

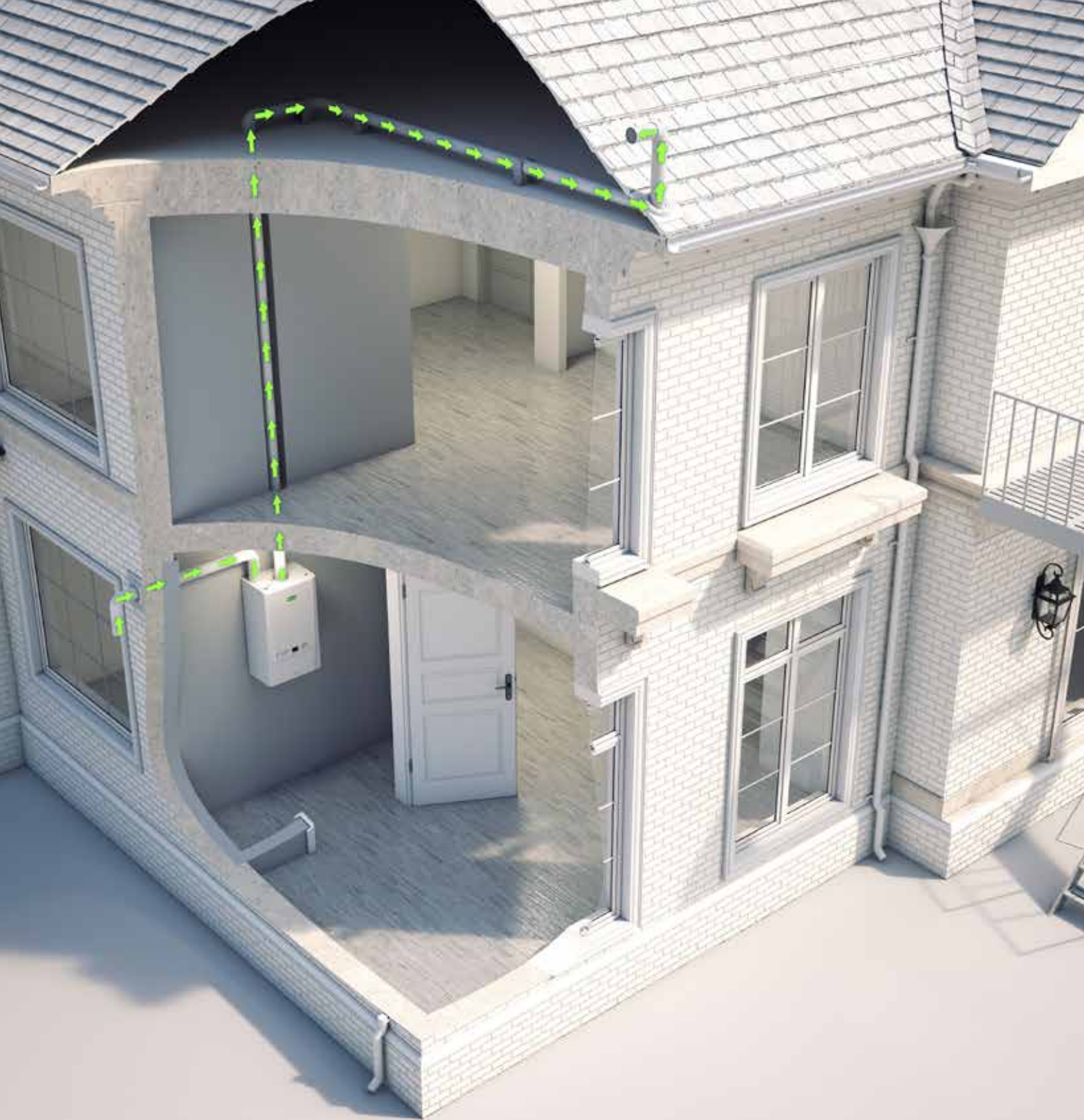
# Keston

BY IDEAL BOILERS

# TWIN FLUE TECHNOLOGY

Designed to go the distance





When you choose to work with Keston 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, 364 days a year.



#### 7 YEAR WARRANTY\*

Providing ultimate reliability, Keston boilers are offered with warranties of up to 7 years when fitted with a Keston System Filter



#### TWIN FLUE DESIGN

Providing the perfect solution for problematic and awkward installations



#### WEATHER COMPENSATOR

All models in the Keston range come complete with weather compensation as standard



#### BRITISH BUILT SINCE 2013

All Keston boilers are built in and designed for the British market

\* Keston System and Combi: 5 year parts & labour warranty as standard. 7 year warranty when installed with a Keston 22mm System Filter and registered within 30 days of installation. 7 year warranty available until 31/12/20. Terms and conditions apply. Keston Heat: 2 year parts & labour warranty as standard. 5 year warranty available subject to being commissioned by Keston Boilers. Free Commissioning only available when a Keston 28mm System Filter is installed with a single Keston Heat boiler; not available on multiple (cascade) boiler installations. Terms and conditions apply.

Image for illustrative purposes only

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# DESIGNED TO WORK WITHOUT COMPROMISE

When you choose to work with Keston you can be confident 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, 364 days a year.

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

The Keston Twin Flue system makes every job easier. To give you maximum flue flexibility, you can run the flue vertically or horizontally from an elevation of 1.5° and the flue can be extended up to 27 metres from the boiler allowing for easy and hassle-free installation. This allows the boiler to be sited in the most convenient and practical location.

## THE ULTIMATE SIMPLE FLUE SYSTEM

- Flexible flue positioning avoids plumbing
- Widely available from plumbing and builders merchants
- Flue can be painted when installed internally and externally
- 50mm muPVC (PVC-C)\* solvent weld allowing simple cost effective installation

\* The only systems approved for this application are: Marley muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe System 2000 muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe Terrain Solvent Weld System (50mm) and Wavin Osma PVC-C Solvent Weld System (50mm). Please use the recommended Solvent Weld Cement for each system. Please see page 9 for more details.



# A KESTON FOR ALL OCCASIONS

The Keston range includes both domestic and light commercial models which come complete with twin flue capability.

Keston boilers are offered with a warranty of up to 7 years\*, ensuring the ultimate peace of mind for both you and your customer. The Keston range is made up of Combi, Heat only and System boilers, offering a solution for all applications.

Every model in the range offers a market leading solution for awkward and problematic installations, thanks to the twin flue capability.

You can rest assured when choosing Keston as you will be supported by a national customer service team, offering support 7 days a week.



Keston boilers are available with warranties of up to 7 years when a Keston System Filter is also installed†



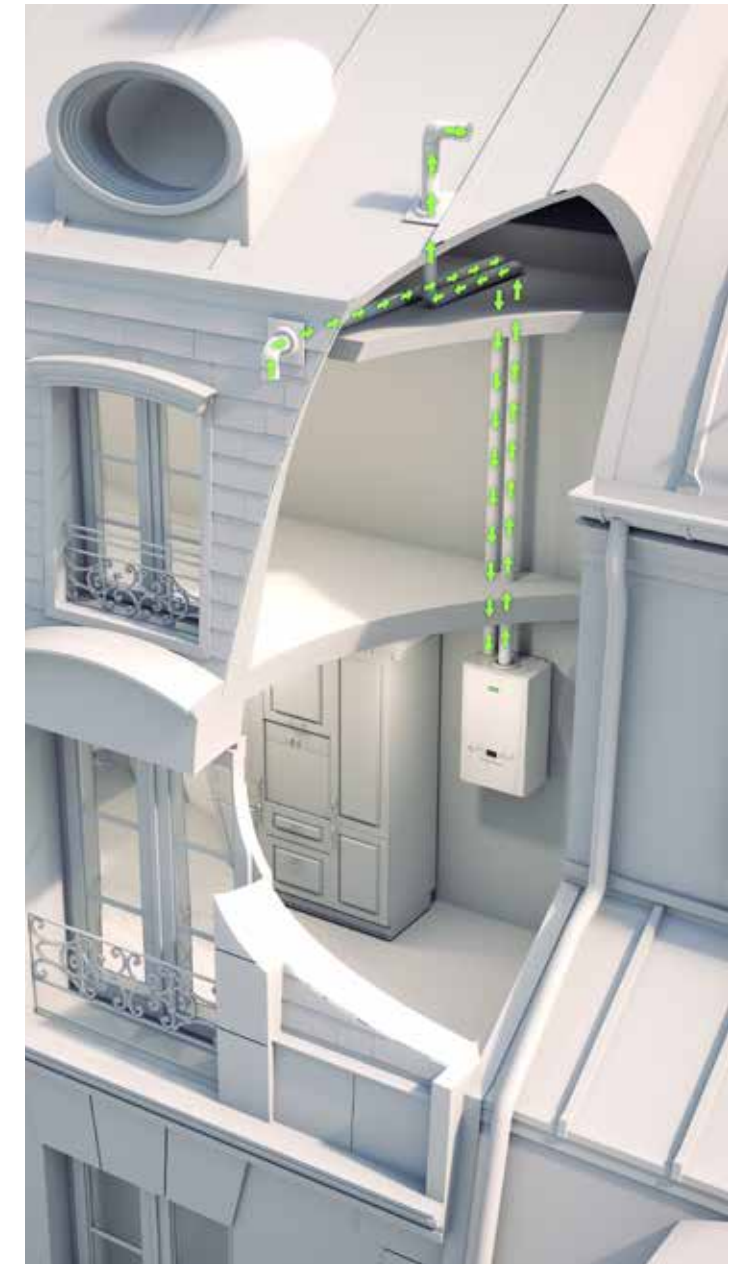
With Keston, your boiler can be situated any room, any place, anywhere – no compromise.

## WHERE I DON'T WANT THE BOILER IN SIGHT



Images for illustrative purposes only.

## WHERE THERE IS A LONG DISTANCE FROM BOILER TO OUTLET



† Keston System and Combi: 5 year parts & labour warranty as standard. 7 year warranty when installed with a Keston 22mm System Filter and registered within 30 days of installation. 7 year warranty available until 31/12/20. Terms and conditions apply. Keston Heat: 2 year parts & labour warranty as standard. 5 year warranty available subject to being commissioned by Keston Boilers. Free Commissioning only available when a Keston 28mm System Filter is installed with a single Keston 2 Heat boiler; not available on multiple (cascade) boiler installations. Terms and conditions apply.

# TWIN FLUE SYSTEMS

The benefits of unique Keston flue systems make every installation easier.

