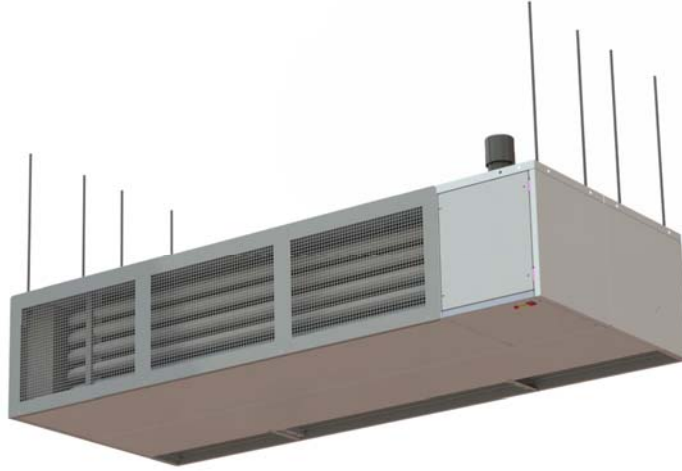


# AB-2 RANGE GAS FIRED AIR CURTAIN



These appliances meet the following EC Directives

DIR 2009/142/EC:GAD

DIR 2014/30/EC:EMC

DIR 2014/35/EC:LVD

DIR 2006/42/EC:MD

**PLEASE READ THIS DOCUMENT CAREFULLY BEFORE COMMENCING THE INSTALLATION AND LEAVE IT WITH THE USER OR ATTACHED TO THE APPLIANCE OR GAS SERVICE METER AFTER INSTALLATION.**

### **WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. All work must be carried out by appropriately qualified persons.

**The manufacturer does not take any responsibility in the event of non-observance of the regulations concerning the connection of the apparatus causing an evil operation possibly resulting in damage to the apparatus and/or environment in which the unit is installed.**

Subject to modifications

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## **WARNINGS :**

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

Gas-fired appliances are not designed for use in hazardous atmospheres containing flammable vapors or combustible dust, in atmospheres containing chlorinated or halogenated hydrocarbons or in applications with airborne silicone substances.

Should overheating occur, or the gas supply fail to shut off, shut off the manual gas valve to the appliance before shutting off the electrical supply.

Do not use this appliance if any part has been immersed in water. Immediately call a qualified service technician to inspect the appliance and replace any gas control that has been immersed in water.

This appliance is not intended for use by persons (including children) with reduced sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## **FOR YOUR SAFETY**

### **What to do if you smell gas:**

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier.
- Evacuate all personnel.
- Do not store or use petrol or other flammable vapours and liquids in the vicinity of this or any other appliance.

# 1. General Information.

Welcome to the new AB-2 Reznor gas fired air curtain models. Local regulations may vary in the country of use and it is the installers responsibility to ensure that such regulations are satisfied.

All installation, assembly, commissioning and service procedures must be carried out by suitably qualified competent persons to the statutory regulations in the country of use.

These air curtains are suitable for indoor use only, and designed to operate at an ambient temperature between  $-15^{\circ}\text{C}$  and  $30^{\circ}\text{C}$ .

When installing, commissioning and servicing is undertaken on the gas fired air curtains specified in these instructions, due care and attention is required to ensure that working at height regulations are adhered to at the mounting heights specified.

All dimensions shown are in mm unless otherwise stated.

The manufacturer reserves the right to alter specifications without prior notice.

**PLEASE READ** this document prior to installation to familiarise yourself with the components and tools you require at the various stages.

The primary reason for installing gas fired air curtains is to prevent the influx of cold outside air through a door opening into a heated area.

Typical applications include large despatch bay doors in factories and warehouses, and internal doors between areas of different temperatures.

Wider door openings can be accommodated by bolting two or more units together.

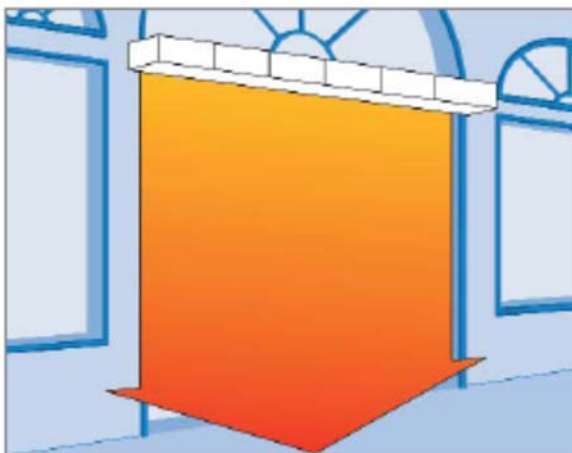
Air curtains control the internal climate by emitting an air stream with enough velocity to meet the floor so creating an air barrier in the door area. To prevent the ingress of outside draughts, the discharge louvre is angled outwards, so that the air leaving the building meets the wind trying to enter, thus deflecting it. (See diagrams below).

Reznor gas fired air curtains provide uniform air distribution across the full width of the door, keeping heated or conditioned air inside the building and stopping the ingress of cold air, draughts, and dust.

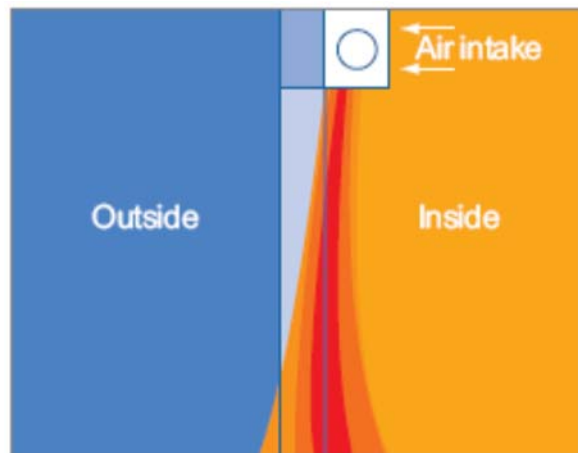
This manual provides detailed information on the installation of Reznor gas fired air curtains. It is essential that these products are installed in accordance with these manufacturers instructions.



