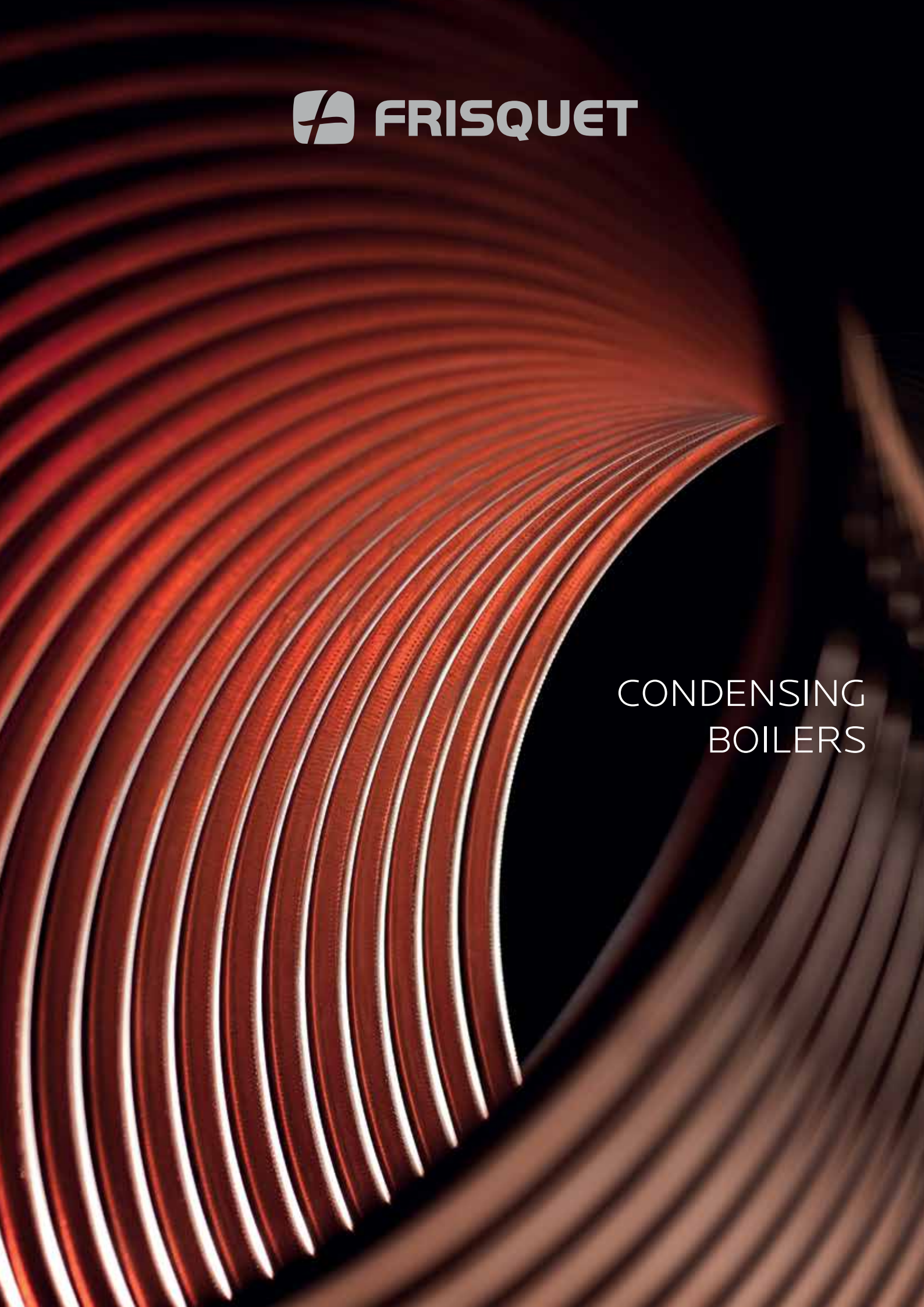

FRISQUET
CONDENSING
BOILERS

INDEPENDENCE: & *MADE IN FRANCE**

Some things have remained the same since 1936: our name and our stringent demands.

Demand for quality, first of all, because our products are manufactured entirely in our own factories in France. FRISQUET expertise is transmitted from one generation to the next.

Demand for innovation, secondly, because we continuously aim to increase the safety and convenience of our boilers. All the technologies we develop are immediately incorporated as part of the standard product, never as an option.

And finally, the demand for service, since the quality of our boilers means we can guarantee them well beyond the minimum legal period.

We have been designing and manufacturing gas boilers for over 70 years.
All of our passion and energy goes into this.
This is our trademark. The sign of our commitment to you.

François Frisquet

*Made in France.

A TRADITION OF QUALITY...

Your boiler must offer you comfort and peace of mind. FRISQUET boilers have been developed to meet your needs **to an unrivalled level**.
From design to production, close attention is paid at every stage.

Comfort and peace, strength and longevity, energy saving, low after-sales cost, etc.
We set many criteria for quality. Our brand's reputation has been built on this demand for quality ever since our family business was established in 1936.

FRISQUET S.A. is now the **only gas boiler and renewable energy company that remains wholly French-owned**. Our economic independence has allowed us to create a strong business culture.
It becomes the engine for our commercial and technological dynamism.

Continual unit and factory testing
Our production plant is in Meaux (France). From design to manufacture, every detail of our products is conceived and checked by our teams. All our boilers are individually tested in real operating conditions.
The name of the engineer responsible for checking is actually shown on each appliance.
With FRISQUET, the word "quality" really means what it says..

FRISQUET S.A. holds ISO 9001 certification and is also an approved producer outside the European Union.

...AND INNOVATION

Our Research and Development laboratory consists of a **specialised design office**, equipped with the latest CAD tools and **an ISO 45001, CE approved laboratory**. It is authorised to run its own certification tests, which are then validated by an independent, approved laboratory.

The standard of our brand is so high that our R&D department also takes an active part in **developing European standards**, alongside the Industry ministry, as well as AFNOR or the French Office for Gas Standards.

OUR INNOVATIONS ARE PERCEIVED AS THE BENCHMARK FOR THE SECTOR. SOME OF THEM HAVE EVEN BECOME STANDARD THEMSELVES.

FRISQUET aims for continually increasing levels of safety, comfort and energy savings, by immediately adding the latest technical improvements to its boilers as standard, rather than optional extras.

2008 EVOLUTION

We have designed our new Low temperature EVOLUTION boiler, a market leader for unparalleled 95% efficiency, and the lowest, class 5, NOx level.

2007 DUOSTEP®

We launched DUOSTEP®, the first condensing boiler with a separate condenser to combine very high performance, durability and top quality for hot water production.

2005 ECO CONCEPT

Our dual-power, switchable boiler was developed ahead of the new EuP directive on improving energy efficiency and environmental protection.

2001 FLATFIRE®

We created the FLATFIRE® surface burner with optimized combustion and very low NOx rate. Its performance is still unparalleled.

2000 ECO RADIO SYSTEM®

We brought in the innovative ECO RADIO SYSTEM®, an interactive heating management system, a very sophisticated radio control system built into the boiler.

1994 ELECTRONIC IGNITION

We removed the pilot light, installing electronic ignition on all our boilers for user safety. At the end of 2002, it also became a CE standard device.

1991 A.D.D.

We have developed the Abnormal Draft Detector. In 1996, this became a regulatory requirement for asphyxia prevention. Ours were the only customers able to benefit from this essential safety device for five years.

1988 HOT WATER SAFETY

We have introduced the innovative Automatic Temperature Regulator, ATR®. Safe hot water temperature, limited to 50°C to avoid burns, became mandatory at the end of 2006.

2014 CONDENSATION Visio® BOILING ROOM

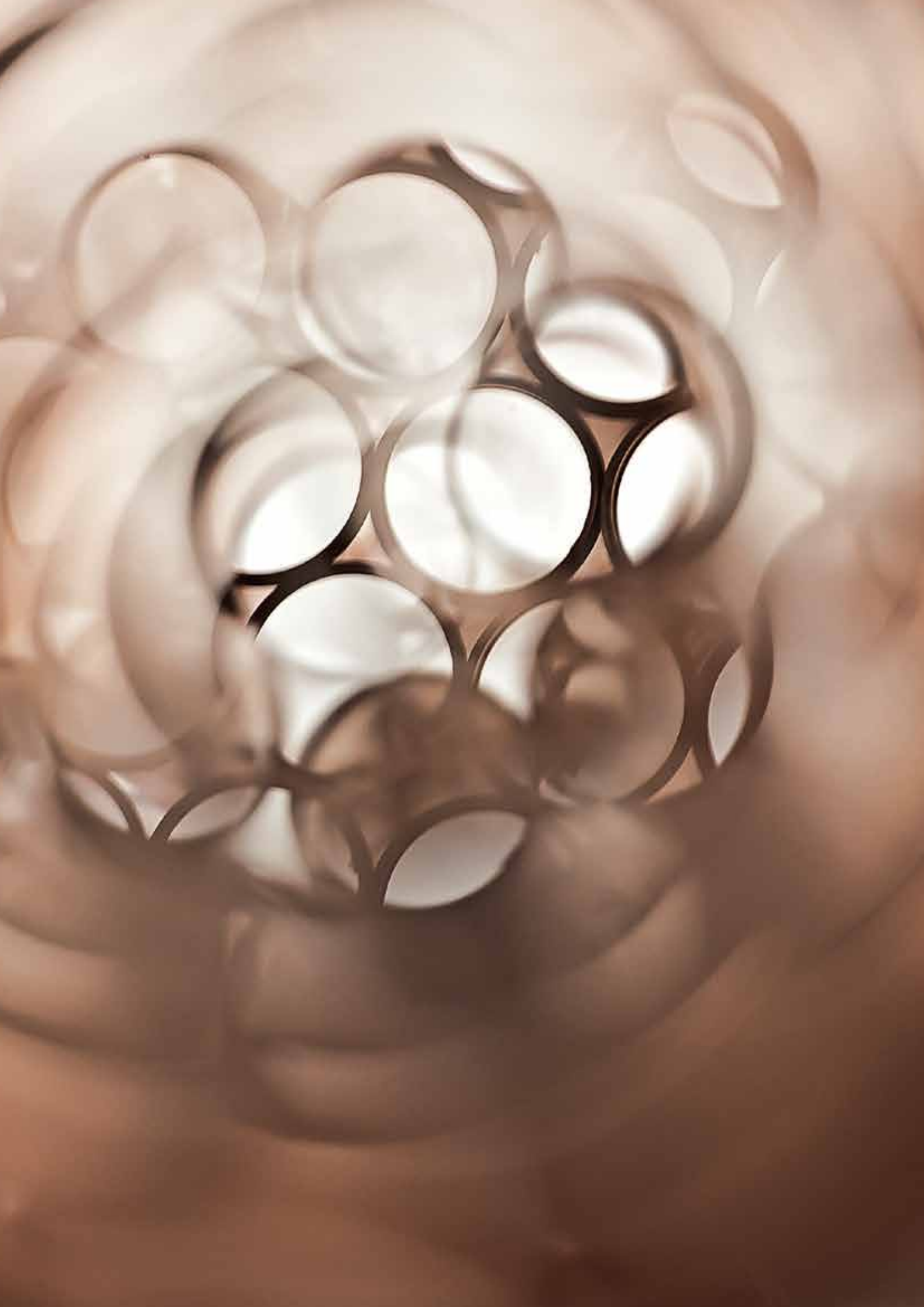
We incorporate the "heating" function into our condensing boilers, providing the most efficient modular solution, with factory-installed, multi-circuit heating.

