

Trox Design Bureau®
Cool I.T. System
Solutions

Partnering Innovation, Comfort & Safety

TROX® **TECHNIK**

The art of handling air

COOLIT.™
Keeping your hotspots cool

Patent Application No: 03141637

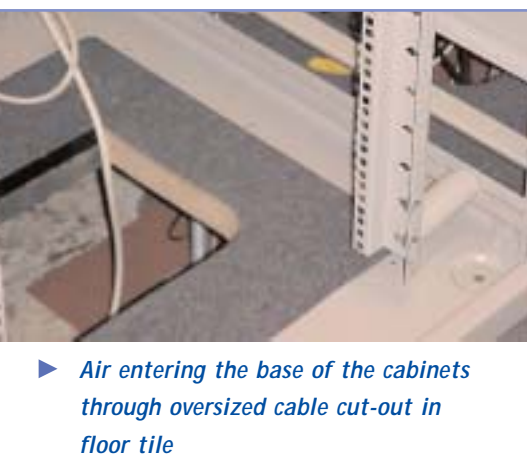
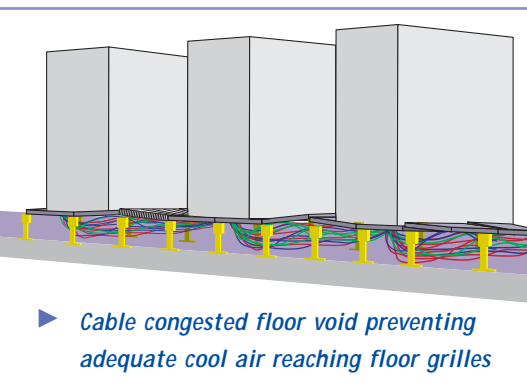
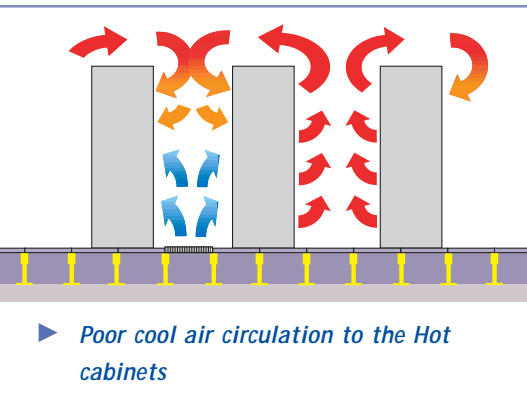


Increasing Heat Gains

The problem – **HOTSPOTS**

Ever increasing 'state-of-the-art' computing power has significantly raised heat gains in I.T. communications rooms.

Independent studies have shown that Hotspots are caused by a number of reasons, which include:



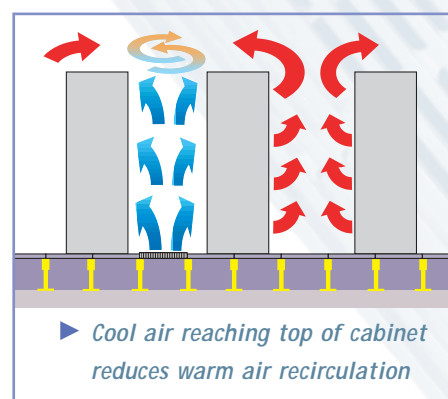
The solution – **Cool I.T.**

The unique patented design of Cool I.T. tackles computer room hotspots with localised cooling, even at higher levels.

Cool I.T. fan assisted computer room floor grilles eliminate hotspots by providing up to 5kW¹⁾ of cooling per cabinet. It has been specially developed for installing in raised access floors.

Providing cool air exactly where required, high temperatures can be eliminated, reducing the risk of equipment failure due to overheating.

Cool I.T. has been designed to replace a 600 x 600mm floor tile, offering total flexibility of positioning in the floor. It is therefore ideal for New Build or Refurbishment alike. The unit boasts simple plug and play connectivity to ensure a speedy and failsafe operation.