Without air curtain



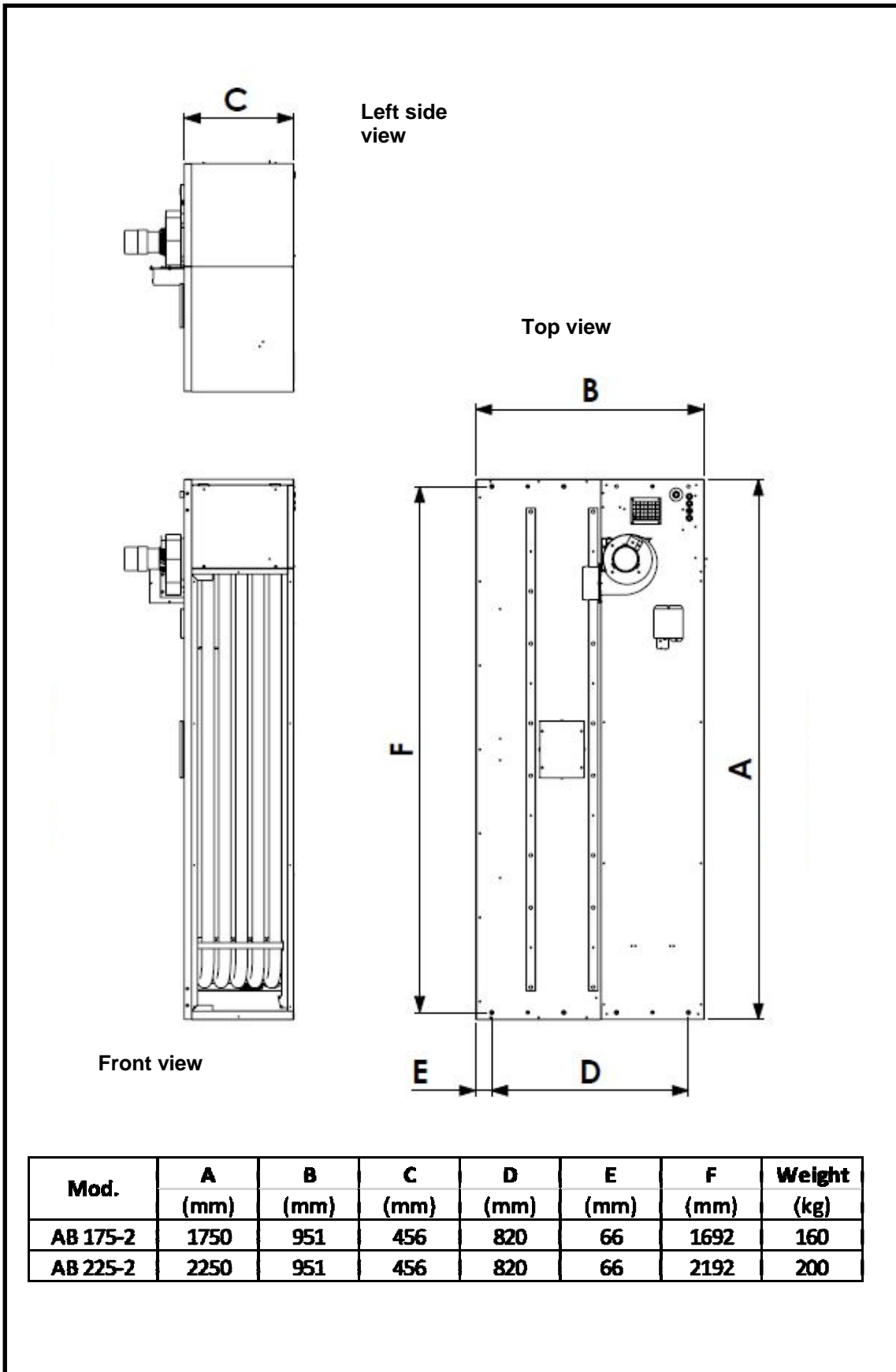
With air curtain



Pattern of airflow

## 2. Dimensions

Figure 1: Dimensions (tol.  $\pm 2\text{mm}$ )



### 3. Technische specificaties

| Model : air curtain AB xxxx-2       |                                    |         |                                    |         |                               |         |
|-------------------------------------|------------------------------------|---------|------------------------------------|---------|-------------------------------|---------|
|                                     | AB 225N                            | AB 175N | AB 225N                            | AB 175N | AB 225P                       | AB 175P |
| Gas type                            | Natural gas G20 (I <sub>2H</sub> ) |         | Natural gas G25 (I <sub>2L</sub> ) |         | PropaneG31 (I <sub>3P</sub> ) |         |
| Gas connection                      | ¾ inch external thread             |         |                                    |         |                               |         |
| Max. supply pressure (mbar)         | 25                                 |         | 30                                 |         | 45                            |         |
| Min. Supply pressure (mbar)         | 17                                 |         | 20                                 |         | 25                            |         |
| Nominal pressure (mbar)             | 20                                 |         | 25                                 |         | 37                            |         |
| Gross heat input (kW)               | 66                                 | 45,5    | 66                                 | 45,5    | 65                            | 45,5    |
| Nett heat input (kW)                | 59.4                               | 41.0    | 59.4                               | 41.0    | 60.2                          | 41.0    |
| Nett heat output (kW)               | 54.0                               | 37.0    | 54.0                               | 37.0    | 54.8                          | 37.0    |
| Gas flow rate (m <sup>3</sup> /uur) | 6.3                                | 4.3     | 7.4                                | 4.3     | -                             | -       |
| Gas flow rate (kg/h)                | -                                  | -       | -                                  | -       | 4.6                           | 3.2     |
| N° of injectors                     | 5                                  |         |                                    |         |                               |         |
| Injector size (mm)                  | Ø3.4                               | Ø2.9    | Ø3.4                               | Ø2.9    | Ø1.85                         | Ø1.60   |
| Injector pressure (mbar)            | 7.25                               | 6.35    | 10.90                              | 9.30    | 30.50                         | 26.00   |
| Flue nominal bore (mm)              | 130                                |         |                                    |         |                               |         |

#### I/D fan

|              |                     |
|--------------|---------------------|
| Voltage      | 230 V 1-fasig 50 Hz |
| Power rating | 120 W               |
| Current      | 0,9 A (FLC)         |

#### Air distribution fans

|                         |  |   |   |   |                                  |   |
|-------------------------|--|---|---|---|----------------------------------|---|
| Type                    | Centrifugal (with integral thermal trip) |   |   |   |                                  |   |
| Speeds                  | 2  |   |   |   |                                  |   |
| N° of fans              | 4  | 3 | 4 | 3 | 4                                | 3 |
| Max. air volume         | 11000m <sup>3</sup> /hr (AB 175)         |   |   |   | 13000m <sup>3</sup> /hr (AB 225) |   |
| Voltage                 | 230V 1PH 50Hz                            |   |   |   |                                  |   |
| Power rating (per fan)  | 1140 W                                   |   |   |   |                                  |   |
| Current (per fan)       | 5.2A (FLC)                               |   |   |   |                                  |   |
| Start current (per fan) | 11A                                      |   |   |   |                                  |   |

#### Constitution

| Model  | AB175-2 | AB225-2 |
|--------|---------|---------|
| AB350= | X 2     |         |
| AB400= | X 1     | X 1     |
| AB450= |         | X 2     |
| AB525= | X 3     |         |
| AB575= | X 2     | X 1     |
| AB625= | X 1     | X 2     |
| AB675= |         | X 3     |



#### WARNING:

THIS AIR CURTAIN SHOULD NOT BE INSTALLED WHERE THERE IS A CORROSIVE ATMOSPHERE.

## 4. Installation details

### Health and safety

Reznor air curtains must be installed in accordance with the relevant provisions of the Gas Safety (Installations and Use) Regulations 1998. Due account should also be taken of any obligations arising from the Health and Safety at Work Act 1974 or relevant codes of practice. In addition the installation must be carried out in accordance with the current IEE wiring regulations (BS 7671), BS 6896 (Industrial & Commercial) and any other relevant British Standards and Codes of Practice by a qualified installer. Isolate all electrical supplies to the heater & control panel before proceeding. For your own safety we recommend the use of personal protective equipment when handling this air curtain.

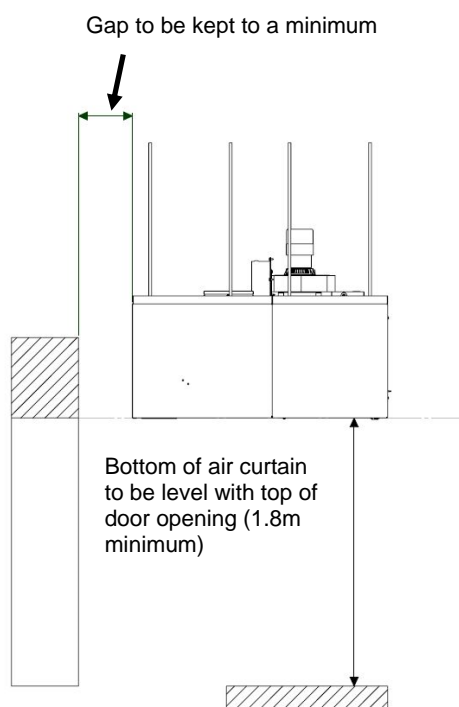
Check the supporting structure to verify that it has sufficient load-carrying capacity to support the unit weight. Suspend the heater only from the threaded nut retainers or with a manufacturer provided kit.

DO NOT suspend from the heater cabinet panels. Do not place or add additional weight to the suspended heater.

### 4.1 Mounting

Reznor gas fired air curtains are supplied with mounting brackets pre-fitted, either as single units, or in multiples, which can be bolted together to suit various door widths. The minimum mounting height is 1.8 metres

Fig. 2



### 4.1.1

#### Suspension by means of threaded rods.

De gas-fired air curtains can standard be suspended using threaded rods M10 and lock nuts. Ensure that the structural elements which will be used to suspend the appliance are adequate to carry the weight of the appliance.

Leave the unit on the pallet. If the bottom of the unit is not supported or protected damage can occur.

The heater is supplied with 8 suspension points. All points must be used.

Ensure that threaded rods are lock nut secured to ensure against loosening.

Use a lock nut being carefully tightened in order not to damage the screw thread.