2012 ECO RADIO SYSTEM Visio®

We created the ECO RADIO SYSTEM Visio®,a new generation of multi-zone digital controller built into our Condensing and Evolution boilers.

2010 CMV SYSTEM SOLUTION

When renovating collective housing units with CMV boilers, we developed a special, High-Performance renovation solution: Very low temperature boiler + controlled extractor. An exclusive, CE-certified system solution.



EXCLUSIVE TECHNICAL SOLUTIONS

Our condensing boilers incorporate the best of our technical solutions on the production line, to ensure you benefit from **the best possible long-lasting performance**.

THE HEAT EXCHANGER

Where our difference starts. Quality is revealed by the copper, stainless steel and other high-grade materials, and by our expertise.

THE FLATFIRE® BURNER

An adjustable burner, with optimised combustion, constant CO/CO_2, the latest technology.

ECO RADIO SYSTEM VISIO®

A new generation for with built-in environment and climate control, for future-proof technical solutions.

HEATING

The VISIO® ECO RADIO SYSTEM enables individual zone control for greater comfort and energy saving.

HOT WATER

Domestic hot water production, an exclusive, 3-star reference table quality concept.

...FOR AN UNEQUALLED ECO 3® LABEL

Through each of our technical solutions, we demonstrate our commitment to provide safe, efficient products that respect the environment.

Manufacturing procedures, choice of materials, pollution emissions, energy consumption and recycling are all taken into account from the start. This deliberate choice also enables us to comply with the European ECODESIGN directives, the coming standards for efficiency, air quality, power levels and recycling.

This environmental performance has led to the creation of the exclusive label for our boilers: ECO 3®

eco3

ECONOMY

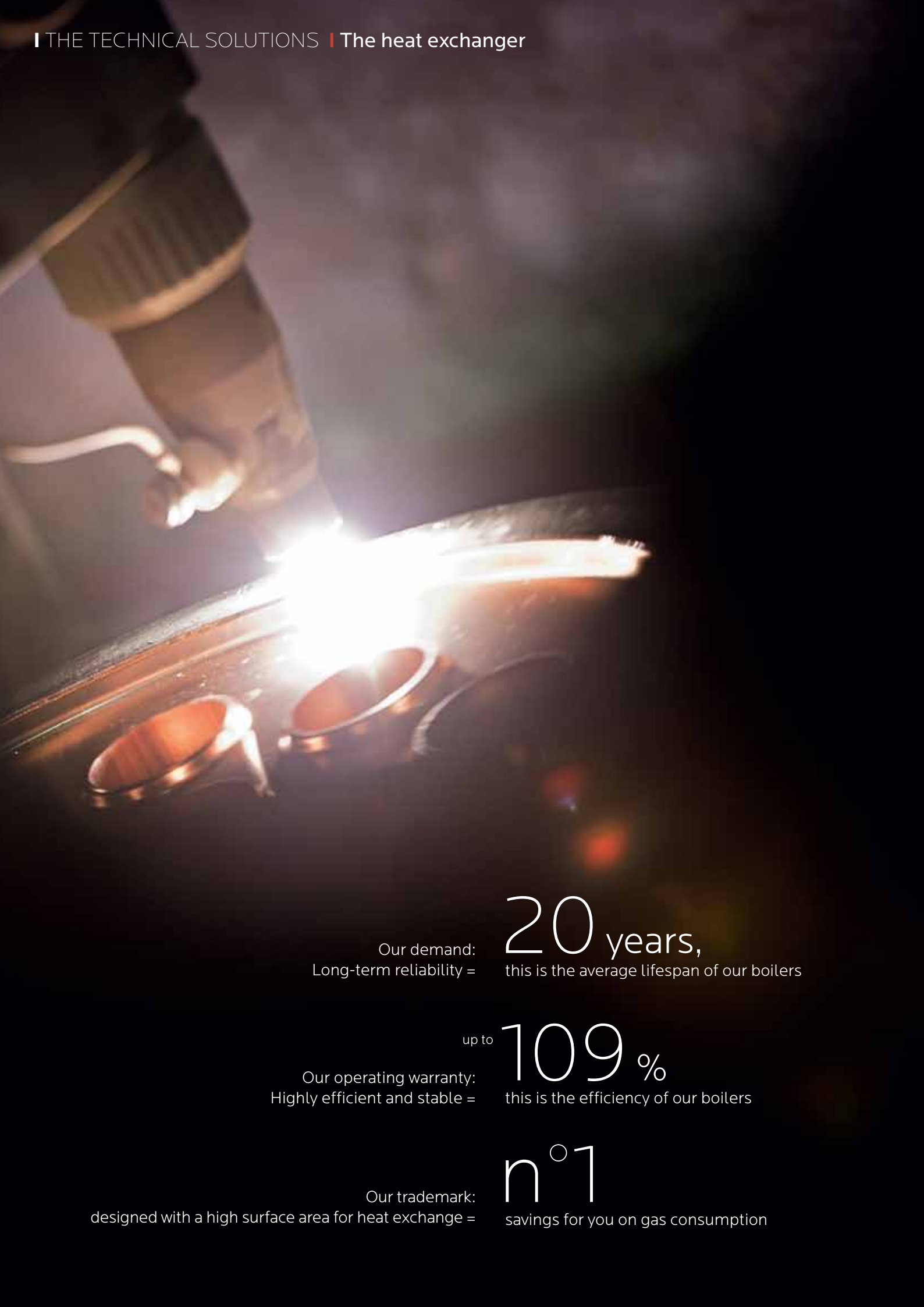
Our boilers are designed to condense for as long as possible, and to consume the least possible gas.

ECOLOGY

They emit the lowest possible level of pollutants, and 99.5% of the materials used are recyclable.

ECO ENERGY

They operate with gas, which is a clean energy source.



Our demand:
Long-term reliability = 20 years,
this is the average lifespan of our boilers

Our operating warranty:
Highly efficient and stable = up to 109 %
this is the efficiency of our boilers

Our trademark:
designed with a high surface area for heat exchange = n°1
savings for you on gas consumption

THE HEAT EXCHANGER OUR TRADEMARK

3 MAIN FOUNDING PRINCIPLES THAT MARK US OUT

1 LONG-TERM RELIABILITY

Our heat exchangers are designed to run 24 hours a day for years. Each material is chosen for its best properties:

- **copper**, for areas with no condensation, but significant power density: its unparalleled conductive properties and durability optimise heat transfer.
- **stainless steel** for areas with high levels of condensation, but low power density: it is extremely resistant to the effect of condensates.

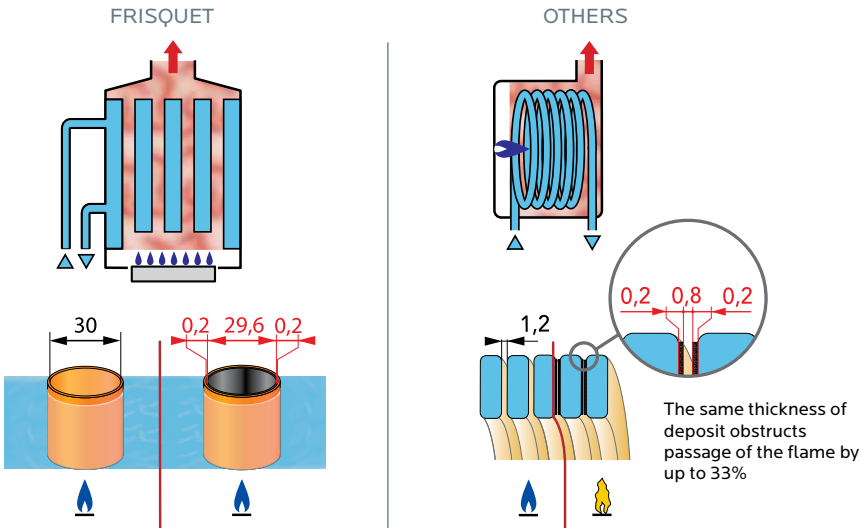
2 DESIGNED WITH A HIGH SURFACE AREA FOR HEAT EXCHANGE

All surfaces are wide and smooth and those in contact with the flame or burnt gases are water-cooled. **This optimises heat exchange** and eliminates local overheating caused by the burner power. The metal works at low temperatures, ensuring its reliability and strength.

