

moving towards a low carbon future, whatever the application

REMEHA COMMERCIAL

Remeha Commercial – providing the nation with affordable, sustainable heating

Remeha Commercial has been producing reliable, ethical, energy efficient commercial heating and hot water solutions since 1935. Today, Remeha Commercial remains committed to helping create a more sustainable future as we continue to innovate with new products that will support businesses in meeting environmental legislation. We work closely alongside consultants and contractors to produce the very best system design that will deliver the most usable energy according to the specific requirements of each individual project. We offer the experience, knowledge, products and service that will support you along the way.

Our latest technologically advanced heating and hot water systems challenge existing conventional heating efficiencies with the new, higher, easily attainable level of 107 per cent NCV at 82/71°C flow and return temperatures. These are now identified by the new Remeha Blue Efficiency icon. Also in the Blue Efficiency range are our latest 'renewable ready' condensing boilers designed for higher efficiencies on bivalent systems, and our new smart controls that maximise the efficiency of Remeha boilers. It is our hope that this new range will help safeguard our common future and that of the next generation.



See them in action on Remeha TV
www.remeha.co.uk/remehatv

Energy efficiency to help move the nation towards a low carbon future

According to the Building Research Establishment, 60 per cent of the buildings that will be standing in 2050 are already built and 40 per cent predate 1985, the year that building regulations for fuel and power were first introduced under Part L. In such buildings, refurbishment and renovation projects are often the only affordable and replicable option to improving energy efficiency. Flexible, space saving and easy to install, Remeha Commercial high efficiency boilers and 'super condensing' heating and hot water systems are helping UK businesses and organisations save energy and work towards the government's steep carbon reduction target of 80 per cent by 2050 from base 1990 figures.

The best of low carbon heating technology

In new build, the Energy Performance of Buildings Directive includes a target to make all homes and buildings zero carbon by 2016. Remeha Commercial's popular range of high performance biomass boilers continues to lead the field for low carbon heating, now with new touchscreen and remote servicing options. With over 450 installations in the UK, our 100kW biomass boiler was chosen to illustrate the best of low carbon technology in the BREEAM 'Excellent' rated Think Low Carbon energy training centre at Barnsley College.

Energy Efficiency Financing

Investing in energy efficient heating makes sound business and environmental sense. Remeha Commercial now offers a financing scheme to help your organisation upgrade to our approved energy efficient products to reduce running costs, greenhouse gas emissions and energy waste. Remeha Commercial's Energy Efficiency Financing Scheme, set up by the Carbon Trust and Siemens Financial Services, helps ease the initial outlay with payments offset against the calculated energy savings so that the products not only pay for themselves in the first year, but continue to produce savings on a yearly basis.



Remeha Commercial – innovating and working with you for a greener, cleaner future

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Remeha Commercial's cleaner, greener Blue Efficiency range helps organisations meet their environmental concerns and improve profitability with systems that offer a higher efficiency level of 107 per cent NCV at 82/71 °C flow and return temperatures. Smart system design and sophisticated Remeha controls can also maximise the efficiency of our high efficiency condensing boilers, particularly those with a secondary return option, to Blue Efficiency levels.



Tread Lightly is Remeha Commercial's promise to produce in the most ethical, sustainable way the most environmentally-friendly heating products that improve quality of life. As part of Tread Lightly, we work with not-for-profit and profit-for-purpose organisations such as ClimateCare to tackle climate change through a range of carbon offsetting programmes that address poverty and sustainable development in the world's least developed countries.



SUPER CONDENSING
107% NCV ≥ 82/71 °C

HIGH EFFICIENCY
108.9% NCV ΔT 50/30°C

FULLY MODULATING
BOILER CONTROL

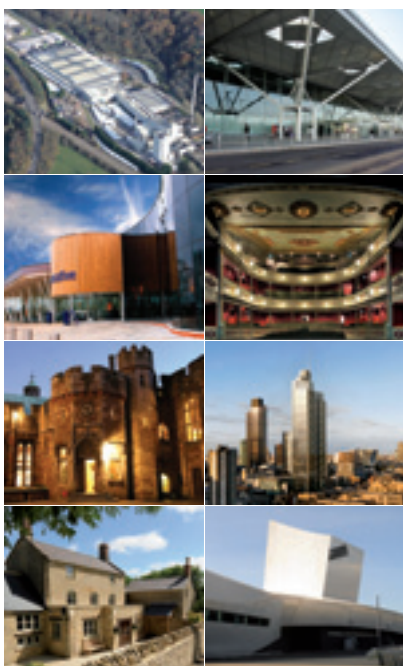
PREMIX BURNER
CLEAN COMBUSTION

ULTRA LOW NOx
BREEAM EXCELLENT

RECYCLABLE
MATERIALS

Remeha heating and hot water systems Safeguarding our common future, whatever the application

Global climate change is the most pressing environmental issue of our time. Remeha Commercial's unique range of energy efficient condensing boilers, 'super condensing' heating systems and renewable solutions can help the UK move to a low carbon future.



FIND OUR CASE STUDIES

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From historic old castles to iconic new commercial structures, from housing to hospitals, schools to universities, public buildings to private estates, Remeha Commercial consistently delivers the most reliable, sustainable and energy saving heating solution, whatever the application.

At Remeha Commercial, we help make businesses and organisations more comfortable and energy efficient with our unique offering of 'super condensing' heating systems, high efficiency condensing boilers and high performance biomass boilers. Our aim is to help you significantly reduce your greenhouse gas emissions from heating whilst achieving rapid financial payback.

Advanced Technology Controls

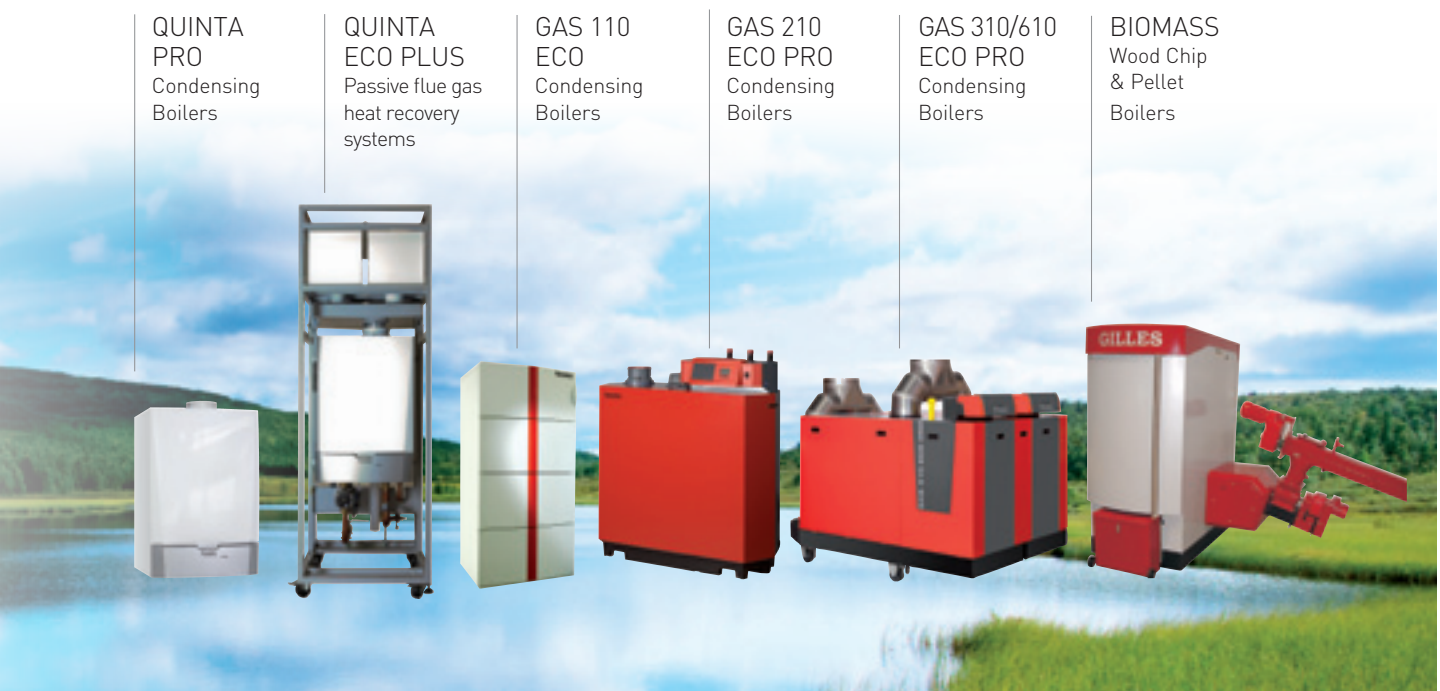


Maximise still further the efficiency of your energy saving Remeha boilers by adding the Remeha iSense Pro

advanced technology control. This smart control will help your boilers deliver more usable energy and reduce carbon emissions.

