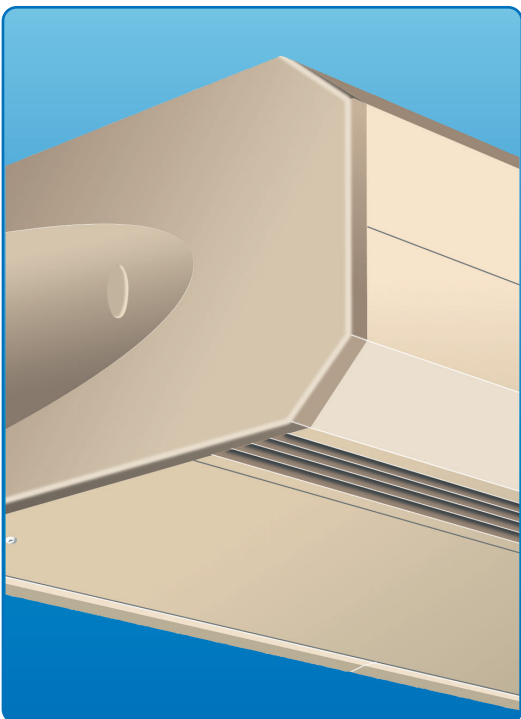


AIRDOOR[®] Elite



SPC

Elite warm
air curtains

heating with style

SPC The Company

SPC is a specialist manufacturer and supplier of fan convectors, coil heat exchangers, and HVAC equipment to the public and private sector.

SPC leads the way in HVAC technology and in responsiveness to customer needs. We thrive on innovation, on new technologies and new challenges. We stand for irresistible quality, exceptional customer care, and whole-life value for money.

For more than 20 years, we've applied our ingenuity to the heating, cooling, and dehumidifying of indoor environments - and to the delivery of HVAC equipment that withstands the grind of daily use. The result is a range of products that are aesthetic, robust, and economical to run.

But new ideas are never developed in isolation. They come from a service culture that takes pride in putting customers first. We listen and, if asked, we advise; we offer free site surveys - and we always return your calls.

Our mission is simple - to become your first-choice HVAC supplier, and to be the one company that provides a solution that exactly matches your needs.

Key facts about SPC:

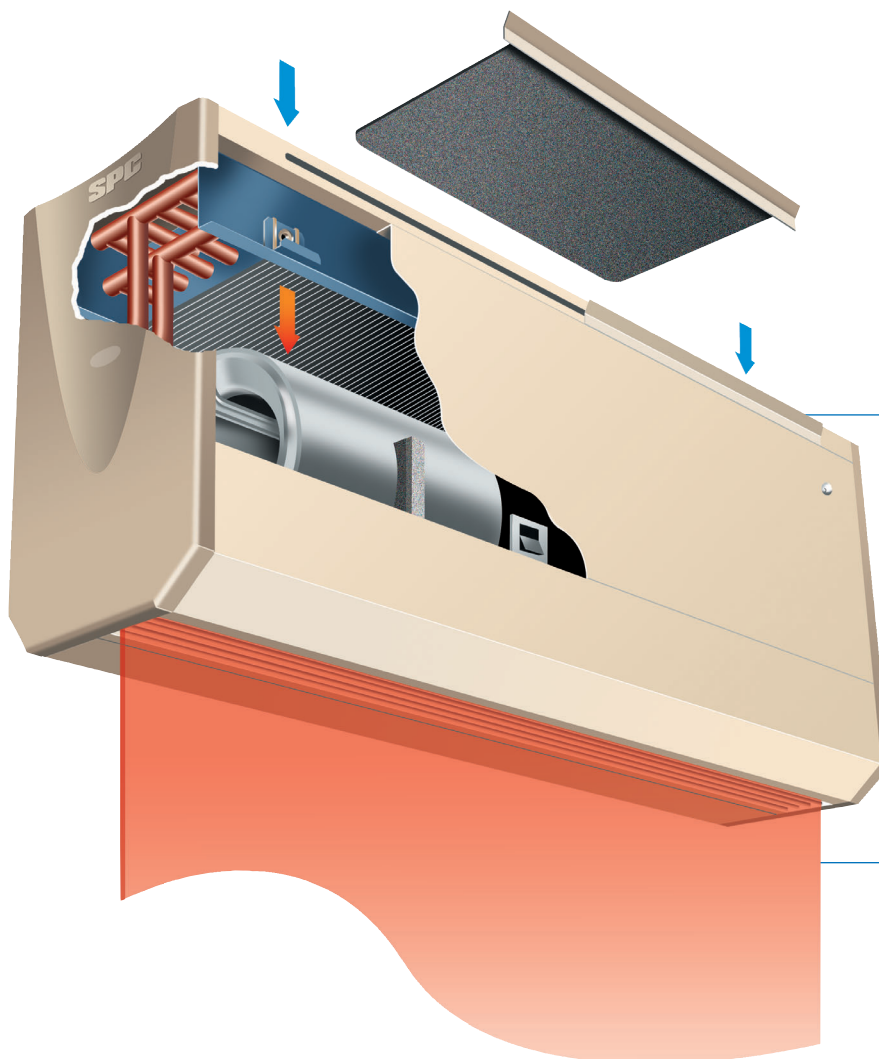
- Our mission is to be your first choice for HVAC equipment
- Major supplier to local government and commercial sectors
- Unrivalled regional sales and technical support team
- Free site check / survey
- ISO 9001 and Investor in People

