



BOSCH

Condens 7000 F & FP Installer guide

Flexible design, easy installation



Installer
guide



Condens 7000 F & FP

High output, low emissions

Our Condens 7000 F & FP floor-standing gas boilers are perfect for new and existing boiler replacements. The low hydraulic resistance and intelligent burner control means there are no minimum flow rate requirements to be considered and a wide ΔT can be achieved, allowing simple integration into existing heating systems.

With outputs ranging from 75kW to 500kW, our premium quality boiler can be easily cascaded to meet higher output requirements. The range can be cascaded up to 8MW, with the ability to combine 16 boilers while using our Bosch 8313 control range.



Why install the Condens 7000 F & FP?



Space saving

Left-hand and right-hand options to match installation space



Easy installation

Integrates into existing hydraulic arrangements



Simple maintenance

Wide access openings on the heat exchanger for mechanical cleaning



Easy transportation

Transport roller accessory and removable burner for easy transportation



System suitability

50K max. temperature differential and high temperatures (95°C)*



Energy saving

Low pressure loss and high modulation of 1:5 and 1:6

Commercial floor-standing series

Efficiency meets flexibility



Designed to optimise efficiency, the premix gas burner has a wide modulation range up to 1:6* – and the low hydraulic resistance of the heat exchanger provides excellent conductivity for optimum adjustments to all heating requirements.

Why choose Bosch?



Tried and tested

We have over 15 years of expertise in boiler technology



Get ahead

Trade-rated training to go from newbie to expert



End-to-end support

Full project support from buying and design to installation and spares

*Refer to output and efficiencies table on page 9 for accurate modulation ranges.

Energy-saving and compact

Our floor-standing commercial boiler series

“GC7000 F & FP boiler range is a versatile unit, able to integrate into almost any existing install. This accompanied by the Control 8313 makes it a perfect solution for heating, hot water and heat networks”

Paul – Bosch technical assistant commercial products



Cascade design for Condens 7000 F boilers with CC8313 control

Space-saving

If installation space is limited, the modular heat exchange design provides a range of outputs in varying sizes.

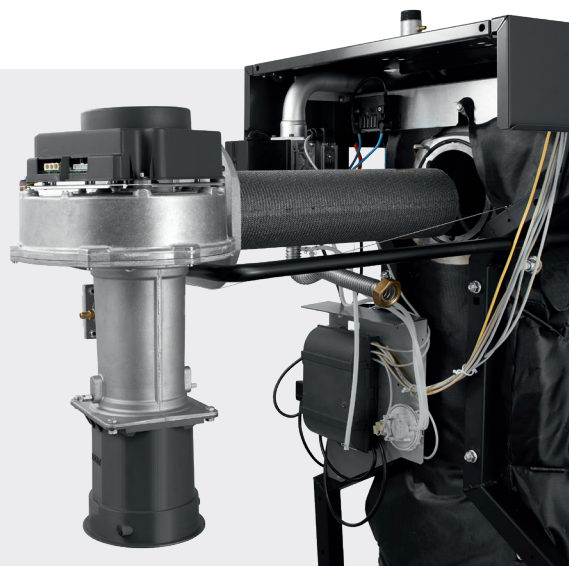
Easy installations

Integrate into existing hydraulic arrangements, with or without hydraulic separation.



Simple maintenance

Designed for accessibility, removable casing means simple maintenance via inspection covers on the HE – making mechanical cleaning quick and easy.



Compact design

Suitable for smaller plant rooms and tight access.



Suitable for all heating systems

Our Condens 7000 F & FP floor-standing gas boilers are compatible with multiple technologies, including heat pumps, hybrids and solar. They are perfect as a plant room solution.

Low NOx conversion kits

The Condens 7000 F & FP now include Low NOx conversion kits as part of the scope of delivery. The conversion kit allows all Condens 7000 F & FP appliances to be converted to operate at NOx levels of $\leq 24\text{mg/kWh}$ (EN15502).

