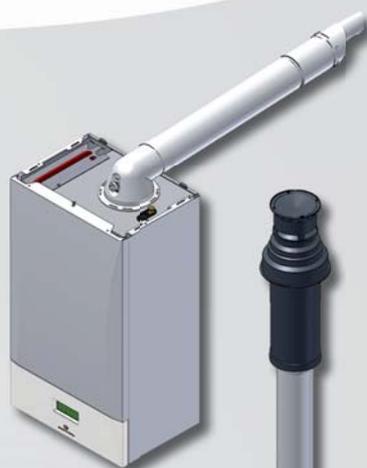


Reno

CONCENTRIC & TWIN FLUES

INSTALLATION INSTRUCTION



COMBI SERIES

HE 30C HE 30CP
HE 37C HE 37CP

SYSTEM SERIES

HE 16S HE 16SP
HE 25S HE 25SP
HE 31S HE 31SP

HEAT ONLY SERIES

HE 16H HE 16HP
HE 25H HE 25HP
HE 31H HE 31HP

RELIABILITY YOU CAN TRUST

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**PLEASE READ THESE INSTRUCTIONS CAREFULLY
BEFORE INSTALLATION**

**PLEASE LEAVE THESE INSTRUCTIONS WITH THE USER OR AT
THE GAS METER AFTER INSTALLATION**

2. REGULATIONS AND RELEVANT STANDARDS

The Johnson and Starley Reno Boiler range is certified as a heating boiler with corresponding flue systems according to EU Directive 90/396/EEC on gas-fired devices. These installation instructions are covered by this certification and are referred to in the design approval test certificate.

These instructions should be read in conjunction with the instructions for installation and servicing supplied with the boiler.

Ensure also that all legislation, regulations and directives mentioned in the installation instructions are observed.

The installation of the boiler and its flue system must be carried out by a competent CORGI registered person. (The Council for Registered Gas Installers)

The installation of the boiler and flue system must be in accordance with the Gas Safety (Installation and Use) Regulations 1998 and the Building Regulations. If no specific instructions are given, reference should be made to the relevant codes of practice.

THESE RELEVANT STANDARDS SHOULD BE FOLLOWED

- | | |
|-----------|---|
| BS5440:1 | Flues and ventilation for gas appliances of rated heating input not exceeding 70kW (net) : Flues |
| BS15440:2 | Flues and ventilation for gas appliances of rated heating input not exceeding 70kW (net) : Air Supply |

The requirements for the flue termination detailed in the boiler installation instructions must be observed.

Two types of flue systems are available for the Reno Boiler Range. The standard concentric flue system 60/100 (100mm diameter) and the concentric twin flue system 80mm which allows for longer flue duct lengths to be achieved.

The air/flue duct operates at very low temperatures therefore no clearance is necessary between the air duct and the adjacent services.

Ensure while installation work is being carried out that no debris such as swarf, filings or fragments of mortar are allowed to remain in the air/flue duct.

3. FLUE TERMINAL LOCATIONS

The following information provides the general requirements for siting flue terminals. As part of the recommendation given in BS1550 Part 1. For IE recommendations, see the current issue of I.S. 813 "Domestic Gas Installations." Also publication a "Guide for Gas Installations in Timber Framed Housing DM2" or consult your local gas region, MUST be consulted when installing the appliance into a timber-framed building.

NOTE: Due to the nature of the boiler, water vapour will discharge from the flue. This should be taken into account when siting the flue

Both the horizontal and vertical terminals must be positioned on the outside of the building and the free passage of air must be available at all times. It is not recommended to position the terminal close to projections especially under a balcony or near to a drainpipe.

Ensure that combustion products cannot enter the building where the heater is installed or near to any other building where doors or windows may be open.

Recommended terminal positions for both horizontal and vertical flues are shown and flue components and installation options are also detailed.

Where the lowest part of the flue terminal is located less than 2 metres above the ground, a balcony or above a flat roof across which there is access, the terminal MUST be fitted with a guard (Part No:1000-0019710) which is available from Johnson & Starley. The distance between the guard and the nearest part of the terminal must not be less than 50 mm.

The Flue MUST NOT be installed under a car port.

	Terminal Position	Min Distance
A	Directly below an opening, air brick, opening window etc	300mm
B	Above an opening, air brick, opening window, etc.	300mm
C	Horizontally to an opening, air brick, opening window etc.	300mm
D	Below gutters, soil pipes or drain pipes.	75mm
E	Below eaves.	200mm
F	Below balconies.	200mm
G	From a vertical drain pipe or soil pipe.	150mm
H	From an internal or external corner. Greater than 450mm protrusion.	300mm
I	Above ground, roof or balcony level.	300mm
J	From a surface facing the terminal.	600mm
K	From a terminal facing the terminal.	1,200mm
M	Vertically from a terminal on the same wall.	1,500mm
N	Horizontally from a terminal on the same wall.	300mm
Q	Above intersection with roof.	530mm
P	From a vertical structure on the roof	300mm

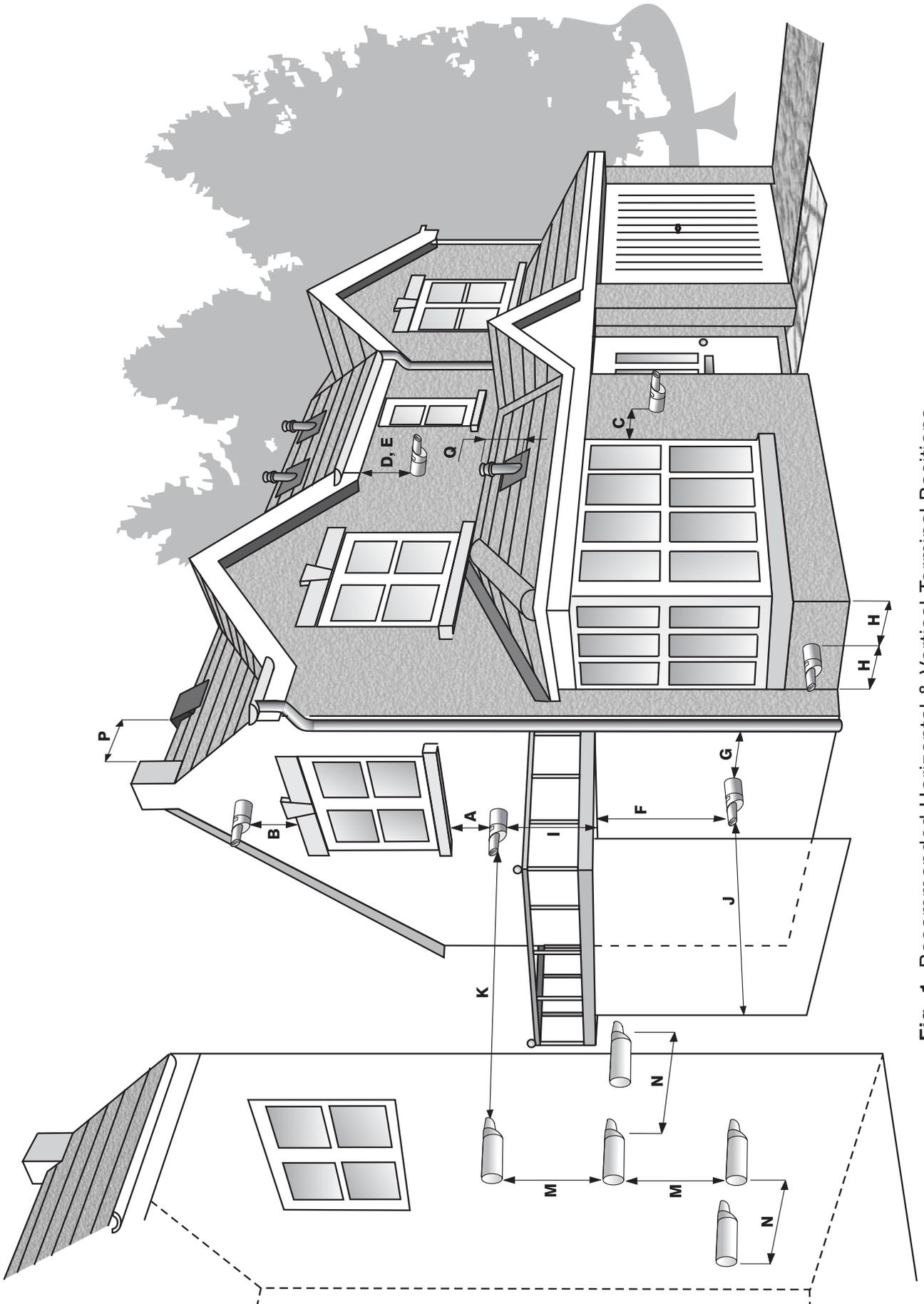


Fig. 1 Recommended Horizontal & Vertical Terminal Positions

4. TYPICAL FLUE CONFIGURATIONS

HORIZONTAL FLUES

HORIZONTAL REAR FLUE



Standard flue kit comprising of:
Turret
Horizontal Terminal

HORIZONTAL SIDE FLUE

Can be fitted to the left or the right.

