Sentinel Totus^2 D-ERV

- 3 unit sizes covering 500-2000m^3/h
- Sentinel demand ventilation control
- Low energy EC/DC motors
- Internal or external mounting IPX4
- Up to 90% energy recovery cell
- Independently Tested to EN 308
- Proportional or constant pressure control
- Performance tested to BS848 Parts 1 & 2
- Manufacture controlled to BS EN ISO 9001

Mini and Midi Models are manufactured with a frameless construction from single skinned Aluzinc panels, internally lined with 90kg/m^3 high efficiency acoustic and thermally insulating foam (fire retardant to BS476 Part 7 Class 1 & Part 6 Class O). Aluzinc panels allow for all units to be mounted either internally or externally as standard (IPX4). An optional inlet cowl is available for roof mounting applications if required.

Maxi units are manufactured with an aluminium frame construction with double skinned Aluzinc panels fitted with 60kg/m^3 thermal acoustic insulation.

The casing includes an inclined inlet and bellmouth entry which directs the incoming air to the impeller with minimal turbulence. The result is better air management through the unit, less noise, higher efficiency and an increased performance.

The housing is designed to be as compact as possible for concealed false ceiling applications and Sentinel Totus2 D-ERV, Demand Energy Recovery casings incorporate top and bottom access panels for maintenance (note Maxi unit is side access). Access panels are sized to enable single man maintenance.

Impellers

All Sentinel Totus^2 D-ERV units feature low energy, Class 1, EC/DC external rotor motor and backward curved impeller assemblies specifically chosen for performance and non-overloading characteristics. The assembly is dynamically balanced to DIN ISO 1940 Grade 6.3. Ball bearings are greased for life. Insulation is Class 'B' (from -25°C to +60°C). All models incorporate internal electronic overload protection and soft start function.

Filters

All Sentinel Totus^2 D-ERV units are complete as standard with G4 replaceable synthetic filters, complete with filter change warning. High grade F6 filters are available as an option.

Performance/Sound

Extensively tested to BS848 parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at reference level of 2 x 10^{-5} Pa. The inlet/outlet sound power level spectra figures are dB with a reference of 10^{-12} watts.

Electrical

Every Sentinel Totus^2 D-ERV unit is fitted with integrated controls and a purpose designed common user interface controller incorporating a 16 character backlit alpha numerical 2 line display with 4 button membrane keypad for fan status and commissioning set up. As standard this is mounted behind a removable perspex viewing pane allowing commissioning without accessing the wiring compartment. The user interface can be removed and remotely fixed if required. The unit also incorporates an isolator that is suitable for fitting a locking device to prevent accidental operation.

Motors are single phase 230V +/- 10% / 50/60Hz / 1ph.

24V DC power is provided from the unit for powering the matched range of Sentinel Demand Ventilation switches and sensors.

Models

Sensor Control

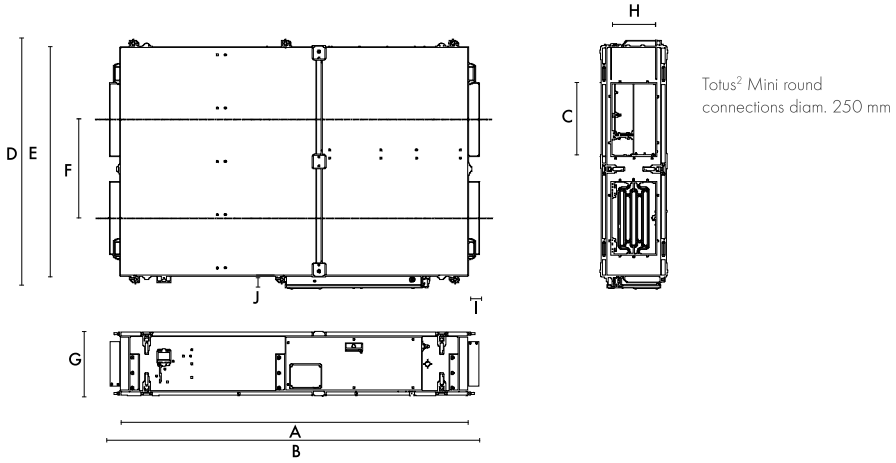
Model	Stock Ref
Mini	TOTUS2MINI
Midi	TOTUS2MIDI
Maxi	TOTUS2MAXI