Airdor Elite

The stylish air curtain that's easy to maintain

The Airdor Elite brings stylish yet powerful overhead heating to doorways and entrances. This warm air curtain with its bevelled edges and moulded end-panels looks good wherever you mount it - on a wall or on a ceiling. And, if you value unobtrusiveness above good looks, you can install it invisibly behind plasterboard or a standard T-bar ceiling grid.

However you mount the Airdor Elite, maintenance is easy. Slot-in filters can be removed, cleaned, and replaced by non-specialist staff, while a tamper-proof inspection panel provides ready access to every single component.



Wall-mounted Airdor Elite: draws in ambient air from above and emits downward draught of warm air via lower grille. Cutaway illustration shows the 1m-long LPHW model with removable filters, tamper-proof inspection panel, and three-speed fan control.

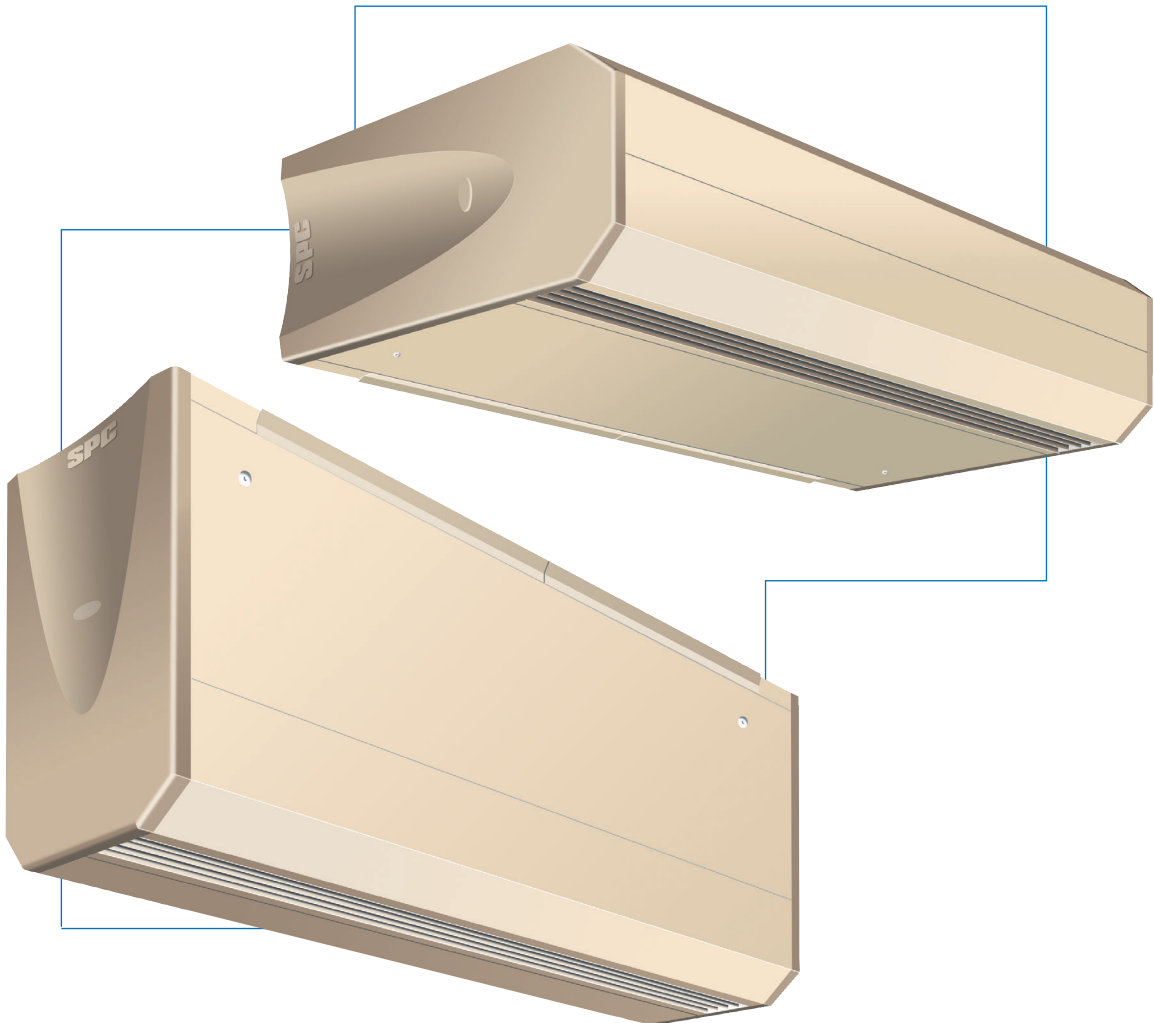
Finished colours may vary from illustration - see Engineering Specification on page 11 for RAL references.

Warm air curtains

The thermal solution to open doorways

Some doors stay open whatever the weather. In retail premises a welcoming and ever-open doorway is an invitation to shop. In many commercial and industrial operations pedestrian traffic is so high that doors are forever opening and closing.

The tried-and-tested solution is a warm air curtain - a powerful yet invisible downdraught of hot air from above the doorway. A warm air curtain is open for business, yet closed to the elements; it admits traffic while reducing and tempering the ingress of cold air. To pass through is to experience an instant heating effect. To work behind one is to remain pleasantly warm all day.



Designed with flexibility in mind

Adaptability lies at the heart of the Airdor Elite

A wide range of configurations and power options mean that you can install the Airdor Elite almost anywhere and meet most design conditions. A choice of control options allows you to tailor the Airdor Elite to your unique set of operational circumstances.

Aesthetic

- attractive two-tone casing colour scheme
- sleek casing design with moulded end-panels
- concealed option places unit within ceiling decor

Versatile

- suitable for wall or ceiling mounting - visibly or recessed within the ceiling void
- three standard sizes (1m, 1.5m, and 2m) and a modular design to accommodate any size of doorway
- concealed option sizes (1.2m, 1.8m, and 2.4m) suitable for standard 600x600mm T-bar ceiling grids and plasterboard ceilings
- choice of LPHW or electric power - MPHw and steam coils available to order
- integral 3-speed fan control on LPHW models
- comprehensive range of electric heat outputs available

Trouble-free

- easy installation with all connections accessible from within the casing
- no heavy lifting - largest units (2m and 2.4m) installed in two light weight halves with internal connections completed later
- externally removable filters for easy cleaning by non-specialists
- robust construction requires little maintenance
- easy servicing and access to all components from below via tamper-proof inspection panel (or from above when mounted in plasterboard)