Standard Flue Kit
Turret
Horizontal Terminal

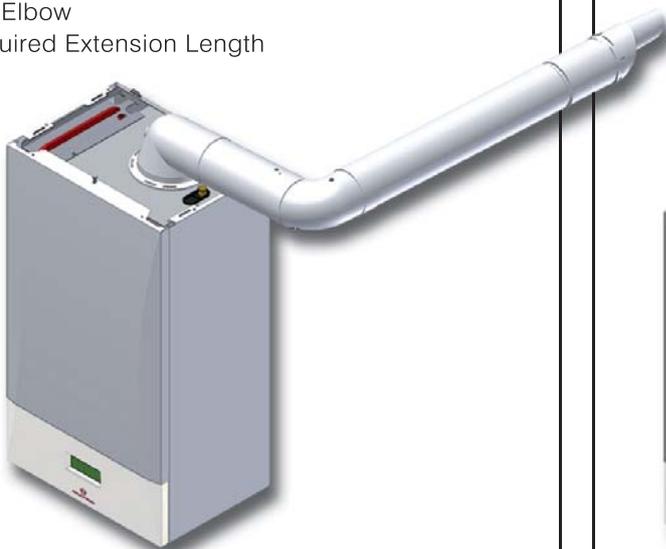


OFFSET EXTENDED HORIZONTAL REAR FLUE

Up to 10 meters equivalent length.

Can be fitted to the left or the right.

Standard Flue Kit +
90° Elbow
Required Extension Length



EXTENDED HORIZONTAL REAR FLUE

Up to 10 meters equivalent length.

Can be fitted to the left or the right.

Vertical Appliance Adaptor
Horizontal Terminal
90° Elbow
Required Extension Length

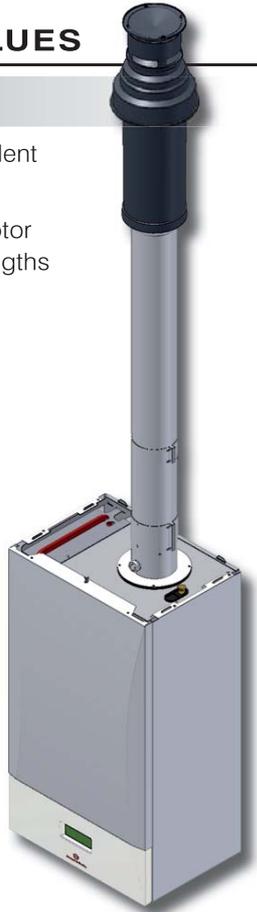


VERTICAL FLUES

VERTICAL FLUE

Up to 10 meters equivalent length.

Vertical Appliance Adaptor
Required Extension Lengths
Vertical Terminal



TWIN FLUES

OFFSET EXTENDED TWIN TO HORIZONTAL TERMINAL

Up to 30 meters equivalent length

Twin Pipe Adaptor
80mm Extensions as required
90° Elbows (80mm) as required
Twin to concentric Adaptor
Vertical Terminal



OFFSET VERTICAL FLUE

Up to 10 meters equivalent length.

Can be fitted to the left or the right.

Turret
Vertical Terminal
90° Elbow
Required Extension Lengths



OFFSET EXTENDED TWIN TO VERTICAL TERMINAL

Up to 30 meters equivalent length.

Twin Pipe Adaptor
80mm Extensions as required
45° Elbows (80mm) as required
Twin to Concentric Adaptor
Vertical Terminal



5. FLUE REQUIREMENTS & GENERAL INFORMATION

Horizontal and vertical concentric flues (60/100mm diameter) with balanced terminals and vertical and horizontal flues (twin 80 diameter) may be installed on all the Reno appliance's.

If an extended horizontal flue is being used (any flue length longer than the standard kit) it must have a continuous fall back towards the appliance of 3° (52mm) per meter. This ensures that condensate runs back into the appliance from the flue system for safe discharge via the condensate waste pipe. Reference should be made to Table C for relevant part numbers.

The maximum length of flue permissible is calculated on page 17 using the component pressure drop and examples are given in Table B which include the maximum lengths at 95% of input.

The minimum vertical flue length is 0.7m from the top of the appliance case to the top of the terminal.

The minimum combined 80 twin flue length is 600mm.

Longer flues may be fitted, however the input of the appliance will be reduced accordingly.

Elbows may be fitted within the flue system with a corresponding reduction in overall flue length based on the component pressure drop.

Reference should be made to Tables A and B.

Table A Flue Pressure Drops for the HE30C ——— & HE37C - - - - -

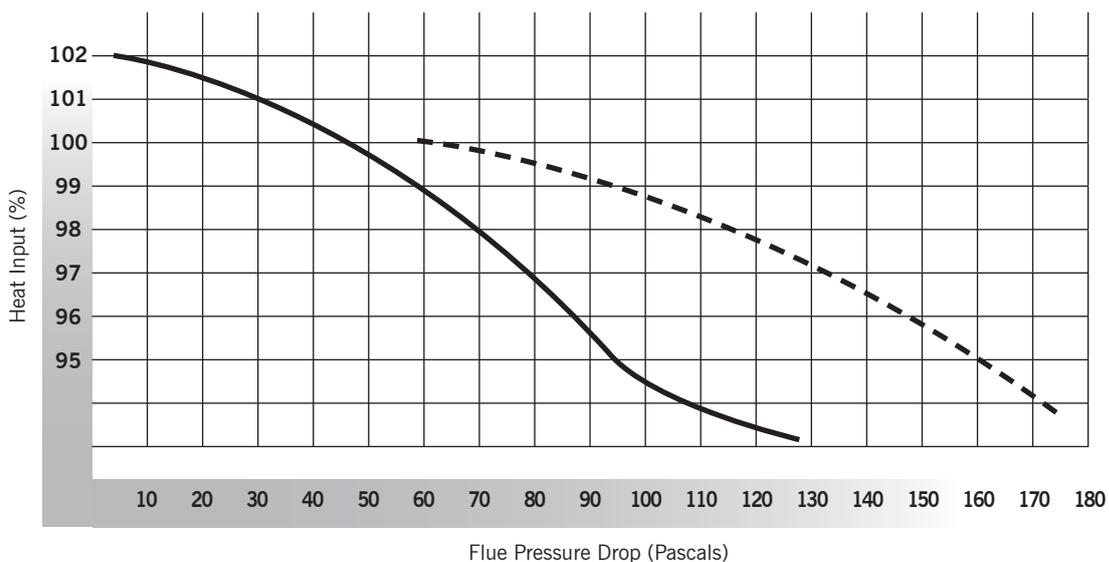


Table B Flue Components & Parts List

ITEM	DESCRIPTION	QTY	PARTS INCLUDED	APPLICATION	PART No.	PASCAL	
						16H 16S 25H 25S 30C	31H 31S 37C
1	STANDARD FLUE KIT WHITE	1	Turret	Horizontal	1000-0020070	45	60
		1	Appliance Seal				
		1	60/80 Adaptor				
		1	Inside Wall Cover Plate				
		1	Outside Wall Cover Plate				
		1	100mm Diameter Clamp				
		1	800mm Horizontal Terminal				
1a	TURRET WHITE	1	Turret	Horizontal	1000-0020020	40	45
1b	HORIZONTAL TERMINAL WHITE	1	800mm Horizontal Terminal	Horizontal	1000-0019830	5	15
2	VERTICAL APPLIANCE ADAPTOR WHITE	1	Adaptor	Vertical	1000-00018990	0	0
3	45° ELBOW WHITE	1	Elbow	Horizontal + Vertical	1000-00018980	5	12.5
4*	90° ELBOW WHITE	1	Elbow	Horizontal + Vertical	1000-00018980	10	25
5	250mm STRAIGHT EXTENSION WHITE	1	250mm Straight Extension	Horizontal + Vertical	1000-0018960	1.25	4
		1	100mm Diameter Clamp				
		2	Screws				
6	500mm STRAIGHT EXTENSION WHITE	1	500mm Straight Extension	Horizontal + Vertical	1000-0018950	2.5	7.5
		1	100mm Diameter Clamp				
		2	Screws				
7	1000mm STRAIGHT EXTENSION WHITE	1	1000mm Straight Extension	Horizontal + Vertical	1000-0018940	5	15
		1	100mm Diameter Clamp				
		2	Screws				
8	FLAT ROOF WEATHER COLLAR	1	Aluminium Circular Flat Roof Seal	Vertical	1000-0020060	n/a	n/a
9	PITCHED ROOF COLLAR BLACK	1	Plastic & Lead Pitched Roof Seal	Vertical	1000-0020030	n/a	n/a
10	RIDGE TERMINAL	1	Condensing Concentric Ridge Terminal		1000-0021030	5	10
11	WALL FIXING BRACKET 100mm	1	Clamp for 100mm tube	Horizontal + Vertical	1000-0020050	n/a	n/a
12	1140mm VERTICAL TERMINAL	1	Vertical Terminal Assembly	Vertical	1000-00018930	5	10
		1	Support Bracket				
13	TWIN FLUE TO CONCENTRIC ADAPTOR BLACK	1	Clamp, screws		1000-0020130	3	8
14	TWIN FLUE ADAPTOR WHITE	1	Screws	Horizontal + Vertical	1000-0020080	3	8
15	90° ELBOW 80mm SELF	1			1000-0020100	6	15
16	45° ELBOW 80mm SELF	1		Horizontal + Vertical	1000-0020110	3	8
17	FLUE EXTENSION 1 METER 80mm SELF	1		Horizontal + Vertical	1000-0020120	3	8
18	WALL FIXING BRACKET 80mm	1	Clamp for 80mm tube	Horizontal + Vertical	1000-0020090	n/a	n/a
19	PLUME MANAGEMENT KIT (BLACK) 60mm	1	See page 22	Horizontal + Vertical	1000-00200730	21	53
20	1000mm EXTENSION FLUE 60mm	1		Horizontal + Vertical	1000-0020740	3	8
21	90° ELBOW BLACK 60mm	1		Horizontal + Vertical	1000-0020680	6	15
22	45° ELBOW (BLACK) 60mm	2		Horizontal + Vertical	1000-0020670	3	8
23	WALL FIXING BRACKET 60mm	1		v	100-0020770	n/a	n/a

