Condensing Boilers

Wall Hung - Evomax

www.idealcommercialheating.com

Commercial Heating Solutions

Introduction - Evomax

Pioneering heating solutions since 1905

Here at Ideal, we understand that you want a reliable, long term partner that has the skills and expertise to deliver you a wide range of reliable and pragmatic solutions.

With over 100 years of manufacturing experience, you can be confident to know that our capabilities stretch beyond traditional boiler technologies Ideal Commercial Heating provides a range of condensing solutions both wall hung or floor mounted, all perfectly designed to meet your individual building requirements.

As well as being able to help you rise to the challenge of the UK building regulations, we also provide a dedicated support service throughout the design, planning and after sales stages, giving you total peace of mind that we will provide you with the complete one-stop solution, all from one manufacturer.

When you choose to partner with Ideal you can be confident to know that you're partnering with a British manufacturer that's supported by a dedicated national service team, delivering help and advice to you and your customers throughout the year.

We have been keeping British buildings warm for over a century and believe in making products which are reliable, energy efficient and easy to use, combining the latest technology with common sense engineering that make our products easy to specify, simple to install & maintain and most importantly are reliable.

CE **Conforms with all relevant European standards and requirements**

Contents

Wall Hung Condensing Boilers

Evomax

Evomax 30 - 150 kW

The Evomax range offers a number of key features that enables ease of installation, maintenance and operation.

Available in outputs of 30, 40, 60, 80, 100, 120 and 150 kW, the Evomax is designed to ensure all installation requirements can be achieved. With outputs as low as 30 kW and as high as 150 kW, the Evomax offers more to suit your specific requirements.

The lightweight design is supported through quality build and aesthetics that allow for the boiler to be installed either on the wall or into a prefabricated floor mounted frame. Optional frame and header kits offer in-line and back-to-back cascade options of up to 6 boilers, with a combined capacity of up to 600 kW and provide the option of mounting boilers away from the wall for multiple installations that deliver a higher output.

Supported by a 2 year parts and labour warranty, the Evomax is a reliable and efficient wall hung solution. The quality of this product range has been developed through meticulous design, careful component selection and proving; to provide straightforward commissioning and servicing together with a compact one height and width for easier siting.

The Evomax range provides high efficiencies for low running costs with up to 110 percent part load and seasonal efficiency (ref Building Regs Part L2) up to 97 percent. The range also provides low NOx emissions at Class 5 and at less than 40mg/kWh achieve maximum points under BREEAM schemes.

The Evomax boasts easy to read boiler controls featuring large backlit display with five lines of plain English text. This, along with the light weight of the product makes easier installation for the engineer. The single width and height irrespective of model size also ensures the product provides easier design.

With a high specification as standard, including two remote alarm contacts, BMS (0-10v) control and high 5:1 turndown which aids efficiency and minimises running costs through closer load matching the new Evomax provides peace of mind and the perfect solution for a wide variety of commercial installations.

Features and Benefits

- Largest range of outputs in market (30 - 150 kW)
- 30 kW commercial model
- Robust & light monobloc heat exchanger
- Highest seasonal efficiency for lower operating costs
- High 5:1 turndown
- Low NOx emissions
- Compact – one width & height for easy siting
- Simple controls interface with large backlit display
- Comprehensive range of options
- Designed for easy installation, commissioning and servicing
- Quality product through design, component selection and proving
- 2 year warranty

Evomax 30 - 150 kW

Performance data

Model			30	40	60	80	100	120	150
Boiler Output (non-condensing) Mean 70°C	Max	kW	30	40	60	80	100	120	150
		Btu/hr	102350	136500	204750	273000	341200	409450	511800
	Min	kW	6	8	12	16	20	24	30
		Btu/hr	20450	27300	40950	54600	68250	81900	102350
Boiler Output (condensing) Mean 40°C	Max	kW	31.54	42.0	63.5	86.5	103.9	124.7	158.0
		Btu/hr	107600	14300	216650	295050	357360	428900	539100
	Min	kW	6.25	7.8	12.7	17.2	21.6	26.0	32.5
		Btu/hr	21300	26600	43350	58750	81620	98250	110800
Boiler Input Max Rate	Nett	kW	30.4	40.5	60.8	82.0	102.4	122.9	153.7
		Btu/hr	103700	138250	207400	279650	349550	419500	524350
	Gross	kW	33.7	44.9	67.4	90.9	13.6	136.4	170.5
		Btu/hr	115000	153350	230050	310200	387750	465300	581600
Boiler Input Min Rate	Nett	kW	6.1	8.1	12.2	16.4	20.5	24.6	30.7
		Btu/hr	20750	27650	41500	55950	69900	83900	104900
	Gross	kW	6.7	9.0	13.5	18.2	22.7	27.3	34.1
		Btu/hr	23000	30650	46000	62050	77550	93050	116300
Gas Rate	Max Rate	m^3/hr	3.2	4.3	6.4	8.7	10.8	13.0	16.2
		ft^3/hr	113.4	151.2	226.9	305.9	382.4	458.9	573.6
Flue Gas Flow Rate	Max Rate	m^3/hr	47.6	63.4	95.1	128.3	160.3	192.5	240.7
		ft^3/hr	1680	2238	3360	4531	5662	6799	8499
CO_2 (±0.5%)	Max Rate	%	9.7	9.7	9.7	9.7	9.7	9.7	9.7
	Min Rate	%	8.7	8.7	8.7	8.7	8.7	8.7	8.7
NOx	Weighted	mg/kWh	31.0	39.1	32.3	39.8	39.6	38.8	38.1
		ppm	17.6	22.2	18.3	22.9	22.5	22.0	21.6
Efficiency	Seasonal	%	96.7	96.2	96.4	97.2	96.7	96.6	96.7
	*SEDBUK 2009	%	89.6	89.3	89.4	n/a	n/a	n/a	n/a

* The value is used in the UK Government's Standard Assessment Procedure (SAP) for energy ratings of dwellings.
The test data from which it has been calculated have been certified by a notified body.

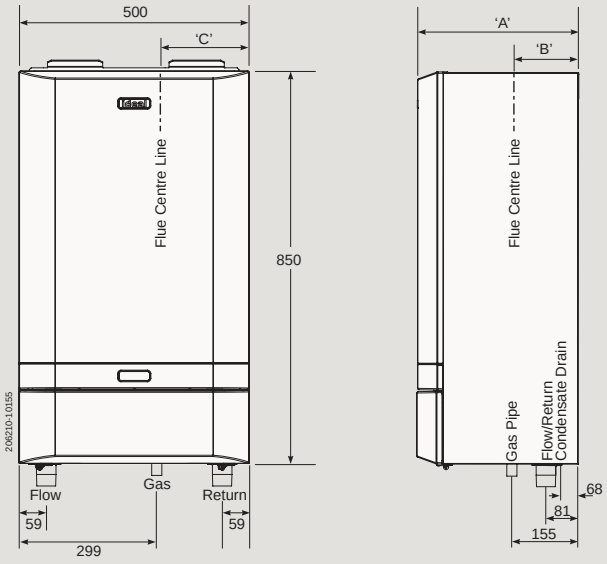
Dimensions

Boiler	Dim A*	Dim B	Dim C
30, 40, 60, 80	360	130	118
100, 120	520	226	118
150	610	233	120

The following minimum clearances must be maintained for operation and servicing.

Front of boiler - 450mm
Sides of boiler - 25mm
Above boiler - dependent upon the flue system
Below boiler - 300mm
Clearance between multiple boiler installations - 25mm

* Dimension from wall.



General data

Model		30	40	60	80	100	120	150
Gas Supply		2H - G20 - 20mbar						
Gas Supply Connection		G¾						
Flow Connection		G1¼						
Return Connection		G1¼						
Max Pressure (sealed system)	Bar (psi)	4.0 (58)						
Maximum Static Head	m	40.7						
Electricity Supply		230V - 50Hz						
Fuse Rating	A	4.0						
Power Consumption	W	126	207	131	265	370	403	400
IP Rating		IP20						
Nominal Flue Size	mm	80/125[1]				100/150		100/150*
Condensate Drain		25						
Water Content	L	3.0		5.0		7.0		9.2
Dry Weight	Kg	49		60.30		75.70		89.75

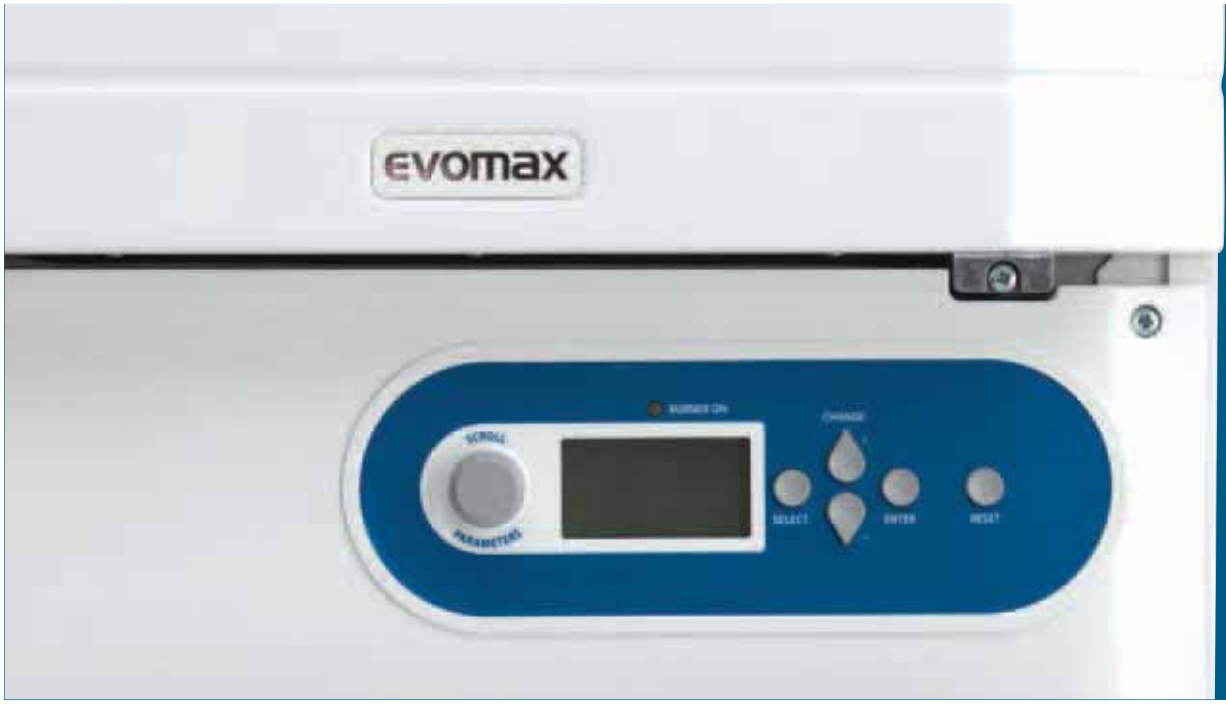
[1] optional kit available on 60/80 models for 100/150mm flue * For use with vertical flues only.