A low cost, small diameter (50mm) muPVC (PVC-C) pipe (Marley, Polypipe 2000 System, Polypipe Terrain 200 and Wavin Osma systems only) is the only item required for use with the innovative Keston flue and air intake system. This is readily available from your local merchant at a fraction of the cost of concentric flue.

The Keston flue system makes every job easier. To give you maximum flexibility, you can run the flue vertically or horizontally from an elevation of 1.5°) and the flue can be extended up to 27\* metres from the boiler allowing for easy and hassle-free installation.



**Keston System**  
27m maximum flue length\*



**Keston Combi**  
27m maximum flue length\*



**Keston Heat**  
21m maximum flue length\*

\* For flue fall and maximum total equivalent flue lengths, please refer to each boiler's installation manual.

# APPROVED FLUE PIPE SYSTEMS

When installing a replacement boiler a new flue system is recommended. However re-using the existing boiler flue installation is acceptable if the installer checks and confirms:

- The flue pipe is the approved Marley/Polypipe/Terrain/Wavin 50mm muPVC (PVC-C) solvent weld flue system
- The flue installation is upgraded to the most recent flue standards taking particular care to comply with flues in voids regulation
- A risk assessment is conducted to confirm the effectiveness of the flue
- The existing flue will last the lifetime of the new appliance

# DESIGN

Individual air supply and flue outlet pipes are used as standard. The material approved for this application which MUST be used are:

- Marley muPVC Solvent Weld System (50mm)
- Polypipe System 2000 muPVC solvent weld (50mm)
- Polypipe Terrain 200 muPVC Solvent Weld System (50mm)
- Wavin OSMA PVC-C Solvent Weld System (50mm)

to BS5255 and/or BSEN1566-11 and BSEN1329, are the only systems approved for this application.

THE FOLLOWING PIPE AND FITTINGS ARE APPROVED:

## Marley muPVC Solvent Weld System (50mm)

Marley Code	
KP 304	50mm x 4m double spigot pipe
KP32	50mm x 45 deg bend
KSC3	50mm straight coupling
KB3	50mm x 88.5 deg bend
KT3	50mm swept tee

## Polypipe System 2000 muPVC Solvent Weld System (50mm)

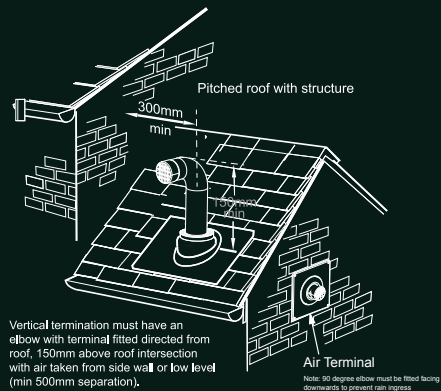
Polypipe Code	
MU 301	4m length muPVC wastepipe 5/225
MU 313	50mm x 45 deg muPVC obtuse bend
MU 314	50mm x 92.5 deg muPVC swept bend
MU 310	50mm muPVC straight coupling
MU 316	50mm muPVC straight coupling
MU 316	50mm x 92.5 deg muPVC swept tee

## Polypipe Terrain Solvent 200 Weld System (50mm)

Polypipe Code	
200.2.40	4m length muPVC wastepipe
201.2.135	50mm x 135 deg muPVC bend
200.2.91	50mm x 91 1/4 deg muPVC swept bend
210.2	50mm muPVC straight coupling
204.2.135	50mm muPVC swept tee

## Wavin OSMA PVC-C Solvent Weld System (50mm)

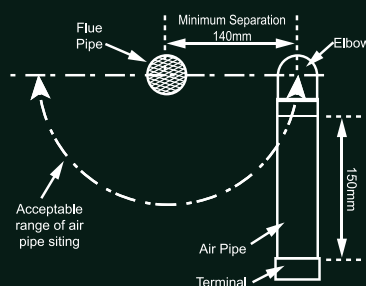
Wavin Code	
2M073	3M length waste pipe 50mm
2M163	50mm x 45 deg bend
2M161	50mm x 87.5 deg bend
2M104	50mm double socket
2M190	50mm x 8.75 tee



The flue and air pipes may terminate independently through any external walls within the same dwelling except on opposing walls, within the maximum lengths shown in the graphs on pages 18, 24 and 30 (alternatively a vertical flue pipe termination is acceptable). The air pipe must have an elbow and 150mm length of pipe directed downwards with a termination grill fitted. C13 only, C53 must have a minimum of a 90 degree elbow and terminal fitted facing downwards to prevent rain ingress.

The air pipe can be situated at the side or beneath the flue pipe to a minimum dimension of 140mm (see diagram below). It must not be sited above the flue pipe. The flue and air pipes must extend by at least 40mm from the wall surface. Condensing boilers emit a visible plume of water vapour from the flue terminal, this is normal. It is the responsibility of the installer to judiciously select a terminal location that does not cause a nuisance. If either the flue or air terminal is below a height of 2m from ground level a terminal guard must be fitted.

**Note.** Any vertical termination **MUST** comply with C53 installation with the air being taken from greater than 500mm away and from a flat wall termination as diagram in “Flue Positioning”.

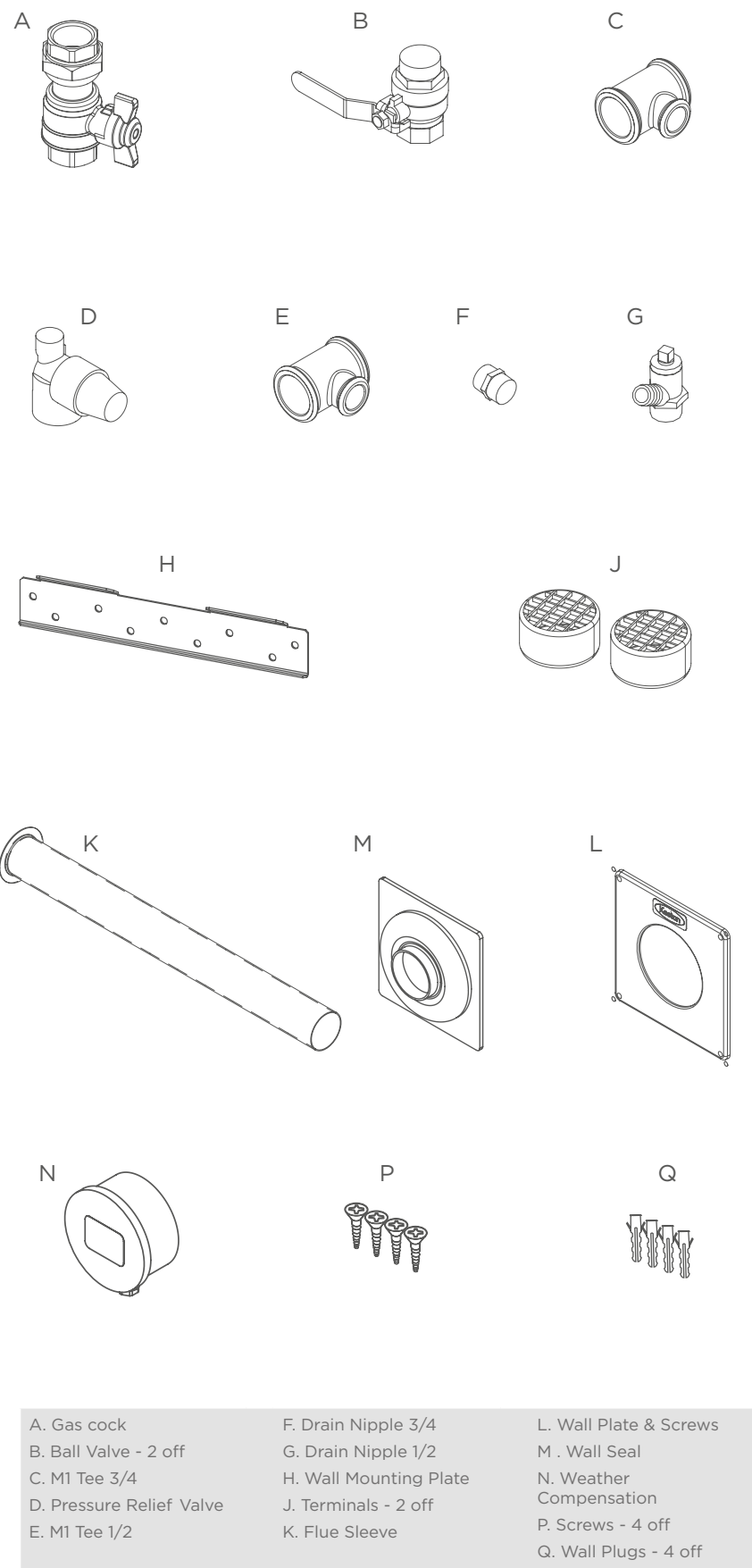


Twin Flue Positions when Flue & Air Terminal are less than 500mm apart		Flue minimum spacing	Air minimum spacing
A	Below an opening (1)	300mm	50mm
B	Above an opening (1)	300mm	50mm
C	Horizontally to an opening	300mm	50mm
D	Below gutters,soil pipes or drain pipes	75mm	75mm
E	Below eaves	200mm	50mm
F	Below balcony or car port roof	200mm	50mm
G	From a vertical drain pipe or soil pipe	150mm	50mm
H	From an internal or external corner or to a boundary alongside the terminal (2)	200mm	50mm
I	Above ground,roof or balcony level	300mm	100mm
J	From a surface or boundary facing the terminal	600mm	100mm
K	From a terminal facing a terminal	1200mm	1200mm
L	From an opening in the car port into the building	1200mm	100mm
M	Vertically from a terminal on the same wall	1500mm	1500mm
N	Horizontally from a terminal on the same wall	300mm	300mm
O	From the wall on which the terminal is mounted	40mm	40mm
P	From a vertical structure on the roof	N/A	N/A
Q	Above intersection with roof	N/A	N/A
(1)	In addition, for temperature and structural reasons, the terminal should not be nearer than 150 mm (fanned draught) to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame		
(2)	The reference to external corners does not apply to building protrusions not exceeding 450 mm, such as disused chimneys on external walls for: fanned draught appliances		