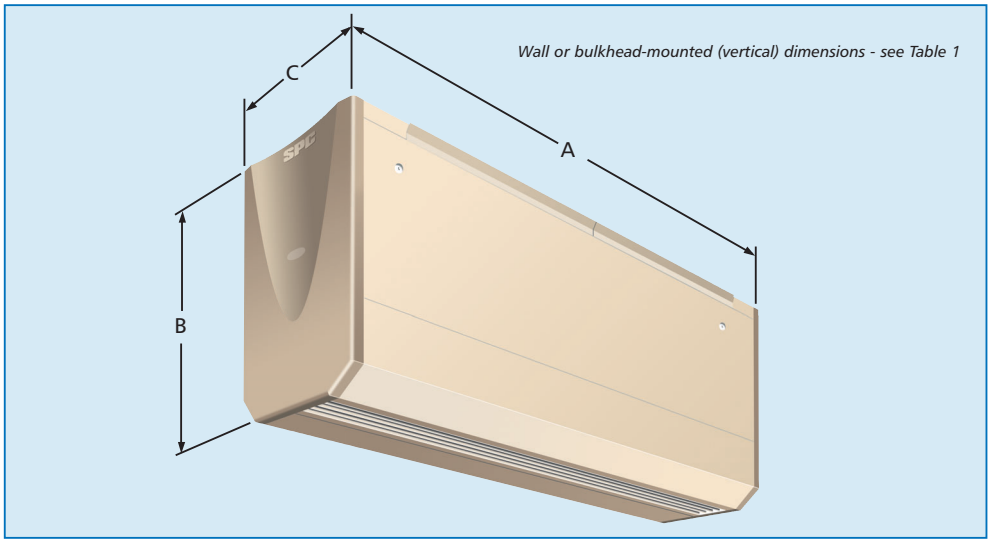
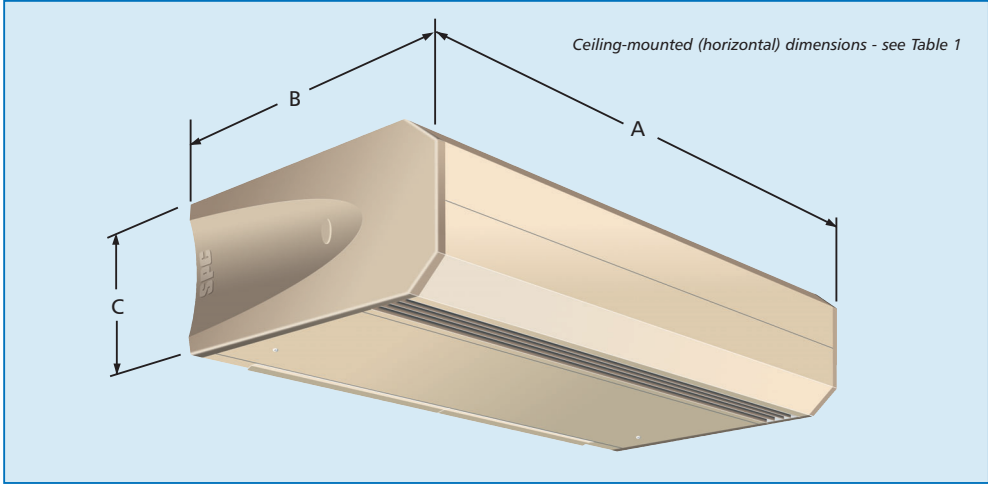
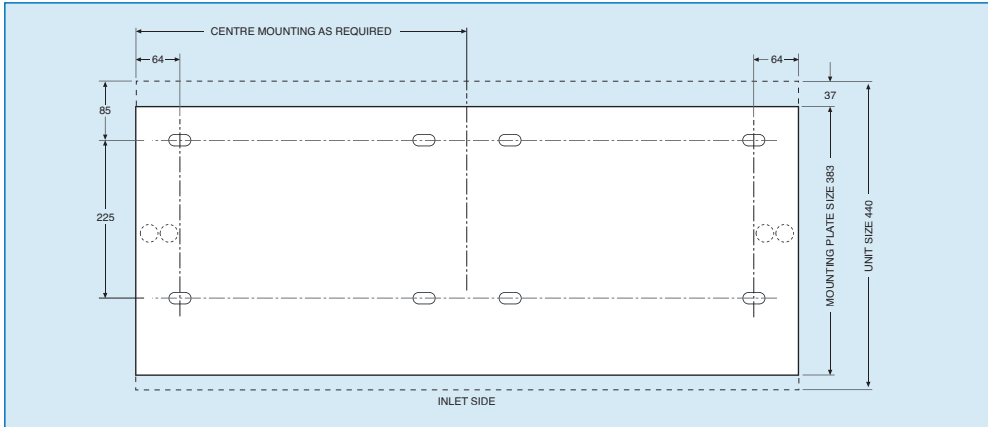