Optional kits

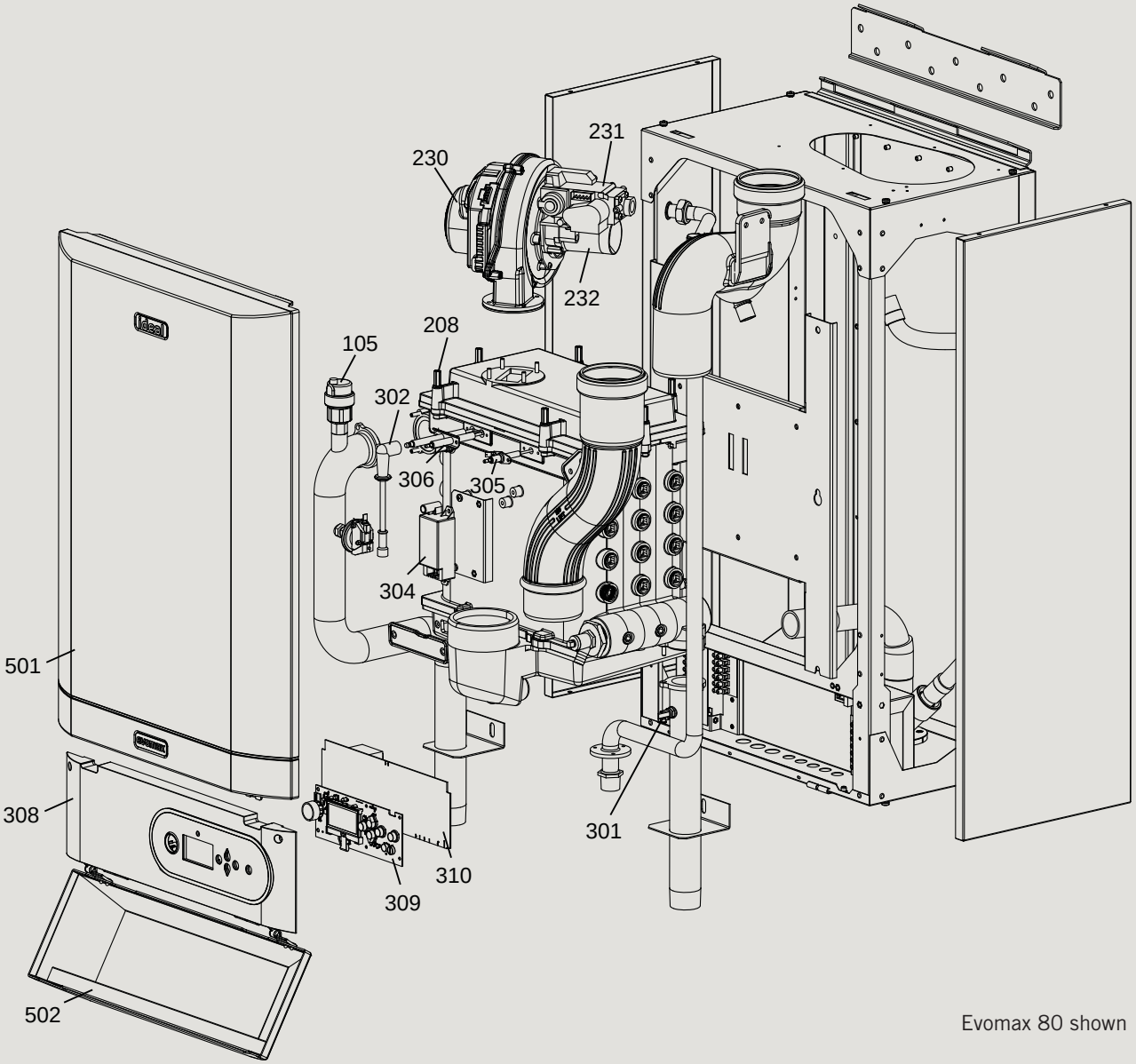
Boiler	Evomax
Modulating Sequencer kit	✓
Programmable Room Thermostat kit	✓
Outside sensor kit	✓
Tank Sensor kit	✓
Room sensor kit	✓
Safety Interlock kit	✓
Pump kit	✓
Multi boiler frame & header kits	✓

Included as standard

Boiler	Evomax
Remote indication (run & alarm)	✓
Hours run	✓
BMS (0-10v) operation	✓
Pump overrun	✓
Large backlit LCD controls, including 5 line plain text display	✓



Boiler assembly - exploded view



Evomax 80 shown

Key

105 Auto Air Vent
208 Burner Fixings
230 Fan
231 Gas Valve
232 Venturi
301 Dry Fire Thermistor
302 Lead Ignition
304 Ignitor Unit
305 Electrode Detection
306 Ignition Electrode
308 Fascia Plastic
309 HMI Board
310 Primary PCB
501 Jacket Assembly
502 Door Assembly

Water Treatment

These boilers incorporate an ALUMINIUM heat exchanger.

IMPORTANT. The application of any other treatment to this product may render the guarantee of Ideal Stelrad Group INVALID.

Ideal Stelrad Group recommend Water Treatment in accordance with Guidance Notes on Water Treatment in Central Heating Systems.
Ideal Stelrad Group recommend the use of Fernox Copal or MB1 or GE Betz Sentinel X100 inhibitors and associated water treatment products, which must be used in accordance with the manufacturers' instructions.

For further information contact:
Fernox Manufacturing Co. Ltd., Cookson Electronics,
Forsyth Road, Sheerwater, Woking, Surrey, GU21 5RZ
Tel: +44 (0) 1799 521133

or

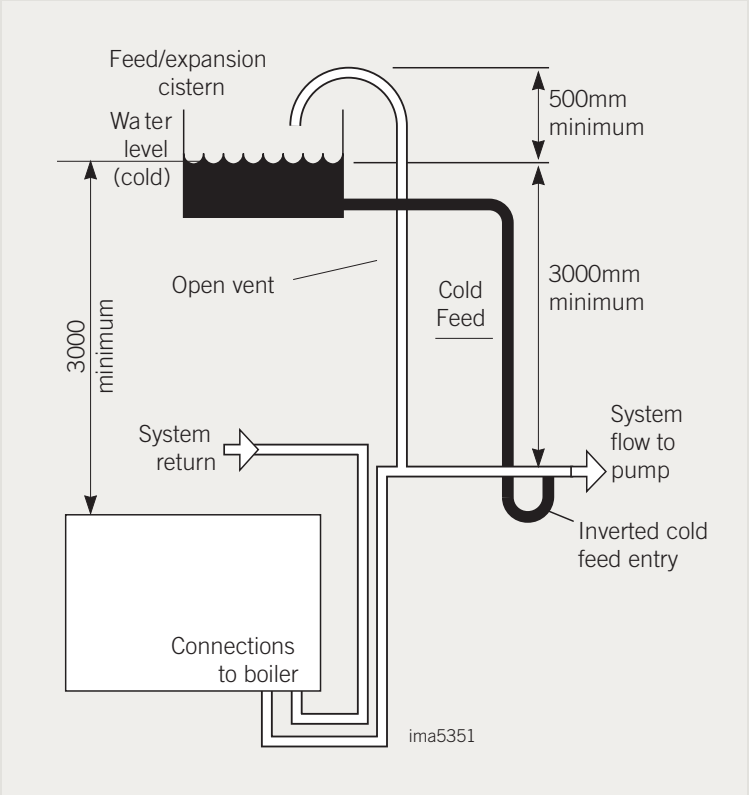
Sentinel Performance Solutions, The Heath Business and
Technical Park, Runcorn, Cheshire, WA7 4QX
Tel: 0800 389 4670
www.sentinel-solutions.net

System requirements - open vented

The information and guidance given below is not intended to override any requirements of the above publications or the requirements of the local authority, gas or water undertakings.

The vertical distance between the pump and feed/expansion cistern MUST comply with the pump manufacturer's minimum requirements, to avoid cavitation. Should these conditions not apply either lower the pump position or raise the cistern above the minimum requirement specified by Ideal Stelrad Group.

The isolation valves should be fitted as close to the pump as possible. The boiler is fitted with an automatic air vent, located in the left top side of the interior. This air vent must never be shut off, as this could result in dry firing of the boiler and subsequent damage to the heat exchanger.



System requirements - sealed system

Note. The method of filling, refilling, topping up or flushing sealed primary hot water circuit from the mains for a non-domestic property is shown below.

1. **General**
   a. The information and guidance given below is not intended to override any requirements of these publications or the requirements of the local authority, gas or water undertakings.

   b. The installation should be capable of working with flow temperatures of up to 90°C and a temperature differential of up to 20°C.

   c. All components of the system, including the heat exchanger of the indirect cylinder, must be suitable for a working pressure of 4 bar (60 lbf/in^2) and temperature of 110°C. Care should be taken in making all connections so that the risk of leakage is minimised.

   d. The boiler is fitted with an automatic air vent, located in the left top side of the interior. This air vent must never be shut off, as this could result in dry firing of the boiler and subsequent damage to the heat exchanger.

2. **Safety Valve**
   A spring loaded safety valve complying with the relevant requirements of BS. 6759 Pt. 1 must be fitted in the flow pipe as close to the boiler as possible and with no intervening valve or restriction. The valve should have the following features:

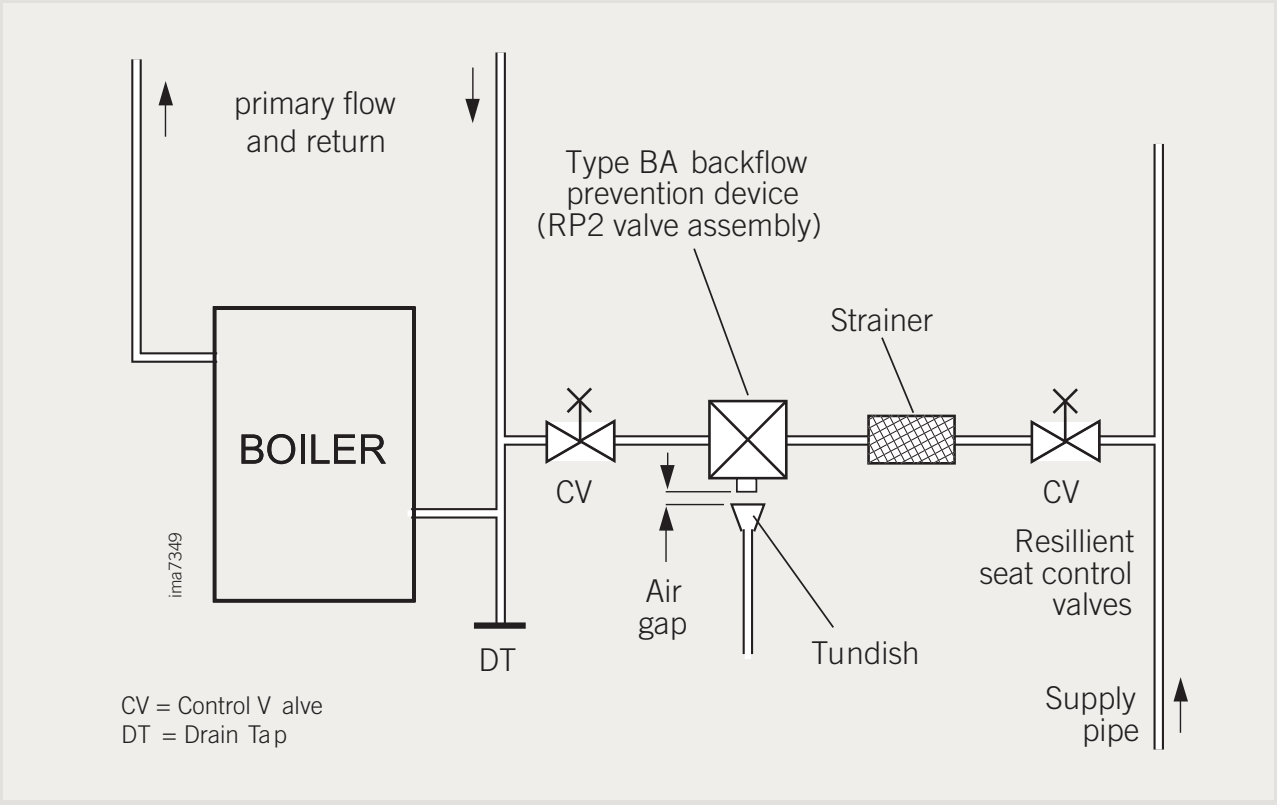
   a. A non-adjustable preset lift pressure not exceeding 4 bar (60 lbf/in^2).

   b. A manual testing device.

   c. Provision for connection of a discharge pipe. The valve or discharge pipe should be positioned so that the discharge of water or steam is visible, but will not cause hazard to user or plant.

