



## LCB700 Blue Flame oil boilers

Blue flame - bright future



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Installer's guide

# welcome to Navien

We have been designing and manufacturing reliable and easy to install products for over 40 years, making Navien the fourth largest global boiler manufacturer. From the latest oil and gas-firing technology, to micro-CHP and solar, we are committed to developing highly efficient heating equipment.



## World's largest facility

Our state-of-the-art facility in Seotan, South Korea, is the world's largest boiler manufacturing plant, with an annual capacity of 2 million units. We utilise the latest research and development, along with high-tech manufacturing methods to deliver heating products of unrivalled quality, unbeaten performance and with superb reliability over their lifetime.

## Why choose Navien?



**2 million produced a year**  
We produce 1.8 million gas and electric appliances and 200,000 oil boilers per year.



**Low NOx emissions**  
Class-leading levels that are fit for the future.



**A+ energy rating**  
All Navien products deliver the highest levels of efficiency.



**Blue flame technology**  
Proprietary blue flame technology designed specifically to work with Navien boilers.



**Lightweight**  
LCB700 Blue Flame weighs only 67kg making for ease of installation.



**Peace of mind guaranteed**  
10 Year warranty straight from the box



Before leaving our factory, every boiler undergoes a thorough, two-stage testing procedure. This includes a specialised robotised process that carries out 55 quality checks per second. In addition, each unit receives a full working test by an operative, who completes a further 250 quality checks, ensuring all Navien Blue Flame boilers are of the highest standard.



Conformal coated waterproof PCB board

We design and manufacture our boiler components to the highest standards to deliver reliability and maximum performance.

# Navien Blue Flame boiler range

Combi



## LCB700 Blue Flame Combi

A standout unit that pushes the boundaries of condensing Blue Flame boiler technology.

### Features & benefits:

- Internal and external models
- Stainless steel heat exchanger
- Class leading energy efficiency
- Flexible installation options
- Achieves highest 3-star mark in DHW performance (in accordance with EN Regulations)



System



## LCB700 Blue Flame System

An exceptional boiler with a range of pioneering design features.

### Features & benefits:

- Internal and external models
- Class leading energy efficiency
- Stainless steel heat exchanger
- Lightweight design for easy installation



Regular



## LCB700 Blue Flame Regular

An easy to install boiler upgrade for older systems.

### Features & benefits:

- Internal and external models
- Class leading energy efficiency
- Stainless steel heat exchanger
- Lightweight design for easy installation



## SMART FORECAST CHECK

A heating system that can check the weather forecast and adjust itself accordingly.

Come rain or shine, our boilers will respond intuitively to the current weather conditions with Smart Plus.\*\* When connected to WiFi, our LCB700 Blue Flame boilers check the forecast on OpenWeatherMap, ensuring a property maintains a comfortable temperature, and the boiler only uses energy when needed.

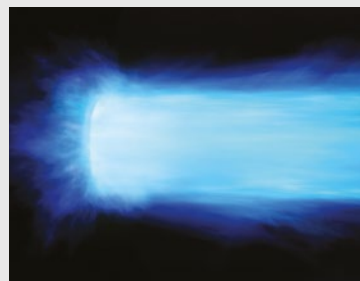


\*\*Requires Navien Smart Plus and a WiFi connection.

## BLUE FLAME

Leading the way towards a cleaner and more sustainable future.

In the coming years, blue flame is set to replace yellow flame in all oil boilers. Navien's revolutionary blue flame technology guarantees superior efficiency and ultra-low NOx emissions, resulting in a more economical, future-proof boiler.



## GEOFENCING CAPABILITIES

Let location take care of the heating system, with Smart Plus.\*\*

By connecting an LCB700 Blue Flame boiler to a smartphone, the heating system will turn on and off based on an occupant's proximity to home. It can also be set up with multiple users so everyone in the household benefits from maximum comfort.



