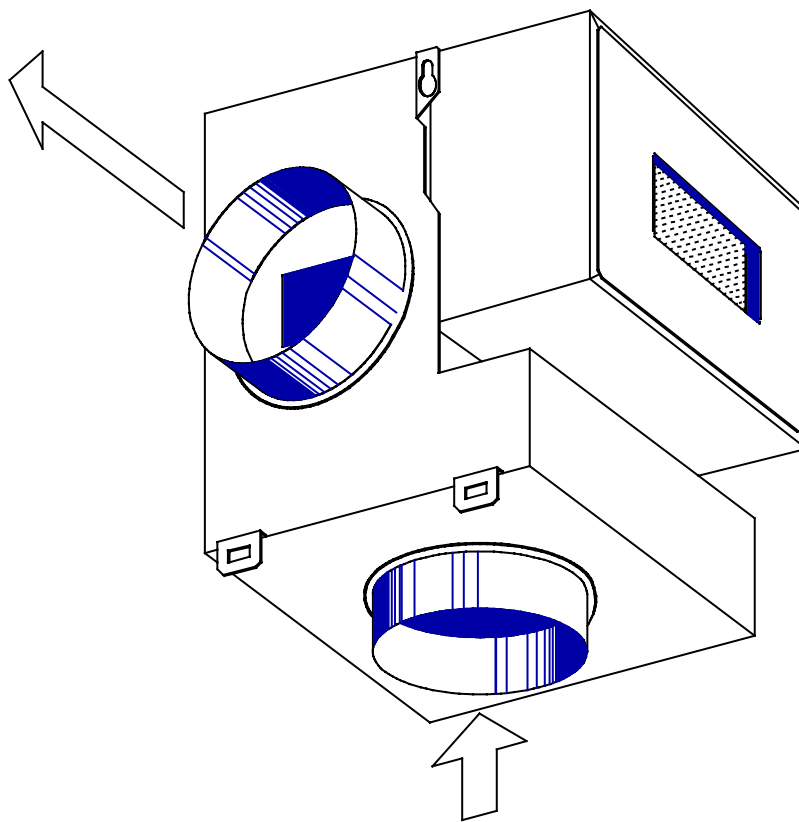


EUROVENTER 90-6 FLUE-GAS FAN

INSTALLATION AND SERVICE INSTRUCTIONS

FOR OPEN FLUED GAS APPLIANCES UP TO 120 kW INPUT



This product is in accordance with the following EC directives when used with:

Reznor UL & EURO-X 1000 series air heaters

Dir. CE 90/396/EEC GAD

Dir. CE 89/336/EEC EMC

Dir. CE 73/23/EEG LVD

Dir. CE 89/392/EEC MD

Please read this before starting the installation
Please leave this document with the appliance instruction literature.

"EUROVENTERS" MAY ONLY BE INSTALLED ONTO THE OUTSIDE WALL OF THE BUILDING WHERE FLUE TERMINATES

IMPORTANT: WHEN A EUROVENTER IS FITTED TO A TYPE B11 APPLIANCE IT CONVERTS IT TO A TYPE B14. APPLIANCES SO CONVERTED DURING INSTALLATION MUST HAVE THE APPLIANCE CATEGORY INDICATED ON THE APPLIANCE DATA PLATE, MARKED BY DELETING THE CATEGORY THAT DOES NOT APPLY.

Use of this product in corrosive or inflammable atmospheres is not recommended.
Warranty is void if operated in the presence of chlorinated vapours.

SECTION 1 GENERAL DESCRIPTION

1.1 Application

The Reznor Euroventer 90-6 flue gas fan is suitable for use on all Reznor CE marked open flue gas fired air heaters.

The purpose is to permit the use of flues that are difficult to run in vertical self aspirating naturally convecting mode and to enable those appliances that normally require a flue diameter in excess of 130 mm to be reduced in size to smaller diameters, (see table 2).

Horizontal runs are possible within the static pressure capacity of the Euroventer.

Euroventers are designed for indoor use only.

Model 90-6 is for use only on 230/240 V burner controlled appliances.

Euroventers have been designed to be used with the following Reznor open flued appliances:

UL 1000 Series
Reflex
EURO-X 1000 S, B, D & E/J

The EUROVENTER 90-6 flue gas fan can only be guaranteed by the manufacturer for use on the above listed appliances.

1.2 Description

The Reznor Euroventer is a high quality flue gas exhaust fan designed to be used on open flued appliances. It meets the requirements to ensure safe operation of the appliance with respect to under pressure within the flue system and to suit the maximum resistance to which they may be subjected.

One size Euroventer is made to suit all Reznor air heater capacities, restriction necessary for the different model sizes is achieved by the inclusion of purpose made plates which are inserted by the installer as appropriate.

Adaptors are supplied to convert to the required Reznor appliance flue socket diameters onto the

Euroventer connection.

Construction is of a fabricated aluminised steel casing with a self colour finish, this material is resistant to the corrosive effects of the gas fired flue gasses.

1.3 Limitations on use Cautions:

Operating temperatures from -10 °C to +60 °C in ambient air must not be exceeded.

Flue gas temperatures of 200 °C must not be exceeded. Reference ambient temperature 20 °C ± 5 °C.

IMPORTANT

The Euroventer must only be installed with the fan motor mounted in the horizontal plain as indicated in figure 2.

Positive or negative pressure zones will effect the operation of the Euroventer and the open flued appliance to which it is connected.

Contaminated air may cause premature corrosion of both the Euroventer and the gas fired appliance. Avoid installing where corrosive vapours or dusts i.e. chlorinated solvents which when passed through the gas burner will degrade into corrosive substances.

1.4 Principle of operation

The appliance external controls calling for heat switch on the EUROVENTER fan. Providing the fan has been at rest, a differential pressure air flow proving switch changes from the normally open mode to the closed mode when adequate airflow is sensed.

On thermoelectric appliances this switching energises the gas valve. On automatic electronic ignition appliances the switching energises the automatic burner control.

When the heating cycle is finished the external controls switch off the Euroventer fan and the air flow proving switch changes position to switch off the gas valve or burner control.