The kit contains all necessary components and information required to convert the appliance which can be completed during installation. Once converted, the appliances are eligible for up to two additional BREEAM credits in accordance with BREEAM New Construction 2018.

Condens 7000 F

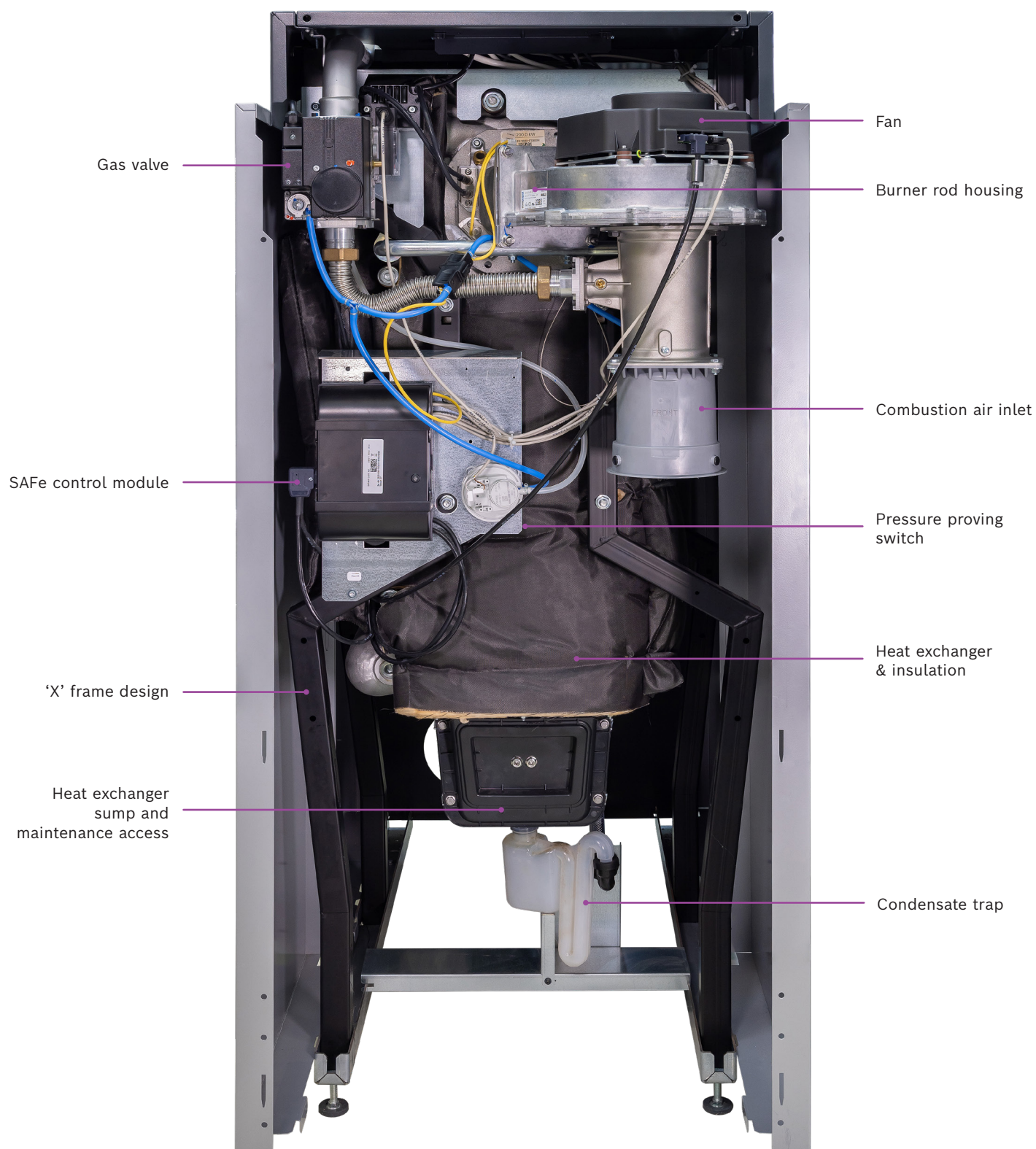
Product	75kW	100kW	150kW	200kW	250kW	300kW
Maximum rated heat output 80/60°C	64.3kW	86.4kW	129.8kW	172.5kW	216.1kW	259.6kW
Maximum rated heat output 50/30°C	69.5kW	92.3kW	138.7kW	184kW	231kW	277kW
Emissions of nitrogen oxides (mg/kWh)	18	23	17	20	21	20

