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第 20192 號郵箱



FIRE SERVICES DEPARTMENT,  
FIRE PROTECTION BUREAU,

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本處編號 OUR REF. FPB 316/06

來函編號 YOUR REF.

電話 TEL. NO. 5-281122

23rd May 1983

To: All Registered Ventilation Contractors  
Electrical and Mechanical Consultants  
All Authorised Persons - Architects  
Director of Building Development (20 copies)  
Director of Urban Services  
Secretary, Urban Council

Dear Sirs,

Ventilation Circular Letters - F.S.D.

Ventilation Circular Letters have been issued by the Fire Services Department since 1971 to assist Ventilation Contractors, Authorised Persons, etc., in conforming with the minimum fire safety precautions and requirements considered necessary by this Department to prevent the spread of fire through any system falling within the scope of the legislation.

2. They are not intended to impose unnecessary restrictions on design and installations or on the use of new materials used in the manufacture of any component part of a system, and responsible and constructive suggestions on these aspects will always be considered.

3. Information contained in the Circular has now been consolidated into the present format, (copy attached) which it is hoped you will find more convenient.

4. In future all information requiring circulation will be issued to this format and revisions/amendments will be made by one of the following methods :-

(i) The issue of numbered amendment(s) contained in the form of a "tearoff" slip which will be pasted over the paragraph(s) which it amends.

(ii) The complete re-issue of the page(s) affected.

(iii) The complete re-issue of the whole part.

5. All Ventilation Circular Letters previously issued will be cancelled with effect from the date of this letter.

Yours faithfully,

(T.D.J. Gardiner)  
for Director of Fire Services

REF. NUMBER AND DATE SHOULD BE QUOTED IN REFERENCE TO THIS LETTER

凡提及本信時請引述編號及日期

TDCG/JRSP/kw

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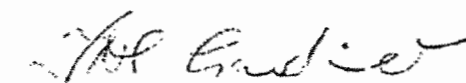
Circular No. VIElectric Heating Elements Used in Ventilation Installations1.1 Duct Heater Assemblies

- 1.1.1 Heating elements shall be evenly spaced and occupy the cross sectional area of the duct at the point where the duct heater is installed.
- 1.1.2 Heating elements shall be sheathed and of 'black' heat type.
- 1.1.3 An external terminal box shall be provided for all connections.
- 1.1.4 Internal wiring shall be carried out in cable as used in high temperature work.
- 1.1.5 Internal insulation for either acoustic or thermal reasons shall not be permitted within 1.0 metre of the duct heater unless, in the case of package units, designed for this use.
- 1.1.6 Fire resisting access door(s) shall be provided at the duct heater for maintenance and cleaning purposes.

1.2 Line, Control and Sequence Interlocking

- 1.2.1 The blower fan motor shall be controlled by a contactor starter complete with overload protection device, stop/start push buttons, auxiliary switches, terminals for sequence interlocking and incorporate a time delay device.
- 1.2.2 The heater(s) shall be controlled by a contactor(s) and, step controller if required by design considerations, fully interlocked with 1.2.1 above and 1.2.3 below.
- 1.2.3 A sail switch and an overheat thermostat, duct type with fail safe feature and manual reset, shall be provided and connected in series with the heating contactor coil circuit. The overheat thermostat shall operate at  $50^{\circ}\text{C} \pm 10\%$ , and within 90 seconds of reaching this temperature.
- 1.2.4 A summer/winter switching arrangement is permissible providing the timer cannot be defeated when either heating or reheat facilities are provided.
- 1.2.5 An interlock defeat is permitted subject to use by Authorised personnel only.
- 1.2.6 An emergency stop push button shall be provided for and adjacent to the blower fan motor and shall be so connected as to defeat the time escapement delay. Three wire control is required and the button shall be mushroom head type.

/1.2.7 ....



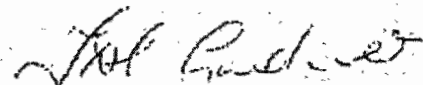
(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983

- 1.2.7 Control circuit voltages shall not exceed 200 volts.
- 1.2.8 The intended function of the timer is that, on depressing the stop push button, the heater contactor coil is open circuited but the blower fan motor continues to run for not less than three minutes to dissipate residual heat.

### 1.3 Fan Coil Unit Installation

- 1.3.1 These may be exempted, where direct driven, from this specification where winter heating and reheat elements do not exceed a total rating of 2000 WATTS. The elements are of course required to be interlocked with the blower fan motor and protected by an overheat thermostat having operating characteristics as defined in line, control and sequence interlocking, Paragraph 1.2.3.