## COST SAVING

Installation



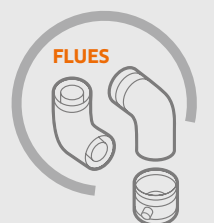
Saving  
**£70**

Warranty



Saving  
**£375**

60/100 plastic flue



Saving  
**£140**

# Combi



Blue flame burner

Navien's blue flame burner emits extremely low NOx emissions of 57mg/kWh, providing a market leading and future proofed standard.



Gear pump

## Discover the UK's first A+ rated oil boiler range

Our new LCB700 Blue Flame range of oil boilers is the first in the UK market to offer an A+ energy rating, thanks to an exceptional design and the latest smart control systems.\*

Combined with easy to install features, such as a combined PRV/condensate drain and flexible pipework arrangements, the LCB700 Blue Flame is a boiler like no other.



## Hot water temperature control

Patented technology that delivers outstanding performance.

Navien's patented temperature control technology provides accurate adjustment of LCB700 Blue Flame hot water temperatures to within 1°C (30-60°C). This allows the boiler to achieve the highest 3-star mark in DHW performance (in accordance with EN Regulation (EN13203-1)\* 1 of DHW performance assessment).

## Take a look inside

### COMBINED PRV AND CONDENSATE DRAIN

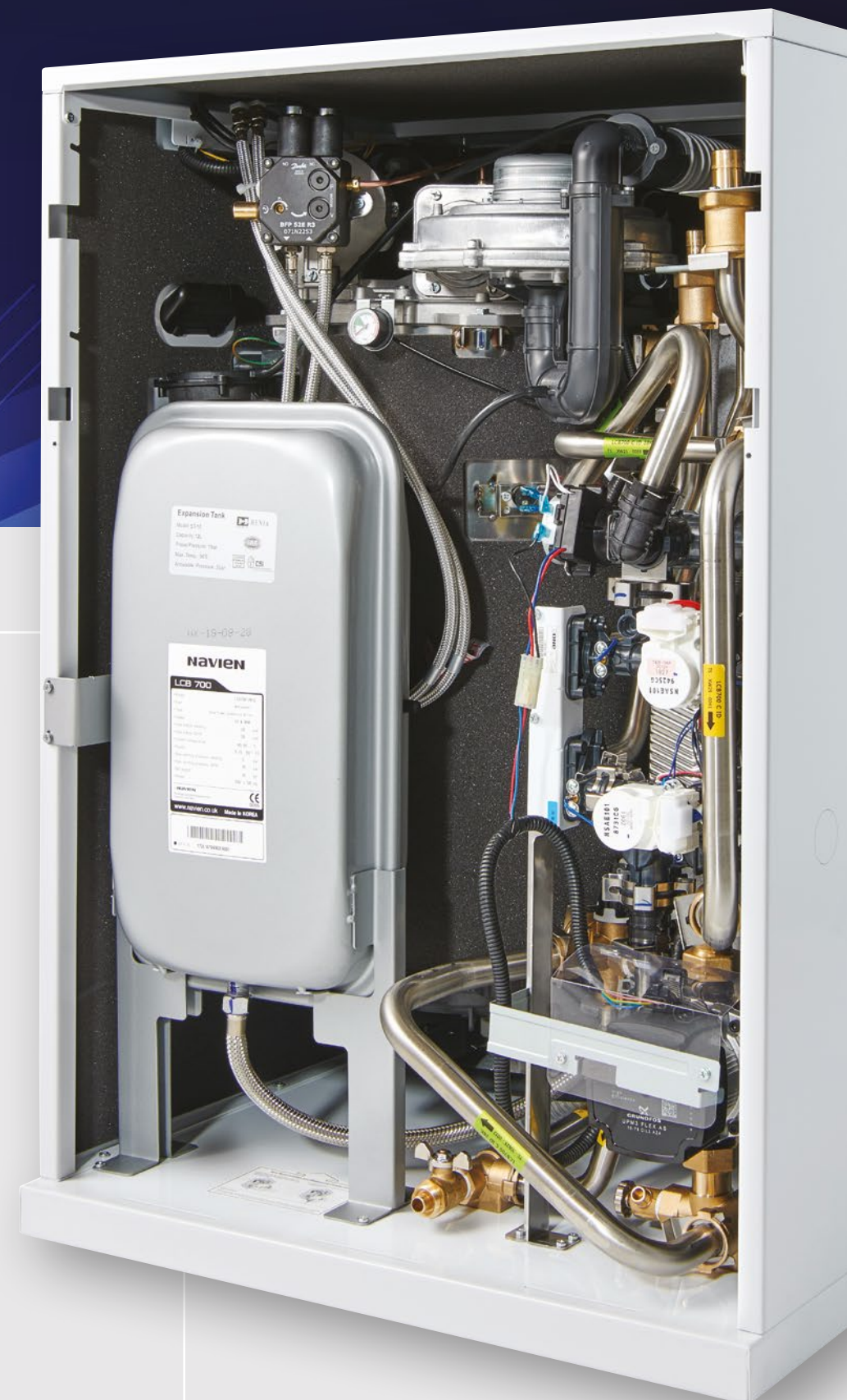
A clever design makes installation and ongoing maintenance simple, without compromising performance.