3. **Pressure Gauge**
   A pressure gauge covering at least the range 0-4bar must be fitted to the system. The gauge should be easily seen from the filling point and should preferably be connected at the same point as the expansion vessel.

4. **Expansion Vessel**
   Expansion vessels used must comply with BS. EN 13831. Connection to the system must not incorporate an isolating valve.



System temperature differentials

Flow rates for common systems using either 11ºC, 15ºC or 20ºC temperature differentials are given in the table below.

Following are in litres/sec (l/s)

Boiler	11°C	15°C	20°C
Evomax 30	0.65	0.48	0.36
Evomax 40	0.87	0.64	0.48
Evomax 60	1.3	0.96	0.72
Evomax 80	1.74	1.27	0.96
Evomax 100	n/a	1.59	1.19
Evomax 120	n/a	n/a	1.43
Evomax 150	n/a	n/a	1.79

- Maximum efficiencies are the highest in the market.
- 30-80 kW boilers must operate with temperature differentials from 11 to 20ºC.
- 100 kW boilers must operate with temperature differentials not less than 15 to 20ºC.
- 120-150 kW boilers must operate with temperature differentials not less than 20ºC.

Controls Kits

- Programmable Room Thermostat kit.
Timed control of central heating. Includes a built in electronic room sensor, optimised start and on/off controlled
DHW. A new easier use kit replaces the old Imax W kit.

- Modulating Sequencer kit.
Controls up to 5 boilers for cascade operation.
Air and Flow Header sensors are included.

- Outside Sensor kit.
Provides weather compensation directly or with Programmable Room Thermostat kit.

- Tank Sensor kit.
Provides DHW temperature control. Also for use with Sequencer kit.

- Room Sensor kit.
Used with Modulating Sequencer kit for CH control.

- Safety Interlock kit.
Provides boiler shutdown via an external signal.

Flue systems

A comprehensive range of flue kits are available from Ideal Stelrad Group. Examples of horizontal and vertical concentric and open flue options are demonstrated on the following pages. Tables are provided with these examples, giving the maximum extensions which may be added. The flue lengths achievable without any extensions are also provided.

For horizontal flues: this is the distance from the flue outlet centre line on the boiler to the outside wall. Horizontal flues are not available for Evomax 150.

For vertical flue: this is the distance from the top of the boiler case to the aperture in the weather collar.

If elbows are to be used, then the equivalent length of that fitting must be subtracted from the maximum flue extensions allowed for that flue option.

Note: Horizontal terminal resistance includes 1 x 90° elbow.

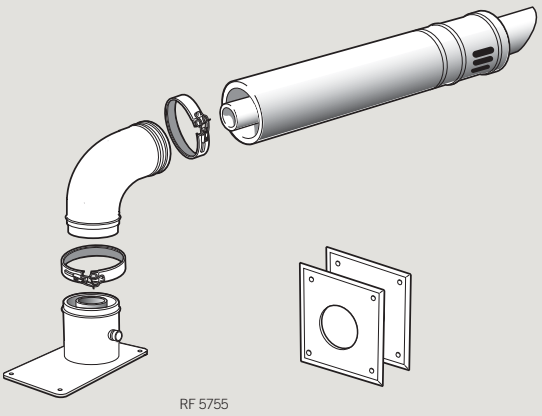
Together with the maximum flue resistance each boiler can work against. These may be used to calculate the total flue resistance of the system, and to determine if they are acceptable to run on the boiler.

Multiple boilers may be installed with a common flue header (not supplied by Ideal Heating).

The flue system should be designed and supplied by a specialist flue company. BS 6644 and IGE UP/10 provide guidance on design and the drainage of condensate from flue stack and headers. Condensate from a flue stack and header must be collected and drained before entering the boiler.

Horizontal wall flue kit

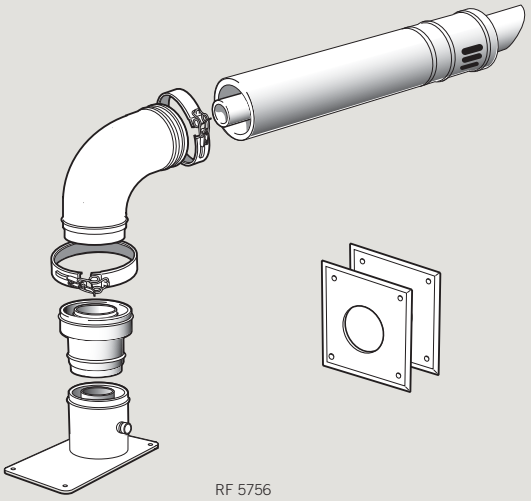
Evomax horizontal concentric flue application ~ maximum lengths and pressure differentials						
Model	30	40	60	80	100	120
Max flue length (m)	42	42	7.5	12	20	17.6
Max flue press diff (Pa)	140	200	117	260	220	288
Flue Size	80/125				100/150	
Wall flue kit No	158659				158661	


RF 5755

Contents

- Boiler adapter + screws (x6)
- 90° elbow
- Terminal
- Locking collars (x2)
- Wall plates (x2)

Evomax 60 & 80 horizontal concentric flues of longer lengths		
Model	60	80
Max flue length (m)	30	35
Max flue press diff (Pa)	133	250
Flue Size	100/150	
Wall flue kit No	158660	

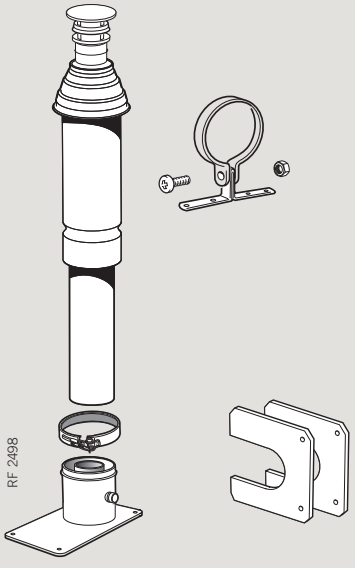

RF 5756

Contents

- Boiler adapter + screws (x6)
- Increaser
- 90° elbow
- Terminal
- Locking collars (x2)
- Wall plates (x2)

Vertical roof flue kit

Evomax vertical concentric flue application ~ maximum lengths and pressure differentials							
Model	30	40	60	80	100	120	150
Max flue length (m)	42	42	7.5	12	20	17.6	7.5
Max flue press diff (Pa)	140	200	117	260	220	288	290
Flue Size	80/125				100/150		
Vertical flue kit No	158654				158656		


RF 2498

Contents

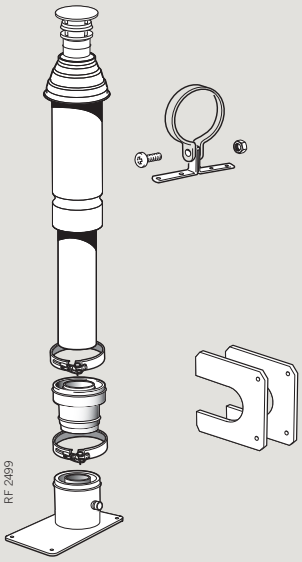
- Boiler adapter + screws (x6)
- Terminal
- Locking Collar
- Finishing plates (x2)
- Bracket

Vertical roof flue kit

Evomax 60 & 80 vertical concentric flues of longer length		
Model	60	80
Max flue length (m)	30	35
Max flue press diff (Pa)	133	250
Flue Size	100/150	
Vertical flue kit No	158655	

Contents

- Boiler adapter + screws (x6)
- Increaser
- Terminal
- Locking Collars (x2)
- Finishing plates (x2)
- Bracket



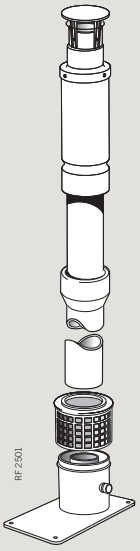
Open flue kits

Evomax open flue application ~ maximum lengths and pressure differentials							
Model	30	40	60	80	100	120	150
Max flue length (m)	65	70	25	22	20	49	32
Max flue press diff (Pa)	140	225	150	312	220	365	430
Flue Size	80/125				100/150		
Open flue kit No	158662 + 158769				158663 + 158770		

Contents

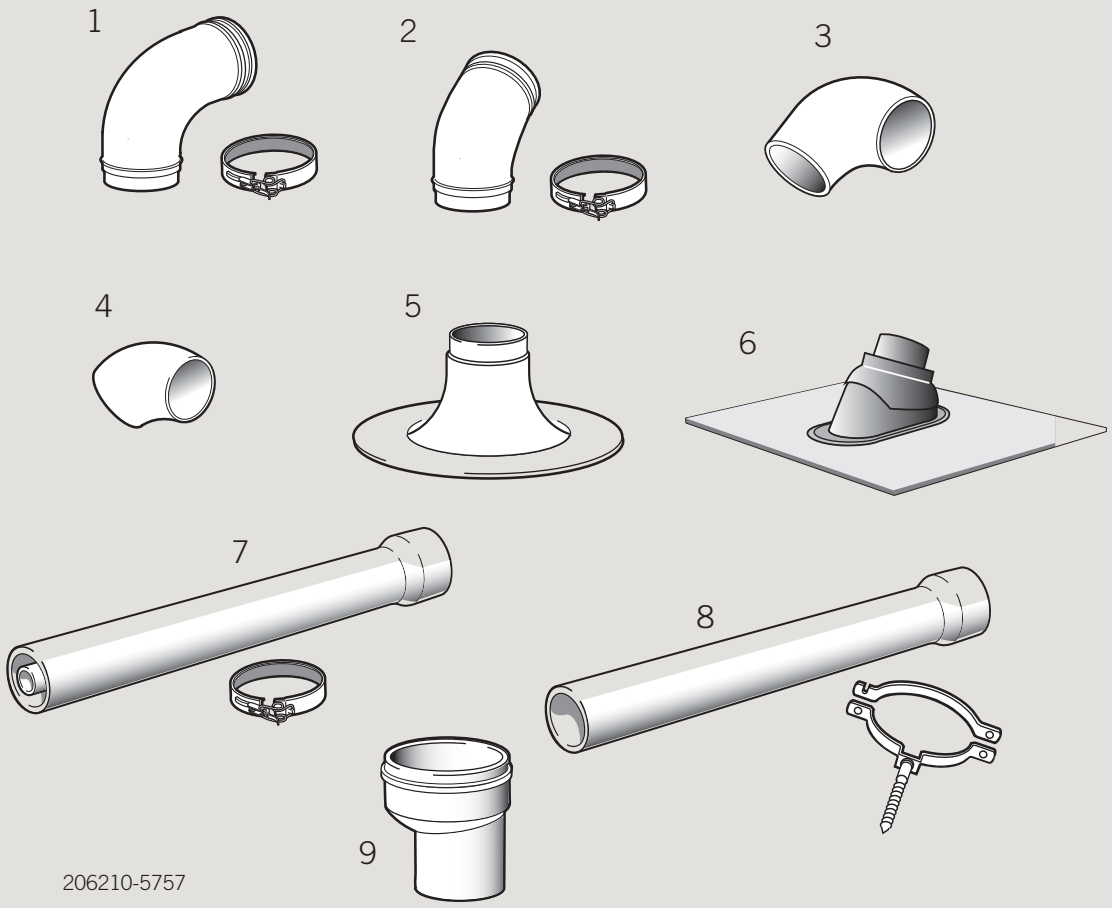
158662 / 158663
- Boiler adapter + screws (x6)
- Air inlet grille