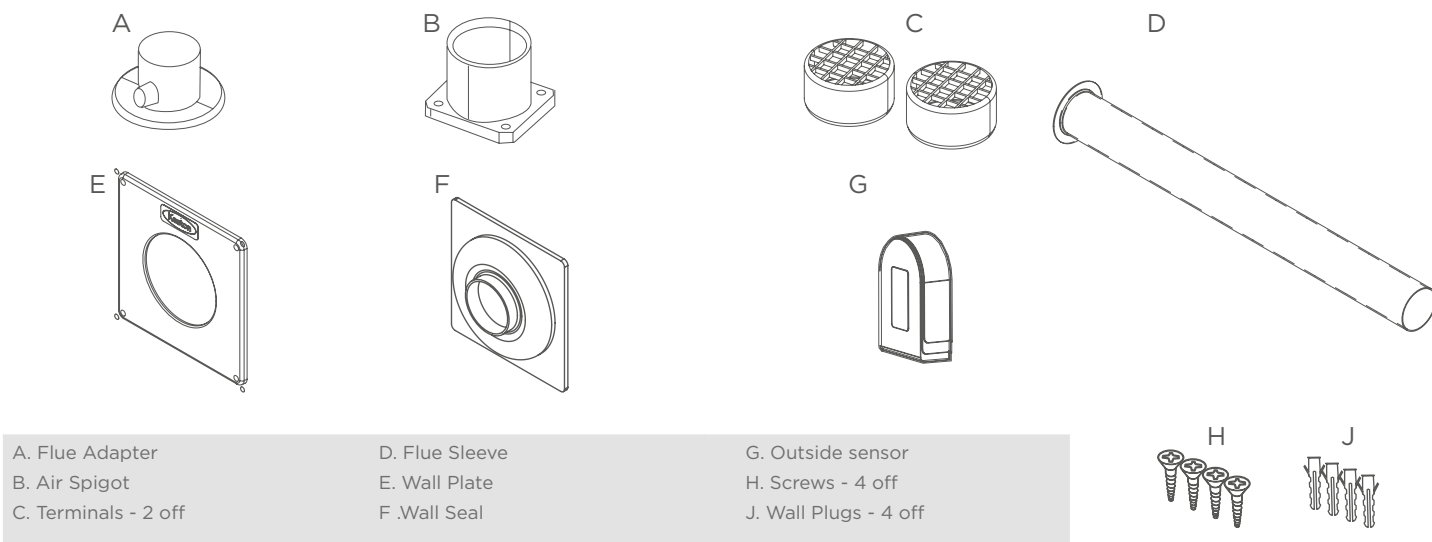
Twin Flue Positions when Flue & Air Terminal are more than 500mm apart		Flue minimum spacing	Air minimum spacing
A	Below an opening (1)	300mm	50mm
B	Above an opening (1)	300mm	50mm
C	Horizontally to an opening	300mm	50mm
D	Below gutters,soil pipes or drain pipes	75mm	75mm
E	Below eaves	200mm	50mm
F	Below balcony or car port roof	200mm	50mm
G	From a vertical drain pipe or soil pipe	150mm	50mm
H	From an internal or external corner or to a boundary alongside the terminal (2)	200mm	50mm
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O	From the wall on which the terminal is mounted	40mm	40mm
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(2)	The reference to external corners does not apply to building protrusions not exceeding 450 mm, such as disused chimneys on external walls for: fanned draught appliances		



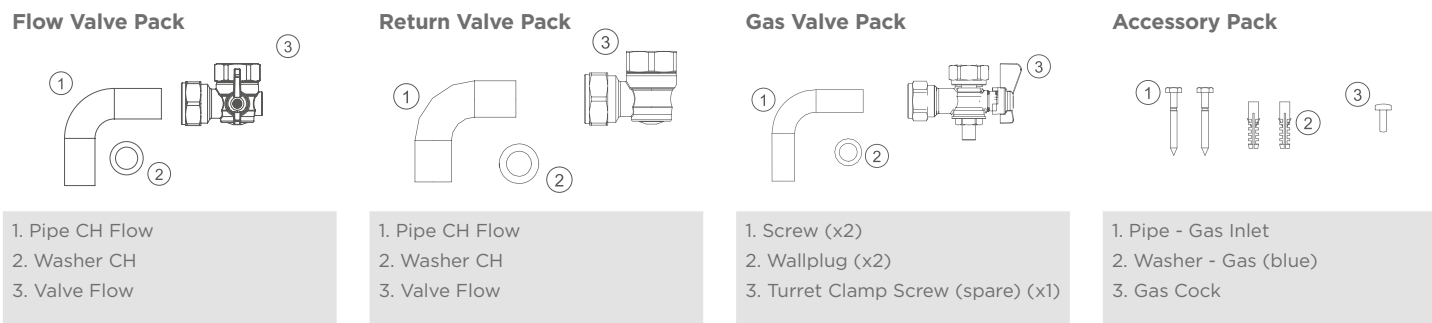
SUPPLIED WITH KESTON HEAT



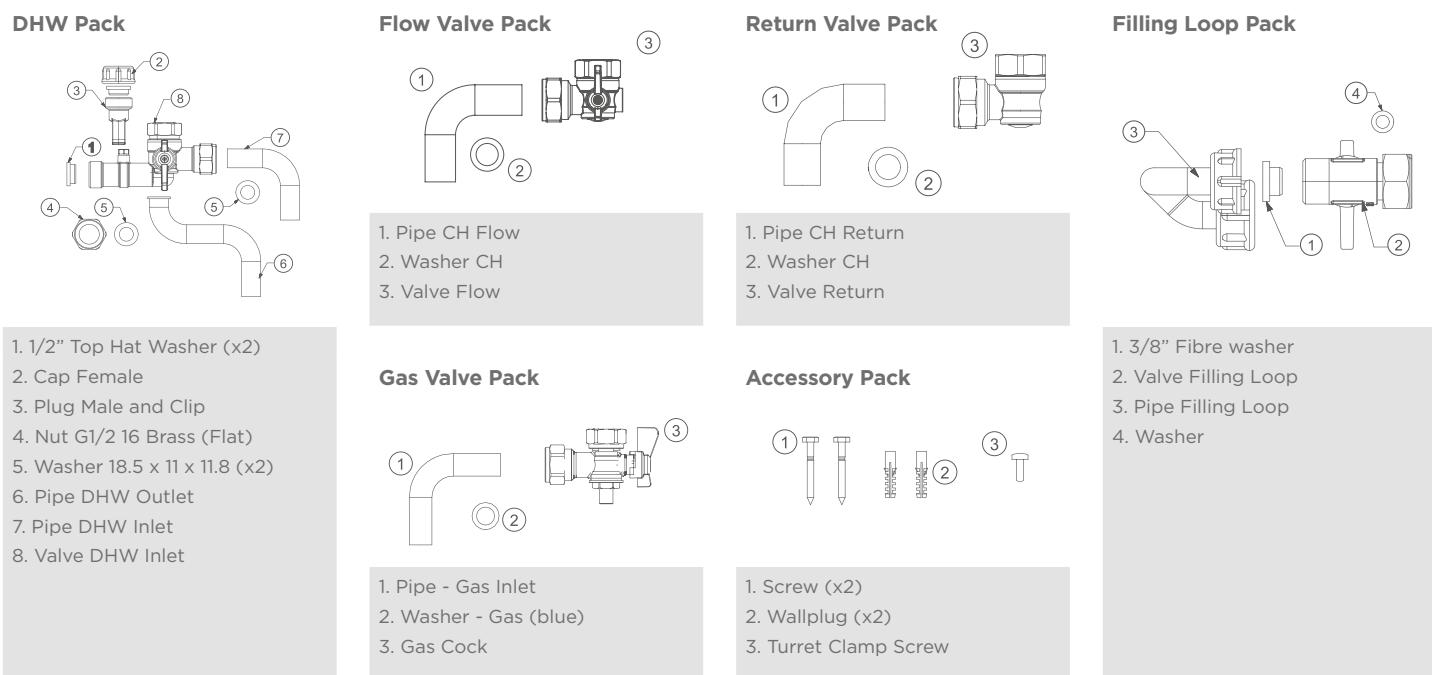
SUPPLIED WITH KESTON SYSTEM/COMBI



KESTON SYSTEM CONNECTION PACK



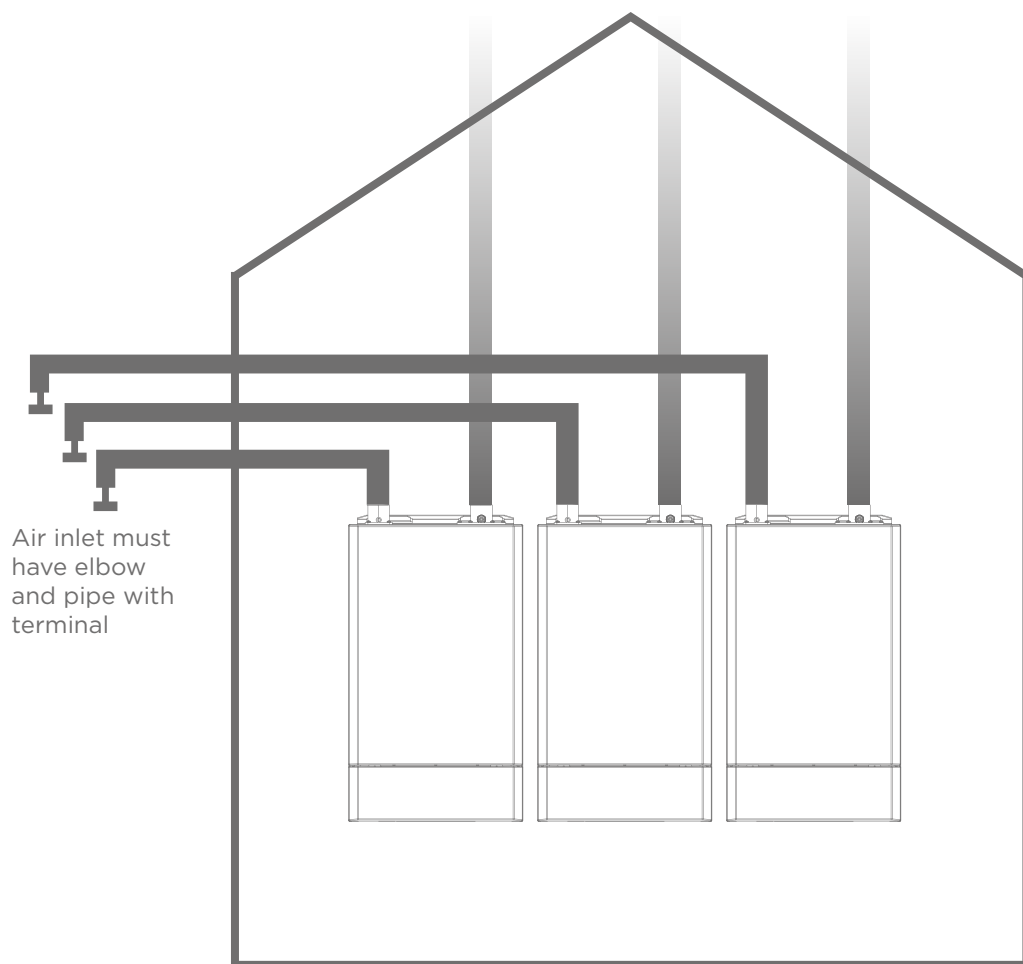
KESTON COMBI CONNECTION PACK



# HEAT CASCADE INSTALLATION

The termination of the flue pipes must be a minimum of 140mm apart.