SECTION 2 TECHNICAL DATA & DIMENSIONS

Fig.1 Principle Dimensions

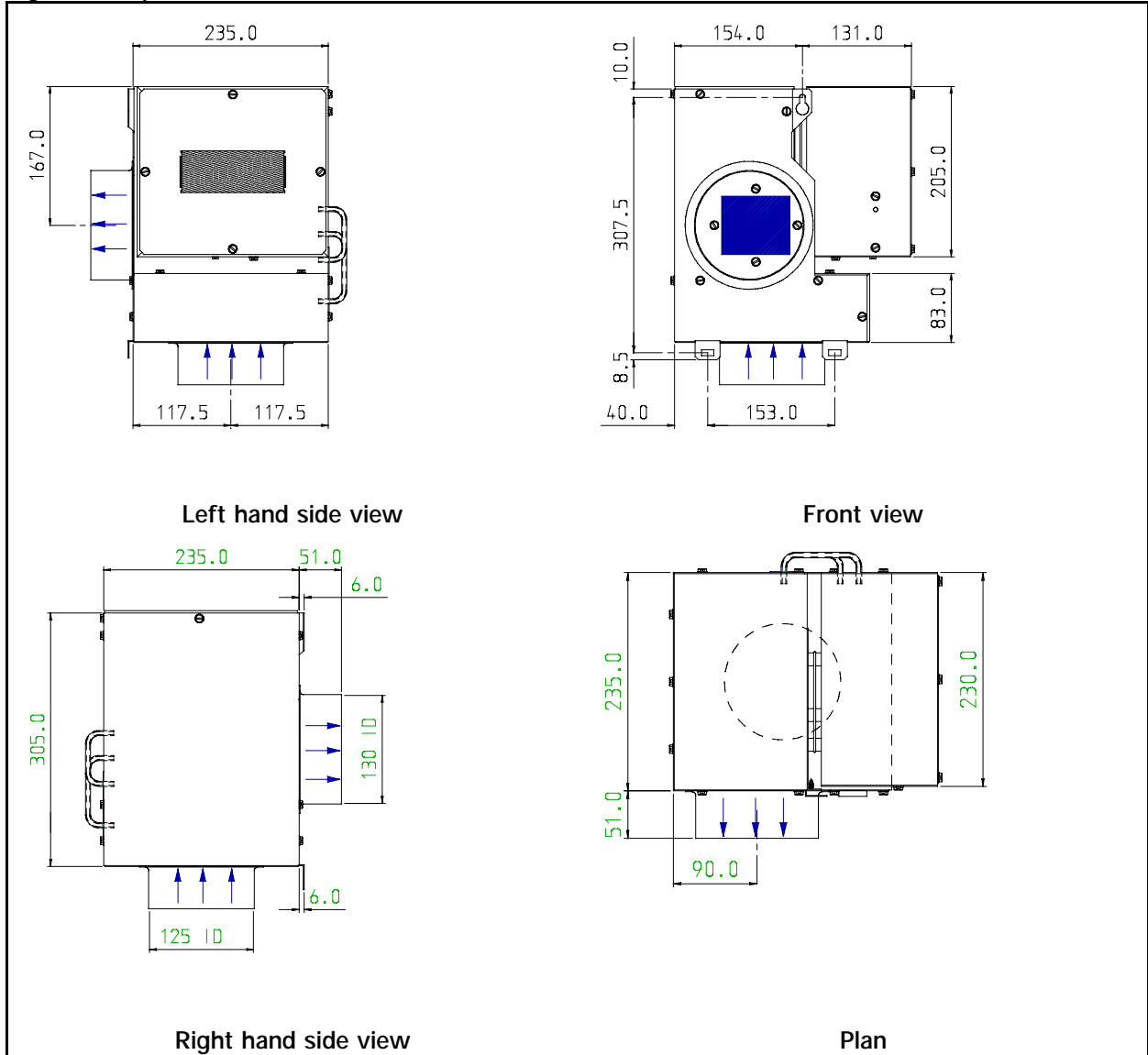
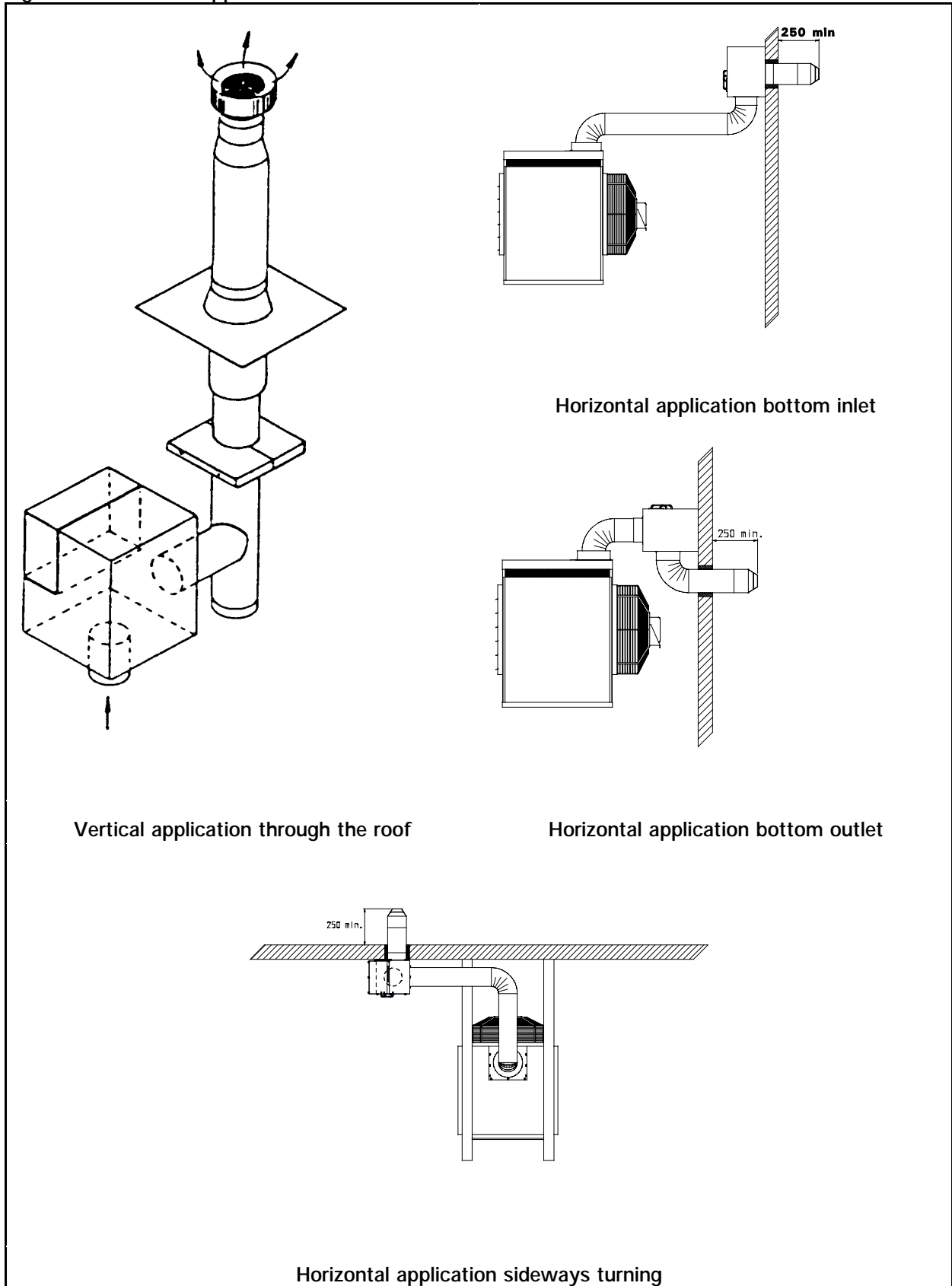