158769 / 158770
- Terminal



Flue kit accessories

	Accessory	Part No.			
		80/125	100/150	80	100
1	90° elbow (concentric)	152616	152617	n/a	n/a
2	45° elbow (concentric)	152618	152619	n/a	n/a
3	90° elbow	n/a	n/a	158773	158774
4	45° elbow (pair)	n/a	n/a	158775	158776
5	Flat Weather Collar	152611	152612	158780	158780
6	Pitched Weather Collar	152609	152610	158779	158779
7	1m Extension (concentric)	152400	152401	n/a	n/a
8	1m Extension (pair)	n/a	n/a	158771	158772
9	Increaser 80-100	n/a	n/a	152404	n/a



Flue resistances - concentric flue systems

For concentric flue systems with elbows fitted, use the table to correct the maximum flue extension capability. Alternatively use the table to design the flue system, deducting the individual resistance of components from the maximum pressure drop allowed in the flue for that boiler. The maximum pressure drop allowed in the flue is given below.

Note: The resistances are given in Pa and also the equivalent length of straight concentric pipe.

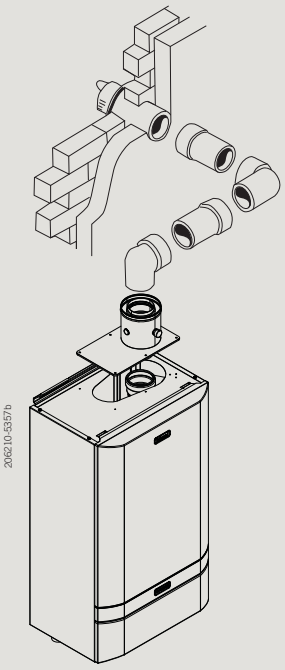
Pressure drop & resistances for concentric flue systems														
Model	**30/30P**		**40/40P**		**60/60P**		**80/80P**		**100**		**120**		**150**	
Flue gas flow rate (m3/hr) - max	**47.6**		**63.4**		**95.1**		**128.3**		**160.3**		**192.5**		**240.7**	
	Pa	m	Pa	m	Pa	m	Pa	m	Pa	m	Pa	m	Pa	m
Terminals														
Vertical roof kit 80 / 125	21	6	45	7	86	6.2	135	4.8						
Vertical roof kit 100 /150					30	7.6	70	8	65	3.5	100	3.3	172	4.3
Horizontal wall kit 80 / 125 + 90°	21	6	45	7	86	6.2	135	4.8						
Horizontal wall kit 100 / 150 + 90°					30	7.6	70	8	65	3.5	100	3.3		
Pipes & Elbows														
45° bend 80 / 125	3.5	1.1	7.5	1.1	13.5	1.1	22	1.1						
45° bend 100 / 150					8	1.2	15	1.2	24	1.2	35	1.2	50	1.2
90° bend 80 / 125	7.0	1.6	14.0	1.6	25	1.6	40	1.6						
90° bend 100 / 150					13	2	23	2	37	2	50	2	75	2
Straight 1m length 80 /125	3.3	1	4.8	1	15.6	1	21.7	1						
Straight 1m length 100 /150					4.4	1	7.1	1	11	1	16.4	1	38.7	1

For open flue systems with elbows fitted, use this table to correct the maximum extension capability. The table shows the equivalent length of flue tube for the elbow required.

Open Flue Systems ~ Equivalent flue resistances in metres		
	Models 30, 40, 60, 80	Models 100 / 120 / 150
90° Elbow	2.1	2.7
45° Elbow	0.6	1.8

Maximum allowable pressure diff & flue length Concentric flues including terminal			
Model	Flue Size	Pressure diff (Pa)	Length (m)
30	80 / 125	140	42
40	80 / 125	200	42
60	80 / 125	117	7.5
	100 / 150	133	30
80	80 / 125	260	12
	100 / 150	250	35
100	100 / 150	220	20
120	100 / 150	288	17.6
150	100 / 150	291	7.5

Examples of calculating flue resistances/lengths - example 1

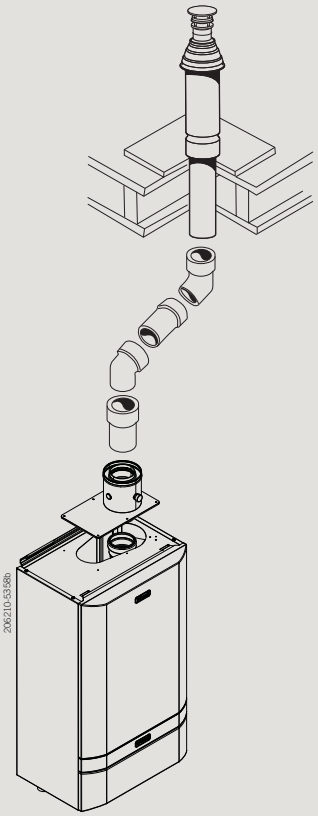


Example 1

	Horizontal Flue for Evomax 40	
	Resistance (Pa)	Resistance (m)
Flue Size	80/125	80/125
Horizontal Wall Flue Kit 80/125	45	7
2 x 1m extension flue	2 x (4.8)	2 x (1)
1 x 90° elbow	14	1.6
Total Flue Resistance	68.6	10.6

The total maximum flue resistance for an Evomax 40 is 200Pa or 42m 80/125. Therefore this installation is acceptable.

Examples of calculating flue resistances/lengths - example 2

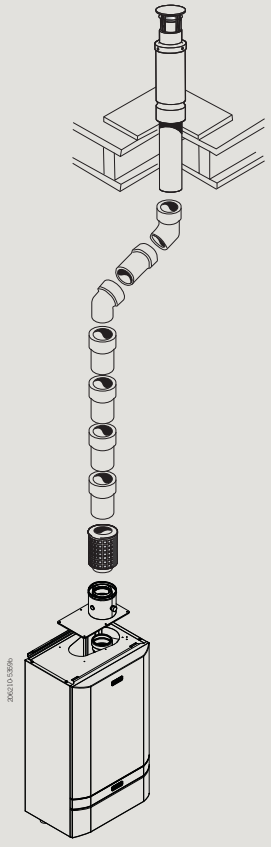


Example 2

	Vertical Roof Flue for Evomax 80	
	Resistance (Pa)	Resistance (m)
Flue Size	80/125	80/125
Vertical Flue Kit 80/125	135	4.8
2 x 1m extension flue	2 x (21.7)	2 x (1)
1 x 90° elbow	2 x (22)	2 x (1.1)
Total Flue Resistance	222	9

The total maximum flue resistance for an Evomax 80 is 260 Pa or 12m 80/125. Therefore this installation is acceptable.

Examples of calculating flue resistance/lengths - example 3

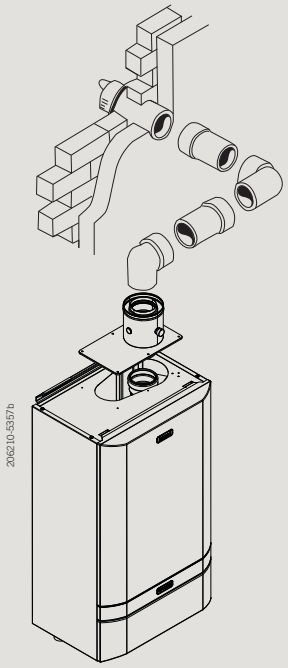


Example 3

	Open Flue for Evomax 30
	Resistance (m)
Flue Size	80
5 x 1m extension	5 x 1
2 x 45° elbow	2 x 0.6
Total Flue Resistance	6.2

The maximum flue extension for an Evomax 30 on open flue is 65m. Therefore this installation is acceptable.

Examples of calculating flue resistances/lengths - example 4



Example 4

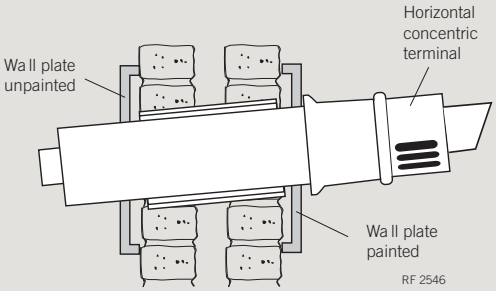
	Horizontal Flue for Evomax 120	
	Resistance (Pa)	Resistance (m)
Flue Size	100/150	100/150
Horizontal Wall Flue Kit 100/150	100	3.3
2 x 1m extension flue	2 x (16.4)	2 x (1)
1 x 90° elbow	50	2
Total Flue Resistance	183	7.3

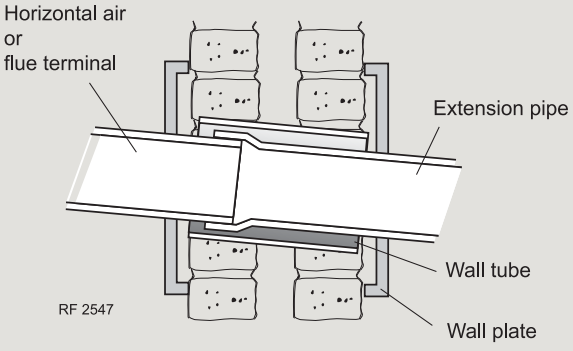
The total maximum flue resistance for an Evomax 120 is 288 Pa or 17.6m 100/150. Therefore this installation is acceptable.

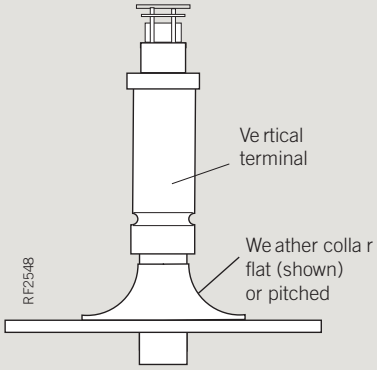
Assembling the flue

Flue terminals or extension ducts may be cut to shorter lengths if required. When cutting a duct ensure it is square by marking the length all the way around and only cut back the plain end. When cutting concentric duct it is important that the inner duct is maintained at 20mm longer than the outer duct to allow correct connection of the ducts. Care should be taken to support the inner duct when cutting the flue.
Note. Horizontal flue runs must be angled down between 1.5° - 3° towards the boiler to allow the condensate to drain. For this reason it is recommended that a support bracket is used for every 1m of extension pipe.

Care must be taken when assembling flues, not to damage the seals. See below for flue assembly examples.







