

消 防 處  
防 火 組

香港九龍尖沙咀東部康莊道1號  
消防總部大廈



FIRE SERVICES DEPARTMENT,  
FIRE PROTECTION BUREAU,  
FIRE SERVICES HEADQUARTERS BUILDING,  
No. 1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon,  
Hong Kong.

本處檔號 Our Ref.: (18) in FPB 316/06 II

來函檔號 Your Ref.:

電訊掛號 Telex: 39607 HKFSD HX }  
圖文傳真 Fax: 852-723 2197 } (24 小時 Hours)

電 話 Tel. No.: 2733 7744

5 January 1996

To: Authorised Persons/Resident Site Engineers  
Registered Ventilation Contractors  
Air Conditioning & Refrigeration Association  
of Hong Kong  
Electrical & Mechanical Consultants  
Power Companies  
Petroleum Companies

The H.K. & China Gas Co. Ltd.  
Hong Kong Construction Association  
Hong Kong Telecommunications Ltd.  
Fire Insurance Association of H.K.  
Director of Buildings  
Director of Architectural Services

Dear Sirs,

**F.S.D. Circular Letter (Ventilation) 1/96**  
**Checklist for Mechanical Ventilating Systems**

Subsequent to consultations with Air Conditioning & Refrigeration Association of Hong Kong and all Registered Ventilation Contractors, this Department has drawn up a 'Ventilating Systems Inspection Checklist' which will come into operation as from 1 February, 1996.

This Checklist is designed to provide guidelines for ventilation contractors when carrying out acceptance inspection and testing of mechanical ventilating systems. It will assist design engineers and contractors to verify that the equipment and systems are in conformity with the specified standards before requesting inspection from the Authority.

It is expected that the checklist could be made available, whenever possible, to the Fire Services Inspecting Officers to facilitate acceptance inspection.

Should you have any queries, please contact the Ventilation Division of Fire Protection Bureau at telephone no. 2733 7571.

Yours faithfully,

(LAM Chun-man)  
Chief Fire Officer (Protection)  
for Director of Fire Services

LCM/lol

**DESCRIPTION**

**DESCRIPTION**

- c. Fire & smoke dampers installed according to manufacturer's recommendations (details attached). (Y/W/NA)
- d. Fan coil units serving the protected area are in compliance with BS 476:Pt. 4. (Y/W/NA)

- b. Compartmentation maintained by fire & smoke damper operated by an approved smoke detector system (probe type). (Y/W/NA)
- c. Fire & smoke dampers approved by a FSD recognized testing authority to UL 555 and UL 555S (documentary proof attached). (Y/W/NA)
- d. All electrical mains/wiring in the void are contained in heavy metal cable ducts and/or screwed metal conduits to the relevant standards. (Y/W/NA)
- e. All pipes within the void are metallic. (Y/W/NA)
- f. All insulation within the void in compliance with FSD Circular Letter No. 4(Vent)/89. (Y/W/NA)
- g. Pneumatic control lines are made of copper. (Y/W/NA)
- h. Pneumatic control flexible tubes do not exceed 300 mm and are of flame retardant type. (Y/W/NA)
- i. No other services in the void except essential services and services exclusively for the area. (Y/W/NA)
- j. Access for cleaning and inspection provided. (Y/W/NA)

