NCB700 / NCB500 / NCB300



NCB Combi Crossover Boilers.

Putting hot water first.

Navien



Welcome to Navien.

We have been designing and manufacturing reliable and easy to install products for over 45 years, making Navien the fourth largest global boiler manufacturer. From the latest gas and oil-fired technology, to micro-CHP and solar, we are committed to developing highly efficient heating equipment.

Why choose Navien?

UP TO 12 YEARS WARRANTY

Peace of mind guaranteed

Up to 12 years warranty straight from the box.

2M

2 million boilers produced a year

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

A+

A+ energy rating

All Navien products deliver the highest levels of efficiency.

30

Export to over 30 countries

A global leader in heating technology.

H2 20%

20% Hydrogen ready

Navien is committed to achieving the UK government's net zero targets.



World's largest facility

Our state-of-the-art facility in Seotan, South Korea, is the world's largest single-site 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.

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Quality first

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



Conformal coated waterproof PCB board

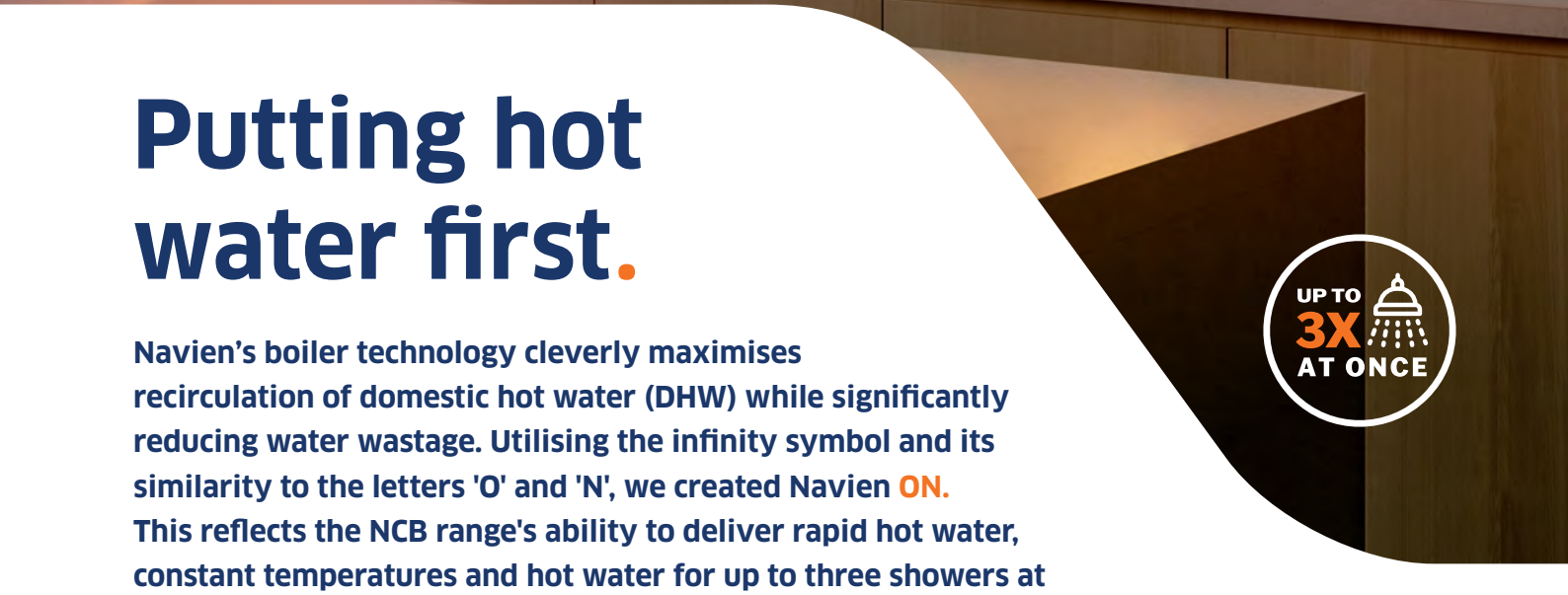
Fully tested

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.



Putting hot water first.

Navien's boiler technology cleverly maximises recirculation of domestic hot water (DHW) while significantly reducing water wastage. Utilising the infinity symbol and its similarity to the letters 'O' and 'N', we created Navien ON. This reflects the NCB range's ability to deliver rapid hot water, constant temperatures and hot water for up to three showers at once. Thanks to Navien ON, the possibilities are infinite.



A change to meet demand.

