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Installer's guide to **LCB700 condensing oil boilers** Blue flame - bright future

# 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.



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



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





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



**Peace of mind guaranteed** Every Navien oil boiler is guaranteed for up to 10 years.





Conformal coated waterproof PCB board

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



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 boilers are of the highest standard.

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## Navien oil boiler range



### LCB700 Combi

A standout unit that pushes the boundaries of condensing oil 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



.. ..

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

## 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 boilers check the forecast on OpenWeatherMap, ensuring a property maintains a comfortable temperature. and the boiler only uses energy when needed.



## **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 ultralow NOx emissions, resulting in a more economical. futureproof boiler.



#### **GEOFENCING CAPABILITIES**

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

By connecting an LCB700 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.



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





## **COST SAVING** Installation





## Warranty





#### 60/100 plastic flue



5

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

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Our new LBC700 range of oil condensing 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 is a boiler like no other.

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



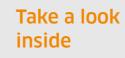


## Hot water temperature control

## Patented technology that delivers outstanding performance.

Navien's patented temperature control technology provides accurate adjustment of LCB700 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).

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



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## 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.





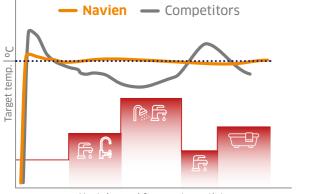
## Combi



- 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 delivers consistent flow temperatures across multiple outlets.



Heat demand from water outlets



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

lavien stainless steel heat exchanger

See page 12 for more information.

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

The LCB700 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.

860mn

Internal

600mm

-

## 16

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F

TIE								
• • •	Internal Model			External Model				
echnical data		28	36	21	28	36		
	RS / LS / LC	RS / LS / LC	RS / LS / LC	RSX / LSX / LCX	RSX / LSX / LCX	RSX / LSX / LCX		
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		39.0kW		
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				
Flue Size			Coaxial P	lastic Ø 60/100				
Max Horizontal Length				20m				
Max Vertical Length				21m				
	80/60°C 50/30°C 50/30°C Maximum Flow Rate (±15%) DHW Control Range Maximum hot water temperature rise for 90 litres draw off (@max flow rate) Flue Size Max Horizontal Length	Caldata       21         RS/LS/LC       RS/LS/LC         80/60°C       16/21kW         50/30°C       23.0kW         Maximum Flow Rate (±15%)       14L/min         DHW Control Range       14L/min         Maximum hot water temperature rise for 90 litres draw off (@max flow rate)       Image         Flue Size       Image         Max Horizontal Length       Image	Internal ModeCaldata2128RS/LS/LCRS/LS/LCRS/LS/LC80/60°C16/21kW21/28kW50/30°C23.0kW30.3kWMaximum Flow Rate (±15%)14L/min18L/minDHW Control Range	Internal Model212836212836RS/LS/LCRS/LS/LCRS/LS/LC80/60°C16/21kW21/28kW29/36kW50/30°C23.0kW30.3kW39.0kWMaximum Flow Rate (±15%)14L/min18L/min20L/minDHW Control Range	Internal Model21283621RS/LS/LCRS/LS/LCRS/LS/LCRSX/LSX/LCX80/60°C16/21kW21/28kW29/36kW16/21kW50/30°C23.0kW30.3kW39.0kW23.0kWMaximum Flow Rate (±15%)14L/min18L/min20L/min14L/minDHW Control Range	Internal ModelExternal Model2128362128RS/LS/LCRS/LS/LCRS/LS/LCRSX/LSX/LCXRSX/LSX/LCX80/60°C16/21kW21/28kW29/36kW16/21kW21/28kW50/30°C23.0kW30.3kW39.0kW23.0kW30.3kWMaximum Flow Rate (±15%)14L/min18L/min20L/min14L/min18L/minDHW Control Range30.5kW30.60°C30.60°C30.60°C30.60°C30.60°CMaximum hot water temperature rise for 90 litres draw off (@max flow rate)14L/min18L/min18L/minFlue SizeCoaxial Postic Ø 60/10040°C50/10050/100Max Horizontal Length1000000000000000000000000000000000000		

Dimensions	Regular/System Model	47	0 x 600 x 860n	nm	515 x 673 x 882mm			
Dimensions	Combi Model	60	0 x 600 x 860n	nm	6	m		
	Regular	58kg	59kg	62kg	64kg	65kg	68kg	
Weight	System	66kg	67kg	70kg	72kg	73kg	76kg	
	Combi	91kg	92kg	95kg	98kg	99kg	102kg	

ErP Efficiency		ErP A (93%)				
ErP Efficiency with Smart Plus (x3)		ErP A+ (98%)				
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

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



## External





## System

## LCB700 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



External

673mm

36

**External Model** 

28

Internal 882mm

36

21

## Technical data

		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			
Heat Output	50/30°C	23.0kW	30.3kW	39.0kW	23.0kW	30.3kW	39.0kW			
	Flue Size	Coaxial Plastic Ø 60/100								
Flue	Max Horizontal Length	20m								
	Max Vertical Length		21m							