There is no minimum spacing required when running flue pipes vertically within the building.



150mm above intersection of roof vertical flue pipe to have elbow and terminal pointing away from pitch.

If long runs of vertical pipe are utilised, it is recommended to fit a condensate trap at the base of the vertical section (if offset to flue adaptor).

- Air must be taken from vertical wall below roof level
- No minimum separation required between air intakes
- No fall required for air intake - can be horizontal

# KESTON BOILER RANGE



## 7 YEAR WARRANTY†

Providing ultimate reliability, Keston boilers are offered with warranties of up to 7 years when fitted with a Keston System Filter



## TWIN FLUE DESIGN

Providing the perfect solution for problematic and awkward installations



## WEATHER COMPENSATOR

All models in the Keston range come complete with weather compensation as standard



## BRITISH BUILT SINCE 2013

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# KESTON HEAT

45kW & 55kW Output  
Natural Gas & LPG



**5**  
YEAR WARRANTY<sup>†</sup>

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

Supported by a 5 year parts and labour warranty and Free Commissioning<sup>†</sup>, Keston Heat 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; leading to reliability and longevity.

The range provides high efficiencies for low running costs with up to 110% part load, seasonal efficiency (ref Building Regs Part L2) up to 97%. The range also provides low NOx emissions at Class 5 and less than 40mg/kWh. Keston Heat provides the perfect solution for a wide variety of commercial installations.

Keston Heat boilers are easy to cascade using our Frame and Header kits, see pages 22-25 for full details. Please note that Free Commissioning is not available on multiple (cascade) boiler installations.

## THE FACTS

- 5 year warranty<sup>†</sup>
- Free Commissioning<sup>†</sup>
- Condensing outputs 45 & 55kW
- Low NOx Class 5
- Inbuilt weather compensation
- Inbuilt pump (low energy modulating)
- Minimum pressure 0.3 bar
- Minimum head 3m
- Twin flue up to 21m\*
- High 5:1 turndown
- Small installation footprint
- 50mm muPVC (PVC-C) solvent weld flue allowing simple, cost effective installations\*\*
- Commercial control system compatibility as standard
- British Gas service listed
- ECA listed

**5**  
YEAR WARRANTY<sup>†</sup>

**INSTALL THE KESTON 28MM SYSTEM FILTER**

with a Keston Heat boiler to receive a 5 year warranty<sup>†</sup>



## 5 YEAR WARRANTY<sup>†</sup>

Providing ultimate reliability, Keston Heat boilers are offered with a 5 year warranty when commissioned by Keston Boilers



## TWIN FLUE DESIGN

Providing the perfect solution for problematic and awkward installations



## WEATHER COMPENSATOR

All models in the Keston range come complete with weather compensation as standard



## FRAME AND HEADER KITS

Able to facilitate up to 6 Keston Heat boilers in cascade



## MODULATING PUMP

Keston Heat boilers come with a low energy modulating pump which complies with energy efficiency requirements



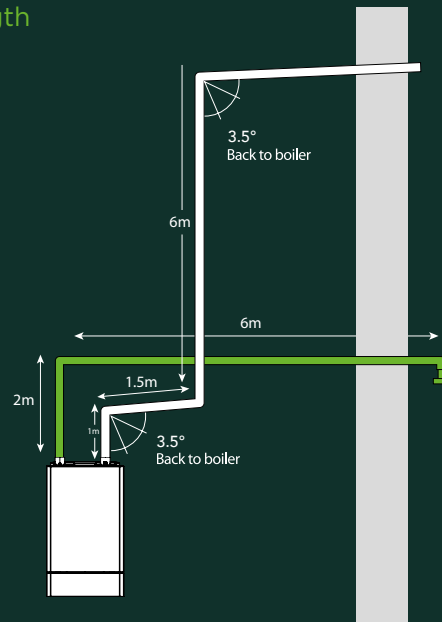
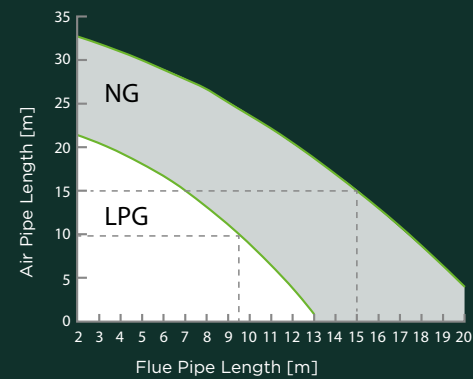
## BRITISH BUILT SINCE 2013

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# FLUE INSTALLATION

## Keston Heat 45 - Flue & Air Pipe Length



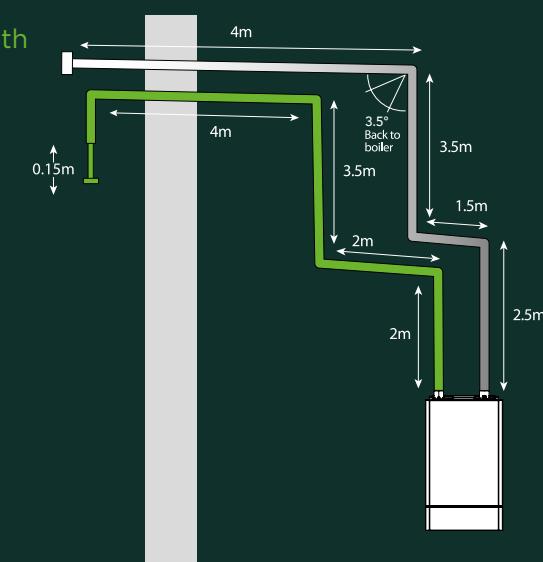
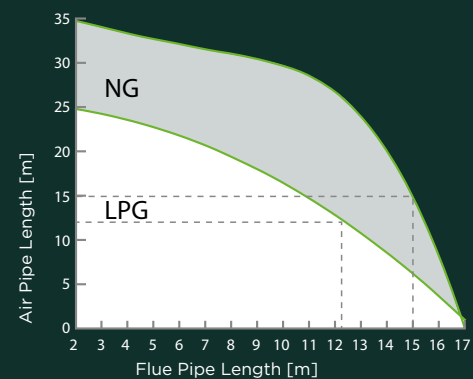
## C53 HORIZONTAL

### Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 4+6+1.5+1 = 12.5m  
Total = 15m

Air  
Elbows 2 x 1m = 2m  
Straights 6+2+0.1m = 8.1m  
Total = 10.1m

## Keston Heat 55 - Flue & Air Pipe Length



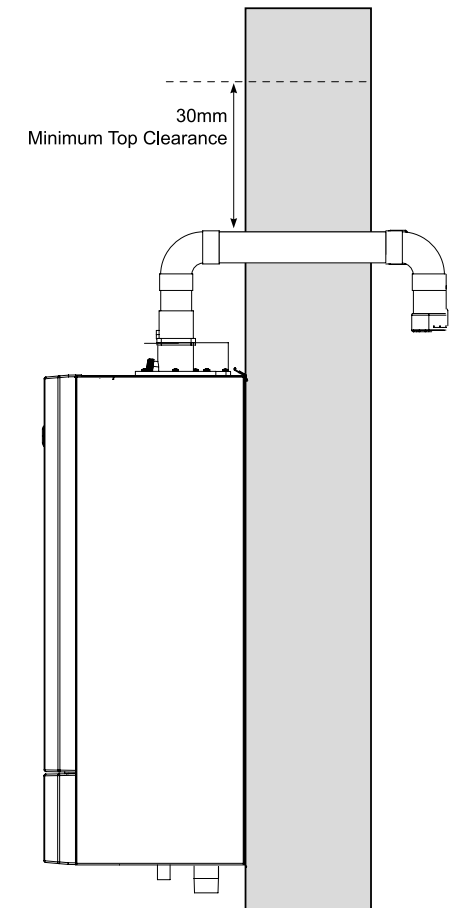
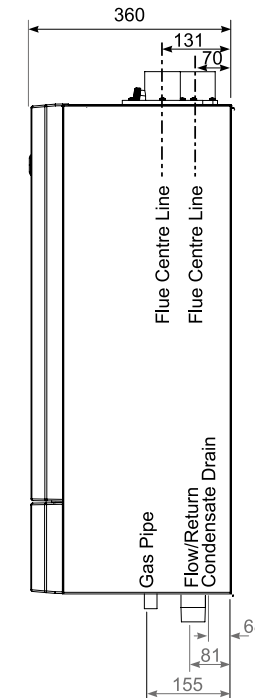
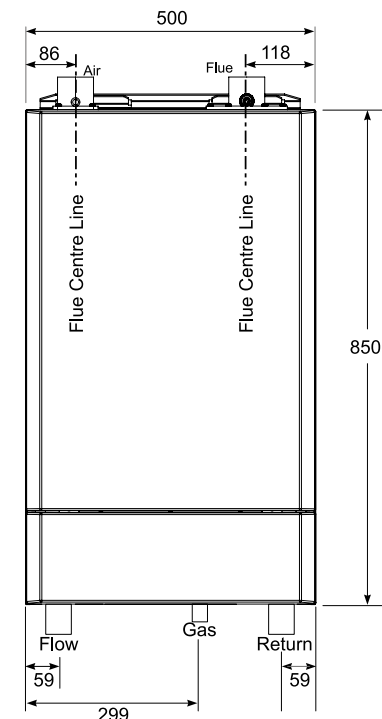
## C13 HORIZONTAL

### Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 2.5+1.5+3.5+4 = 11.5m  
Total = 14.5m

Air  
Elbows 4 x 1m = 4m  
Straights 2+2+3.5+4+0.15 = 11.65m  
Total = 15.65m

# DIMENSIONS



## KESTON HEAT

Height	850mm
Width	500mm
Depth	360mm

The following minimum clearances must be maintained for operation and servicing.  
Front of boiler - 450mm\*  
Sides of boiler - 25mm  
Above boiler - 30mm above the flue  
Below boiler - 300mm  
Clearance between multiple boiler installations - 25mm