Fig. 3a

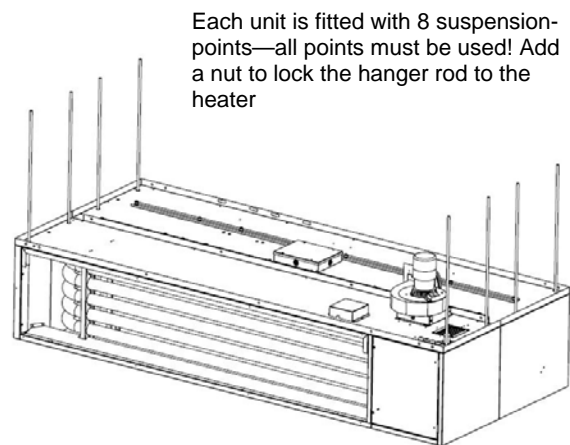
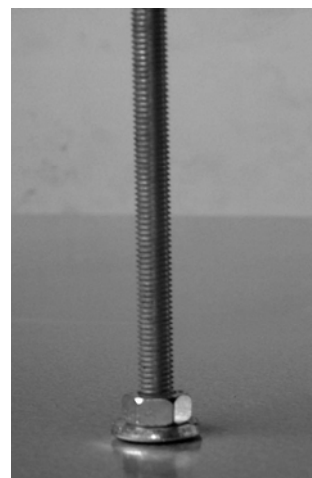


Fig. 3b



## 4. Installation details (cont)

It may be necessary to adjust the position of the air outlet louvres to provide the correct airflow across the door opening. This can be done by first loosening the locking pins (fig. 4), The louvres can now be moved to the desired position and the locking pins re-tightened.

NOTE: The AB 225-2 model has two pairs of lock nuts, whereas the AB 175-2 model only has one pair.

Fig. 4



Lock nut

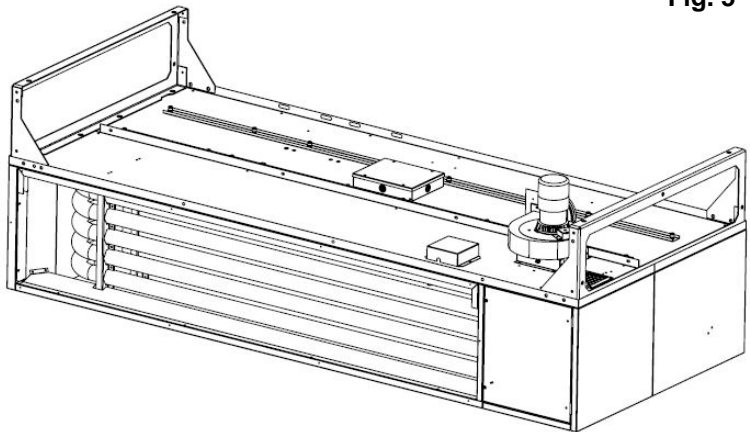
### 4.1.2

#### Suspension by means of fixing brackets (option).

The use of fixing brackets to suspend the air curtain is optional (to be specified on order form). See figure 5..

By using suitable steelwork the air curtains can be fixed to the building structure.

Fig. 5



### 4.1.3

#### Multiple air curtains

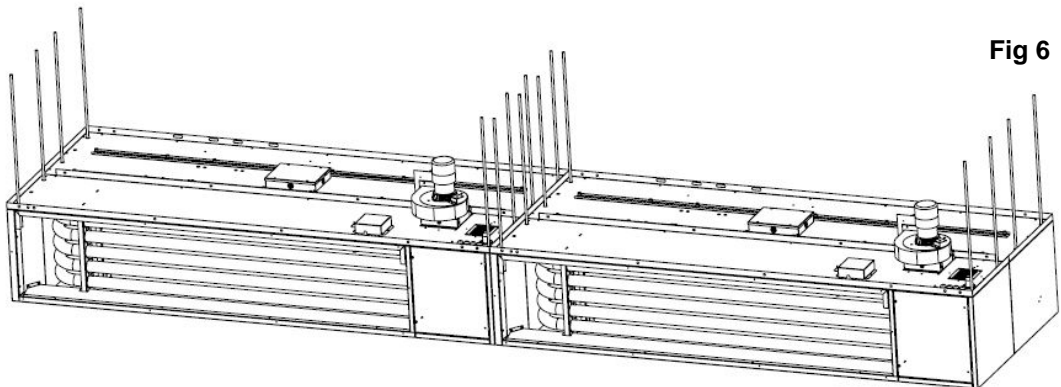
Multiple air curtains must be fixed to the building structure by means of threaded rods as described in section 4.1.1.

The use of fixing brackets to install the air curtains is optional (see section 4.1.2).

Make sure that the multiple air curtains are level and in the same plane in order to avoid bending of the system.

Then, the air curtains must be fixed together by means of four M6 bolts, nuts and washers in the hereto provided holes in the side of the unit.

Fig 6



#### 4.2 Flueing.

The gas fired air curtain must be installed with a fixed flue. The fan is fitted with a 130mm diameter female outlet. (Flue and fittings can be supplied by the manufacturer).

The flue pipe should be adequately supported at regular intervals from the building structure and terminated externally with a British Gas tested and certified GC1 terminal.

The maximum flue length is 7m and the maximum number of bends is two on individually flued appliances. The flue may be installed vertically or horizontally, noting that horizontal flues MUST be terminated vertically. (See figures 7 & 8).

#### 4.3 Ventilation requirements.

In buildings having an air change rate of less than 0.5 per hour, additional mechanical or natural ventilation is required. For detailed information please see BS6230 section 5.2.2.2.1.1.

##### 4.3.1 Mechanical ventilation.

Should be installed to meet a minimum of 0.5 air changes per hour using appropriately sized fans interlocked with the heaters.

##### 4.3.2 Natural ventilation.

Low level ventilation openings with a free area of at least 2cm<sup>2</sup>/kW shall be provided. See section 5.2.2.2.1.2.

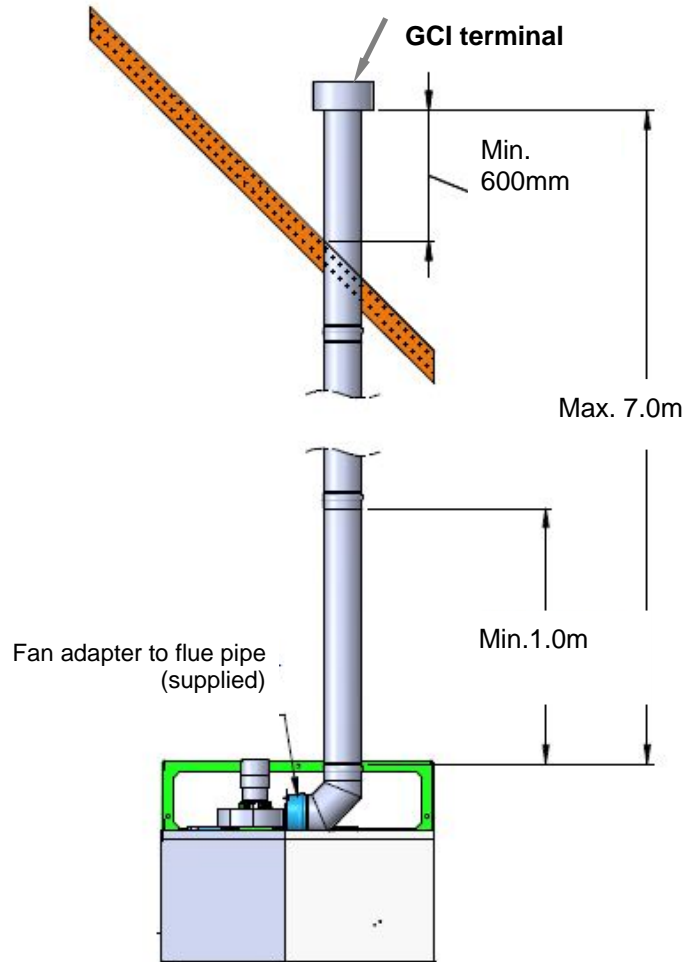
#### Flue technical details

| Model                                | AB 225-2      |             | AB 175-2       |             |
|--------------------------------------|---------------|-------------|----------------|-------------|
|                                      | Nat gas (G20) | Prop. (G31) | Nat. gas (G20) | Prop. (G31) |
| Gas type                             | Nat gas (G20) | Prop. (G31) | Nat. gas (G20) | Prop. (G31) |
| Mass flow rate of flue gasses (kg/s) | 0,03337       | 0,0332      | 0,02576        | 0,0283      |
| Flue gas temp. At flue outlet (°C)   | 188           | 173         | 189,5          | 187         |
| Flue pressure positive(Pa)           | 8             |             | 8              |             |