Condens 7000 FP

Product	350kW	400kW	500kW
Maximum rated heat output 80/60°C	316.2kW	368.6kW	452kW
Maximum rated heat output 50/30°C	339kW	394kW	480kW
Emissions of nitrogen oxides (mg/kWh)	22	22	24



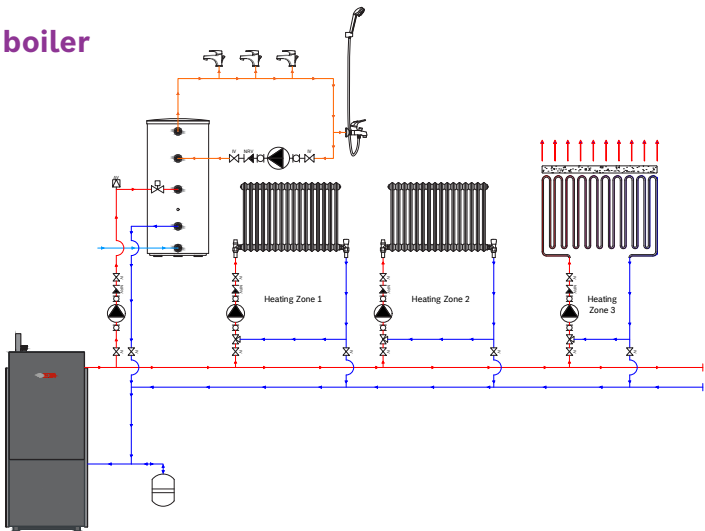
The inside story



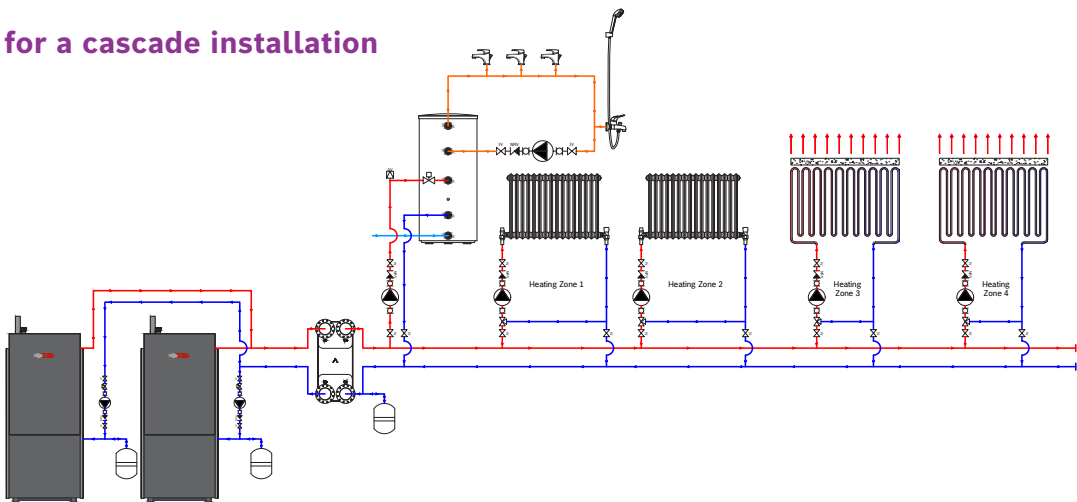
Hydraulics schematics

The Condens 7000 F & FP can be used in many different hydraulic configurations to integrate seamlessly into the existing heating system. Prefabricated cascade hydraulic kits are available, giving significant time savings for installation and confidence of matched hydraulic design.

