



Belgravia Tilevector

Installation, Operation & Maintenance Manual

IOM 71 Issue 3



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1. General Description

The Belgravia Tilevector is a self-contained fan convector heater designed for hidden installation into suspended “T-bar” and plasterboard ceilings. The product is in two sizes designated ‘Solo’ and ‘Duo’.

2. Receipt And Preparation

The units are wrapped and display the SPC works order number, model reference, site reference (where appropriate), and site details.

On receipt check that all details are correct to the Customer schedules prior to opening the packaging. Damages should be reported to the carrier and to the SPC Sales Office immediately.

It is recommended that the packaging is kept in place and the units stored in a safe area until the necessary services are complete in order to avoid the possibility of site damage.

3. Installation

3.1 Key sizes, dimensions and weights

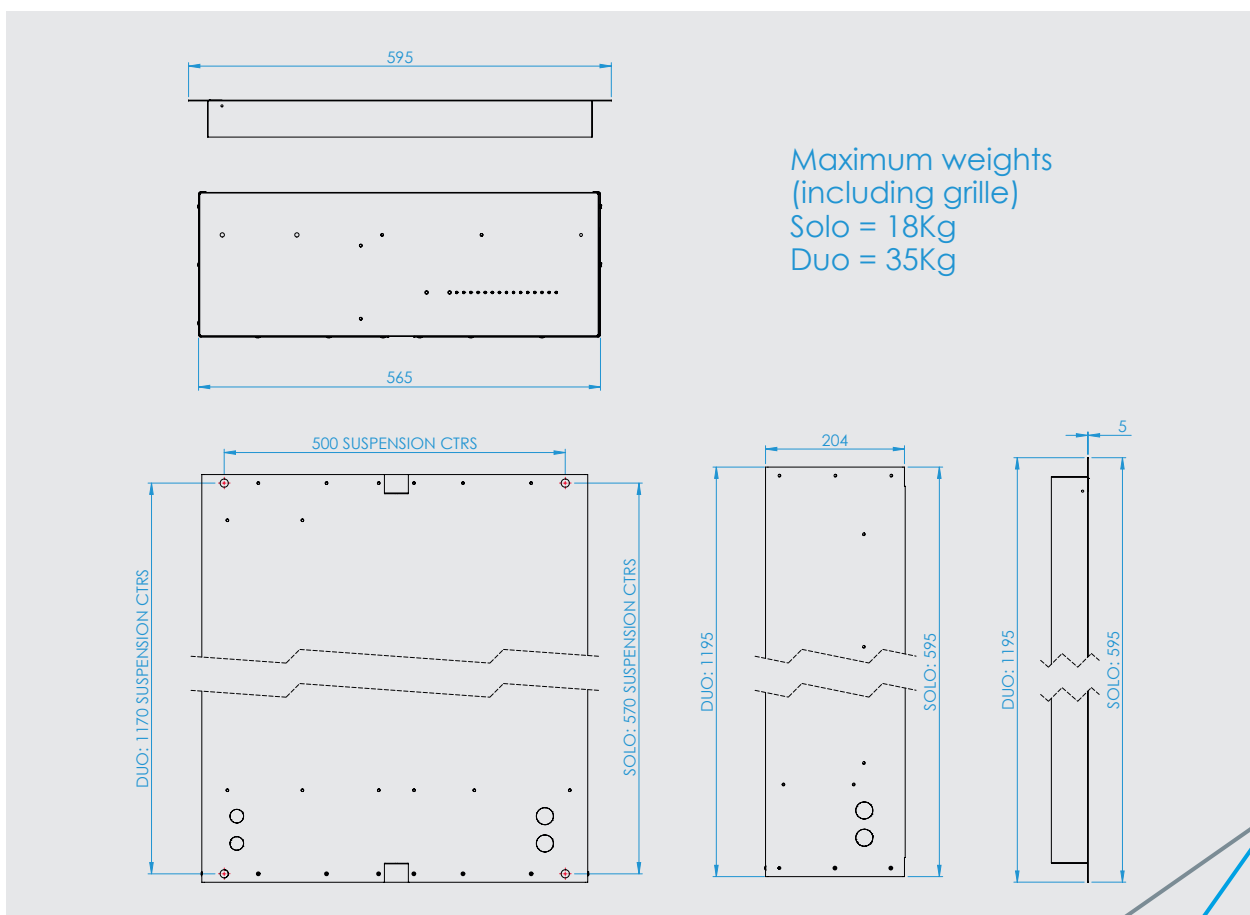


Figure (I)

3.2 Ceiling installation

Note: Tilevector units must be installed at least 1.8m above floor level.

Note: Maximum recommended ceiling height for Tilevector installation is 3.0m.

3.2.1 Ceiling installation

Remove any fitted ceiling tiles around the area where the Tilevector is to be located. Ensure that four suspension cables (minimum 14 swg galvanised steel wire) are tied off securely to points in the roof space to match the suspension centres Figure (i).

