchange performance of the unit: the intervals studied are an indication of performance at logical operating points.

PRODUCT ACCESSORIES

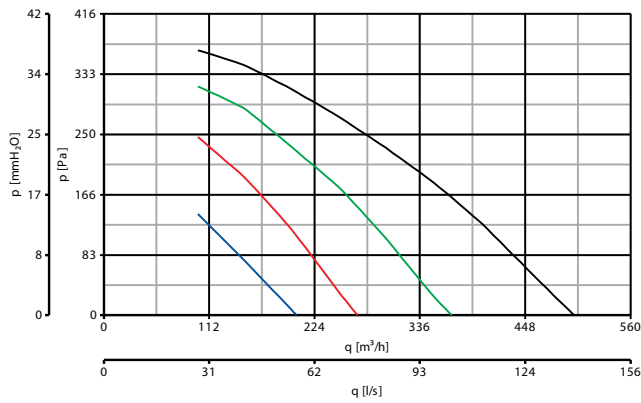
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		VORT NRG 500 code 45150	VORT NRG 800 code 45151	VORT NRG 1200 code 45152	VORT NRG 2000 code 45154	VORT NRG 2500 code 45155	VORT NRG 3000 code 45156	VORT NRG 4000 code 45157	VORT NRG 5000 code 45158	VORT NRG 6000 code 45159	
	C3VM16 Comm. 3V single phase 16A	22916				•	•	•			
	C4VM16 Comm. 4V single phase 16A	14021	•	•	•						
	NRG DEH 500 Ø 200 Duct electric heater (2 KW single phase)	24158	•								
	NRG DEH 800 Ø 250 Duct electric heater (3 KW single phase)	24159		•							
	NRG DEH 1500 Ø 315 Duct electric heater (6 KW single phase)	24160			•	•					
	NRG DEH 3000 Ø 355 Duct electric heater (7.5 KW single phase)	24161					•	•			
	NRG RRC 500 Rain cover	24130	•								
	NRG RRC 800 Rain cover	24131		•							
	NRG RRC 1200 Rain cover	24132			•						
	NRG RRC 2000 Rain cover	24133				•					
	NRG RRC 2500-3000 Rain cover	24134					•	•			
	NRG RRC 4000-5000-6000 Rain cover	24136							•	•	•
	F5 FILTER VORT NRG 500	21001	•								
	F5 FILTER VORT NRG 800	21002		•							
	F5 FILTER VORT NRG 1200	21003			•						
	F5 FILTER VORT NRG 2000	21004				•					
	F5 FILTER VORT NRG 2500-3000	21005					•	•			
	F5 FILTER VORT NRG 4000-5000	21006							•	•	
	F5 FILTER VORT NRG 6000	21007									•
	F7 FILTER VORT NRG 500	21008	•								
	F7 FILTER VORT NRG 800	21009		•							
	F7 FILTER VORT NRG 1200	21010			•						
	F7 FILTER VORT NRG 2000	21011				•					
	F7 FILTER VORT NRG 2500-3000	21012					•	•			
	F7 FILTER VORT NRG 4000-5000	21013							•	•	
	F7 FILTER VORT NRG 6000	21014									•

Models	Description	Code	Product								
			VORT NRG 500 code 45150	VORT NRG 800 code 45151	VORT NRG 1200 code 45152	VORT NRG 2000 code 45154	VORT NRG 2500 code 45155	VORT NRG 3000 code 45156	VORT NRG 4000 code 45157	VORT NRG 5000 code 45158	VORT NRG 6000 code 45159
	DHW 500 Ø 200 Duct hot water coil	24148	●								
	DHW 800 Ø 250 Duct hot water coil	24149		●							
	DHW 1500 Ø 315 Duct hot water coil	24150			●	●					
	DHW 3000 Ø 355 Duct hot water coil	24151					●	●			
	DHW 5000 Ø 450 Duct hot water coil	24152							●	●	●
	DCW 500 Ø 200 Duct cooled water coil	24153	●								
	DCW 800 Ø 250 Duct cooled water coil	24154		●							
	DCW 150 Ø 315 Duct cooled water coil	24155			●	●					
	DCW 3000 Ø 355 Duct cooled water coil	24156					●	●			
DCW 5000 Ø 450 Duct cooled water coil	24157							●	●	●	
	FB 500 Ø 200 Duct filter box (F7)	24139	●								
	FB 800 Ø 250 Duct filter box (F7)	24140		●							
	FB 1200 Ø 315 Duct filter box (F7)	24141			●						
	FB 2000 Ø 315 Duct filter box (F7)	24142				●					
	FB 2500-3000 Ø 355 Duct filter box (F7)	24143					●	●			
	FB 4000-5000 Ø 450 Duct filter box (F7)	24145							●	●	
	FB 6000 Ø 450 Duct filter box (F7)	24147									●
	NRG ABC 500 Ø 200 Expulsion sleeve with insect screen	22296	●								
	NRG ABC 800 Ø 250 Expulsion sleeve with insect screen	22297		●							
	NRG ABC 1200-2000 Ø 315 Expulsion sleeve with insect screen	22298			●	●					
	NRG ABC 2500-3000 Ø 355 Expulsion sleeve with insect screen	22299					●	●			
	NRG ABC 4000-5000-6000 Ø 450 Expulsion sleeve with insect screen	22749							●	●	●

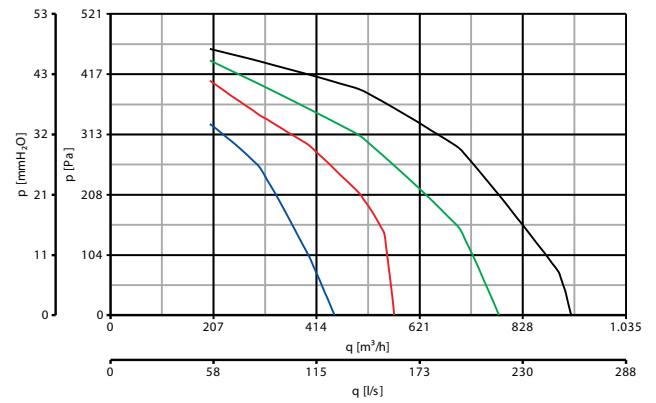
Description and sizes on page 236; System components on page 330.