**8. DUCT HEATER**

- a. Black heat type with 'cold' extension. (Y/W/NA)
- b. Heater element evenly spaced in duct and securely fixed to fire resisting fixtures. (Y/W/NA)
- c. Support provided for heating elements > 800 mm in length. (Y/W/NA)
- d. External terminal box provided for all connections with warning notice in both English and Chinese. (Y/W/NA)
- e. A small hole provided for inserting a test thermometer. (Y/W/NA)
- f. Heat resistant internal wiring. (Y/W/NA)
- g. Heater and blower fan interlocked. (Y/W/NA)
- h. Timer fitted for blower fan control. (Y/W/NA)
- i. Timer setting at 3 minutes minimum. (Y/W/NA)
- j. Fail-safe flow sensing device fitted. (Y/W/NA)
- k. Fail-safe overheat thermostat fitted with manual reset. (Y/W/NA)
- l. Overheat cut-out operates within 90 sec. at 50°C +/- 10%. (Y/W/NA)
- m. Manual reset on/off push buttons provided. (Y/W/NA)
- n. No internal insulation within 1 m from heater. (Y/W/NA)
- p. Control circuit of single phase. (Y/W/NA)
- q. An emergency stop push button is provided. (Y/W/NA)
- r. Access panel for maintenance purposes. (Y/W/NA)

**10. OTHERS**

- a. Fire dampers installed for all air transfer openings and air ducts breaching fire compartments. (Y/W/NA)
- b. No combustible material in the fresh/supply/return/exhaust air duct/air plenum. (Y/W/NA)
- c. No exhaust fan discharges into seating accommodation/corridor/false ceiling void/staircase. (Y/W/NA)
- d. No A/C plant room used as storage purposes. (Y/W/NA)

**9. VENTILATED FALSE CEILING or ELEVATED FLOOR**

- a. False ceiling or elevated floor materials approved by a FSD recognized testing authority to BS 476:Pt. 4 (documentary proof attached). (Y/W/NA)

Inspected and verified by:-

.....(Signature)

.....(Name in block letters)

Ventilation contractor's representative

.....  
Name of ventilation contractor company

Date .....

.....  
Company chop

Where Y = Yes  
N = No  
NA = Not Applicable

1

**VENTILATING SYSTEMS INSPECTION CHECKLIST**

Address .....  
.....  
.....

FSD Ref. ....

Type of premises .....