Table 1 Specification

Max. Flue Gas Temperature	°C	200	Ambient Temperature Range	°C	-10 - +60
Voltage @ 50 Hz 1 ~ N	V	230/240	Current Rating	A	0.6
Motor Rating	W	140	Fan Speed	RPM	2800
Protection Class	IP	21	Inlet Collar Size ϕ	mm ID	125
Net Weight	kg	8.0	Outlet Collar Size ϕ	mm ID	130

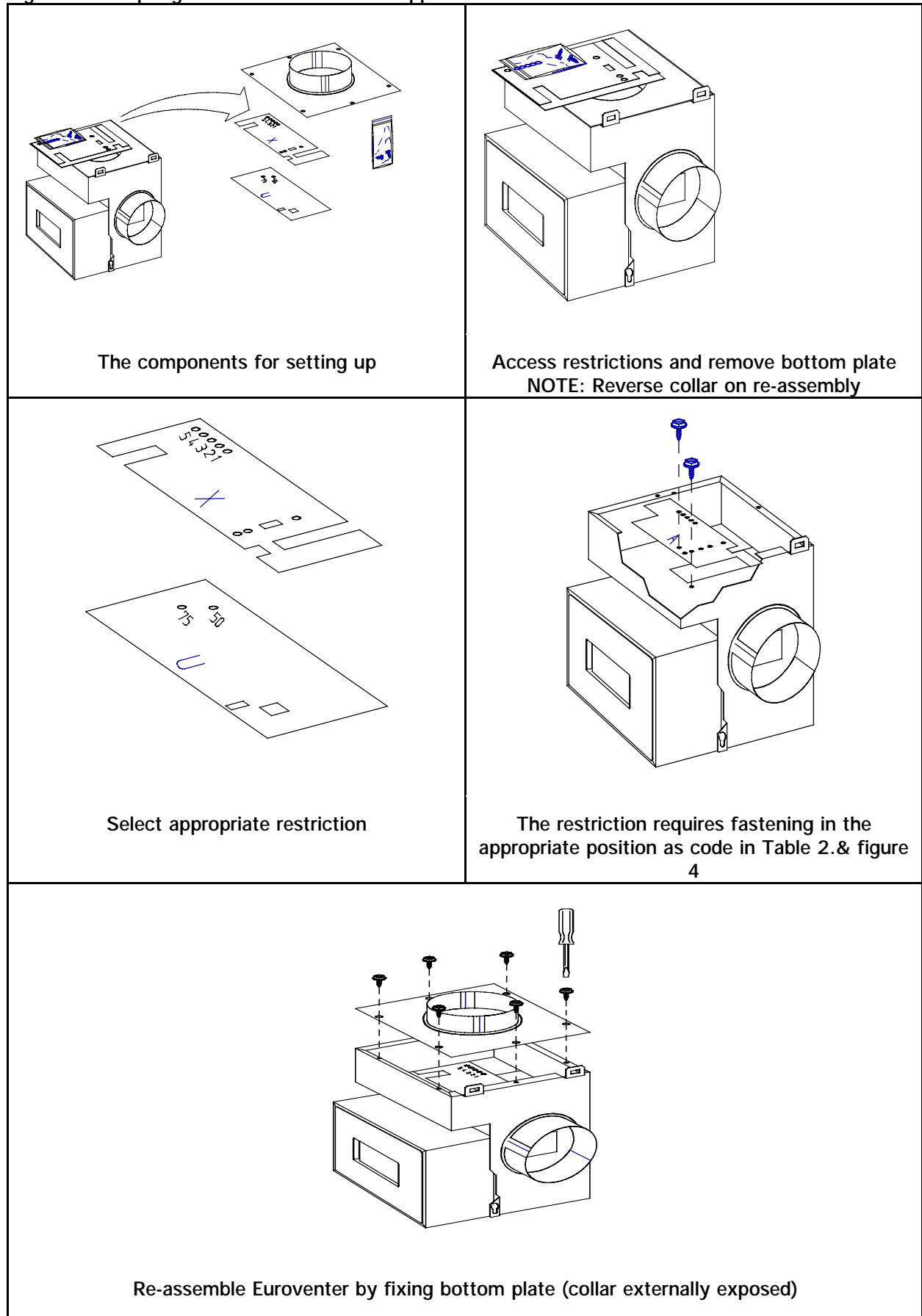
SECTION 3 APPLICATION SUGGESTIONS

Figure. 2 Modes of Application



SECTION 4 PREPARING FOR INSTALLATION

Figure. 3 Adapting the Euroventer for the Appliance Size



SECTION 4 Continued

4.1 Preparing the Euroventer for Installation

Before fitting the Euroventer to the appliance it is necessary to:

1. Ensure that the flue length being connected will not create a resistance in excess of the capacity of the Euroventer or that the length will not cause condensation to be formed within the flue system.
2. Fit the appropriate internal restriction plate in accordance with the guideline diagrams shown in figs.3 & 6
3. Ensure that an appropriate appliance flue/Euroventer connection socket adapter is available to convert to the size differences between the appliance flue outlet and the Euroventer flue inlet.