3 HIGHLY EFFICIENT AND STABLE

Clogging is the chief enemy of efficiency.
As a boiler operates over a year, a thin layer of scale inevitably builds up on the heat exangers, but this does not have the same impact on a FRISQUET boiler.
On a tubular heat exchanger, whether spiral-wound flat tubes or in fins, the channels through which the burnt gases pass have to be between 1 and 1.4mm wide, rarely more than that otherwise the burnt gases are not sufficiently cooled.
Even slight scaling of 0.2mm reduces this available space by 30 to 40%, which affects performance.
This results in a gradual increase in gas consumption. This drop in efficiency is avoided in **FRISQUET boilers by giving all heating bodies a very wide channel**: 20, 30 and 200 mm in diameter.

COMPARISON OF CLOGGING
heat exchangers
deposit of 0.2mm
(measurements are expressed in mm)



The thickness of the deposits on the walls of the Frisquet heat exchanger tubes hardly reduces the cross-section of the flame's passage at all.

The same thickness of deposit obstructs passage of the flame by up to 33%

Clogging:	Before the season	After the season
Cross-section of passage:	100 %	- 2 %
Combustion efficiency:	=	=

	Before the season	After the season
	100 %	- 33 %
	=	

THE HEAT EXCHANGER VERTICAL AND UPRIGHT WITH NATURAL STRATIFICATION

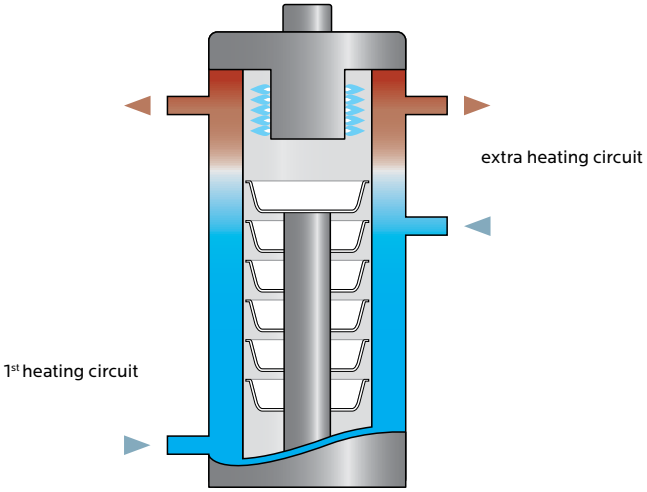
An architecture design for optimised condensation in all operating modes

TURBULATORS

Its stainless steel turbulators guide the burnt gases through, to maximise heat exchange. They are independent of the heat exchanger.

FRISQUET OPTIMAL®

Specially designed for power levels of 14-20 kW, 14 kg of molybdenum-grade stainless steel, 109 % efficient.



Section through Optimal heat exchanger with cylindrical FLATFIRE® burner

OPTIMAL WATER VOLUME

The water volume ensures **full irrigation** in all usage situations, power or temperature levels. There are no minimum flow rate or buffer volume limits, and no cooling expectations between two operating modes, DHW and heating.

LARGE VERTICAL HEAT EXCHANGE SURFACE

Condensates must flow freely and fast, but this is often a neglected, yet determining factor in the lifespan of a heat exchanger.
The OPTIMAL® heat exchanger itself is in one piece. Its heat exchange surface is perfectly smooth. **It is practically self-cleaning and maintains its performance over time** :
its smooth wall allows the condensation to flow evenly. It has no spots or other containment areas where damaging corrosion is very likely to develop.

OPTIMISED CONDENSATION

Its height and annular water volume provide **consistent, natural stratification of the heating water temperature**: the lower part of the heat exchanger remains coldest, optimising condensation and prolongs it even during severe cold spells when there is greater demand for heating.

EASY MAINTENANCE

Maintenance is simple and straightforward with the smooth, vertical walls, and the burner at the top with removable turbulatorsî.

THE +

EXTRA HEATING CIRCUIT CONNECTIONS

Our OPTIMAL® heat exchanger is equipped in production to supply a second and third heating circuit.

Example showing installation of 2 heating circuits

- 1st low temperature heating circuit (floor heating): 20°C / 45°C
- 2nd heating circuit (radiators): 20°C - 85°C

Even with two circuits at different temperatures, the design of the heat exchanger enables condensation to take place unaided, with the lower part remaining coldest for a long period.

FRISQUET DUOSTEP®
18-25 kW and higher

Long life, efficiency and maintenance are prioritised by separating the functions in DUOSTEP®: the condensation zone is separate from the main body.

the FRISQUET DUOSTEP® is specially developed for our 18-25 kW, 23-32 kW and 32-45 kW power levels, and has a two-stage heat recovery process.

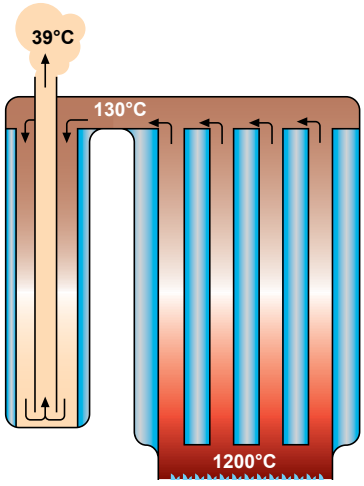
1ST STAGE

A main copper heat exchanger, with high conduction capacity, giving **maximum cooling of burnt gases** to the condensation limit.

The copper is kept away from attack by condensates, and preserves its legendary durability. The burnt gases from the burner are cooled here from +1200°C to 130°C without condensing, with the titanium-grade stainless steel turbulators. All their heat is recovered, except for the latent heat that reaches the condenser.

The heat exchanger and its turbulators are very accessible, assisting maintenance.

CONDENSER AND CHICANE



2ND STAGE

The molybdenum-grade stainless steel condenser supplements the action of the main body by condensing the burnt gases for optimal recovery of the latent heat. Its smooth surface and corrugated chicane encourage turbulence and optimise performance.

It is self-cleaning and maintenance-free.

THE MAIN COPPER HEAT EXCHANGER

Almost 2 million examples of this sophisticated heat exchanger are in service, building our brand reputation with its strength and long-lasting performance. Copper works at low temperatures, retaining its conduction and durability characteristics over time.

STAINLESS STEEL CONDENSER

It acts to recover 2.5 to 4 kW of the available latent heat: this heat is added to that supplied by the main heat exchanger.
This efficient recovery of latent heat gives performance of up to **109 %.**

THE +

EXTRA HEATING CIRCUIT CONNECTIONS

Our DUOSTEP® heat exchanger is factory-fitted for additional heating circuits such as radiators and underfloor heating.
In this case, with a shared return, the low return temperature of the underfloor heating prolongs condensation even further, even though the temperature required by the radiators is high.

Only our boilers have this factory-built addition.

FLATFIRE®
AN EXCEPTIONAL BURNER

It might appear at first glance that all burners are much the same. In fact, they are very different, comparing quality of combustion and environmental performance. The advanced technology of the FLATFIRE® burner has revolutionised the boiler industry. Only FRISQUET has this.

THE FLATFIRE® BURNER ACTS TO PROTECT THE ENVIRONMENT & THE ECOLOGY

EXTREMELY QUIET IN OPERATION

The FLATFIRE® burner achieves a very low noise level. It has a fan that drives cool air at low speed, eliminating boiler vibration and preventing noise pollution both inside and outside the home.

MAINTENANCE

Designed in one piece, it is simple to check, as it can be removed easily and placed complete on a work surface. It includes:

- Fan modulating air
- Electro-valve modulating gas
- Ignition electrode
- Combustion head

VERY LOW NOx RATE

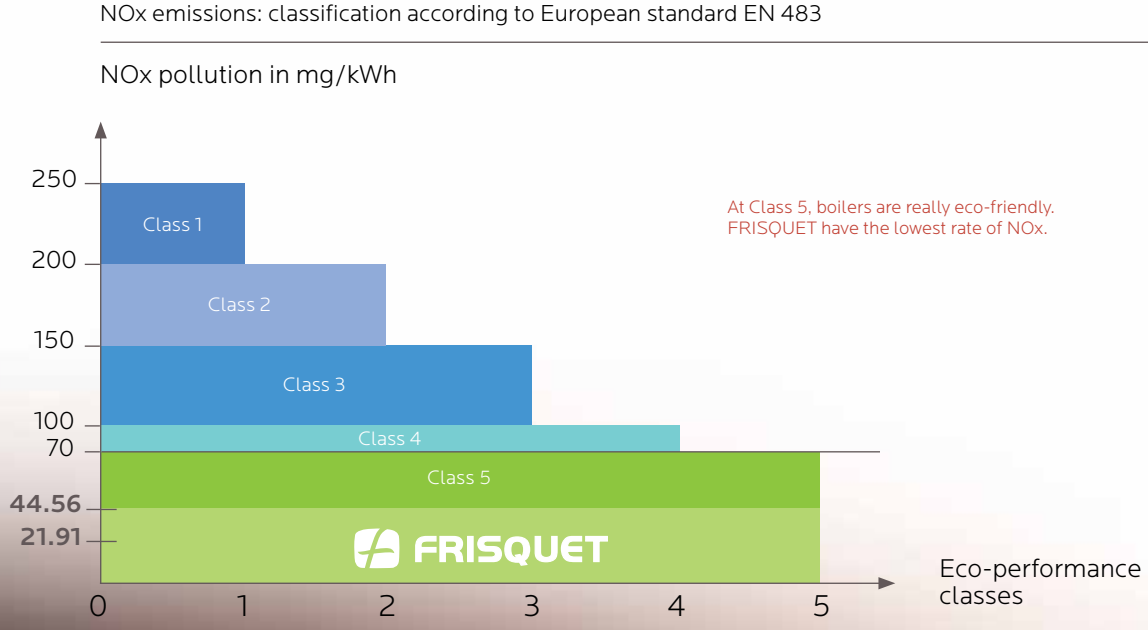
The exceptional combustion quality of our FLATFIRE® burner gives a much lower pollution (NOx) emission rate than that required by the EN 483 European standard. The latter has 5 classes: the most tolerant permits 250 mg/kWh (Class 1) and the most stringent up to 70 mg/kWh (Class 5).

Our FLATFIRE® burner records **levels 3 to 10 times lower**, placing our boilers in class 5, and also making them the most eco-friendly on the market.