- | <b><u>DESCRIPTION</u></b>  | <b><u>DESCRIPTION</u></b>  |
|--|--|
| <b>1. <u>AIR INTAKE</u></b>  |  |
| a. Wire mesh constructed of corrosion resistant material having mesh opening not > 12 mm is provided. (Y/N/NA)                             | l. Blade overlap by 5 mm minimum. (Y/N/NA)   |
| b. Away from areas with potential fire hazard. (Y/N/NA)  | m. Blade and casing lateral clearance <1.5mm. (Y/N/NA)   |
|  | n. Sound structural rigidity of casing. (Y/N/NA)   |
|  | p. Suitable stoppers provided. (Y/N/NA)  |
|  | q. Closing action solely by the weight of blade(s). (Y/N/NA)   |
|  | r. Length of blade not > 600 mm. (Y/N/NA)  |
| <b>2. <u>AIR FILTERS</u></b>   |  |
| a. Filters installed. (Y/N/NA)   | <b>C. <u>Proprietary Made Fire Dampers</u></b>   |
| b. Comply with approved standard (documentary proof attached). (Y/N/NA)  | s. Approved by a FSD recognised testing authority to BS 476:Part 20 for integrity, or UL 555, (documentary proof attached). (Y/N/NA)                                       |
| c. Metal filters provided. (Y/N/NA)  | t. Installed according to manufacturer's recommendations (details attached). (Y/N/NA)  |
| d. Filter is clean. (Y/N/NA)   |  |
| e. Filter frame constructed of non-combustible material. (Y/N/NA)  |  |
| <b>3. <u>AIR DUCTS</u></b>   | <b>5. <u>INSULATION</u></b>  |
| a. Constructed of non-combustible material having a strength and durability not less than that of galvanised sheet iron or steel. (Y/N/NA) | a. Internal insulation and associated fixing assembly in compliance with BS 476:Pt.6 with indices 'I' <= 12, 'i <sub>1</sub> ' <= 6 (documentary proof attached). (Y/N/NA) |
| b. Internal duct surfaces are clean. (Y/N/NA)  | b. External insulation and associated fixing assembly in compliance with BS 476:Pt.7 (documentary proof attached). (Y/N/NA)  |
| c. Flexible connector in compliance with BS 476:Part 6 with indices 'I' <= 12, 'i <sub>1</sub> ' <= 6. (Y/N/NA)                            | c. Mineral wool or fibre-glass insulating material used. (Y/N/NA)  |
| <b>4. <u>FIRE DAMPERS</u></b>  | d. Minimum 12 mm thick plastering. (Y/N/NA)  |
| <b>A. <u>General Requirements</u></b>  | e. Metal cladding. (Y/N/NA)  |
| a. Damper operation matches the air flow direction. (Y/N/NA)   | f. No external insulation passing through a fire separation structure. (Y/N/NA)  |
| b. Fusible link does not impede damper from closing. (Y/N/NA)  |  |
| c. Damper properly secured to structure. (Y/N/NA)  | <b>6. <u>FLEXIBLE DUCTS</u></b>  |
| d. Adequate access for maintenance purposes. (Y/N/NA)  | a. Fully comply with UL 181, Class 1 OR BS 476:Pt. 6 with indices 'I' <= 12, 'i <sub>1</sub> ' <= 6 and the puncture test. (documentary proof attached). (Y/N/NA)          |
| e. No internal lining within 1 m of damper. (Y/N/NA)   | b. Not exceeding 4 m in length. (Y/N/NA)   |
| f. Approved fusible link installed. (Y/N/NA)   | c. Not used as main air distribution duct. (Y/N/NA)  |
| g. Damper with correct fire resisting rating. (Y/N/NA)   | d. Not penetrating through fire compartment. (Y/N/NA)  |
| h. Casing exceeds the blade width (in open position) by 15 mm at each end. (Y/N/NA)  |  |
| i. Damper closes properly when fusible link disconnected. (Y/N/NA)   | <b>7. <u>PROTECTED AREAS</u></b>   |
| j. Builder's work around fire damper casing properly made good. (Y/N/NA)   | a. Fire & smoke dampers actuated by approved smoke detectors are provided. (Y/N/NA)  |
| <b>B. <u>Local Made Fire Damper</u></b>  | b. Fire & smoke dampers approved by a FSD recognised testing authority to UL 555 and UL 555S (documentary proof attached). (Y/N/NA)  |
| k. Bearing made of brass or equivalent. (Y/N/NA)   |  |

## 通風系統檢查核對表

地址 \_\_\_\_\_

消防處檔號 \_\_\_\_\_

樓宇類型 \_\_\_\_\_

### 核對項目

1. 入風口
  - a. 裝有由防腐蝕物料製造而網孔不超過 12 毫米的網罩。 (是/ 否/ 不適用)
  - b. 遠離有潛在火警危險的範圍。 (是/ 否/ 不適用)
2. 空氣隔塵網
  - a. 已安裝隔塵網。 (是/ 否/ 不適用)
  - b. 符合認可標準(附有文件證明)。 (是/ 否/ 不適用)
  - c. 已安裝金屬隔塵網。 (是/ 否/ 不適用)
  - d. 隔塵網是清潔的。 (是/ 否/ 不適用)
  - e. 隔塵網用不可燃燒物料製造。 (是/ 否/ 不適用)
3. 風槽
  - a. 用不可燃燒物料製造，其堅固及耐用程度不低於鍍鋅鐵片或鍍鋅鋼片。 (是/ 否/ 不適用)
  - b. 風槽的內部是清潔的。 (是/ 否/ 不適用)
  - c. 軟接頭符合英國標準第 476 條第 6 部的規定，指數「I」不超過 12、「i<sub>1</sub>」則不超過 6。 (是/ 否/ 不適用)
4. 防火閘
  - A. 一般規定
    - a. 防火閘的運作配合氣流方向。 (是/ 否/ 不適用)
    - b. 保險連桿不妨礙防火閘關閉。 (是/ 否/ 不適用)
    - c. 防火閘牢固地安裝在建築結構內。 (是/ 否/ 不適用)
    - d. 有足夠「生口」供維修用途。 (是/ 否/ 不適用)
    - e. 距離防火閘 1 米以內的風槽沒有內層襯墊。 (是/ 否/ 不適用)
    - f. 已安裝認可的保險連桿。 (是/ 否/ 不適用)
    - g. 防火閘具有適當抗火時效。 (是/ 否/ 不適用)
    - h. (防火閘開啓時)外殼最少比閘葉每端的闊度多 15 毫米。 (是/ 否/ 不適用)
    - i. 拆除保險連桿時，防火閘會正當關上。 (是/ 否/ 不適用)
    - j. 防火閘外殼周圍的建築工作完整。 (是/ 否/ 不適用)
  - B. 本港製造的防火閘
    - k. 軸承由黃銅或類似質料製造。 (是/ 否/ 不適用)
    - l. 葉閘之間互相重疊最少為 5 毫米。 (是/ 否/ 不適用)
    - m. 閘葉與外殼之間側面空隙不超過 1.5 毫米 (是/ 否/ 不適用)