Hydraulics for a single boiler



Hydraulics for a cascade installation



Hydraulic separation

We offer two types of hydraulic separation for the Condens 7000 F & FP. These consist of a **plate heat exchanger** or a **low loss header**.

Plate heat exchanger is primarily used for open vented systems. We can also use a plate heat exchanger on sealed systems to provide protection where the water quality in an existing system is low.

Low loss header is only used with sealed systems. This will create a separation between the boilers primary circuit and the system's secondary circuits.

Product	Part number
PHE C/W STAND/PIPING (DN65 - 2X 75KW)	7 736 604 082
PHE C/W STAND/PIPING (DN65 - 2X 100KW)	7 736 604 083
PHE C/W STAND/PIPING (DN65 - 2X 150KW)	7 736 604 084
PHE C/W STAND/PIPING (DN80 - 2X 200KW)	7 736 604 085
PHE C/W STAND/PIPING (DN80 - 2X 250KW)	7 736 604 086
PHE C/W STAND/PIPING (DN80 - 2X 300KW)	7 736 604 087
LLH + INSULATION (DN65 - 2X 75 - 100kW)	7 736 604 088
LLH + INSULATION (DN65 - 2X 150KW)	7 736 604 089
LLH + INSULATION (DN80 - 2X 200 - 300KW)	7 736 604 090

Technical data

Dimensions and model weight

Product	Condens 7000 F						Condens 7000 FP		
	75kW	100kW	150kW	200kW	250kW	300kW	350kW	400kW	500kW
Height	1570mm		1620mm	1620mm			1670mm		1670mm
Width	670mm		670mm	670mm			803mm		803mm
Depth	736mm		914mm	1317mm			1903mm		2088mm
Weight	132kg		184kg	231kg	258kg	283kg	336kg		384kg

Product	Condens 7000 F & FP Twin					
	400kW	500kW	600kW	700kW	800kW	1MW
Height	1620mm	1620mm	1620mm	1670mm	1670mm	1670mm
Width	1440mm	1440mm	1440mm	1706mm	1706mm	1706mm
Depth	1317mm	1317mm	1317mm	1903mm	1903mm	2088mm
Weight	462kg	516kg	566kg	672kg	672kg	768kg

Output and efficiencies

Product	Condens 7000 F						Condens 7000 FP						
	75kW	100kW	150kW	200kW	250kW	300kW	350kW	400kW	500kW	600kW	700kW	800kW	1MW
Max rated heat output at 80/60°C	69.4 kW	93.0 kW	139.8 kW	186.1 kW	232.9 kW	280.0 kW	326.7 kW	380.6 kW	466.7 kW	560.0 kW	653.4 kW	761.2 kW	933.4 kW
Max rated heat output at 50/30°C	75 kW	100 kW	150 kW	200 kW	250 kW	300 kW	350 kW	408 kW	500 kW	600 kW	700 kW	816 kW	1000 kW
Standard seasonal efficiency (to L2B)	95.9%	95.6%	95.3%	95.7%	95.9%	95.6%	93.4%	93.4%	93.4%	95.6%	93.4%	93.4%	93.4%
Modulation	1:5	1:6	1:6	1:6	1:6	1:6	1:5	1:6	1:6	1:12	1:10	1:12	1:12

Flues

Condens 7000 F & FP	75kW	100kW	150kW	200kW	250kW	300kW	350kW	400kW	500kW	600kW	700kW	800kW	1MW
Standard NOx emission factor (EN15502)	40 mg/kWh	49 mg/kWh	34 mg/kWh	36 mg/kWh	32 mg/kWh	36 mg/kWh	30 mg/kWh	30 mg/kWh	33 mg/kWh	40 mg/kWh	33 mg/kWh	33.4 mg/kWh	36.7 mg/kWh
Fan for residual pressure differential (flue gas and combustion air system)	150 Pa	150 Pa	150 Pa	150 Pa	150 Pa	150 Pa	200 Pa	200 Pa	200 Pa	150 Pa	200 Pa	200 Pa	200 Pa
Temperature classification to be used for flue system in accordance with EN 1443	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120	Min. T120

