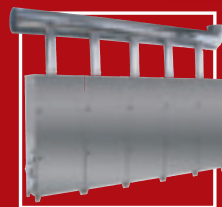
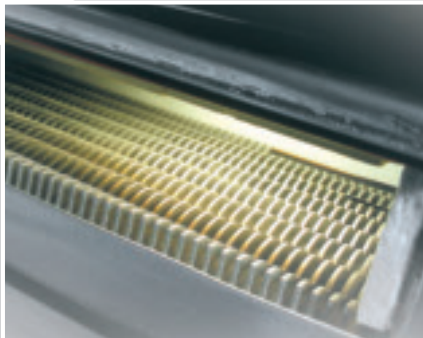




Econcept A

35–125kW premix gas-fired condensing boilers
wall hung and floor standing models





Commercial and industrial heating

Ferrolli began producing heating appliances and equipment in Italy during the 1950s. Today, the company is still family-owned but now operates ten ultra-modern factories in Europe, producing a wide range of domestic, commercial and industrial boilers.

The boiler range covers wall hung and floor standing condensing, cast iron atmospheric and pressure jet, steel shell, steam and biomass products. Outputs range from 35kW to 14,000kW. Other products include heat pumps, cylinders, solar heating, underfloor heating, plate heat exchangers and pressurisation units.

Ferrolli's UK warehouse, backed by its huge manufacturing facility in Italy, offers delivery ex-stock for most smaller boiler models up to 650kW and for all frequently used parts. The company also assembles sectional boilers in the UK to suit particular requirements and sizes.





Econcept A

Ferroli's range of commercial Econcept premix, gas-fired, room-sealed* condensing boilers caters for a wide range of heating needs in offices, shops, schools and other business premises. All models are Band A rated. Ideal for both radiator and underfloor applications, the Econcept range offers a range of models for different situations with outputs from 35kW to 125kW which may be installed individually or in modular configurations. All models can be specified to be fired by natural gas or LPG.



35kW and 50kW wall hung models

Gas fired condensing boilers designed specifically to burn less fuel

page 6



80kW and 125kW wall hung models

Premix condensing boilers for heating with very high thermal efficiency and very low emissions

page 8



100kW floor standing model

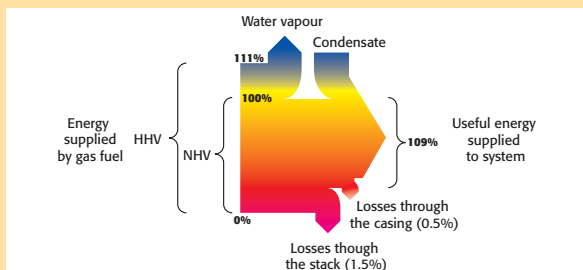
Vertical modulating condensing boiler for heating with dual heat exchanger and double premix burner with very low emissions