NOx EMISSIONS LIMITED TO PROTECT THE NATURAL WORLD AND HEALTH

While many initiatives are being taken against the greenhouse effects of CO_2 at the moment, **NOx is the challenge for tomorrow:** it is harmful to health (irritating mucous membranes, causing breathing difficulties) and it affects eco-systems (acid rain).

NOx emissions: classification according to European standard EN 483



QUALITY OF COMBUSTION TO MAINTAIN EFFICIENCY AND SAVE YOU ENERGY

DYNAMIC POWER MODULATION FROM 4.5 TO45 kW

Short, blue flame at full power

The FLATFIRE® burner has dynamic power modulation: **continually adapting its combustion mode** to comply with your needs.

You can observe this for yourself:
- at full power, the high-temperature flame is short and burns blue;
- during modulation, you will detect infrared radiation.

It has an unparalleled variability, from 4.5 to 45 kW.

Infrared radiation during modulation.

READ® SYSTEM
Auto-calibrated dynamic control

Unparalleled combustion efficiency

The FLATFIRE® burner is fitted with the READ® device.
READ® checks and guarantees combustion quality every 125 milliseconds.

The READ® system is accurate enough to ensure permanent rates of 0.0032 at full power and 0.0017 at reduced power, some 30 to 60 times less unburnt gases than the strictest standard EN483 which allows a lower limit of 0.1 carbon monoxide.

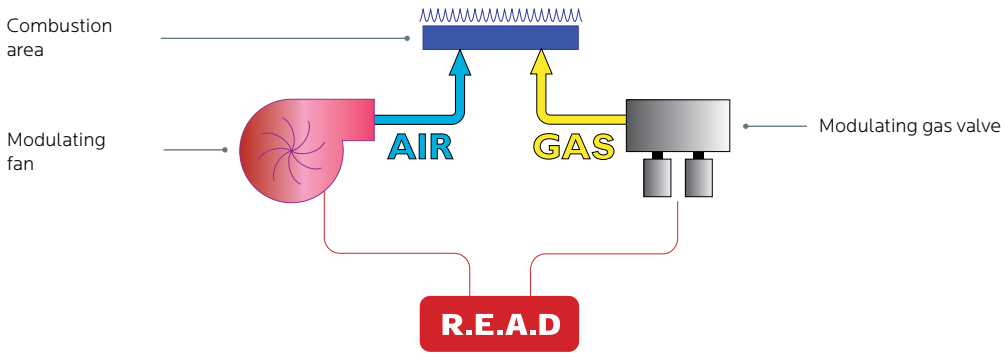
→ Less unburnt gas demonstrated by **greater fuel economy**.

Air/gas mixture control

Combustion quality and thus efficiency depend on the stability of the mix.

Normally, pneumatic and mechanical devices, which naturally drift over time, are used to control the air/gas mixture.
It is essential that these are adjusted manually, on site, using a portable CO/CO_2 analyser when the boiler is commissioned and thereafter once a year during maintenance.
These analyses and adjustments are complicated and time-consuming. Gas consumption rises if they are not carried out.

→ READ® offers the solution with its **automatic control** and **continuous adjustment**.



THE +

No manual adjustment: FLATFIRE® and its integrated READ device ® ensures continuous combustion efficiency.

TWIN HEATING POWER TO COMBINE COMFORT AND SAVINGS

DO NOT CONFUSE MODULATION WITH TWIN-POWER

Experience shows that domestic hot water production requires a powerful boiler. A heating installation is poorly suited to a boiler that is too powerful. It leads to excessive energy consumption, temperatures rising too sharply and expansion noise and it reduces the operation in condensation mode through the time taken for the controller to restore the balance.

TWIN-POWER

Twin-power resolves this problem: **you select the boiler power according to the hot water required** then your installer chooses the appropriate heating power.

While producing hot water, the boiler automatically switches to full power, then returns to heating mode.

So for instance, while 6 to 14 kW is enough to heat a dwelling, 25 kW is needed for domestic hot water.

MODULATION

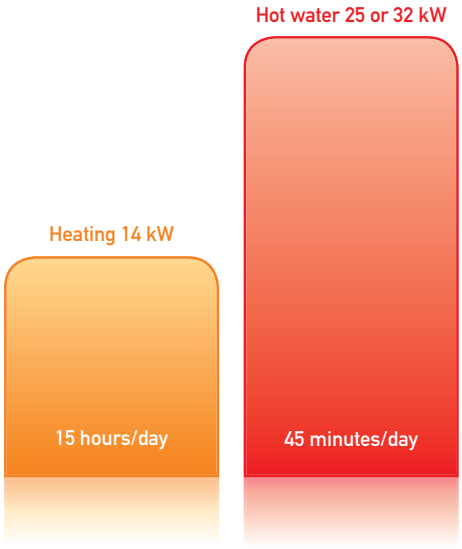
Modulation simply varies **the burner power, according to the demand determined** by Visio® ECO RADIO SYSTEM.
It is an accurate, continuous adjustment.

Combining TWIN-POWER and MODULATION in the FLATFIRE® burner, together with the VISIO® ECO RADIO SYSTEM optimises condensation in our boilers.

It is an important factor in gas savings.

TWIN-POWER COMBINED
with low-level modulation in our burner
reduces the volume of fumes
for better environmental protection

THE +



ECO RADIO SYSTEM Visio®

DIGITAL REGULATION

Unique analysis power so you can freely adjust your own comfort and your heating installation.

UP TO

25 %

SAVINGS ON YOUR GAS CONSUMPTION*

ECO RADIO SYSTEM VISIO® adapts to your lifestyle and the temperature variations your home may experience îthroughout the seasons. **It has exclusive functions, so you can forget about your boiler** . Its processing power allows it to incorporate all these functions at no extra cost.

DESIGN & INTUITIVE LAYOUT

A **highly accurate, simple to use technology**: particular care has been paid to the design, bringing together all the information so it can be accessed in an easy, intuitive way.

FULL, MODULAR RADIO

Fully integrated radio architecture **easy to install wireless technology**, so your heating installation is simple to upgrade.
The radio frequency is secure and encrypted (868 MHz, so no interference).

OPTIMIZED MANAGEMENT OF THE BOILER

ECO RADIO SYSTEM VISIO® constantly controls the boiler's components to provide **just the right level of energy needed for your residence**. It is permanently in contact with radio communication satellites.

3 LOCAL DIGITAL CONTROLLERS

Optimal management of the installation with 3 modes of control built into the boiler as standard:

- 1 environmental control only
- 1 outdoor temperature control only
- 1 environmental + outdoor temperature control

It is enough simply to **activate them, according to the features of the installation** .

MULTI-CIRCUIT HEATING MANAGEMENT

Management of all three heating circuits at different temperatures, with their own settings, so you **can configure your installation to suit yourself** and adjust it to your own needs in each zone.

*Compared to a traditional boiler, as long as the installation is equipped with all its fittings, as recommended by ADEME, Agence de l'Environnement et de la Maîtrise de l'Energie.

ECO RADIO SYSTEM Visio®

INTUITIVE CONTROL SOLUTION

Guides you, so you don't need the user manual: on the control panel, the buttons for the next action light up. Just a few keys are enough to operate all the functions. A large screen optimises legibility of the information displayed.

THE CONTROL PANEL: CLEAR DISPLAY

A large, backlit white screen makes reading information easy. The data about time, heating temperature, heating water pressure, the burner operation and domestic hot water are all displayed constantly. The key for the next action to perform is illuminated to guide you.

SIMPLIFIED CONTROL

The main functions for running the boiler and the installation are grouped together on the control panel. They can be directly accessed, with one touch, for simple control

1/ STANDBY/ON

2/ MENU KEY

To access specific settings:
vacation, date, time, hot water programme, special information.

3/ INFORMATION

The information key gives an overview of your installation: heating water pressure, current temperature of heating zones, outdoor temperature (if outdoor sensor is installed).

4/ ECO, ECO+, MAX, STOP HOT WATER KEY

For maximum savings, hot water production is customized as required, further refined with ECO+ (see page 31).

5/ AUTO OR MANUAL HEATING KEY

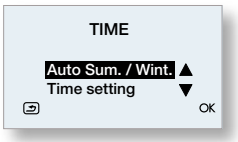
It is simple to modify the settings in manual mode: The pulse command is completely safe and does not affect the boiler's automatic control in anyway if you return to AUTO mode.

6/ CHOICE

To adjust a value + or -

ADDITIONAL FUNCTIONS FOR EASE OF USE

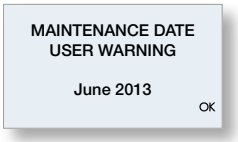
- **Automatic time setting**
  Day, date and time are updated automatically in the boiler's factory settings. It sends the information simultaneously to all the satellites. These do not have to be set again.



- **Summer/winter time switch**
  Summer/winter time switch.

- **Holiday programming, simple to do**
  Easy setting, giving the departure date and return date in words. The boiler will provide the chosen ambient temperature.

- **Date of next maintenance**
  The date of the next service can be checked, to ensure the boiler is maintained at its maximum efficiency.



- **Telephone contact**
  Provided to activate heating, or heating plus domestic hot water remotely.

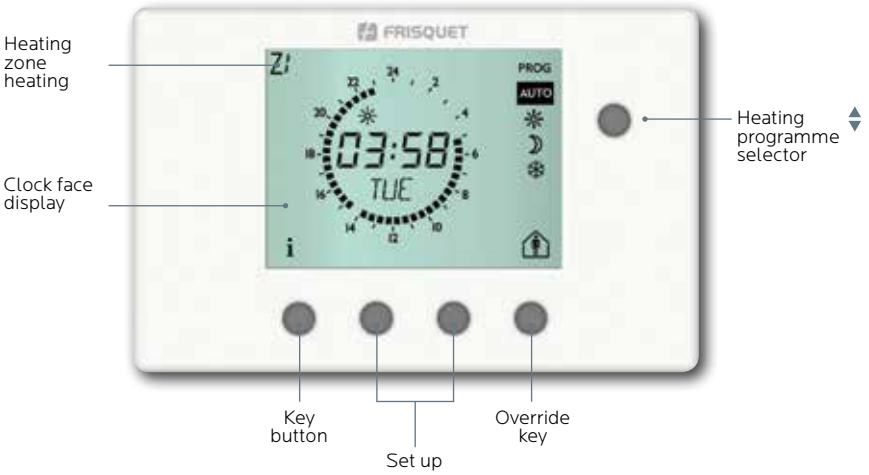
ECO RADIO SYSTEM Visio®

CUSTOMIZED COMFORT

There are 1 to 3 satellites activated, as required: each heating zone has its own communication satellite. Each satellite is individually linked to the boiler, for tailor-made comfort.