Constant Pressure

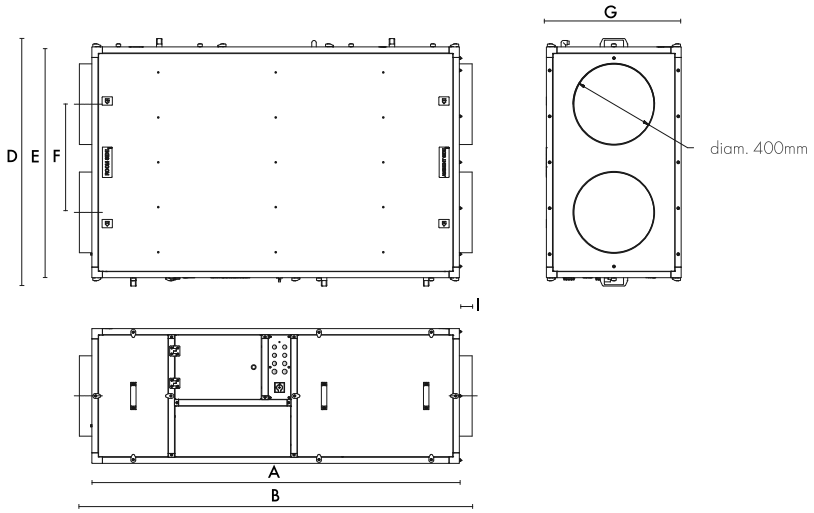
Model	Stock Ref
Mini/CP	TOTUS2MINI/CP
Midi/CP	TOTUS2MIDI/CP
Maxi/CP	TOTUS2MAXI/CP

Dimensions (mm)

Sentinel Totus² Mini/ Midi

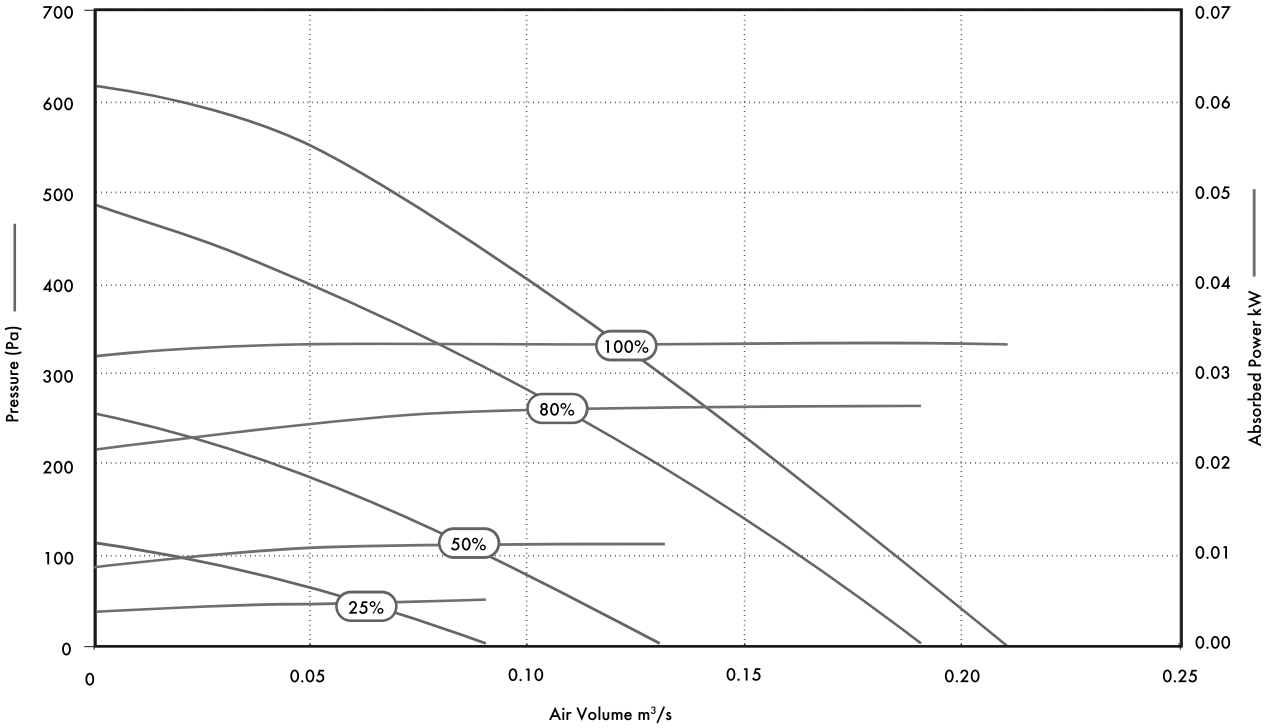


Sentinel Totus² Maxi



Model	a	b	c	d	e	f	g	h	i	j
Mini	1800	1910	-	970	900	450	350	-	55	70
Midi	1900	2020	400	1320	1250	538	350	250	60	70
Maxi	1800	1924	-	1212	1130	530	660	-	60	-