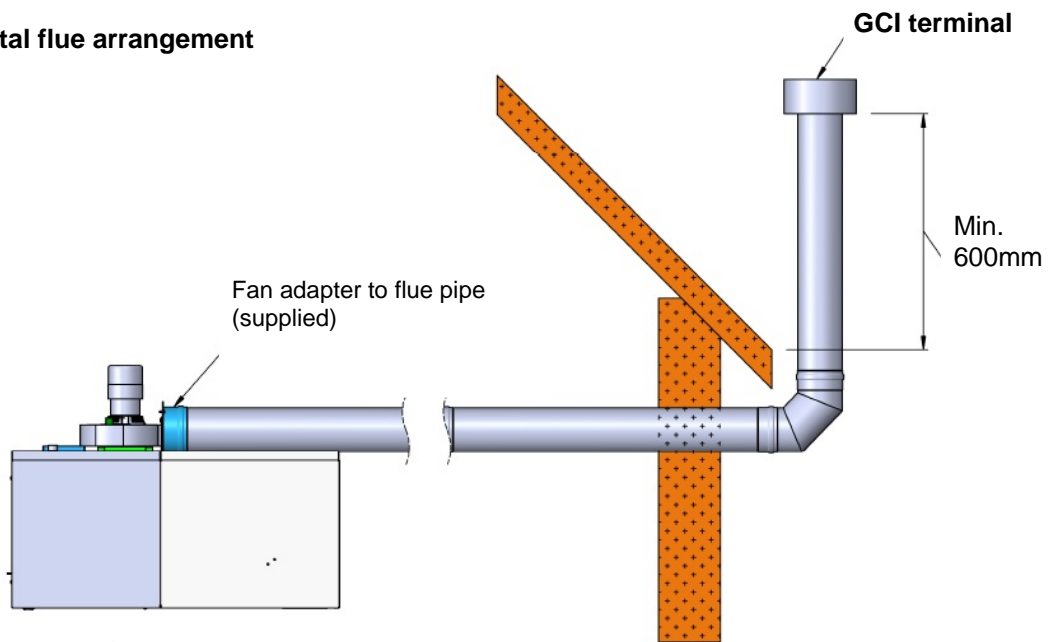
## 4. Installation details (cont.)

**Fig. 7 :**  
Typical vertical flue arrangement



*Right side view*


**Fig. 8 :**  
Typical horizontal flue arrangement



*Side view*



## 5. Wiring details (cont.)d

 *A customer specific control panel wiring diagram will be supplied with each air curtain*

### 5.1 Burner controls

The burner controls are mounted in the burner control cubicle which is an integral part of the air curtain casing and are accessible by opening a hinged lid on the right hand side of the air curtain (see Figs. 4 and 5 in section 8 of this manual for details). The controls accessible in the cubicle are: gas solenoid valve, ignition controller, air pressure switch, flame probe, ignition electrode, reset switch, orange and white lamps, plus associated wiring harness. For details see burner wiring diagram in section 5, page 9.

### 5.2 Control panel.

The electrical control panel incorporates the facility to interlock with the door opening mechanism and automatically switch the air curtain between high/low speed as the door is opened and closed. A pair of volt free auxiliary contacts are required on the door open/close contactor which closes as the door opens. If this is not available then a suitably positioned limit switch and striker plate will need to be fitted to the door.

The panel incorporates an auto/off/manual selector switch, which, when in 'auto' mode operates the air curtain in low speed via an external room thermostat provided the door is the down position. In the door up position the air curtain operates in high speed and overrides the room thermostat. The 'manual' position overrides the door interlock and thermostat, and the 'off' position turns the air curtain off.

A cool/heat selector switch is also incorporated which allows the air curtain to supply heated air, or unheated ambient air.

The panel also contains a removable link on the main terminal rail to allow the air curtain to be switched on and off remotely via a BMS control relay.


The panel may also be fitted with optional low voltage (24V AC) relays for fire alarm/door contact interlocks.

Regardless of the position of any of the above switches, the main air fans must be running to allow the burner to run.

### 5.3 Overheat protection.

In the event of any overheat condition there are two thermal limit controls fitted inside the air curtain. The controls are factory set and non-adjustable. The self resetting (cycling) control activates at 63°C (AB 225N) and 51.5°C (AB 175N), and the manual reset control at 96°C. If either set point is reached, the corresponding limit control will interrupt the electrical power to the burner gas valve. The burner will not relight until the limit control has reset. The manual reset button is located on top of the heater on the left hand side of the thermostat cover and can be accessed after first removing the dust cover. (See Figs. C and D).

These safety devices provide protection in the event of an air distribution fan motor failure, or lack of airflow due to restrictions. (For location see section 8 Fig.29, and section 5 diagram 8, burner controls wiring diagram).

 *Warning: never attempt to bypass the thermal limit controls as hazardous conditions could result.*



## 6. Servicing

! These appliances should be serviced annually by a competent person to ensure safe and efficient operation. In exceptionally dusty or polluted conditions more frequent servicing may be required. The manufacturer offers a maintenance service. Details available on request. **Isolate gas and electricity supplies before commencing any work.**

### 6.1 Tools Required.

The following tools and equipment are advisable to complete the tasks laid out in this manual.

! Suitable alternative tools may be used.



Cross point screwdriver



Small flat head screwdriver



Adjustable spanner



10mm spanner



8mm spanner



Manometer



Adjustable pipe wrench



Soft brush

### 6.2 Burner assembly.

The major components of the burner assembly can be accessed by removing the two retaining nuts located on the door so that door can easily be opened (see fig. 1 & 2 in section 8).

In case of insufficient space to reach the components, remove the cover at the bottom. Before removing the 4 retaining nuts at the bottom of the cover, make sure that electrical contacts of both lamps and switch are disconnected. We refer to figures 3 & 4 in section 8.

Section 8 explains how to remove the major components.

#### 6.2.1 Manifold/injectors.

Remove the manifold complete with injectors as described in section 8. The manifold/injectors should be examined for signs of debris and cleaned if necessary by blowing compressed air in the reverse direction to flow. Individual injectors can be replaced if necessary.

#### 6.2.2 Burners.

Access to the burners is achieved by first detaching and slipping aside the panel of the control unit (see section 8). The burners can now be examined and cleaned using a soft brush, or by blowing compressed air in the reverse direction to flow. Individual burners can be replaced if necessary by removing the clamping plate (see section 8). The complete burner rack can also be removed following the instructions described in section 8.

#### 6.2.3 Spark electrode .

Remove the spark electrode as described in section 8 and examine. If it is in good order

check the electrode gap, this should be 3.18mm  $\pm$  0.5mm. Adjust the gap if necessary by carefully bending the earth rod, then re-checking the measurement.

#### 6.2.4 Flame probe.

Remove the flame probe as described in section 8 and examine for signs of erosion. The probe should be cleaned if necessary using a fine grade emery paper.

#### 6.3 I/D fan.

**NOTE:** Before removing the I/D fan it will be necessary to remove the first flue section after releasing it from the fan/flue adapter. (See section 8).

Disconnect and remove I/D fan as described in section 8. Clean off any dust or deposits using a soft brush paying particular attention to the impeller. Also remove any dust or deposits from the finger guard covering the secondary (cooling) impeller, and the mesh aperture in the motor cover. Check that the impeller is free to rotate and that there is no play in the bearings.

#### 6.4 Emitter tubes.

##### 6.4.1 External.

Brush away any dust on the exterior of the emitter tubes after first removing the ten screws retaining the mesh air inlet grille as shown in Fig.0. overleaf

##### 6.4.2 Internal.

To gain access first remove the bottom cover as described in section 8 before removing the screws from the inspection cover.

## 6. Servicing (cont)



Remove the screws from the flue cover as shown in figure 3. Take care not to damage the gasket.



### 6.5 Air outlet louvres

The air outlet louvres should be cleaned with a soft brush. Check that the louvres are set to the required angle.

### 6.6 Air distribution fans

*The air distribution fans can be accessed by opening the fan lid as described in section 8.*

*Clean off any dust or deposits with a soft brush paying particular attention to the impeller. Check that the impeller spins freely, and that there is no play in the fan bearings.*

*The fan(s) can be removed, if necessary, as described in section 8.*

**!** *NOTE: Following any servicing work it will be necessary to re-commission the air curtain (See section 7).*

## 7. Commissioning.

**This appliance must be commissioned by a suitably qualified engineer**

### 7.1 Gas connection

Only persons suitably qualified to work on gas fired appliances may carry out commissioning and testing. The whole of the gas service installation including the meter must be inspected, tested for gas soundness, and purged in accordance with the current rules in force.