Flue termination position

Due to the high efficiency of these boilers pluming will occur. For this reason vertical termination is recommended, and in any case, terminal positions which could cause problems should where possible be avoided.

Particular care should be taken in the case of large multiple boiler installations, and complying with the requirements of the Clean Air Act.

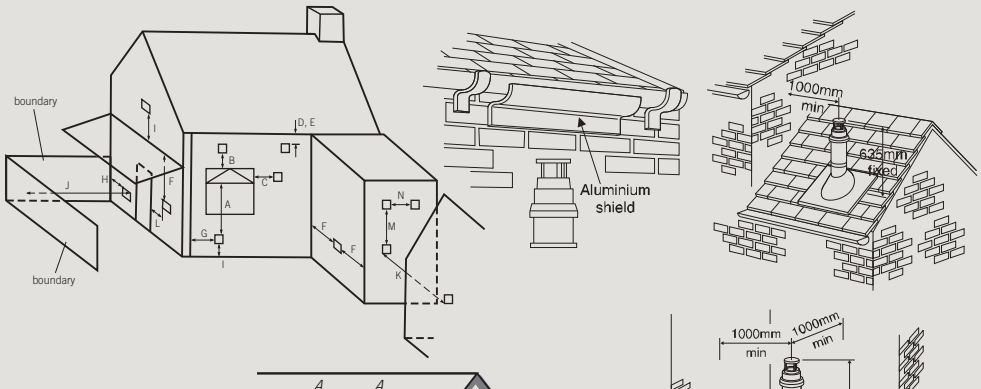
The information below is extracted from BS. 5440 Pt. 1 and is for boilers with heat inputs not exceeding 70kW nett, and the latest Building Regulation Part J. Detailed reference should still be made to these standards. In IE refer to I.S. 813:2002.

Concentric Wall Terminal Positions	Minimum spacing	
A. Below an opening (1)	300 mm	12"
B. Above an opening (1)	300 mm	12"
C. Horizontally to an opening (1)	300 mm	12"
D. Below gutters, soil pipes or drain pipes	75 mm	3"
E. Below eves	200 mm	8"
F. Below balcony or car port roof	200 mm	8"
G. From a vertical drain pipe or soil pipe	200 mm	6"
H. From an internal or external corner or to a boundary alongside the terminal	300 mm	12"
I. Above ground, roof or balcony level	300 mm	12"
J. From a surface or a boundary facing the terminal	600 mm	24"
K. From a terminal facing the terminal	1200 mm	48"
L. From an opening in the car port into the building	1200 mm	48"
M. Vertically from a terminal on the same wall	1500 mm	60"
N. Horizontally from a terminal on the same wall	300 mm	12"
Concentric Roof Terminal Positions		
Directly below an opening, air brick, windows, etc.	300 mm	12"
Below plastic/painted gutters	500 mm*	20"
Below painted surface	500 mm*	20"
Below eaves or balcony	500 mm	20"
From wall	1000 mm	40"
Below Velux window	2000 mm	80"
Above or side of Velux window	200 mm	24"

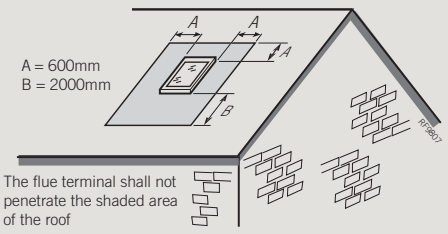
* May be reduced to 300mm if a shield fitted.

(1) An opening here means an openable element, such as a openable window, or a fixed opening such as an air vent. However, in addition, the outlet should not be nearer than 150mm (fanned draught) to an opening into the building fabric formed for the purpose of accommodating a built in element, such as a window frame.

If the terminal is fitted less than 500 mm below plastic gutters, painted eaves or any other painted surface then an aluminium shield at least 1m long should be fitted to protect the surface. For positioning of open flue terminals reference should be made to BS. 5440 Pt. 1. In IE refer to I.S.813.2002.



HEAT INPUTS IN EXCESS OF 70kW NETT
For boiler installations with total heat inputs in excess of 70kW nett, reference should be made to BS6644. In IE refer to I.S.820.2000.



Boiler frame and header kits

A new range of kits suitable for modular (cascade) boiler installations are introduced. Kits are available up to a maximum output of 600kW in both in-line and back-to-back arrangements.

In-line kits
Packs include flow & return headers with mixing header and gas header, all with fixing brackets.
Connection kits to boilers are stainless flexibles for easy connection and include pressure relief valves, boiler shut off valves and drain cock.
Appropriately sized Grundfos pumps are also included. Flow, return and mixing headers together with the flexible boiler connections are all pre insulated.
Separate single boiler frame kits are available for use with in-line kits if required.

Back-to-back kits
Packs include all the In-line contents plus the required special frame kits for such compact installations.

Both types of kit are available for the following number of boilers and sizes.
Mixing header kits and pump kits are also available separately.

Number of Boilers	Models	Size
2	30-100	DN80
2	120-150	DN80
3	30-100	DN80
3	120-150	DN100
4	30-100	DN100
4	120-150	DN100
5	30-100	DN100
5	120	DN100
6	30-100	DN100

General Description of Cascade Systems

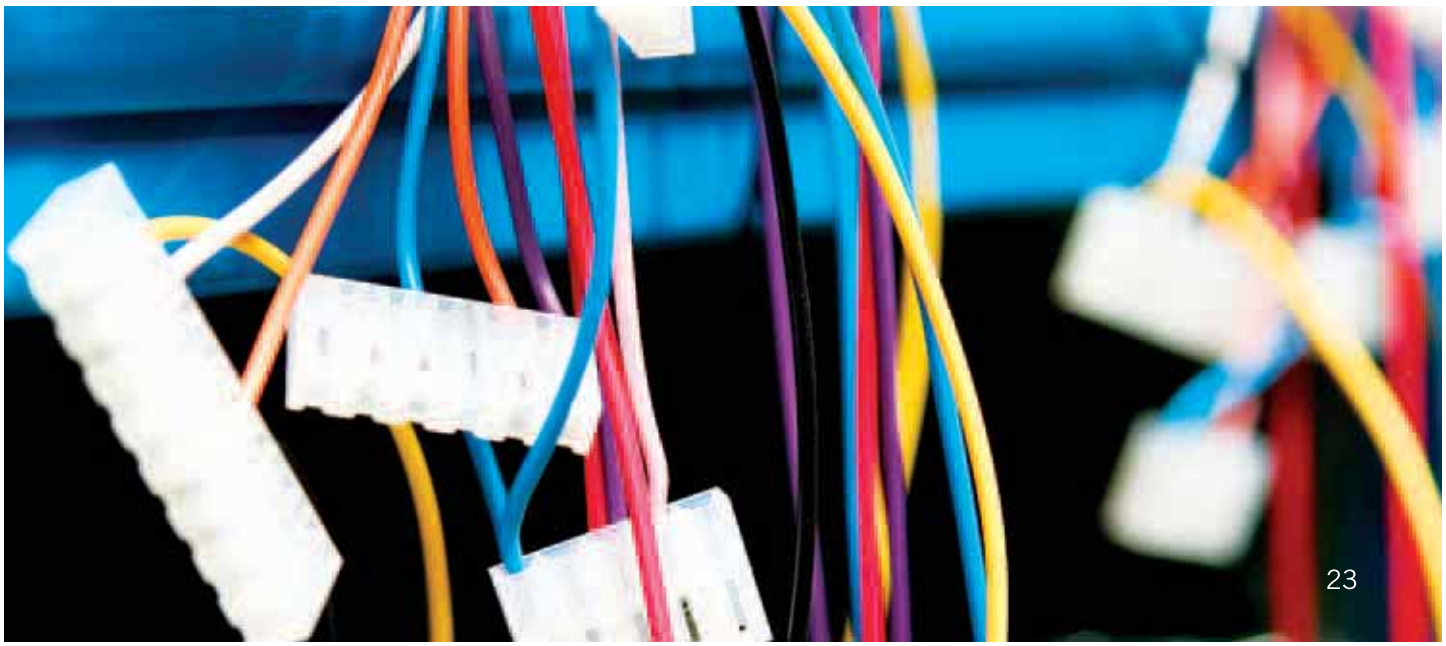
Frame and header Kit Design Options
The Evomax boilers are suitable for use in a multiple boiler configuration. The Evomax multiple boiler system is available in both side by side and back to back options giving the opportunity to choose the optimum footprint size or wall space for a given output. The following table states options available and gives the minimum number of appliances required, the appropriate floor space & the kit product number (N.B. The kits do not include the boilers).

In-line kits do not include the support frame as the boilers can be wall mounted but a frame kit is available if wall space etc. does not facilitate boiler/header wall mounting.

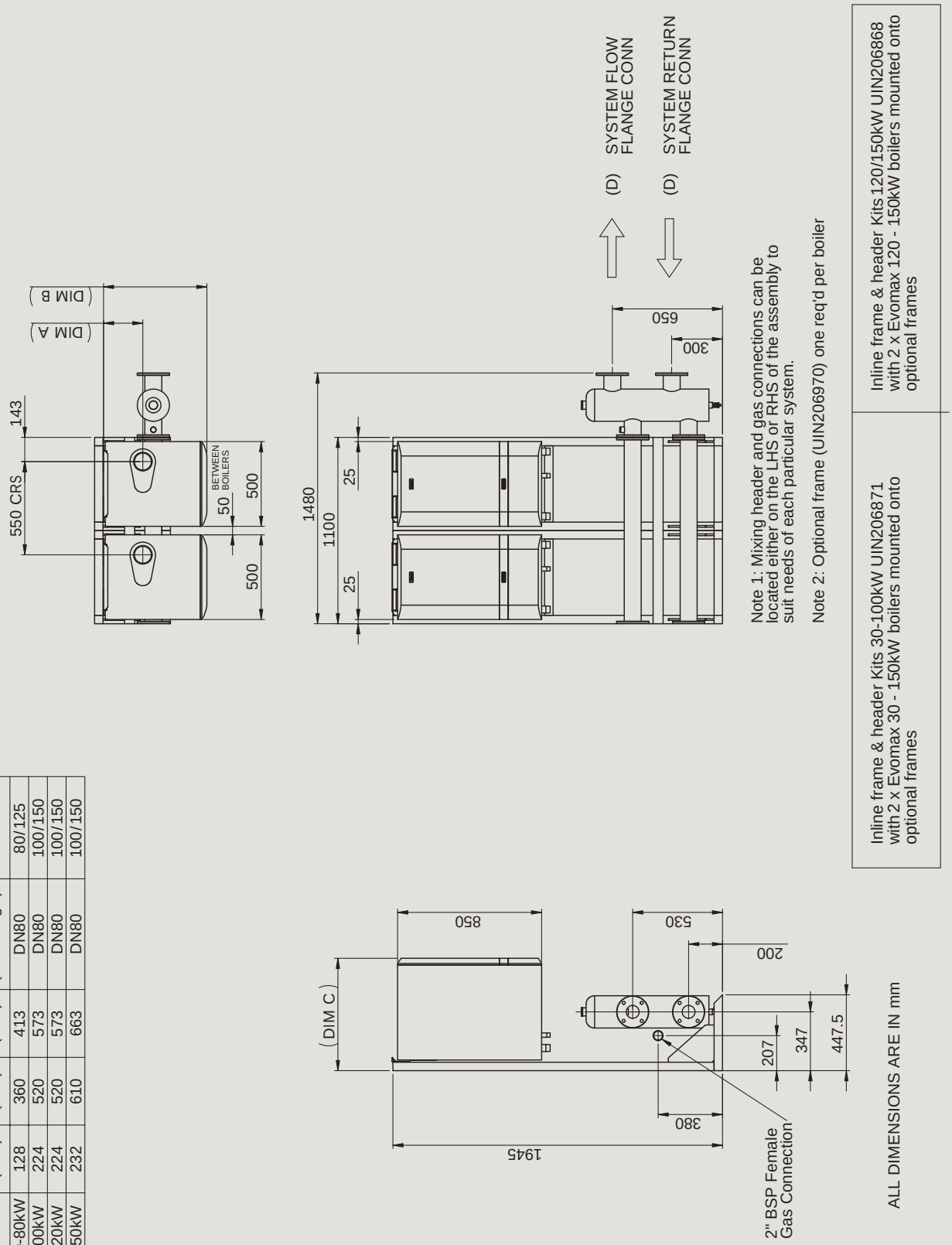
Frame and Header Kit System Design Options