\* Can be reduced to 5mm for cupboard fit, 450mm required for servicing

# SPECIFICATION DATA



## CENTRAL HEATING

			45	45P	55	55P
Boiler Output	Max	kW	42.6	42.6	52.1	52.1
(Non Condensing) Mean 70°C	Min	kW	12.0	12.0	12.0	12.0
Boiler Output	Max	kW	45.0	45.0	55.0	55.0
(Condensing) Mean 40°C	Min	kW	12.7	12.7	12.7	12.7
Boiler Input Net	Max	kW	43.2	43.2	52.7	52.7
	Min	kW	12.2	12.2	12.2	12.2
Boiler Input Gross	Max	kW	47.9	47.9	58.5	58.5
	Min	kW	13.5	13.5	13.5	13.5
Gas Consumption / Rate	Max	m³/h	4.56	1.78	5.57	2.18
	Max	ft³/h	161.2	62.9	196.9	76.8
Flue Gas Flow Rate	Max	m³/h	66.4	64.3	81.0	77.4
	Max	ft³/h	2,343	2,271	2,861	2,733

## OTHERS

			45	45P	55	55P
Efficiency	Seasonal	%	96	96	96.7	96.7
	SEDBUK 2009	%	89.2	89.2	89.6	89.6
Seasonal Space Heating Efficiency Class			A	A	A	A
NOx	Weighted	mg/kWh	38.6	43.9	38.3	59.2
		ppm DAF	21.9	24.7	21.7	33.3
	Classification		Class 5	Class 5	Class 5	Class 5
CO <sub>2</sub> (±0.5)	Max	%	9.3	11	9.5	11.2
	Min	%	8.4	10.2	8.4	10.2

## GENERAL DATA

		45	45P	55	55P
Max Horizontal Flue Length	m	21 Flue / 2 Air	13 Flue / 1 Air	17 Flue / 2 Air	17 Flue / 1 Air
Max Horizontal Flue Length (Parallel)	m	15 Flue / 15 Air	9.5 Flue / 9.5 Air	15 Flue / 15 Air	12.25 Flue / 12.25 Air
Flue Terminal Diameter	mm	50			
Gas Supply		2H - G20 - 20mbar	3P - G20 - 37mbar	2H - G20 - 20mbar	3P - G20 - 37mbar
Gas Supply Connection		G 3/4			
Flow Connection		G 1 1/4			
Return Connection		G 1 1/4			
Max Pressure (Sealed System)	bar (psi)	6.0 (87.0)			
Maximum Static Head	m	61.0			
Electricity Supply		230V - 50Hz			
Fuse Rating	A	4.0			
Power Consumption	W	180	202	262	239
IP Rating		IP20			
Condensate Drain	mm	25			
Water Content	l	5.0			
Dry Weight	kg	60.3			

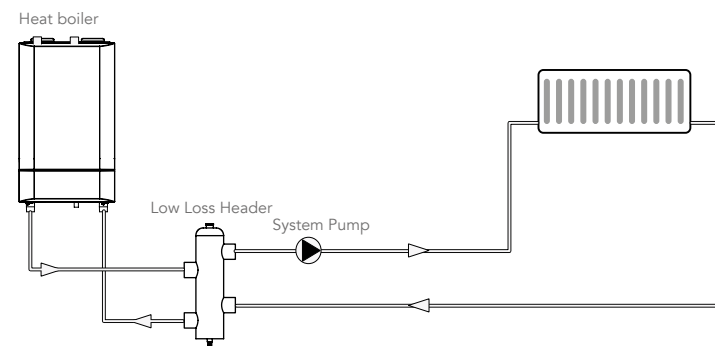


# INSTALLATION WITH LOW LOSS HEADER

## SINGLE KESTON HEAT BOILER WITH LOW LOSS HEADER

If the system has or requires an additional circulation pump, the Keston Heat model must be fitted as shown in the diagram below, with the inclusion of a Low Loss Header.

Multiple heating circuits can be added with the appropriate controls. The installation of a suitably sized dirt separator in the return pipework to the low loss header is recommended, particularly in the case of old systems.



## MODULATING SEQUENCER

The modulating sequence controller is designed to control Keston boilers operating in cascade. An OpenTherm interface is used for the exchange of data between the controller and the boilers. The requested load is transmitted to each boiler separately. The setpoint flow temperature is determined from a heating curve, or from the setpoint flow temperature from an OpenTherm room thermostat. The Controller is also capable of being used in combination with:

1. Programmable Room Thermostat Kit
2. On/Off room thermostat, in addition to this, the Controller can also actuate a hot water storage circuit or a pump circuit.
3. OpenTherm compatible BMS

The universal design of the system, the consistent menu structure and the simple operation enables the installer to commission the controller quickly.

## INSTALLER FEATURES

- Each module can control up to 5 boilers (20 in total with 4 modules)
- OpenTherm BMS compatible as standard
- Can use OpenTherm to gateway adaptors (Bac Net etc)
- Can support weather compensation with the supplied outside sensor configured
- Additional control with the addition of Plant room sensor/room sensor (modulation taken from central point in building or can be set up as a plant room high temp limit)
- Can support hot water with an addition of tank sensor

## CUSTOMER FEATURES

- Date & time
- Daylight saving
- Hours run & pulse counters
- Data logger (48 hrs storage with 5 min interval)
- Fault detection
- Restore factory settings

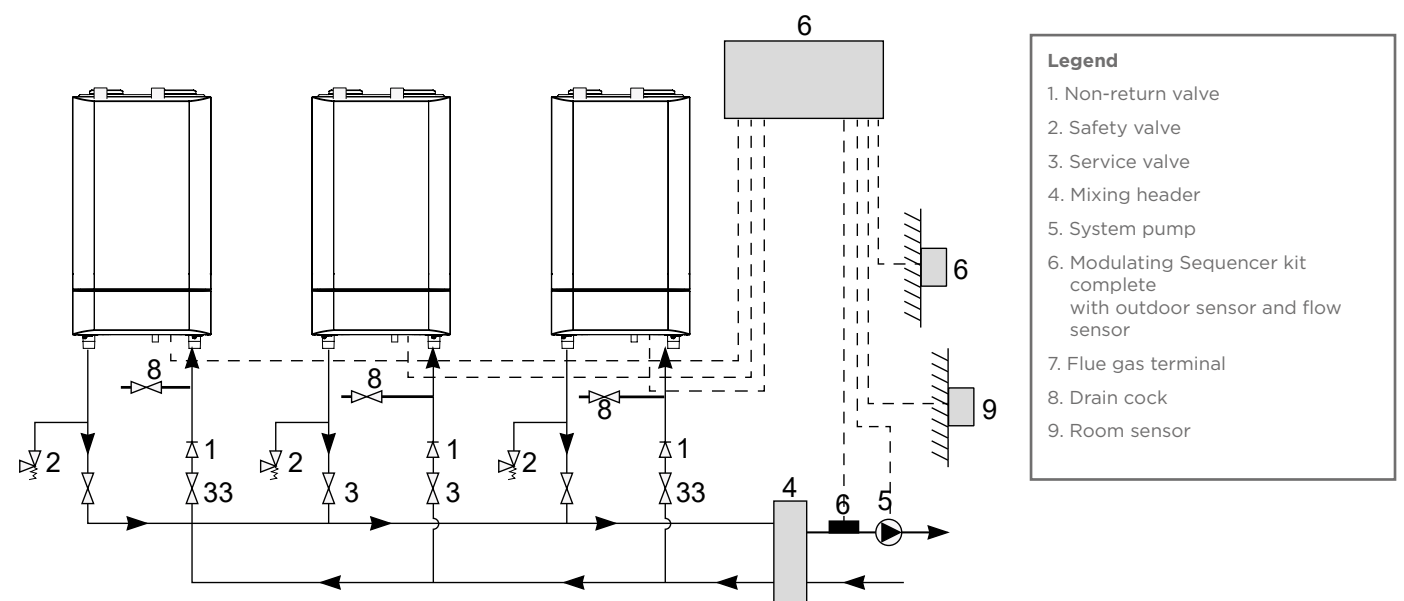
# MULTI BOILER INSTALLATIONS

## SYSTEM IN CASCADE

Systems that require a heat load greater than the output of a single boiler capacity can be easily achieved by fitting the required number of units in cascade. The Keston Heat range has a turndown rate of 5:1 allowing system requirements to be easily matched.

In installations where the heat load is greater than the boiler capacity an ideal solution is to use multiple boiler arrangements.

Use Varican modules to control all boilers on a cascade through a Master and Slave set up. See page opposite for more details.



Keston can also supply a cascade controller for up to 5 boilers, for total system outputs of up to 275kW. The control unit is also capable of controlling the domestic hot water via a separate hot water cylinder.

# FRAME AND HEADER KITS

## Install Up To 6 Boilers in Cascade with Keston Heat Frame and Header Kits.

The Keston Heat Frame and Header kits offer a simple system installation allowing for outputs from 90kW to 330kW

### THE FACTS

#### Small footprint

- 560mm depth for all variants of the Keston Heat frame and header, with boilers in cascade
- Standard Height and Low Height (4 boiler maximum cascade) frames available

#### Low lift weight

- Lift weights are as low as possible

#### Time saving

- The flow and return and the low loss header are pre insulated which improves efficiency and reduces heat loss, as well as reducing installation time

#### Controls

- The Frame and Header Kit can be installed with either a Keston Sequencer (up to 5 boilers) offering direct modulation of the system, which reduces running costs
- For installation of 6 boilers, two Keston sequencers are required

### FLEXIBILITY OF SITING

#### Flue system

- The twin flue system allows awkward and difficult to site flue runs up to 21m\*
- Simple 50mm muPVC (PVC-C)\*\* solvent weld flue reduces time, cost and labour
- For increased flexibility of siting, additional elbows and bends are available for both flue systems
- Only 1m reduction in equivalent flue length per 90° bend
- Gas pressure test point fitted to both ends of the gas header to allow left or right hand installation

\* For the maximum total equivalent flue length, please refer to the installation manual. \*\* The only systems approved for this application are: Marley muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe System 2000 muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe Terrain Solvent Weld System (50mm) and Wavin Osma PVC-C Solvent Weld System (50mm). Please use the recommended Solvent Weld Cement for each system. Please see page 9 for more details.