Navien **ON** helps eliminate the need to wait for hot water, whatever the time of day. This revolutionary new concept allows washing up and showers to take place simultaneously, with consistent hot water always available.

A change for the better.

By putting hot water first, Navien **ON** maximises comfort, alleviating the stress from everyday life. An energy efficient and futureproof method of prioritising hot water performance has arrived – and it's time for installers and homeowners to embrace it.

Advanced combi boilers that meet hot water demand.

Installers have traditionally shunned fitting combi gas boilers in bigger homes, often associating the products with slow water heat up times and low flow rates.

As time goes on and people's lifestyles change, so do the homes in which they live.

- The national UK average for a four-bedroom, three-bathroom dwelling is approximately 100–140m^2.
- Our own findings show 24% of UK properties are over 110m^2 in size, with 41% of homes having three bedrooms.
- Research from insurer Direct Line has revealed that the ideal house should have a bedroom to bathroom ratio of 3:2 – so a property should have two bathrooms for every three bedrooms – in order to maximise its value and desirability.





More bathrooms require more hot water.

With all these bathrooms being put to everyday use, there is clearly going to be a lot of demand for hot water. We know that:

- Every household in the UK uses an average of around 350 litres of water each day.
- Approximately 53% of an average annual combined energy bill is from heating the water for showers, baths and hot water from the tap. (According to the Energy Saving Trust, this costs end users, on average, about £228 a year).

World's first 'crossover' water heating technology.

Navien is the first manufacturer in the world to incorporate its ground-breaking water heating technology into a condensing gas boiler. By utilising the fundamentals of the company's number 1 selling NPE water heater, Navien's new NCB700 **ON**, NCB500 **ON** and NCB300 boilers prioritise incredible levels of hot water performance.





NCB700 ON - The powerful Combi Crossover.

The game-changing NCB700 ON combi gas boiler is the first product of its type capable of delivering hot water to three bathrooms simultaneously.

Shattering all preconceptions of a combi boiler's suitability for large properties, the NCB700 ON cleverly maximises recirculation of domestic hot water (DHW) to significantly reduce water wastage and offer flow rates up to an industry-leading 22 litres per minute (at 35°C temperature rise). The new boiler also features an outstanding turndown ratio of 15:1, is hydrogen-ready and can also achieve ErP A+ when used with Navien's Smart Plus controller. It is available in two models capable of delivering up to 42kW and 54kW of hot water respectively. And with such incredible all-round performance, this new combi boiler has reinvented what is possible in larger family homes.

NCB700 ON savings.

Thanks to a range of features within the NCB700 **ON** boiler, it offers a completely new approach to home heating - with a host of savings on offer. The boiler cleverly maximises recirculation of domestic hot water (DHW) in applications to significantly reduce water wastage. Plus, it is more economical to use than system or regular boilers, as there are no operational costs in terms of preheating or keeping water warm inside a cylinder.

ENERGY
WINNER 2022

Save space

Reclaim 4-5m³ of storage space*
Large family homes no longer need a cylinder, thanks to the outstanding performance provided by the NCB700 **ON**.