* The first 90° change in direction from vertical to horizontal has a resistance of 40 pascal (16H, 16S, 25H, 25S & 30C) + 45 pascal (31H 31S & 37C)

6. CONCENTRIC FLUE COMPONENTS

1. STANDARD HORIZONTAL FLUE KIT (60/100)

Part No. 1000-0020070

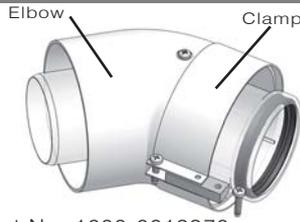


2. VERTICAL APPLIANCE ADAPTOR



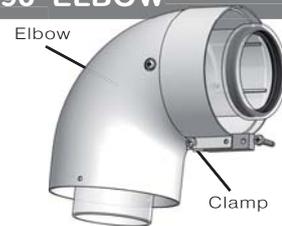
Part No. 1000-0018990

3. 45° ELBOW



Part No. 1000-0018970

4. 90° ELBOW



Part No. 1000-0018980

5. 250mm STRAIGHT EXTENSION



Part No. 1000-0018960

6. 500mm STRAIGHT EXTENSION



Part No. 1000-0018950

7. 1000mm STRAIGHT EXTENSION



Part No. 1000-0018940

8. FLAT ROOF WEATHER COLLAR



Part No. 1000-0020060

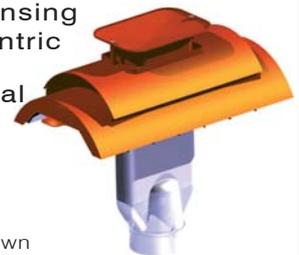
9. PITCHED ROOF WEATHER COLLAR



Black - Part No. 1000-0020030
Terracotta - Part No. 1000-0020040

10. RIDGE TERMINAL

Condensing Concentric Ridge Terminal



Grey Brown
Part No. 1000-0021030
Copper Brown
Part No. 1000-0021050

11. WALL FIXING BRACKET 100mm



Part No. 1000-0020050

12. VERTICAL TERMINAL



Part No. 1000-0018930

7. TWIN FLUE COMPONENTS

CONCENTRIC ADAPTOR

13. Twin Flue to Concentric Adaptor
Part No. 1000-0020130

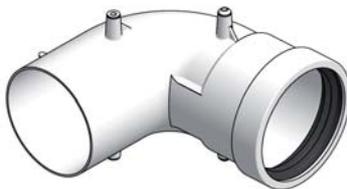


14. Twin Flue Adaptor
Part No. 1000-0020080



ELBOWS

15. 90 Degree Elbow 80mm
Part No. 1000-0020100



16. 45 Degree Elbow 80mm
Part No. 1000-0020110



17. 1m FLUE EXTENSION 80mm



Part No. 1000-0020120

18. WALL FIXING BRACKET 80mm



Part No. 1000-0020090

8. PLUME MANAGEMENT

19. PLUME MANAGEMENT KIT 60mm

All Models (only available in black)



Part No. 1000-0020730

21. 90° ELBOW 60mm

(only available in black)



Part No. 1000-0020680

22. 45° ELBOW 60mm

(only available in black)



Part No. 1000-0020670

20. 1000mm EXTENSION FLUE 60mm

(only available in black)
Part No. 1000-0020740



23. WALL FIXING BRACKET 60mm



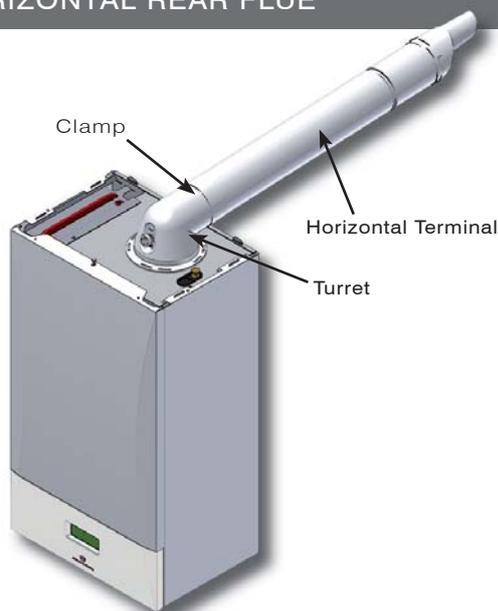
Part No. 1000-0020770

9. INSTALLATION OF THE STANDARD FLUE SYSTEMS

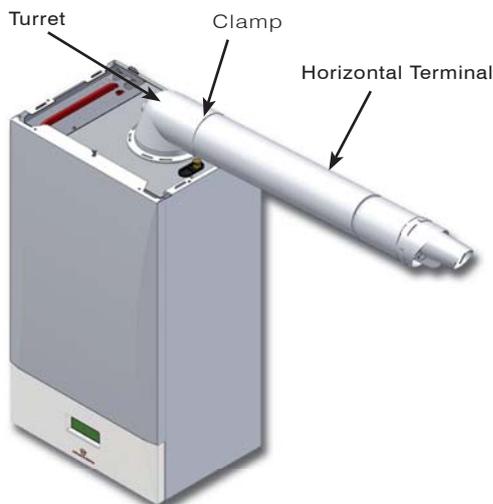
The standard flue kit comprises of:

ITEM	DESCRIPTION	QTY
1	Turret	1
2	Appliance Seal	1
3	60/80 Adaptor	1
4	EPDM Outside Wall Cover Plate	1
5	Inside wall cover Plate	1
6	100mm Diameter Clamp	1
7	800mm Horizontal Terminal	1

HORIZONTAL REAR FLUE



HORIZONTAL SIDE FLUE



IMPORTANT NOTE:

Before carrying out this procedure ensure seal has not been dislodged from top of heat exchanger.

With the appliance comes a wall template.
(Label Ref: 1000-2217950-3)

1. INSTALLATION INSTRUCTIONS

- 1.1 Using the template supplied with the boiler, determine the position of the flue.
- 1.2 If access is available from outside drill a 105mm diameter hole.

If no access is available refer to section 2.
- 1.3 Mount the jig and the boiler on the wall as detailed in the boiler installation instructions.
- 1.4 Fit the appliance seal to the underside of the turret and fix the turret to the top of the boiler using the 4 screws supplied, ensuring that the heat exchanger flue seal and 60/80 adaptor is in place.
- 1.5 Take a measurement from the outside of the wall to the edge of the turret dimension "X" Fig. 1.
- 1.6 Mark this dimension onto the horizontal terminal as shown in Fig. 2.
- 1.7 Cut the flue to the desired length making sure the ends are square and free from burrs.

NOTE: To ease the assembly of the flue components, apply suitable silicone lubricant to the male plastic end. (Any other type of lubricant may corrode the gasket.)

- 1.8 Place flue clamp over turret rim.
- 1.9 From the outside of the building, push the terminal through the wall and locate the male plastic end of the terminal into the female end of the turret.
- 1.10 Place clamp equally over the turret and terminal ends and tighten the 2 screws.
- 1.11 Fit the rubber-finishing ring over the outside of the flue, pushing it flush to the wall. The rib on the inside of the ring will locate in-between the locating pips on the end of the terminal.