### DE-AERATOR READY

A built-in two pipe oil system allows for simple conversion from a one pipe oil system.

### SMART DISPLAY PANEL

Fitted in both internal and external models, Navien's intuitive built-in smart display makes it easy for everyone to get the most from their boiler.



\* An A+ energy rating is achieved when installed with 3 Smart Plus room thermostats.

# Combi



The LCB700 Blue Flame range benefits from Navien's latest heat exchanger technology, which maximises heat transfer for superb efficiencies. Plus, by utilising high quality stainless steel, the heat exchanger is resistant to surface corrosion, maintaining its performance for the lifetime of the boiler.

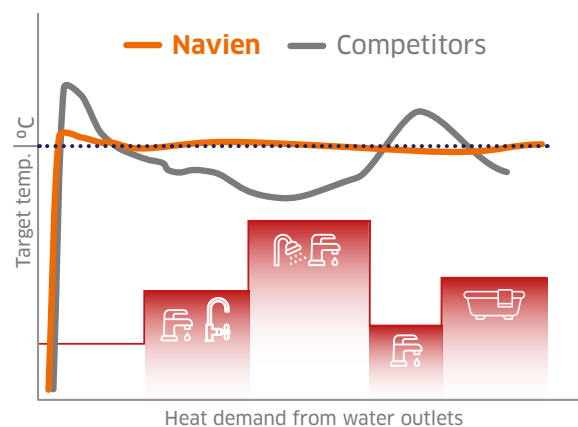


Navien stainless steel heat exchanger

- Outputs of 15-21, 22-29 and 29-36kW
- The only boiler with A+ energy rating\*
- Class leading NOx emissions
- 10 year guarantee as standard
- Clean and modern design
- Built-in control with easy programming and diagnostics
- Compatible with standard flues

## Consistent flow temperatures

Avoid cold showers when someone turns on a tap! Thanks to a built-in Smart Auto Mixing and a Smart Auto Flow Control Valve, the LCB700 Blue Flame delivers consistent flow temperatures across multiple outlets.



The text driven built-in control unit allows management of hot water temperatures accurate to 1°C (30-60°C).

See page 12 for more information.

\* An A+ energy rating is achieved when installed with 3 Smart Plus room thermostats.