*Based on average airing cupboard size

Save water

7,787 litres saved per year



= 78 **Standard baths**

Save gas

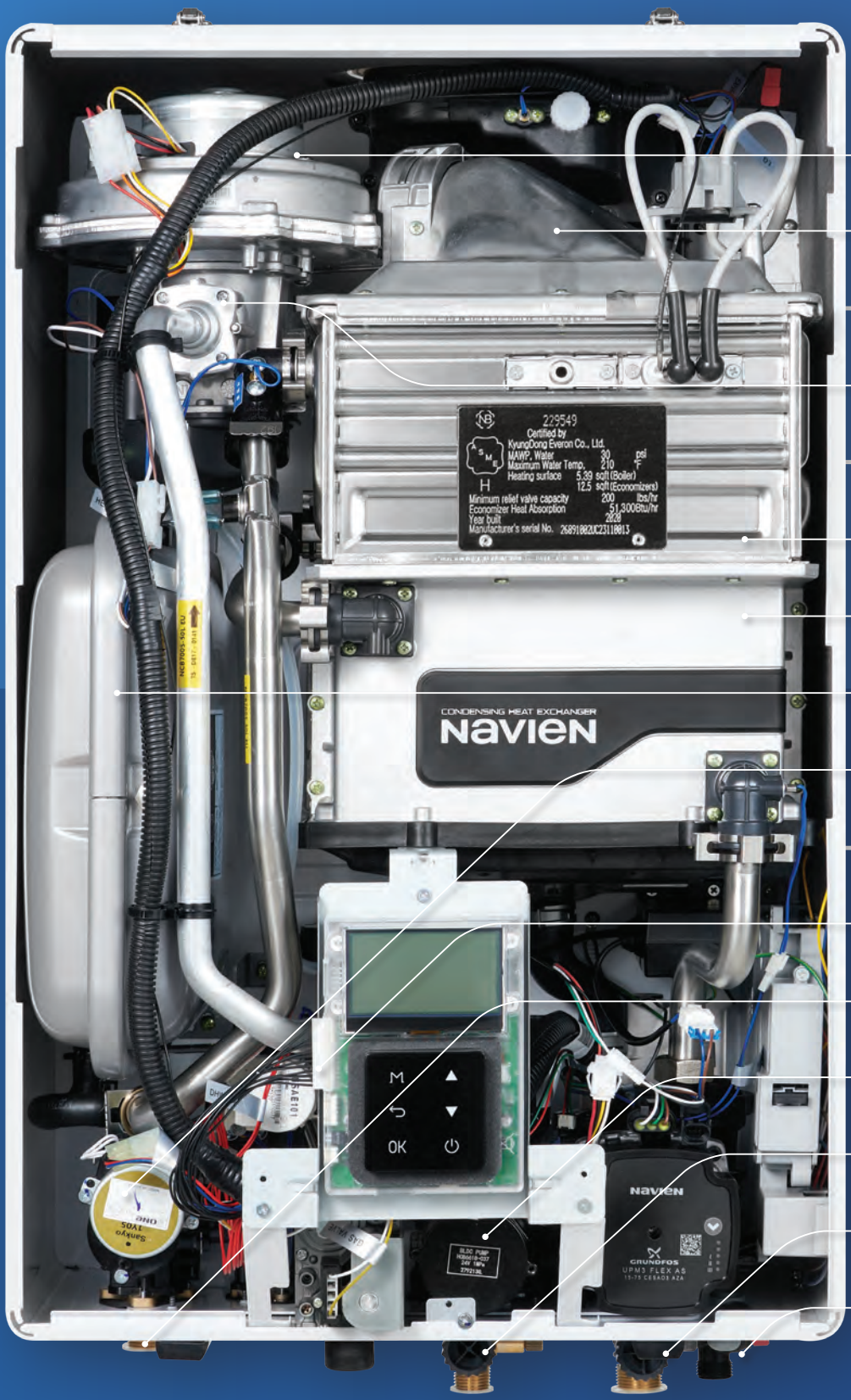
38% saved on average per year



= £950 **Saving**

Data taken from British Gas, March 2023

Inside the **NCB700**



BLDC Fan & Motor

Mixing Chamber

Dual Venturi

STS Primary Heat Exchanger

STS Secondary Heat Exchanger

Expansion Vessel

3-Way Valve

Mixing Valve

Central Heating Flow

Recirculation Pump

DHW Outlet

Central Heating Return

Pressure Relief Valve

UP TO 3X SHOWERS AT ONCE.

The only combi for larger homes



RAPID HOT WATER.

Recirculation of hot water with NaviCirc™





HOT WATER COMFORT.

Constant temperatures guaranteed

Features & benefits.

- Stainless steel heat exchanger for maximum durability
- Class leading energy efficiency
- H2 20% ready technology for futureproofing
- 3-zone ready with Smart Plus controls
- Easy to use built-in digital display panel displays energy usage
- 12-year warranty for complete peace of mind