New for our domestic biomass boiler range, the Remeha Touch offers touchscreen and remote servicing options, making the biomass boilers even easier and more flexible to operate.

Gas 110 ECO Condensing Boilers	Gas 210 ECO PRO Condensing Boilers	Gas 310/610 ECO PRO Condensing Boilers	P Series Pressure Jet	Biomass Wood Chip & Pellet Boilers
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QUINTA
PRO
Condensing
Boilers

QUINTA
ECO PLUS
Passive flue gas
heat recovery
systems

GAS 110
ECO
Condensing
Boilers

GAS 210
ECO PRO
Condensing
Boilers

GAS 310/610
ECO PRO
Condensing
Boilers

BIOMASS
Wood Chip
& Pellet
Boilers



Passive flue gas heat recovery
heating and hot water system



Quinta ECO PLUS

Super Condensing:
107% NCV ΔT 82/71°C
(99% GCV)

**PFGHR technology
48% lower emissions than 'best practice'**

DHW heating system configuration	Gas Usage (KWh)	Electricity and gas cost (£)	CO ₂ emission (kg)
Combi boiler plus PFGHR GasSaver	2456	102	520
Theoretically ideal gas system	2852	114	587
Condensing regular boiler with twin coil solar store and evacuated tube solar collectors	3200	145	725
Non-storage combi boiler	3932	161	824
Condensing regular boiler plus cylinder	4832	197	1009
Typical Existing System	5946	241	1239



See the Quinta Eco Plus in action on Remeha TV www.remeha.co.uk/remehatv

High efficiency Quinta Pro boiler complete with Eco Plus passive flue gas heat recovery units

Quinta ECO PLUS

QEP 65: 12.0-65.0kW

QEP 90: 14.1-89.5kW

QEP 115: 16.6-114.0kW

The Remeha Quinta Eco Plus (PFGHR) is a full time super condensing system that improves operational efficiency over existing condensing boiler installations for space heating applications by up to 15% of the gross energy input to a seasonal efficiency <107% NCV (99% GCV) < 82/71°C.

Incorporating Passive Flue Gas Heat Recovery (PFGHR) technology, the Remeha Quinta Eco Plus recovers normally wasted energy equivalent to up to 15% of the gross input energy. This full time condensing

environment is achieved irrespective of primary circuit temperatures, making it the perfect solution for a wide range of commercial heating requirements.

The Remeha Quinta Eco Plus (PFGHR) consists of the market-leading Remeha Quinta Pro boiler and the Eco Plus, an advanced Passive Flue Gas Heat Recovery system that uses a heat exchanger together with an internal 'heatstore'.



SUPER CONDENSING
107% NCV $\geq 82/71^{\circ}\text{C}$



**FULLY MODULATING
BOILER CONTROL**



**PREMIX BURNER
CLEAN COMBUSTION**



**ULTRA LOW NOx
BREEAM EXCELLENT**



**RECYCLABLE
MATERIALS**

EFFICIENCY RESULTS	
Temperatures $^{\circ}\text{C}$ Flow/Return	Efficiency in % GCV
80/63	98.8
80/63	99.1
80/63	99.4
80/63	99.3
53/49	99.9
53/49	99.9
53/49	99.9
80/60	99.9
Average Efficiency	99.4625

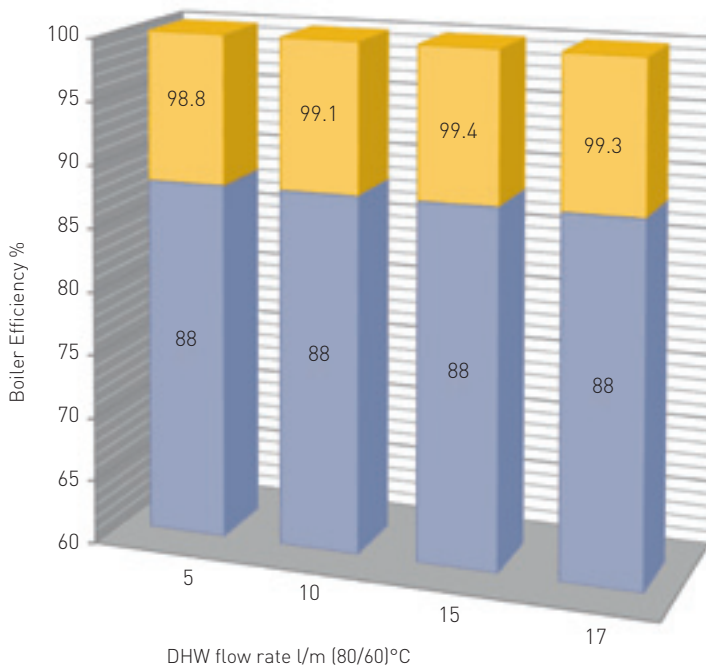
Efficiency summary

Independent tests have demonstrated that the use of Passive Flue Gas Heat Recovery improved boiler performance in all areas of operation with no undesirable side effects. Across the full range of tests, the Quinta Eco Plus achieved an average efficiency of 99.5% [GCV].

This represents a significant energy saving when compared to the published efficiency figure of 88% at 80/60 $^{\circ}\text{C}$ (GCV) for the standard condensing boiler.

DATA LOG FOR REMEHA QUINTA ECO PLUS PASSIVE FLUE GAS HEAT RECOVERY TEST

Heating Circuit Temperatures		Room Temp	Gas Rate	Calorific Value	Boiler Output	Standing pressure	Working pressure	Flow Rate	Standard Condensing Boiler	Quinta Eco Plus
Flow $^{\circ}\text{C}$	Return $^{\circ}\text{C}$	$^{\circ}\text{C}$	m^3/minute	MJ/m^3	kW	mbar	mbar	l/min	% Efficiency	% Efficiency
80	63	20	0.167	38.8	100	20	17	5	88	98.8
80	63	20	0.167	38.8	100	20	17	10	88	99.1
80	63	20	0.167	38.8	100	20	17	15	88	99.4
80	63	20	0.167	38.8	100	20	17	17	88	99.3



■ Quinta Eco Plus ■ Standard Condensing Boiler
All efficiencies shown in GCV

QUINTA ECO PLUS RANGE

- Super condensing
<107% NCV (99% GCV) <82/71 $^{\circ}\text{C}$
- Improves operational efficiency
by up to 15% over existing
condensing boilers
- Pre-plumbed and configured
for ease of installation
- Modular design provides
flexible, scalable solution
- Compact, space saving design



CASE STUDY
HEALTHCARE BUILDINGS



Hatch Mill Nursing Home - Farnham Surrey

Installation



Quantity:
3

Product:
Quinta ECO PLUS 65

Description:
Passive flue gas
heat recovery heating
and hot water system



Remeha's affordable, super condensing heating system reaps dividends for nursing home

When Geoff Berry of Touchstone Energy Services was commissioned to carry out an energy survey at Hatch Mill Nursing Home in Farnham, Surrey, he recommended immediately replacing the existing atmospheric boilers with three Remeha Quinta Eco Plus 65 systems.

This ultra efficient, super condensing heating system consists of the market-leading Remeha Quinta Pro, a fully modulating, commercial condensing boiler and the Eco Plus, a passive flue gas heat recovery device, now recognized in Building Regulations. The Quinta Eco Plus recovers waste energy up to 15 per cent of the gross input, offering a new level of full time attainable efficiency of up to 99 per cent GCV at 82/71°C flow and return temperatures for existing and new buildings.

At Hatch Mill, the recovered energy pre-heats the incoming boosted cold water feeding the DHW system. This means that less energy is needed to heat the water, lowering fuel bills

for the nursing home as well as their carbon emissions. So significant are the savings that Abbeyfield, the owners of the nursing home, are now planning to install more Quinta Eco Plus systems in their second site.

For Phil Kearn of Hydro Heating Solutions Ltd, installation of the three Quinta Eco Plus systems was quick and easy as they are prefabricated and configured in a wheel-in enclosure. "It's compact too," said Phil Kearn, "which not only facilitates installation but also leaves more space in the plant room." With its small dimensions and modular design, the Quinta Eco Plus provides flexible solutions to meet the individual requirements of a building.

"It's win-win for us at Hatch Mill," added Sally Tidy of Abbeyfield, the not for profit charity that manages Hatch Mill nursing home. "We save on energy bills whilst doing our bit for the environment - and all with rapid financial payback. My advice would be, why wait for the boiler to break when you can reap financial and environmental benefits now?"