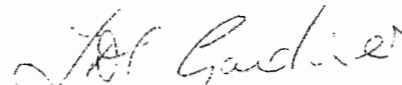


(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983

Circular No. V2Fire Dampers

- 1.1 For any duct passing through any floor or ceiling, requiring the provision of a fire damper, within the meaning of the Building (Ventilating Systems) Regulations, fire dampers shall be constructed from not less than 6 mm mild steel. The associated casing shall also be constructed to this standard.
- 1.2 For any duct passing through any wall requiring the provision of a fire damper, within the meaning of the Building (Ventilating Systems) Regulations, fire dampers shall be constructed from not less than 3 mm mild steel. The associated casing shall also be constructed to this standard.
- 1.3 In the case of floor, wall or ceiling transfer openings, they shall be protected as required in paragraphs 1.1 and 1.2 above.
- 1.4 6 mm mild steel shall be deemed the maximum metal gauge necessary for the construction of fire dampers or associated casings.
- 1.5 Angle iron shall be employed in the construction to permit clearance and to prevent deforming or jamming of the fire damper.
- 1.6 Brass bearings shall be used for the fire damper assembly.
- 1.7 The fire damper casing shall be securely bolted to the structure through which the duct penetrates.
- 1.8 In addition to the simple damper as specified above, fire dampers approved by recognised testing authorities may be used provided the fire damper possesses a rating which equates with the fire resistance of the structure it protects.

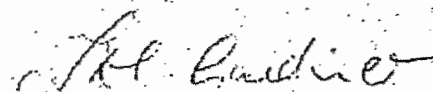


(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983

Circular No. V3The Use of False Ceilings and Elevated Floors as Air Ducts  
(Excluding Computer Room Installations)1.1 New Installations

- 1.1.1 Proposed installations and those currently being installed shall not receive approval to use a combustible false ceiling and/or elevated floor as an air duct for Fresh Air, Discharge, Return or Exhaust Air purposes.
- 1.1.2 Specially designed noncombustible false ceilings or ventilated ceilings or elevated floors are approved for use as an air plenum subject to the following conditions :-
- 1.1.2.1 The materials used in the construction of the false ceiling or ventilated ceiling or elevated floor shall be approved by recognized testing authorities.
- 1.1.2.2 Compartmentation shall be maintained by the provision of fire dampers which should preferably be operated by smoke detectors (Probe Type).
- 1.1.2.3 The construction of ductwork and associated insulation within the void shall comply with CP413 (with current amendments) published by the British Standards Institution.
- 1.1.2.4 All electrical mains, distribution and control wiring in the voids must be contained in metal cable ducts and/or screwed metal conduits terminated in accordance with British Standard Specifications and are to comply with I.E.E. Regulations.
- 1.1.2.5 All pipes shall be metallic and any insulation thereof shall comply with CP413, Clause A.2.3 paragraph (1) and (2) in respect of fire rating.
- 1.1.2.6 Pneumatic control lines for air conditioning systems shall be copper.
- 1.1.2.7 The false ceiling shall not be used to contain any services other than essential services and services exclusively for that area.
- 1.1.2.8 Access shall be provided for cleaning and inspection.



(T.D.C. Gardiner)  
for Director of Fire Services

Date: 23rd November 1982  
Amended: 23rd May 1983

Circular No. V4Insulation for use with duct work or pipe work

- 1.1 Where a duct passes through a structure and is provided with a fire damper, the external insulation is required to have a fire resistance equal to the structure through which the duct passes.
- 1.2 Insulation for chilled water pipelines and condensate drains shall have a fire resistance equal to the structure through which the pipeline passes.
- 1.3 It should also be noted that the authority in respect of fire resistance is the Building Authority.

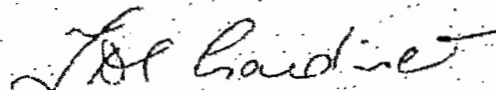


(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983

Circular No. V5Structural Ducts

- 1.1 Structural ducts in buildings are primarily designed to accommodate various services and, many air conditioning installations utilize them for ventilation purposes.
- 1.2 Structural ducts have a designed fire resistance and, under the Building (Ventilating Systems) Regulations, fire dampers are required at the point where the structural duct is penetrated.
- 1.3 Openings not exceeding 1300 square millimetres in free area, per room, in any structural duct, are not required to be fitted with fire dampers and fusible links provided that fire dampers and fusible links are fitted to ensure separation between floors.



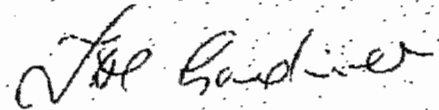
(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983



Circular No. V6Ventilating Systems Layout Design

- 1.1 Protected areas in buildings are essentially those which are required, by law, to be separate compartments relative to the usable area of the premises and, for the purposes of this Circular are areas designed to stop both fire and smoke.
- 1.2 These areas are provided for the occupants, as means of safe egress from the building in the event of fire and not to accommodate services required for the building.
- 1.3 Submissions showing ducts, pipes etc., passing through these areas shall not be approved and where they are found installed will be required to be removed under Section 9 of the Fire Services Ordinance.
- 1.4 Electric Switchgear
  - 1.4.1 In no circumstances shall electrical switchgear be installed in designated protected areas.



(T.D.C. Gardiner)  
for Director of Fire Services

Date: 6th January 1975  
Amended: 23rd May 1983