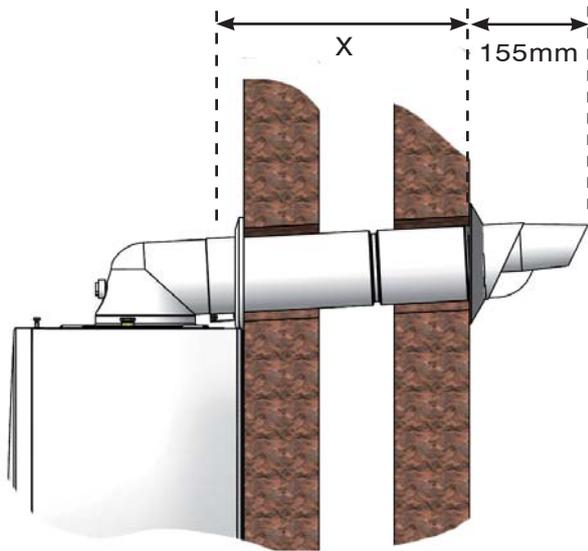


Fig. 1

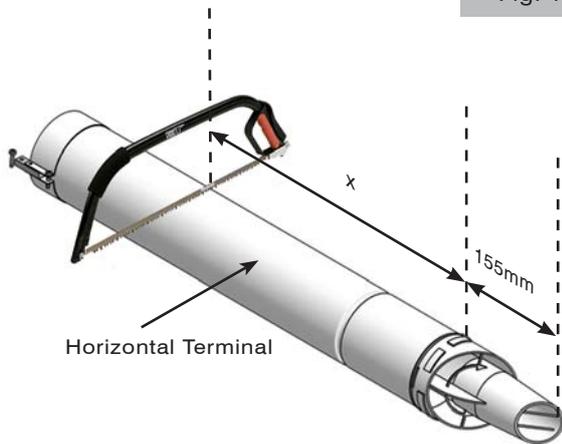
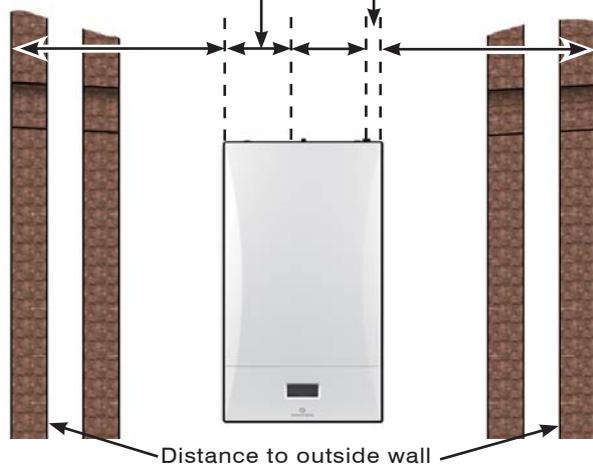


Fig. 2

COMBI & SYSTEM + 180mm	COMBI & SYSTEM + 45mm
HEAT ONLY SERIES + 100mm	HEAT ONLY SERIES + 45mm



LEFT FACING TURRET FLUE LENGTH =
Edge of boiler to outside wall + 180mm

RIGHT FACING TURRET FLUE LENGTH =
Edge of boiler to outside wall + 45mm

Fig. 3

2. NO OUTSIDE ACCESS

- 2.1 If no access is available from outside the building drill a 125mm diameter hole.
- 2.2 Mount the jig and the boiler on the wall as detailed in the boiler installation manual.
- 2.3.
 - a. For a rear flue measure the wall thickness and add;
 - 40mm for a standard rear flue
 - 90mm for a rear flue if the standoff bracket is used.
 - b. For a side flue measure the distance from the outside wall to the side of the boiler and add;
 - Length shown in Fig. 3.
 - This dimension is known as dimension "X".
- 2.4 Mark this dimension on to the turret as in Fig. 2.
- 2.5 Cut the flue to the desired length making sure the ends are square and free from burrs.

NOTE: To ease the assembly of the flue components, apply suitable silicone lubricant to the male plastic end. (Any other type of lubricant may corrode the gasket.)

- 2.6 Fit the rubber-finishing ring over the outside of the flue. The rib on the inside of the ring will locate in-between the locating pips on the end of the terminal.
- 2.7 Push the terminal through the hole in the wall.
- 2.8 Fit the appliance seal to the underside of the turret and fix the turret to the top of the boiler using the 4 screws supplied, ensuring that the heat exchanger flue seal and 80/60 reducer is in place.
- 2.9 Place flue clamp over turret rim
- 2.10 Pull back the terminal through the wall locating the male plastic end of the terminal into the female end of the turret.
- 2.11 Place the clamp equally over the turret and terminal and tighten the 2 screws.

10. INSTALLATION OF EXTENDED FLUE SYSTEMS

These are an examples of extended horizontal rear flue systems. Various configurations can be arranged using the individual items listed on page 10 & 11.

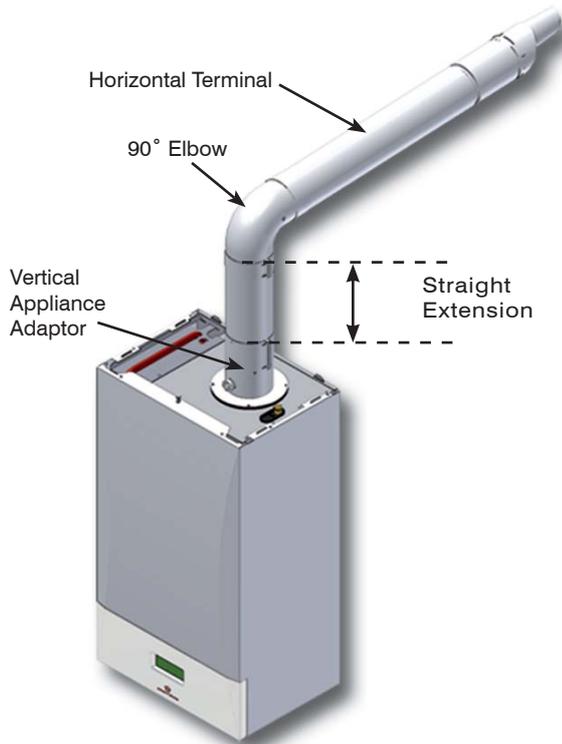
EXAMPLE 1

ITEM	DESCRIPTION	QTY
1	Vertical Appliance Adaptor	1
2	Appliance Seal	1
3	60/80 Adaptor	1
4	EPDM Outside Wall Cover Plate	1
5	Inside wall cover Plate	1
6	100mm Diameter Clamp	3
7	90° Elbow	1
7	800mm Horizontal Terminal	1
8	Straight Extensions as required	1

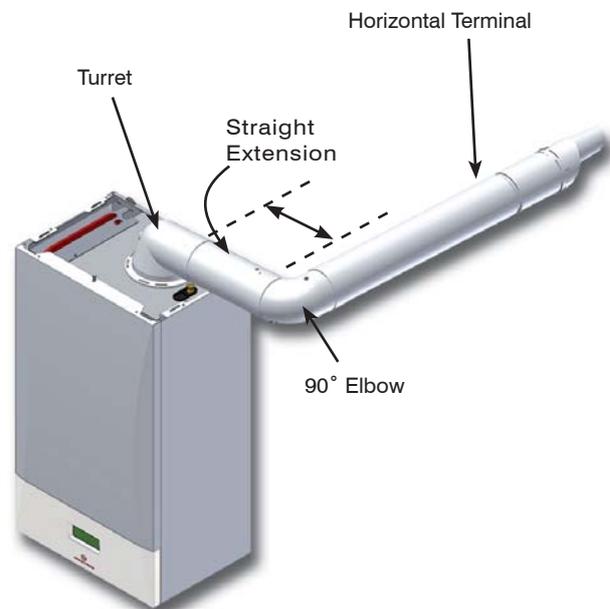
EXAMPLE 2

ITEM	DESCRIPTION	QTY
1	Turret	1
2	Appliance Seal	1
3	60/80 Adaptor	1
4	EPDM Outside Wall Cover Plate	1
5	Inside wall cover Plate	1
6	100mm Diameter Clamp	3
7	90° Elbow	1
7	800mm Horizontal Terminal	1
8	Straight Extensions as required	1

EXTENDED HORIZONTAL REAR FLUE



OFFSET EXTENDED HORIZONTAL REAR FLUE



IMPORTANT NOTE:
Before carrying out this procedure ensure seal has not been dislodged from top of heat exchanger.

1. INSTALLATION INSTRUCTIONS

- 1.1 Determine the position of the flue. Fig. 1b
 - 1.2 If access is available from outside drill a 105mm diameter hole. If no access is available refer to page 13, section 2
 - 1.3 Mount the jig and the boiler on the wall as detailed in the boiler installation manual.
 - 1.4 Fit the appliance seal to the underside of the vertical adaptor and fix the vertical adaptor to the top of the boiler using the 4 screws supplied, ensuring that the heat exchanger flue seal is in place.
- NOTE:** To ease the assembly of the flue components, apply suitable silicone lubricant to the male plastic end. (Any other type of lubricant may corrode the gasket.)
- 1.5 Cut the flue extensions to the desired length measuring from the female end. Fig 2. Make sure the ends are square and free from burrs.
 - 1.6 Any horizontal runs must have a minimum of a 3° fall back to the boiler
 - 1.7 Build up the flue as required to line up with the pre-drilled hole
 - 1.8 Take a measurement from the outside of the wall to the edge of the elbow dimension "X".
 - 1.9 Mark this dimension on to the horizontal terminal as in Fig. 3
 - 1.10 Place flue clamp over elbow rim
 - 1.11 From the outside of the building push the terminal through the wall locating the male plastic end of the terminal into the female end of the turret.
 - 1.12 Place the clamp equally over the turret and terminal and tighten the 2 screws
 - 1.13 Fit the rubber-finishing ring over the outside of the flue pushing it flush to the wall. The rib on the inside of the ring will locate in between the locating pips on the end of the terminal.
- Refer to section 13 for fitting 90° elbow's.