SUPER
CONDENSING™

CASE STUDY
COMMERCIAL BUILDINGS



Knauf Insulation - Cwmbran South Wales

Installation



Quantity:
2

Product:
Quinta ECO PLUS 115

Description:
Passive flue gas
heat recovery heating
and hot water system



Knauf Insulation backs Remeha Quinta Eco Plus for maximum energy efficient heating

Installation company Knauf Insulation recently took a leaf out of its own energy saving book when it upgraded its heating with Remeha's super condensing Quinta Eco Plus heating systems, providing an impressive new level of energy efficient heating for its Welsh headquarters.

Knauf Insulation's 30-year-old existing boilers were wasteful and inefficient compared with modern condensing boilers. Yet, even with high efficiency boilers there is typically energy waste of around 20 per cent when boilers are run at high loads and high temperatures.

Knauf Insulation chose to leapfrog current heating technology and install two Remeha Quinta Eco Plus 115 passive flue gas heat recovery heating systems to ensure maximum condensing at full output at all times, and a new level of full time attainable efficiency of up to 99 per cent GCV at 82/71°C flow and return temperatures.

The energy saving benefits for Knauf Insulation from its new Quinta Eco Plus heating systems will be considerable, with an estimated reduction in energy use for heating of up to 40 per cent and a rapid financial payback on the new system in the next eighteen months. The refurbishment has also brought an unanticipated benefit in the shape of a whole new office for Knauf Insulation, thanks to the small footprint of this ground-breaking new system.

"The Quinta Eco Plus is pre-plumbed and configured so installation came down to a simple wheel-in and connect fitting, which meant less downtime for Knauf Insulation when we changed over to the new system," said Andy Norman of MII Engineering Ltd.

"I've already recommended the Quinta Eco Plus for a number of other refurbishment projects. From my point of view, it's simple to install and hugely space saving – and for businesses, it will bring enormous energy savings which can only be welcome."

QUINTA PRO

High efficiency wall hung condensing boiler with ultra low NOx emissions



Quinta PRO

High efficiency:
108.9% NCV ΔT 50/30°C
(98.1% GCV)



SKID MOUNTED SYSTEM

High efficiency compact condensing boiler with ultra low NOx emissions - for single and multiple (modular/cascade) configurations

Quinta PRO

QP 30: 8.0-31.4kW

QP 45: 8.0-43.0kW

QP 65: 12.0-65.0kW

QP 90: 14.1-89.5kW

QP 115: 16.6-114.0kW

The Remeha Quinta Pro is a market-leading compact condensing boiler range that may be wall hung or installed free standing on a suitable frame. The one piece, cast aluminium heat exchanger and other major components are contained within a sealed air box.

This forms the main boiler casing with a removable front section for maintenance purposes. All electrical and electronic controls are contained within the instrument panel mounted behind the drop-down lower front panel and also the electrical housing mounted on the inside right panel.

The combined flue gas outlet and combustion air inlet are mounted on the top of the boiler, with the flow, return, gas and condensate connections located at the bottom.

The boiler is suitable for room-sealed or open flue applications. It has been designed for central heating and indirect hot water production. It must be installed on a fully pumped system.



HIGH EFFICIENCY
108.9% NCV ΔT 50/30°C



FULLY MODULATING
BOILER CONTROL



PREMIX BURNER
CLEAN COMBUSTION



ULTRA LOW NO_x
BREEAM EXCELLENT



RECYCLABLE
MATERIALS

QUINTA PRO RANGE

	QP 30	QP 45	QP 65	QP 85	QP 115	
GENERAL						
SEDBUK 'A' Rated	✓	✓	✓	n/a	n/a	
Wall Hung	✓	✓	✓	✓	✓	
Nominal Output 80°C/60°C	kW	8.0 - 29.3	8.0 - 40.0	12.0 - 61.0	14.1 - 84.2	16.6 - 107
Nominal Output 50°C/30°C	kW	8.9 - 31.4	8.9 - 43.0	13.3 - 65.0	15.8 - 89.5	18.4 - 114
Nominal Input GCV	kW	9.1 - 33.3	9.1 - 45.7	13.6 - 68.8	16.2 - 95.3	19.1 - 122.4
Weight (dry)	kgs	53	53	60	67	68
NO _x Emissions (O ₂ @ 0% dry)	mg/ kWh	37	37	32	29	35
Noise Levels (at 1m from boiler)	dBA	38	45	45	52	51
Max Operating Pressure	bar	4.0	4.0	4.0	4.0	4.0
Min Operating Pressure	bar	0.8	0.8	0.8	0.8	0.8
Min Operating Pressure (Open Vented)	bar	0.3	0.3	0.3	0.3	0.5
Fully Condensing	✓	✓	✓	✓	✓	
CONTROL OPERATION						
Fully Modulating	✓	✓	✓	✓	✓	
On/Off	✓	✓	✓	✓	✓	
FUEL OPTIONS						
Natural Gas	✓	✓	✓	✓	✓	
LPG	✓	✓	✓	✓	✓	

QUINTA PRO RANGE

- High efficiency: 108.9% NCV ΔT 50/30°C (98.1% GCV)
- Boiler control:
 - Modulating (18-100%)
 - On/off (18-100%)
- Premix burner for clean combustion
- Low NO_x
- Quiet operation <52 dBA
- Digital display
- Data file for storing information
- Remote signalling options
- Cast aluminium heat exchanger
- Easy maintenance
- Built-in calorifier control
- Options for modular control and/or weather compensator
- Control 0-10V signal or volt free
- PC connection
- Advanced boiler control, Remeha's 'abc®', for reliable heat delivery
- Conventional or "room-sealed" flue options
- Cascade packages for up to 6 boilers
- Quick and easy installation
- Space saving
- For use with natural gas and L.P.G. Quinta Pro 90 requires a conversion kit (supplied with the boiler)
- LED illuminated air box
- Suitable for pressurised flue systems



Berkeley Castle - Gloucestershire

Installation



Quantity:
5

Product:
Quinta PRO 115

Description:
Market-leading high efficiency compact condensing boiler



Where past meets present: bringing welcome warmth to Berkeley Castle

Standing proud on the Welsh Marches is the beautiful Norman fortress of Berkeley Castle in Gloucestershire. Dating back to the 12th century, Berkeley Castle is one of the most remarkable buildings in Britain and possibly the most outstanding example of medieval domestic architecture in the country.

So when contractors Keyplan Engineering Limited, Environmental and Building Services Engineers, were approached to replace the heating system, as part of a general refurbishment of the castle, this was no small challenge. The castle has been home to the Berkeley family for nearly 900 years, heated by old boilers fitted in the 1920s. Not only were these ineffective at supplying warmth throughout the huge castle, but the heating system also leaked.

The Berkeley family was keen to introduce more efficient heating with minimum impact on the environment. Consultant Steve Underwood of Keyplan Engineering recommended installing

a series of five Remeha Quinta Pro 115 boilers to heat the entire castle. "Remeha boilers are my boiler of choice every time," said Mr Underwood. "They are always reliable and their exceptionally high energy efficiency means lower fuel costs and ultra low greenhouse emissions."

The exceptional output of the Quinta Pro115s has brought warmth to every corner of the castle's many rooms. "The family is delighted," added Mr Underwood. "Even radiators that have not been known to work previously are now giving out welcome heat."

The compact design and easy flueing of the Quinta Pro 115s made them particularly appropriate for installation at this listed building, fitting neatly and unobtrusively into the existing spaces. With the installation of the Remeha Quinta Pro 115s, Keyplan Engineering has sympathetically upgraded the previously archaic heating system at Berkeley Castle to the 21st century.



Feathered Nest Inn - Nether Westcote, Cotswolds

Installation



Quantity:
3

Product:
Quinta PRO 30

Description:
Market-leading high efficiency compact condensing boiler



Remeha reliability is top recommendation at Feathered Nest Gastro Pub

Three Remeha Quinta Pro 30 boilers are keeping it cosy at the award-winning Feathered Nest Country Inn, nestled in the Cotswolds village of Nether Westcote.

When you are running a successful Cotswolds country pub, restaurant and inn, alongside the wine list, cuisine and décor, reliable heating plays an essential role in creating the perfect relaxing environment. So when proprietors Amanda and Tony Timmer discovered that the five-year-old boilers they had inherited were consistently breaking down, they were quick to act.

“Reliability and quality were the two main criteria for us when specifying the replacement boilers,” said Director Malcolm Faulkner of Shackleton & Wintle Ltd in Cheltenham. The team of heating engineers recommended replacing the faulty boilers with three Remeha Quinta Pro 30kW gas condensing boilers running on LPG.