Lift up the Tilevector, through the T-bar aperture into the roof void, securely attaching the suspension cables to the case. Place the hinged grille into position and adjust the height so that the unit locates around the grille as in Figure (ii)

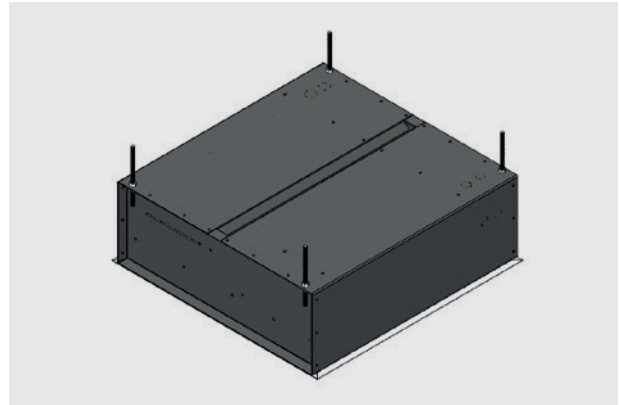


Figure (ii)

3.2.2 Installation into a plasterboard ceiling

Note: Access into the ceiling void is required for installation.

Cut a square aperture 575mm x 575mm for a single unit (Solo) and 1175mm x 575mm for a duo into the plasterboard ensuring any obstructions in the ceiling void are a minimum of 210mm away from this surface.

Ensure that four suspension cables (minimum 14 swg galvanised steel wire) are tied off securely to points in the roof space to match the suspension centres.

Offer the Tilevector up, lengthwise from below, through the cut aperture and into the roof void.

Securely attach the suspension cables and adjust the height so the unit sits over the aperture and just clear of the plasterboard.

Locate the grille into the suspended casing in the orientation shown below.

With a 3.5mm drill, make four holes through the grille wall and casing sides.

Open out the holes in the grille to 5.0mm.

Locate the grille back into the casing and secure with No 8 screws.



Figure (iii)

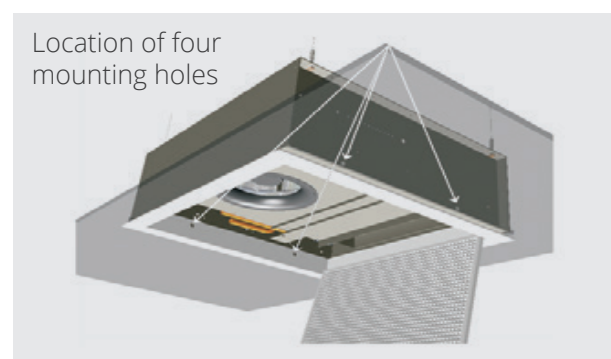


Figure (iv)

3.2.3 Free-hanging

While the units are intended for recessed installation they can be free-hanging if required. The units should be suspended from the ceiling

as above and the grille attached to the unit as in the instructions for plasterboard installation given above.

3.3 Pipework connection

There are 3 pairs of “knock-out” holes in the casing to allow simple entry of the feed and return pipework into the Tilevector. Connections to be

made with standard 15mm compression joints. The supply water should be connected to the inner coil pipe and the return to the outer.

3.4 Electrical information

3.4.1 Electrical connection

Units are supplied with high efficiency EC motors and, with the exception of the DUO (ELECTRIC) unit, require a single phase 230V supply. The DUO (ELECTRIC) unit requires a 3 phase 400V supply.

All electrical work should be carried out in

accordance with IET regulations. The terminal block is accessible in the void area after hinging open the eggcrate grille. The supply must be made via a suitable means of isolation and the earth connection must be included.

Model	Voltage (V)	Full Load Current (A)	Absorbed Power (W)
SOLO (LPHW)	230	0.1	14
SOLO (ELECTRIC)	230	13.1	3014
DUO (LPHW)	230	0.2	28
DUO (ELECTRIC)	400	8.8	6028

Based on medium speed

3.4.2 Control wiring

A wiring diagram showing customer connections is included with each unit. For wiring other

than with the standard, available options the SPC Technical Department should be contacted.

3.4.3 Standard control options

Factory-fitted options		
LPHW OPTIONS		
Energy-saving thermostatic controls	2-ST	Two-stage thermostat (remote)
	RT1	On/off thermostat (remote)
	RT2	Speed-change thermostat (remote)
	ALTC	Adjustable low water-temperature cut-out (remote)
Switches	RS1	On/off rocker switch (remote)
	RS2	Summer/winter rocker switch (remote)
	RS3	3-speed rocker switch (remote)
Electrical Connections	FSB	Fused spur box for direct mains connection
	CCB	Customer connection box for external controls
Coil connections	ISV	Isolation valves for flow and return pipes
ELECTRIC OPTIONS		
Energy-saving thermostatic controls	RT1	On/off thermostat (remote)
Switches	RS1	On/off rocker switch (remote)
	RS2	Summer/winter rocker switch (remote)

Table (ii)