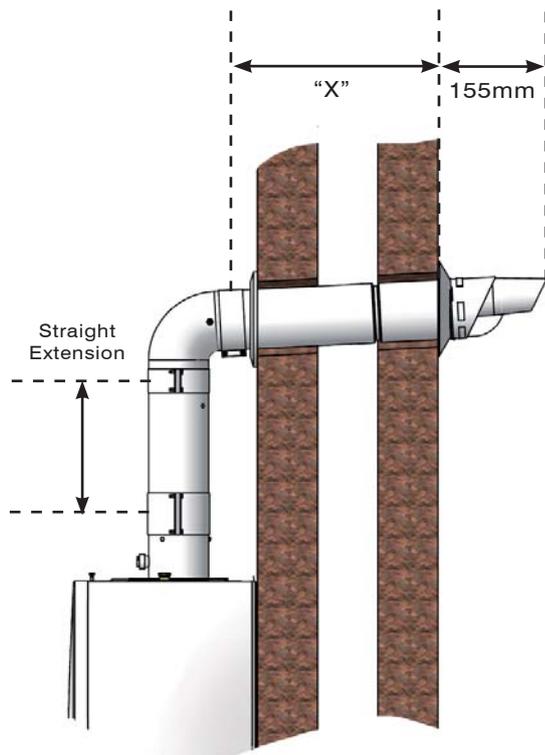


Fig. 1

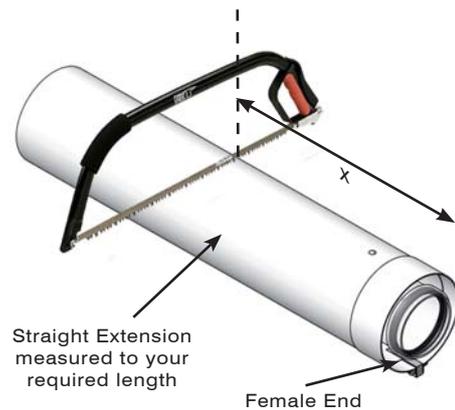


Fig. 2

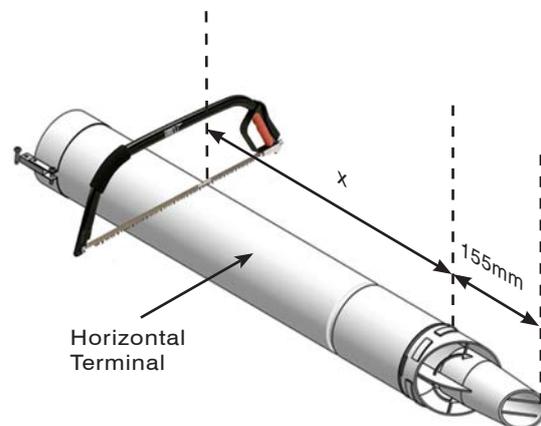


Fig. 3

11. INSTALLATION OF VERTICAL FLUE SYSTEMS

These are an examples of vertical flue systems. Various configurations can be arranged using the individual items listed on page 10 & 11.

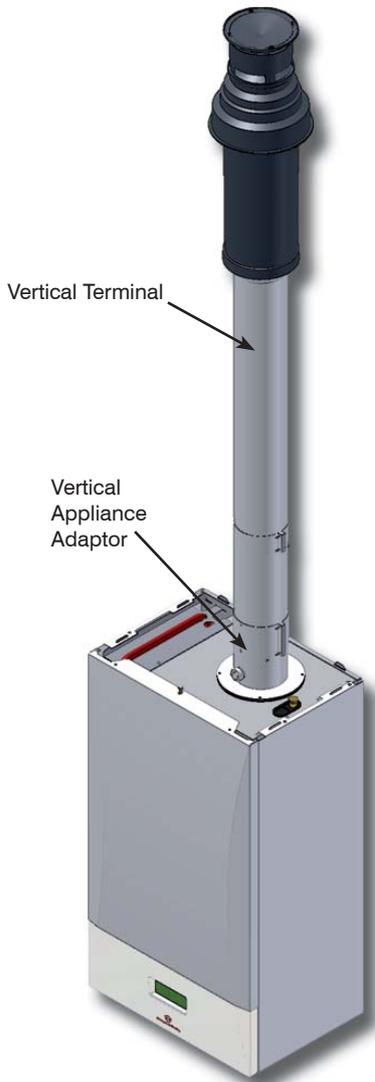
EXAMPLE 1

ITEM	DESCRIPTION	QTY
1	Vertical Appliance Adaptor	1
2	Appliance Seal	1
3	60/80 Adaptor	1
4	Vertical Terminal	1
5	Straight Extensions as required	-

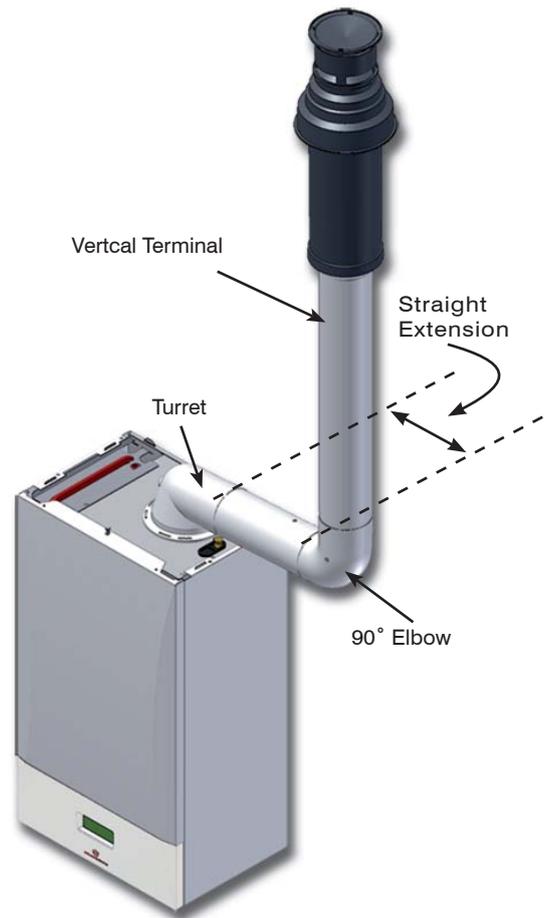
EXAMPLE 2

ITEM	DESCRIPTION	QTY
1	Turret	1
2	Appliance Seal	1
3	60/80 Adaptor	1
4	Vertical Terminal	1
5	90° Elbow as required	-
6	Straight Extensions as required	-

VERTICAL/EXTENDED FLUES



OFFSET VERTICAL/EXTENDED SIDE FLUE



IMPORTANT NOTE:
Before carrying out this procedure ensure seal has not been dislodged from top of heat exchanger.

1. INSTALLATION INSTRUCTIONS

- 1.1 Fit the boiler in accordance with the installation instructions.
- 1.2 Determine the position that the flue will penetrate the roof.
- 1.3 Fit either the pitched roof weather collar (Fig 2), flat roof weather collar (Fig 3) or ridge terminal (Fig 4) as per the relevant codes of practice.
- 1.4 For both the pitched and flat roof weather collars work from above and fit the terminal through the weather collar and push down firmly into place. The terminal can be cut if required making sure the ends are square and free from burrs.
- 1.5 Vertically align the terminal and secure it in place using the fixing bracket supplied.
- 1.6 Fit the appliance seal to the underside of the vertical adaptor and fix the vertical adaptor to the top of the boiler using the 4 screws supplied, ensuring that the heat exchanger flue seal is in place.

NOTE: To ease the assembly of the flue components, apply suitable silicone lubricant to the male plastic end. (Any other type of lubricant may corrode the gasket.)

- 1.7 Build up the flue from the boiler and connect to the vertical terminal using bends and extensions as required.
- 1.8 Cut any flue extensions to the desired length measuring from the female end. Making sure the ends are square and free from burrs.
- 1.9 Any horizontal runs must have a minimum of a 3° fall back to the boiler
Support the flue as required using fixing bracket 1000-0020050 it is recommended that horizontal runs have 1 clamp per extension as a minimum.

Refer to section 13 for fitting 90° elbow's.