These popular, high efficiency models would not only support the existing radiators and underfloor heating, but also provide sufficient heat to the additional radiators in the newly extended development.

Having previously installed Remeha Quinta Pro boilers in other large properties, Shackleton & Wintle Ltd were confident of the boiler’s ability to provide exceptional reliability and output. The Remeha Quinta Pro is also an excellent backup boiler. Installing the three boilers in a cascade arrangement further prevented the unlikely event of one of the boilers failing and supported the increased load due to the new build.

The new, energy saving Remeha Quinta Pro boilers have brought welcome comfort and warmth to the Feathered Nest Country Inn. Rest assured, the Remeha Quinta Pro certainly can stand the heat.



Tate Gallery - St Ives

Installation



Quantity:
2

Product:
Quinta 115 PRO

Description:
Market-leading high efficiency compact condensing boiler



A work of art

Two Remeha Quinta Pro 115 boilers have been installed at the Tate Gallery in St Ives during the first phase of a major refurbishment project. The 115kW condensing wall-hung boilers replaced older boilers in a rooftop plant room to heat the entire gallery. Simon Matthews of County Heating, Bodmin commented that they “had better flueing arrangements and were high output, high efficiency” in comparison to the previous boilers.

The Quinta Pro 115 boilers are highly efficient (108.9% NCV at 50/30°C – 98.1% GCV), have ultra low NOx emissions and operate extremely quietly – making them an ideal heating solution for the gallery. Their quick and easy installation and space saving capabilities also meant minimum disruption.

The gallery occupies a spectacular site overlooking Porthmeor Beach, close to the home of Alfred Wallis and studios used by many artists whose works it exhibits. It is designed to show works of art in the surroundings and atmosphere in which they were created.

Remeha Commercial is proud to support the Tate Gallery.



St Michael's Care Home and Convent - Essex

Installation



Quantity:
4

Product:
2 x Quinta PRO 115
2 x Quinta PRO 45

Description:
Market-leading high efficiency compact condensing boiler



State-of-the-art space heating

High efficiency Remeha Quinta Pro gas condensing boilers working alongside renewable energy technologies are providing state-of-the-art space heating at the newly refurbished St Michael's Care Home and Convent in Clacton, Essex.

The bivalent system designed by Essex-based contractor NCC Mechanical Services Limited combines two air source heat pumps and two Remeha Quinta Pro 115kW boilers, linked to a 500 litre buffer tank. The heating system, operated at approximately 45/35°C to enable both boilers and heat pumps to achieve maximum efficiency, offers variable temperature space heating through underfloor heating, radiators and fan convectors. A control module optimises the efficiency of the heat pumps with a matching weather compensation and sequence control for the Remeha Quinta Pro boilers within the control panel.

Two additional Remeha Quinta Pro 45kW boilers provide constant temperature hot water (82/71°C) to the LPHW frost coils of four large heat recovery units to bring tempered air to a number of communal areas.

"We have a long history of using Remeha products," commented Director Andy Taylor of NCC Mechanical Services Limited. "The excellent quality and reliability of Remeha boilers is unmatched."

GAS 110 ECO

High efficiency gas fired floor standing fully condensing boiler with ultra low NOx emissions



Gas 110 ECO

High efficiency:
111% NCV ΔT 40/30°C
(100% GCV)

High efficiency fully condensing boiler with ultra low NOx emissions - for single and multiple (modular/cascade) configurations

Gas 110 ECO

GAS 110 ECO 65

GAS 110 ECO 115

Remeha Gas 110 Eco boilers are floor standing gas-fired condensing boilers fitted with an "Open Therm" control interface which enables direct weather compensation using single and multi boilers controls such as the Remeha iSense Pro.

The Remeha Gas 110 Eco has been developed specifically to fit directly into the same floor area as a traditional boiler of equal output. This will promote the benefit of higher energy efficiency and lower carbon emissions.

The Gas 110 Eco boilers are designed for sealed and open vented heating systems, with a maximum operating temperature of 90°C. Installation is recommended where possible on low temperature heating installations.

GAS 110 ECO



HIGH EFFICIENCY
111% NCV ΔT 40/30°C



FULLY MODULATING
BOILER CONTROL



PREMIX BURNER
CLEAN COMBUSTION



ULTRA LOW NOx
BREEAM EXCELLENT



RECYCLABLE
MATERIALS

GAS 110 ECO

		Gas 110 Eco 65	Gas 110 Eco 115
GENERAL			
SEDBUK 'A' Rated		-	-
Wall Hung		-	-
Nominal Output 80°C/60°C	kW	12 - 61	16.6 - 107
Nominal Output 50°C/30°C	kW	13.3 - 65	18.4 - 114
Nominal Input NCV	kW	12.2 - 62	17.2 - 110.2
Weight (shipping)	kgs	116	133
NOx Emissions (O ₂ @ 0% dry)	mg/ kWh	<32	<35
Noise Levels (at 1m from boiler)	dBA	<48	<52.5
Max Operating Pressure	bar	4	4
Fully Condensing		✓	✓
CONTROL OPERATION			
Fully Modulating		✓	✓
On/Off - High/Low		✓	✓
FUEL OPTIONS			
Natural Gas		✓	✓
LPG		✓	✓

GAS 110 ECO

- High efficiency: 111% NCV ΔT 40/30°C (100% GCV)
- Boiler control:
 - a) Modulating (18-100%)
 - b) High/low (18-100%)
 - c) On/off (18-100%)
- Conventional or "room sealed" flue options
- The boiler is particularly suitable for retrofit applications, having a small footprint
- Premix burner for clean combustion
- Low NOx
- Quiet operation <48 dBA
- Cascade / Modular packages for up to 6 boilers
- Quick and easy installation
- Advanced boiler control, Remeha's 'abc®', for reliable heat delivery
- Digital display
- Data file for storing information
- Remote signalling options
- Cast aluminium heat exchanger
- Easy maintenance
- Built-in calorifier control
- Options for modular control and/or weather compensator
- Control 0-10V signal or volt free
- PC connection
- For use with natural gas and L.P.G. (Gas 110 Eco 115 requires a conversion kit)

CASE HISTORY

RETAIL & LEISURE BUILDINGS



ESPORTA - Health and Fitness Clubs

Installation



Quantity:
Combination

Product:
Gas 110 ECO and
Gas 310 ECO PRO

Description:
High efficiency fully
condensing boiler



Esporta takes sustainable route with installation of condensing boilers

Premium UK gym and health club chain Esporta has carried out an intensive six-month upgrade of its heating systems with the installation of a combination of Remeha Gas 110 Eco and 310 Eco Pro compact floor standing condensing boilers into a number of its 55 clubs around the country. The replacement of 7000kW of old atmospheric and pressure jet boilers achieves for Esporta the dual purposes of reducing greenhouse emissions and cutting gas and electricity consumptions for its various health clubs.

Heating, Ventilation, Air Conditioning and Refrigeration consultant Mistral Technical Services recommended the high performance Remeha Gas condensing boilers range for their high efficiency, as they convert over 90 per cent of their fuel into heat, compared to 80 per cent for conventional atmospheric boilers. Other factors influencing the decision were the reliability and quality of the build, and the technical support offered by Remeha Commercial.

Given the ecological commitment of Esporta, Mistral particularly liked the ultra low NOx benefits of the Remeha Gas condensing boilers.

Esporta estimates that with the installation of the new Remeha boilers, they will reduce NOx levels on site by at least 90 per cent and CO₂ levels by 26 per cent compared with their previous old pressure jet boilers.

The health clubs also anticipate significant gas reductions of at least 20 per cent post installation. In the clubs where the Remeha condensing boilers have replaced atmospheric boilers, these already impressive savings will be still 25 per cent higher.

Esporta has set its brand firmly on track to creating a more sustainable business by upgrading its boilers with high efficiency, proven technology from market leader Remeha Commercial.



Caerleon Endowed School - Wales

Installation



Quantity:
3

Product:
Gas 110 ECO

Description:
High efficiency fully
condensing boiler



Award-winning eco-school
opts for Remeha heating

Caerleon Endowed Junior School in Newport is an award-winning eco-school. Pupils and staff alike are proud of this hard-won accolade and continue their work to maintain their Green Flag, the highest of all eco-school awards. Recycling, water saving, waste management, sustainability and healthy living are just some of the school's recent projects.

Now, with the installation of three Remeha Gas 110 Eco boilers, Caerleon Endowed Junior School can add energy saving to its credentials. The school's new boilers offer exceptionally high efficiency levels and ultra low greenhouse emissions that are in perfect keeping with the school's environmentally-friendly stance – and bring the added bonus of welcome fuel savings.