PERFORMANCE CURVES

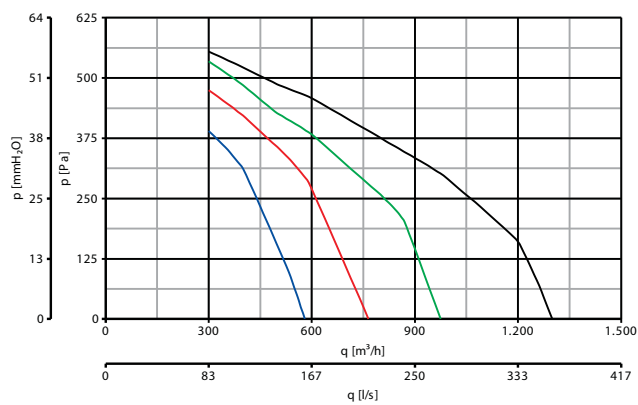
VORT NRG 500 code 45150



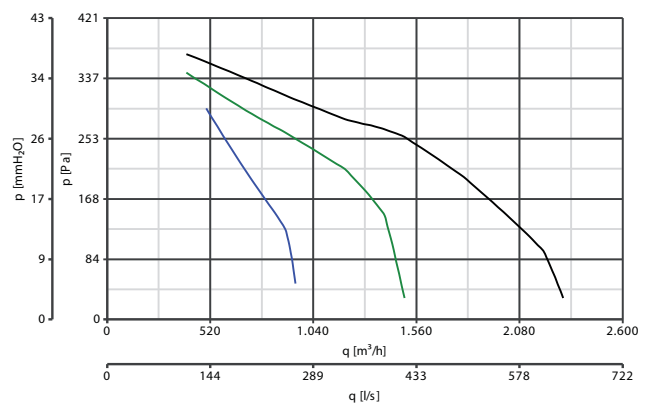
VORT NRG 800 code 45151



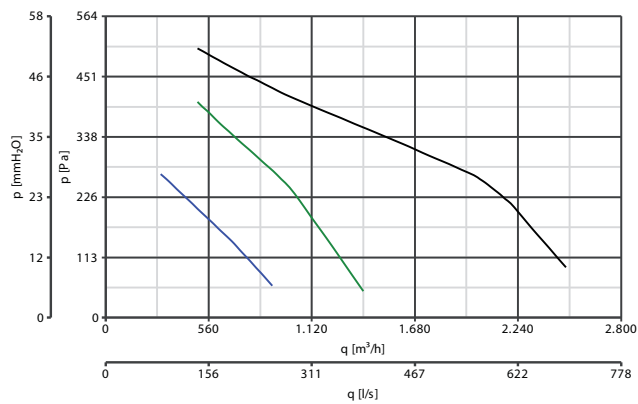
VORT NRG 1200 code 45152



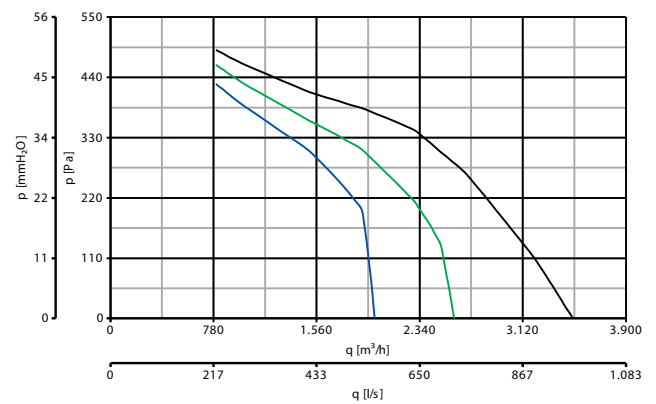
VORT NRG 2000 code 45154



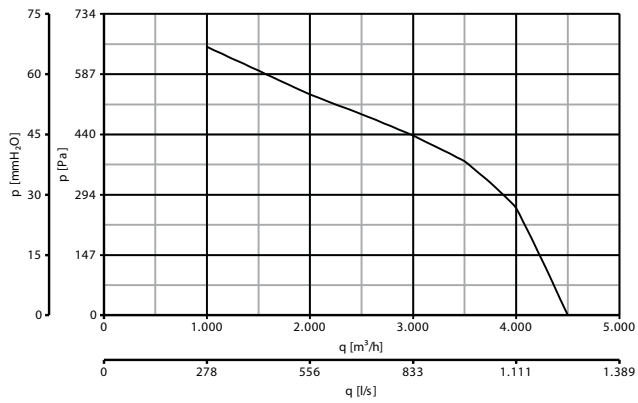
VORT NRG 2500 code 45156



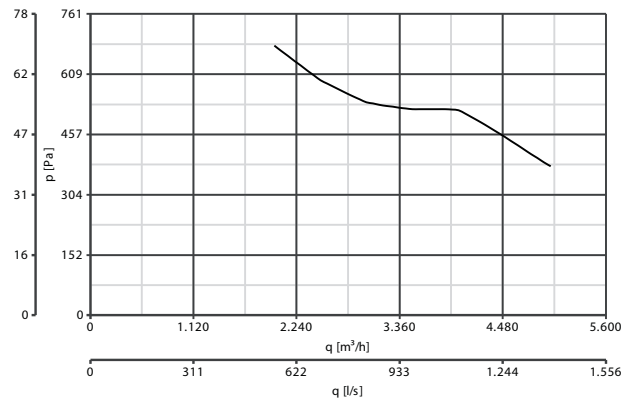
VORT NRG 3000 code 45156



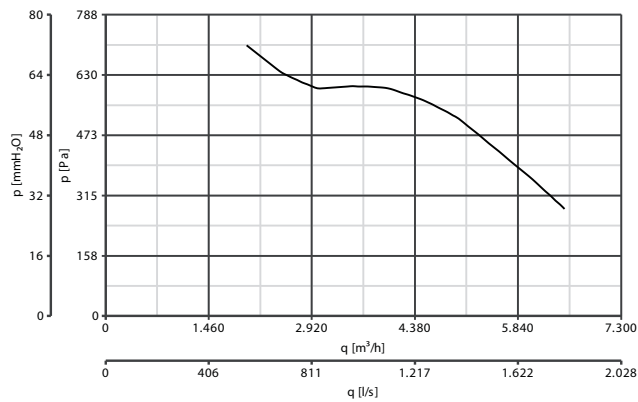
VORT NRG 4000 code 45157



VORT NRG 5000 code 45158

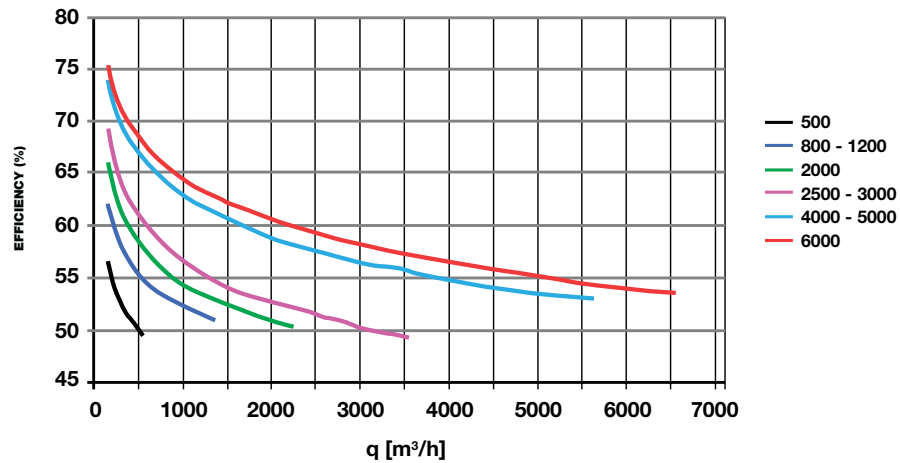


VORT NRG 6000 code 45159



— Min — Max

HEAT RECOVERY EFFICIENCY CURVE





VORT NRG V RANGE

Cross flow heat recovery units for vertical installation

Suitable for commercial applications such as:
bars, pubs, restaurants, canteens, offices, meeting rooms,
shops, dancing hall etc.



- **14 models: 16 possible configurations.**
- Extruded aluminium profile structure and galvanised steel sandwich panels (18/25 mm thick) with expanded polyurethane insulation.
- AC single-phase motor (230 V – 50 Hz), two or four poles, four speeds (Mod. 500 – 1000), 3 speeds (Mod. 2000 – 2500 – 3000).
- AC three-phase motor (400 V – 50 Hz), four poles, one speed (Mod. 4000 – 6000).
- Aluminium cross-flow heat exchanger (efficiency higher than 50%).
- Circular spigots on outlet and inlet panels.
- Interchangeable panels to allow outlet and inlet spigots positioning on preferred sides.
- Centrifugal impellers mounted on interchangeable panels.
- Supply and exhaust fans can be individually regulated.
- Provided with F5 filters (F7 optional).
- Possibility of pressure sockets to measure filters pressure housing.
- Condensation drainage system.
- Regulators, components for external installation, coils (hydraulic) for post-heating or post-cooling, coils (electric) for pre- or post- heating available as accessories on request.
- Protection rating: IPX4.
- Insulation class: I. ⊕

Wiring diagrams shown from page 458

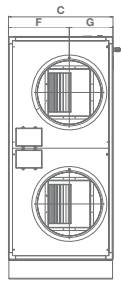
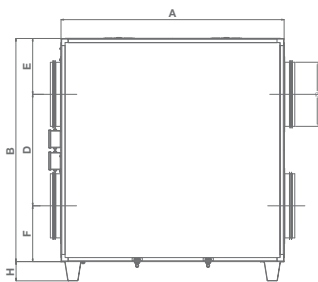
TECHNICAL DATA

Models	Code	Models				Heat Recovery Unit**		Filters	Fans						Sound pressure radiated - Lp dB(A) 1 m max. speed	
		m³/h*	Pa*	m³/h	A	°C	%		°C	%	W	Poles	A	Max. current absorption		Fan speed
VORT NRG 500 V	45180	430	175	570	1.2	45	50.1	7.5	F5	135x2	2	0.6x2	4	B	230/1/50	45
	45190															
VORT NRG 1000 V	45181	1000	165	1500	2.8		54.3	8.5		320x2	1.4x2	3	F	55		
	45191															
VORT NRG 2000 V	45182	1800	165	2200	4.8		51.3	7.8		540x2	2.4x2	4	F	49		
	45192															
VORT NRG 2500 V	45186	2500	185	2700	7.4		51.2	7.8		800x2	3.7x2	1	F	51		
	45196															
VORT NRG 3000 V	45183	3000	187	3000	8.0		56.6	9.1		900x2	4x2	400/3/50	F	53		
	45193															
VORT NRG 4000 V	45184	4000	155	4650	4.8	54.6	8.7	1300x2	2.4x2	1	F	46				
	45194															
VORT NRG 6000 V	45185	5500	125	6150	7.0	54.4	8.6	1900x2	3.5x2	400/3/50	F	56				
	45195															

* Values refer to nominal airflow through filters and heat exchanger.

** Values refer to nominal airflow in the following conditions: T ext. air -5 °C (80% RH), Ambient T +20 °C (55% RH).

DIMENSIONS



Models	A	B	C	D	E	F	G	H	Ø	Kg
VORT NRG 500 V	630	630	324.5	160	310	176.5	148	95	200	40
VORT NRG 1000 V	1000	1000	516	275	550	216	300		315	108
VORT NRG 2000 V									355	135
VORT NRG 2500 V	1240	1240	536	282	676	217	319		210	
VORT NRG 3000 V	1550	1550	660	330	890	330	330		213	
VORT NRG 4000 V									450	
VORT NRG 6000 V									233	

Dimensions (mm)

PRE-POST HEATING

Pre – electrical heating

Models	Vort NRG 500 V code 45180 code 45190	Vort NRG 1000 V code 45181 code 45191	Vort NRG 2000 V code 45182 code 45192	Vort NRG 2500 V code 45186 code 45196	Vort NRG 3000 V code 45183 code 45193
DEH resistor model	500 Ø 200	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355
	20158	24160	24160	24161	24161
Nominal power - kW	2	6	6	7.5	7.5
Voltage - V	230	400 (Y)	400 (Y)	400 (Δ)	400 (Δ)
Phases - no.	1	3	3	3	3
Power draw - A	8.7	8.7	8.7	10.8	10.8
Temp. air entering heat exchanger -°C	-2.1	1.7	-5.7	-6.7	-8.1

Values refer to nominal air flow with external air temperature = -15°C

Post – electrical heating

Models	Vort NRG 500 V code 45180 code 45190	Vort NRG 1000 V code 45181 code 45191	Vort NRG 2000 V code 45182 code 45192	Vort NRG 2500 V code 45186 code 45196	Vort NRG 3000 V code 45183 code 45193
DEH resistor model	500 Ø 200	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355
	20158	24160	24160	24161	24161
Nominal power - kW	2	6	6	7.5	7.5
Voltage - V	230	400 (Y)	400 (Y)	400 (Δ)	400 (Δ)
Phases - no.	1	3	3	3	3
Power draw - A	8.7	8.7	8.7	10.8	10.8
Temp. Air outlet - °C	20.9	24.7	17.3	16.3	14.9

Values refer to nominal air flow with air inlet temperature = +8°C

Post – water heating

Model	Vort NRG 500 V code 45180 code 45190	Vort NRG 1000 V code 45181 code 45191	Vort NRG 2000 V code 45182 code 45192	Vort NRG 2500 V code 45186 code 45196	Vort NRG 3000 V code 45183 code 45193	Vort NRG 4000 V code 45184 code 45194	Vort NRG 6000 V code 45185 code 45195
DHW HOT WATER COIL	500 Ø 200	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355	5000 Ø 450	5000 Ø 450
	24148	24150	24150	24151	24151	24152	24152
No. rows	1	1	1	1	1	1	1
Thermal output - kW	4.04	10.2	14.4	22.7	25.2	39.5	47.7
Temp. Air outlet - °C	35.0	31.3	31.1	34.2	32.2	36.4	33.0
Loss in load air side - Pa	9	7	17	11	15	8	13
Loss in load water side - kPa	8.1	10.8	20.9	22.8	27.8	17.2	24.7

Values refer to nominal air flow with air inlet temperature = +8°C and water temperature = 80/70°C