**WARNING:** *Never use a naked flame for checking gas soundness.*

### 7.2 Air curtain gas pipework

The gas soundness of the air heater pipework has been checked prior to leaving the factory. However during installation, connections may have been loosened. Check the gas soundness of the appliance pipework using suitable leak detection fluid. If any leaks are found they must be rectified immediately.

### 7.3 Check vacuum setting

**7.3.1** Ensure that the gas and electrical supply to the control panel is switched on. Ensure that the control panel heat/cool selector switch is set to the 'cool' position. The air curtain fans will now start.

**7.3.2** Ensure that the control panel heat/cool selector switch is now set to the 'heat' position. The air curtain fans will now start and the burner will fire automatically. Allow the air curtain to heat up for 15 minutes.

**NOTE:** *If the air curtain will not start on initial start up, the ignition controller may be in lock-out position and require resetting. This may occur especially if the appliance has been on stand-by for a prolonged period.*

### 7.4 Air curtain lighting sequence

AB air curtains are fitted with automatic spark ignition. When adequate airflow for combustion is proven by an air proving switch, and a pre-purge period has elapsed, the integral igniter and gas control valve operate.

The ignition spark ignites the burner and the flame is detected by a flame ionisation rod sensor. If a burner flame is not detected after 5 attempts then the ignition controller proceeds to lockout and will require manually resetting. Lockout is indicated by the illuminated burner rocker switch on the burner housing, and by a lockout lamp on the control panel, and can be reset either by pressing the illuminated burner rocker switch or the control panel lockout reset button.

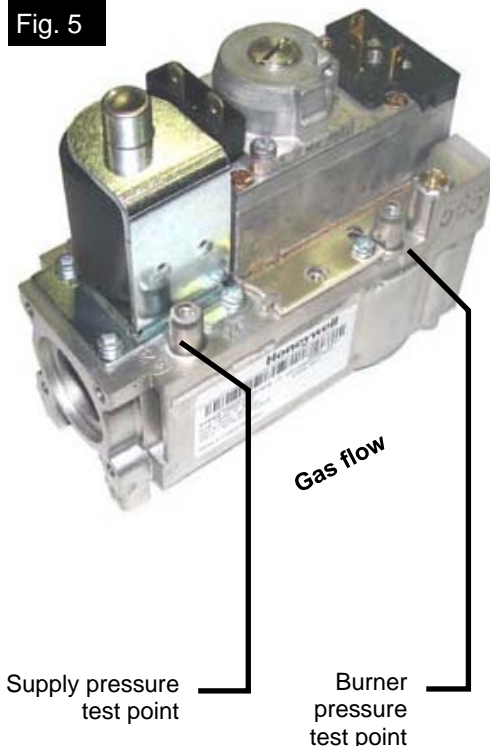
**NOTE:** *If the first lockout reset is not successful, further investigation will be required to ascertain the fault.*

### 7.5 Burner gas pressure adjustment

The gas pressure is set for the required heat input before the appliance leaves the factory, normally, provided the gas supply to the air curtain is in accordance with the supply pressure described on the appliance data plate, the operating pressure will not require adjustment. To check the pressure, the following procedure should be carried out:

**7.5.1** Ascertain from section 3 (technical specifications) of this document, and the appliance data plate, the correct operating gas pressure for the air curtain burner.

**7.5.2** Turn the control panel cool/heat selector switch to the 'cool' position.



#### 7.5.4

Connect a suitable manometer to the burner pressure test point.

Turn the control panel cool/heat selector switch to the 'heat' position, then wait for burner to light.

#### 7.5.5

Observe the burner gas pressure reading on the manometer and compare to the required pressure.

#### 7.5.6

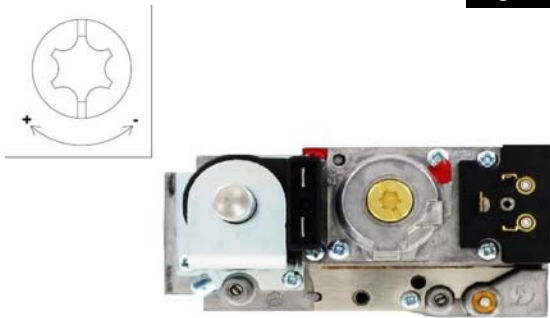
If necessary adjust as follows:

First remove the plastic dust cover from the regulator adjusting screw. Turn the regulator adjusting screw anticlockwise to decrease gas pressure, or clockwise to increase gas pressure. (See Fig.6 ) After adjustment replace dust cover.

#### 7.5.7

Set control panel heat/cool switch to the 'cool' position to turn the burner OFF. Replace the test point screw (if removed). Relight the burner and test for gas soundness using suitable leak detection fluid.

Fig. 6

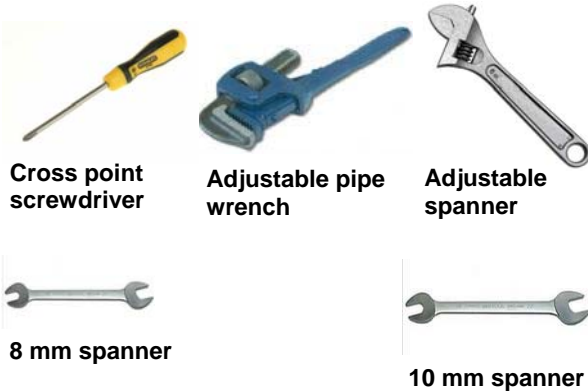


Gas flow

## 8. Parts replacement

! All servicing/maintenance work on this air curtain should be carried out by suitably qualified and Corgi registered engineer. Before commencing any work please ensure that the gas and electricity supplies are turned off. Always test for gas soundness with a suitable leak detection fluid.

### 8.1 Tools required

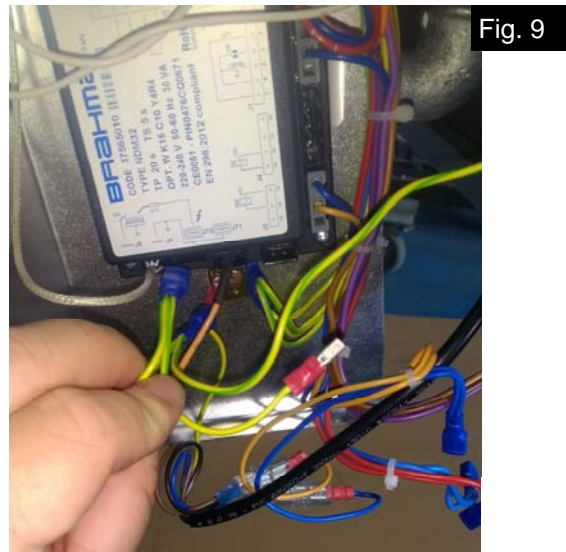


### 8.2 Burner/control assembly

The major components of the burner/control assembly can be accessed by removing the 2 retaining screws from the door so that door can be opened (see fig. 7 & 8).

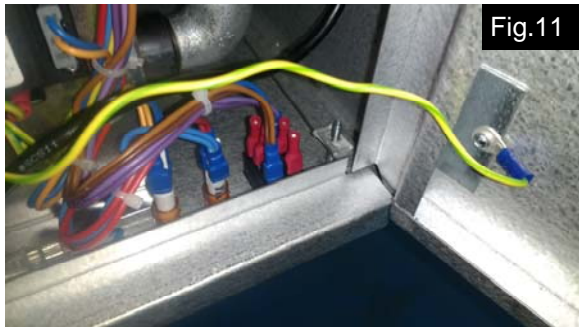


It is also possible to take away the door. In this case the earthing wires must firstly be detached from the burner relay.. Only then can the door be removed from the appliance.





If there is insufficient space to reach the burner components, remove the lid at the bottom. Take care that first the electrical contacts of the two lamps and the switch are disconnected. See fig. 11. Then the four retaining nuts at the bottom of the lid can be removed (see fig. 12).



### 8.2.1 Gas valve

Disconnect the mains gas pipe feeding the air curtain.

Then remove the gas valve as shown in fig. 13.

To ease access to the gas valve remove the electric panel by unscrewing the 2 screws at the top of the appliance. The panel can then be hung over the top panel side (see fig. 14).

Disconnect the quick coupling between gas valve and gas feeding pipe to remove the gas valve. Use hereto appropriate tools. See fig. 15. The valve can now be slid downwards and removed from the unit.