RADIO SATELLITE

The satellite has a **wide LCD screen**, placed at a slight angle to make it easy to read and understand. It can be placed on a flat surface or wall-mounted, with its ultra-slim design making it a discreet fixture. The satellite's batteries last 3 years.



EACH ZONE HAS ITS OWN RADIO SATELLITE, FOR CUSTOMIZED COMFORT

From a traditional installation with a single heating circuit, to a sophisticated system with several circuits, each heating zone has its own radio satellite. It receives the **comfort levels programmed by the user** and ensures that the ambiance is correct. It sends the information back to the boiler by radio, with no interference.

EXTREMELY EASY TO PROGRAMME

The user-friendly guide makes it **easy to set the parameters on the clock face:** you can set as many "COMFORT" and "REDUCED" periods it is possible to fit inside 24 hours.

- 1 key to switch modes among auto/day/night/frost-free/programming
- 1 button for ambient temperature and outdoor temperature if there is an outdoor sensor fitted.

Multiple functions

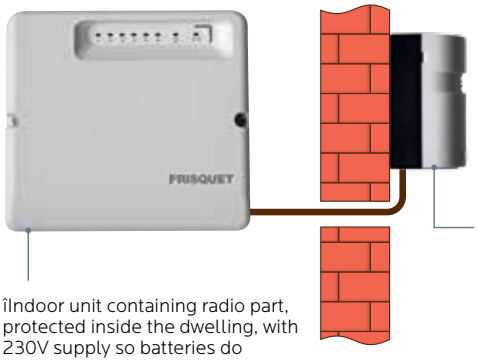
- intuitive "daily" and/or "weekly" programming
- COMFORT temperature
- REDUCED temperature
- FROST-FREE temperature
- temporary override of current programme
- immediate display of programmes

Direct display of information

- problem report from boiler
- battery life indicator

Information key

- current temperature of heating zone controlled
- outdoor temperature (*if outdoor temperature active)*



îIndoor unit containing radio part, protected inside the dwelling, with 230V supply so batteries do not have to be changed if access is awkward.

îOutdoor unit holding temperature sensor.

OUTDOOR RADIO SENSOR

It is used to adjust the ambient temperature according to the outdoor temperature, and is individually linked to the boiler. The outdoor sensor is vital for the underfloor heating, for instance.

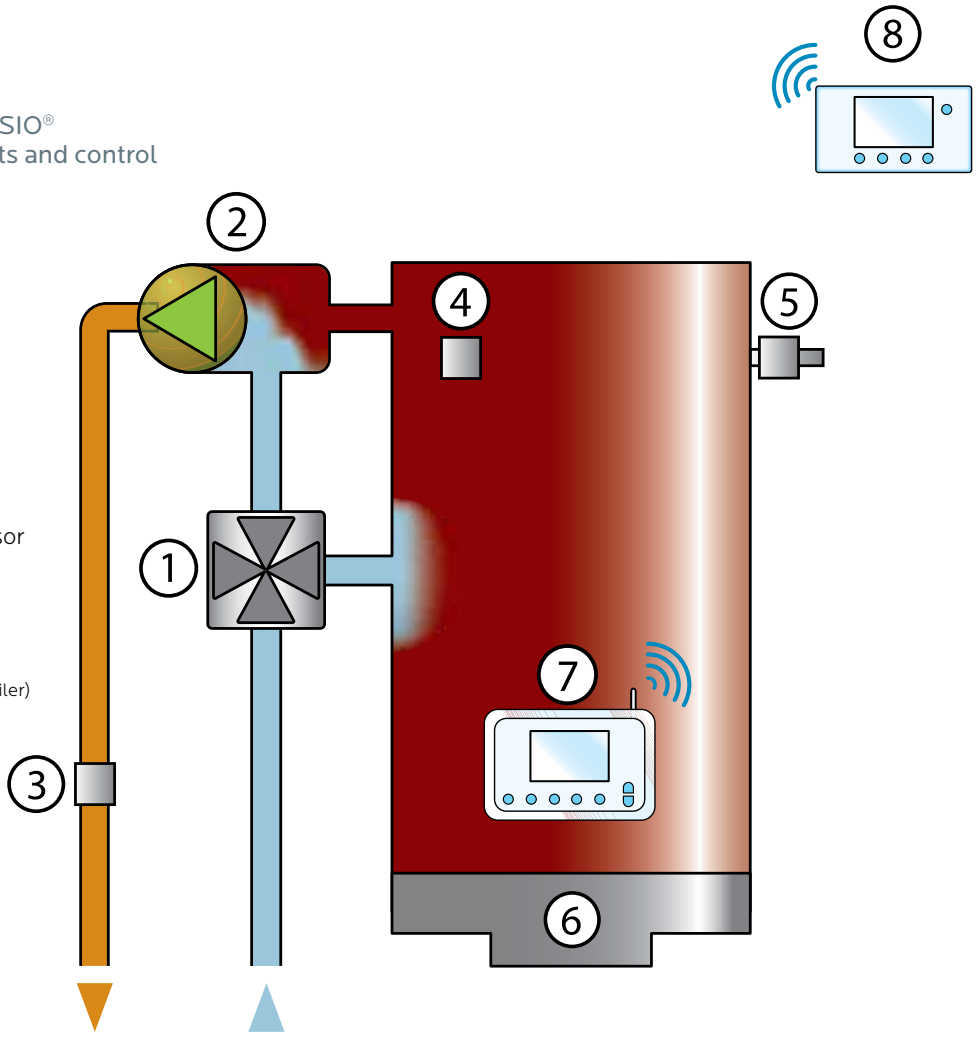
ECO RADIO SYSTEM Visio®

3 INBUILT, DIGITAL REGULATIONS FOR FULLY ADJUSTABLE HEATING

ECO RADIO SYSTEM VISIO® has a basic automatic adjustment facility for the initial heating temperature. It continually adjusts the heat exchanger temperature, on the burner adjustment and the 4-way valve, taking account of the properties of each zone to be heated to supply the precise energy needed for the dwelling.

In addition, to set your heating as precisely as possible, ECO RADIO SYSTEM VISIO® has **3 on-board, digital controllers** for adjusting to the characteristics of the zones to be heated for customized comfort.

ECO RADIO SYSTEM VISIO®
with its main components and control thermistors



1. 4-way valve
2. Circulator pump
3. Initial temperature sensor
4. Heat exchanger temperature sensor
5. Hot water temperature sensor
6. Adjustable burner
7. Visio control panel
8. Radio communication satellite
   (1 satellite supplied as standard with the boiler)

NO SETTING, ECO RADIO SYSTEM Visio®

KEEPS YOU COMFORTABLE FOR YEARS

AMBIANT REGULATION

ECO RADIO SYSTEM VISIO® includes an environmental controller which works at two levels:

- It measures the difference between the ambient temperature and the temperature setting required, and **continually adjusts the boiler temperature**.
- It analyses the speed of change in the ambient temperature to take account of the heating system's response time, and smoothly **anticipates the adjustments needed for optimal comfort**.

The VISIO® ECO RADIO SYSTEM combines accuracy and precision for high-quality setting control. This high-tech control facility is provided as standard with the boiler.

REGULATION USING ONLY THE OUTDOOR TEMPERATURE

Only the outdoor sensor's temperature measurement is used. It is useful for applications where the ambient temperature is not important (small business, dwelling where the ambient temperature measurement is not representative).

THE AMBIENT REGULATION AS A FUNCTION OF THE OUTDOOR TEMPERATURE.

It is useful when the characteristics of the dwelling require it; for underfloor heating, for instance, the outdoor temperature has to be taken into account.

SELF-ADJUSTING: no need to adjust the parameters of the settings.
It applies **a learning process relating to the performance of the heating zone, and determines the most suitable settings**.

NB: The settings relating to the external temperature are adjusted in the boiler, and the outdoor FRISQUET radio sensor is enough to activate them. These 2 types of settings can then be chosen only if the FRISQUET outdoor sensor is installed.

THE +

MULTIZONE REGULATION

Each separate heating zone is managed by a digital controller, different from the other zones.

ECO RADIO SYSTEM Visio®

OPTIMIZED MULTIZONE MANAGEMENT, FOR UP TO 3 HEATING CIRCUITS

With ECO RADIO SYSTEM VISIO®, our boilers can supply a heating system with a single circuit, or two or three heating circuits with the same efficiency, at different temperatures, whatever the vector used, a heating floor and/or radiators.

RADIATORS

They are flexible, and respond at once to the boiler controller and alternating day/night programmes. For a standard installation, the chosen temperature setting is 20/85°C, or for Low Temperature, between 20/60°C which encourage condensation, as it is "more padded".

UNDERFLOOR HEATING

This gives **uniform comfort** with no sensation of a heat source.
The high thermal inertia of the heating floor combines perfectly with our boilers' capability to operate at very low temperature, from 20°C to 45°C.

UNDERFLOOR AND RADIATORS

This combination is ideal to take **advantage of the heating floor** in living rooms and the **flexibility of radiators** for night-time rooms, for instance.

THE +

4-WAY VALVE
motor-driven, built-in as standard

THE ELEMENTS OF THE PERFORMANCE

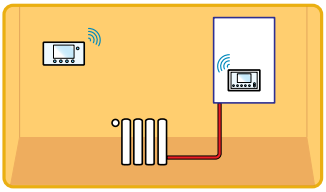
However sophisticated the controller, it is important that the boiler and heating installation can supply precisely the right heating water temperature calculated by the controller.