Performance Guide - Mini Model

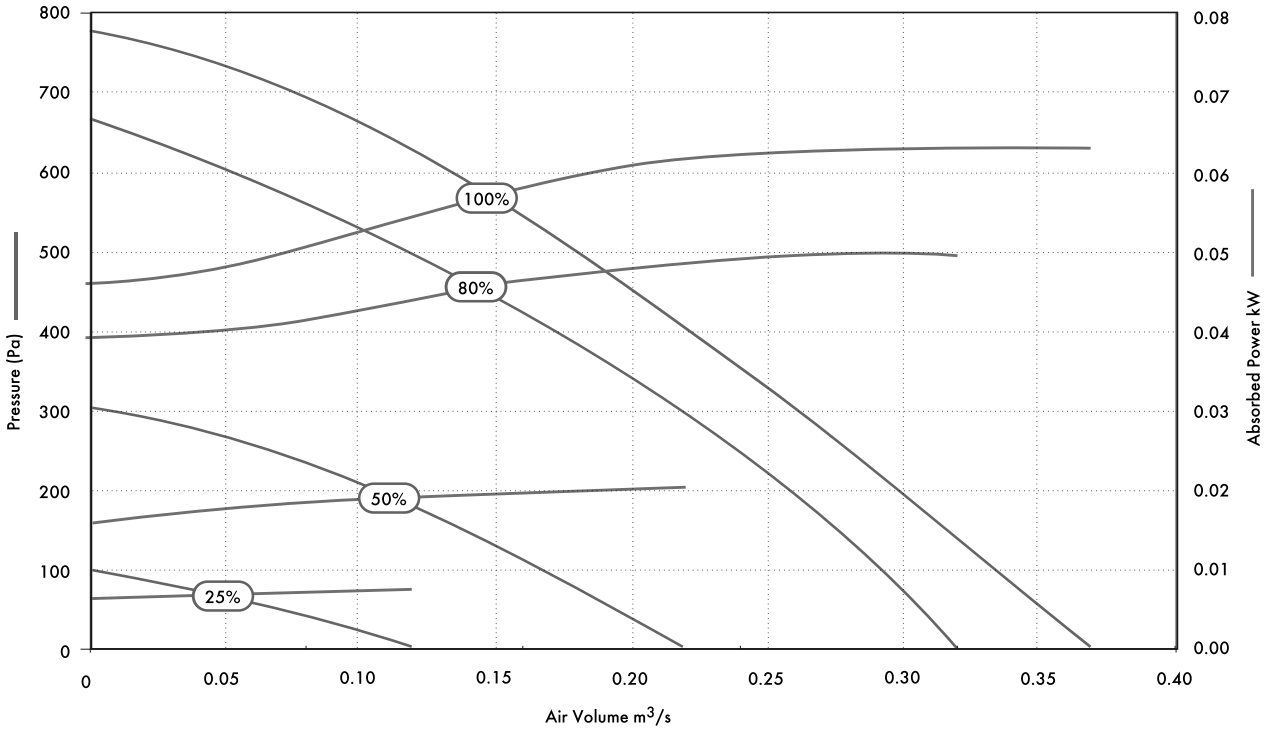


Speed		Airflow, m³/s @ Pa 0	50	100	200	300	400	500	600	Fans F.L.C.	Supply Voltage	Frost Heater	Unit Rated Current
100%	m³/s	0.21	0.20	0.19	0.16	0.13	0.10	0.07	0.03	2.5	230V/ 1/ 50Hz	2kW	12A
	SFP	1.59	1.68	1.77	2.10	2.57	3.33	4.76	11.00				
	kW	0.33	0.34	0.34	0.34	0.33	0.33	0.33	0.33				
80%	m³/s	0.19	0.18	0.16	0.13	0.09	0.05			1.85			
	SFP	1.38	1.46	1.66	2.05	2.88	4.90						
	kW	0.26	0.26	0.27	0.27	0.26	0.25						
50%	m³/s	0.13	0.11	0.09	0.04					0.8			
	SFP	0.85	1.02	1.23	2.63								
	kW	0.11	0.11	0.11	0.11								
25%	m³/s	0.09	0.06	0.02						0.35			
	SFP	0.51	0.77										
	kW	0.05	0.05	0.04									