Caution: Ensure that the Euroventer when fitted has the fan motor mounted in the horizontal plane.

4.2 Fitting the Restriction

1. Remove the inlet collar plate by following fig. 3, unscrewing qty. 6 sheet metal screws and lifting the plate away.
2. Select the appropriate restriction, A or B, check the correct location and fix in position using both of the sheet metal screws supplied provided.
As a wise precaution check twice the restriction and its location.
3. Replace the inlet collar plate.

4.3 Connecting the Euroventer to the Appliance

After adapting the Euroventer fix using sheet metal screws, the flue collar size adapter fig. 8, where this differs from the appliance collar size, to the appliance. The Euroventer may now be connected with appropriate size flue pipe via the adapter in any position of horizontal alignment, i.e. around 360°.

Ensure that the Euroventer is installed in a level plane and that the inter connecting flue joints are sound.

N.B. Ensure that it will be possible to gain access to service the Euroventer fan and controls.

Consideration should be given to provide disconnect sections in the flue system to allow easy removal of the Euroventer for service purposes.

Ensure that the flue leaving the Euroventer is installed in accordance with correct practice with respect to clearances from combustible materials (50 mm minimum) N.B. flue gas temperatures may reach 200° C. Clearances from the building structure for termination etc. must be observed.

All flues must be provided with a suitable terminal device.

Ensure that the flue outlet terminal from the EUROVENTER is installed so that a minimum clearance from a wall of 25 cm is maintained.

Flues must terminate in accordance with the rules in force.

4.4 Setting the differential pressure switch

1. Remove control cover;
2. Set dial to marking as appropriate for the appliance being installed as indicated in figure 4. and table 2;
3. Using paint or similar substance seal dial at set point;
4. Replace cover and reseal.

4.5 Wiring Connections

THE EUROVENTER MUST BE EARTHED.

The electricity supply for the Euroventer must be taken from the gas appliance.

Wiring should be routed via the wire-way entries in both the Euroventer and the appliance. Conductors of $\geq 1.0 \text{ mm}^2$ should be used, connected in accordance with the Reznor diagram/s provided.

After wiring, test the Euroventer independently of the appliance, i.e. before the gas has been turned on.

The test should include:

- a. earth continuity,
- b. resistance to earth;
- c. zero voltage neutral to earth;
- d. phase supply is connected to the correct terminal;
- e. the operation of the thermal overheat (limit) device is unaffected by the inclusion of the Euroventer into the appliance wiring circuit.

N.B. Tests a, b, c & d should include the gas fired appliance to which the Euroventer is attached.

Figure 4.

SETTING THE DIFFERENTIAL SWITCH

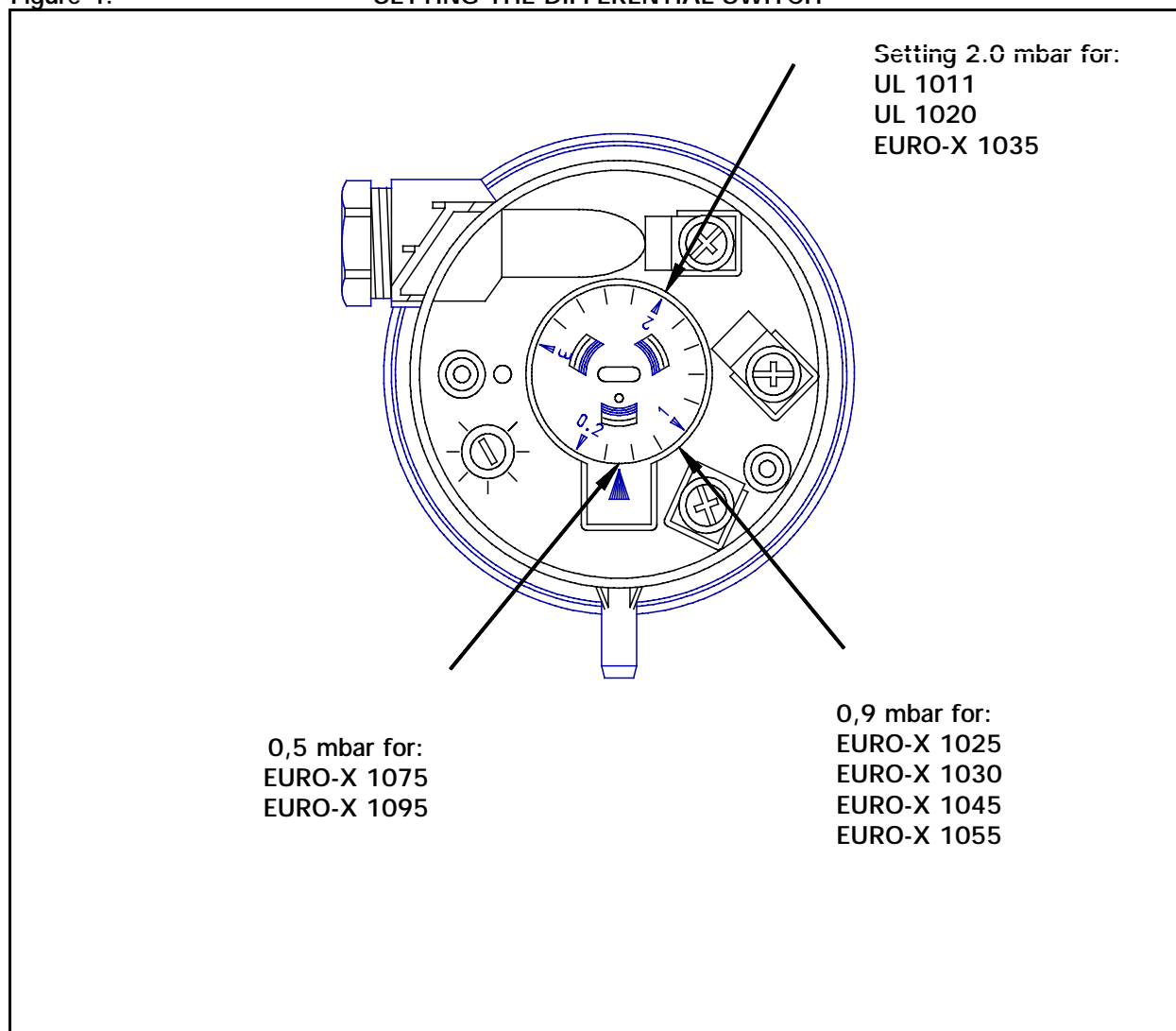


Table 2.