Post - water cooling

Model	Vort NRG 500 V code 45180 code 45190	Vort NRG 1000 V code 45181 code 45191	Vort NRG 2000 V code 45182 code 45192	Vort NRG 2500 V code 45186 code 45196	Vort NRG 3000 V code 45183 code 45193	Vort NRG 4000 V code 45184 code 45194	Vort NRG 6000 V code 45185 code 45195
DCW COOL WATER COIL	500 Ø 200	1500 Ø 315	1500 Ø 315	3000 Ø 355	3000 Ø 355	5000 Ø 450	5000 Ø 450
	24153	24155	24155	24156	24156	24157	24157
No. rows	4	4	4	4	4	4	4
Thermal output - kW	3.11	8.36	12.5	17.9	20.3	33.2	41.5
Temp. Air outlet - °C	19.3	17.7	20.1	19.6	20.3	17.7	19.2
Loss in load air side - Pa	34	38	104	65	91	39	66
Loss in load water side - kPa	8.8	31.0	66.1	13.3	16.8	24.7	37.3

Values referred to nominal air flow with air inlet temperature = +32°C and water temperature = 7/12°C

THERMAL YIELD

Thermal yield of hot water coil - DHW 500

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
430	-15	9	19.1	5.60	0.49	14.8	14.7	4.87	0.21	2.9	6.1	3.46	0.15	1.5	9.1	3.94	0.35	7.9
430	-10	9	22.3	5.20	0.46	13.0	18.1	4.52	0.20	2.6	9.7	3.16	0.14	1.4	12.3	3.59	0.32	6.6
430	-5	9	25.5	4.81	0.42	11.0	21.6	4.18	0.18	2.1	13.3	2.88	0.13	1.2	15.6	3.25	0.29	5.5
430	0	9	30.0	4.63	0.41	10.4	25.0	3.86	0.17	1.9	15.9	2.46	0.11	0.9	18.9	2.92	0.26	4.5
430	5	9	33.1	4.26	0.38	9.0	28.4	3.55	0.16	1.7	18.8	2.08	0.09	0.6	21.4	2.48	0.22	3.2
430	10	9	36.3	3.89	0.34	7.3	31.9	3.24	0.14	1.3	22.5	1.85	0.08	0.5	24.8	2.19	0.19	2.4

Thermal yield of hot water coil - DHW 1500

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
1000	-15	7	22.1	14.10	1.24	19.9	18.4	12.70	0.56	4.4	9.3	9.27	0.41	2.5	11.3	10.00	0.88	10.7
1000	-10	7	25.5	13.30	1.17	17.8	21.6	11.80	0.52	3.8	12.4	8.38	0.37	2.1	14.4	9.11	0.80	9.0
1000	-5	7	28.9	12.40	1.09	15.6	24.9	10.90	0.48	3.3	15.8	7.63	0.34	1.8	17.5	8.24	0.72	7.3
1000	0	7	31.9	11.40	1.01	13.4	28.4	10.20	0.45	2.9	18.8	6.73	0.30	1.4	20.6	7.41	0.65	6.0
1000	5	7	35.5	10.70	0.94	11.7	31.4	9.28	0.41	2.4	21.8	5.90	0.26	1.1	23.8	6.60	0.58	4.9
1000	10	7	38.4	9.81	0.86	9.9	34.6	8.49	0.37	2.0	24.6	5.05	0.22	0.8	26.5	5.70	0.50	3.7
1800	-15	18	13.9	19.90	1.75	38.6	11.0	17.80	0.78	8.3	3.8	12.90	0.57	4.7	5.2	13.90	1.22	20.0
1800	-10	18	17.8	18.70	1.65	34.4	14.6	16.60	0.73	7.3	7.5	11.80	0.52	3.9	9.0	12.80	1.12	17.0
1800	-5	18	21.6	17.50	1.54	30.2	18.2	15.30	0.67	6.2	11.0	10.50	0.46	3.1	12.6	11.60	1.02	14.2
1800	0	17	25.0	16.20	1.43	26.2	22.2	14.30	0.63	5.5	14.5	9.39	0.41	2.5	16.1	10.40	0.91	11.5
1800	5	17	29.0	15.20	1.34	23.1	25.5	13.00	0.57	4.5	17.9	8.17	0.36	2.0	19.5	9.16	0.80	9.0
1800	10	17	32.4	13.90	1.23	19.6	29.1	11.90	0.52	3.8	21.3	7.03	0.31	1.5	23.0	8.08	0.71	7.1

Thermal yield of hot water coil - DHW 3000

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
2500	-15	11	18.0	31.50	2.78	42.7	15.1	28.60	1.26	9.6	7.0	20.90	0.92	5.5	8.2	22.10	1.94	22.5
2500	-10	11	21.6	29.60	2.61	37.9	18.5	26.60	1.17	8.3	10.9	19.20	0.84	4.6	11.8	20.40	1.79	19.3
2500	-5	11	25.2	27.70	2.44	33.3	22.2	24.90	1.10	7.4	13.8	17.20	0.76	3.8	15.2	18.50	1.63	16.2
2500	0	11	28.8	25.80	2.27	29.1	25.6	23.00	1.01	6.3	17.1	15.40	0.68	3.1	18.5	16.60	1.46	13.1
2500	5	11	32.2	24.00	2.12	25.2	29.0	21.10	0.93	5.4	20.5	13.60	0.60	2.5	21.8	14.80	1.30	10.5
2500	10	11	35.6	22.00	1.94	21.5	32.4	19.30	0.85	4.5	23.6	11.70	0.51	1.8	25.1	13.00	1.14	8.2
3000	-15	15	15.6	35.00	3.09	52.4	12.8	31.80	1.40	11.7	5.4	23.30	1.02	6.7	6.6	24.70	2.17	27.8
3000	-10	15	19.4	32.90	2.90	46.3	16.4	29.60	1.30	10.2	8.9	21.10	0.93	5.6	10.2	22.60	1.99	23.6
3000	-5	15	22.9	30.70	2.71	40.7	20.1	27.50	1.21	8.9	12.4	19.10	0.84	4.6	13.8	20.60	1.81	19.7
3000	0	15	26.6	28.60	2.52	35.4	23.8	25.60	1.13	7.8	15.8	17.00	0.75	3.7	17.2	18.50	1.63	16.2
3000	5	15	30.2	26.60	2.35	31.0	27.3	23.50	1.03	6.5	19.2	15.00	0.66	2.9	20.6	16.50	1.45	12.9
3000	10	15	33.8	24.60	2.17	26.7	30.6	21.40	0.94	5.5	22.5	12.90	0.57	2.2	23.9	14.40	1.27	10.1

Thermal yield of hot water coil - DHW 5000

Air (70% rh)			Water in/out 80/70°C				Water in/out 80/60°C				Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
4000	-15	8	20.9	54.70	4.82	31.9	17.7	49.80	2.19	7.3	9.0	36.50	1.60	4.2	10.3	38.60	3.39	17.2
4000	-10	8	24.5	51.50	4.54	28.5	21.1	46.50	2.05	6.4	12.3	33.30	1.46	3.5	13.6	35.30	3.10	14.5
4000	-5	8	27.9	48.20	4.25	25.1	24.5	43.20	1.90	5.6	15.4	29.90	1.31	2.9	16.9	32.10	2.82	12.1
4000	0	8	31.3	44.90	3.96	22.0	27.8	39.90	1.76	4.8	18.6	26.80	1.18	2.4	20.1	28.90	2.54	10.0
4000	5	8	34.4	41.50	3.66	18.9	31.1	36.70	1.61	4.5	21.9	23.60	1.04	1.9	23.3	25.70	2.26	8.0
4000	10	8	37.8	38.30	3.38	16.3	34.2	33.40	1.47	3.4	24.7	20.30	0.89	1.4	26.3	22.60	1.99	6.3
5500	-15	14	16.5	66.10	5.83	45.8	13.6	59.90	2.64	10.3	5.9	43.90	1.93	6.0	7.1	46.40	4.08	24.4
5500	-10	14	20.1	62.00	5.47	40.5	17.2	55.80	2.46	9.0	9.4	39.90	1.75	5.0	10.7	42.50	3.73	20.6
5500	-5	13	23.7	57.90	5.10	35.5	20.7	51.80	2.28	7.8	12.9	36.10	1.59	4.2	14.2	38.70	3.40	17.3
5500	0	13	27.3	54.00	4.76	31.1	24.3	48.00	2.11	6.8	16.3	32.20	1.41	3.3	17.6	34.80	3.06	14.2
5500	5	13	30.9	50.20	4.43	27.2	27.8	44.10	1.94	5.8	19.6	28.30	1.24	2.6	21.0	31.00	2.72	11.4
5500	10	13	34.3	46.20	4.07	23.2	31.2	40.20	1.77	4.9	22.9	24.50	1.08	2.0	24.3	27.20	2.39	8.9

THERMAL YIELD

Thermal yield of cold water coil - DCW 500

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
430	25	23	15.4	1.61	0.28	2.6	430	-10	21	31.0	6.59	0.29	2.5	32.1	6.77	0.59	9.7
430	30	31	18.1	2.71	0.46	6.7	430	0	20	34.7	5.36	0.24	1.7	36.1	5.57	0.49	6.8
430	35	37	21.0	3.78	0.65	12.9	430	10	20	37.7	4.11	0.18	1.0	39.2	4.33	0.38	4.2

Thermal yield of cold water coil - DCW 1500

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
1000	25	28	14.3	4.75	0.82	11.0	1000	-10	23	35.7	17.10	0.75	8.1	36.0	17.20	1.51	30.4
1000	30	36	16.7	7.30	1.25	24.1	1000	0	22	38.7	13.90	0.61	5.5	39.1	14.00	1.23	20.6
1000	35	42	19.3	10.00	1.72	43.9	1000	10	22	41.4	10.80	0.47	3.4	41.8	11.00	0.97	13.2
1800	25	80	16.0	7.26	1.25	24.1	1800	-10	65	28.8	26.10	1.15	18.2	29.4	26.50	2.33	69.0
1800	30	98	18.9	11.00	1.89	52.5	1800	0	63	32.8	21.50	0.93	12.2	33.5	21.70	1.91	47.3
1800	35	114	22.1	14.90	2.56	92.7	1800	10	61	36.6	16.50	0.72	7.5	37.4	17.00	1.49	29.6