# KESTON HEAT

## Frame & Header Accessories

CHOOSE A FRAME KIT	CHOOSE A HEADER KIT	CHOOSE HYDRAULIC SEPARATION
Standard Height Up to 6 boilers 355013 1 frame required per boiler i.e. a 6 boiler cascade requires 6 frames	Standard Height Frame	Low Loss / Mixing Header
Low Height Inline Up to 4 boilers Included with Low Height Header Kit	2 boilers (DN80) 355084	DN50 355090
	2 boilers (DN100) 355111	DN65 355091
	3 boilers (DN80) 355085	DN80 355019
	3 boilers (DN100) 355112	DN100 355092
	4 boilers (DN100) 355087	
	5 boilers (DN100) 355087	
	6 boilers (DN100) 219546	
	6 boilers (DN150) 355088	
	Low Height Frame	
	1 boiler (DN50) 355093	
	2 boilers (DN65) 355094	
	3 boilers (DN80) 355095	
	4 boilers (DN100) 355096	

Boilers not included with Frame or Header Kits; please remember to add them to your order.

# KESTON SYSTEM

## 30kW Output



## High SEDBUK efficiency rating and easy to install.

Keston System boiler provides a simple and reliable solution for a wide variety of sealed domestic systems.

Available with a 30kW output, Keston System provides a dependable and efficient solution for new and replacement installations. Time saving push & clip flue spigot connections and a wide range of alternative flueing solutions help to ensure the product is installed quickly in virtually any domestic situation.

With a lightweight design, concealed connections at the base and no compartment ventilation required, Keston System can be conveniently fitted out of sight into a standard kitchen cupboard\*.

Complete with a 7 year parts and labour warranty†, Keston System boiler provides simple heating control, all from a single compact appliance.

### THE FACTS

- 7 year warranty†
- Easy to see pressure gauge
- Large backlit display with user friendly controls
- Low lift weight
- Low component count maximising reliability
- Compact dimensions
- Twin flue up to 27m\*\*
- 50mm muPVC (PVC-C) solvent weld flue allowing simple, cost effective installations\*\*\*
- Weather compensation supplied as standard
- Inbuilt frost protection
- Fully modulating
- LPG conversion kit available



**7 YEAR WARRANTY†**  
Providing ultimate reliability, Keston System boilers are offered with a 7 year warranty when fitted with a Keston 22mm System Filter



**TWIN FLUE DESIGN**  
Providing the perfect solution for problematic and awkward installations



**WEATHER COMPENSATOR**  
All models in the Keston range come complete with weather compensation as standard



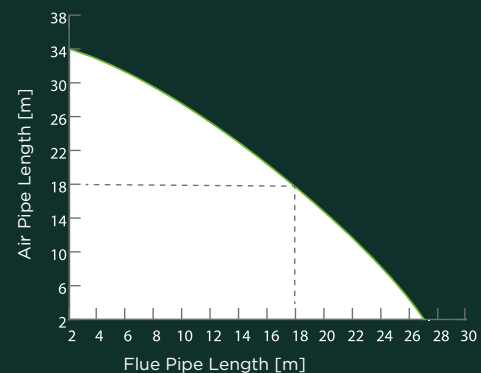
**BRITISH BUILT SINCE 2013**  
All Keston boilers are built in and designed for the British market

† 7 year warranty when installed with a Keston 22mm System Filter and registered within 30 days of installation. 5 year parts & labour warranty as standard. 7 year warranty available until 31/12/20. Terms and conditions apply.  
\* Please check cupboard size prior to installation  
\*\* For the maximum total equivalent flue length, please refer to the installation manual.  
\*\*\* The only systems approved for this application are: Marley muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe System 2000 muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe Terrain Solvent Weld System (50mm) and Wavin Osma PVC-C Solvent Weld System (50mm). Please use the recommended Solvent Weld Cement for each system. Please see page 9 for more details.



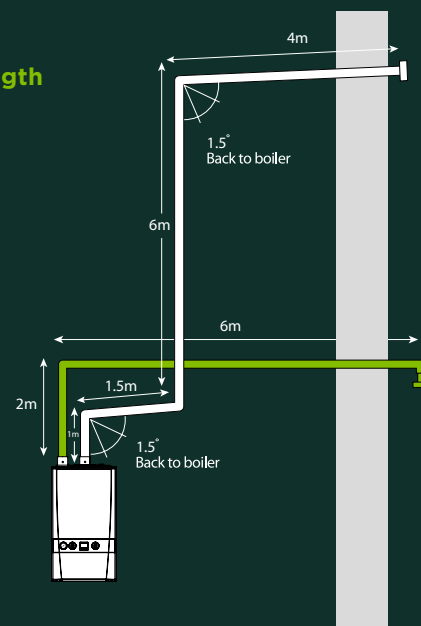
# FLUE INSTALLATION

**Keston System S30 - Flue & Air Pipe Length**



acceptable flue operating area

Graph indicates maximum flue run 27m with 2m air. Also, 18m flue with 18m air pipe for parallel twin flue run.

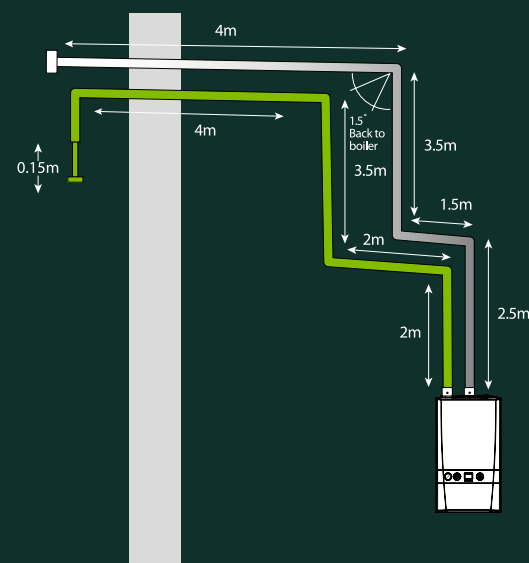


## C53 HORIZONTAL

### Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 4+6+1.5+1 = 12.5m  
Total = 15.5m

Air  
Elbows 2 x 1m = 2m  
Straights 6+2+0.1+1 = 8.1m  
Total = 10.1m



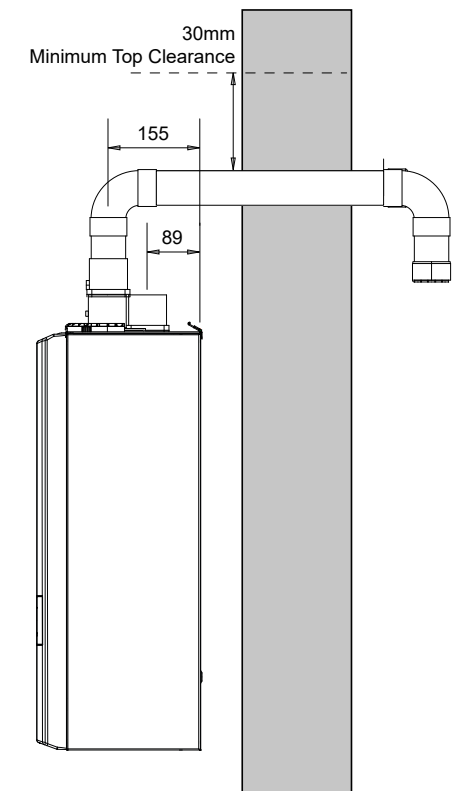
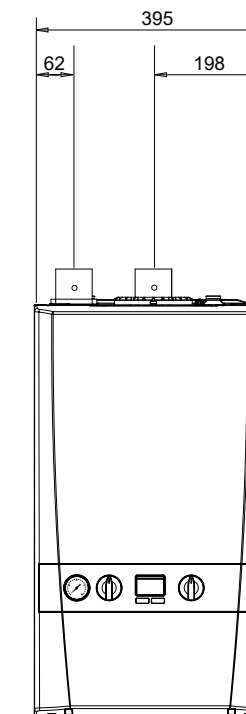
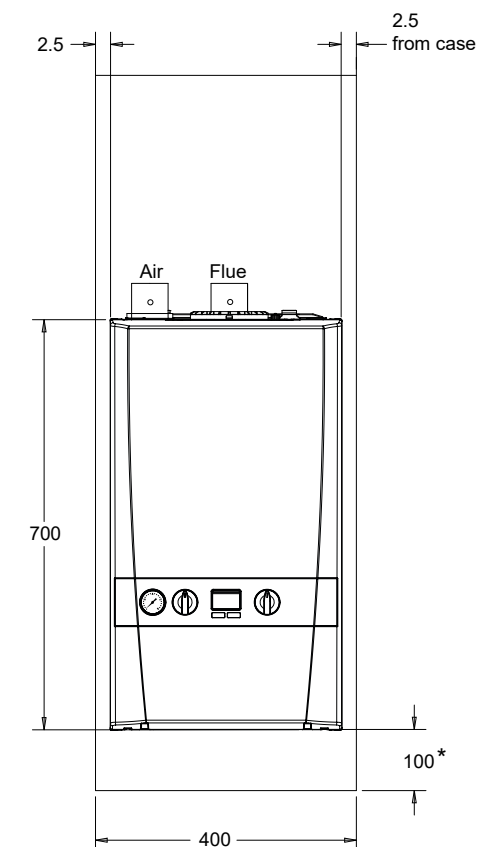
## C13 HORIZONTAL

### Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 4+3.5+1.5+2.5 = 11.5m  
Total = 14.5m

Air  
Elbows 4 x 1m = 4m  
Straights 2+2+3.5+4+0.15 = 11.65m  
Total = 15.65m

# DIMENSIONS



## KESTON SYSTEM

Height	700mm
Width	395mm
Depth	278mm

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

Front of boiler - 450mm<sup>†</sup>  
Sides of boiler - 2.5mm  
Above boiler - 30mm above the flue  
Below boiler - 100mm<sup>†</sup>

\* Or equivalent length.

† Can be reduced to 5mm for cupboard fit, 450mm required for servicing.