SETTING PRESSURES & RESTRICTIONS DATA

Air Heater Model Size	DIFFERENTIAL PRESSURE SETTING, mbar	RESTRICTION PLATE TYPE/MARKING	RESTRICTION OPENING L x W mm
UL 1011	2.00	U Location 11	100 x 9
UL 1020	2.00	U Location 20	100 x 11
Reflex 25 - EURO-X 1025	0.90	X Location 1	100 x 28
Reflex 30 - EURO-X 1030	0.90	X Location 2	100 x 35
Reflex 35 - EURO-X 1035	2.00	X Location 2	100 x 35
Reflex 45 - EURO-X 1045	0.90	X Location 3	100 x 60
Reflex 55 - EURO-X 1055	0.90	X Location 4	100 x 65
Reflex 75 - EURO-X 1075	0.55	X Location 5	100 x 105
Reflex 95 - EURO-X 1095	0.55	NO PLATE	100 x 142

Figure 5. Wiring Diagram

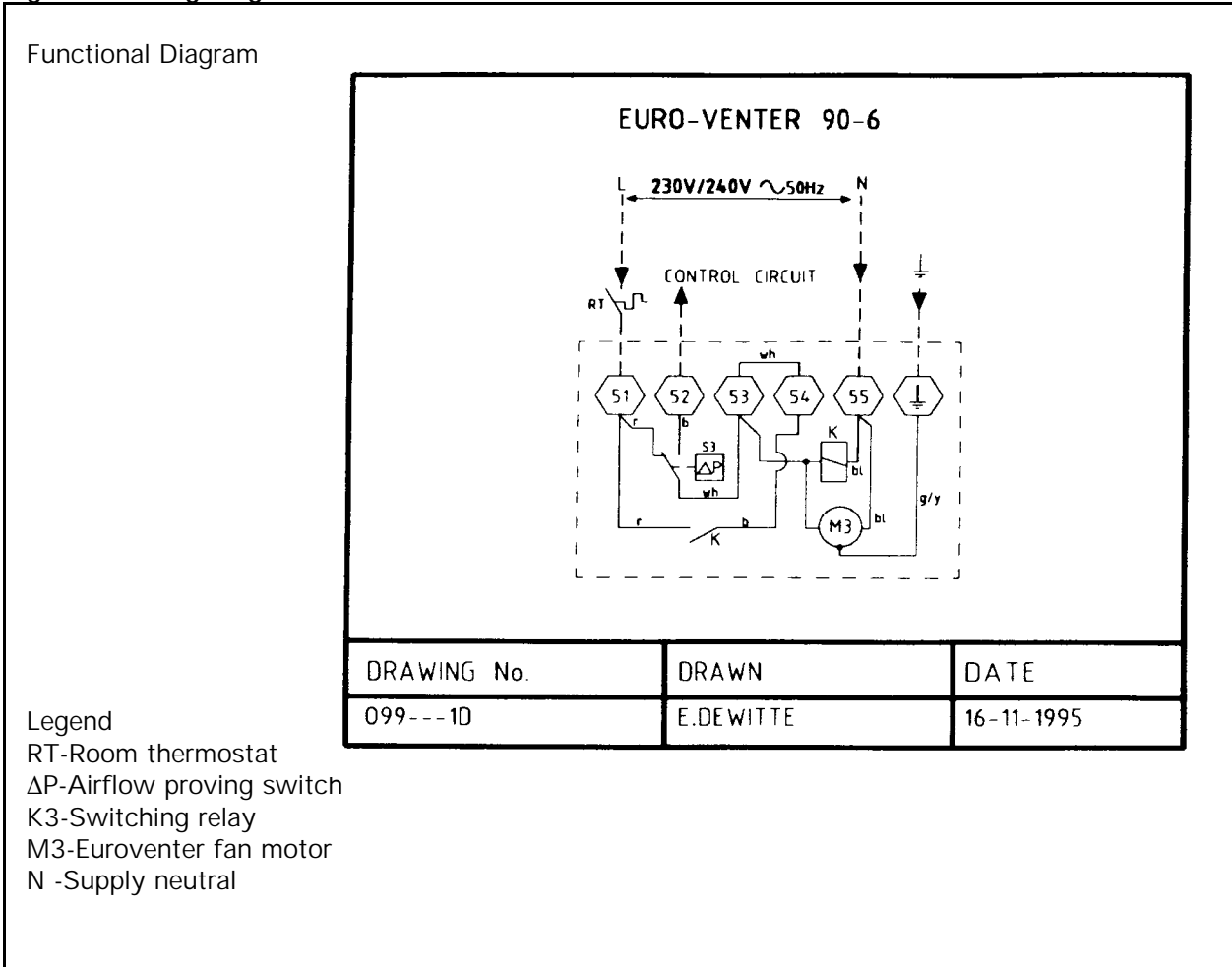


Table 3. Maximum flue pipe lengths avoiding condensation. Not guaranteed for lengths longer than those given in this table

Air heater model/size	Maximum Length including fittings (m)		
	Flue Ø (mm)		
	100	130	150
UL 1011	10	10	
UL 1020	14	14	
Reflex 25 - EURO-X 1025		14	12
Reflex 30 - EURO-X 1030	10	14	16
Reflex 35 - EURO-X 1035	14	14	14
Reflex 45 - EURO-X 1045	10	10	10
Reflex 55 - EURO-X 1055	7	10	13
Reflex 75 - EURO-X 1075		10	13
Reflex 95 - EURO-X 1095		10	12

Notes to table 3:

1. Round elbows 90° Equivalent resistance = 1.5 m straight duct
2. Round elbows 45° Equivalent resistance = 30% of value for 90° elbow
3. Round tee pieces Equivalent resistance = 150% of value for 90° elbow

SECTION 5 SERVICING

5.1 General

Servicing will normally be necessary each time the gas appliance is serviced these instructions should therefore, be regarded as part of the appliance service schedule.

5.2 Service Requirements

Fig. 7 shows an exploded view of the Euroventer. The accessibility to the various components is self explanatory if this diagram is followed.