Thermal yield of cold water coil - DCW 3000

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
2500	25	46	15.6	9.60	1.65	4.2	2500	-5	41	30.5	37.80	1.66	3.7	31.5	38.80	3.41	14.2
2500	30	60	18.4	15.50	2.66	10.2	2500	0	40	34.0	30.50	1.34	2.5	35.2	31.60	2.78	9.7
2500	35	72	21.3	21.60	3.71	19.0	2500	10	38	37.1	23.40	1.03	1.5	38.7	24.70	2.17	6.1
3000	25	65	16.1	11.00	1.89	5.4	3000	-5	57	28.3	42.90	1.88	4.7	29.5	44.30	3.89	18.2
3000	30	85	19.0	17.50	3.00	12.7	3000	0	56	32.2	34.70	1.52	3.1	33.5	36.10	3.17	12.4
3000	35	100	22.1	24.40	4.19	23.8	3000	10	54	35.8	26.70	1.17	1.9	37.2	28.20	2.48	7.8

Thermal yield of cold water coil - DCW 5000

Air (50% rh)			Water in/out 7/12°C				Air (70% rh)			Water in/out 60/40°C				Water in/out 55/45°C			
W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	W	Ti a	ΔP a	To a	Pw	Q w	ΔP w	To a	Pw	Q w	ΔP w
m³/h	°C	Pa	°C	kW	m³/h	kPa	m³/h	°C	Pa	°C	kW	m³/h	kPa	°C	kW	m³/h	kPa
4000	25	29	14.4	18.80	3.23	8.7	4000	-10	23	35.4	67.80	2.98	6.4	35.7	68.30	6.00	23.4
4000	30	37	16.8	29.00	4.98	19.3	4000	0	23	38.5	55.30	2.43	4.4	38.9	55.80	4.90	16.1
4000	35	43	19.4	39.80	6.83	34.5	4000	10	22	41.2	43.00	1.89	2.8	41.7	43.70	3.84	10.2
5500	25	50	15.3	23.80	4.08	13.3	5500	-10	41	31.7	85.70	3.76	9.8	32.2	86.70	7.62	36.5
5500	30	62	18.0	36.30	6.23	29.1	5500	0	39	35.3	69.80	3.07	6.8	35.9	70.90	6.23	25.1
5500	35	72	20.9	49.50	8.49	51.6	5500	10	38	38.6	54.20	2.38	4.2	39.3	55.60	4.88	15.9

HEAT RECOVERY PERFORMANCE

Thermal yield of NRG V heat recovery units

Model	Air flow	Indoor		Outdoor		Treated air	Efficiency
	m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
Vort NRG 500 V code 45180 code 45190	430	20	55	-10	80	5.6	51.9
				-5	80	7.5	50.1
				0	70	9.4	47.2
				5	60	11.7	44.7
Vort NRG 1000 V code 45181 code 45191	1000	20	55	-10	80	6.8	56.1
				-5	80	8.5	54.3
				0	70	10.3	51.4
				5	60	12.3	48.9
Vort NRG 2000 V code 45182 code 45192	1800	20	55	-10	80	5.9	52.9
				-5	80	7.8	51.3
				0	70	9.7	48.3
				5	60	11.9	45.8
Vort NRG 2500 V code 45186 code 45196	2500	20	55	-10	80	5.9	53.0
				-5	80	7.8	51.2
				0	70	9.6	48.2
				5	60	11.9	45.7
Vort NRG 3000 V code 45183 code 45193	3000	20	55	-10	80	7.5	58.4
				-5	80	9.1	56.6
				0	70	10.7	53.6
				5	60	12.7	51.1
Vort NRG 4000 V code 45184 code 45194	4000	20	55	-10	80	7.0	56.7
				-5	80	8.7	54.6
				0	70	10.4	51.9
				5	60	12.4	49.3
Vort NRG 6000 V code 45185 code 45195	5500	20	55	-10	80	6.9	56.5
				-5	80	8.6	54.4
				0	70	10.3	51.8
				5	60	12.4	49.2

THERMAL YIELD

Thermal yield - Vort NRG 500 V code 45180 - 45190

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
100	20	55	-10	80	7.6	58.5
			0	70	10.7	53.7
			10	50	15.0	49.9
			30	50	28.0	49.9
300	26	55	34	50	30.0	49.9
			-10	80	6.0	53.5
			0	70	9.8	48.8
			10	50	14.6	45.9
430	20	55	30	50	28.2	45.9
			34	50	30.4	45.9
			-10	80	5.6	51.9
			0	70	9.4	47.2
430	26	55	10	50	14.4	44.1
			30	50	28.2	44.1
			34	50	30.5	44.1
			-10	80	5.6	51.9

Thermal yield - Vort NRG 1000 V code 45181 - 45191

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H. %	°C	R.H. %	°C	%
400	20	55	-10	80	8.3	61.3
			0	70	11.3	56.4
			10	50	15.2	51.8
	26	55	30	50	27.9	51.8
			34	50	29.9	51.8
			-10	80	7.2	57.4
800	20	55	0	70	10.5	52.6
			10	50	14.9	48.9
			30	50	28.0	48.9
	26	55	34	50	30.2	48.9
			-10	80	6.8	56.1
			0	70	10.3	51.4
1000	20	55	10	50	14.8	47.9
			30	50	28.0	47.9
			34	50	30.2	47.9
	26	55	-10	80	6.8	56.1
			0	70	10.3	51.4
			10	50	14.8	47.9

Thermal yield - Vort NRG 2000 V code 45182 - 45192

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H. %	°C	R.H. %	°C	%
1000	20	55	-10	80	6.8	56.1
			0	70	10.3	51.4
			10	50	14.8	47.9
	26	55	30	50	28.0	47.9
			34	50	30.2	47.9
			-10	80	6.2	54.0
1500	20	55	0	70	9.9	49.3
			10	50	14.6	45.9
			30	50	28.1	45.9
	26	55	34	50	30.3	45.9
			-10	80	5.9	52.9
			0	70	9.7	48.3
1800	20	55	10	50	14.5	45.1
			30	50	28.1	45.1
			34	50	30.4	45.1
	26	55	-10	80	5.9	52.9
			0	70	9.7	48.3
			10	50	14.5	45.1

N.B. The air flow rates in the tables below illustrate the heating action of the machine: the intervals examined are indicative of performance levels in logical operating areas

Thermal yield - Vort NRG 2500 V code 45186 - 54196

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
1500	20	55	-10	80	6.8	55.9
			0	70	10.2	51.2
			10	50	14.8	47.7
	26	55	30	50	28.0	47.7
			34	50	30.2	47.7
			-10	80	6.3	54.3
2000	20	55	0	70	9.9	49.6
			10	50	14.6	46.2
			30	50	28.1	46.2
	26	55	34	50	30.3	46.2
			-10	80	5.9	53.0
			0	70	9.6	48.2
2500	20	55	10	50	14.5	45.0
			30	50	28.1	45.0
			34	50	30.4	45.0
	26	55	-10	80	6.3	54.3
			0	70	9.9	49.6
			10	50	14.6	46.2

Thermal yield - Vort NRG 3000 V code 45183 - 45193

Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
2000	20	55	-10	80	8.3	60.9
			0	70	11.2	55.9
			10	50	15.2	51.9
	26	55	30	50	28.0	51.9
			34	50	31.1	51.9
			-10	80	7.9	59.5
2500	20	55	0	70	10.9	54.6
			10	50	15.1	50.7
			30	50	28.0	50.7
	26	55	34	50	29.9	50.7
			-10	80	7.5	58.4
			0	70	10.7	53.6
3000	20	55	10	50	15.0	49.8
			30	50	28.0	49.8
			34	50	31.0	49.8
	26	55	-10	80	7.5	58.4
			0	70	10.7	53.6
			10	50	15.0	49.8

Thermal yield - Vort NRG 4000 V code 45184 - 45194


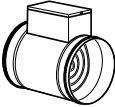

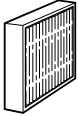
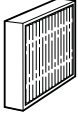
Air flow	Indoor		Outdoor		Treated air	Efficiency
m ³ /h	°C	R.H.%	°C	R.H.%	°C	%
2000	20	55	-10	80	8.3	60.9
			0	70	11.2	55.9
			10	50	15.2	51.9
	26	55	30	50	28.0	51.9
			34	50	31.1	51.9
			-10	80	7.5	58.4
3000	20	55	0	70	10.7	53.6
			10	50	15.0	49.8
			30	50	28.0	49.8
	26	55	34	50	31.0	49.8
			-10	80	7.0	56.9
			0	70	10.4	51.9
4000	20	55	10	50	14.8	48.2
			30	50	28.0	48.2
			34	50	30.9	48.2
	26	55	-10	80	7.0	56.9
			0	70	10.4	51.9
			10	50	14.8	48.2

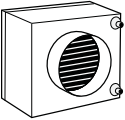
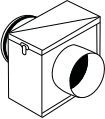
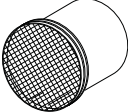
N.B. The air flow rates in the tables below illustrate the heating action of the machine: the intervals examined are indicative of performance levels in logical operating areas

Thermal yield - Vort NRG 6000 V code 45185 - 45195

Air flow m ³ /h	Indoor		Outdoor		Treated air	Efficiency
	°C	R.H.%	°C	R.H.%	°C	%
4000	20	55	-10	80	7.5	58.4
			0	70	10.7	53.6
			10	50	15.0	49.8
	26	55	30	50	28.0	49.8
			34	50	30.0	49.8
			-10	80	7.1	57.0
5000	20	55	0	70	10.5	52.3
			10	50	14.9	48.6
			30	50	28.1	48.6
	26	55	34	50	30.1	48.6
			-10	80	6.9	56.5
			0	70	10.3	51.8
5500	20	55	10	50	14.9	48.2
			30	50	28.1	48.2
			34	50	30.2	48.2
	26	55	-10	80	6.9	56.5
			0	70	10.3	51.8
			10	50	14.9	48.2