Fig 15



Fig.17

The gas pipe can now be removed from the burner rack by unscrewing 4 screws. See fig. 18.

### 8.2.2 Burner rack and gas feeding pipe.

Follow above steps to disconnect the coupling between gas valve and gas feeding pipe. By removing 3 screws the burner rack and the gas feeding pipe can be removed. Move the burner rack forward and remove by performing a rotational motion. See fig 16 & 17.



Fig.18



Afb.16

Fig. 19 shows a gas feeding line with injectors.



Fig.19

### 8.2.3 Burner tubes

Remove burner tubes by disconnecting the clamping plate. Remove hereto the screws as described in figure 20.



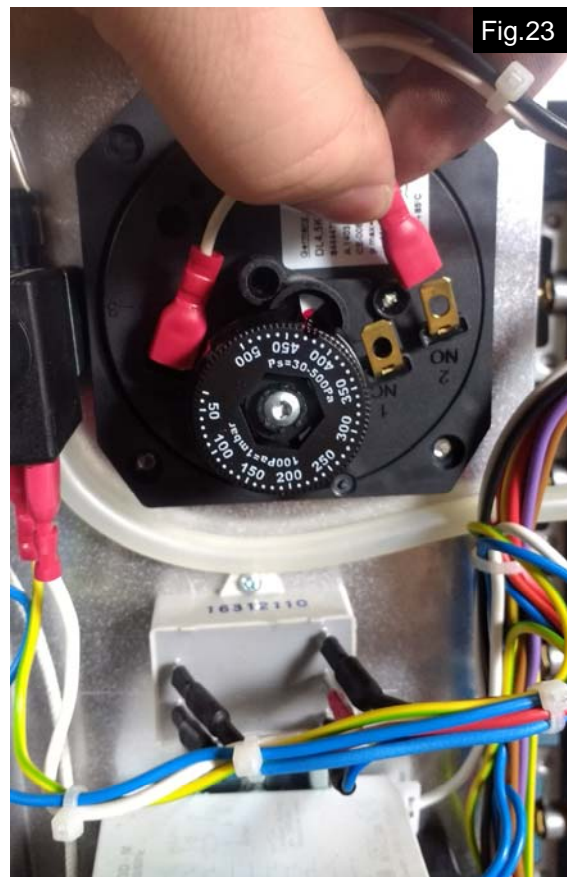
### 8.2.4 Air pressure switch

Release the electric panel as described in 8.2.1. Remove the silicon tubing at the top of the air pressure switch as shown in figure 21.

*NB: only a single tube is fitted to the air pressure switch on the negative pressure side.*



Remove now the electrical connections. Remove hereto the protection cap. Then connections can be disconnected. See fig. . 22 and 23.



Unscrew the retaining nuts at the back of the panel and then remove the air pressure switch. See fig. 24.

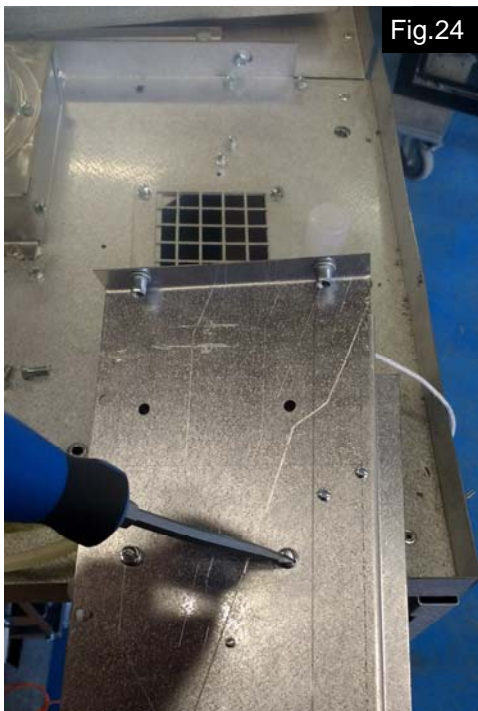


Fig.24

Unscrew then the 4 screws fixing the ignition controller to the electric panel and then remove the controller as shown in figure 26.



Fig.26

### 8.2.5 Ignition controller

Disconnect the multi-pin connector from the ignition controller as shown in figure 25.

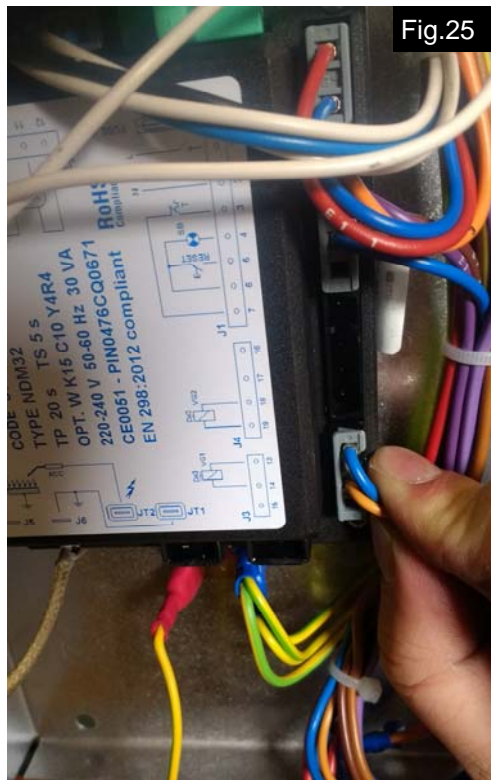


Fig.25

### 8.2.6 I/D fan

The I/D fan is mounted on top of the unit towards the right hand side.

First remove the flue from the fan outlet.

Disconnect the mains plug from the fan and the silicon tubing at de side of the fan box.

Remove the four screws securing the fan to the unit. Remove the fan/fan box assy taking care not to damage the gasket seal.

See figure 27.

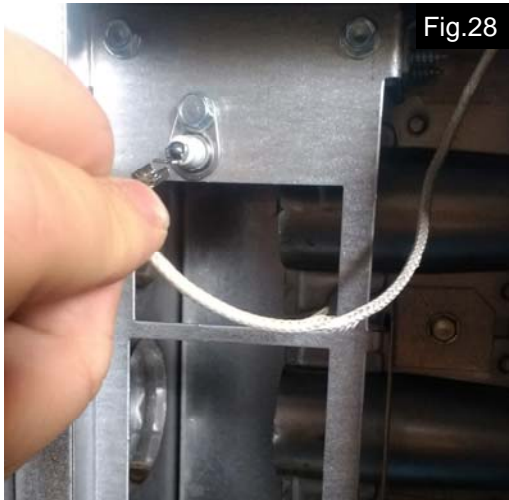


Fig.27

## 8. Parts replacement (cont)

### 8.2.7 Flame probe

Remove the cable socket as shown in figure 28.



Remove the fixing screw from the flame probe as shown in figure 29.

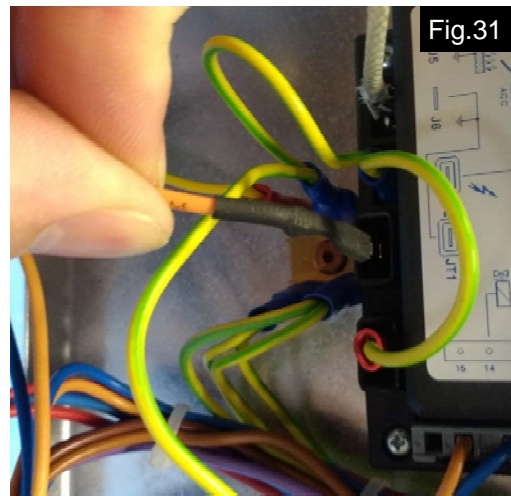


Withdraw flame probe as shown in fig. 30



### 8.2.8 Spark electrode

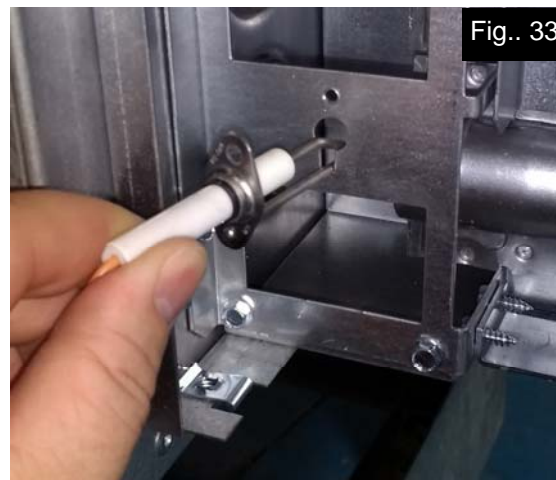
Remove the HT cable from the ignition controller as shown in figure 31.