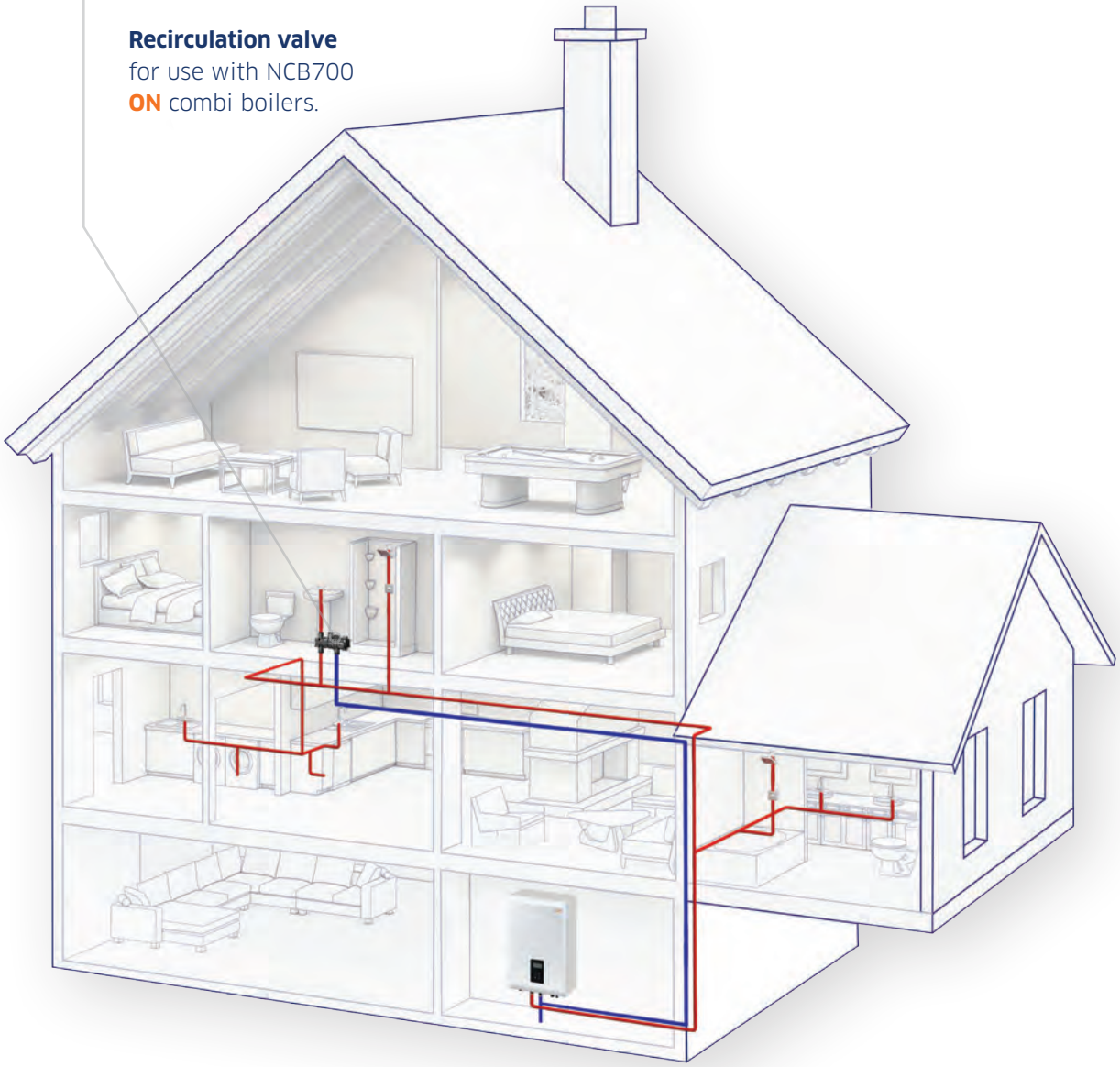




NaviCirc™

NaviCirc™ is a simple plumbing device that uses existing pipework to reduce the waiting time for hot water at the tap, via the addition of a dedicated recirculation return pipe.

Recirculation valve
for use with NCB700 **ON** combi boilers.



How it works.

The NaviCirc™ recirculation valve works best if installed under the furthest accessible fixture away from the boiler. With the NCB700 **ON**'s built-in pump, water circulates through the NaviCirc™ to preheat the hot water. Water is supplied back to the boiler via an additional dedicated recirculation return pipe.

NCB700

The first combi boiler capable of delivering hot water to three bathrooms simultaneously.

Features & benefits:

- ASME-certified stainless steel heat exchanger
- Flow rates of up to 22LPM (at 35°C temperature rise)
- Built-in DHW recirculation pump for super fast hot water delivery
- State-of-the-art flow adjustment valve and auto mixing valve for superb hot water comfort
- Industry-leading turndown ratio of 15:1 for supreme efficiencies
- Easy to use built-in digital display panel
- ErP A+ energy efficiency rating when used with a single Smart Plus room thermostat

A+ | 15:1 TDR | 12 YEARS WARRANTY | H2 20%



Technical data.