page 10

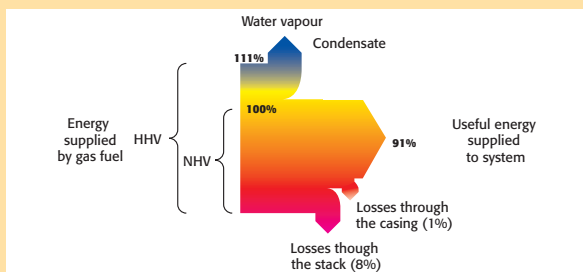
* Econcept 100A model not room sealed

Econcept technology

CONDENSING BOILER

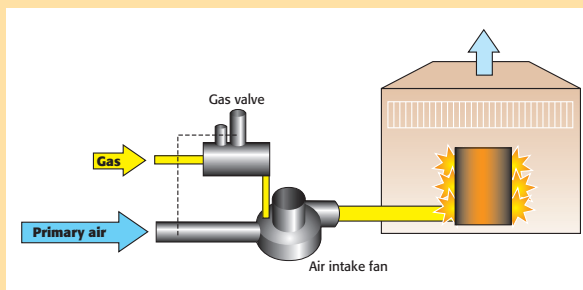


TRADITIONAL BOILER



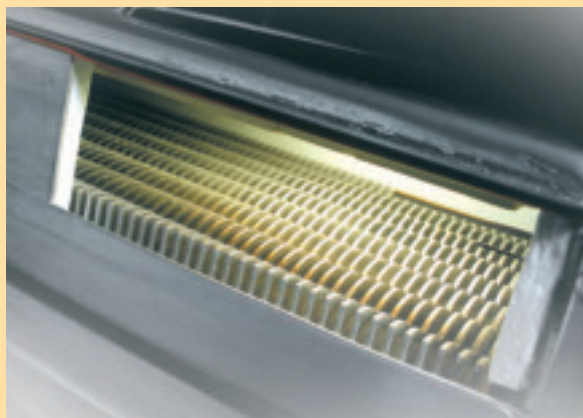
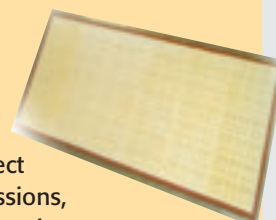
Condensing boiler

One of the products of the combustion of gas is water vapour, and in traditional boilers this is discharged with the flue gas at high temperatures, wasting around 11% of the energy available in the fuel. Condensing boilers extract significantly more useful energy than conventional boilers and discharge flue gases at optimum low temperatures. This causes the water vapour to condense. The lower the temperature of water entering the boiler, the greater the recovery of latent heat and the overall efficiency of the system.



Premix burner

To ensure maximum combustion efficiency, Ferroli Econcept boilers accurately mix gas and air prior to combustion. This produces a perfect flame and drastically reduces emissions, especially CO₂. As a result, condensation starts at higher temperatures, to improve latent heat recovery.

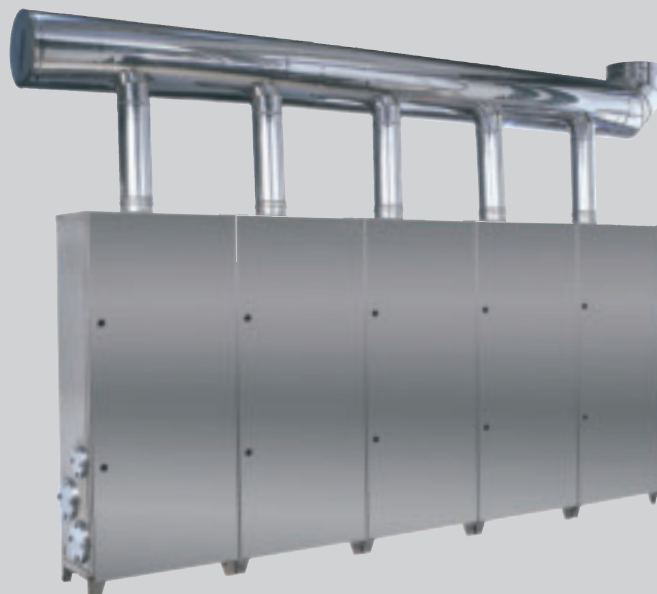


Aluminium heat exchanger

The highly efficient Ferroli aluminium heat exchanger, designed at our state-of-the-art research and development facility, yields efficiency values among the highest, reaching 109%. It is set out to ensure effective condensation of water vapour in the flue gas. The aluminium heat exchanger is designed to maintain its high performance characteristics over time, and is proven in long-life service – the optimum balance of highest efficiency and longest life.

Modular configurations

- All Ferroli Econcept models suitable for modular configuration
- Floor standing models are pre-fitted with flow and return piping within the boiler casing which reduces installation time and space
- Wall mounted models may also be installed in modular configuration with an external pipework rig which gives maximum design flexibility
- Modular installations are best installed with external cascade control which optimises energy savings and comfort levels through continuous modulation
- Cascade controller guarantees operation of heating plant if a module fails, modulating other units to make up as much of lost output as possible



LARGER APPLICATIONS

All Ferroli Econcept boilers can be installed in modular configurations to extend the benefits of high-efficiency heating to larger applications.

CASCADING CONTROL

Modular installations are electronically controlled to ensure the most efficient use of available boiler power for the required heat output. Multiple Econcept boiler modules may be controlled by a single cascading control unit. This optimises the heat output of each module, according to the heating load on the system. Cascading mode allows

continuous modulation of all modules to any level from the minimum output of one module to the maximum rating of all boilers.

GUARANTEED HEAT

Cascade control provides significant heat outputs, while at the same time guaranteeing continued operation of the heating plant even if one of the boiler modules fails. Any faulty boiler modules are automatically excluded from the cascading management, and the controller will attempt to supply the output required by the system by using the remaining boiler modules.