Table 1	Airdor Elite: wall and ceiling-mounted dimensions		
dimensions in mm	A	B	C
Elite 1000	1000	440	235
Elite 1500	1500	440	235
Elite 2000	1970	440	235

Dimension "A" for Elite 2000 is comprised of 2 1000 units with joining plate replacing centre end panels

Wall-mounted (vertical) units require minimum 130mm clearance between unit and ceiling



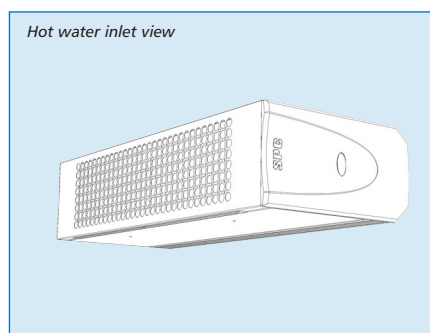
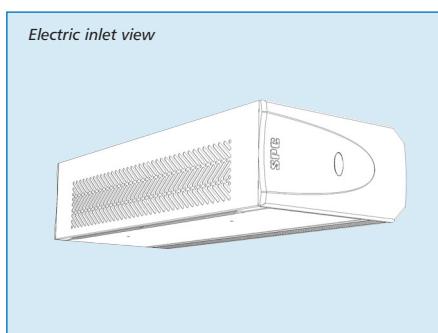
Airdor Elite rear mounting plate dimensions

Customised to your circumstances

We customise each Airdor Elite to your specific requirements, with the modular design accommodating a variety of doorway widths. The following table includes the most popular factory-fitted options for LPHW and electric models.

Table 2	Airdor Elite: factory-fitted options	
LPHW OPTIONS <i>air filter, 3-speed fan switch, and low water-temperature cut-out come as standard</i>		
<i>Energy-saving thermostatic controls</i>	RT1	on/off thermostat with fascia dial (remote)
	TLX	on/off thermostat with tamper-proof dial (remote)
	ALTC	adjustable low water-temperature cut-out (remote)
<i>Switches</i>	RS1B	on/off rocker switch (adjustable)
	RS1R	on/off rocker switch (remote)
	RS2B	summer/winter LTC override (integral)
	RS2R	summer/winter LTC override (remote)
	RS3R	3-speed rocker switch (remote)
	combinations	RS12B/R, RS13B/R, RS123B/R etc
<i>Electrical connections</i>	FSB	fused spur box for direct mains connection
<i>Coil connectors</i>	ISV	isolation valves for flow and return pipes

ELECTRIC OPTIONS <i>high temperature cut-out comes as standard - plus single, pre-set fan speed</i>		
<i>Energy-saving thermostatic controls</i>	RT1	on/off thermostat with fascia dial (remote)
	TLX	on/off thermostat with tamper-proof dial (remote)
<i>Switches</i>	RS1R	on/off rocker switch (remote)
	RS2R	summer/winter fan only control (remote)
	RS3R	2-heat control (remote)
	combinations	RS12R, RS13R, RS123R etc