## Technical data

|                         |                                                                            | Internal Model           |              |              | External Model  |                 |                 |
|-------------------------|----------------------------------------------------------------------------|--------------------------|--------------|--------------|-----------------|-----------------|-----------------|
|                         |                                                                            | 21                       | 28           | 36           | 21              | 28              | 36              |
|                         | RS / LS / LC                                                               | RS / LS / LC             | RS / LS / LC | RS / LS / LC | RSX / LSX / LCX | RSX / LSX / LCX | RSX / LSX / LCX |
| <b>Heat Output</b>      | 80/60°C                                                                    | 16/21kW                  | 21/28kW      | 29/36kW      | 16/21kW         | 21/28kW         | 29/36kW         |
|                         | 50/30°C                                                                    | 23.0kW                   | 30.3kW       | 39.0kW       | 23.0kW          | 30.3kW          | 39.0kW          |
| <b>DHW (Combi only)</b> | Maximum Flow Rate (±15%)                                                   | 14L/min                  | 18L/min      | 20L/min      | 14L/min         | 18L/min         | 20L/min         |
|                         | DHW Control Range                                                          | 30-60°C (Default 50°C)   |              |              |                 |                 |                 |
|                         | Maximum hot water temperature rise for 90 litres draw off (@max flow rate) | 40°C                     |              |              |                 |                 |                 |
| <b>Flue</b>             | Flue Size                                                                  | Coaxial Plastic Ø 60/100 |              |              |                 |                 |                 |
|                         | Max Horizontal Length                                                      | 20m                      |              |              |                 |                 |                 |
|                         | Max Vertical Length                                                        | 21m                      |              |              |                 |                 |                 |

| <b>Dimensions</b> | Regular/System Model | 470 x 600 x 860mm |      |      | 515 x 673 x 882mm |      |       |
|-------------------|----------------------|-------------------|------|------|-------------------|------|-------|
|                   | Combi Model          | 600 x 600 x 860mm |      |      | 650 x 673 x 900mm |      |       |
| <b>Weight</b>     | Regular              | 58kg              | 59kg | 62kg | 64kg              | 65kg | 68kg  |
|                   | System               | 66kg              | 67kg | 70kg | 72kg              | 73kg | 76kg  |
|                   | Combi                | 91kg              | 92kg | 95kg | 98kg              | 99kg | 102kg |

|                                            |              |            |            |            |            |            |
|--------------------------------------------|--------------|------------|------------|------------|------------|------------|
| <b>ErP Efficiency</b>                      | ErP A (93%)  |            |            |            |            |            |
| <b>ErP Efficiency with Smart Plus (x3)</b> | ErP A+ (98%) |            |            |            |            |            |
| <b>EN Regulation (EN13203-1)*</b>          | ★★★          |            |            |            |            |            |
| <b>NOx Emission Rate</b>                   | 57.2mg/kWh   | 57.2mg/kWh | 63.2mg/kWh | 57.2mg/kWh | 62.5mg/kWh | 63.2mg/kWh |

\* An A+ energy rating is achieved when installed with 3 Smart Plus room thermostats.

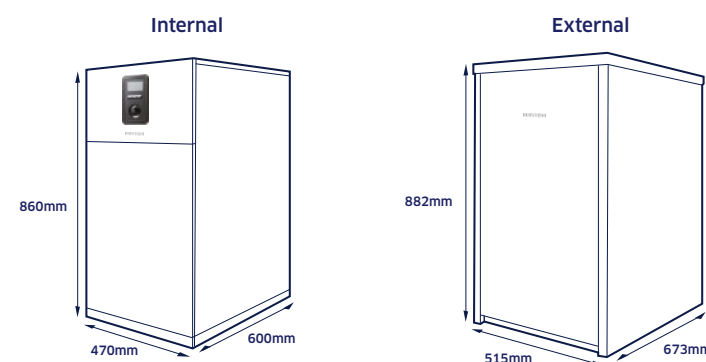
# System

## LCB700 Blue Flame System

Suitable for all sizes of home with a pressurised system, this boiler offers complete flexibility for all installations.