ECO RADIO SYSTEM VISIO® has both a high-level heating controller and the capability of using it to the full, with its built-in standard 4-way valve. Along with the ECO RADIO SYSTEM VISIO®, **it means that the boiler's power can be modulated from 0% to 100%.**

SINGLE-CIRCUIT HEATING

This is the traditional, radiator-only or underfloor heating only system.
It is controlled by the ECO RADIO SYSTEM VISIO® with the radio satellite supplied as standard with the boiler. No additional hydraulic kit is needed for an underfloor heating system; the outdoor sensor is needed, of course (option).

Installation with 1 heating circuit, using radiators or underfloor heating



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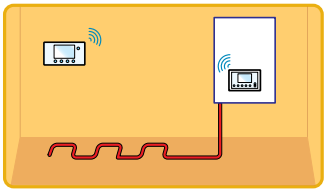


H Visio module

Compact, can be placed anywhere on the installation: the H Visio module can be placed near the boiler or anywhere else in the installation.

2 OR 3-CIRCUIT HEATING

Heating circuits are needed for heat vectors at different temperatures.

Installation is simple and quick with ECO RADIO SYSTEM VISIO®, whether it is a new system, or modernisation of an existing home. The boiler's control panel simply has to activate the built-in controllers, and assign them to the chosen heating circuit.

One of these circuits is supplied as it it were a "single-circuit heating system". There are two possible solutions for the others:

1 - Circulator pump

A full kit for managing a supplementary circuit, including the circulator. ECO RADIO SYSTEM VISIO® controls the heating zone by adjusting the heat exchanger's temperature to its lowest level, so that the circulator operates continually for as long as possible, and not in ON/OFF mode as normal.

2- H Visio module

This is the highest-level heating circuit, **with a 4-way motorised valve**.
It allows a continuous delivery of heat at precisely the right temperature calculated by the digital controller in the boiler.

→ The H Visio Module and the boiler are in permanent and close radio contact, to deliver the minimum energy needed for the thermal balance to suit you.

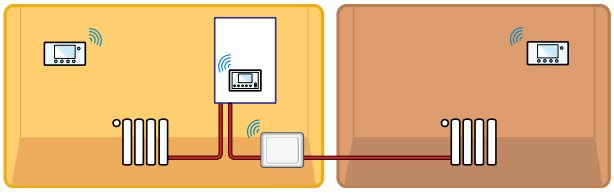
→ It is possible to connect up to two hydraulic modules, to manage 3 heating zones each fully independent of the others.

THE +

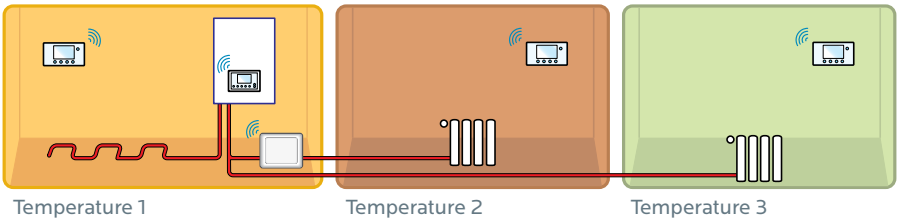
POOL HEATING

Pool heating is provided by ECO RADIO SYSTEM VISIO®, through its swimming pool multi-function radio unit.

Installation with 2 heating zones and H Visio module



Installation with 3 heating zones with different emitters, H Visio module and circulator module built into the boiler



HOT WATER, THE FRISQUET DIFFERENCE

Quality hot water must always be available at once, to meet the needs of users and their equipment. FRISQUET condensing boiler technology provides you with the best quality hot water, no matter how much you need.

INSTANT HOT WATER WITH SEMI-STORAGE

This offers **instant hot water convenience**, more than sufficient for everyday needs.

Our mixed boilers (heating + instant hot water) have a unique hot water production system: a triple-supply heat exchanger.
It gives immediate, endless hot water.

Operating principle

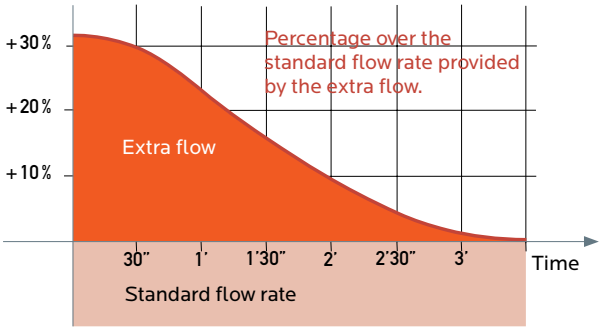
PREHEATING: The heat exchanger is sunk into the heat exchanger. This is where the water is heated.

THERMAL STORAGE The heat exchanger also benefits from input from the heat exchanger's thermal wheel. It provides significant, very obvious extra flow.

BURNER POWER: Every discharge of water is detected at once, triggering the burner at full power.
This ensures continuous production of hot water.

The triple-supply gives up to 30% supply above normal flow rates at start-up.

This extra flow rate provides additional comfort for 1.5 mins, the average time at most of the outlet points. This is a significant difference compared to the 4 to 6 l mini-accumulator tanks; the only purpose of this is to avoid having cold water flow at start-up, without changing flow rate.



Ours is the only copper heat exchanger to deliver real, top-quality hot water naturally, better than the 3-star benchmark set by EN 13203, only possible on FRISQUET boilers.

Standard flow rate

25 kW 12.5 l/min
32 kW 15.5 l/min
45 kW 19 l/min

Availability example
hot water
with 120 l tank

450L
instantly

+

400L
10 min later

Hot water at 40°C, 20 l/min with cold water input at 15°C.

HOT WATER STORED IN A BUILT-IN OR SEPARATE STAINLESS STEEL TANK

This means ample, copious hot water, **supplying several taps at the same time, with no change in flow rate or temperature**.

Our tanks are available with a capacity of 80 and 120 litres, fitted with a more than adequate double-coil heat exchanger.

These feature are necessary in order to be sure of providing generous amounts of hot water. Experience shows that smaller capacity tanks (40, 50 or 60 litres) quickly reach their limit and run out.

Frisquet tanks are made of stainless steel, fully recyclable, including the heat exchanger.
Using stainless steel means that there is no need for the anodes used to prevent corrosion in enamelled steel tanks.

In the heating-only version, HYDROMOTRIX and PRESTIGE boilers together with the UPEC 80 or 120 hot water heater provide the same level of performance for hot water. The same applies for mixed versions if the need for hot water changes, since all our boilers are designed to be connected directly to a tank.

THE +

All our mixed or heating-only boilers
can be paired with a hot water tank or solar tank, with our built-in standard 4-way valve.

YOUR DAILY, CUSTOMIZED AND SECURE COMFORT

ECO+ HOT WATER PROGRAM

In order to optimise energy savings, the hot water function can be disabled at times when it is not needed (night and/or day time, at preset time periods). It will automatically return to ECO mode.

ECO+ optimisation: 4 possible choices

Night 7/7:	disabled every night
Night 5/7:	disabled every night, except for weekends.
Night + day 7/7:	inactive night and daytime (in time periods)
Night + day 5/7:	inactive night and daytime (in time periods) except weekends

ECO/ECO+/MAX/STOP SERVICE

ECO a normal day-to-day service ECO+ to optimize your savings, MAX an intensive service, STOP to turn off the hot water function.

PSE (SPECIAL HOT WATER PROGRAM)

It automatically adjusts the FLATFIRE® burner to the correct power to meet hot water requirements without wasting energy.

POLLUTION PROTECTION

All our hot-water wall-mounted boilers are protected from pollution hazards by interconnection between water for heating and domestic hot water.

HOT WATER SAFETY

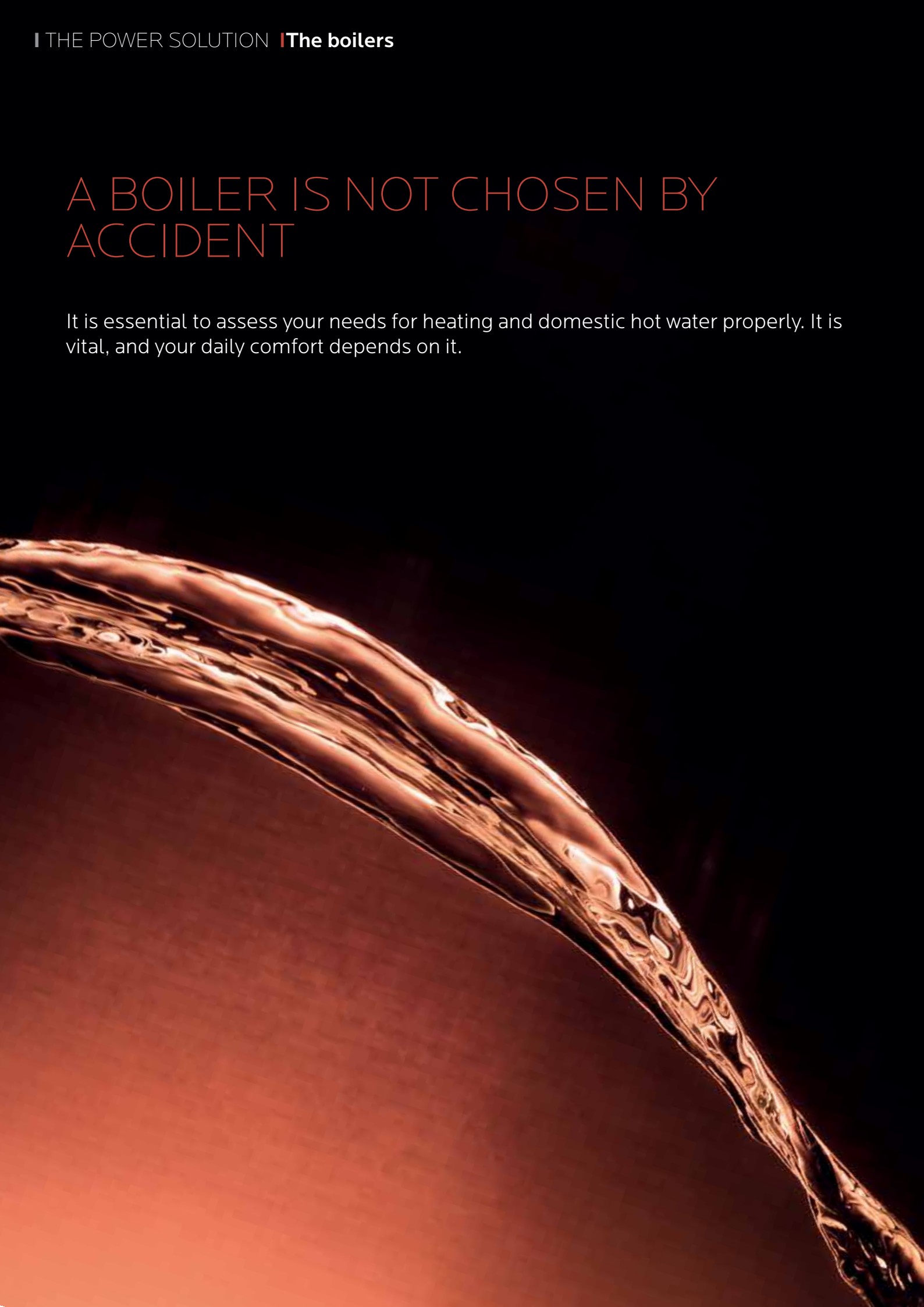
A factory-set thermostat control limits the hot water temperature to the mandatory safety limit of 50°C.