CLIMATE COMFORT

Flow temperatures are programmed and the system temperature is modulated directly by the boiler's own microprocessor control maximising energy savings. An outside probe permits temperature scrolling and adjustment of system flow temperatures according to outdoor conditions – producing excellent savings and better control of ambient comfort.



Econcept 35A and 50A models



- Room-sealed appliance giving a wide range of flue options, allowing installation almost anywhere
- Modulating output, based on current demand for central heating, saves fuel and reduces emissions
- High efficiency heat exchanger with in-built shunt pump
- Advanced ceramic plaque burner spreads flames evenly for ease of ignition and exceptionally quiet operation
- Priority hot water production using a cylinder pump kit (supplied as standard Econcept 35A, and as an option for Econcept 50A)
- Boilers can only be used on pressurised systems



Hot Water production

The boiler is fitted for the advanced management of an external hot water cylinder. A special kit allows the pump for the hot water cylinder and the return connection to be housed directly in the boiler. The electronic board manages priority of the hot water cylinder, switched by the cylinder's control stat. When the cylinder is satisfied the boiler automatically returns to heating mode.



Controls

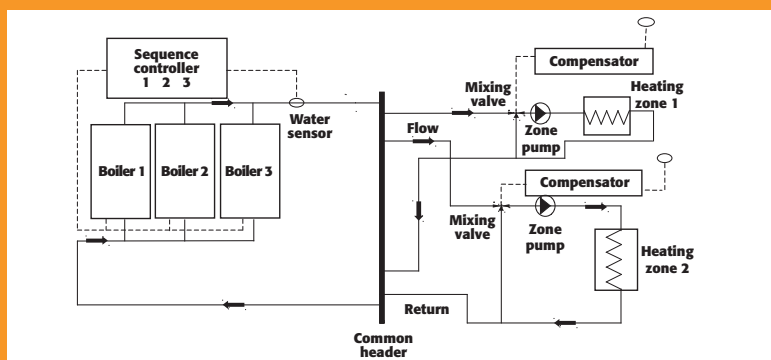
- Customer friendly multi-function display panel controls all basic parameters and is easy to operate
- OpenTherm remote fully modulating heating and time control monitors temperature continuously to modulate boiler output and optimise efficiency

Technical Specifications

| Econcept | | 35kW | 50kW |
|---|-------------------|-----------|-----------|
| Output max/min | | | |
| Heat input | kW | 34.8/10.4 | 46.0/13.8 |
| Useful heat output 80°C - 60°C | kW | 34.6/10.2 | 45.2/13.6 |
| Useful heat output 50°C - 30°C | kW | 36.4/11.1 | 48.4/14.4 |
| Efficiency (net) | | | |
| 80°C - 60°C Full load | % | 99.4 | 98.2 |
| 50°C - 30°C | % | 104.6 | 106.8 |
| Part load (30%) | % | 109.1 | 109.0 |
| NO_x emissions | | | |
| Class | | 5 | 5 |
| Gas supply (natural gas G20) | | | |
| Gas nozzles | mm | 5.9 | 6.7 |
| Supply pressure | mbar | 20.0 | 20.0 |
| Flow rate max/min | m ³ /h | 3.68/1.1 | 4.86/1.46 |
| Gas supply (LPG G31) | | | |
| Gas nozzles | mm | 4.4 | 4.75 |
| Supply pressure | mbar | 3.70 | 3.70 |
| Flow rate max/min | kg/h | 2.72/0.81 | 3.6/1.8 |
| Central heating | | | |
| Maximum operating pressure | bar | 3 | 6 |
| Hot water content | litres | 2.0 | 2.7 |
| Dimensions, weights, fittings | | | |
| Height | mm | 780 | 720 |
| Width | mm | 480 | 630 |
| Depth | mm | 367 | 280 |
| Weight (empty) | kg | 53 | 62 |
| Gas fitting | | 22mm | 3/4" BSP |
| Central heating fittings | | 22mm | 1" BSP |
| Power supply | | | |
| Max power input | W | 150 | 190 |
| Power supply voltage/frequency | V/Hz | 230V/50Hz | 230V/50Hz |
| Index of protection | IP | IPX4 | IPX4D |
| Maximum permissible flue lengths | | | |
| Max horizontal flue length 60/100mm Ø | m | 5 | N/A |
| Max vertical flue length 60/100mm Ø | m | 6 | N/A |
| Max horizontal flue length 80/125mm Ø | m | 12 | 12 |
| Max vertical flue length 80/125mm Ø | m | 12 | 12 |
| Total equivalent length two pipe 80mm Ø | m | 55 | 45 |