When Caerleon Endowed Junior School's four existing boilers needed replacing out of compliance, Tony Lewis of Newport City Council had no hesitation in recommending

Remeha boilers. "We've used Remeha Commercial in the past – the products are good and extremely reliable, as is the service and delivery."

The fully modulating, fully condensing Remeha Gas 110 Eco offers impressive efficiency levels of 111 per cent NCV at 40/30°C. Its small footprint makes it particularly suitable for retrofit applications, while its advanced boiler control, the Remeha abc®, provides reliable heat delivery.

"The boiler house serving Caerleon School is quite small, so the Gas 110 was the perfect solution here due to its size," added Tony Lewis. "And, like all Remeha products, it was quick and easy to install."

With the new Remeha boilers in place, Caerleon Endowed Junior School is more eco-friendly than ever, and comfortably warm to boot.

GAS 210 ECO PRO

High efficiency compact floor standing fully condensing boiler with ultra low NOx emissions



Gas 210 ECO PRO

High efficiency:
108.6% NCV ΔT 40/30°C
{97.8% GCV}



High efficiency compact fully condensing boiler with ultra low NOx emissions - ideally suited for modular configurations

Gas 210 ECO PRO

GAS 210 ECO PRO 80

GAS 210 ECO PRO 120

GAS 210 ECO PRO 160

GAS 210 ECO PRO 200

The Remeha Gas 210 Eco Pro Range of compact floor standing condensing boilers are designed for central heating and indirect hot water production at working pressures not exceeding 6 bar. The small footprint and ability to be installed back to back makes them ideally suited for modular configurations.

An optional Optimising Weather Compensating control package is available to ensure maximum efficiency, and is also compatible with Open Therm.

The boilers are suitable for both new and retrofit applications. With conventional and room sealed capability they can be installed in most situations.

The sectional cast aluminium heat exchanger and other major components are contained within a sealed air box. This forms the main boiler casing with a removable front panel section for maintenance purposes. All electrical and electronic controls are contained within the instrument panel mounted on top of the boiler.

The flue gas outlet, combustion air inlet, flow, return and gas connections are located on the top of the boiler with a condensate connection and optional return connection at low level on the right hand side.

GAS 210 ECO PRO



HIGH EFFICIENCY
108.6% NCV ΔT 40/30°C



FULLY MODULATING
BOILER CONTROL



PREMIX BURNER
CLEAN COMBUSTION



ULTRA LOW NOx
BREEAM EXCELLENT



RECYCLABLE
MATERIALS

GAS 210 ECO PRO

		Eco Pro 80	Eco Pro 120	Eco Pro 160	Eco Pro 200
GENERAL		3 Sections	4 Sections	5 Sections	6 Sections
SEDBUK 'A' Rated		-	-	-	-
Wall Hung		-	-	-	-
Nominal Output 80°C/60°C	kW	16 - 87	22 - 120	29 - 166	39 - 200
Nominal Output 50°C/30°C	kW	18 - 93	24 - 129	33 - 179	44 - 217
Nominal Input GCV	kW	19 - 99	26 - 137	34 - 189	46 - 228
Weight (dry)	kgs	115	135	165	188
NOx Emissions (O ₂ @ 0% dry)	mg/ kWh	<35	<35	<35	<35
Noise Levels (at 1m from boiler)	dBa	<59	<59	<59	<59
Max Operating Pressure	bar	6	6	6	6
Fully Condensing		✓	✓	✓	✓
CONTROL OPERATION					
Fully Modulating		✓	✓	✓	✓
On/Off - 0-10v		✓	✓	✓	✓
FUEL OPTIONS					
Natural Gas		✓	✓	✓	✓
LPG		✓	✓	✓	✓

GAS 210 ECO PRO

- Compact lightweight construction
- High efficiency: 108.6% NCV ΔT 40/30°C (97.8% GCV)
- Boiler controls - On/Off or fully modulating over 18-100%
- Premix burner for optimum combustion
- Low NOx
- Ultra quiet <59 dBA
- Digital diagnostic display
- Remote signalling options
- Cast - sectional aluminium heat exchanger
- Easy maintenance
- Options for direct weather compensation
- Compatible with Open Therm
- Advanced intelligent 'abc®' control system
- Diagnostic PC connection
- Conventional or "room sealed" flue capability
- Supplied fully assembled for ease of installation
- PC connection
- Optional low level return kit



The Johnnie Johnson House Association - Hertfordshire

Installation



Quantity:
Combination

Product:
Gas 210 ECO PRO

Description:
High efficiency compact fully condensing boiler



Major cost savings for retirement accommodation

The Bury retirement accommodation scheme in Hertfordshire recently underwent a major refurbishment with the installation of energy efficient, environmentally-friendly heating from Remeha boilers.

Opened in 1980 by wartime hero Sir Douglas Bader, The Bury is a listed 16th Century manor house that has been sympathetically converted into accommodation for people over the age of 55. It is owned and run by the "Johnnie" Johnson Housing Trust (JJHT), a charitable status housing association providing accommodation and support services for families, single and retired people.

Remeha Commercial supplied a combination of high efficiency boilers from its range including the Gas 210 Eco Pro model, helping overcome a number of conservation issues along the way to provide cutting-edge, reliable heating throughout the building.

The boilers are highly efficient (108.6% NCV at 40/30°C – 97.8% GCV) with ultra low NOx emissions offering an environmentally friendly approach to heating as well as significant energy savings.

Peter Jordan, Maintenance Surveyor of JJHT, was delighted with the results and remarked that "an excellent job was undertaken by both Remeha Commercial and Bancroft Plumbing & Heating ... in providing a first class heating and hot water system and major cost saving for our residents."

The "Johnnie" Johnson Housing Trust was formed in 1969 by James Edgar "Johnnie" Johnson, a highly decorated Royal Air Force pilot and wartime hero, the highest scoring RAF fighter pilot to survive the war.

Remeha Commercial was honoured to be involved in such a historically significant and community-supportive project.



Co-operative Foodstore - Oakham

Installation



Quantity:
2

Product:
Gas 210 ECO PRO

Description:
High efficiency compact fully condensing boiler



Helping to sustain our future at award-winning Oakham Foodstore

Winner of the CIBSE 2011 Commissioning Project of the Year Award, The Oakham Foodstore for the society is an inspiring example of how to combine different technologies to create a sustainable building for the future. The Co-operative society is renowned for its ethical approach to retail, so it was keen to design a replacement superstore that would meet the needs of 21st century retailing while at the same time reducing the impact that such a building would have on the environment.

EDP Consulting Ltd recommended incorporating both renewable and conventional heating features: underfloor heating, a solar water heating system to preheat the domestic hot water, recovered low grade heat from the store refrigeration system, reused to heat the building - and two Remeha Gas 210 Eco Pro condensing boilers.

Given the intricacy of the project, a reliable boiler was needed to provide a back up to the recovered energy systems that would also provide a "top up" when

the required level of recovered energy was not available. The boiler needed high operating efficiencies and to be capable of operating at low water temperatures. The boilers operate in tandem with the recovered energy systems: up to 250 kW of heat can be recovered from the store refrigeration systems, at peak loads, but as the energy available to be recovered can be highly variable, the boilers had to be sized to match the building heating load.

The two Remeha Gas 210 Eco Pro compact, floor-standing, condensing boilers installed by William Bailey Ltd are particularly suitable for this project due to their exceptionally high efficiency. Fully modulating with ultra low carbon and NOx emissions, they also meet the environmentally-friendly criteria of the new superstore.

For the Co-operative Society, Remeha Commercial's experience in all aspects of renewable heating and bivalent systems brought added peace of mind.

GAS 310/610 ECO PRO

High efficiency fully modulating condensing boiler with excellent ultra low NOx emissions



Gas 310/610 ECO PRO

High average
annual efficiency
109.35% NCV



See the Gas 310/610 Eco Pro in action on
Remeha TV www.remeha.co.uk/remehatv

High efficiency fully modulating condensing boiler with excellent ultra low NOx emissions

Gas 310 ECO PRO

5- 51-(261)kW

6- 65-(327)kW

7- 79-(395)kW

8- 92-(461)kW

9- 106-(530)kW

10- 119-(601)kW

Gas 610 ECO PRO

5- 69-(522)kW

6- 87-(654)kW

7- 123-(790)kW

8- 122-(922)kW

9- 148-(1060)kW

10- 158-(1202)kW

The new Remeha Gas 310/610 Eco Pro is a versatile, flexible, eighth generation condensing boiler offering exceptional average annual efficiencies of 109.35% NCV and excellent, ultra low CO₂ and NOx emissions ≥ 36 . With its modern, compact design, the Remeha Gas 310/610 Eco Pro can fit through all standard doorways and is easily disassembled, making it the perfect solution for both retrofit and new build projects. Its reduced footprint and ability to be installed side-to-side makes it suitable for modular configuration. The secondary return feature allows the range to achieve optimum efficiencies on bivalent systems.