Total Output Required kW	No. of Boilers	Side By Side Option – Boiler Models	Side by Side Footprint Size W x D (mm)	Header Kit Product No. Side By Side	Boiler Models	Back to Back Footprint Size W x D (mm)	Frame/Header Product No. Back To Back
60	2	30	1480 x 573	206871	30	930x1096	206922
70	2	30 + 40	1480 x 573	206871	30 + 40	930x1096	206922
80	2	40	1480 x 573	206871	40	930x1096	206922
90	2	30 + 60	1480 x 573	206871	30 + 60	930x1096	206922
100	2	40 + 60	1480 x 573	206871	40 + 60	930x1096	206922
110	2	30 + 80	1480 x 573	206871	30 + 80	930x1096	206922
120	2	60	1480 x 573	206871	60	930x1096	206922
130	3	30, 40 + 60	2030 x 573	206875	30, 40 + 60	480x1096	206926
140	2	60 + 80	1480 x 573	206871	60 + 80	930x1096	206922
150	3	30, 40 + 80	2030 x 573	206875	30, 40 + 80	480x1096	206926
160	2	80	1480 x 573	206871	80	930x1096	206922
170	3	30, 60 + 80	2030 x 573	206875	30, 60 + 80	480x1096	206926
180	2	80 + 100	1480 x 573	206871	80 + 100	930x1096	206922
190	3	30, 60 + 100	2030 x 573	206875	30, 60 + 100	480x1096	206926
200	2	100	1480 x 573	206871	100	930x1096	206922
210	4	30, 40, 60 + 80	2580 x 573	206879	30, 40, 60 + 80	1480x1096	206930
220	3	2 x 60 + 100	2030 x 573	206875	2 x 60 + 100	1480x1096	206926
230	4	30, 40, 60 + 100	2580 x 573	206879	30, 40, 60 + 100	1480x1096	206930
240	2	120	1480 x 573	206868	120	930x1276	206619
250	4	30, 60, 2 x 80	2580 x 573	206879	30, 60, 2 x 80	1480x1096	206930
260	3	60, 2 x 100	2030 x 573	206875	60, 2 x 100	1480x1096	206926
270	2	120 + 150	1480 x 663	206868	120 + 150	930x1276	206919
280	3	80, 2 x 100	2030 x 573	206875	80, 2 x 100	1480x1096	206926
290	4	30, 60, 2 x 100	2580 x 573	206879	30, 60, 2 x 100	1480x1096	206930
300	2	150	1480 x 663	206868	150	930x1276	206919
310	4	30, 80, 2 x 100	2580 x 573	206879	30, 80, 2 x 100	1480x1096	206930
320	4	40, 80, 2 x 100	2580 x 573	206879	40, 80, 2 x 100	1480x1096	206930
330	4	30, 3 x 100	2580 x 573	206879	30, 3 x 100	1480x1096	206930
340	4	60, 80, 2 x 100	2580 x 573	206879	60, 80, 2 x 100	1480x1096	206930
350	5	30, 40, 80, 2 x 100	3130 x 573	206882	30, 40, 80, 2 x 100	2030x1096	206933

Total Output Required kW	No. of Boilers	Side By Side Option – Boiler Models	Side by Side Footprint Size W x D (mm)	Header Kit Product No. Side By Side	Boiler Models	Back to Back Footprint Size W x D (mm)	Frame/Header Product No. Back To Back
360	3	120	2030 x 663	206872	120	1480x1276	206923
370	5	30, 40, 3 x 100	3130 x 573	206882	30, 40, 3 x 100	2030x1096	206933
380	4	80, 3 x 100	2030 x 573	206875	80, 2 x 100	1480x1096	206926
390	3	2 x 120 + 150	2030 x 663	206872	2 x 120 + 150	1480x1276	206923
400	4	100	2580 x 573	206879	100	1480x1096	206930
410	5	30, 80, 3 x 100	3130 x 573	206882	30, 80, 3 x 100	2030x1096	206933
420	3	120, 2 x 150	2030 x 663	206872	120, 2 x 150	1480x1276	206923
430	5	30, 4 x 100	2580 x 573	206879	30, 4 x 100	1480x1096	206930
440	5	40, 4 x 100	2580 x 573	206879	40, 4 x 100	1480x1096	206930
450	3	150	2030 x 663	206872	150	1480x1276	206923
460	5	60, 4 x 100	3130 x 573	206882	60, 4 x 100	2030x1096	206933
470	6	30, 40, 3 x 100	3680 x 573	206884	30, 40, 3 x 100	2030x1096	206935
480	4	120	2580 x 663	206876	120	480x1276	206927
490	6	30, 60, 4 x 100	3680 x 573	206884	30, 60, 4 x 100	2030x1096	206935
500	5	100	3130 x 573	206882	100	2030x1096	206933
510	4	3 x 120 + 150	2580 x 663	206876	3 x 120 + 150	1480x1276	206927
520	6	40, 80, 4 x 100	3680 x 573	206884	40, 80, 4 x 100	2030x1096	206935
530	6	30, 5 x 100	3680 x 573	206884	30, 5 x 100	2030x1096	206935
540	4	2 x 120, 2 x 150	2580 x 663	206876	2 x 120, 2 x 150	1480x1276	206927
550		N/A	N/A	N/A	N/A	N/A	N/A
560	6	60, 5 x 100	3680 x 573	206884	60, 5 x 100	2030x1096	206935
570	4	120, 3 x 150	2580 x 663	206876	120, 3 x 150	1480x1276	206927
580	6	80, 5 x 100	3680 x 573	206884	80, 5 x 100	2030x1096	206935
590		N/A	N/A	N/A	N/A	N/A	N/A
600	4	150	2580 x 663	206876	150	1480x1276	206927
		In line frame kit		206970			
		Mixing header kit DN80		206972			
		Mixing header kit DN100		206973			
		Pump kit (30-100kW)		158921			
		Pump kit (120-150kW)		206974			



In line Frame & Header Kits
2 x Evomax 30 - 150kW



Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206871	30-80kW	128	360	413	DN80	80/125
	100kW	224	520	573	DN80	100/150
UIN206868	120kW	224	520	573	DN80	100/150
	150kW	232	610	663	DN80	100/150

Back to Back Frame & Header Kits
2 x Evomax 30 - 150kW

Note: Mixing header and gas connections can be located either on the LHS or RHS of the assembly to suit needs of each particular system.

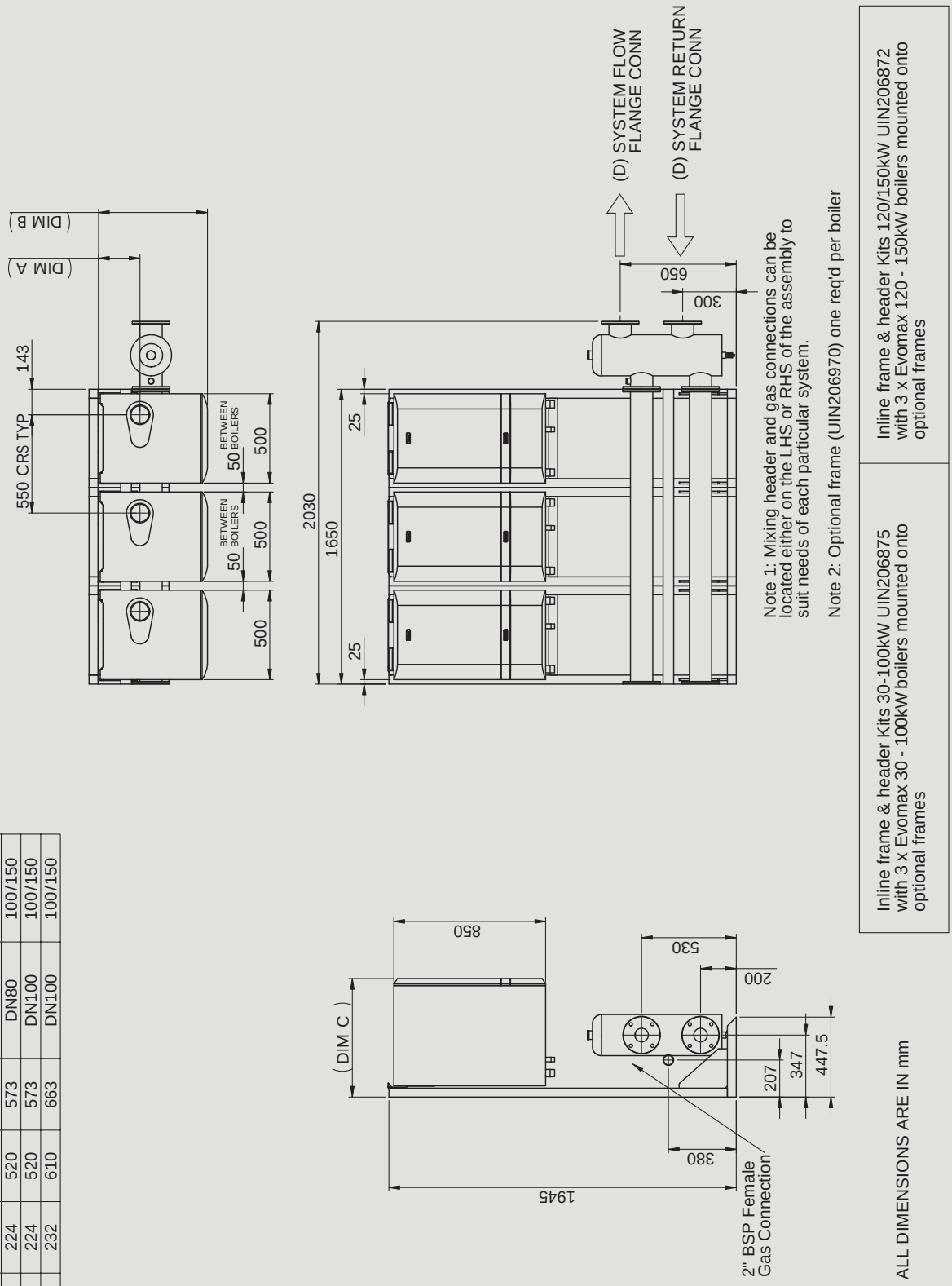
Frame & header Kits 30-100kW UIN206922 with 2 x Evomax 30 - 100kW boilers mounted bk to bk

Frame & header Kits 120/150kW UIN206919 with 2 x Evomax 120 - 150kW boilers mounted bk to bk