Econcept 80A and 125A models

- Micro-flame premix burners ensure even heat distribution and very low emissions
- High efficiency aluminium heat exchangers maximise transfer of heat energy from combustion
- Excellent thermal efficiency minimises running costs and maximises heating output
- Very small flue diameters relative to high output
- Ideal for all heating applications, including radiators and underfloor installations
- Can be used on pressurised systems or open vented systems where minimum 1 bar is available



Configuration

Heating only, with separate temperature compensation on each zone. Where the common low loss header is less than 1m from the boiler there is no requirement for an additional boiler primary pump.



Controls

- Customer friendly multi-function display panel controls all basic parameters and is easy to operate
- OpenTherm remote fully modulating heating and time control monitors temperature continuously to modulate boiler output and optimise efficiency
- Direct shunt pump wiring with over-run timer

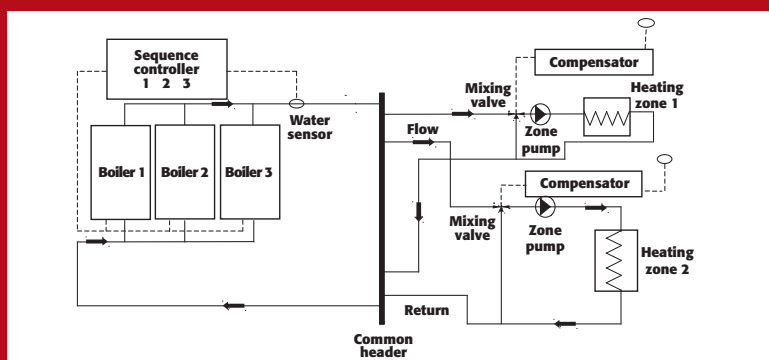
Technical Specifications

| Econcept | | 80kW | 125kW |
|---|--------|-----------|------------|
| Output max/min | | | |
| Heat input | kW | 75.0/17.0 | 116.0/25.0 |
| Useful heat output 80°C - 60°C | kW | 73.5/16.7 | 113.7/24.6 |
| Useful heat output 50°C - 30°C | kW | 79.5/18.3 | 123.0/26.9 |
| Efficiency (net) | | | |
| 80°C - 60°C Full load | % | 98.5 | 98.5 |
| 50°C - 30°C | % | 107.5 | 107.5 |
| Part load (30%) | % | 109.0 | 109.0 |
| NO_x emissions | | | |
| Class | | 5 | 5 |
| Gas supply (natural gas G20) | | | |
| Supply pressure | mbar | 20.0 | 20.0 |
| Flow rate max/min | m³/h | 7.94/1.8 | 12.38/2.65 |
| Gas supply (LPG G31) | | | |
| Supply pressure | mbar | 37.0 | 37.0 |
| Flow rate max/min | kg/h | 5.87/1.33 | 9.16/1.96 |
| Central heating | | | |
| Maximum operating pressure | bar | 6 | 6 |
| Boiler water content | litres | 5 | 7 |
| Dimensions, weights, fittings | | | |
| Height | mm | 900 | 900 |
| Width | mm | 445 | 445 |
| Depth | mm | 430 | 430 |
| Weight (empty) | kg | 46 | 51 |
| Gas fitting | | ¾" BSP | 1" BSP |
| Central heating fittings | | 1½" BSP | 1½" BSP |
| Power supply (boiler only) | | | |
| Max power input | W | 95 | 200 |
| Power supply voltage/frequency | V/Hz | 230V/50Hz | 230V/50Hz |
| Index of protection | IP | X5D | X5D |
| Maximum permissible flue lengths | | | |
| Max horizontal flue length 80/125mm Ø | m | 4 | 2 |
| Max vertical flue length 80/125mm Ø | m | 4 | 2 |
| Total equivalent length two pipe 80mm Ø | m | 20 | 10 |



Econcept 100A model

- Modulating high efficiency premix condensing boiler for heating installations
- Vertical modular structure with built-in manifold pipework
- Dual heat exchangers with independent microprocessor controls
- Independent external switching of controls to maximise efficiency
- Hot surface ignition with independent flame detection probe
- Low water pressure protection switch
- Independent internal 6 bar safety valves
- Boiler manifold can be bolted directly together; minimises use of space and installation time
- Can be used on pressurised systems or open vented systems where min. 1 bar is available



Configuration

Heating only, with separate temperature compensation on each zone. Where the common low loss header is less than 1m from the boiler there is no requirement for an additional boiler primary pump.