PRODUCT ACCESSORIES

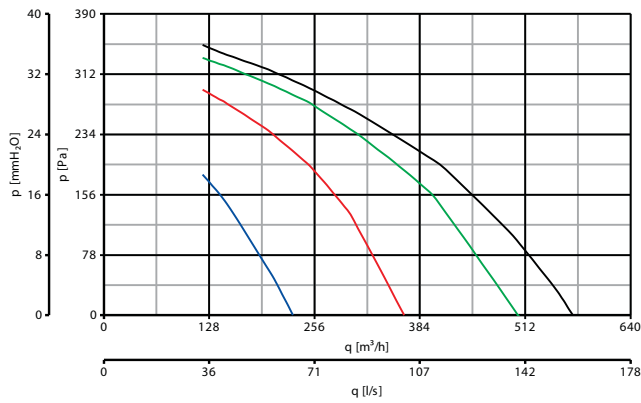
Models	DESCRIPTION	Code	Product						
			VORT NRG 500 V code 45180 code 45190	VORT NRG 1000 V code 45181 code 45191	VORT NRG 2000 V code 45182 code 45192	VORT NRG 2500 V code 45186 code 45196	VORT NRG 3000 V code 45183 code 45193	VORT NRG 4000 V code 45184 code 45194	VORT NRG 6000 V code 45185 code 45195
	C3VM16 Comm. 3V single phase 16A	22916		●	●	●	●	●	
	C4VM16 Comm. 4V single phase 16A	14021	●						
	NRG DEH 500 Ø 200 Duct electric heater (2 KW single-phase)	24158	●						
	NRG DEH 1200-2000 Ø 315 Duct electric heater (6 KW single-phase)	24160		●	●				
	NRG DEH 2500-3000 Ø 355 Duct electric heater (7.5 KW single-phase)	24161				●	●		
	NRG V RRC 500 Rain cover	24162	●						
	NRG V RRC 1000-2000 Rain cover	24163		●	●				
	NRG V RRC 2500 Rain cover	24164				●			
	NRG V RRC 3000-4000 Rain cover	24165					●	●	
	NRG V RRC 6000 Rain cover	24166							●
	F5 FILTER VORT NRG 500	21001	●						
	F5 FILTER VORT NRG 2000	21004		●	●				
	F5 FILTER VORT NRG 2500-3000	21005				●	●		
	F5 FILTER VORT NRG 4000-5000	21006						●	
	F5 FILTER VORT NRG 6000	21007							●
	F7 FILTER VORT NRG 500	21008	●						
	F7 FILTER VORT NRG 2000	21011		●	●				
	F7 FILTER VORT NRG 2500-3000	21012				●	●		
	F7 FILTER VORT NRG 4000-5000	21013						●	
	F7 FILTER VORT NRG 6000	21014							●

Models	DESCRIPTION	Code	Product						
			VORT NRG 500 V code 45180 code 45190	VORT NRG 1000 V code 45181 code 45191	VORT NRG 2000 V code 45182 code 45192	VORT NRG 2500 V code 45186 code 45196	VORT NRG 3000 V code 45183 code 45193	VORT NRG 4000 V code 45184 code 45194	VORT NRG 6000 V code 45185 code 45195
	DHW 500 Ø 200 Duct hot water coil	24148	•						
	DHW 1500 Ø 315 Duct hot water coil	24150		•	•				
	DHW 3000 Ø 355 Duct hot water coil	24151				•	•		
	DHW 5000 Ø 450 Duct hot water coil	24152						•	•
	DCW 500 Ø 200 Duct cooled water coil	24153	•						
	DCW 1500 Ø 315 Duct cooled water coil	24155		•	•				
	DCW 3000 Ø 355 Duct cooled water coil	24156				•	•		
DCW 5000 Ø 450 Duct cooled water coil	24157						•	•	
	FB 500 Ø 200 Duct filter box (F7)	24139	•						
	FB 1200 Ø 315 Duct filter box (F7)	24141		•					
	FB 2000 Ø 315 Duct filter box (F7)	24142			•				
	FB 2500-3000 Ø 355 Duct filter box (F7)	24143				•	•		
	FB 4000-5000 Ø 450 Duct filter box (F7)	24145						•	
	FB 6000 Ø 450 Duct filter box (F7)	24147							•
	NRG ABC 500 Ø 200 Expulsion sleeve with insect screen	22296	•						
	NRG ABC 1000-1200-2000 Ø 315 Expulsion sleeve with insect screen	22298		•	•				
	NRG ABC 2500-3000 Ø 355 Expulsion sleeve with insect screen	22299				•	•		
	NRG ABC 4000-5000-6000 Ø 450 Expulsion sleeve with insect screen	22749						•	•

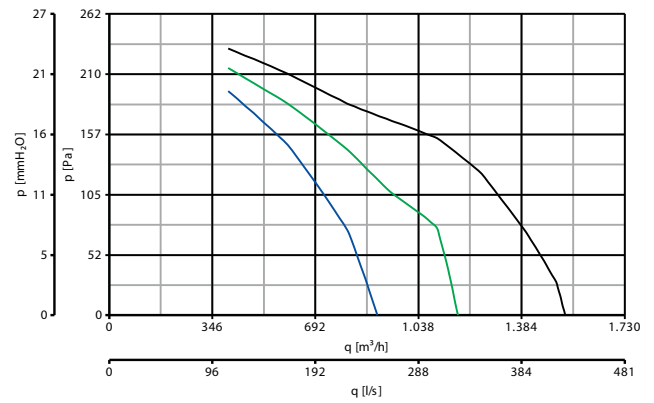
Description and sizes on page 236; System components on page 330.

PERFORMANCE CURVES

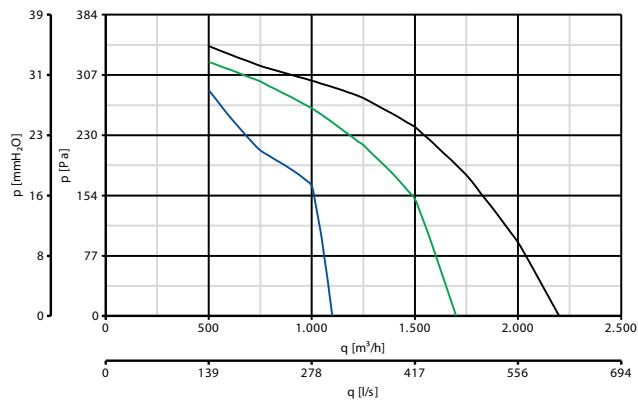
VORT NRG 500 V code 45180 - 45190



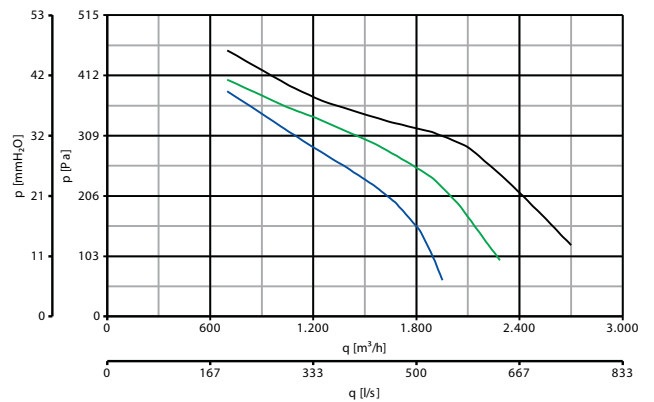
VORT NRG 1000 V code 45181 - 45191



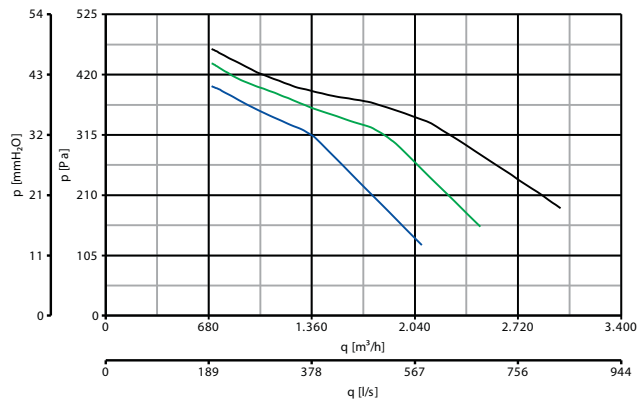
VORT NRG 2000 V code 45182 - 45192



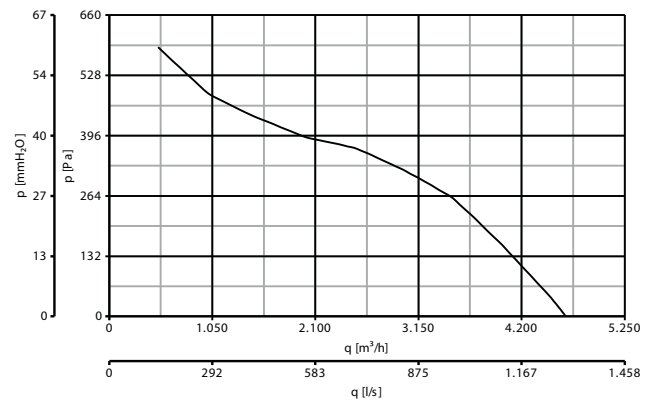
VORT NRG 2500 V code 45186 - 45196



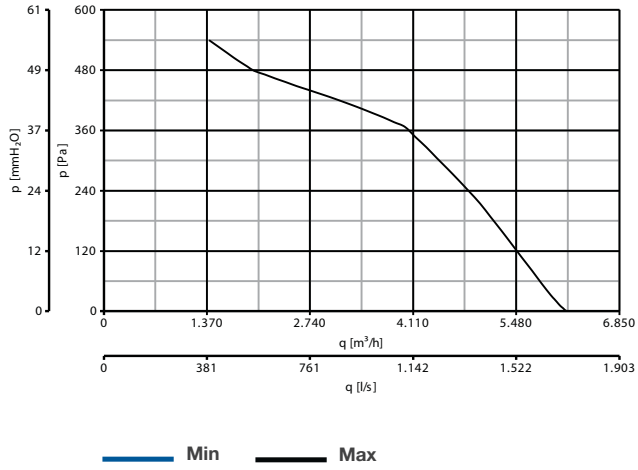
VORT NRG 3000 V code 45183 - 45193



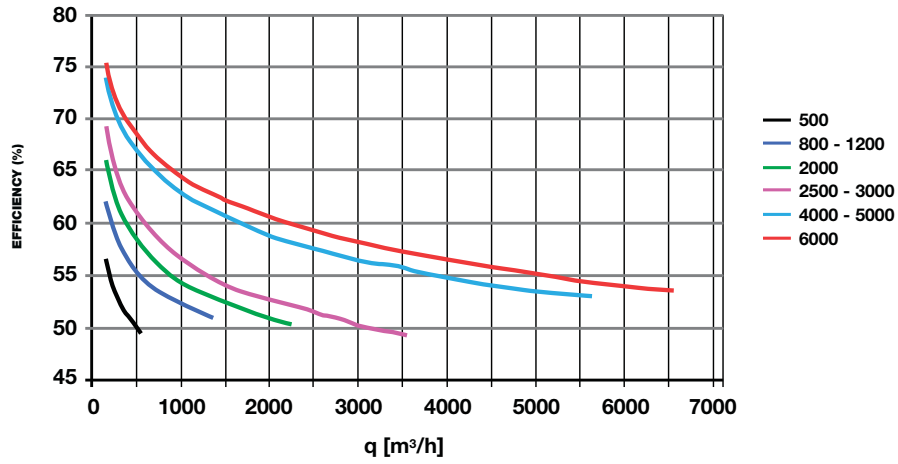
VORT NRG 4000 V code 45184 - 45194




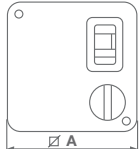


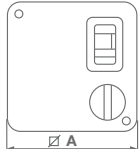


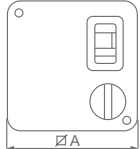
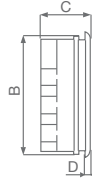