Table B Flue Pressure Drops for the HE30C ——— & HE37C - - - - -

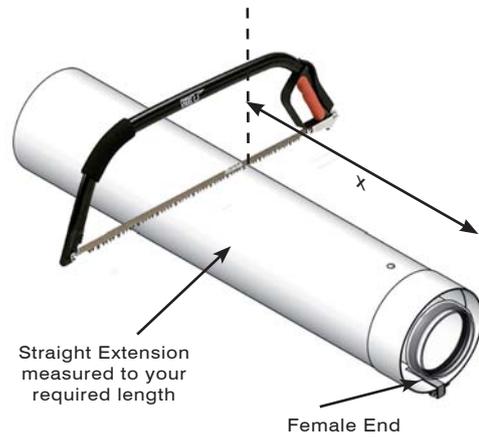
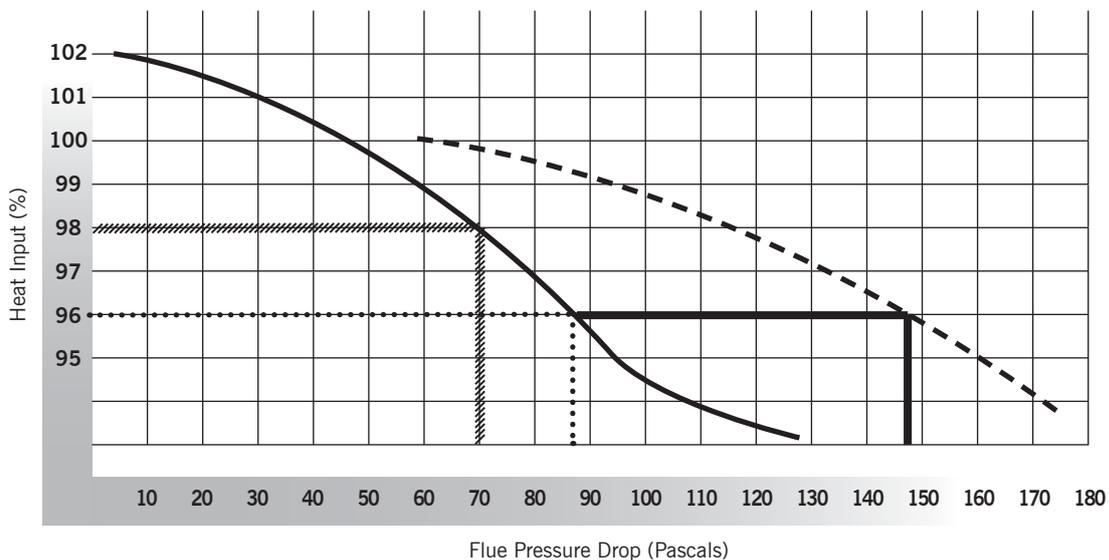
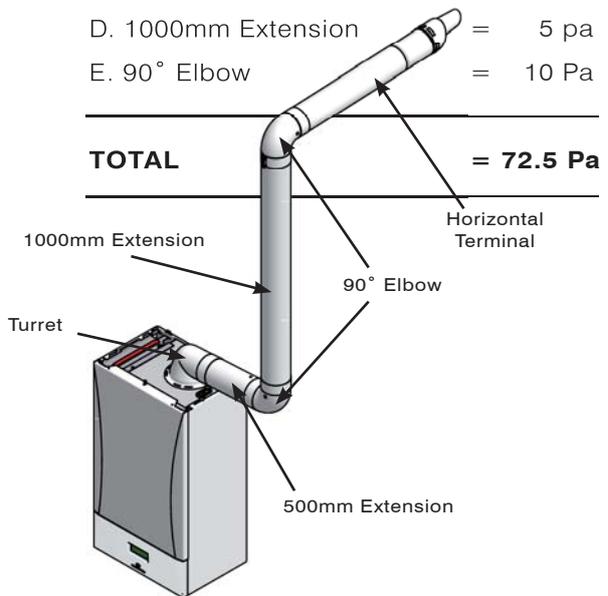


Fig. 1

2. EXAMPLE

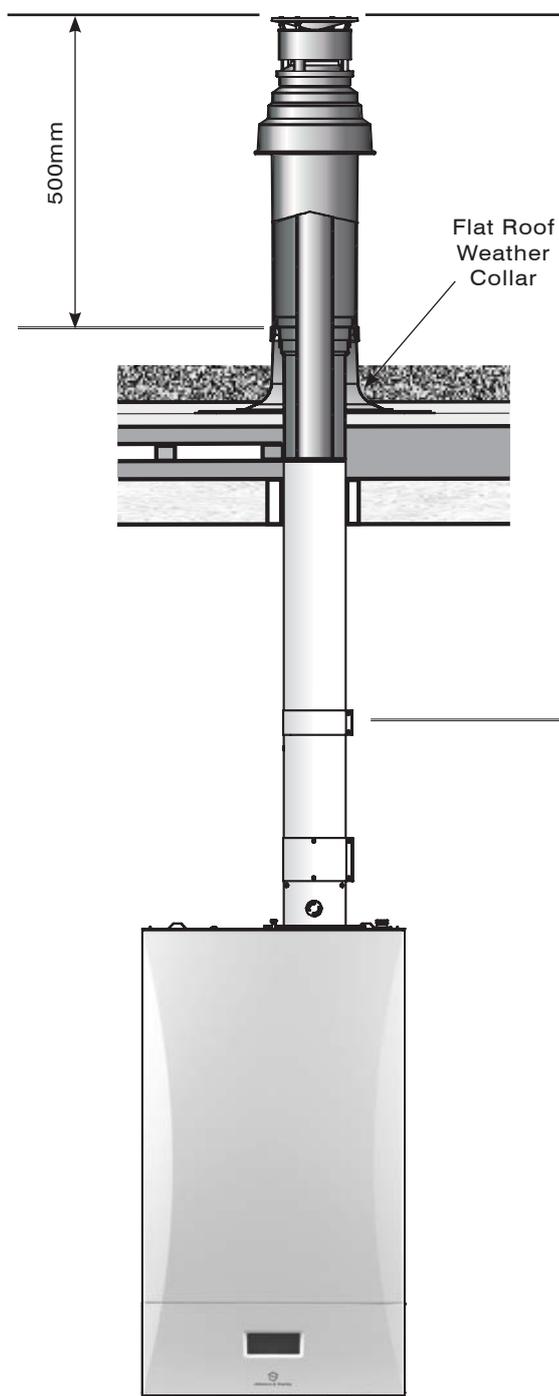
- 2.1

A. Turret + Horizontal Terminal	=	45 Pa
B. 500mm Extension	=	2.5 Pa
C. 90° Elbow	=	10 Pa
D. 1000mm Extension	=	5 pa
E. 90° Elbow	=	10 Pa