Performance of Airdor Elite

Table 3	Airdor Elite: performance data								
LPHW models	Elite 1000w			Elite 1500w			Elite 2000w		
speed setting	1	2	3	1	2	3	1	2	3
air volume (l/s)	170	220	320	260	360	480	340	480	640
exit air velocity (m/s)	4.0	4.8	8.2	4.0	5.2	8.2	4.0	5.2	8.2
duty* (kW)	5.6	6.5	7.9	8.4	10.0	11.6	11.2	13.7	15.8
air temperature rise (°C)	27.5	24.6	20.6	26.9	23.1	20.1	27.5	24.2	20.6
hyd. pressure drop (kPa)	0.7	0.8	1.1	1.3	1.7	2.2	0.7	0.8	1.1
water flow rate (l/s)	0.12	0.14	0.17	0.18	0.22	0.25	0.24	0.28	0.34
max. mounting height** (m)	2.5	3.0	3.5	2.5	3.0	3.5	2.5	3.0	3.5
operating current (A)	0.9	1.2	1.6	1.4	2.0	2.4	1.8	2.4	3.2
weight (kg)	35			53			68 (≈ 2x34)		
noise level*** (dB(A))	43	49	58	45	57	60	46	58	62

Electric models	Elite 1000e		Elite 1500e		Elite 2000e	
Heat setting	1	2	1	2	1	2
air volume (l/s)	220	320	360	480	480	640
exit air velocity (m/s)	4.8	8.2	5.2	8.2	5.2	8.2
duty (kW)	6.0	9.0	8.0	12.0	12.0	18.0
air temperature rise (°C)	22.7	23.4	18.5	20.8	20.8	23.4
max. mounting height** (m)	3.0	3.5	3.0	3.5	3.0	3.5
Operating current (A) <small>per phase (415V 3ph 50Hz)</small>	9.1	13.7	12.2	18.3	18.3	27.4
Weight (kg)	33		51		64 (≈ 2x32)	
noise level*** (dB(A))	49	58	57	60	58	62

Electric units come with a single heat setting - and a corresponding fixed fan speed - selected at time of order placement. Contact SPC for details of variable heat options.

6kW version also available for single phase.

* Duties based on 20°C air inlet temperature + 82/71°C LPHW

** Minimum mounting height of 1.8m applies to all units; refer to SPC for application heights above 3.5m

*** Noise levels measured at a distance of 3m from unit outlet in a typical semi-reverberant room

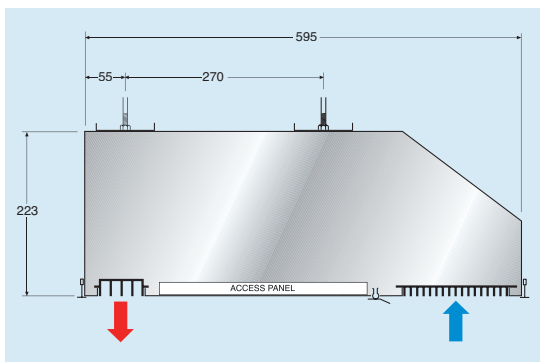
All values are nominal and subject to change in line with SPC's policy of continuous improvement.

Concealed unit options

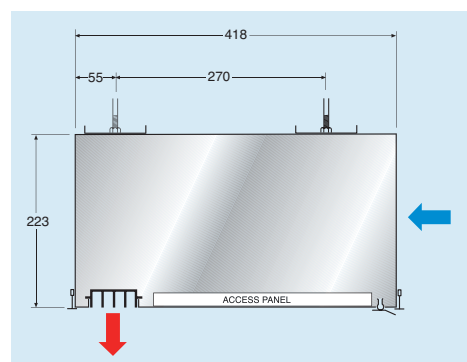
Concealing your Airdor Elite is an aesthetic option in locations with ceiling voids above plasterboard or standard 600x600mm T-bar ceiling grids and you can configure any unit to draw air from the room below or from the ceiling void.