4. Operation and Maintenance

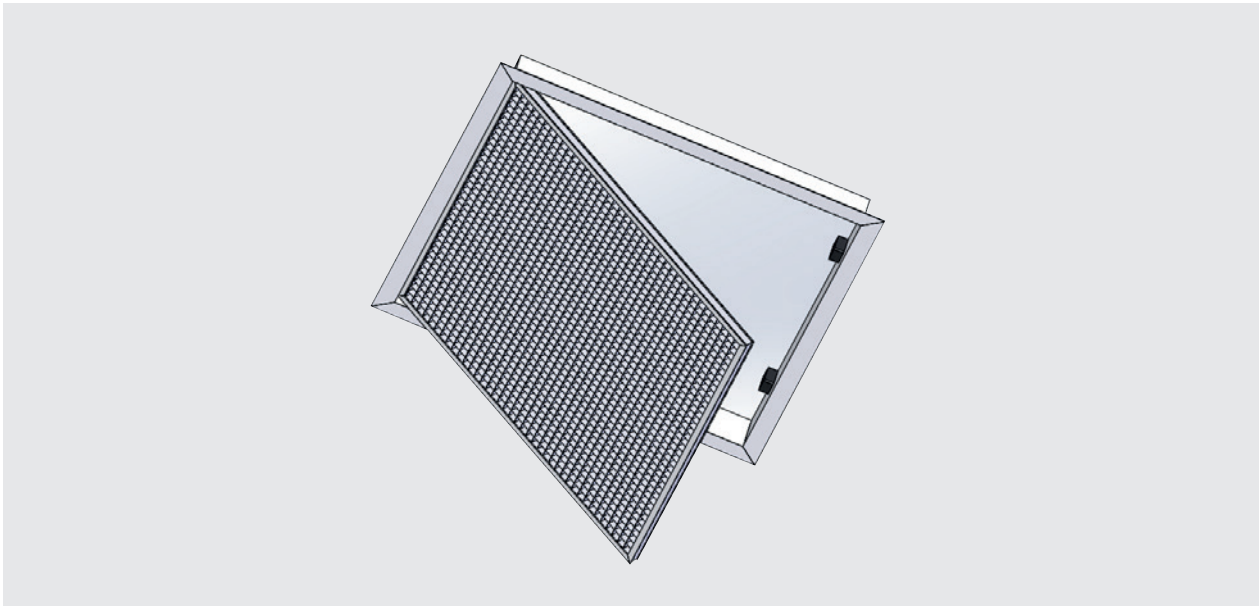
4.1 General

Warning! Electrically isolate the unit prior to commencing work.

4.1.1 Opening the centre section of the grille

The hinged centre section is retained by “press-to-release” clips. Press the edge of the grille up where the catches are visible through the grille,

the centre section will then hinge down. To close the grille, push the centre section back up until the clips are engaged. See Figure (v).



4.1.2 Filter

Filters should be cleaned regularly in order to maintain unit performance. The filter is located behind the shallow U-section metal strip held in place with wing-nuts. To remove, loosen the wing nuts and slide metal cover aside to expose

filter. Extract the filter using the fitted loop. To refit locate filter within internal runners and push home. Cover with metal section and tighten wing-nuts.

4.1.3 Coil

To periodically clean the coil it is necessary to remove the filter cover section and fan cover plate. The coil can then be carefully cleaned with a brush or vacuum cleaner. Care should be taken to avoid damaging the coil surface.

4.1.4 Fan set

The fan/motor set has sealed for life bearings which should not require any user maintenance.

4.1.5 Fusing

Fan motor fuses anti-surge 20mm x 5mm 2A to BS 4265/IEC127.

4.1.6 Spares list

2A Fuse	33 / 114
Filter (Solo)	SK 3974
Filter (Duo)	SK 4226
LTC	33 / 134
Fan / motor set	35 / 001
Coil (Solo)	CM 2020
Coil (Duo)	CM 2058
Electric Element (Solo)	TILELEC 3.0
Electric Element (Duo)	TILELEC 6.0

Table (iii)

4.2 Fault finding

All electrical investigations must be performed by a qualified electrician.

Fault	Remedy
No fan operation	Check fuse on fan box
	Check power supply to unit
	Check for loose wiring or damage to wiring
	Check switches
	Check impeller runs freely
No Heating - LPHW	Check hot water to unit
	Check LTC contact on pipework
	Check coil vented
	Check integrity of wiring
	Check thermostat operation (if fitted)
No Heating - Electric	Check thermal cut-out switch (red button on internal connection panel), press home to reset and re-check unit operation.
	Check electric element vented
	Check integrity of wiring
	Check power supply to electric element.
	Check thermostat operation (if fitted)

5. Disposal

Units have a heat exchanger from copper tubes and aluminium fins. The units include fan assemblies from mixed materials and printed circuit boards which should be disposed of

separately and in line with WEEE directives. It is not recommended that the units are disposed of with domestic waste but that the components are recycled as far as possible.





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