# SPECIFICATION DATA



## CENTRAL HEATING

S30			
CH Output @ 70°C	Max	kW	30.3
	Min	kW	6.1
CH Output @ 40°C	Max	kW	31.0
	Min	kW	6.4
CH Input	Nett CV Max	kW	30.4
	Nett CV Min	kW	6.1
CH Input	Gross CV Max	kW	33.7
	Gross CV Min	kW	6.7
CH Gas Consumption	Max	m3/h	3.135
	Min	m3/h	0.622

## OTHERS

S30			
Seasonal Efficiency	SEDBUK 2005	%	91.1
	SEDBUK 2009	%	89.6
Seasonal Space Heating Efficiency Class			A
NOx Classification			Class 5

## GENERAL DATA

S30		
Max Horizontal Flue Length	m	27 Flue / 2 Air
Max Horizontal Flue Length (Parallel)	m	18 Flue / 18 Air
Flue Terminal Diameter	mm	50
Gas Supply		2H - G20 - 20mbar
Gas Supply Connection		15mm copper compression
Injector Size	mm	4.65
Flow Connection (CH)		22mm copper compression
Return Connection (CH)		22mm copper compression
Average Flue Temp - Mass Flow Rate		69°C - 13g/s
CO <sub>2</sub> Content (±0.7) (Max CH)	%	9.3
CO <sub>2</sub> Content (±0.7) (Min CH)	%	8.8
Max Working Pressure (Sealed Systems)	bar (psi)	2.5 (36.3)
Electrical Supply		230V - 50Hz
Power Consumption	W	100
Fuse Rating		External 3A / Internal: T4A HRC L250V
Water Content	l (gal)	1.2 (0.26)
Weight (Packed)	kg	31.6
Maximum Installation Weight	kg	26.2

# KESTON COMBI

## 30kW & 35kW Output



## Complete hassle-free home comfort from a single compact appliance.

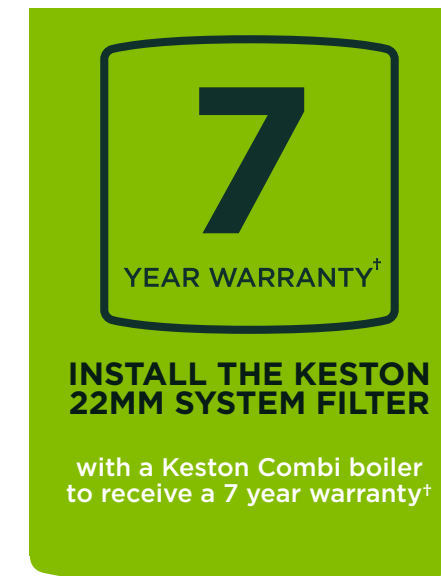
Offering first-class comfort in a compact, wall-hung appliance small enough to fit inside a standard kitchen cupboard\*, the Keston Combi range enables heating and hot water to be controlled independently, ensuring maximum comfort and efficiency.

Keston Combi can be sited almost anywhere in the home, without the need for a separate tank. And because it connects to the unique Keston Twin Flue system, the boiler can be situated anywhere up to 27\*\* metres from the flue outlet, helping to provide further flexibility when required.

Fully modulating, and with weather compensation, Keston Combi provides excellent energy savings, making it the perfect choice for new or replacement installations alike.

### THE FACTS

- 7 year warranty†
- Easy to see pressure gauge
- Large backlit display with user friendly controls
- Low lift weight
- Low component count maximising reliability
- Compact dimensions
- Twin flue up to 27m\*\*
- 50mm muPVC (PVC-C) solvent weld flue allowing simple, cost effective installations\*\*\*
- Weather compensator supplied as standard making Keston Combi **Boiler Plus compliant out of the box**
- Pre-fitted filling loop
- Inbuilt frost protection
- Fully modulating
- LPG conversion kit available



### 7 YEAR WARRANTY†

Providing ultimate reliability, Keston Combi boilers are offered with a 7 year warranty when fitted with a Keston 22mm System Filter



### TWIN FLUE DESIGN

Providing the perfect solution for problematic and awkward installations



### WEATHER COMPENSATOR

All models in the Keston range come complete with weather compensation as standard



### BRITISH BUILT SINCE 2013

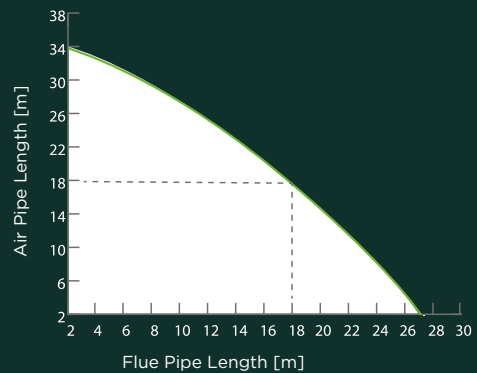
All Keston boilers are built in and designed for the British market

† 7 year warranty when installed with a Keston 22mm System Filter and registered within 30 days of installation. 5 year parts & labour warranty as standard. 7 year warranty available until 31/12/20. Terms and conditions apply.\* Please check cupboard size prior to installation.\*\* For the maximum total equivalent flue length, please refer to the installation manual.\*\*\* The only systems approved for this application are: Marley muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe System 2000 muPVC (PVC-C) Solvent Weld Waste System (50mm), Polypipe Terrain Solvent Weld System (50mm) and Wavin Osma PVC-C Solvent Weld System (50mm). Please use the recommended Solvent Weld Cement for each system. Please see page 9 for more details.



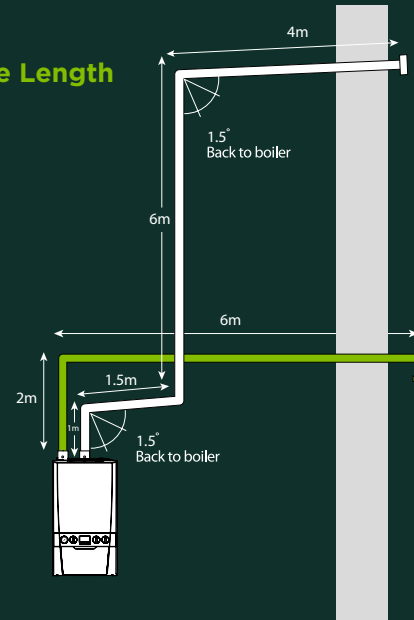
# FLUE INSTALLATION

**Keston Combi C30 - Flue & Air Pipe Length**



acceptable flue operating area

Graph indicates maximum flue run 27m with 2m air. Also, 18m flue with 18m air pipe for parallel twin flue run.



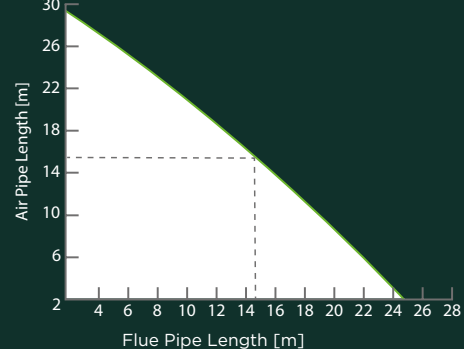
**C53 HORIZONTAL**

Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 4+6+1.5+1 = 12.5m  
Total = 15.5m

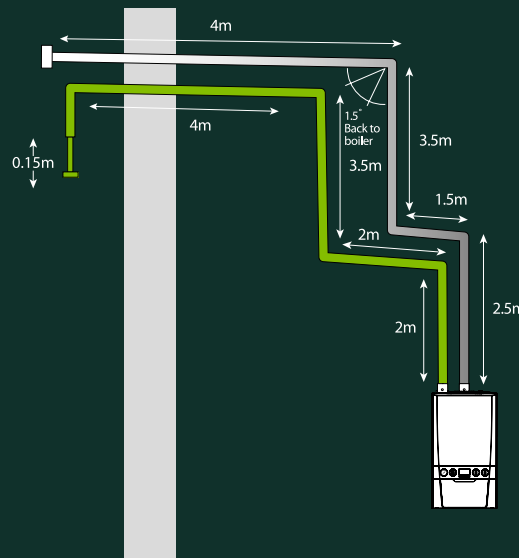
Air  
Elbows 2 x 1m = 2m  
Straights 6+2+0.1+1 = 8.1m  
Total = 10.1m

**Keston Combi C35 - Flue & Air Pipe Length**



acceptable flue operating area

Graph indicates maximum flue run 25m with 2m air. Also, 15m flue with 15m air pipe for parallel twin flue run.



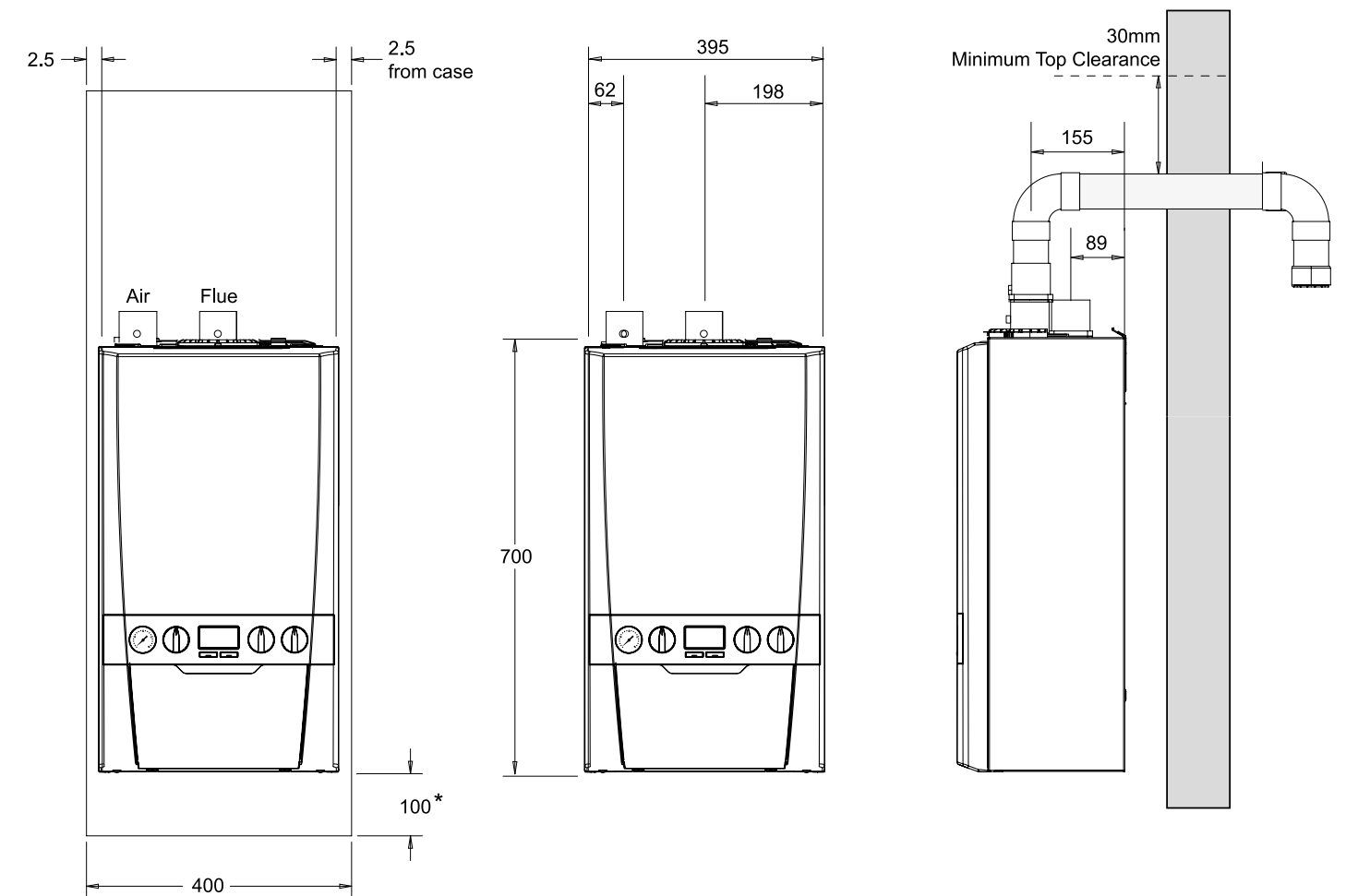
**C13 HORIZONTAL**

Calculations

Flue  
Elbows 3 x 1m = 3m  
Straights 4+3.5+1.5+2.5 = 11.5m  
Total = 14.5m

Air  
Elbows 4 x 1m = 4m  
Straights 2+2+3.5+4+0.15 = 11.65m  
Total = 15.65m

# DIMENSIONS



## KESTON COMBI

Height	700mm
Width	395mm
Depth	278mm

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

Front of boiler - 450mm<sup>†</sup>  
Sides of boiler - 2.5mm  
Above boiler - 30mm above the flue  
Below boiler - 100mm<sup>†</sup>

\* Or equivalent length.