### Features & benefits:

- Internal and external models
- High efficiency circulating pump
- Combined pressure relief valve and condensate drain
- Blue flame technology for maximum efficiencies
- 10 year guarantee
- Factory fitted expansion vessel
- Perfect height for installation between kitchen or utility units



## Technical data

|             |                       | Internal Model           |              |              | External Model  |                 |                 |
|-------------|-----------------------|--------------------------|--------------|--------------|-----------------|-----------------|-----------------|
|             |                       | 21                       | 28           | 36           | 21              | 28              | 36              |
|             |                       | RS / LS / LC             | RS / LS / LC | RS / LS / LC | RSX / LSX / LCX | RSX / LSX / LCX | RSX / LSX / LCX |
| Heat Output | 80/60°C               | 16/21kW                  | 21/28kW      | 29/36kW      | 16/21kW         | 21/28kW         | 29/36kW         |
|             | 50/30°C               | 23.0kW                   | 30.3kW       | 39.0kW       | 23.0kW          | 30.3kW          | 39.0kW          |
| Flue        | Flue Size             | Coaxial Plastic Ø 60/100 |              |              |                 |                 |                 |
|             | Max Horizontal Length | 20m                      |              |              |                 |                 |                 |
|             | Max Vertical Length   | 21m                      |              |              |                 |                 |                 |

| Dimensions | System Model | 470 x 600 x 860mm |      |      | 515 x 673 x 882mm |      |      |
|------------|--------------|-------------------|------|------|-------------------|------|------|
| Weight     | System Model | 66kg              | 67kg | 70kg | 72kg              | 73kg | 76kg |

| ErP Efficiency             | ErP A (93%) |            |            |            |            |            |
|----------------------------|-------------|------------|------------|------------|------------|------------|
| EN Regulation (EN13203-1)* | ★★★         |            |            |            |            |            |
| NOx Emission Rate          | 57.2mg/kWh  | 57.2mg/kWh | 63.2mg/kWh | 57.2mg/kWh | 62.5mg/kWh | 63.2mg/kWh |

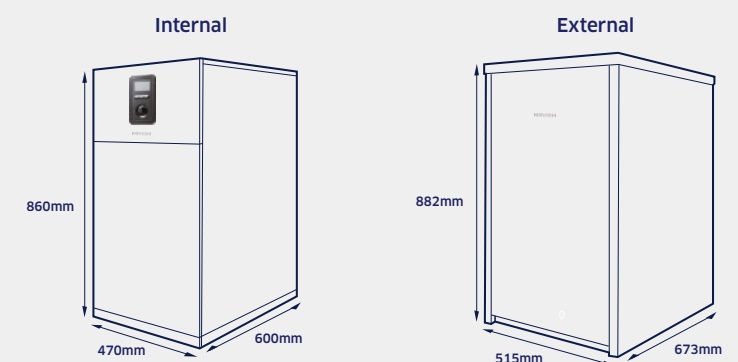
# Regular

## LCB700 Blue Flame Regular

Ideal for upgrading traditional systems, this boiler is well suited to larger households with multiple bathrooms.

### Features & benefits:

- Internal and external models
- Blue flame technology for maximum efficiencies
- Built-in control panel for easy setup and programming
- 10 year guarantee
- Perfect height for installation between kitchen or utility units



## Technical data

|             |                       | Internal Model           |              |              | External Model  |                 |                 |
|-------------|-----------------------|--------------------------|--------------|--------------|-----------------|-----------------|-----------------|
|             |                       | 21                       | 28           | 36           | 21              | 28              | 36              |
|             |                       | RS / LS / LC             | RS / LS / LC | RS / LS / LC | RSX / LSX / LCX | RSX / LSX / LCX | RSX / LSX / LCX |
| Heat Output | 80/60°C               | 16/21kW                  | 21/28kW      | 29/36kW      | 16/21kW         | 21/28kW         | 29/36kW         |
|             | 50/30°C               | 23.0kW                   | 30.3kW       | 39.0kW       | 23.0kW          | 30.3kW          | 39.0kW          |
| Flue        | Flue Size             | Coaxial Plastic Ø 60/100 |              |              |                 |                 |                 |
|             | Max Horizontal Length | 20m                      |              |              |                 |                 |                 |
|             | Max Vertical Length   | 21m                      |              |              |                 |                 |                 |