		NCB700-2S+/42K	NCB700-3S/54K
Shower rating	Number of showers		
Heat output	Heat output range @ 80/60°C	34.0/3.4kW	34.0/3.4kW
DHW	DHW output range	42.0/3.5kW	54.0/3.5kW
	DHW flow rate @ 25°C temp. rise.	24.1 l/min	31.0 l/min
	DHW flow rate @ 35°C temp. rise.	17.2 l/min	22.1 l/min
	DHW flow rate for kitchen @ 45°C temp. rise.	13.4 l/min	17.2 l/min
Modulation	TDR	12:1	15:1
Flue	Flue size	Coaxial length Ø 60/100	
	Max. horizontal coaxial length Ø60/100	20m	
	Max. vertical coaxial length Ø60/100	21m	
Weight	Lift weight	43kg	46kg
Dimensions	Width x depth x height	440 x 335 x 695mm	
ErP	ErP efficiency	ErP A (94%)	
	ErP efficiency with single Smart Plus	ErP A+ (98%)	
NOx	NOx classification	Class 6	



NCB500 ON - The superb all-rounder.

Fitting comfortably inside a cupboard with ease due to a compact 280mm depth, this energy-saving boiler boasts the same high-quality construction as the NCB700 ON.

It can achieve hot water outputs of up to 41kW while boasting an industry-leading ErP efficiency of 93%. Plus, thanks to Navien's state-of-the-art flow adjustment valve and auto mixing valve, the NCB500 **ON** is able to provide lots of hot water, with no changes in DHW temperature or flow rate. The boiler also features a built-in, text-driven digital display panel; simple to program and use, it includes a two-channel timer and allows energy usage to be monitored with ease.

NCB500

A state-of-the-art boiler that provides lots of hot water, with no changes in DHW temperature or flow rate.

Features & benefits:

- Stainless steel heat exchanger for optimum durability and long-term efficiencies
- Flow rates of up to 16.8LPM (at 35˚C temperature rise)
- State-of-the-art flow adjustment valve and auto mixing valve for superb hot water comfort
- Compact dimensions for easy cupboard fit
- Pre-installed boiler set-up wizard
- ErP A+ energy efficiency rating when used with 3 Smart Plus room thermostats (multizone heating)





Technical data.

		NCB500-1S+/32K	NCB500-2S/37K	NCB500-2S+/41K
Shower rating	Number of showers			
Heat output	Heat output range @ 80/60˚C	26.0/4.5kW	26.0/4.5kW	26.0/4.5kW
DHW	DHW output range	32.0/4.6kW	37.0/4.6kW	41.0/4.6kW
	DHW flow rate @ 25˚C temp. rise.	18.4 l/min	21.3 l/min	23.6 l/min
	DHW flow rate @ 35˚C temp. rise.	13.1 l/min	15.2 l/min	16.8 l/min
	DHW flow rate for kitchen @ 45˚C temp. rise.	10.2 l/min	11.8 l/min	13.1 l/min
Modulation	TDR	7:1	8:1	9:1
Flue	Flue size	Coaxial length Ø 60/100		
	Max. horizontal coaxial length Ø60/100	8m		
	Max. vertical coaxial length Ø60/100	8m		
Weight	Lift weight	34kg		
Dimensions	Width x depth x height	395 x 285 x 680mm		
ErP	ErP efficiency	ErP A (93%)		
	ErP efficiency with Smart Plus x3	ErP A+ (98%)		
NOx	NOx classification	Class 6		



NCB300 - The impressive entry boiler.

The NCB300 gas condensing combi boiler is our entry model, which offers the same hot water comfort, powerful heating and flexible installation options as larger models, but in a compact design.

This combination of features makes the NCB300 an excellent choice for smaller properties where exceptional levels of reliability and DHW performance are the priority. Although this boiler is a pared down version of its larger cousins, it still achieves exceptional levels of hot water performance, due to its high-quality construction and high-tech components. There are three sizes of NCB300 available, with DHW outputs of 28kW, 37kW and 41kW to choose from. Plus, each unit benefits from an LCD control panel for comprehensive management.

NCB300

Achieve exceptional levels of hot water performance, thanks to high-quality construction and high-tech components.

Features & benefits:

- Stainless steel heat exchangers for optimum durability and long-term efficiencies
- Flow rates of up to 16.8LPM (at 35˚C temperature rise)
- Compact dimensions for easy cupboard fit
- Lightweight design
- Easy to use display panel
- ErP A+ energy efficiency rating when used with 3 Smart Plus room thermostats (multizone heating)



28-41 KW

CUPBOARD FIT

WARRANTY 5 YEARS

H2 20%

Technical data.