- n. 外殼結構堅固。 (是/ 否/ 不適用)
  - p. 已安裝合適的停止器。 (是/ 否/ 不適用)
  - q. 純粹利用閘葉的重量來關閉防火閘。 (是/ 否/ 不適用)
  - r. 閘葉的長度不超過 600 毫米。 (是/ 否/ 不適用)
- C. 專利廠製造的防火閘
- s. 由消防處認可的測試機構根據英國標準第 476 條第 20 部只限於防火閘本身的完整部分，或根據擔保人實驗室公司 555(UL555)審批。(附有文件證明) (是/ 否/ 不適用)
  - t. 按照製造商的建議安裝(附有詳情)。 (是/ 否/ 不適用)
5. 隔熱材料
- a. 內層的隔熱材料與所用的安裝配件符合英國標準第 476 第 6 部的規定指數「I」不超過 12、「i<sub>1</sub>」則不超過 6。(附有文件證明) (是/ 否/ 不適用)
  - b. 外層隔熱材料與所用的安裝配件符合英國標準第 476 條第 7 部的規定。(附有文件證明) (是/ 否/ 不適用)
  - c. 使用礦質棉或纖維玻璃隔熱材料。 (是/ 否/ 不適用)
  - d. 英泥批盪最少有 12 毫米厚。 (是/ 否/ 不適用)
  - e. 金屬包層。 (是/ 否/ 不適用)
  - f. 外層隔熱材料沒有貫穿隔火結構。 (是/ 否/ 不適用)
6. 軟喉
- a. 完全符合 UL181 第 1 級測試標準或英國標準第 476 條第 6 部的規定，指數「I」不超過 12、「i<sub>1</sub>」則不超過 6，以及完全符合穿刺測試。(附有文件證明) (是/ 否/ 不適用)
  - b. 長度不超過 4 米。 (是/ 否/ 不適用)
  - c. 沒有用作主要空氣分配風槽使用。 (是/ 否/ 不適用)
  - d. 沒有貫穿防火間格。 (是/ 否/ 不適用)
7. 防護範圍
- a. 已安裝由認可煙霧偵測器啟動的防火及防煙閘。 (是/ 否/ 不適用)
  - b. 防火及防煙閘經消防處認可的測試機構根據 UL555 及 UL555S 審批。(附有文件證明) (是/ 否/ 不適用)
  - c. 按照製造商的建議安裝防火及防煙閘。(附有詳情) (是/ 否/ 不適用)
  - d. 用於防護範圍的風扇盤管符合英國標準第 476 條第 4 部的規定。 (是/ 否/ 不適用)
8. 風槽電發熱器
- a. 屬「黑熱」式，有「凍」伸延。 (是/ 否/ 不適用)
  - b. 發熱線平均分佈風槽，並牢固地繫在防火物料製造的固定裝置上。 (是/ 否/ 不適用)
  - c. 長度超過 800 毫米的發熱線上裝有支持物。 (是/ 否/ 不適用)
  - d. 為所有電線接駁提供一個外接線箱，附有中英文警告告示。 (是/ 否/ 不適用)
  - e. 設有一小插口，放入測試溫度計。 (是/ 否/ 不適用)
  - f. 內部線路屬高溫隔熱電線。 (是/ 否/ 不適用)
  - g. 電熱器與吹風機聯鎖。 (是/ 否/ 不適用)
  - h. 吹風機控制器安裝了定時器。 (是/ 否/ 不適用)
  - I. 定時器最低調校至 3 分鐘時限。 (是/ 否/ 不適用)