| Dimensions | Regular Model  | 470 x 600 x 860mm |      |      | 515 x 673 x 882mm |      |      |
|------------|----------------|-------------------|------|------|-------------------|------|------|
| Weight     | Regular Mmodel | 58kg              | 59kg | 62kg | 64kg              | 65kg | 68kg |

| ErP Efficiency             | ErP A (93%) |            |            |            |            |            |
|----------------------------|-------------|------------|------------|------------|------------|------------|
| EN Regulation (EN13203-1)* | ★★★         |            |            |            |            |            |
| NOx Emission Rate          | 57.2mg/kWh  | 57.2mg/kWh | 63.2mg/kWh | 57.2mg/kWh | 62.5mg/kWh | 63.2mg/kWh |

# Controls

## Intuitive control

Designed with end-users and installers in mind, Navien's control panel is fitted on both internal and external models. Its easy to use display allows full control of the boiler's parameters and eliminates the need for an additional thermostat.



### Text Driven

Display shows text to indicate any boiler issues, making them easier and quicker to resolve.

### Two Channel Program

Separate programming options for heating and water temperatures.

### Zone Control

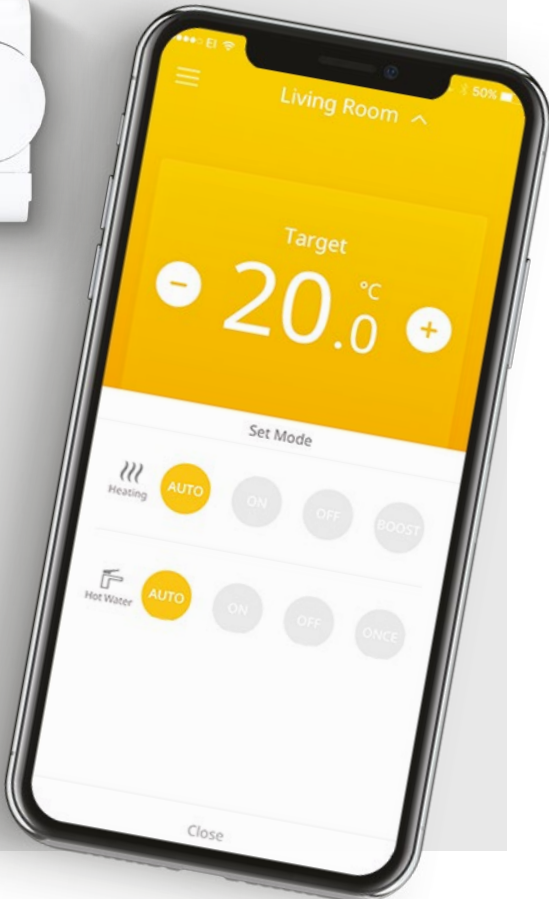
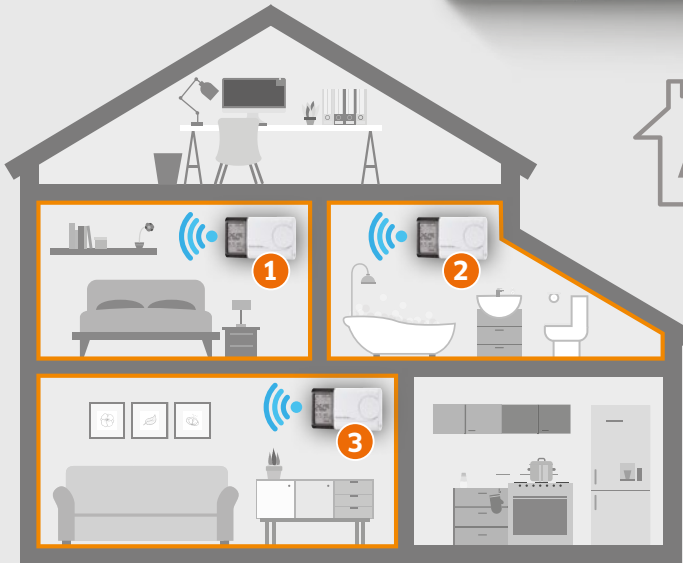
Allows user to set up three areas of the home as 'zones' and control each one independently.