† Can be reduced to 5mm for cupboard fit, 450mm required for servicing

# SPECIFICATION DATA



## CENTRAL HEATING

			C30	C35
CH Output @ 70°C	Max	kW	24.2	24.2
	Min	kW	6.1	7.1
CH Output @ 40°C	Max	kW	25.6	25.6
	Min	kW	6.4	7.5
CH Input	Nett CV Max	kW	24.3	24.3
	Nett CV Min	kW	6.1	7.1
CH Input	Gross CV Max	kW	27.0	27.0
	Gross CV Min	kW	6.7	7.9
CH Gas Consumption	Max	m³/h	2.512	2.512
	Min	m³/h	0.623	0.734

## HOT WATER

			C30	C35
DHW Output	Max	kW	30.3	35.3
DHW Input	Nett CV Max	kW	30.4	35.4
DHW Input	Gross CV Max	kW	33.7	39.3
DHW Gas Consumption		m³/h	3.135	3.658
DHW Flow Rate at 35°C Rise		l/min	12.4	14.5
DHW Specific Rate		l/min	14.5	16.9

## OTHERS

			C30	C35
Seasonal Efficiency	SEDBUK 2005	%	91.1	91.1
	SEDBUK 2009	%	89.6	89.6
Seasonal Space Heating Efficiency Class			A	A
NOx Classification			Class 5	Class 5

## GENERAL DATA

			C30	C35
Max Horizontal Flue Length	m		27 Flue / 2 Air	25 Flue / 2 Air
Max Horizontal Flue Length (Parallel)	m		18 Flue / 18 Air	15 Flue / 15 Air
Flue Terminal Diameter	mm		50	
Gas Supply			2H - G20 - 20mbar	
Gas Supply Connection			15mm copper compression	
Injector Size	mm		4.65	4.90
Flow Connection (CH)			22mm copper compression	
Return Connection (CH)			22mm copper compression	
Inlet Connection (DHW)			15mm copper compression	
Outlet Connection (DHW)			15mm copper compression	
Average Flue Temp - Mass Flow Rate (DHW)			68°C - 13g/s	73°C - 15g/s
CO <sub>2</sub> Content (±0.7) (Max CH)	%		8.8	8.9
CO <sub>2</sub> Content (±0.7) (Max DHW)	%		9.3	9.5
Max Working Pressure (Sealed Systems)	bar (psi)		2.5 (36.3)	
Max DHW Inlet Pressure	bar (psi) (kPa)		10.0 (145) (1000)	
Min DHW Inlet Pressure	bar (psi) (kPa)		1.3 (18.9) (130)	
Electrical Supply			230V - 50Hz	
Power Consumption	W		101	114
Fuse Rating			External 3A / Internal: T4A HRC L250V	
Water Content (CH)	l (gal)		1.2 (0.26)	
Water Content (DHW)	l (gal)		0.5 (0.11)	
Weight (Packed)	kg		34.4	34.5
Maximum Installation Weight	kg		31.4	31.5

# KESTON SERVICE

## Support & aftersales

When you choose a Keston appliance, you are selecting a solution that has been expertly produced to the highest of standards.

### SUPPORT

When you choose to work with Keston 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, 364 days a year.

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

### SERVICE

Our dedicated service team of engineers are fully trained to exacting standards and are Gas Safe Registered, providing one-to-one advice on the road, over the phone or via the net to thousands of customers each year.

### PARTS

Keston's extensive quality testing procedures ensure that all of our products are manufactured to the highest of quality standards.

In the unlikely event that a spare part is required, you can be rest assured that most parts are readily available to order via your local spares outlet up to 10 years after appliance production has ceased.

Keston spare parts can be obtained from any of Ideal's nationwide network of approved stockists.

### AFTERSALES

Supported by a dedicated national service team, delivering help and advice to you and your customers, 364 days a year, all of Keston's products come with their own dedicated warranty. Each product design undergoes a rigorous research and development procedure and manufacturing quality control check to ensure that every product is produced to the highest of standards, helping to deliver total home comfort and peace of mind.

Our call centre team based in Hull are comprehensively trained to provide tailored advice to homeowners and the trade.



**Installer helpline &  
Homeowner helpline**

**01482 443 005**

FOR INFORMATION ABOUT  
ANY KESTON SPARE PARTS

For a list of stockists, please call our  
Spares Department or visit our website

[www.keston.co.uk](http://www.keston.co.uk)



**SPARES DEPARTMENT**

**01482 443 005**



# KESTON TRAINING

Here at Keston, we understand that having the confidence to be able to specify and install a wide range of products is an essential part of your day-to-day job.

With this in mind, we have created a wide range of comprehensive training courses, utilising both classroom and hands-on learning techniques to enable you to become a more efficient, skilled heating engineer.

All of our training courses have been designed to ensure that you get the most out of the time spent off the road and can be easily adapted to suit the desired knowledge level.

So, if you're looking to refresh your existing knowledge, or to learn how to install something completely new, Keston has a course for you.

For more information, please contact the training department on 01482 443 005.

## LOCATIONS

Centres of Excellence in Hull, Leeds and Reading.

These are comprehensive one-day courses, which can be mixed and matched for individual installation and servicing companies. The course uses a simple step-by-step approach with hands on training to ensure all aspects of commissioning, servicing and fault finding can be dealt with quickly and efficiently.

If you are an installer/service engineer you must be Gas Safe Registered to attend a course.

## COURSE CONTENT

Each course covers the following:

**Product range overview**

**Product specification**

**Installation requirements**

**Flue and accessory options**

**Component review overview**

**Component change and repair**

**User controls**

**Sequence of operation**

**Fault finding**

The course involves discussion with tutors, demonstrations with practical advice. Lunch and refreshments are provided and a certificate is awarded upon completion.



# PRODUCT INFORMATION



## BOILER PACKAGED

KESTON SYSTEM	KESTON COMBI	KESTON HEAT
355063 - Keston System S30 Boiler Packaged	355061- Keston Combi C30 Boiler Packaged 355062 - Keston Combi C35 Boiler Packaged	355003 - Keston Heat 45 Boiler Packaged 355004 - Keston Heat 55 Boiler Packaged 355079 - Keston Heat 45P Boiler Packaged 355078 - Keston Heat 55P Boiler Packaged

## ACCESSORIES

KESTON SYSTEM	KESTON COMBI	KESTON HEAT
355005 - Keston Twin Combi/System Stand Off Kit 355006 - Keston Air Terminal Finishing Kit 355007 - Keston Flue Sleeve Kit 355081 - Keston System Filter 22mm 355071- Keston System S30 LPG Conversion Kit	355005 - Keston Twin Combi/System Stand Off Kit 355067 - 7 Day Plug in Electronic timer 355066 - RF Electronic Programmable Stat 355006 - Keston Air Terminal Finishing Kit 355007 - Keston Flue Sleeve Kit 355081- Keston System Filter 22mm 355069 - Keston Combi C30 LPG Conversion Kit 355070 - Keston Combi C35 LPG Conversion Kit	355008 - Keston Heat Room Controller 355009 - Keston Heat Modulating Sequencer Kit 355010 - Keston Heat Tank Sensor Kit 355011 - Keston Heat Safety Interlock Kit 355012 - Keston Heat Room Sensor Kit 355006 - Keston Air Terminal Finishing Kit 355082 - Keston System Filter 28mm

## FRAME AND HEADER KITS

KESTON HEAT
355013 - Single Frame Standard Height Inline Kit 355089 - Single Frame Low Height Inline Kit 355084 - Header Inline DN80 x 2 Boilers Kit 355085 - Header Inline DN80 x 3 Boilers Kit 355111 - Header Inline DN100 x 2 Boilers Kit 355112 - Header Inline DN100 x 3 Boilers Kit 355086 - Header Inline DN100 x 4 Boilers Kit 355087 - Header Inline DN100 x 5 Boilers Kit 355088 - Header Inline DN100 x 6 Boilers Kit 355093 - Low Height Frame & Header DN50 x 1 Boiler Kit 355094 - Low Height Frame & Header DN65 x 2 Boiler Kit 355095 - Low Height Frame & Header DN80 x 3 Boiler Kit 355096 - Low Height Frame & Header DN100 x 4 Boiler Kit 355090 - Low Loss Header DN50 355091 - Low Loss Header DN65 355019 - Low Loss Header DN80 355092 - Low Loss Header DN100 355097 - Standard Height Flexible Gas Hose 355098 - Low Height Flexible Gas Hose



BY IDEAL BOILERS

Customer Service:

**01482 443005**

Technical Help:

**01482 443005**

Manufactured to the highest UK standards,  
anything is possible with a Keston.

Keston Heating  
PO Box 103  
National Avenue  
Kingston Upon Hull  
HU5 4JN

[www.keston.co.uk](http://www.keston.co.uk)



**GROUPE  
ATLANTIC**  
UK, ROI & NORTH AMERICA DIVISIONS

In accordance with our policy of constant improvement we reserve the right to alter the design and specification of products without prior notice.  
Keston business reg : no 03544589

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