Sound Data - Mini Model

Speed	Test Mode	Octave Band Frequency SWL 63	125	250	500	1K	2K	4K	8K	Breakout dB(A) @ 3m
100%	Intake	58	65	69	54	53	54	48	46	33
	Supply	55	59	55	50	49	53	37	36	
	Discharge	59	68	74	66	63	67	55	57	
	Exhaust	55	60	63	52	50	55	37	36	
	Breakout	55	53	55	47	43	46	33	31	
80%	Intake	58	63	69	54	53	52	45	45	31
	Supply	53	58	55	46	48	50	34	33	
	Discharge	59	67	74	64	62	65	53	55	
	Exhaust	55	59	60	50	48	52	34	34	
	Breakout	53	52	53	44	42	44	31	30	
50%	Intake	54	58	64	49	47	42	35	36	25
	Supply	49	53	53	39	40	38	26	29	
	Discharge	54	62	69	56	55	53	43	43	
	Exhaust	50	54	56	41	41	39	25	29	
	Breakout	50	48	49	38	35	33	24	27	
25%	Intake	47	52	48	39	37	30	26	29	17
	Supply	48	48	38	33	31	27	22	28	
	Discharge	49	59	51	48	44	41	30	30	
	Exhaust	48	50	39	34	31	28	23	29	
	Breakout	44	45	33	32	28	25	23	26	