Remove fixing screw as shown in figure 32.



Withdraw spark electrode complete with HT cable as shown in figure 33.



## 8. Onderdelen vervangen (vervolg)

### 8.2.9 Overheat thermostats

Remove the two retaining screws securing the thermostat access lid as shown in fig. 34.



Disconnect the spade terminals from the self resetting thermostat as shown in fig.35.



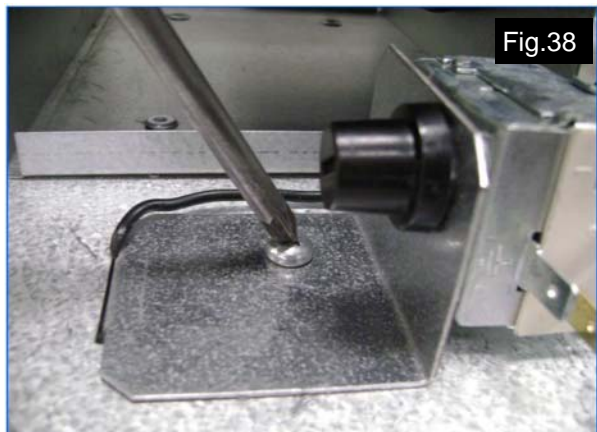
Remove the 2 retaining screws as shown in figure 36 and remove thermostat.



Disconnect the connections from the self resetting thermostat as shown in figure 37.



Remove the retaining screw securing the manual reset thermostat as shown in figure 38.



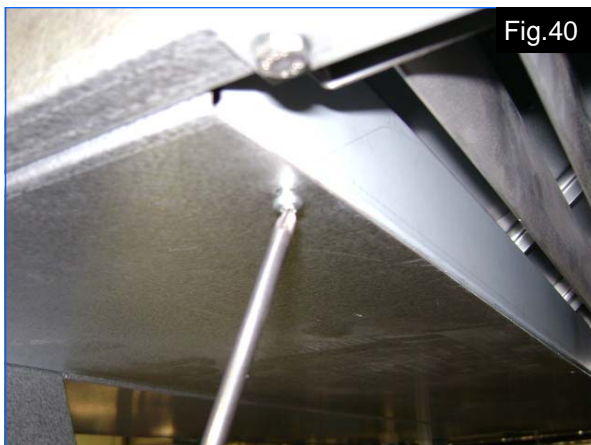
Remove from location slot complete with bracket as shown in figure 39.



## 8. Parts replacement (cont)

### 8.3 Air distribution fans

The air distribution fans can be accessed by removing the retaining screws securing the hinged lid on the underside of the air curtain. (See fig.40)

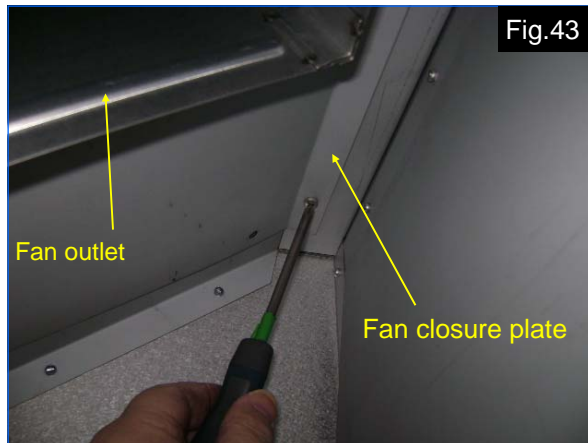
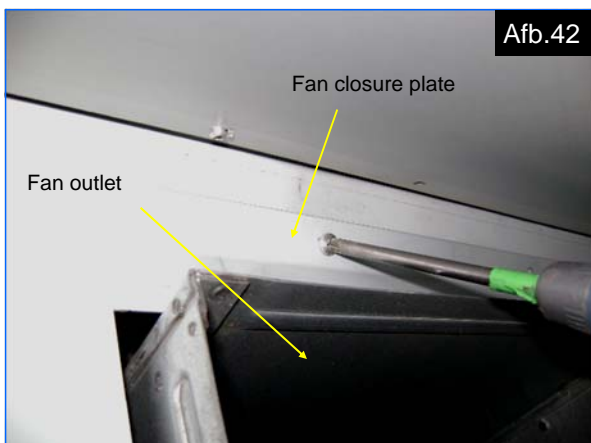


The lid can now be hinged down to access the fans as shown in figure 41.



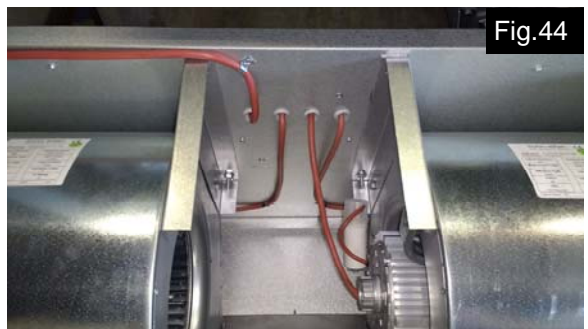
#### 8.3.1 Fan closure plate

Remove the retaining screws around the perimeter of the plate (see fig. 42/43) The plate can now be removed. Remove now the individual



#### 8.3.2 Fan removal

Identify the feed cable for the fan requiring removal and disconnect it from the terminal row located at the top of the unit. See fig. 44 and 45..



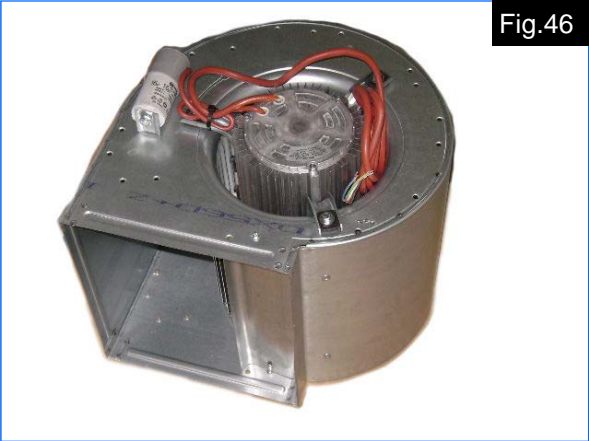
The four bolts securing the fan can now be removed as shown in fig.45 and the fan removed from the air curtain downwards.



**! Caution : these fans are heavy**

# 8. Parts replacement (cont)

Fig.46 shows for clarity a single air distribution fan.





## 9. Spare parts

### Recommended spares

In order to aid troubleshooting and servicing we recommend that the components shown in this section should be stocked.