LEGIONELLA PROTECTION

The FRISQUET heat exchanger is specially design to raise the hot water temperature to a level that prevents the spread of the legionella bacterium.

A BOILER IS NOT CHOSEN BY ACCIDENT

It is essential to assess your needs for heating and domestic hot water properly. It is vital, and your daily comfort depends on it.



A RANGE OFFERING FRESH CHOICES

With its two-way switchable power range, from 14 to 45 kW, FRISQUET offers a solution for all sizes of living space and different hot water requirements. From studio flat to a large house, from a single shower to 2 baths at once, FRISQUET wall-mounted or floor standing boilers deliver the performance you need.

Selection guide	WALL-MOUNTED BOILERS						FLOOR-STANDING BOILERS				BOILERS + UPEC ASSEMBLY					
	HYDROMOTRIX Condensing				HYDROCONFORT Condensing		PRESTIGE Condensing				• HYDROMOTRIX Condensing + UPEC wall-mounted 80 or 120 • PRESTIGE Condensing + UPEC 120 in column or side by side					
	heating only	mixed or heating only			with built-in tank		built-in tank	mixed or heating only		heating only						
Power (Kw)	20	25	32	45	20	20	20	25	32	45	25		32		45	
Tank capacity (l)					80	120	80				80	120	80	120	80	120
Hot water requirements																
Bathrooms* Kitchen		■	■	■	■	■	■	■	■		■	■	■	■	■	■
Bathrooms* Wet room Kitchen		■	■	■	■	■	■	■	■		■	■	■	■	■	■
Convenience in bathroom High output equipment Kitchen		■	■	■	■	■	■	■	■		■	■	■	■	■	■
2 bathrooms* Kitchen		■	■	■	■	■	■	■	■		■	■	■	■	■	■
Heating needs																
Two-way switch power	14/20	18/25	23/32	32/45	14/20	14/20	14/20	18/25	23/32	32/45	18/25		23/32		32/45	
Studio apartment	■	■	■	■	■	■	■	■	■	■	■		■		■	
Large apartment	■	■	■	■	■	■	■	■	■	■	■		■		■	
Detached house	■	■	■	■	■	■	■	■	■	■	■		■		■	
Large house	■	■	■	■	■	■	■	■	■	■	■		■		■	

*Bathroom with standard 180 l bath.

■ Modified use ■ Good insulation ■ Risk of over-dimensioning ■ Unsuitable use

THE +

VISIO HEATING WITH CONDENSING TECHNOLOGY

Our boilers have a special, factory-installed function, which just needs activating to provide straightforward heating.

- **57 to 270 kW**
- **Applications**: residential and tertiary use (very large house, small building, private hotel, school, multi-use hall, etc.)

Wall-mounted boilers

With our wall-mounted boilers, the years pass peacefully.
With tank, mixed or heating only...
you choose the type of comfort that suits your.

HYDROMOTRIX CONDENSING

heating only 14/20 kW

HYDROMOTRIX CONDENSING

mixed/heating only
or twinned with UPEC
18/25 kW
23/32 kW
32/45 kW

HYDROCONFORT CONDENSING

with built-in tank
80 l or 120 l 14/20 kW

THE +

Visio heating with condensing technology

All our condensing boilers can be an integral part of a heating system

HYDROMOTRIX CONDENSING
heating only 14/20 kW

This heating-only boiler, with two-way switched power, 14 or 20 kW is suitable for older buildings or new,
wherever heating only is needed, and domestic hot water is not required or already provided by a separate tank.

- Its built-in equipment, on-board controller and connections to additional heating circuits make the HYDROMOTRIX Condensing 14/20 kW suitable for the most complicated installations:
  1, 2 or 3-circuit heating
- For an underfloor heating system, there is no hydraulic kit; FRISQUET is the only one designed to be connected directly to the heated floor circuit.
- Domestic hot water extension: The 4-way valve fitted to the HYDROMOTRIX condensing boiler allows a hot water tank to be added that can be controlled by the VISIO®ECO RADIO SYSTEM.
  Our solar UPECs are designed to be connected directly.

It is easy to integrate, because of its compact size and neat design.

PERFORMANCE SPECIFICATIONS

- FRISQUET OPTIMAL® heat exchanger
- Up to 109 % efficient
- Switchable heating power: 14 or 20 kW
- Burner adjustable from 5 to 14 kW or 5 to 20 kW
- Permanent stability of air/gas mixture
- NOx rate 38.32 mg/kWh - Class 5
- The ECO RADIO SYSTEM Visio® digital controller with its radio communication satellite
- Connections for additional heating circuits as standard

HYDROMOTRIX CONDENSING

mixed/heating only 18/25 kW
23/32 kW
32/45 kW

The HYDROMOTRIX Condensing boiler combines the DUOSTEP® heat exchanger and the triple-supply hot water heat exchanger, a perfect system, bringing together top quality, efficient hot water production.

boiler + upec assembly

It combines power and performance in the most compact space: only 49.5 cm for the 25 kW and 32 kW models.

- The mixed HYDROMOTRIX provides instant hot water and a stable temperature at a standard output of 12.5 l/min (25 kW), 15.5 l/min (32 kW) and 19 l/min (45 kW), with an extra 30 % output at start-up.
- For extra hot water needs, the mixed or heating-only HYDROMOTRIX condensing boiler can be connected straight to the UPEC 80l or 120 l placed on the left-hand side of the boiler.

This assembly gives remarkable levels of performance:

- HYDROMOTRIX + UPEC 80 :
  300 l at once + 300 l after 8 min heating
- HYDROMOTRIX + UPEC 120 :
  450 l at once + 400 l after 10 min heating

Examples given for hot water at 40°C at 20 l/min, with cold water input at 15°

PERFORMANCE SPECIFICATIONS

- FRISQUET DUOSTEP® heat exchanger
- Up to 109 % efficient
- Switchable heating power
- Hot water power 25, 32 and 45 kW
- Continuous adjustment burner
- Permanent stability of air/gas mixture
- NOx Class 5
- ECO RADIO SYSTEM VISIO® digital controller with its radio communication satellite
- Connections for additional heating circuits as standard

25 kW	Heating power 18 or 25 kW Adjustable from 6.4 to 18 or 25 kW Nox 21.91 mg/kWh
32 kW	Heating power 23 or 32 kW Adjustable from 8 to 23 or 32 kW Nox 25.80 mg/kWh
45 kW	Heating power 32 or 45 kW Adjustable from 11 to 32 or 45 kW Nox 44.56 mg/kWh

HYDROCONFORT CONDENSING with built-in stainless steel tank 80 L or 120 L 14/20 kW

OPTIMAL® heat exchanger and built-in stainless steel tank together for a prestigious hot water system, up to 109 % efficient, in the most compact space.

With two-way switching, the power options of 14 or 20 kW make it suitable for medium-sized dwellings or detached houses, with high or very high hot water demand, since the capacity and quality of its hot water production make the HYDROCONFORT condensing boiler suitable for the daily needs of a family as well as the high output demands of sophisticated equipment or even for business use.

Its hot water output is unmatched for a boiler of this power level:

- high, standard output, 20 l/min and 24 l/min
- ample supply, 280l and 450l
- ultra-quick heating time
- ECO/ECO+/MAX/STOP functions
- may be coupled with the solar UPEC

HYDROCONFORT 80	280L instantly	+ 280L 8 min later	HYDROCONFORT 120	450L instantly	+ 400L 10 min later

Example of hot water at 40°C, 20 l/min with cold water input at 15°C.

PERFORMANCE SPECIFICATIONS

- FRISQUET OPTIMAL® heat exchanger
- Up to 109 % efficient
- Switchable heating power: 14 or 20 kW
- Hot water power: 20 kW
- Burner adjustable from 5 to 14 kW or 5 to 20 kW
- Permanent stability of air/gas mixture
- NOx rate 38.32 mg/kWh - Class 5
- ECO RADIO SYSTEM VISIO® digital controller with its radio communication satellite
- Connections for additional heating circuits as standard

FLOOR-STANDING boilers

Our floor-standing boilers show you what the word "prestige" means. How to combine power with discretion?
Choose a PRESTIGE boiler, with compact size and power adjustable to suit your living space.

PRESTIGE CONDENSING

with built-in 80 l tank 14/20 kW

PRESTIGE CONDENSING

mixed/heating only 18/25 kW
23/32 kW
32/45 kW

THE +

Visio heating with condensing technology

All our condensing boilers can be an integral part of a heating system

PRESTIGE CONDENSING

+ UPEC 120 l tank 18/25 kW
23/32 kW
32/45 kW

PRESTIGE Condensingwith built-in stainless steel tank 80 L

14/20 kW

Only 54 cm wide, the PRESTIGE Condensation 14-20 kW is concentrated performance.
This fully integrated concept has an OPTIMAL® heat exchanger and an 80l stainless steel hot water tank.