Internal Model

28

860mi

21

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 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		
Heat Output	50/30°C	23.0kW	30.3kW	39.0kW	23.0kW	30.3kW	39.0kW		
	Flue Size			Coaxial P	lastic Ø 60/100				
Flue	Max Horizontal Length	Aax Horizontal Length 20m							
	Max Vertical Length	21m							
		1			1				
Dimensions	Regular Model	47	'0 x 600 x 860n	nm	5	15 x 673 x 882m	m		
Weight	Regular Mmodel	58kg	59kg	62kg	64kg	65kg	68kg		
ErP Efficiency		ErP A (93%)							
EN Regulation (EN13203-1)* ***									
NOx Emission R	tate	57.2mg/kWh	57.2mg/kWh	63.2mg/kWh	57.2mg/kWh	62.5mg/kWh	63.2mg/kWh		

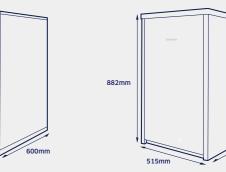




#### Internal

External

673mn



## 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.

## Thermostat comparison

Model	Supplier	Error Message	Geofencing	Fuel Usage	Smart Weather Forecast	Self Learning	PRICE
Smart Plus	NAVIEN	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	£138.00
Nest	Google	×	×	×	<ul> <li>Image: A set of the set of the</li></ul>	~	£185.00
Tado	Tado	×	<ul> <li></li> </ul>	×	<ul> <li>✓</li> </ul>	~	£125.00
Hive	Hive	×	<ul> <li></li> </ul>	×	×	×	£139.00
EVOHOME	Honeywell	×	<ul> <li></li> </ul>	×	×	×	£216.00
vSmart	Vaillant	×	×	×	<ul> <li>✓</li> </ul>	~	£196.00
Easy control	Worcester	<ul> <li></li> </ul>	<ul> <li></li> </ul>	$\checkmark$	<ul> <li></li> </ul>	~	£177.00
One zone	ATAG	<ul> <li>✓</li> </ul>	×	×	<ul> <li></li> </ul>	~	£216.00

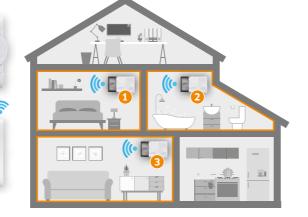
3.Total Oil Consumption

1.2019.08: 033 Litre 2.2019.07: 026 Litre 3.2019.06: 037 Litre 4.2019.05: 028 Litre

## **3-zone ready**

For unrivalled energy efficiency and running costs, the LCB700 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 LCB700 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 both arrangements (maximum length without bends).

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

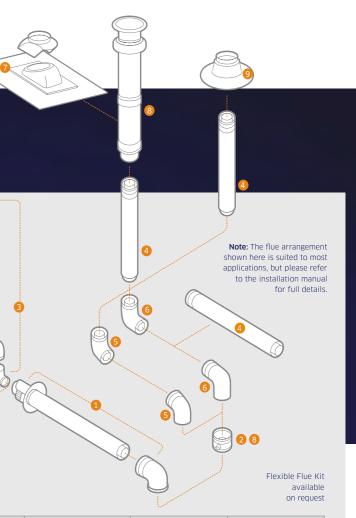
## **Flue accessories**

NO.	Product description	Product code	Length / Height	Width	Depth
1	Standard flue horizontal kit 60/100	GXXX001881	1000	100	100
2	Vertical flue adaptor	GXXX001883	100	100	100
3	Plume management kit 60mm	GXXX001877	1200	60	60
4	500mm flue extension 60/100	GXXX001872	500	100	100
4	1000mm flue extension 60/100	GXXX001873	1000	100	100
4	Telescopic flue horizontal kit 60/100	GXXX001880	300 to 460	100	100
5	45° bend 60/100	GXXX001875	150	100	100
6	90° bend 60/100	GXXX001874	170	100	100
7	Weather Slate pitched roof	GXXX001878	215	500	500
8	Roof terminal kit with adapter 60/100	GXXX001876	1350	100	100
9	Weather slate flat roof	GXXX001879	150	115	/350
10	Balcony kit	GXXX001882	380	60	60
11	Deflector kit	GXXX001884	85	60	60

## 4 options to install flue







## 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



## Training Free training options

- Designed for installing, servicing and maintaining Navien products
- Training carried out by gualified & 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



## 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

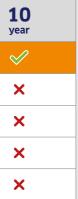
## Warranty & Spares 10 year warranty straight from the box

WARRANTY			
	<b>2</b> year	5 year	
NAVIEN			
COMPANY A	×	~	
COMPANY B	~	×	
COMPANY C	×	~	
COMPANY D	~	×	



## 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.



• Our Technical and Service Engineers carry a range of spare parts on their vans

To contact our Warranty & Spares Team, call:

## 0344 332 23 23

email us at: service@navienuk.com