The four diagrams that follow show how the two configurations work within plasterboard and T-bar ceilings. T-bar ceilings allow filter cleaning and maintenance access from below, and with plasterboard ceilings, the access is from above. (See page 7 for factory-fitted control options.)

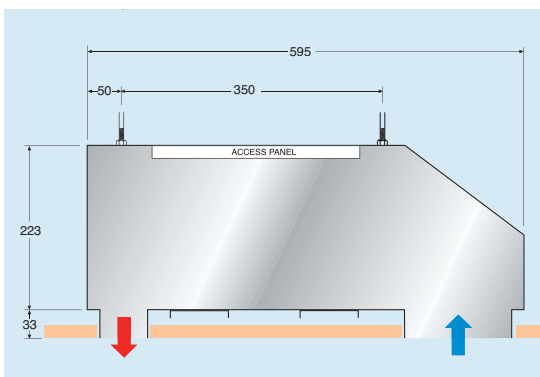
When the Airdor Elite sits within a plasterboard ceiling, loose grilles can be supplied separately, in white or anodised silver, for a professional finish.



Airdor Elite above T-bar ceiling grid, air drawn from room below

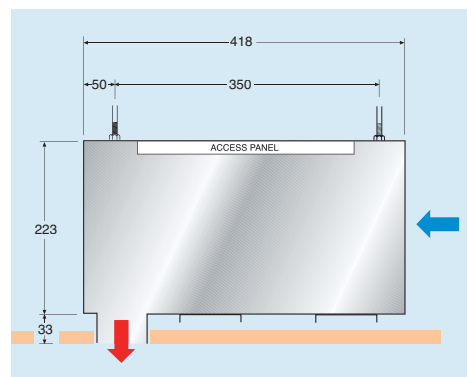


Airdor Elite above T-bar ceiling grid, air drawn from ceiling void



Airdor Elite above plasterboard ceiling, air drawn from room below

Note requirement for two additional plasterboard-ceiling grilles to cover inlet and outlet



Airdor Elite above plasterboard ceiling, air drawn from ceiling void

Note requirement for one additional plasterboard-ceiling grille to cover outlet

Performance of concealed options

Table 4	Airdor Elite: concealed option performance data								
LPHW models	Conc 1200w			Conc 1800w			Conc 2400w		
length (mm)	1195			1795			2 x 1195		
speed setting	1	2	3	1	2	3	1	2	3
air volume (l/s)	170	220	320	260	360	480	340	480	640
exit air velocity (m/s)	3.5	4.0	7.0	3.5	4.3	7.0	3.5	4.3	7.0
duty* (kW)	5.6	6.5	7.9	8.4	10.0	11.6	11.2	13.7	15.8
air temperature rise (°C)	27.5	24.6	20.6	26.9	23.1	20.1	27.5	24.2	20.6
hyd. pressure drop (kPa)	0.7	0.8	1.1	1.3	1.7	2.2	0.7	0.8	1.1
water flow rate (l/s)	0.12	0.14	0.17	0.18	0.22	0.25	0.24	0.28	0.34
max. mounting height** (m)	2.5	3.0	3.5	2.5	3.0	3.5	2.5	3.0	3.5
operating current (A)	0.9	1.2	1.6	1.4	2.0	2.4	1.8	2.4	3.2
weight (kg)	36			55			71 (≈ 2x35.5)		
noise level*** (dB(A))	43	49	58	45	57	60	46	58	62