To carry out the service proceed as follows:

1. Switch OFF the gas fired appliance, wait until the appliance air circulating fan has stopped and then; switch OFF the electricity supply to the appliance.
2. Turn OFF the appliance gas supply.
3. If necessary wait until the Euroventer has cooled sufficiently to be able to handle it safely.

4. Remove components as necessary to enable cleaning to be carried out. this should be undertaken in a logical order to aid re-assembly later.

Clean the fan motor;

Clean the fan, taking care not to move or displace any fan balancing tag/s that may be fitted;

Check the condition of all parts including the condition of the wiring particularly the insulation;

Check the condition of the air flow proving switch and its silicone tubes, ensure these are not blocked or filled with condensation;

Reassemble after the servicing has been completed, check the electrical circuitry as described in 4 above.

Test the Euroventer in both cold and hot operating conditions.

Figure 6. Proving Switch Logic

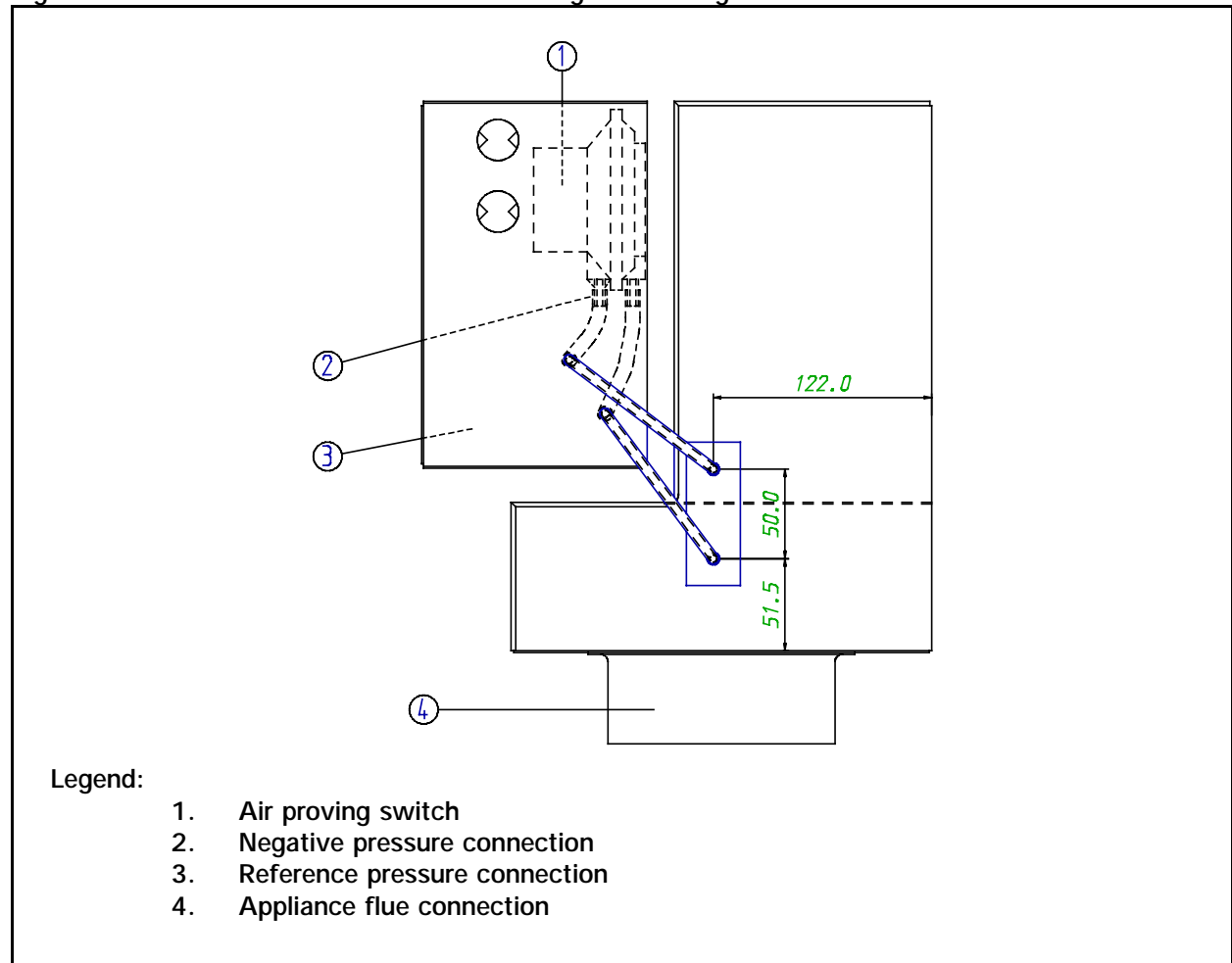


Figure. 7 Restriction Locations for Appliance Types & Sizes

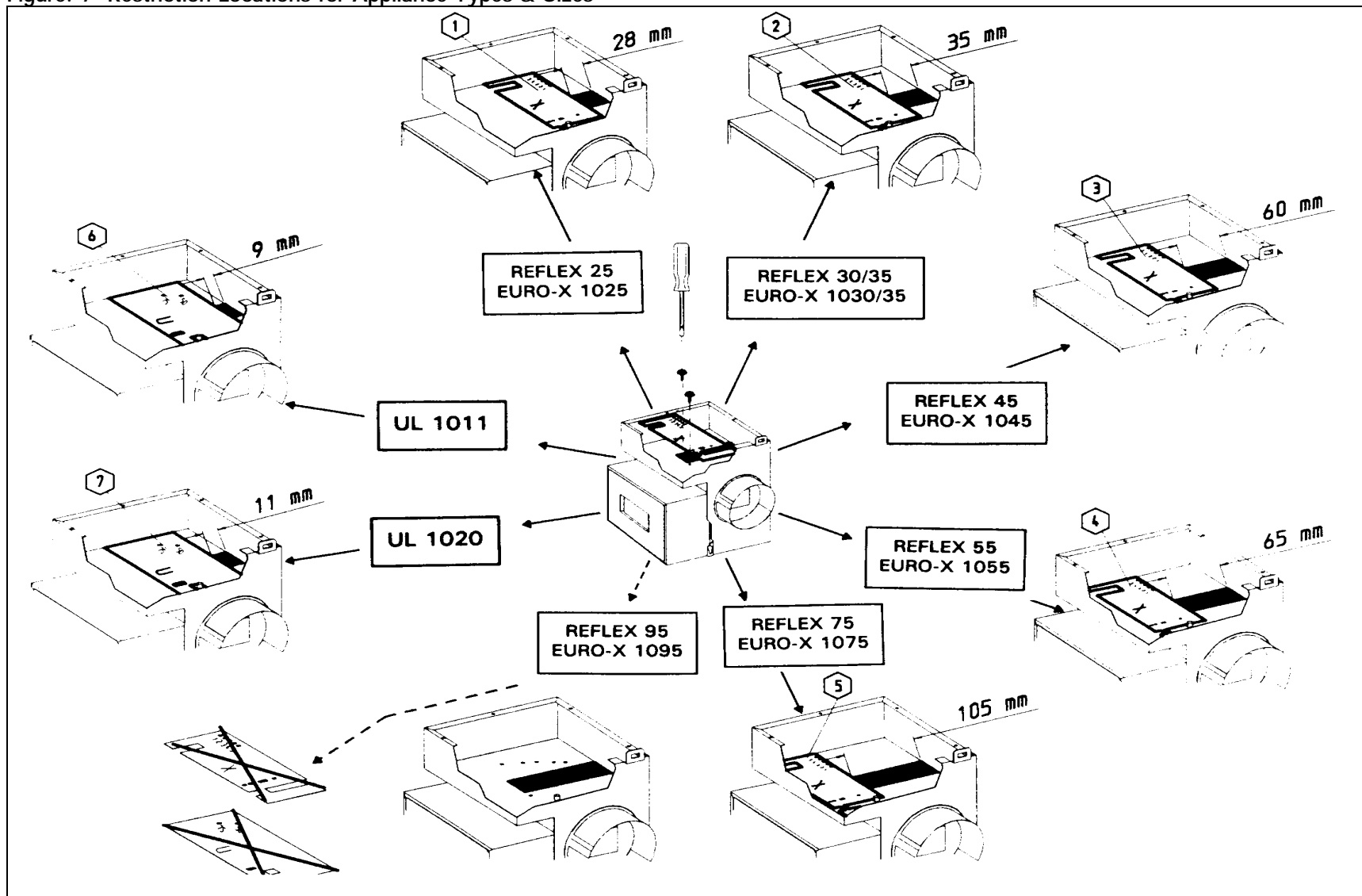


Table 4. Flue sockets for Reznor Air Heaters only

NB. All Sizes mm Ø nominal

Appliance Model / Size	Reznor Part Number	Key Symbol	Dimension Ø mm
UL 1011 & 1020	NO Adapter required	Ø A Ø B Ø C	130 125 130
Reflex 25 EURO-X 1025	NO Adapter required	Ø A Ø B Ø C	130 125 130
Reflex 30 EURO-X 1030	08 20680 100	Ø A Ø B Ø C	153 125 130
Reflex 35 - 45 EURO-X 1035 - 1045	08 20680 125	Ø A Ø B Ø C	181 125 130
Reflex 55 - 75 EURO-X 1055 - 1075	08 20680 175	Ø A Ø B Ø C	202 125 130
Reflex 95 EURO-X 1095	08 20680 225	Ø A Ø B Ø C	252 125 130