- j. 已安裝故障保險流動感應裝置。 (是/ 否/ 不適用)
- k. 已安裝手動重校掣的超熱節溫器。 (是/ 否/ 不適用)
- l. 超熱關掉器在達至攝氏 50 度+10%的 90 秒內運作。 (是/ 否/ 不適用)
- m. 已安裝手動重校開關按鈕。 (是/ 否/ 不適用)
- n. 風槽內距離電熱器 1 米內沒有安裝用作隔音/ 隔熱的材料。 (是/ 否/ 不適用)
- p. 電路控制屬單相類型。 (是/ 否/ 不適用)
- q. 已安裝緊急關閉按鈕。 (是/ 否/ 不適用)
- r. 設有檢查門供維修用途。 (是/ 否/ 不適用)
9. 通風假天花或升高樓層
- a. 假天花或升高樓層的物料經消防處認可的測試機構根據英國標準 (是/ 否/ 不適用) 第 476 條第 4 部的規定審批。(附有文件證明)
- b. 使用由認可的煙霧偵測系統(探針式)操作的防火及防煙閘,以維持 (是/ 否/ 不適用) 間隔間的抗火效能。
- c. 防火及防煙閘經消防處認可的測試機構根據 UL555 及 UL555S 的 (是/ 否/ 不適用) 規定審批。(附有文件證明)
- d. 所有在上述空間內的電力輸送及控制線路均按照有關標準安裝在 (是/ 否/ 不適用) 重型金屬電線槽及/ 或上螺絲的金屬電線喉內。
- e. 上述空間內所有喉管由金屬製成。 (是/ 否/ 不適用)
- f. 上述空間內所有隔熱材料符合消防處通函(通風課)一九八九年第 (是/ 否/ 不適用) 四號所載規定。
- g. 氣動控制管由銅製成。 (是/ 否/ 不適用)
- h. 氣動軟管長度不超過 300 毫米,而且屬防止火焰蔓延類型。 (是/ 否/ 不適用)
- i. 除主要及只用於該範圍內的設施外,上述空間沒有容納其他設 (是/ 否/ 不適用) 施。
- j. 已設有「生口」以便清潔及檢查。 (是/ 否/ 不適用)
10. 其他
- a. 所有連接防火間格的通風口及風槽均已安裝防火閘。 (是/ 否/ 不適用)
- b. 在鮮風/ 冷風/ 回風/ 排風槽/ 通風槽內沒有可燃燒物料。 (是/ 否/ 不適用)
- c. 抽氣扇沒有排氣出座位間/ 走廊/ 假天花的空間/ 樓梯。 (是/ 否/ 不適用)
- d. 冷氣機房沒有用作存放物品用途。 (是/ 否/ 不適用)

檢查兼核實人員：

\_\_\_\_\_ (簽署)

\_\_\_\_\_ (請用正楷填寫姓名)

通風設備承辦商的代表

\_\_\_\_\_

公司蓋印

通風設備承辦商公司名稱

日期 \_\_\_\_\_