3. INSTALLATION INSTRUCTIONS FOR ROOF OUTLETS

FLAT ROOF



PITCHED ROOF

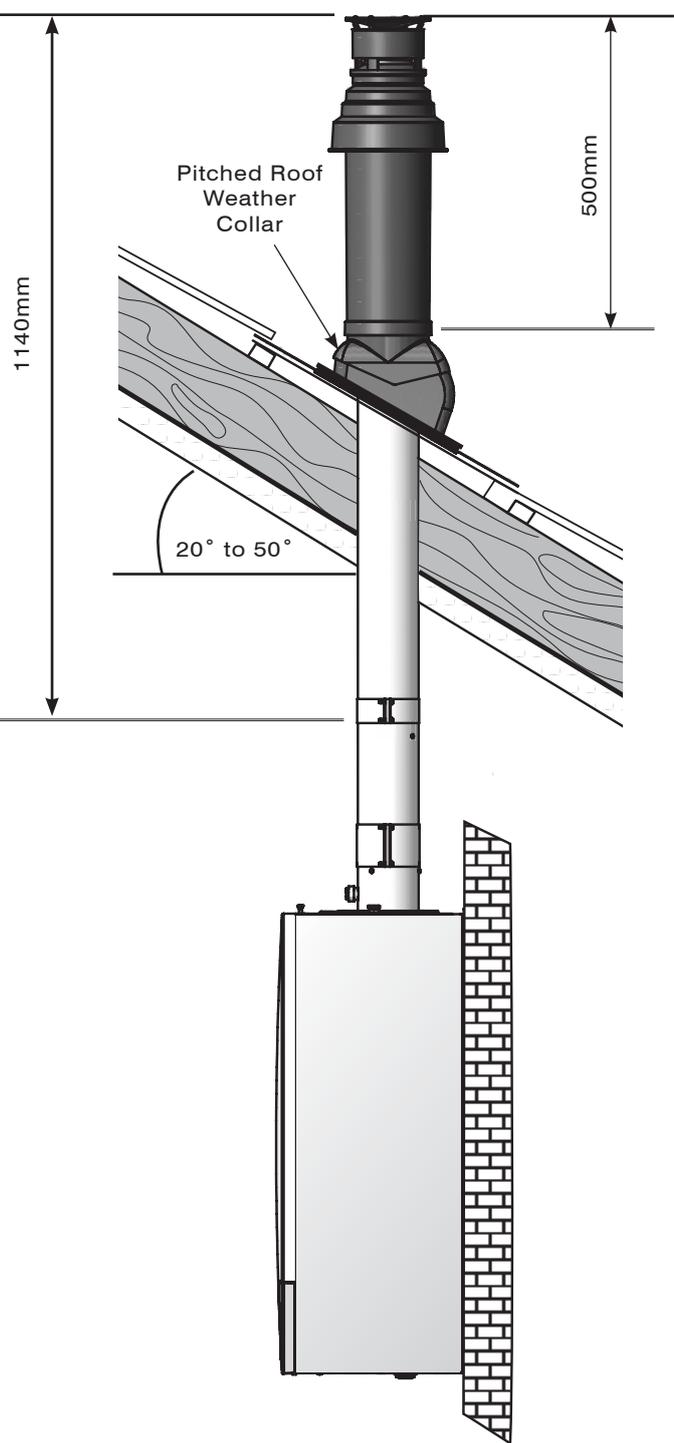


Fig. 3

Fig. 4

RIDGE TERMINAL

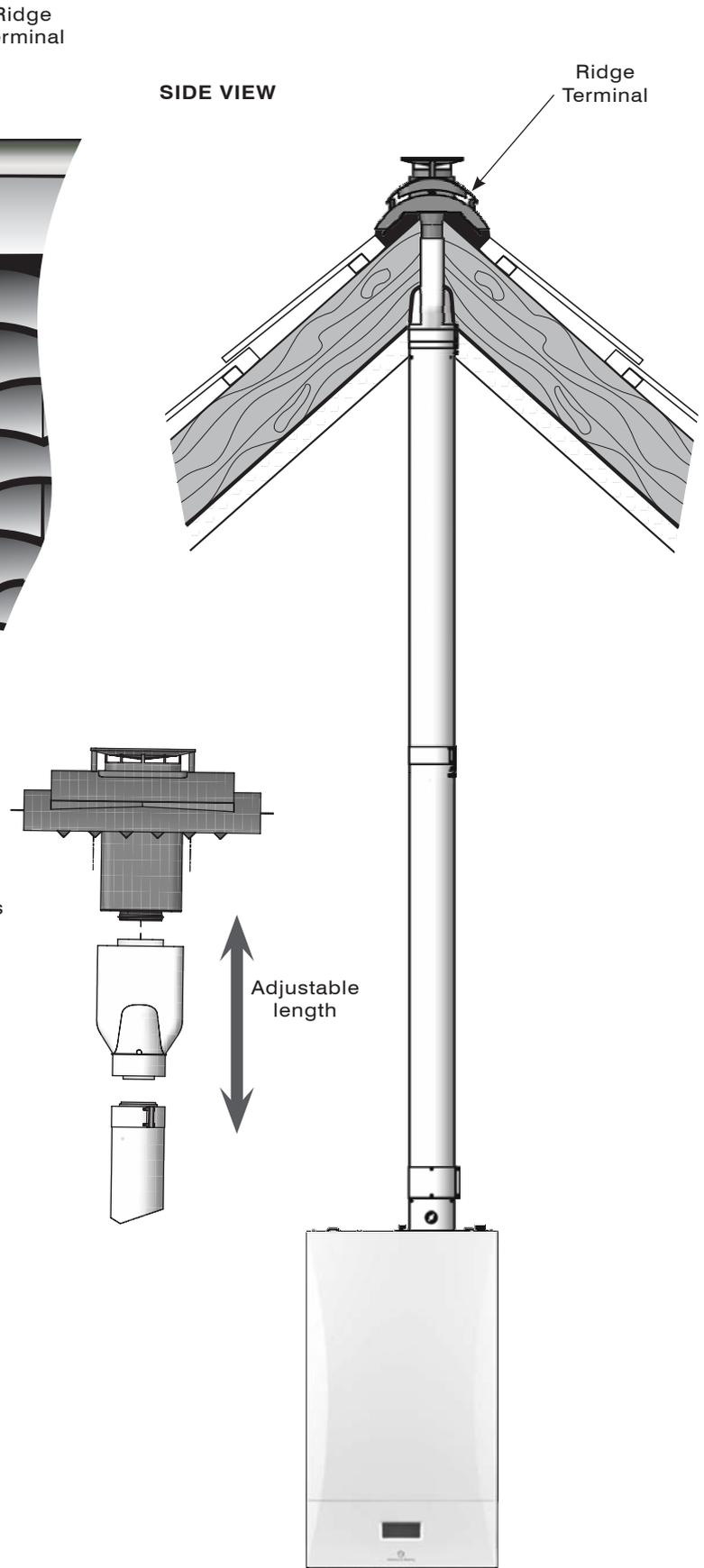
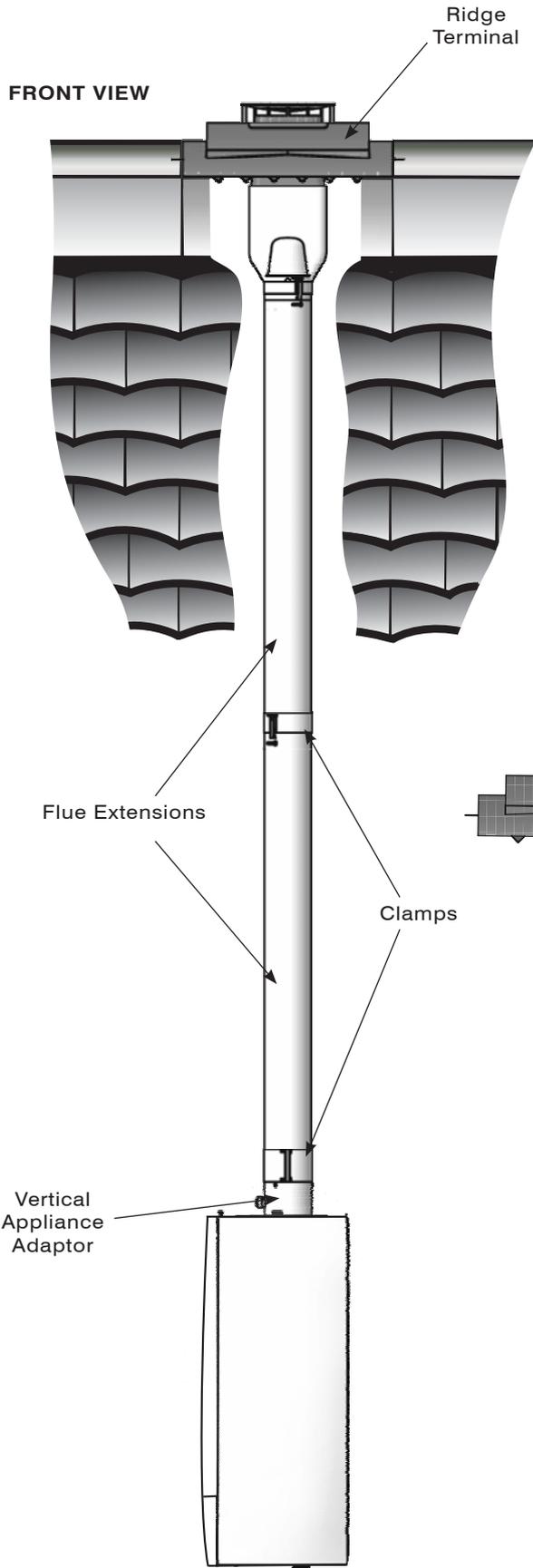


Fig. 5

Fig. 6

12. INSTALLATION OF TWIN FLUE SYSTEMS

NOTE: It is important that any enclosures around the flue pipe have adequate inspection access

These are an examples of Twin Flue Systems. Various configurations can be arranged using the individual items listed on page 10 & 11.

ITEM	DESCRIPTION	QTY
1	Twin Flue Adaptor	1
2	Twin Flue to Concentric Adaptor	1
3	Appliance Seal	2
4	80mm 90° Elbow as required	-
5	Horizontal Terminal	1
6	80mm Extensions as required	-

ITEM	DESCRIPTION	QTY
1	Twin Flue Adaptor	1
2	Twin Flue to Concentric Adaptor	1
3	Appliance Seal	2
4	80mm 45° Elbows as required	-
5	Vertical Terminal	1
8	80mm Extensions as required	-

EXTENDED TWIN TO CONCENTRIC
HORIZONTAL FLUE



EXTENDED TWIN TO CONCENTRIC
VERTICAL FLUE



IMPORTANT NOTE:
Before carrying out this procedure ensure seal has not been dislodged from top of heat exchanger.

1. INSTALLATION INSTRUCTIONS

- 1.1. Determine the position of the flue termination either vertical or horizontal
- 1.2
 - a. For a horizontal terminal if access is available from outside drill a 105 mm hole. If no access is available please refer to page 13, section 2
 - b. For a vertical terminal determine the position that the flue will penetrate the roof

Fit either the pitched roof weather collar, flat roof weather collar or ridge terminal as per the relevant codes of practice.

For both the pitched and flat roof weather collars work from above and fit the terminal through the weather collar and push down firmly into place. The terminal can be cut if required making sure the ends are square and free from burrs.

Vertically align the terminal and secure it in place using the fixing bracket supplied

- 1.3 Mount the jig and the boiler on the wall as detailed in the boiler installation manual.
- 1.4 Fit the twin flue adaptor to the top of the appliance by pushing the twin flue adaptor flue pipe in to the heat exchanger outlet with the air inlet duct to the left hand side ensuring the flue seal is in place. Secure the adaptor to the top panel with the screws supplied. Care should be taken when inserting the screw through the hole in the adaptor.

NOTE: To ease the assembly of the flue components, apply suitable silicone lubricant to the male plastic end. (Any other type of lubricant may corrode the gasket.)

- 1.5 Build up the flue from the boiler and connect to the terminal using bends and extensions as required
- 1.6 Cut the flue extensions to the desired length measuring from the female end. Making sure the ends are square and free from burrs.
- 1.7 Any horizontal runs must have a minimum of a 3° fall back to the boiler
- 1.8 Support the flue as required using fixing bracket 1000-0020090 it is recommended that horizontal runs have 1 clamp per extension as a minimum
- 1.9 The final connection must be made to the terminal by the use of the twin flue to concentric adaptor 1000-0020130

NOTE: Twin flue systems must be installed with access to enable visible inspection of the flue joints.