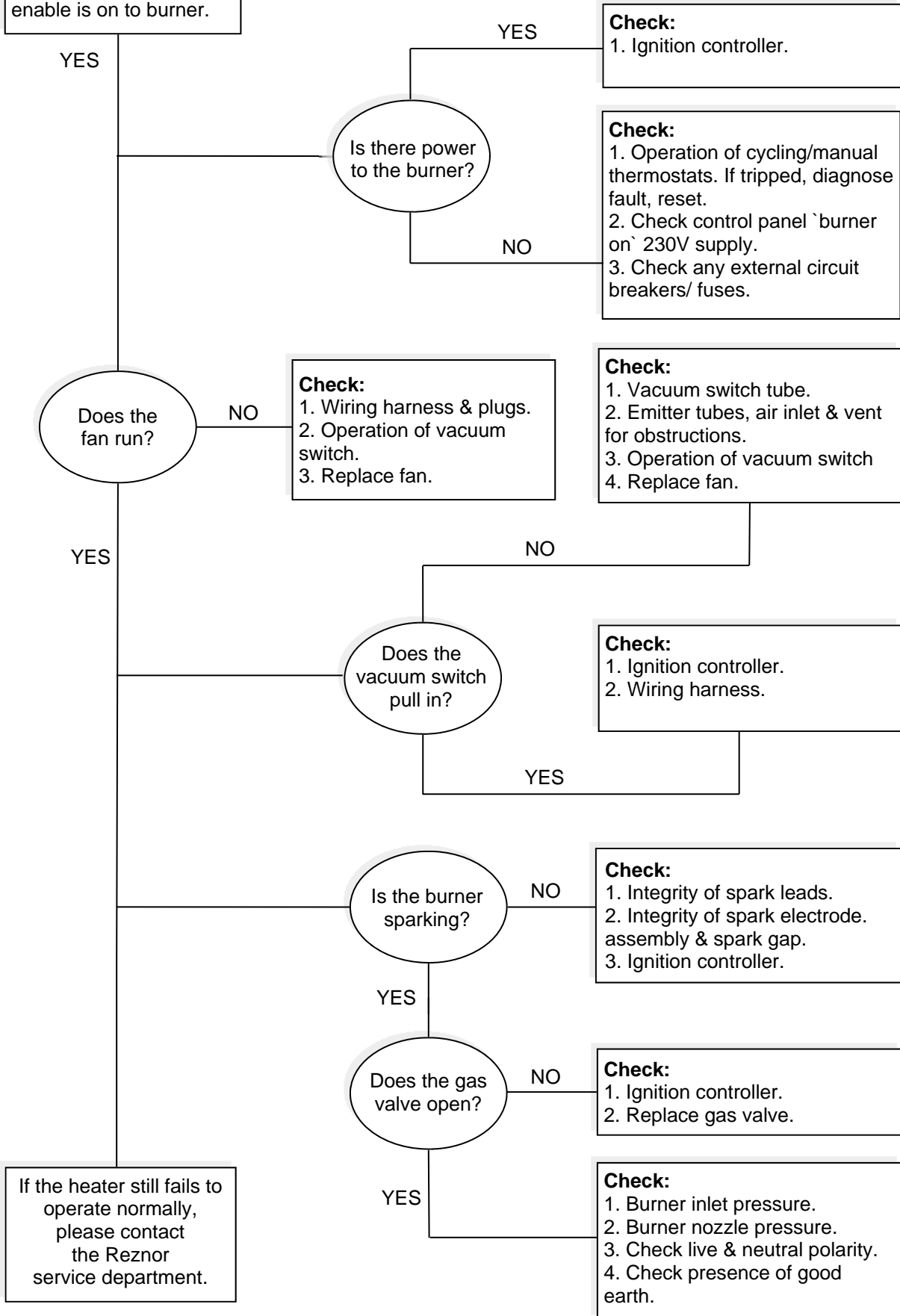
*Note: Any spare parts or components used that are not approved by Reznor could invalidate the approval of the appliance and also the warranty.*

| Item  | Description                   | Part n°   | Item  | Description                     | Part n°   |
|---|-------------------------------|---|---|---------------------------------|---|
|    | Air distribution fan          | 01 27100  |    | Thermal overhear control LC1    | AB175N-2:<br>03 24970<br>AB225N-2:<br>03 24969 01 |
|    | Exhaust fan                   | 20 25749  |    | Thermal overhear control LC3    | 03 24959  |
|   | Gas valve natural gas 1 stage | 03 25136  |    | Ignition electrode              | 03 400US 42                                       |
|  | Plug & wire gas valve         | 03 25136 V1   |  | Flame probe                     | 03 401US<br>195292                                |
|  | Burner relay                  | 03 25322  |  | Illuminated reset-toggle switch | 60 61988  |
|  | Pressure switch               | 30 60618 420  |  | Orange lamp                     | 60 61996  |
|  | Burner                        | 03 400US<br>1021  |  | White lamp                      | 60 61988 04                                       |
|  | Injectors<br>(5 pcs)          | Nat. gas:<br>AB175N-2:<br>07 25801 290<br>AB225N-2:<br>07 25801 340 |   |                                 |   |

# 10. Fault Finding.

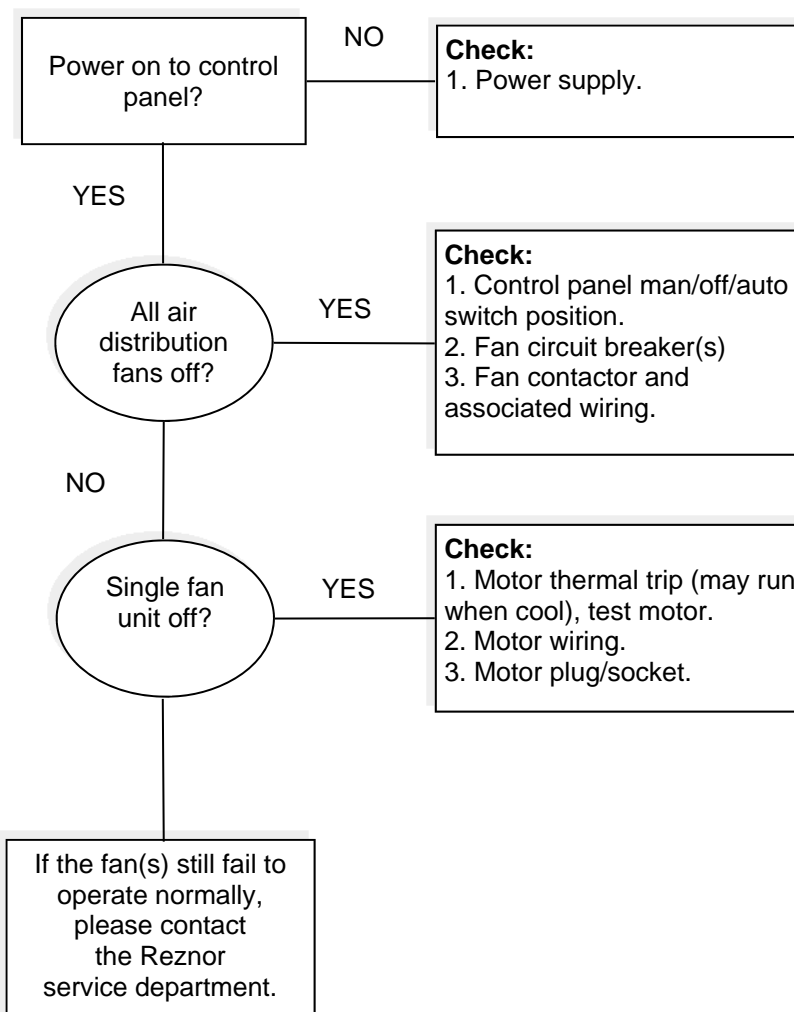
Ensure gas & electricity supplies are on, and that control panel heat enable is on to burner.

## Burner controls



## 10. Fault Finding cont.

### Air distribution fans



# 11. User Instructions.

## 11.1 Important information

This appliance must only be installed by a competent person in accordance with the requirements of the codes of practice and the rules in force in the country of use.

**11.1.1** The appliance **must** be earthed.

**11.1.2** Never rest anything, especially ladders, against the air curtain.

## 11.2 To start the AB air curtain

**11.2.1** First ensure that the gas supply to the air curtain is turned on.

**11.2.2** Ensure that the control panel auto/off/manual selector switch is in the manual position, and that the heat/cool selector switch is in the heat position.

**11.2.3** Switch on electrical supply to the control panel. The panel live lamp, and the white burner live neon lamp on the air curtain will illuminate, the combustion fan and the air distribution fans will start, and the automatic ignition sequence will commence.

**11.2.4** After completion of an air purge period, ignition of the burner will occur, and the amber burner on lamp will illuminate.

**11.2.5** If lockout should occur, the red rocker switch on the burner panel, and the lockout lamp on the control panel will illuminate. The lockout

can be reset by pressing the illuminated rocker switch on the burner panel, or the control panel lockout reset button, providing the lockout condition has cleared. If lockout re-occurs, switch off air curtain and call out a service engineer.

## 11.3 To switch off the AB air curtain

**11.3.1** Rotate the auto/off/manual control panel switch to the 'off' position. The burner will shut off, and the combustion fan and air distribution fans will stop.

**11.3.2** If the air curtain is switched off for periods in excess of one week, it is highly recommended that both gas and electrical supplies to the air curtain are turned off.

## 11.4 Servicing

To ensure continued efficient and safe operation it is recommended that the air curtain is serviced regularly by a competent person, once a year in normal working conditions, but in exceptionally dusty or polluted conditions more frequent servicing may be required.

*The manufacturer, (address given below), offers a maintenance service, details of which are available on request.*

*For sales related queries please contact the address given below.*



### WARNING:

THIS AIR CURTAIN SHOULD NOT BE INSTALLED WHERE THERE IS A CORROSIVE ATMOSPHERE.

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