GAS 310/610 ECO PRO

25



HIGH EFFICIENCY
109.35% NCV



FULLY MODULATING
BOILER CONTROL



PREMIX BURNER
CLEAN COMBUSTION



ULTRA LOW NOx
BREEAM EXCELLENT



RECYCLABLE
MATERIALS

GAS 310/610 ECO PRO

Model	285	355	430	500	575	650	570	710	860	1000	1150	1300
Number Of Sections	5	6	7	8	9	10	2x5	2x6	2x7	2x8	2x9	2x10
Nominal Output (Pn) 80/60°C	51 261	65 327	79 395	92 461	106 530	119 601	69 522	87 654	123 790	122 922	148 1060	158 1202
Nominal Output (Pn) 50/30°C	279	350	425	497	574	651	558	700	850	994	1148	1303
Nominal Input Gcv	60 295	75 369	96 445	105 520	121 598	135 677	80 590	101 738	142 890	141 1040	170 1196	180 1354
Weight (Empty) (Kgs)	364	398	433	495	531	568	707	771	837	957	1025	1095
Nox-Emission Per Year Breeam En 15420 (Mg/Kwh)	33	35	32	29	36	26	33	35	32	29	36	26
Noise Level At 1M Db(A)	61	61	65	65	65	65	64	64	68	68	68	68
Max Operating Pressure (Pms)(Bar)	7	7	7	7	7	7	7	7	7	7	7	7
Fully Condensing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fully Modulating	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
On/Off	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Natural Gas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LPG	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

GAS 310/610 ECO PRO

Full load water efficiency 50/30°C (Hi)	104.8%	105.2%	105.6%	106.0%	106.4%	106.8%	104.8%	105.2%	105.6%	106.0%	106.4%	106.8%
Annual efficiency G20 (DIN 4702, Part 8)	109.6%	109.5%	109.4%	109.3%	109.2%	109.1%	109.6%	109.5%	109.4%	109.3%	109.2%	109.1%

GAS 310/610 ECO PRO

- Inspected for compliance
- Compact lightweight construction for quick and easy installation – can fit through the standard doorway
- Specially designed for easy disassembly for awkward installations
- Supplied on wheels for easy manoeuvrability into the plant room
- Small footprint and ability to be installed side-to-side makes them ideal for modular configuration
- High average annual efficiency – 109.35% (NCV)
- Optional weather compensating control package available to ensure maximum efficiency
- Conventional and room-sealed capability means they can be installed in most situations
- Suitable for new and retrofit applications
- Low NOx ≥ 36 at 0% O₂
- Digital Diagnostic Display
- Cast – sectional aluminium heat exchanger
- Cylindrical, stainless steel, premix burner
- Control adjustable 20°C-90°C
- Air pressure differential sensor (LDS)
- Temperature sensors for low water level protection
- Gas/air mixing system with venturi
- Electronic control and protection equipment]
- Optional secondary return



Bristol Old Vic - Theatre

Installation



Quantity:
2

Product:
Gas 310-5 ECO PRO

Description:
High efficiency fully modulating ultra low NOx condensing boiler



Remeha boilers warm it up at newly refurbished Bristol Old Vic

Bristol Old Vic, England's oldest continually operating theatre, has undergone a major refurbishment of its historic auditorium and backstage areas.

The sensitive £12 million redevelopment of this Grade 1 listed building has combined the best of old and new, protecting the original design of the unique horseshoe-shaped Georgian auditorium whilst allowing 21st century technologies to bring improved acoustics and increased comfort to this historic theatre. The result is a new stage re-instated in its original pre-1880 position, new seating, new performance and rehearsal spaces, and, for the benefit of actors and audience alike, an agreeable ambient temperature throughout provided by the new air-conditioning system and two energy saving Remeha Gas 310-5 boilers.

It was the task of Bristol Intoheat Ltd., working with consultant James Outram of Hoare Lea Mechanical and Electrical Consulting Engineers, and Ian Morgan of green house building and construction group Galliford Try, to specify the appropriate heating system for the theatre.

A key aspiration of Bristol Old Vic was to reduce the energy consumption and fuel bills. Prior to the refurbishment, the heating for the theatre complex came from old oil fired boilers which were inefficient and wasteful. Following the recommendation of Intoheat Ltd., Remeha Gas 310 Eco Pro boilers were installed to deliver reliable, effective, energy efficient heating.

"We've used Remeha boilers on several projects," said John Rankin of Intoheat Ltd., "and find their products and aftersales service to be excellent. At the Bristol Old Vic, the plant room is extremely small. Working in such a tight space, it was very helpful that the Gas 310 has such a small footprint."

The Remeha Gas 310/610 Eco Pro is compact and lightweight, designed for easy installation in restricted spaces. It can fit through any standard doorway and is easily disassembled for projects where access is awkward, making it the perfect solution for renovation and refurbishment projects such as this impressive project at the Bristol Old Vic.



The Chase School - Malvern

Installation



Quantity:
2

Product:
Gas 610-9 ECO PRO

Description:
High efficiency fully modulating ultra low NOx condensing boiler



An education in heating

With the start of the new academic year approaching, The Chase School in Malvern, Worcestershire, was keen to improve the heating system on its main site ahead of the arrival of its students and the autumn chill.

The existing four boilers in this area of the academy were nearly 30 years old. With two of the four having failed and the remaining boilers operating below achievable efficiency levels, the managers sought the advice of Jeff Widdett of Worcestershire County Council in specifying a reliable, energy efficient replacement heating system.

"This was an interesting project," said Jeff Widdett. "The boiler house had been built around the old boilers with the result that access was tight in the extreme. Yet the academy needed a decent sized model in order to deliver the necessary heating output for this large building. The challenge was to find a boiler that could offer the right level of heat but would also fit into the existing space."

Jeff Widdett recommended installing two Remeha Gas 610-9 Eco Pro boilers for

high performance heating. This boiler model was particularly suitable for this project as it is extremely compact and can be installed side-to-side, offering greater design flexibility in the plant room. The Remeha Gas 610 Eco Pro can also be easily disassembled, a necessary feature for this project and the perfect solution for the installers who were tasked with manoeuvring a narrow staircase and standard doorway to reach the boiler room.

"There were a number of criteria requiring consideration on this refurbishment project," added Carl Fry, managing director of Spa Gas, the installers of these Remeha boilers. "Taking into account the size of the boiler house, the need to dismantle the boiler, the heat output and the need for reliability, the Remeha Gas 610 Eco Pro was the only boiler suitable for the job."

With high average annual efficiencies of 109.35%, the Remeha Gas 610 Eco Pro will also bring welcome energy and carbon savings to The Chase School in line with the academy's environmental ethos.

P SERIES PRESSURE JET

Gas, oil and dual fuel pressure jet three-pass cast iron sectional boiler with low NO_x and CO₂ emissions



P Series PRESSURE JET

High efficiency cast iron sectional boilers

Gas, oil and dual fuel pressure jet three-pass cast iron sectional boiler with low NO_x emissions

P Series

P320: 70-330kW

P420: 300-780kW

P520: 696-1450kW

The P Series Range are oil or gas fired pressure jet three-pass cast iron sectional boilers. The boiler is designed on the basis of the triple pass principle for maximum efficiency and a generously sized combustion chamber for minimising NO_x production.

The main boiler casing is steel, with a powder coated enamel finish complete with high quality 80-100mm thick glass wool insulation. The front door is suitable for left or right opening allowing easy access for service operations. The heat exchanger is manufactured from corrosion resistant 'Eutectic' cast iron.

The instrument panel contains all the necessary control and measuring instruments required to control the boiler with the external connections on a terminal strip. The capillaries and sensor wires of the control panel are placed in the instrument pockets fitted at the front of the boiler. For the discharge of flue gases, chimney draught is not required.

The boiler is suitable for open and sealed systems up to a maximum pressure of 6 bar.

The boiler is suitable for installation in basement or rooftop boiler houses.