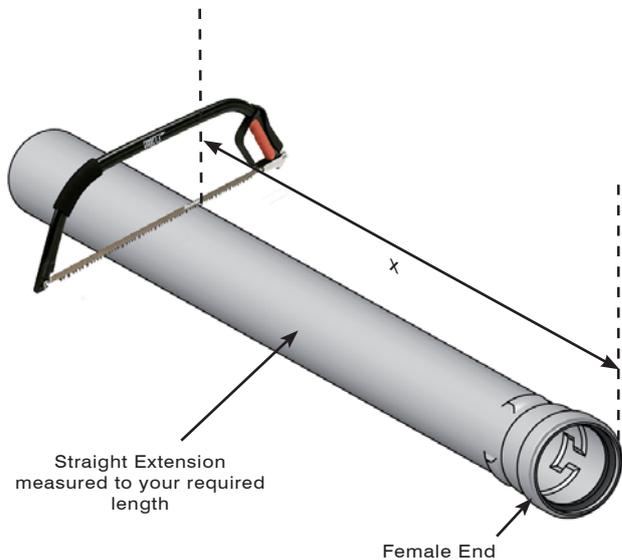


Fig. 2

13. INSTALLATION OF PLUME MANAGEMENT

The Plume Management System is only available in Black. The kit comprises of:

ITEM	DESCRIPTION	QTY
1	1000mm Straight Extension	1
2	500mm Straight Extension	1
3	90° Elbow	1
4	45° Elbow	1
5	Adaptor	1
6	Wall Bracket	2



Fig. 1

1. INSTALLATION INSTRUCTIONS

- 1.1 The plume management kit allows the inner Flue duct to be extended so as to position the terminal where the plume will not cause a nuisance.
- 1.2 Fit the boiler and horizontal terminal as required.
- 1.3 Fit the plume management kit together. The 500mm extension will determine the fixing distance on the outside wall.
- 1.4 Cut the plume extension to the desired length measuring from the female end as shown in Fig 2. Making sure the ends are square and free from burrs.
- 1.5 Fit the plume management kit over the end of the horizontal flue as shown in Fig. 3 and rotate it to the direction required.
- 1.6 Secure the plume management duct to the wall using the 2 brackets supplied.
- 1.7 Any horizontal runs must have a minimum of a 3° fall back to the boiler
- 1.8 The standard kit can be extended by using extra lengths and elbows as required.
(Refer to section 9 for extra components.)
- 1.9 Support the flue as required using fixing bracket 1000-0020770 it is recommended that horizontal runs have 1 clamp per extension as a minimum.

To ease assembly of flue components apply a lubricant to the male plastic end.

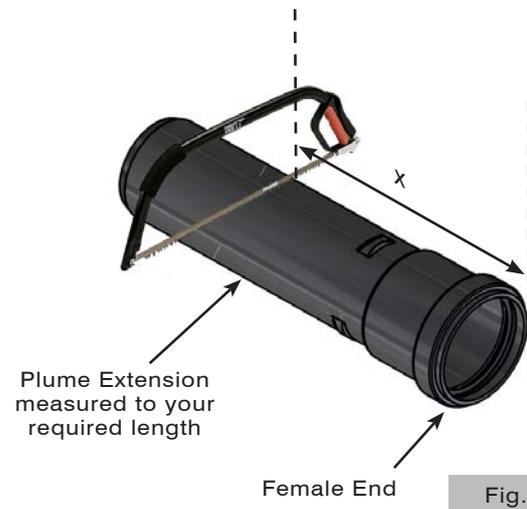


Fig. 2

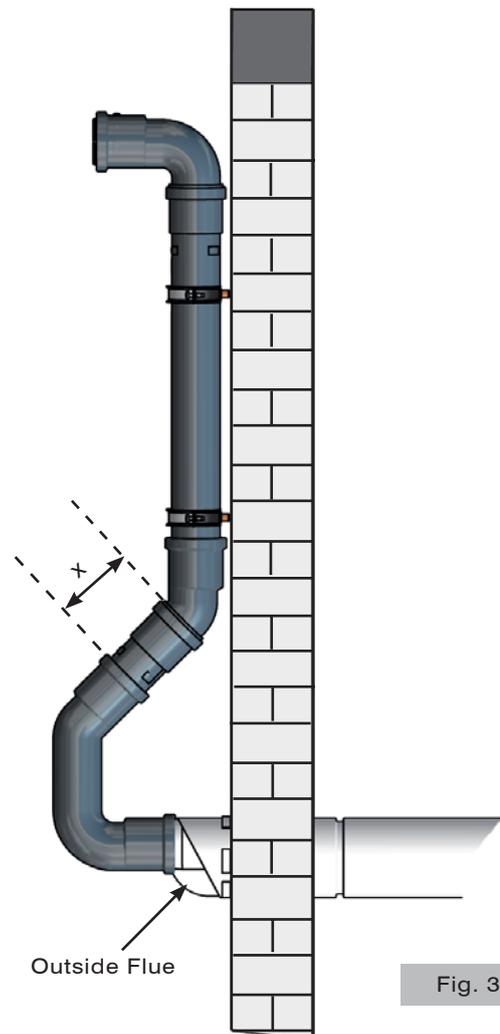


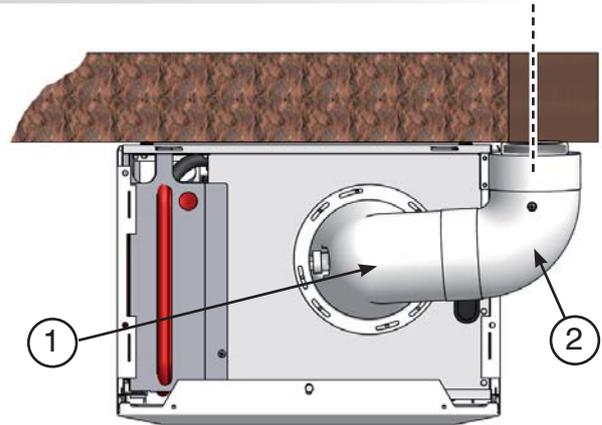
Fig. 3

13. HOW TO FIT 90° ELBOW'S

- 1.1 When using 2 x 90° elbows follow Fig. 4 to Fig 6 to avoid obstructions on outer wall.

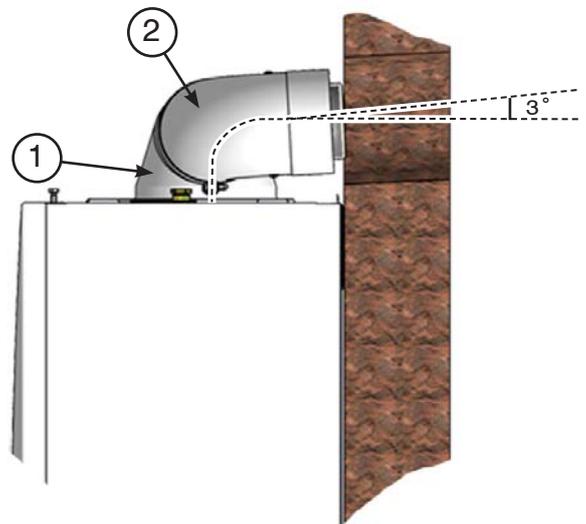
NOTE: The elbows must be correctly aligned to avoid undue stress on the joints and risk of leakage.

- 1.2 The elbow fitted to the top of the boiler 1 should be twisted by 3° to ensure that the second 90° elbow 2 exits the wall perpendicular.



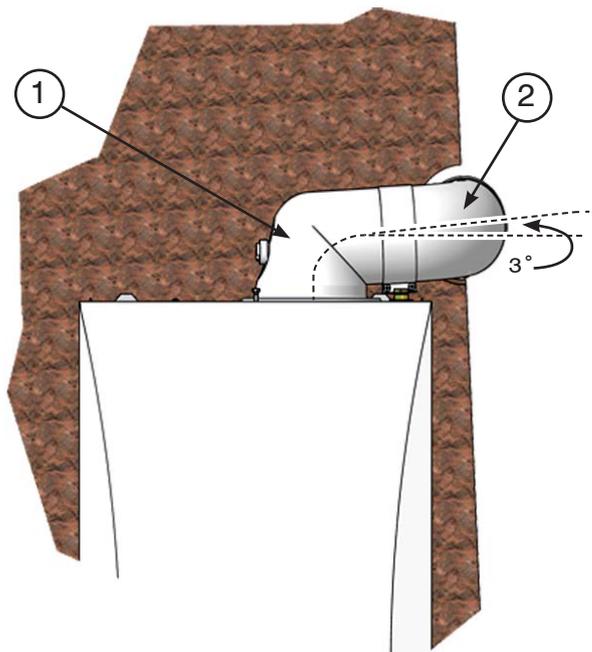
TOP VIEW

Fig. 4



SIDE VIEW

Fig.5



FRONT

Fig. 6

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