Figure 8. Legend Diagram for Key Symbols Re: Table 4

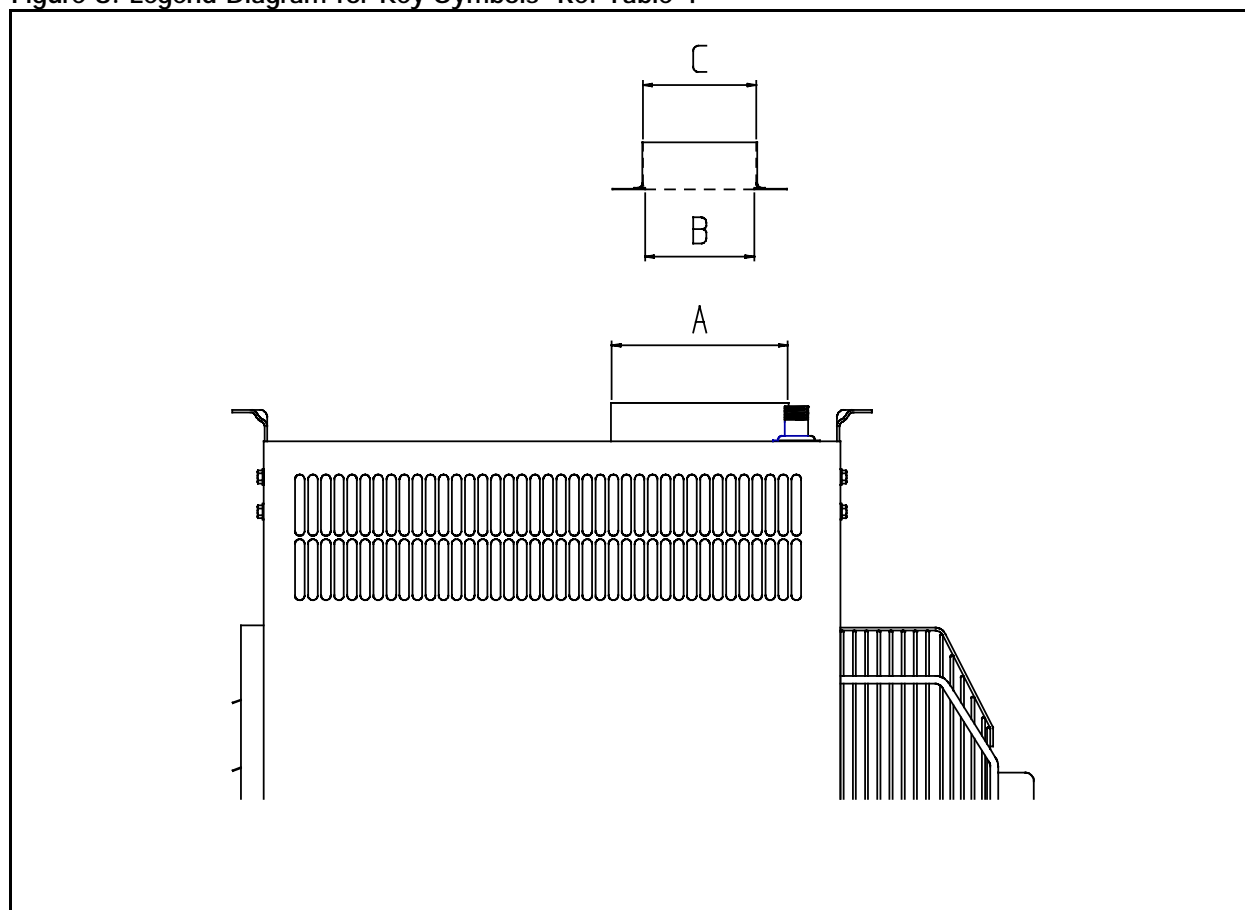
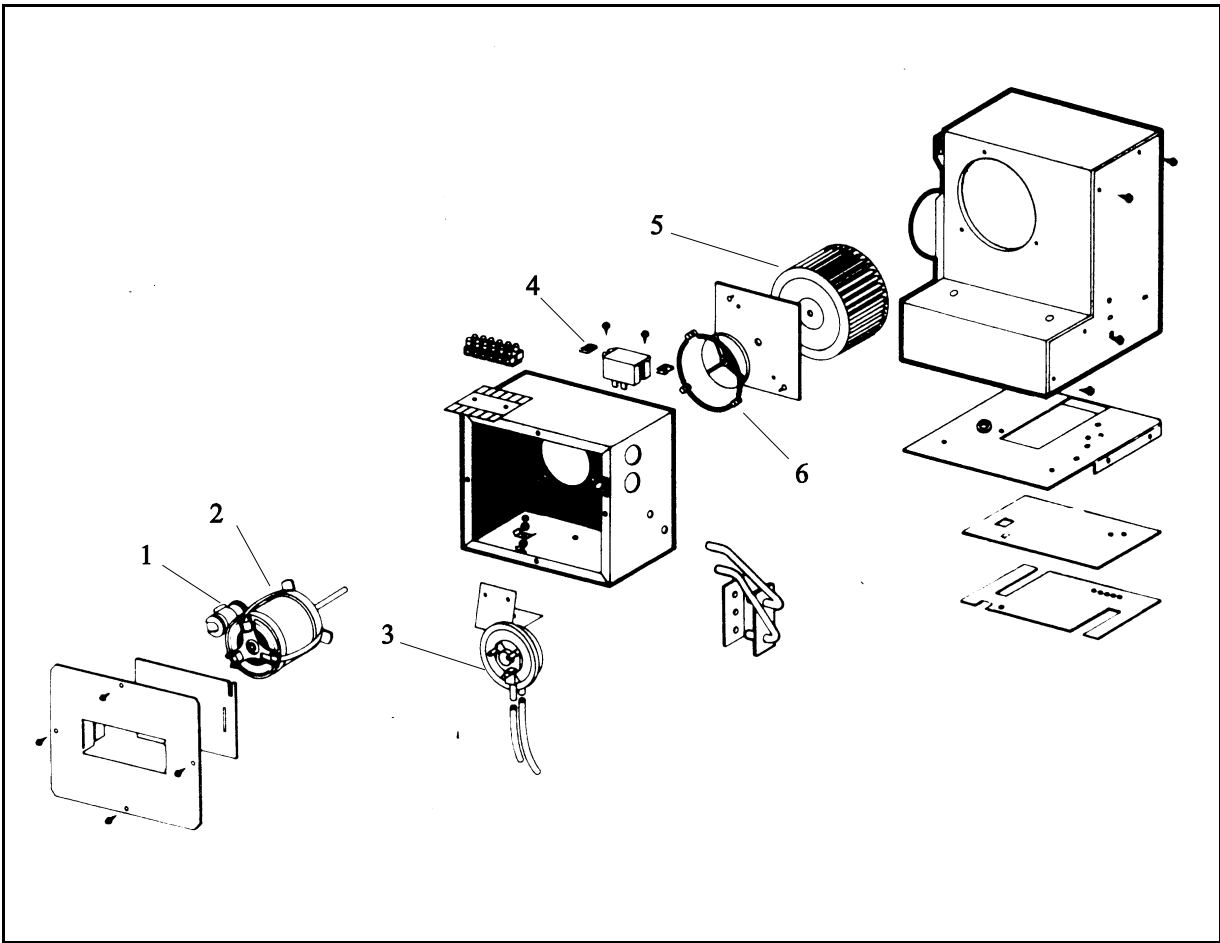


Figure 9. Exploded view - Parts Location - Service Aid



Parts listing legend:

Key	Description	Part number
1	Capacitor	01 25598 04 μ F
2	Motor	11 43426
3	Air Proving Switch	30 60620
4	Relay 230/240	03 61735/230
5	Impeller	02 25728
6	Gasket	11 44696

IMPORTANT NOTE

1. Reznor Euroventers are designed to be used on Reznor gas fired open flue appliances only. Flue gas temperatures must not exceed 200°C net temperature. Plant room ambient temperature $\leq 30^{\circ}\text{C}$.
2. Euroventers must be connected in the secondary flue after a down-draught diverter or any flue break and be fitted so that the flue system within the building is always operating in negative pressure, i.e. Euroventer installed on the outside wall of the building where the flue will terminate.

Reznor® EUROVENTER

A GENERATION OF CE MARKED GAS FIRED ENERGY
EFFICIENT AIR HEATER OPTIONS

FOR USE WITH Reznor TYPE B11 SERIES AIR HEATERS

Reznor UK Limited
Park Farm road
Folkestone
Kent
CT19 5DR
Tel: + 44 (0)303 259141
Fax: + 44 (0)303 850002
e-mail: sales@reznor.co.uk

Reznor® Europe N.V.
J&M Sabbestraat 130
B8930 Menen
Belgium
Tel:+32(0)56 52 95 11
Fax:+32(0)56 52 95 33
e-mail: reznor_europe@tnb.com

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Distributed in GB by:
Reznor UK Limited
Park Farm Road,
Folkestone, Kent. GB CT19 5DR
Telephone: 00 44 (0)1303 259141
Fax: 00 44 (0)1303 850002



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Reznor Europe N.V. J & M Sabbestraat 130 - B 8930 Menen. Belgium
Tel: 00 32 (0)56 52 95 11 Fax: 00 32 (0)56 52 95 33
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