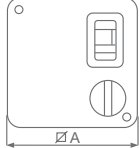


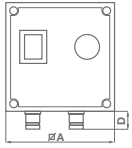
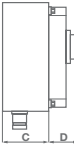

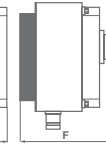



VORT NRG 6000 V code 45185 - 45195




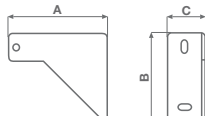
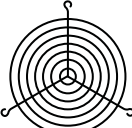
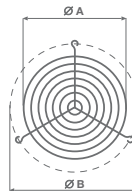

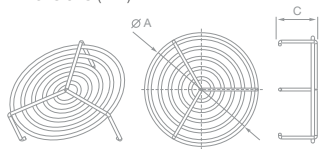


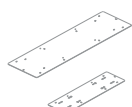
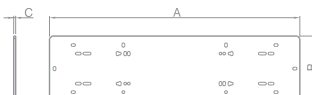
HEAT RECOVERY EFFICIENCY CURVE

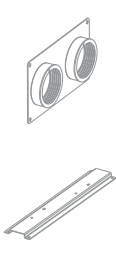
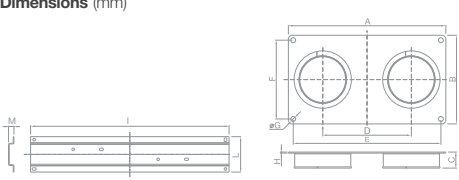
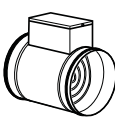
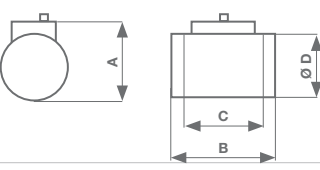
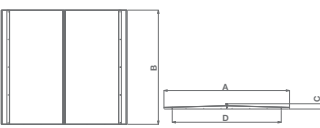
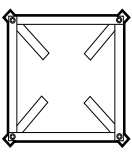
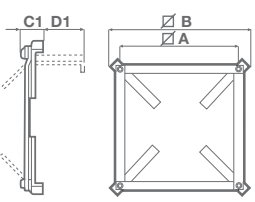


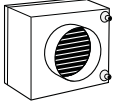
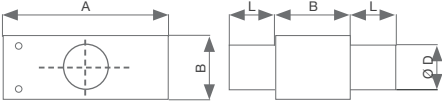
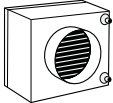
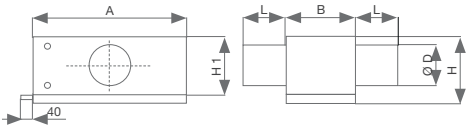
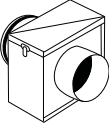
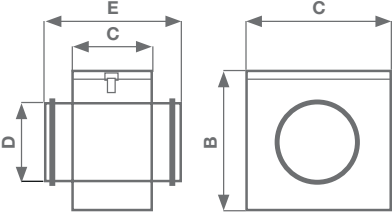
COMMERCIAL VENTILATION ACCESSORIES

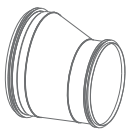
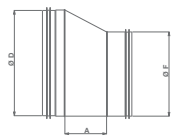
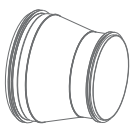
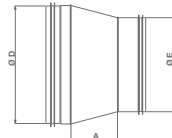

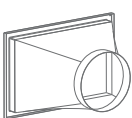
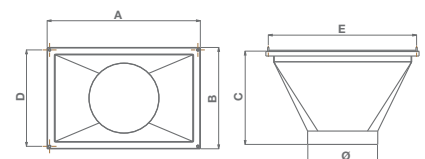
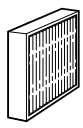
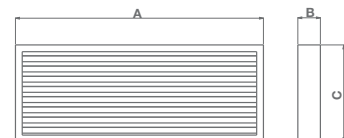
Models		Code	Dimensions																																					
	<p>C5 0.5 5 position speed controller</p> <ul style="list-style-type: none"> - 5 speeds controller - Not suitable for timer, automatic, automatic timer and cord operated appliances - Convertible to flush-mounted using SCB5 kit - Weight 0.2 Kg - Double insulation 	12987																																						
			<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>∅A</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>C5 0.5</td> <td>12987</td> <td>120</td> <td>43</td> </tr> </tbody> </table> <p>Dimensions (mm)</p>	Models	Code	∅A	C	C5 0.5	12987	120	43																													
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	<p>C 1.5 - C 2.5 Non reversible variable electronic speed controller</p> <ul style="list-style-type: none"> - Not suitable for products with timer or automatic shutters - Convertible to flush-mounted using SCB5 kit - Weight 0.2 Kg - Maximum load: 200 W (for C 1.5) 450 W (for C 2.5) - Double insulation 	12966 12967																																						
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	<p>SCNRB Non reversible variable electronic speed controller (built-in)</p> <ul style="list-style-type: none"> - Not suitable for products with timer or automatic shutters - Weight 0.2 Kg - Maximum load: 200 W - Double insulation 	12971																																						
			<table border="1"> <thead> <tr> <th>∅A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>142</td> <td>135</td> <td>59.5</td> <td>4.5</td> </tr> </tbody> </table> <p>Dimensions (mm)</p>	∅A	B	C	D	142	135	59.5	4.5																													
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	<p>KIT SCB</p> <ul style="list-style-type: none"> - Kit to convert C1.5 to built-in model <p>KIT SCB5</p> <ul style="list-style-type: none"> - Kit to convert C5 0.5 to built-in model 	22481 22483																																						
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	<p>IREM Electrical speed controllers</p> <p>IREM 3</p> <p>IREM 5</p> <p>IREM 9</p> <p>IRET 6</p> <ul style="list-style-type: none"> - Single-phase and three-phase electronic speed controller 	12931 12932 12933 12934	   																																					
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IREM 9	12933	220-240	9	0.7	Cl.I	54																																		
IRET 6	12934	220-240	6	0.7	Cl.I	54																																		
	<p>DUO Speed controller</p> <ul style="list-style-type: none"> - Two speeds switch - On/off switch 	22914																																						
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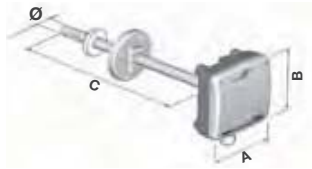