Electric models	Conc 1200e		Conc 1800e		Conc 2400e	
length (mm)	1195		1795		2x1195	
speed setting	1	2	1	2	1	2
air volume (l/s)	220	320	360	480	480	640
exit air velocity (m/s)	4.0	7.0	4.3	7.0	4.3	7.0
duty (kW)	6.0	9.0	8.0	12.0	12.0	18.0
air temperature rise (°C)	22.7	23.4	18.5	20.8	20.8	23.4
max. mounting height** (m)	3.0	3.5	3.0	3.5	3.0	3.5
Operating current (A) <small>per phase (415V 3ph 50Hz)</small>	9.1	13.7	12.2	18.3	18.3	27.4
weight (kg)	34		53		65 (≈ 2x32.5)	
noise level*** (dB(A))	49	58	57	60	58	62

Electric units come with a single heat setting - and a corresponding fixed fan speed - selected at time of order placement. Contact SPC for details of variable heat options. 6kW version also available for single phase.

* Duties based on 20°C air inlet temperature + 82/71°C LPHW

** Minimum mounting height of 1.8m applies to all units; refer to SPC for application heights above 3.5m

*** Noise levels measured at a distance of 3m from unit outlet in a typical semi-reverberant room

All values are nominal and subject to change in line with SPC's policy of continuous improvement.

Airdor Elite: standard engineering specification

The Airdor Elite shall be manufactured by S & P Coil Products Limited, SPC House, Evington Valley Road, Leicester. The heaters shall be suitable for the applications as described in the literature, dependent on the model selected. The quantities and model references shall be indicated in the schedule, with the constructional features complying to the under-mentioned specification.

Casing The casing shall be manufactured from medium gauge mild steel of riveted construction. Visible unit to have fire-retardant plastic end panels.

Finish Metal components shall be degreased and treated, where appropriate, with an approved rust-inhibiting and priming process, followed by a final coat of powder-coat finish in two-tone grey for wall or ceiling-mounted units (RAL 7044 and RAL 9002), or in white (RAL 9016) or black (RAL 9005) when concealed above ceiling.

Grilles All inlet grilles to be punched sheet metal or punched aluminium extrusion. Outlet grilles to be fire-retardant plastic on visible units and concealed ceiling-tile units, and aluminium on concealed plasterboard units.

Filters Filters to be fitted on LPHW units only, and shall be a washable-type Bondina P15/150 non-woven polyamide or equivalent, bonded with synthetic resin, and rated at EU2 arrestance complying with BSEN779. Filters should be removable for cleaning.

Heat exchangers (a) LPHW: The heat exchanger shall be of plate fin construction, comprising aluminium fins mechanically bonded to copper primary tubes brazed, in turn, to 22 mm flow and return pipes. A 1/8" BSP air bleed to be provided as standard, with drainage to be provided by pipe connection breakage.

(b) ELECTRIC ELEMENTS: Provided with automatically resetting over-heat cut-out wired for 3-phase operation (415V / 3ph / 50Hz) or single phase (240V / 1ph / 50Hz) where applicable.

Test pressure The heat exchanger shall be tested to 22 bar (2,200 kPa) air under water.

Working pressure All heat exchangers to be suitable for a maximum working pressure of 10 bar (1,000 kPa).

Fan and motor assembly The fan assembly shall be mounted, resiliently and directly, on to a plenum box fixed directly to the main mounting panel.

Fans The fans shall be dual inlet, high performance, centrifugal units driven by vibration-resistant, internally suspended rotor motors.

Motors The motors shall be 2-pole units with sealed ball bearings for quiet operation. Motors shall have an in-built self-resetting thermal overload cut-out. Multi-speed operation shall be provided by means of transformer control.

Wiring and control LPHW units shall be suitable for operation with a standard single phase 240V / 50Hz supply, the fused terminal block for mains connection to be sited in clear location under front panel. All wiring shall be tri-rated heat-resistant cable. Provision shall be made for connection of selected control options. Electric units are 3-phase or, where applicable, 1-phase power with heating elements controlled by contactors.

Packaging All packaging to be clearly marked with the unit model reference and instructions called for in the schedule.

C E marking The Airdor Elite warm air curtain shall comply with all relevant EU directives currently in force.

S & P Coil Products reserves the right to amend the specification whilst pursuing a policy of continuous improvement in performance and design.



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