HIGH EFFICIENCY
92%



FULLY MODULATING
BOILER CONTROL



PREMIX BURNER
CLEAN COMBUSTION



ULTRA LOW NO_x
BREEAM EXCELLENT



RECYCLABLE
MATERIALS

P SERIES

		P 320	P 420	P 520
GENERAL				
SEDBUK 'A' Rated		-	-	-
Wall Hung		-	-	-
Nominal Output 80°C/60°C	kW	70 - 330	300 - 780	696 - 1450
Nominal Output 50°C/30°C	kW	n/a	n/a	n/a
Nominal Input GCV	kW	76 - 361	329 - 871	763 - 1595
Weight (dry)	kgs	610 - 1228	1470 - 2550	3000 - 5297
NO _x Emissions (O ₂ @ 0% dry)	mg/ kWh	Depends on burner choice	Depends on burner choice	Depends on burner choice
Noise Levels (at 1m from boiler)	dBA	Depends on burner choice	Depends on burner choice	Depends on burner choice
Max Operating Pressure	bar	6	6	6
Fully Condensing		-	-	-
CONTROL OPERATION				
Fully Modulating		Depends on burner choice	Depends on burner choice	Depends on burner choice
On/Off - High/Low		✓	✓	✓
FUEL OPTIONS				
Natural Gas		✓	✓	✓
LPG		✓	✓	✓
Oil		✓	✓	✓
Dual Fuel (NG/OIL)		✓	✓	✓
Pellet/Wood chip		-	-	-

P SERIES

- Boiler body with 3-pass flueways design with a large combustion chamber and horizontal flue passes with fins. The heat transfer is enhanced by the fins and the cast iron baffles
- A high combustion efficiency up to 92%
- A low noise level operation
- Optimal combustion with low NO_x and CO₂ emissions
- Easy adaptation to traditional burners, as well as new burners
- Hinged burner / cleaning door (right hand side or left hand side)
- Eutectic cast iron boiler body provides exceptional resistance to temperature variations, thermal shocks and corrosion
- Safe low modulated temperature operation down to 40°C (minimum outlet temperature)
- Reinforced fibreglass wool insulation (100 mm) and double insulation of the boiler front which minimises heat loss and allows reduced stand-by consumption and improved thermal efficiency
- Internal electrical duct for wiring connections
- Easy installation for existing or new boiler houses
- The assembly of the sectional boiler body can be carried out anywhere even in boiler houses with difficult access
- A maximum working pressure of 6 bar allows any type of installation
- P520 is delivered as standard with a pre-set water flow switch



Imperial War Museum North - Manchester

Installation



Quantity:
2

Product:
P320

Description:
Pressure jet three-pass
cast iron sectional boiler



Trouble-free heating for Imperial War Museum North

When the existing boilers continued to fail at the Imperial War Museum North, Darren Chesworth of J Fletcher Engineering recommended replacing the bank of four boilers with two Remeha P320 pressure jet gas high efficiency boilers. Heat was maintained at the museum throughout the installation by replacing a bank of two boilers at a time.

“Reliability was the essential consideration for this project,” said Darren Chesworth. “We’d used Remeha boilers previously and are impressed with their high performance. They’ve proved equally reliable at the Imperial War Museum North with the P320 boilers delivering maximum efficiency heating and running well ever since.”

The Remeha P Series is an environmentally friendly solution to low NOx emission, high combustion efficiency heating. It has provided the perfect energy saving heating system for the Imperial Museum North, confirming Remeha Commercial’s reputation for quality and excellence.



Heron Tower - London

Installation



Quantity:
4

Product:
P520

Description:
Pressure jet three-pass
cast iron sectional boiler



Remeha Commercial soars to new heights at London's Heron Tower

In the very heart of the City of London, a new iconic building of ground-breaking scale and dramatic architecture soars into the sky. At 230m high including a 28m mast, the visionary glass and stainless steel clad structure must class as one of the most inspiring world class office spaces.

This 46-storey building provides office space across 36 floors with a restaurant planned on levels 38-40 and a separate one on the ground floor.

London's new commercial building has not only created the benchmark for innovation and quality but also for its environmental approach to design, having already achieved a BREEAM rating of 'Excellent'.

The building has been designed for optimum energy efficiency and reduced consumption. A veil of photovoltaic cells covers the entire south facade, generating renewable energy and helping to create a solar shield. Extensive use of clear glass in the design encourages a light environment, maximising daylight to the office floors and reducing the need for artificial lighting.

In the plant room, overlooking London's famous 'Gherkin' building, are four Remeha P520 pressure jet gas high efficiency boilers, installed by Skanska Rashleigh Weatherfoil. Services consultant Foreman Roberts specified four cast iron sectional boilers with matching gas fired burners, with a maximum output of 1100kW each and a control panel, which would be capable of operating on future bio-fuel.

The Remeha P520 was chosen above other models due to its size, compatibility and value for money. This advanced technology boiler offers a high combustion efficiency of up to 92 per cent and low carbon and NOx emissions, in keeping with the environmentally-friendly design of Heron Tower. With its easy installation for new build or retrofit it was the perfect solution given the plant room constraints. Added to which, the low noise level of operation meant minimum disturbance.

This state-of-the-art, high performance, high efficiency boiler further contributes to the excellent environmental standard set by Heron Tower and Remeha Commercial with its vision to sustain our future.

BIOMASS

The most efficient way of providing low carbon space heating and hot water



Biomass

Low Carbon Wood Chip
and Pellet Boilers

High Efficiency: up to 93%
(TÜV Report)

Control your heating via your smart
phone – see the new Remeha Touch
page 38



See the Biomass boiler range in action on
Remeha TV www.remeha.co.uk/remehatv

Easy-to-use,
environmentally-friendly,
fully controllable heating
using renewable energy
from wood chips or pellets

Biomass

Domestic Range HPK-RA
Wood Pellet Heating 12.5-150kW

Domestic Range HPK-RA
Wood Chip Heating 15-150kW

Industrial Range HPKI-K
(Chips or Pellets) 120-550kW

Using wood for energy in place of fossil fuels helps prevent long-term global climate change, the most pressing environmental challenge of our time. The Remeha-Gilles range of Biomass boilers runs on sustainably produced wood chip or wood pellets, providing high performance heating from low carbon fuel. This quality, robust Biomass boiler range is highly efficient too, using smart combustion technology to achieve maximum efficiency levels of up to 93% as certified in independent TÜV tests for space heating and hot water.

Operating the fully modulating domestic boiler range is simplicity itself thanks to the new advanced Remeha Touch touchscreen controls. When heat is required on demand, these fully controllable Biomass boilers are the solution, with settings for different fuels, automatic error messages via email, remote monitoring via the internet, and graph records of all the heating parameters accessible on the internal memory. For added flexibility, the domestic Biomass boiler range can now also be controlled and even reset from a smart phone. Remeha-Gilles Biomass boilers are eligible for RHI funding.

HIGH EFFICIENCY
93%FULLY MODULATING
BOILER CONTROLPREMIX BURNER
CLEAN COMBUSTION

LOW CARBON

RECYCLABLE
MATERIALS

BIOMASS

	Domestic Range HPK-RA (Pellets)	Domestic Range HPK-RA (Wood Chips)	Industrial Range HPKI-K (Wood Chips or Pellets)
Floor Standing	✓	✓	✓
Output Range (covered by several models) kW	12.5 - 150	15 - 150	120 - 550
Modulation	30% - 100%	30% - 100%	30% - 100%
Max Flow Temp °C	95	95	95
Min Return (controlled by boiler) °C	55	55	63
Water Content litres	72 - 620	83 - 620	290 - 1550
Max Working Pressure bar	3	3	5
Weight (dry) kgs	421 - 2463	443 - 2463	2100 - 7005
NOx Emissions (13% O ₂ approx) mg/kw hr	81 - 94	87 - 93	81 - 94
Able to Burn Logs	✓	✓	-
Fully Auto Ignition	✓	✓	✓
Remote Access Available	Remeha Touch	Remeha Touch	Internet
Fully Controlled Combustion via Lambda	✓	✓	✓
Noise Levels (site specific examples for comparison)	Circa 75 dba @ 1m	Circa 75 dba @ 1m	Circa 78 dba @ 1m
BMS Compatible	✓	✓	✓
Smoke Zone Exempt Appliance	✓	✓	✓

BIOMASS

- Environmentally-friendly, low carbon heating
- Up to 93% combustion efficiency (TÜV Report)
- Heat outputs from 12.5 to 550kW
- Robust design for exceptional durability and reliability
- Unique cell wheel combustion technology for 100% protection against burnback
- Modulating, fully controllable burners
- Automatic fuel feed systems
- Settings for different fuels
- Automatic de-ashing
- Automatic heat exchanger cleaning
- Automatic error message via email
- Remote monitoring via internet
- Graph record of all heating parameters on the internal memory
- Expertise gained from over 450 Biomass boiler installations in the UK
- New easy-to-use touch screen controls - Remeha Touch
- Flexible control via computer, tablet or smart phone
- Eligible for RHI funding - currently above 45kW

CASE HISTORY

PUBLIC BUILDINGS



Duchy of Cornwall Nursery - Cornwall

Installation



Quantity:
1

Product:
Remeha 100kW
Biomass Boiler

Description:
Low carbon sustainable
space heating and hot water



By royal appointment

A Remeha 100kW biomass boiler is bringing energy efficient, low carbon heating to the newly opened Visitors' Centre at the Duchy of Cornwall Nursery at Lostwithiel, Cornwall.