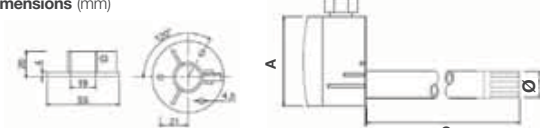

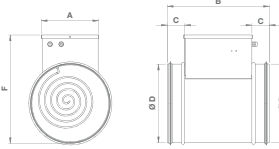



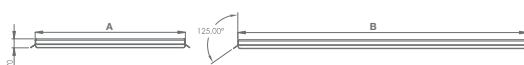
Models		Code	Dimensions																																	
	<p>Sensor units</p> <p>Sensor units are appliances which detect certain environmental conditions (humidity, temperature, human motion, odour and smoke concentration) and automatically activate the extractor fans. They may also be connected to Vortice control units, enhancing their functions.</p> <ul style="list-style-type: none"> - Supply voltage 220-240 V - Frequency: 50/60 Hz - Max load 3A - Operating temperature: 50°C - Protection rating IP20 																																			
	<p>C HCS (code 12994)</p> <p>Checks the relative humidity of the air: the extractor fan is activated automatically when the relative humidity percentage exceeds 65%. Otherwise, the appliance starts automatically a few seconds after the light is switched on and continues to run for a set time after it has been switched off again; this time period can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.</p>		<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>C HCS</td> <td>12994</td> <td>144</td> <td>54</td> <td>55.8</td> </tr> <tr> <td>C TEMP</td> <td>12992</td> <td>144</td> <td>54</td> <td>55.8</td> </tr> <tr> <td>C SMOKE</td> <td>12993</td> <td>144</td> <td>54</td> <td>55.8</td> </tr> <tr> <td>C PIR</td> <td>12998</td> <td>144</td> <td>54</td> <td>55.8</td> </tr> <tr> <td>C TIMER</td> <td>12999</td> <td>144</td> <td>54</td> <td>55.8</td> </tr> </tbody> </table>				Models	Code	A	B	C	C HCS	12994	144	54	55.8	C TEMP	12992	144	54	55.8	C SMOKE	12993	144	54	55.8	C PIR	12998	144	54	55.8	C TIMER	12999	144	54	55.8
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	<p>C TEMP (code 12992)</p> <p>Checks the temperature of the surrounding air: the extractor fan is activated automatically when a certain temperature is recorded; this can be adjusted, using an external trimmer, to a value between 10°C and 40°C above the set threshold. A timer keeps it running after the temperature has fallen below the set threshold, for a period of time which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer.</p>	12994 12992 12993 12998 12999	<p>Dimensions (mm)</p>																																	
	<p>C SMOKE (code 12993)</p> <p>Checks the quality of the air when the air contains cigarette smoke, odours and other pollutants: the extractor fan is activated automatically when a concentration of odours higher than the set value is detected; this value can be adjusted using an external trimmer. A pre-set timer, which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer, keeps the extractor fan running for the desired period of time.</p>																																			
	<p>C PIR (code 12998)</p> <p>Checks for human motion in the room: the extractor fan is activated automatically for a specified time period, which can be adjusted between 3 and 20 minutes using a trimmer, when human movement is detected in its range.</p>																																			
	<p>C TIMER (code 12999)</p> <p>Checks the operating time of the appliance to which it is connected: the extractor fan is activated automatically a few seconds after the light is switched on and continues to run for a set time, which can be adjusted to a value between 3 and 20 minutes using a built-in trimmer, after it has been switched off again.</p>																																			
	<p>C3VM16 Comm. 3V single phase 16A</p>	22916	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>C3VM16</td> <td>22916</td> <td>81</td> <td>65</td> <td>113</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>V~50Hz</th> <th>A</th> <th>Kg</th> <th>Insulation</th> <th>IP</th> </tr> </thead> <tbody> <tr> <td>C3VM16</td> <td>22916</td> <td>220-240</td> <td>16</td> <td>0.33</td> <td>Cl.II.</td> <td>65</td> </tr> </tbody> </table>				Models	Code	A	B	C	C3VM16	22916	81	65	113	Models	Code	V~50Hz	A	Kg	Insulation	IP	C3VM16	22916	220-240	16	0.33	Cl.II.	65						
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	CA-G Protection grille - Fitted to the appliance intake to prevent accidental contact with moving parts if the appliance is installed in an accessible position (STANDARD EN 294)	22750 22755 22760 22762 22765 22770 22775	 <table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>Ø A</th> <th>Ø B</th> <th>N. fiss.</th> </tr> </thead> <tbody> <tr> <td>CA-G 100</td> <td>22750</td> <td>82</td> <td>99</td> <td>3X120°</td> </tr> <tr> <td>CA-G 125</td> <td>22755</td> <td>102</td> <td>124</td> <td>3X120°</td> </tr> <tr> <td>CA-G 150</td> <td>22760</td> <td>142</td> <td>149</td> <td>3X120°</td> </tr> <tr> <td>CA-G 160</td> <td>22762</td> <td></td> <td></td> <td>3X120°</td> </tr> <tr> <td>CA-G 200</td> <td>22765</td> <td>142</td> <td>183</td> <td>3X120°</td> </tr> <tr> <td>CA-G 250</td> <td>22770</td> <td>182</td> <td>220</td> <td>3X120°</td> </tr> <tr> <td>CA-G 315</td> <td>22775</td> <td>222</td> <td>260</td> <td>3X120°</td> </tr> </tbody> </table> <p>Dimensions (mm)</p>	Models	Code	Ø A	Ø B	N. fiss.	CA-G 100	22750	82	99	3X120°	CA-G 125	22755	102	124	3X120°	CA-G 150	22760	142	149	3X120°	CA-G 160	22762			3X120°	CA-G 200	22765	142	183	3X120°	CA-G 250	22770	182	220	3X120°	CA-G 315	22775	222	260	3X120°
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	LINEO-G Protection grille (not suitable for Lineo Es) - To be mounted directly on the product at inlet/outlet - Useful for safety and to protect the product from external bodies. - Totally manufactured from steel. black epoxy powder coated for perfect weather protection	22701 22702 22703 22704 22705 22706	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>Ø A</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>LINEO-G 100</td> <td>22701</td> <td>101</td> <td>29</td> </tr> <tr> <td>LINEO-G 125</td> <td>22702</td> <td>127</td> <td>29</td> </tr> <tr> <td>LINEO-G 150</td> <td>22703</td> <td>151</td> <td>35.5</td> </tr> <tr> <td>LINEO-G 160</td> <td>22704</td> <td>161</td> <td>34</td> </tr> <tr> <td>LINEO-G 200</td> <td>22705</td> <td>201</td> <td>42</td> </tr> <tr> <td>LINEO-G 250</td> <td>22706</td> <td>255</td> <td>50.5</td> </tr> </tbody> </table> <p>Dimensions (mm)</p> 	Models	Code	Ø A	C	LINEO-G 100	22701	101	29	LINEO-G 125	22702	127	29	LINEO-G 150	22703	151	35.5	LINEO-G 160	22704	161	34	LINEO-G 200	22705	201	42	LINEO-G 250	22706	255	50.5												
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	LINEO-C Installation kit tube - To install Lineo V0 in series, in parallel and in series + parallel	22584 22585 22586 22587 22588 22589	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>Ø A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>LINEO-C 100</td> <td>22584</td> <td>108</td> <td rowspan="6">59</td> </tr> <tr> <td>LINEO-C 125</td> <td>22585</td> <td>134</td> </tr> <tr> <td>LINEO-C 150</td> <td>22586</td> <td>158</td> </tr> <tr> <td>LINEO-C 160</td> <td>22587</td> <td>168</td> </tr> <tr> <td>LINEO-C 200</td> <td>22588</td> <td>208</td> </tr> <tr> <td>LINEO-C 250</td> <td>22589</td> <td>259</td> </tr> </tbody> </table> <p>Dimensions (mm)</p> 	Models	Code	Ø A	B	LINEO-C 100	22584	108	59	LINEO-C 125	22585	134	LINEO-C 150	22586	158	LINEO-C 160	22587	168	LINEO-C 200	22588	208	LINEO-C 250	22589	259																	
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	LINEO-SF Series installation plate - To install Lineo V0 in series	22593 22594	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>LINEO-SF 500</td> <td>22593</td> <td>500</td> <td>130</td> <td rowspan="2">2</td> </tr> <tr> <td>LINEO-SF 700</td> <td>22594</td> <td>730</td> <td>220</td> </tr> </tbody> </table> <p>Dimensions (mm)</p> 	Models	Code	A	B	C	LINEO-SF 500	22593	500	130	2	LINEO-SF 700	22594	730	220																										
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 <p>LINEO-PF Parallel installation kit - To install Lineo V0 in parallel</p>	<p>22577 22578 22579 22581 22582 22583</p>	<p>Dimensions (mm)</p> 	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>Ø G</th> <th>H</th> <th>I</th> <th>640I</th> <th>L</th> <th>M</th> </tr> </thead> <tbody> <tr> <td>LINEO-PF 100</td> <td>22577</td> <td rowspan="2">320</td> <td rowspan="2">180</td> <td rowspan="2">32.5</td> <td rowspan="2">180</td> <td rowspan="2">300</td> <td rowspan="2">160</td> <td rowspan="2"></td> <td rowspan="2"></td> <td rowspan="2"></td> <td rowspan="2"></td> <td rowspan="2">420</td> <td rowspan="2"></td> </tr> <tr> <td>LINEO-PF 125</td> <td>22578</td> </tr> <tr> <td>LINEO-PF 150</td> <td>22579</td> <td rowspan="2">395</td> <td rowspan="2">220</td> <td rowspan="2">37.5</td> <td rowspan="2">205</td> <td rowspan="2">375</td> <td rowspan="2">200</td> <td rowspan="2">10</td> <td rowspan="2">2</td> <td rowspan="2"></td> <td rowspan="2"></td> <td rowspan="2">470</td> <td rowspan="2">75</td> <td rowspan="2">11.5</td> </tr> <tr> <td>LINEO-PF 160</td> <td>22581</td> </tr> <tr> <td>LINEO-PF 200</td> <td>22582</td> <td>440</td> <td>240</td> <td></td> <td>225</td> <td>420</td> <td>220</td> <td></td> <td></td> <td></td> <td></td> <td>520</td> <td></td> </tr> <tr> <td>LINEO-PF 250</td> <td>22583</td> <td>540</td> <td>290</td> <td></td> <td>285</td> <td>520</td> <td>270</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>													Models	Code	A	B	C	D	E	F	Ø G	H	I	640I	L	M	LINEO-PF 100	22577	320	180	32.5	180	300	160					420		LINEO-PF 125	22578	LINEO-PF 150	22579	395	220	37.5	205	375	200	10	2			470	75	11.5	LINEO-PF 160	22581	LINEO-PF 200	22582	440	240		225	420	220					520		LINEO-PF 250	22583	540	290		285	520	270						
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 <p>DEH Pre-post electrical heating - circular duct batteries with automatic-reset control thermostat and manual-reset safety thermostat. A differential flow meter or pressure switch is recommended to increase the operating safety level. Command and control from external probes (thermostat/differential probe).</p>	<p>24158 24159 24160 24161</p>	<p>Dimensions (mm)</p> 	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th colspan="2">kW</th> <th>A</th> <th>B</th> <th>C</th> <th>Ø D</th> </tr> </thead> <tbody> <tr> <td>DEH 500</td> <td>24158</td> <td colspan="2">2 single-ph</td> <td>300</td> <td></td> <td>300</td> <td>200</td> </tr> <tr> <td>DEH 800</td> <td>24159</td> <td colspan="2">3 single-ph</td> <td>350</td> <td>380</td> <td></td> <td>250</td> </tr> <tr> <td>DEH 1500</td> <td>24160</td> <td colspan="2">6 three-ph</td> <td>415</td> <td></td> <td>260</td> <td>315</td> </tr> <tr> <td>DEH 2000</td> <td>24161</td> <td colspan="2">7.5 three-ph</td> <td>550</td> <td>460</td> <td>340</td> <td>355</td> </tr> </tbody> </table>													Models	Code	kW		A	B	C	Ø D	DEH 500	24158	2 single-ph		300		300	200	DEH 800	24159	3 single-ph		350	380		250	DEH 1500	24160	6 three-ph		415		260	315	DEH 2000	24161	7.5 three-ph		550	460	340	355																																			
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 <p>CARF-C Sub-frame - For preventing air back-draught or rain penetration when the unit is turned off</p>	<p>22543 22544 22545</p>	<p>Dimensions (mm)</p> 	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C1</th> <th>D1</th> </tr> </thead> <tbody> <tr> <td>CARF-C 125</td> <td>22543</td> <td>357</td> <td>401</td> <td rowspan="2">140</td> <td rowspan="2">37</td> </tr> <tr> <td>CARF-C 150/160/200</td> <td>22544</td> <td>500</td> <td>541</td> </tr> <tr> <td>CARF-C 250/315</td> <td>22545</td> <td>750</td> <td>791</td> <td></td> <td></td> </tr> </tbody> </table>													Models	Code	A	B	C1	D1	CARF-C 125	22543	357	401	140	37	CARF-C 150/160/200	22544	500	541	CARF-C 250/315	22545	750	791																																																							
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	DHW Post water heating - Circular duct water coil with copper and aluminium tube bundle. The post-cooling units can also be used for post-heating	24148 24149 24150 24151 24152	Models	Code	A	B	Ø D	H	L	ø water IN-OUT			
			DHW 500	24148	420		200	320		12 mm			
			DHW 800	24149	490		250	350					
			DHW 1500	24150	650	400	315	400	150	1/2"			
			DHW 3000	24151	900		355	530		3/4"			
			DHW 5000	24152	11800		450	740		1"			
			Dimensions (mm)										
													