### Fuel Consumption

Shows the amount of energy used and cost at a glance.

## 3-zone ready

For unrivalled energy efficiency and running costs, the NCB range can be connected to Navien's Smart Plus Control Pack to deliver an A+ energy rating. With simple control of up to 3 zones, it delivers the very latest in home comfort.

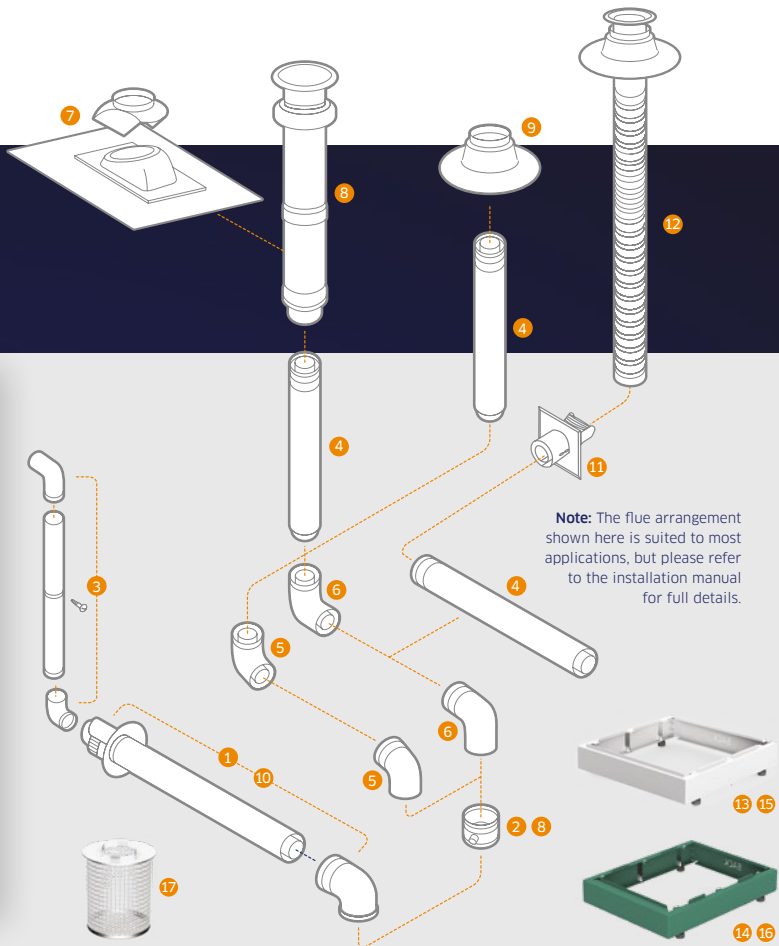


# Flues

## Flue options

The Navien boiler range can be fitted with our 60/100 plastic flue system, and installed horizontally or vertically. Our flues can also extend up to 21 metres in vertical or 20 metres horizontal (maximum length without bends).

- Significant cost saving compared to aluminium flues
- Easier to cut, saving time on site
- Widely available through plumbers' merchants



**Note:** The flue arrangement shown here is suited to most applications, but please refer to the installation manual for full details.