		NCB300-28K	NCB300-37K	NCB300-41K
Shower rating	Number of showers			
Heat output	Heat output range @ 80/60˚C	24.0/4.2kW	26.0/4.5kW	26.0/4.5kW
DHW	DHW output range	28.0/4.3kW	37.0/4.6kW	41.0/4.6kW
	DHW flow rate @ 25˚C temp. rise.	16.0 l/min	21.3 l/min	23.6 l/min
	DHW flow rate @ 35˚C temp. rise.	11.5 l/min	15.2 l/min	16.8 l/min
	DHW flow rate for kitchen @ 45˚C temp. rise.	9.0 l/min	11.8 l/min	13.1 l/min
Modulation	TDR	7:1	8:1	9:1
Flue	Flue size	Coaxial length Ø 60/100		
	Max. horizontal coaxial length Ø60/100	8m		
	Max. vertical coaxial length Ø60/100	8m		

Weight	Lift weight	29kg	33kg
Dimensions	Width x depth x height	395 x 285 x 680mm	

ErP	ErP efficiency	ErP A (93%)
	ErP efficiency with Smart Plus x3	ErP A+ (98%)
NOx	NOx classification	Class 6

Navien Multikit.

Navien's Multikit allows for accurate boiler monitoring and diagnosis based on live data. Use it to check product information, error logs and service history, as well as customise settings according to a user's needs and the property type.



Compatible with NCB700 **ON**, NCB500 **ON**, NCB300 and LCB700.

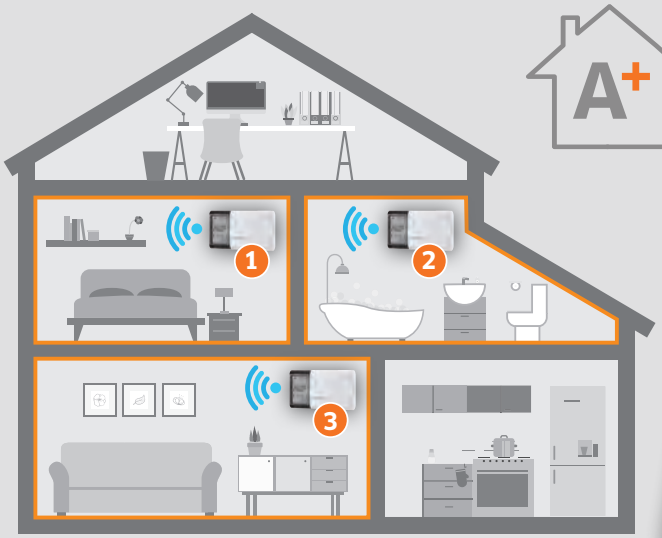
Controls.
3-zone ready.

- Smart Plus delivers unrivalled energy efficiency and running costs
- Weather forecasting and geogfencing capabilities to optimise end user comfort
- Three-zone ready with smartphone connectivity and dedicated app



To download on an Android device:

To download on an Apple device:



A+



NAVIEN SMART-PLUS

Geofencing capabilities.



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

By connecting an NCB gas 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 levels of comfort.

For more information visit:
www.navien.co.uk

Smart forecast.



Come rain or shine, our boilers will respond intuitively to the current weather conditions with Smart Plus.*

When connected to Wi-Fi, our boilers check the forecast on Open-WeatherMap, ensuring a property maintains a comfortable temperature, and the boiler only uses energy when needed.

For more information visit:
www.navien.co.uk

*Requires Navien Smart Plus and a WiFi connection

Service.

What if the boiler breaks down?

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

0344 332 23 23

www.navien.co.uk/support/book-a-service

Email us at:
service@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 2 million boilers annually (the biggest in the world), allowing us to develop into the UK and European markets.

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

www.navien.co.uk/support

Email us at:
info@navienuk.com



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
Book online
www.navien.co.uk/training

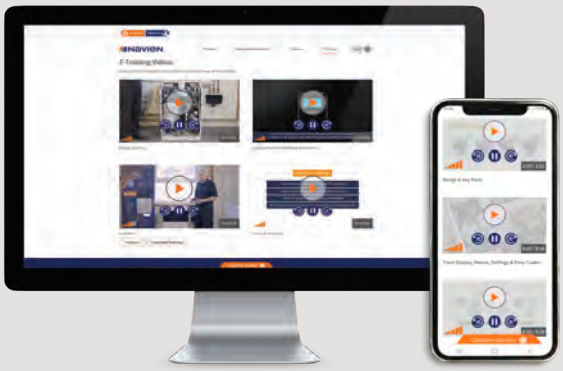


Check our socials for our mobile training vehicle's location.

e-Training.
Go digital with Navien.