Performance Guide - Midi Model

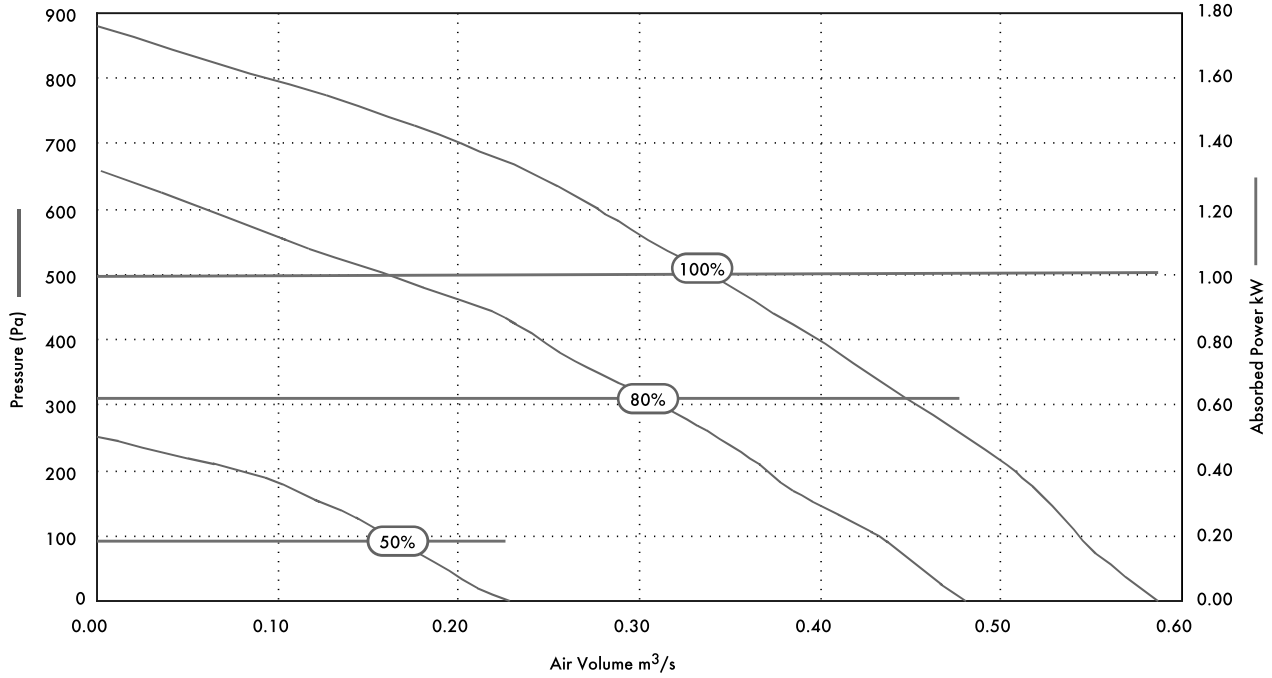


Speed		Airflow, m³/s @ Pa 0	50	100	200	300	400	500	600	Fans F.L.C.	Supply Voltage	Frost Heater	Unit Rated Current
100%	m³/s	0.37	0.35	0.33	0.30	0.26	0.22	0.18	0.13	3.0	230V/ 1/ 50Hz	2kW	12A
	SFP	1.70	1.79	1.89	2.09	2.41	2.81	3.31	4.28				
	kW	0.63	0.63	0.63	0.63	0.63	0.62	0.60	0.56				
80%	m³/s	0.32	0.31	0.29	0.26	0.21	0.17	0.11	0.05	2.5			
	SFP	1.55	1.60	1.71	1.93	2.29	2.74	3.95	8.04				
	kW	0.50	0.50	0.50	0.50	0.48	0.47	0.44	0.40				
50%	m³/s	0.22	0.19	0.17	0.10					1.0			
	SFP	0.91	1.04	1.19	1.78								
	kW	0.20	0.20	0.20	0.18								
25%	m³/s	0.12	0.07							0.5			
	SFP	0.62	0.97										
	kW	0.07	0.07										

Sound Data - Midi Model

Speed	Test Mode	Octave Band Frequency SWL 63	125	250	500	1K	2K	4K	8K	Breakout dB(A) @ 3m
100%	Intake	66	70	75	60	57	52	50	45	37
	Supply	61	62	65	54	52	46	42	41	
	Discharge	67	80	81	74	68	64	60	54	
	Exhaust	59	68	69	58	52	49	41	39	
	Breakout	61	62	63	51	46	42	37	37	
80%	Intake	64	68	72	57	53	49	45	42	34
	Supply	58	61	60	52	49	43	38	39	
	Discharge	66	79	80	73	65	62	57	50	
	Exhaust	58	67	68	54	48	44	37	38	
	Breakout	58	60	58	48	43	40	35	36	
50%	Intake	59	64	57	46	45	40	35	32	25
	Supply	54	56	48	42	40	34	30	31	
	Discharge	62	71	65	62	56	53	46	41	
	Exhaust	53	65	53	45	41	37	32	38	
	Breakout	55	56	44	38	35	31	26	27	
25%	Intake	58	53	46	37	37	29	25	29	18
	Supply	49	46	40	33	32	25	23	30	
	Discharge	56	56	53	49	44	39	31	30	
	Exhaust	50	48	43	35	31	26	23	29	
	Breakout	48	46	35	29	27	24	22	28	

Performance Guide - Maxi Model



Speed		Airflow, m³/s @ Pa 0	50	100	200	300	400	500	600	Fans F.L.C.	Supply Voltage	Frost Heater	Unit Current
100%	m³/s	0.59	0.57	0.55	0.51	0.46	0.40	0.34	0.27	5	230V/ 1/ 50Hz	4kW	20A
	SFP	1.71	1.77	1.84	1.98	2.20	2.53	2.97	3.74				
	kW	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01				
80%	m³/s	0.48	0.45	0.43	0.38	0.31	0.24	0.16		3			
	SFP	1.31	1.40	1.46	1.66	2.03	2.62	3.93					
	kW	0.63	0.63	0.63	0.63	0.63	0.63	0.63					
50%	m³/s	0.23	0.19	0.16	0.07					1			
	SFP	0.82	0.99	1.18	2.69								
	kW	0.19	0.19	0.19	0.19								

Sound Data - Maxi Model

Speed	Test Mode	Octave Band Frequency SWL 63	125	250	500	1k	2k	4k	8k	Breakout dB(A) @3m
100%	Intake	67	72	75	72	73	71	68	62	41
	Supply	62	65	75	66	65	61	53	46	
	Discharge	67	70	83	72	75	73	70	65	
	Extract	62	64	74	63	60	54	44	39	
	Breakout	66	67	70	53	48	49	41	39	
80%	Intake	64	71	79	70	69	68	65	58	40
	Supply	60	64	77	63	62	57	49	43	
	Discharge	65	69	82	69	72	70	67	59	
	Extract	59	63	75	60	57	51	42	38	
	Breakout	64	63	68	50	53	44	38	36	
50%	Intake	56	68	57	57	57	53	49	40	30
	Supply	52	66	57	51	50	44	35	31	
	Discharge	56	64	61	56	59	57	50	41	
	Extract	52	62	52	46	43	37	28	28	
	Breakout	54	62	52	41	39	38	34	32	
25%	Intake	48	47	40	37	35	29	23	29	20
	Supply	46	43	39	33	31	25	23	29	
	Discharge	46	45	42	40	41	34	25	29	
	Extract	48	41	37	31	26	23	23	29	
	Breakout	46	44	40	32	30	28	26	30	