Features

- Heavy construction
- Replaces 600 x 600mm raised access floor tile
- Range of surface finishes available
- 230V or 115V supply

Benefits

- Delivers 5kW¹⁾ of cooling per cabinet
- Reduces risk of equipment failure
- Eliminates vertical temperature gradients
- Delivers the required air flow with low or even zero floor void pressure
- Overcomes congested floor void air path
- Suitable for new and existing I.T. comms rooms
- Plug and play connectivity

Specification text

Heavy construction floor grille for supply air. Frames with welded mitred corners suitable for pedestal mounting. Front profiled blade sections welded to frame. Height between pedestal face and face of grille to be selected with permanently factory fitted shims as necessary.

Noise total sound power level = 66 dB(A).

Fan specification: Voltage 230V, Frequency 50/60Hz, Input 37.5/33W, Current 0.21/0.16A, Bound Current 0.32/0.31A. Voltage 115V, Frequency 50/60Hz, Input 37.5/33W, Current 0.39/0.31A, Bound Current 0.62/0.61A.

Product comes with standard EN IEC 60320 power inlet plug (C14). Socket (C13) and fused power supply lead by others.

Selection guide

The CFG floor grille should be located at the front of the I.T./Comms cabinet, experiencing hotspot conditions which should incorporate a perforated door.

The floor void static pressure must be considered in the selection process (see graph). Sufficient void air (cooled by others) must be available, is drawn by the unit to the specific point of need.



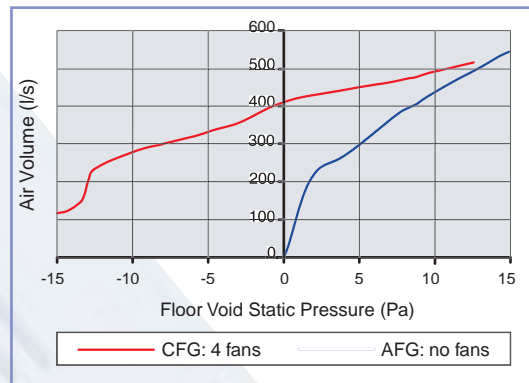
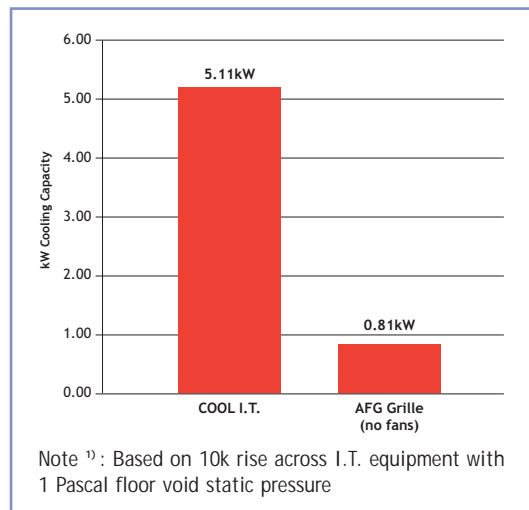
Performance

The 125mm deep unit will provide the following strength against the performance specification:

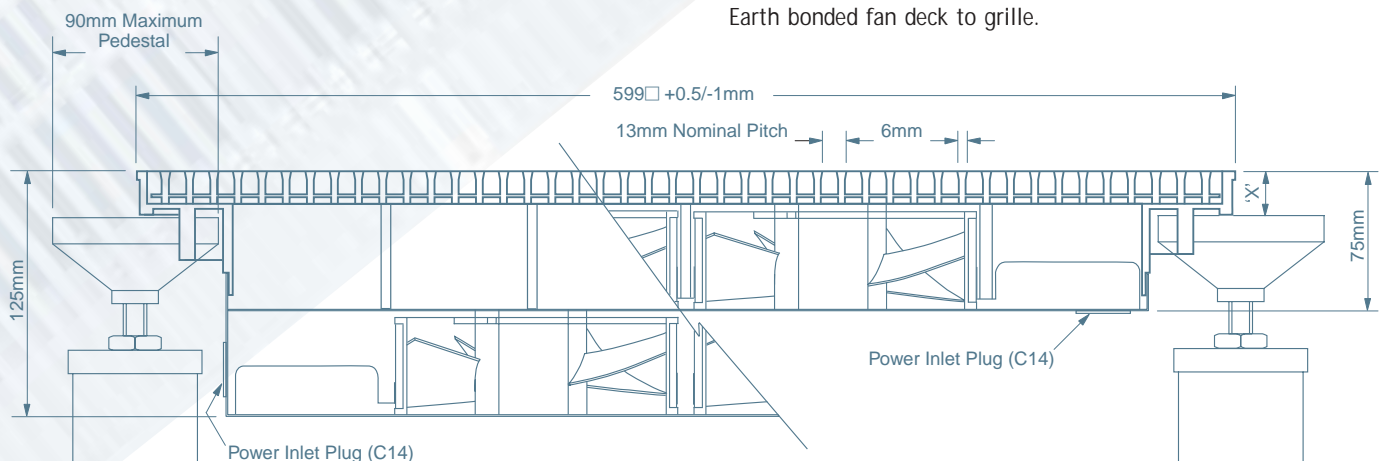
PSA MOB PF2 PS/SPU March 1992, with the following results:

Test	Result
Stability of deflection (centre of grille): 4.5 kN static load through 25mm square indenter	Deflection 23 hours after load applied - 3mm Deflection 24 hours after load applied - 3mm 0.09mm permanent deformation 0.01mm permanent indentation
Impact load test: 40 kg Sand Bag from 1m height	Did not collapse
Dynamic rolling load test: 4.5 kN load 50 passes of wheel 3 kN load 50 passes of wheel 3 kN load 50 passes of wheel	Did not collapse 0.40mm Vertical permanent deformation (max) 0.20mm Horizontal permanent deformation (max)
Safety load test (centre of grille): 13.5 kN load through 25mm square indenter	Did not collapse

Potential cooling



Construction



'X' = minimum 25mm to maximum 50mm in 1mm increments

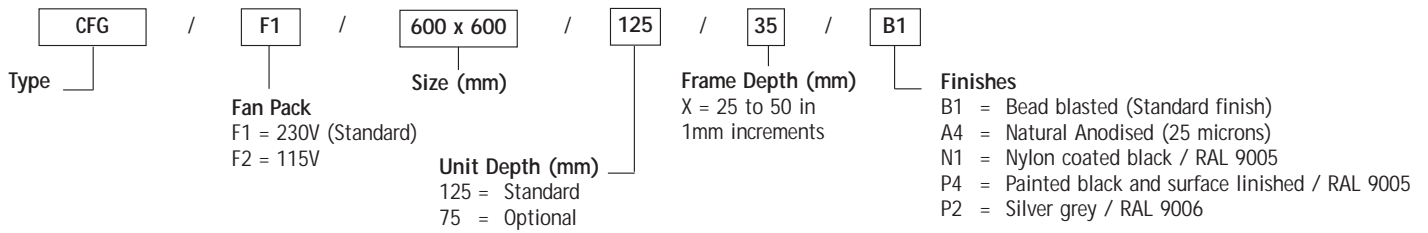
Materials

Grille face and border frame are from extruded aluminium sections.

Fan mounting plate, with integral finger guard, from galvanised sheet steel.

Earth bonded fan deck to grille.

Order code



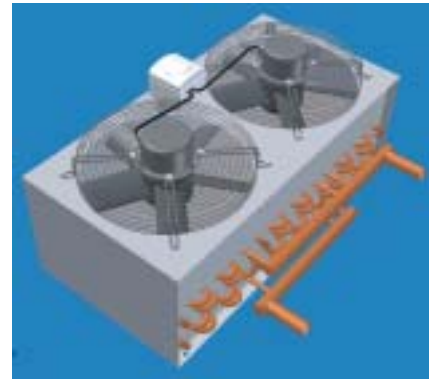
I.T. Cooling Solutions –



Fan Powered
Computer Room
Floor Grille -
Cool I.T.



Integrated
Cabinet
Cooling -
CoolRac



High Level
Fan Assisted
Cooling -
CoolBox

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