Heating power, high performance, flexible operation, plentiful hot water, combined with the most efficient use of space, mean that the PRESTIGE Condensing 14/20 can suit every type of installation, from small flats to detached houses.

With accelerated circulation, its tank produces hot water efficiently, with only 20 kW, at a standard output of 18.5//min.

It offers ample hot water: you have 280 l at once + 260 l after 12 min heating, customised to suit your, with the ECO/ECO+/MAX/STOP FUNCTION.

280 L + 260 L
instantly 12 min later

Hot water at 40°C, 20 l/min with cold water input at 15°C.

Managed by the ECO RADIO SYSTEM Visio®, its Special Tank programme, PSB, automatically adjusts the FLATFIRE® burner up to 20 kW if necessary, then adjusts its power to provide just the right amount of power required.

PERFORMANCE SPECIFICATIONS

- FRISQUET OPTIMAL® heat exchanger
- Up to 109 % efficient
- Switchable heating power 14 or 20 kW
- Hot water power 20 kW
- Burner adjustable from 5 to 14 kW or 5 to 20 kW
- Permanent stability of air/gas mixture
- NOx rate 38.32 mg/kWh - Class 5
- ECO RADIO SYSTEM VISIO® digital controller with its radio communication satellite
- Connections for additional heating circuits as standard
- 3* hot water quality

PRESTIGE Condensing mixed/heating only

18/25 kW
23/32 kW
32/45 kW

The PRESTIGE condensing boiler is upgradable, offering a wide range of solutions: mixed or paired with a UPEC alongside or stacked.

The PRESTIGE condensing boiler is a powerful heating and hot water production resources, with an optimized condensing mode.
It is also the only, mixed, floor-standing boiler that combines 3-star instant hot water production with high efficiency.

Adjustable, with a full, factory-fitted system so it can be adapted to suit requirements, the mixed-version PRESTIGE condensing boiler offers high quality hot water at a standard output rate of 12.5l/min for the 25 kW version and 15.5 l/min for the 32 kW version.

As for the 45 kW PRESTIGE condensing boiler, in the heating only version, it can be paired with the UPEC for hot water production.

With its range of power levels, from 18 to 45 kW, its multi-purpose operation and many configuration options, it can form part of any heating installation, either existing or new-build.

PERFORMANCE SPECIFICATIONS

- FRISQUET DUOSTEP® heat exchanger
- Up to 109 % efficient
- Switchable heating power
- Hot water power 25 and 32 kW
- Continuous adjustment burner
- Permanent stability of air/gas mixture
- NOx Class 5
- ECO RADIO SYSTEM VISIO® digital controller with its radio communication satellite
- Connections for additional heating circuits as standard

25 kW	Heating power 18 or 25 kW Adjustable from 6.4 to 18 or 25 kW Nox 21.91 mg/kWh
32 kW	Heating power 23 or 32 kW Adjustable from 8 to 23 or 32 kW Nox 25.80 mg/kWh
45 kW	Heating power 32 or 45 kW Adjustable from 11 to 32 or 45 kW Nox 44.56 mg/kWh

PRESTIGE Condensing + UPEC 120 L stainless steel tank

18/25 kW
23/32 kW
32/45 kW

Efficient use of space and flexible power options with this high-performance combination in vertical or horizontal versions.

The 25 kW, 32 kW and 45 kW PRESTIGE Condensing boilers are fully fitted in the factory for connection to the UPEC 120 l directly, giving a vertical or horizontal configuration in the smallest possible space: with a vertical tank, the whole assembly takes up only the same space as a chair!

With the UPEC tank, they can produce ample hot water at a rate to meet the most demanding requirements.

- Standard high output: 24 l/min, giving it 3 stars according to the EN 13 203 standard.
- Rapid heating time: 10 minutes, while the strictest standard, EN 13 203, specifies up to 20 minutes.
- Actual hot water availability: 450 litres at once, followed by 400 l at 40°C after heating.
- ECO/ECO+/MAX/STOP options, to meet requirements.

450L + 400L

instantly 10 min later

Hot water at 40°C, 20 l/min with cold water input at 15°C.

TECHNICAL CHARACTERISTICS

		Power (Kw)	Mixed or heating only	Tank (l)	DHW flow rate (l/mn)	Expansion tank (l)	Fume outlets	Overall size (mm)			Weight (kg)
								Height	Width	Depth	under load
Wall-mounted boilers	HYDROCONFORT	20		80		11	H 60/100 V 80/125	1017	805	481	177
		20		120		11		1337	805	481	230
	HYDROMOTRIX	20	H.O.			12		1015	550	464	74
		25	M & H.O.		12.5	11		795	495	437	80
		32	M & H.O.		15.5	12		915	495	447	99
		45	M & H.O.		19	18	80/125	967	710	480	135
	HYDROMOTRIX:+ UPEC tank	25		80		11	H 60/100 V 80/125	795	955	477	
		32		120		12		915	1015	515	
Floor-standing boilers	PRESTIGE	20		80	18.5	18	H 60/100 V 80/125	1720	540	600	188
		25	M & H.O.		12.5	18		1035	555	570	90
		32	M & H.O.		15.5	18		1035	555	570	105
		45	H.O.			-	80/125	1090	555	484	112
	Upright Assembly PRESTIGE + UPEC120	25		120	24	18	H 60/100 V 80/125	1862 1915*	555	570 544*	252
		32									267
		45				-	80/125				274
	Horizontal Assembly PRESTIGE + UPEC120	25		120	24	18	H 60/100 V 80/125	1035 1090*	1113	570 544*	252
		32									267
		45				-	80/125				274
Tanks	UPEC wall-mounted			80	20			795	460	477	115
				120	24			915	520	515	161
	Floor-standing UPEC			120	24			1035	555	546	162

M: Mixed, H.O : Heating only

* for Prestige 45 kW + UPEC

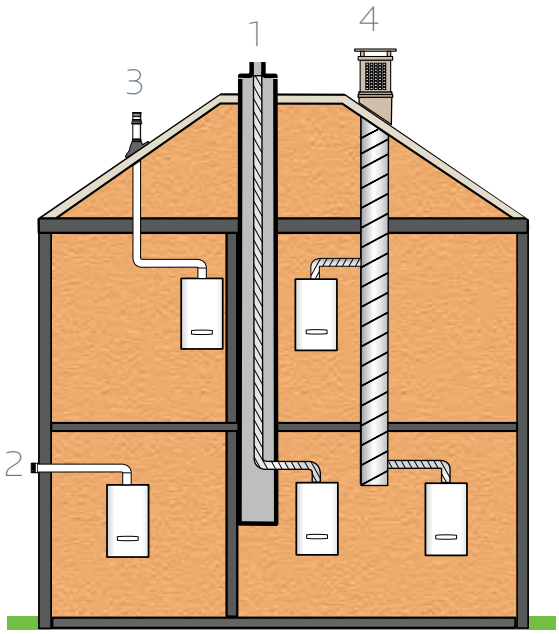
EQUIPMENT AS STANDARD

ECO RADIO SYSTEM VISIO® device® • 1 Radio communication satellite• FLATFIRE® burner • READ® air/gas adjustment • Electronic ignition• Gas ionization safety device • Dual electro-valve gas safety unit • Electronic overheating safety device• Electronic water level safety • Electronic frost-free safety unit• Expansion tank*• Heating control valve • 3-speed circulator • Connectors for 2nd heating circuit • PSE (special hot water programme)• Legionella protection programme• Automatic thermostat controller• Hot-water disconnection built-in (on mixed boilers and boilers with built-in tank) • Mineral wool heat insulation

*Except floor-standing Prestige 45 kW

FUME CONNECTION

		20 kW	25 kW 32 kW	45 kW
1 - Flue				
Length of conduit With device having a CSTB* technical notice	With air intake • in the room	15 m	23 m	Up to 50 m
	With air intake • in the duct	11 m + terminal		
2 - Horizontal vent				
Coax conduit Ø mm		60/100	60/100	80/125
Maximum distance		4.70 m		11 m + terminal
3 - Vertical vent				
Coax conduit Ø mm		80/125	80/125	80/125
Maximum distance		11 m + terminal		
4 - 3CE				
For collective conduits				



*Centre Scientifique et Technique du Bâtiment



SIMPLIFIED MAINTENANCE

The annual cost of a boiler is not limited simply to its gas consumption only. You must also include the costs relating to maintenance. It is an important factor in choosing the boiler. The whole of the FRISQUET range is designed to make maintenance easy and low-cost.

Our parts contribute to simplicity

The walls of our heating bodies are smooth and accessible.
It is thus possible to **clean the whole surface area of the heat exchangers**.
The FLATFIRE® can be removed with a half-turn. It is completely removed from the boiler for checking and cleaning.

Our parts contribute to sharing.

Whatever the model or power, all our boilers have **many common parts**. This inevitably reduces maintenance costs. It also improves availability of parts, both in stock and in terms of their operating life (15 to 20 years, much longer than the manufacturer's legal obligation).

Our parts contribute to safety

Faults are shown written out in full on the boiler's control panel, and an alarm is sent to the satellites around the house.

LOCAL TECHNICAL SUPPORT

- **14 regional** FRISQUET AGENCIES
- A network of distributors representing over **1000 sales outlets** directly supplying installers
- Over **500 approved after-sales services** for installers and users
- **3 regional FRISQUET MANUFACTURER after-sales centres**
- **Permanent technical support** to installers with our hotline service
- **11 approved training centres** giving installers and after-sales services specific information about our products

THE +

A LONG-TERM WARRANTY 5 & 2 YEARS

The quality of our boilers means we can offer you a manufacturer's warranty much longer than the legal limit: this is our long-term warranty*.

- **5 years**:: FRISQUET HEAT EXCHANGER, BURNER, CIRCULATOR AND STAINLESS STEEL TANK
- **2 years**: appendices

*According to the procedures specified in our general warranty conditions.

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