	DCW Post water cooling - Circular duct water coil with copper and aluminium tube bundle. The post-cooling units can also be used for post-heating	24153 24154 24155 24156 24157	Models	Code	A	B	Ø D	H	L	H1	ø water IN-OUT	ø condensation drain	
			DCW 500	24153	420		200	320		275	12 mm		
			DCW 800	24154	490		250	350		305			
			DCW 1500	24155	650	400	315	400	150	365	1/2"	1"	
			DCW 3000	24156	900		355	530		490	3/4"		
			DCW 5000	24157	11800		450	740		730	1"		
			Dimensions (mm)										
													
	FB F7 Filter box - Circular channel filter boxes, complete with F7 filter. Designed to align with regulations (Law 3 16 January 2003) to protect non-smokers, also facilitate maintenance of heat recovery units: removing integrated F5 filters and installing F7 filter boxes allows you direct access to the device whilst being able to transfer the filter units to locations that are easier to access.	24139 24140 24141 24142 24143 24145 24147	Models	Code	A	B	C	Ø D	E				
			FB 500	24139	235	290	300	200	396				
			FB 800	24140	405	320	300	250	396				
			FB 1200	24141	465	375	600	315	696				
			FB 2000	24142	555	490	600	315	696				
			FB 2500-3000	24143	625	520	700	355	796				
			FB 4000-5000	24145	705	610	900	450	996				
			FB 6000	24147	705	610	900	450	996				
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 <p>RLU NRG HE Eccentric sleeve - Made using galvanised sheet steel, this can be used to join two eccentric ducts between Ø 200 mm and Ø 50 mm: it is especially useful for successfully joining circular ducts and coils associated with the recovery unit</p>		24172 24174 24176 24178	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>Ø D</th> <th>Ø E</th> </tr> </thead> <tbody> <tr> <td>RLU Ø 200 - 250 NRG HE</td> <td>24172</td> <td>99</td> <td>250</td> <td>200</td> </tr> <tr> <td>RLU Ø 315 - 250 NRG HE</td> <td>24174</td> <td>119</td> <td>315</td> <td>250</td> </tr> <tr> <td>RLU Ø 355 - 315 NRG HE</td> <td>24176</td> <td>85</td> <td>355</td> <td>315</td> </tr> <tr> <td>RLU Ø 315 - 400 NRG HE</td> <td>24178</td> <td>152</td> <td>400</td> <td>315</td> </tr> </tbody> </table>	Models	Code	A	Ø D	Ø E	RLU Ø 200 - 250 NRG HE	24172	99	250	200	RLU Ø 315 - 250 NRG HE	24174	119	315	250	RLU Ø 355 - 315 NRG HE	24176	85	355	315	RLU Ø 315 - 400 NRG HE	24178	152	400	315	Dimensions (mm) 																	
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 <p>RVLU NRG HE Coaxial adapter - Made using galvanised sheet steel, this can be used to join two coaxial ducts between Ø 200 mm and Ø 50 mm: it is especially useful for successfully joining circular ducts and coils associated with the recovery unit</p>		24171 24173 24175 24177	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>Ø D</th> <th>Ø E</th> </tr> </thead> <tbody> <tr> <td>RCLU Ø 200 - 250 NRG HE</td> <td>24171</td> <td>99</td> <td>250</td> <td>200</td> </tr> <tr> <td>RCLU Ø 315 - 250 NRG HE</td> <td>24173</td> <td>119</td> <td>315</td> <td>250</td> </tr> <tr> <td>RCLU Ø 355 - 315 NRG HE</td> <td>24175</td> <td>85</td> <td>355</td> <td>315</td> </tr> <tr> <td>RCLU Ø 400 - 355 NRG HE</td> <td>24177</td> <td>152</td> <td>400</td> <td>355</td> </tr> </tbody> </table>	Models	Code	A	Ø D	Ø E	RCLU Ø 200 - 250 NRG HE	24171	99	250	200	RCLU Ø 315 - 250 NRG HE	24173	119	315	250	RCLU Ø 355 - 315 NRG HE	24175	85	355	315	RCLU Ø 400 - 355 NRG HE	24177	152	400	355	Dimensions (mm) 																	
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 <p>NRG ABC Expulsion sleeve - Made using galvanised sheet steel, this allows the expulsion of air directly from the machine, preventing foreign bodies from entering while the machine is not running by means of a 10x10 mm mesh</p>		22296 22298 22299	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>NRG ABC 500</td> <td>22296</td> <td>200</td> <td>180</td> </tr> <tr> <td>NRG ABC 1200/2000</td> <td>22298</td> <td>315</td> <td>180</td> </tr> <tr> <td>NRG ABC 2500/3000</td> <td>22299</td> <td>355</td> <td>180</td> </tr> </tbody> </table>	Models	Code	A	B	NRG ABC 500	22296	200	180	NRG ABC 1200/2000	22298	315	180	NRG ABC 2500/3000	22299	355	180	Dimensions (mm)																										
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 <p>F5 FILTER - VORT NRG HE - Extra F5 filter for any necessary EN 13779 compliance measures (optional)</p>		21015 21016 21017 21006	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>F5 FILTER VORT NRG HE 500</td> <td>21015</td> <td>550</td> <td>215</td> <td>48</td> </tr> <tr> <td>F5 FILTER VORT NRG HE 1000</td> <td>21016</td> <td>635</td> <td>400</td> <td>48</td> </tr> <tr> <td>F5 FILTER VORT NRG HE 1500</td> <td>21017</td> <td>1000</td> <td>450</td> <td>48</td> </tr> <tr> <td>F5 FILTER VORT NRG HE 4000-5000</td> <td>21006</td> <td>600</td> <td></td> <td>100</td> </tr> </tbody> </table>	Models	Code	A	B	C	F5 FILTER VORT NRG HE 500	21015	550	215	48	F5 FILTER VORT NRG HE 1000	21016	635	400	48	F5 FILTER VORT NRG HE 1500	21017	1000	450	48	F5 FILTER VORT NRG HE 4000-5000	21006	600		100	Dimensions (mm) 																	
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	<p>NRG HE DUCT SENSOR CO₂ Proportional duct sensor for checking CO₂ levels (4 - 20 m A)</p> <p>- Installed in ducts, this checks the CO₂ levels and, depending on the readings, identifies the necessary machine adaptations to restore the set threshold parameters for the environment</p>	12804	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> <th>Ø</th> </tr> </thead> <tbody> <tr> <td>NRG HE DUCT SENSOR CO₂</td> <td>12804</td> <td>80</td> <td>80</td> <td>200</td> <td>12</td> </tr> </tbody> </table>				Models	Code	A	B	C	Ø	NRG HE DUCT SENSOR CO ₂	12804	80	80	200	12																								
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	<p>NRG HE PRE-HEATER</p> <p>- Coil with heating element for pre-heating modulated by solid state relay; installed in ducts, this increases the temperature of the air entering the exchanger, preventing frost from forming on the heat exchanger and increasing its output. Recommended in areas where external temperatures are particularly severe</p>	24167 24168 24169 24170	<table border="1"> <thead> <tr> <th>Models</th> <th>Code</th> <th>A</th> <th>B</th> <th>C</th> <th>Ø D</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>PRE-HEATER Ø 200 3 kW NRG HE</td> <td>24167</td> <td>200.4</td> <td>400</td> <td>50</td> <td>196</td> <td>289</td> </tr> <tr> <td>PRE-HEATER Ø 315 6 kW NRG HE</td> <td>24168</td> <td>256</td> <td>456</td> <td>78</td> <td>311</td> <td>432</td> </tr> <tr> <td>PRE-HEATER Ø 315 9 kW NRG HE</td> <td>24169</td> <td>256</td> <td>456</td> <td>78</td> <td>311</td> <td>433</td> </tr> <tr> <td>PRE-HEATER Ø 355 12 kW NRG HE</td> <td>24170</td> <td>256</td> <td>456</td> <td>78</td> <td>351</td> <td>484</td> </tr> </tbody> </table>					Models	Code	A	B	C	Ø D	E	PRE-HEATER Ø 200 3 kW NRG HE	24167	200.4	400	50	196	289	PRE-HEATER Ø 315 6 kW NRG HE	24168	256	456	78	311	432	PRE-HEATER Ø 315 9 kW NRG HE	24169	256	456	78	311	433	PRE-HEATER Ø 355 12 kW NRG HE	24170	256	456	78	351	484
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When the air is “good” the quality of our work improves.

Air pollution inside buildings is caused by humans and their actions.

For the sake of our health, it is vital to ventilate our homes and workplaces in order to improve the air quality inside. Vortice® offers a wide range of products designed specifically for commercial ventilation.

CE MARKING

Commercial Ventilation appliances conform to the following European Directives:

- 2006/42/EC Machines Directive (MD)
- 2006/95/EC Low Voltage Directive (LVD)
- 2004/108/EC Electromagnetic Compatibility Directive (EMC)
- 2009/125/EC ErP Directive, Ecocompatible design of energy-related products in accordance with EU regulation 327/2011.

According to the following state-of-the-art Standards:

Safety:

EN 60204-1
EN ISO 12100-1
EN ISO 12100-2
EN ISO 12499
EN ISO 13857
EN 60335-1
EN 60335-2-80
EN 62233

EMC:

EN 55014-1
EN 55014-2
EN 61000-3-2
EN 61000-3-3

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