The new building is a testament to the Prince's vision of sustainability in the built environment. Remeha Commercial's biomass boiler is playing a key part in this inspiring example of low-energy building for the future.

The state-of-the-art 100kW Remeha-Gilles biomass boiler provides heating for the shop and café building as well as the new greenhouse area. This modulating, fully controllable biomass boiler is fuelled by locally sourced low to zero carbon wood pellets, making it environmentally sound and economically viable. The fuel store at the Duchy of Cornwall Nursery can hold a sufficient supply of pellets for least 21 days in winter to minimise fuel deliveries.

Remeha has also supplied a day pellet hopper in the boiler house to give the option to load 10kg bags of pellets manually should adverse weather prevent delivery. A pallet of pellets is stored near the boiler house.

The replacement of the oil-fired heating system with a biomass boiler is the latest initiative contributing to the reduction of the carbon footprint of the Duchy Nursery by 70 per cent: recent changes to electricity supply contracts have reduced the carbon footprint by one-third on baseline, and the wood pellet system will reduce the footprint by another third.

The new Visitors' Centre sits well within the local landscape, incorporating the Prince of Wales' environmental vision. In addition to the biomass boiler, the new site includes a number of renewable features including rainwater harvesting and high levels of thermal insulation. The building itself is constructed using natural materials wherever possible and utilising local craftsmanship. In the cafe, traditional recipes are on offer, created from seasonal, locally sourced ingredients supporting West Country producers.

This project is the third collaboration between Remeha Commercial and the Duchy of Cornwall following on from Restormel Manor and Tor Gate.

CASE HISTORY

EDUCATIONAL BUILDINGS



Think Low Carbon Centre - Barnsley College

Installation



Quantity:
1

Product:
Remeha 100kW
Biomass Boiler

Description:
Low carbon sustainable
space heating and hot water



The best of low carbon technology

One of Europe's most innovative energy training centres, Barnsley College in Yorkshire, has chosen a Remeha 100kW biomass boiler to demonstrate the best of low carbon technology. The inspirational £4.2 million Think Low Carbon Centre, which achieved BREEAM Excellent and an Energy Performance certificate of A, is a centrepiece for all the latest technology and techniques used to make low carbon, energy efficient buildings.

The Remeha biomass boiler, located in the College's hi-tech plant room, is fuelled by wood pellets. This boiler is one of the most efficient ways of getting heating equipment to run on low to zero carbon fuel. It is also one of the most technologically advanced biomass systems available, incorporating firewall software to enable the students to monitor on their PCs the energy generation of the boiler through the College's building management system.

"The Think Low Carbon Centre is intended as a national knowledge hub for low carbon buildings as well as a training support," said Consultant Daniel Madden of S.I. Sealy & Associates.

"Our role is to specify the very best biomass boiler for the project, which is why we came to Remeha."

The Remeha biomass boiler joins a number of energy efficient, green technologies including solar panels, a green roof covered in wild flowers, triple glazing, rainwater harvesting, and reflective sun pipes which allow natural daylight into dark rooms. The windows at the Centre open automatically to regulate temperature, an air source heat pump provides underfloor heating, sheep's wool, panels of locally sourced straw bale and hemp, and recycled denim are used to insulate the walls. A display panel shows visitors how much energy is generated and consumed.

Dave Hart, Renewable Energy Manager at Remeha said: "Remeha is delighted to have played a part in the creation of this centre of excellence which will provide construction professionals with the skills and knowledge to meet the growing demand for energy efficient buildings."

Remeha Commercial now has over 450 biomass boiler installations across the UK.

CASE HISTORY

HISTORIC BUILDINGS



Inverary Castle - Edinburgh

Installation



Quantity:
2

Product:
Remeha 145kW
Biomass Boiler

Description:
Low carbon sustainable
space heating and hot water



Magical transformation to 21st century heating

The fairytale image evoked by the circular turrets and spires of Inverary Castle belies the 21st century outlook of the Campbell clan within. When deciding to update the heating arrangements in the family's private apartments, the 13th Duke of Argyll chose to investigate the ecological advantages of a biomass system. Consultation with Irons Foulner of Edinburgh resulted in the installation of two Remeha 145kW biomass boilers, manufactured by Gilles.

Located in a remote boiler house and connected to the castle by underground heating mains, the biomass boilers provide heat and hot water to approximately one third of the castle. The environmental benefits are further enhanced because the boilers are fuelled by wood chips manufactured and supplied by the Inverary Estate, eliminating both the carbon emissions and costs of fuel transportation.

Fuelled by low to zero carbon fuels (wood chips or wood pellets), Remeha biomass boilers are modulating, fully controllable and automatic. The combustion chamber is lined with replaceable ceramic radiant fire-bricks and designed for high temperature operation. Clean combustion is guaranteed by the high temperatures and the length of time the gases remain in the furnace. Maintenance is facilitated by the insulated door, designed to swing open fully to allow ease of access for the cleaning of all boiler flues.

Irons Foulner commented that the choice of boilers was based on experience of Remeha's technical expertise and back up. The company was pleased with the attention and service received from both Remeha in the UK and Gilles in Austria.

CASE HISTORY

COMMERCIAL BUILDINGS



Stansted Airport - London

Installation



Quantity:
1

Product:
Remeha 2000kW
Biomass Boiler

Description:
Low carbon sustainable
space heating and hot water



Stansted Airport outperforms all expectations

State-of-the-art biomass boiler technology from Remeha has ensured that Stansted Airport's new £50 million terminal extension is a low to zero carbon zone. And, says Stansted's head of environment, the boiler has outperformed all expectations during its first winter of operation.

The 2000kW biomass heating boiler is one of the biggest in commercial use in the UK. Supplied by Remeha and manufactured by European company Gilles Austria, it is powered by wood chips.

The boiler is part of BAA's commitment to reducing the environmental impacts of development and day-to-day operations. It makes the new airport extension, completed in 2008, a low to zero carbon building.

Its performance has proved so efficient that it is now the primary boiler for the whole airport. Results indicate the biomass technology is set to help reduce predicted annual gas consumption at the airport by nearly 40 per cent.

"To say we're delighted with the performance of the new biomass boiler is an understatement," says head of environment at Stansted Airport, Andy Jefferson.

"We set out to ensure the recent terminal extension would be carbon neutral but performance data so far indicates those savings go much further, with results between November 2008 and March 2009 alone showing that gas consumption at Stansted was around 60 per cent of the predicted forecasts for this period, and over 30 per cent lower than the same period for the previous year. And all this despite it being one of the coldest winters on record for over a decade."

"Whilst initiatives such as our asset replacement programme have contributed to these overall results, the introduction of biomass technology has by far been the largest contributor.

"We're proud to maintain our leading position as the largest UK airport to hold ISO14001 accreditation for environmental management."








CONTROLS

Remeha Smart Controls



Adding the appropriate heating control will maximise the efficiency of a condensing boiler to Blue Efficiency levels, bringing even greater energy and carbon savings.

The iSense Pro is the latest in our range of smart controls. This weather compensating, multiple boiler, multiple zone temperature control can be used across the Remeha range.

CONTROLS						
	Quinta PRO 	Quinta ECO PRO 	Gas 110 ECO 	Gas 210 ECO PRO 	Gas 310/610 ECO PRO 	Biomass domestic wood chip / wood pellet boilers 
 iSense single boiler control	✓	✓	✓	✓	✓	
 iSense PRO advanced multiple boiler control (up to 8 units)	✓	✓	✓	✓	✓	
MC4 sequencing control for use with the iSense for multiboiler control (up to 4 boilers)	✓	✓	✓	✓	✓	
 Remeha Touch touchscreen and remote control						✓



For domestic biomass heating, the new Remeha Touch facilitates accurate setting to achieve maximum efficiency levels. It also allows the biomass boiler range to be controlled and even reset from a smart phone, tablet or laptop.



The data published in this technical sales leaflet is based on the latest information (at date of publication) and may be subject to revisions. It should be read in conjunction with our full technical brochures (available on request). We reserve the right to continuous development in both design and manufacture, therefore any changes to the technology employed may not be retrospective, nor may we be obliged to adjust earlier supplies accordingly.
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PART OF BDR THERMEA



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Remeha is committed to carbon offsetting

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