- Tailor-made online training videos
- Presented by qualified & experienced Navien technical engineers
- Practical, hands-on training workshops
- Complete the videos at a time that suits your schedule
- Receive a complimentary gift upon completion of the training course

Register for an online account at:
www.navien.co.uk/training/e-training





*Terms and conditions apply. Reward information is based on diamond tier benefits.

Install more. Get more.

Sign up for Navien Choice Plus today and get more at every level:
www.navienchoiceplus.com

Product comparison.

Model	NCB700	NCB500	NCB300
Line-up	**42kW & 54kW** with TDR of upto 15:1	**32kW, 37kW & 41kW** with TDR of upto 9:1	**28kW, 37kW & 41kW** with TDR of upto 9:1
CH range	**34kW** (3.4kW -34kW)	**26kW** (4.5kW - 26kW)	**24kW - 26kW** (4.2kW - 26kW)
	✓	-	-
	-	✓	✓
ON technology	✓	✓	-
Navi Fill	✓	✓	-
Full text display	✓	✓	-
Cupboard fit	-	✓	✓
ErP efficiency	94%	93%	
Achieves ErP A+ with:	1 x Smart Plus	3 x Smart Plus	
H2 20% ready	✓		
Warranty	12 years	10 years	5 years
Comes with	NaviCirc™ Kit LPG Conversion Kit	LPG Conversion Kit	LPG Conversion Kit
Accessories	**Pipe cover and stand off kit** (Purchased separately)		



Case Study

A successful NCB700 ON installation in East Sussex.

A smart-looking boiler with the technology to match

For a hectic East Sussex family home, the customer needed a boiler that would keep up with the day-to-day demands of a family of five – and help them make more of their much-needed space. The Navien Combi Crossover NCB700 ON was recommended by our installer for its unmatched technology, delivering consistent, endless hot water, together with NaviCirc™ smart recirculation, for up to three showers at once, at any time.



Location previously used for hot water cylinder now available for storage.

Being ON makes a difference

The unrivalled brilliance of **ON** was evidenced from the get-go, with hot water available in under 10 seconds thanks to NaviCirc™ recirculation. Its specially designed valve maximises hot water supply and minimises wastage, with up to 7,787 litres of water saved per year, while also saving space thanks to its compact size.

Combined with the NCB700 **ON**'s intelligent, user habit-learning technology, the customer had no issues simultaneously using all hot water outlets, and were also surprised by its quietness, particularly during switch-on. Additionally, the Smart Plus control panel facilitated complete control throughout their home.

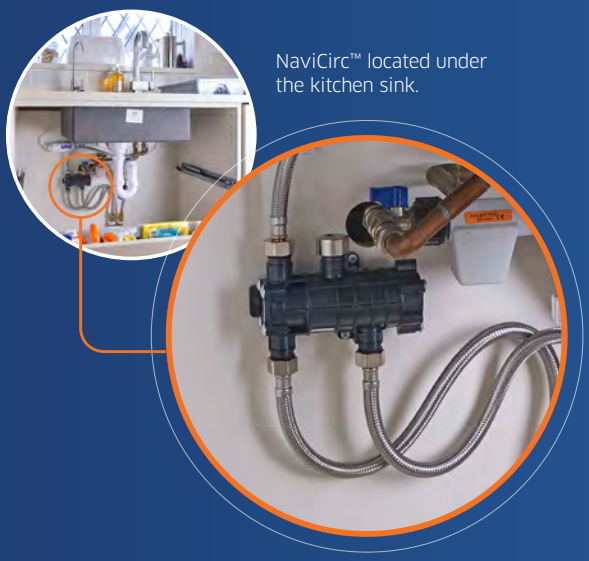


Space-saving, home-changing

The space-saving benefits of the NCB700 **ON** allowed the installer to maximise the size of the landing area by making better use of the airing cupboard, as a hot water cylinder was no longer required.

Wait-free hot water

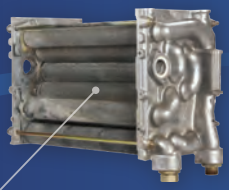
Ultimately, both installer and customer were highly satisfied with the NCB700 **ON**. Beginning with a seamless installation, increased storage space within the home was successfully achieved, while the household also benefits from the unmatched hot water availability of **ON** and NaviCirc™. With a 12-year warranty, too, the NCB700 **ON** provides lasting peace of mind.



NaviCirc™ located under the kitchen sink.