ALL DIMENSIONS ARE IN mm

Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206922	30-80kW	128	312	776	DN80	80/125
	100kW	224	504	1096	DN80	100/150
UIN206919	120kW	224	504	1096	DN80	100/150
	150kW	232	520	1276	DN80	100/150

In line Frame & Header Kits
3 x Evomax 30 - 150kW



Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206875	30-80kW	128	360	413	DN80	80/125
	100kW	224	520	573	DN80	100/150
UIN206872	120kW	224	520	573	DN100	100/150
	150kW	232	610	663	DN100	100/150

Back to Back Frame & Header Kits
3 x Evomax 30 - 150kW

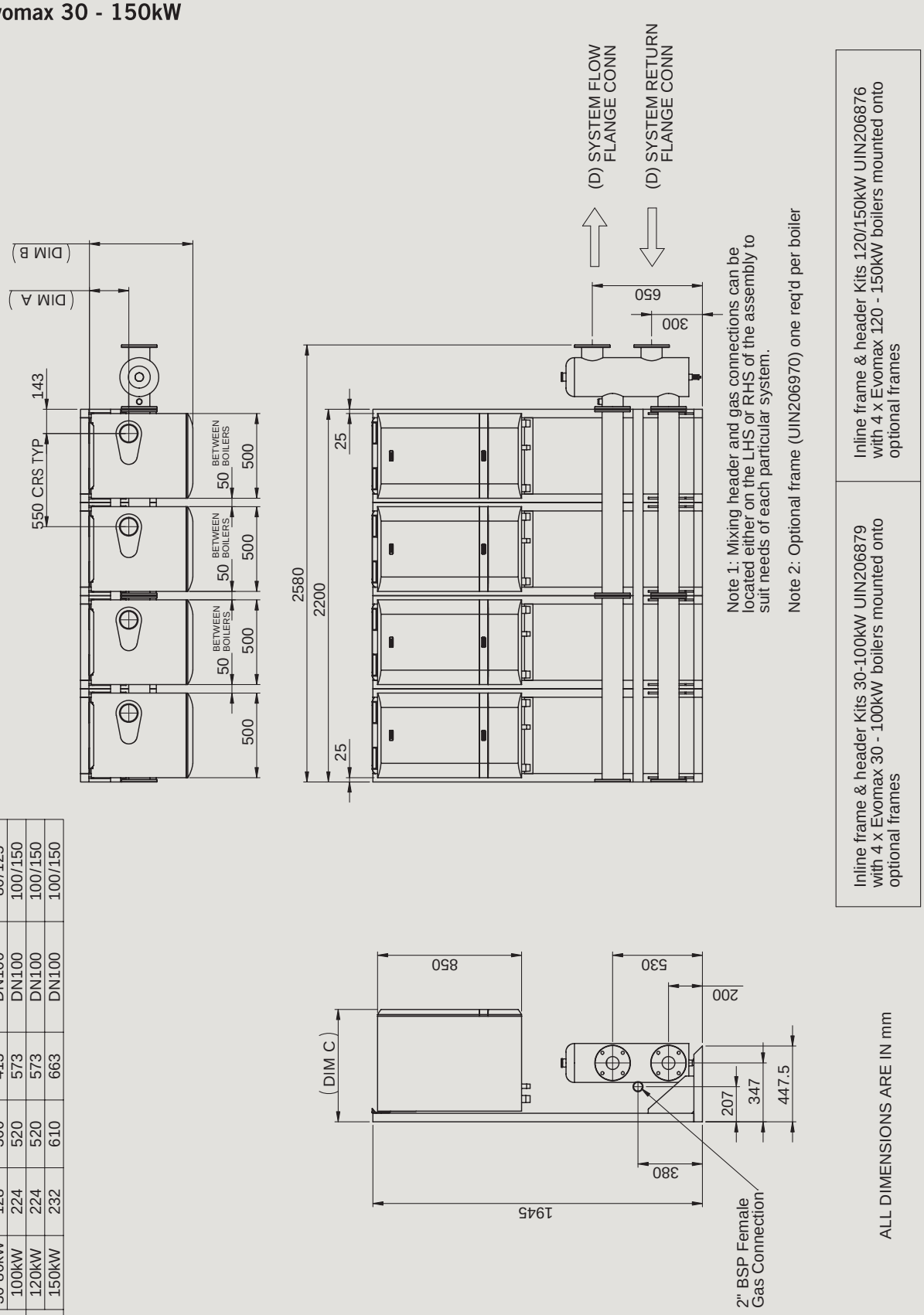
Frame & header Kit 120/150kW UIN206923 with 3 x Evomax 120 - 150kW boilers mounted bk to bk

Frame & header Kit 30-100kW UIN206926 with 3 x Evomax 30 - 100kW boilers mounted bk to bk

ALL DIMENSIONS ARE IN mm

Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206926	30-80kW	128	312	776	DN80	80/125
	100kW	224	504	1096	DN80	100/150
UIN206923	120kW	224	504	1096	DN100	100/150
	150kW	232	520	1276	DN100	100/150

In line Frame & Header Kits
4 x Evomax 30 - 150kW



Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206879	30-80kW	128	360	413	DN100	80/125
	100kW	224	520	573	DN100	100/150
UIN206876	120kW	224	520	573	DN100	100/150
	150kW	232	610	663	DN100	100/150

Back to Back Frame & Header Kits
4 x Evomax 30 - 150kW

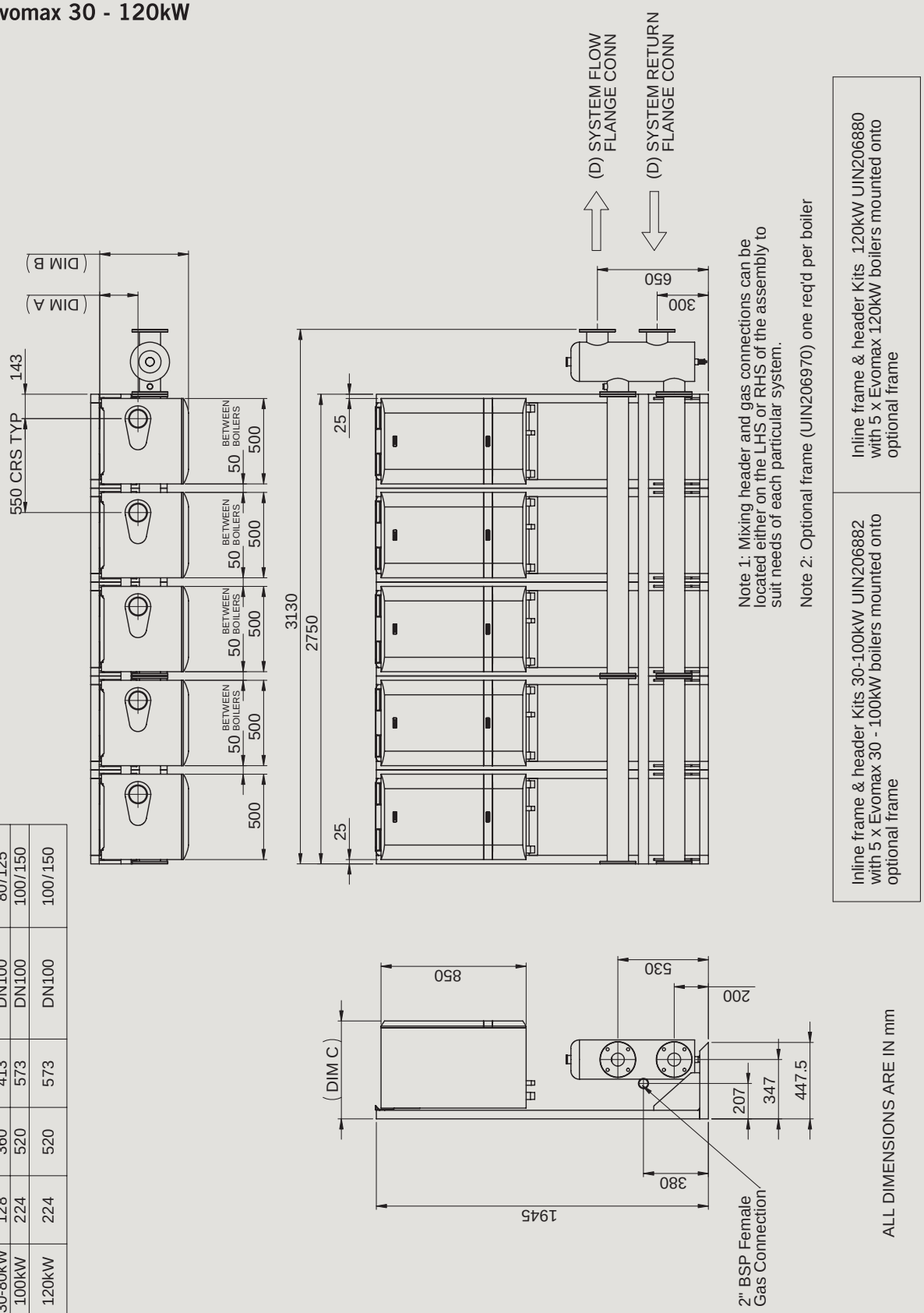
Frame & header Kits 120/150kW UIN206927 with 4 x Evomax 120 - 150kW boilers mounted bk to bk

Frame & header Kits 30-100kW UIN206930 with 4 x Evomax 30 - 100kW boilers mounted bk to bk

ALL DIMENSIONS ARE IN mm

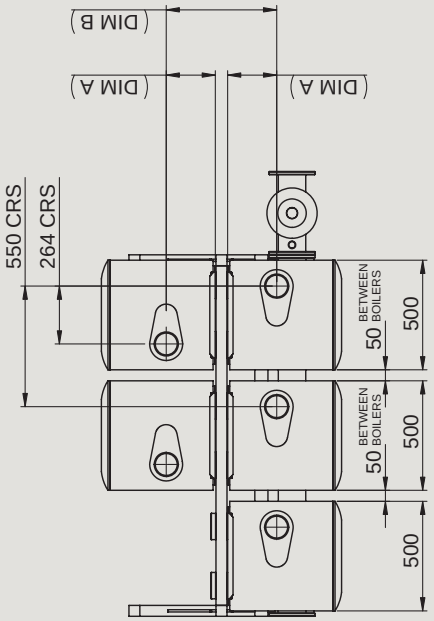
Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206930	30-80kW	128	312	776	DN100	80/125
	100kW	224	504	1096	DN100	100/150
UIN206927	120kW	224	504	1096	DN100	100/150
	150kW	232	520	1276	DN100	100/150

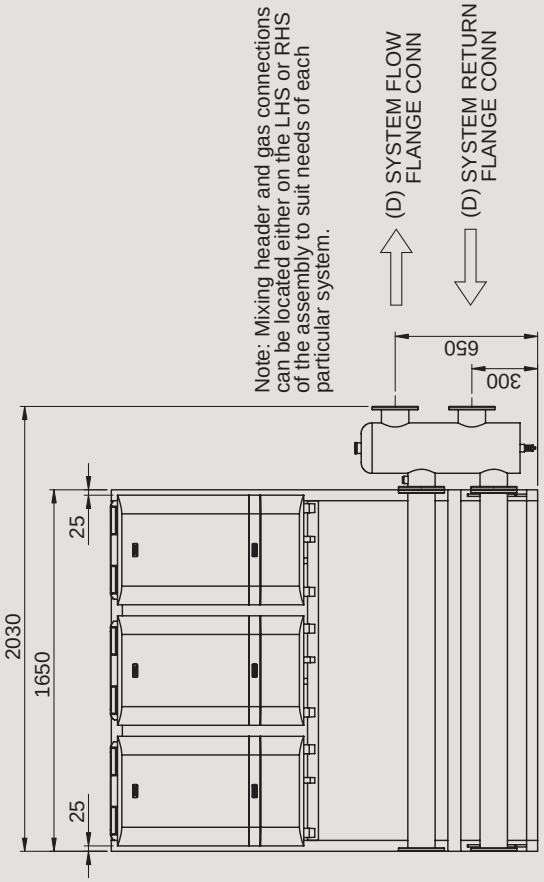
In line Frame & Header Kits
5 x Evomax 30 - 120kW



Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206882	30-80kW	128	360	413	DN100	80/125
	100kW	224	520	573	DN100	100/150
UIN206880	120kW	224	520	573	DN100	100/150

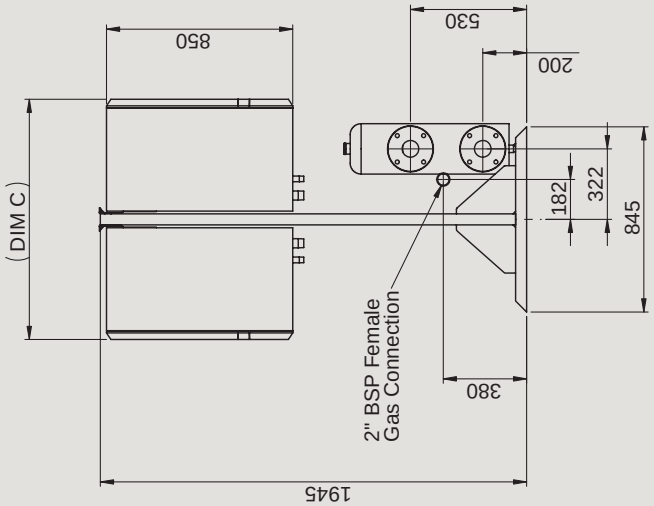
Back to Back Frame & Header Kits
5 x Evomax 30 - 120kW





Frame & header Kits 120kW UIN206931 with 5 x Evomax 120kW boilers mounted bk to bk

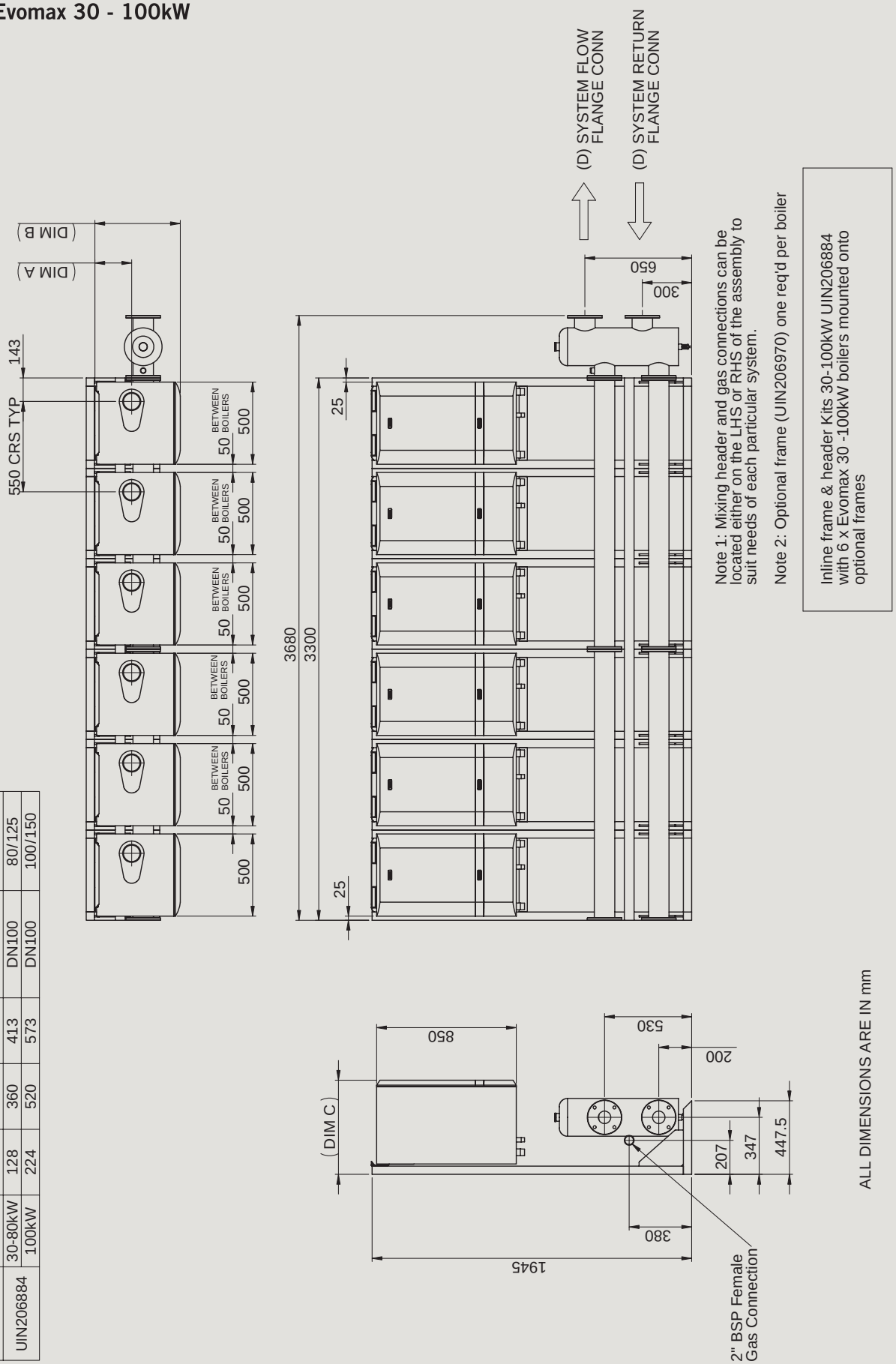
Frame & header Kits 30-100kW UIN206933 with 5 x Evomax 30 - 100kW boilers mounted bk to bk



ALL DIMENSIONS ARE IN mm

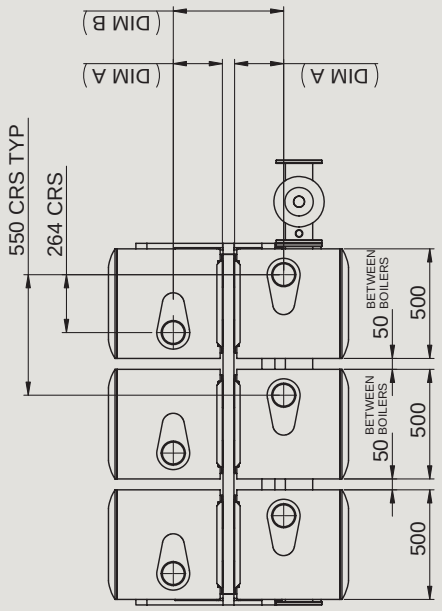
Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206933	30-80kW	128	312	776	DN100	80/125
	100kW	224	504	1096	DN100	100/150
UIN206931	120kW	224	504	1096	DN100	100/150

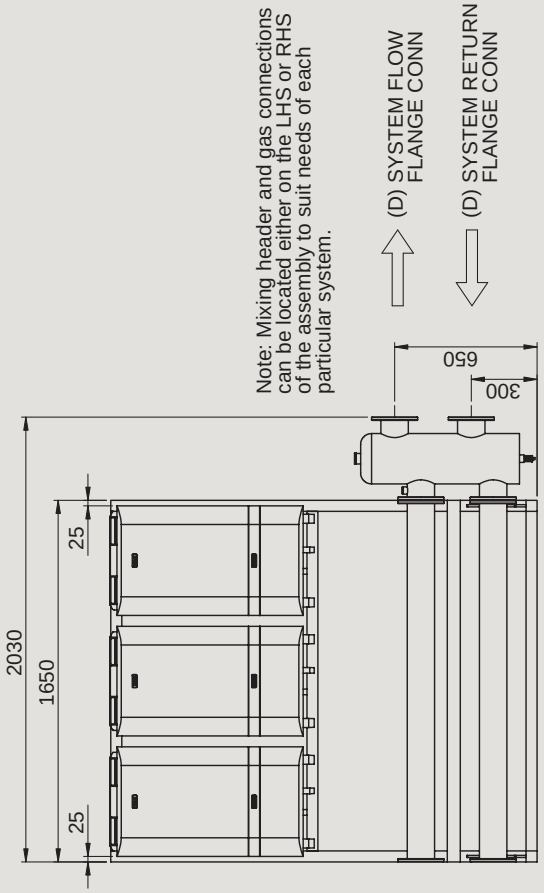
In line Frame & Header Kits
6 x Evomax 30 - 100kW



Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206884	30-80kW	128	360	413	DN100	80/125
	100kW	224	520	573	DN100	100/150

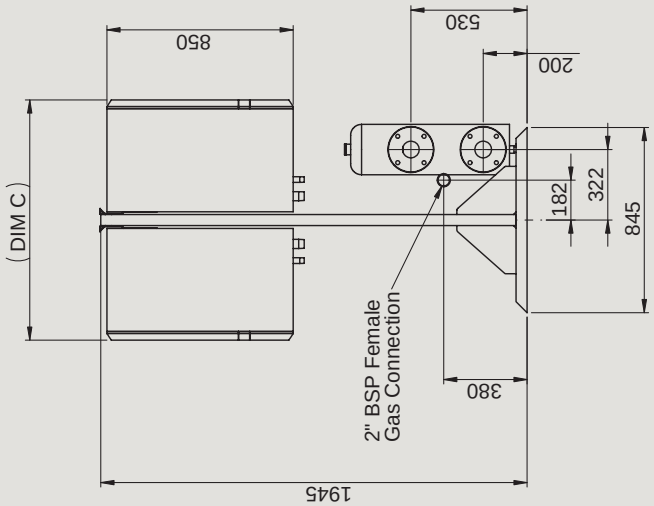
Back to Back Frame & Header Kits
6 x Evomax 30 - 100kW





Frame & header Kits 30-100kW UIN206935 with 6 x Evomax 30 -100kW boilers mounted bk to bk

Header Kits	Rating	DIM A (mm)	DIM B (mm)	DIM C (mm)	D (DN Flange)	Concentric Flue
UIN206935	30-80kW	128	312	776	DN100	80/125
	100kW	224	504	1096	DN100	100/150



ALL DIMENSIONS ARE IN mm

Ideal Service & Support

At Ideal Heating, we are committed towards delivering the highest levels of customer service. With over a century of experience in the heating industry, we know how important confidence and trust is to our customers.

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Our rigorous research and development procedures and manufacturing quality control checks, ensures that all of our products are produced to the highest standards; delivering total comfort and peace of mind.

The call centre team, based in Hull, East Yorkshire, is comprehensively trained to provide tailored advice. All calls will be answered by trained members of staff who will take ownership of the call. All of our trained staff are on-hand to assist with enquiries or help diagnose and resolve faults over the telephone. Should that not be possible, we will arrange an appointment for one of our engineers to visit. Our dedicated team of engineers are fully trained to exacting standards and are all Gas Safe registered.

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