## Flue accessories

| No. | Product description                                      | Product code | Length / Height | Width   | Depth |
|-----|----------------------------------------------------------|--------------|-----------------|---------|-------|
| 1   | Standard flue horizontal kit                             | GXXX002208   | 1000            | 100     | 100   |
| 2   | Vertical flue adaptor                                    | GXXX002220   | 100             | 100     | 100   |
| 3   | Plume management kit 60mm                                | GXXX002199   | 1200            | 60      | 60    |
| -   | Plume Management 1000mm Flue Extension with wall bracket | GXXX002210   | 1000            | 60      | 60    |
| -   | Plume Management Bend 87°                                | GXXX002054   | 170             | 60      | 60    |
| -   | Plume Management Bends 45° 2 in a box                    | GXXX002055   | 150             | 60      | 60    |
| -   | Plume Management Wall Bracket                            | GXXX002202   |                 |         |       |
| 4   | 500mm flue extension                                     | GXXX002195   | 500             | 100     | 100   |
| 4   | 1000mm flue extension                                    | GXXX002196   | 1000            | 100     | 100   |
| 5   | 45° bend                                                 | GXXX002198   | 150             | 100     | 100   |
| 6   | 90° bend                                                 | GXXX002197   | 170             | 100     | 100   |
| 7   | Weather Slate pitched roof                               | GXXX001878   | 220             | 500     | 500   |
| 8   | Roof terminal kit with adapter                           | GXXX002219   | 1350            | 100     | 1000  |
| 9   | Weather slate flat roof                                  | GXXX001879   | 150             | 115/350 |       |
| 10  | Telescopic flue horizontal kit                           | GXXX002204   | 300-460         | 100     | 100   |
| 11  | Ceiling plate flex 60mm                                  | GXXX002005   | -               | 115/350 |       |
| 12  | Flexible flue liner 60mm                                 | GXXX002006   | 12500           | 100     | 100   |
| -   | Flue wall bracket                                        | GXXX002203   | -               | 100     | 100   |
| 13  | LCB Plinth - Regular and System Boiler - Internal        | 30023925A    | 140             | 470     | 600   |
| 14  | LCB Plinth - Regular and System Boiler - External        | 30023926A    | 140             | 470     | 600   |
| 15  | LCB Plinth - Combi Boiler - Internal                     | 30023927A    | 140             | 600     | 600   |
| 16  | LCB Plinth - Combi Boiler - External                     | 30023928A    | 140             | 600     | 600   |
| 17  | Flue Guard - LCB External Boiler                         | 30028256A    | 255             | 230     | 230   |

Measurements in MM

## 4 options to install flue

1. Rear



2. Right side



3. Top



4. Left side



## Service

### What if the boiler breaks down?

- 24hr / 365d manned customer help line
- Attending to customer issues within two working days
- National service engineer coverage

To contact our service team, call:

**0344 332 23 23**

email us at:

**service@navienuk.com**



## Support

### Navien customer support

- Sales support from a qualified member of staff who can advise on installation and maintenance requirements
- National coverage of Technical Engineers who are a phone call away to answer any of your questions
- Navien Installer App for registering and tracking your installations. The App also details product videos, promotions and much more
- Stock available from a number of national and independent plumbers' merchants

To contact our support team, call:

**0344 332 23 23**

email us at:

**info@navienuk.com**



### How do I know Navien will be here in the future?

In 2012, Navien became the 4th largest wall-hung gas boiler manufacturer in the world and reached full production capacity. As a result, we built a new factory in 2013 which could produce 2m boilers (the biggest in the world), allowing us to develop into the UK and European markets.

## Training

### Free training options

- Designed for installing, servicing and maintaining Navien products
- Training carried out by qualified & experienced Navien technical engineers
- Practical, hands-on training workshops
- Choice of training centres across the UK for you to attend
- **Free** of charge, no cost to you or your colleagues to attend (limited time only)

To contact our training team, call:

**0344 332 23 23**

email us at:

**training@navienuk.com**



### Navien's NEW loyalty scheme

**NAVIEN CHOICE**

Installers can now receive great rewards on every gas and oil boiler registered through the Navien Installer App. From grabbing a snack on the go, through to the latest tech and gadgets, our points always give you the best prizes...

**Bank them or redeem them, it's your choice!**



**www.navienchoice.com**

Terms and conditions apply. UK Mainland Only.

\*When purchased as part of either a 'Smart Package' or an 'ErP A+ package'.