If you have high hot water demand at home, choose a boiler that's up to the challenge, every time. Discover more of the NCB700 ON's benefits here: navien.co.uk

Navien Condensing heat exchanger history.



1988

KD Navien - Nefit Buderus Alliance for Research and Technology developed the first Aluminum Condensing heat exchanger.

After years of development, the design is still widely used throughout Europe.

1995

Navien developed the world's first stainless fin-tube type condensing (secondary) heat exchanger in 1995.



1998

The Condensing heat exchanger receives CE mark certification. KD Navien is the first Asian manufacturer to achieve this standard.

2005

Developed a full STS Condensing heat exchanger, including plate heat exchanger.

This heat exchanger maximises the condensing effect by increasing the total heat surface, Navien achieves the world's highest level of heating efficiency and ensure excellent long term durability.



2006

ASME certified STS Condensing heat exchanger. It provides high performance and durability through dual stainless steel heat exchanger design.



2020

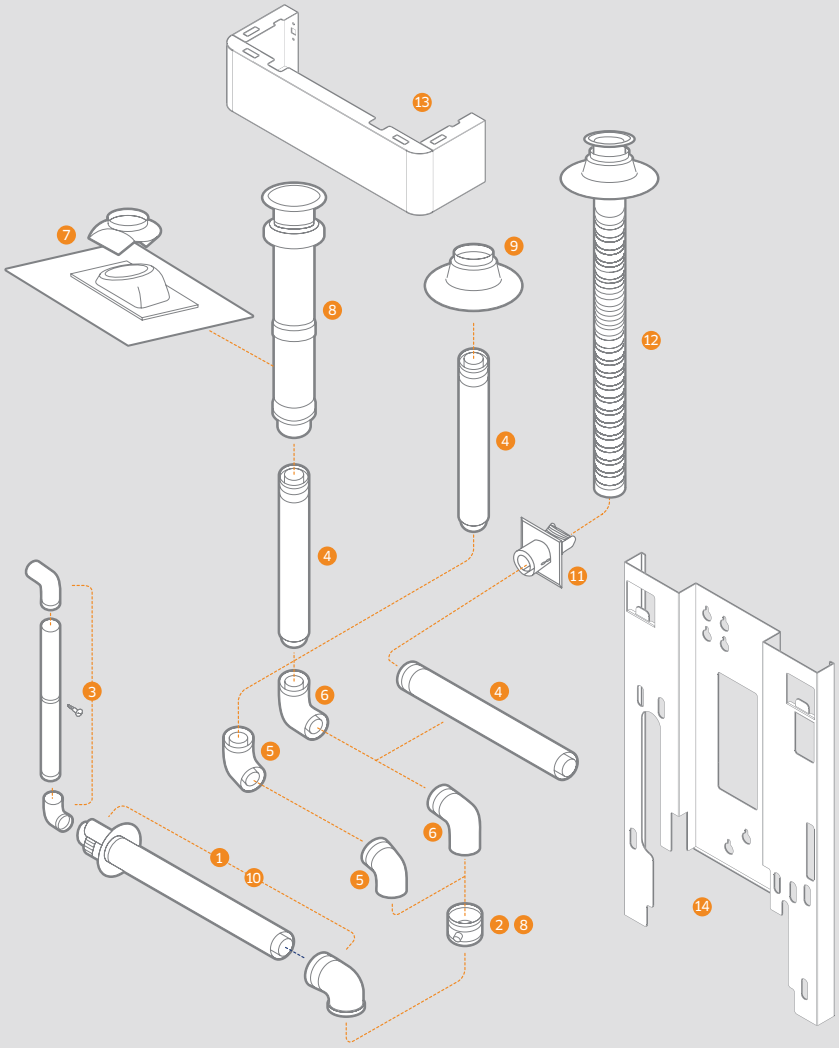
An innovative, more compact STS Condensing heat exchanger. It continues to offer high levels of performance and durability.

Flues.

Extensive 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 meters in vertical or 20 meters 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 mm	Width mm	Depth mm
1	Standard flue horizontal kit	GXXX002208	1000	100	100
2	Vertical flue adaptor	GXXX002219	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	GXXX002220	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	NCB700 ON Pipe Cover	30026295A	100	420	295
-	NCB300/500 Pipe Cover	30031239A	100	375	250
14	NCB700 ON Stand Off Kit	30027162A	695	440	40
-	NCB300/500 Stand Off Kit	30031242A	680	395	50



navien

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Guildford, GU2 8XH



The NCB boiler family -
maximising hot water comfort.

V1:3:23