Modular boiler control

The Econcept 100 A is ready for modular application. Using the special kit with the cascading control unit, the heat output of the various modules can be optimised according to the heating load of the system.

Technical Specifications

| Econcept | | 100kW |
|--------------------------------------|-------------------|-----------|
| Output max/min | | |
| Heat input | kW | 92.0/13.8 |
| Useful heat output 80°C - 60°C | kW | 90.4/13.6 |
| Useful heat output 50°C - 30°C | kW | 96.8/14.4 |
| Efficiency (net) | | |
| 80°C - 60°C Full load | % | 98.2 |
| 50°C - 30°C | % | 106.8 |
| Part load (30%) | % | 109.0 |
| NO_x emissions | | |
| Class | | 5 |
| Gas supply (natural gas G20) | | |
| Gas nozzles | mm | 6.7 |
| Supply pressure | mbar | 20.0 |
| Flow rate max/min | m ³ /h | 9.72/1.46 |
| Gas supply (LPG G31) | | |
| Gas nozzles | mm | 4.75 |
| Supply pressure | mbar | 37.0 |
| Flow rate max/min | kg/h | 7.2/1.8 |
| Central heating | | |
| Maximum operating pressure | bar | 6 |
| Hot water content | litres | 13.0 |
| Dimensions, weights, fittings | | |
| Height | mm | 1650 |
| Width | mm | 700 |
| Depth | mm | 400 |
| Weight (empty) | kg | 165 |
| Gas fitting | | DN50 |
| Central heating fittings | | DN80 |
| Power supply | | |
| Max power input | W | 300 |
| Power supply voltage/frequency | V/Hz | 230V/50Hz |
| Index of protection | IP | IPX5D |
| Flue Diameter | | |
| 1 Module | mm | 150 |
| 2 Modules | mm | 200 |
| 3 Modules | mm | 250 |
| 4 Modules | mm | 300 |
| 5 Modules | mm | 350 |



Ferroli Limited

Ferroli began producing heating appliances and equipment in Italy during the 1950s. Today, the company is still family-owned but now operates ten ultra-modern factories in Europe, employing over 2,500 people and producing a wide range of wall hung, cast iron and welded steel boilers, making Ferroli one of the largest and most successful heating appliance manufacturers in the world.



Ferroli Commercial and Industrial Boilers

The commercial and industrial boiler range covers steel and cast iron designs, atmospheric and pressure jet units, and oil, gas or biomass models. Outputs range from 50kW to 14,000kW. Other products include heat exchangers and pressurisation units. Ferroli's UK warehouse, backed by its huge manufacturing facility in Italy, offers delivery ex-stock for most smaller boiler models and for all frequently used parts. It also assembles sectional boilers in the UK to suit particular requirements.



Ferroli Domestic Boilers

Offering gas wall mounted units with outputs from 5kW to 50kW, Ferroli's stylish, compact domestic boilers provide maximum comfort with minimal fuel usage. With a choice of conventional, condensing and combi technologies, there's a boiler to match the heating and hot water requirements of every home.



Ferroli Service

Once the normal guarantee period on our boilers has expired, coverage can be extended cost-effectively with a choice of Ferrol service contracts to suit your budget. All Ferrol service engineers work to Benchmark standards and the Benchmark Code of Practice for the installation, commissioning and servicing of central heating systems, designed to improve the quality of work undertaken by plumbers and heating installers.



Ferroli Spares

The rapidly growing popularity of Ferrol as first choice for both domestic and commercial installations means that heating parts stockists offer readily available spares for Ferrol boilers. For less frequently needed items, we maintain a fully-stocked warehouse located centrally in the UK, enabling same-day despatch of just about any part needed to keep your Ferrol boiler running at optimum efficiency.



Ferroli Training

Ferroli understands that well-trained installers are the key to a safe and efficient heating system. That's why we run comprehensive training courses in our purpose-built facilities for everyone concerned in the installation and servicing of Ferrol's range of boilers. These courses improve installers' knowledge and skills by providing both the theory and the hands-on practical experience essential to maintaining heating system performance and safety.



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