Part numbers

Condens 7000 F & FP boilers

Output	Part number
Condens 7000 F 75kW	Left: 7 736 603 142
	Right: 7 736 603 136
Condens 7000 F 100kW	Left: 7 736 603 143
	Right: 7 736 603 137
Condens 7000 F 150kW	Left: 7 736 603 144
	Right: 7 736 603 138
Condens 7000 F 200kW	Left: 7 736 603 145
	Right: 7 736 603 139
Condens 7000 F 250kW	Left: 7 736 603 146
	Right: 7 736 603 140
Condens 7000 F 300kW	Left: 7 736 603 147
	Right: 7 736 603 141
Condens 7000 FP 350kW	Left: 7 736 606 239
	Right: 7 736 606 236
Condens 7000 FP 400kW	Left: 7 736 606 240
	Right: 7 736 606 237
Condens 7000 FP 500kW	Left: 7 736 606 241
	Right: 7 736 606 238

Safety sets

Condens 7000 F

Includes manifold, pressure relief valve and a pressure gauge.

75 – 100kW	Part number
Safety set 3 bar (75 – 100kW)	7 736 602 644
Safety set 6 bar (75 – 100kW)	7 733 601 602
Safety set 4 – 6 bar (75 – 100kW no PRV)	7 736 602 646

150 – 300kW	Part number
Safety set 3 bar (150 – 300kW)	7 736 602 645
Safety set 6 bar (150 – 300kW)	7 733 601 603
Safety set 4 – 6 bar (150 – 300kW no PRV)	8 732 908 163

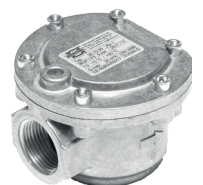
Condens 7000 FP

Includes manifold, pressure relief valve, pressure limiters (x2) and a pressure gauge.

350 – 500kW	Part number
Safety set 3 bar (350/400/500kW)	7 733 601 607
Safety set 4 bar (350/400/500kW)	7 733 601 606
Safety set 5 bar (350/400/500kW)	7 733 601 605
Safety set 6 bar (350/400/500kW)	7 733 601 604

Gas filters

A gas filter is a requirement for the Condens 7000 F in order to protect the heat exchanger. This is not a requirement for the Condens 7000 FP, as a gas filter is built into the larger gas valve.



Product	Part number
Gas filter 1" (75/100kW)	8 317 908 4
Gas filter 1/4" (150/200/250/300kW)	8 317 908 6

Control options

Controls	Part number
MX25	
MX25	8 718 599 281
Sense II	7 738 111 064
Control 8000	
Control 8313	7 736 602 245
8313 FM Modules	
Module FM-CM (for multiple boiler cascade sequencing)	7 736 602 245
Module FM-MM (2x mixed heating module for use with 8313)	8 718 598 828
Module FM-MW (1x heating, 1x hot water module)	8 718 598 831

Please see controls overview on page 13.

Other accessories

Product	Part number
Drain connection set 1" (75 – 100kW)	7 736 602 648
Drain connection set 1 ¼" (150 – 200kW)	7 736 602 647
Drain connection set 2" (350 - 500kW)	8 732 948 018
Hydraulic isolation set DN100 (Qty 2)	8 738 807 773

LPG conversion kits

Product	Part number
Conversion kit G31 - 75 & 100 kW	7 736 603 619
Conversion kit G31 - 150 kW	7 736 603 807
Conversion kit G31 - 200 kW	7 736 603 808
Conversion kit G31 - 250 kW	7 736 603 809
Conversion kit G31 - 300 kW	7 736 603 810

Flues

Product	Part number
Top exit flue kit DN200 (200 – 300kW)	7 736 602 653
Top exit flue kit DN250 (350 – 500kW)	8 732 951 189

Overpressure flue sets for cascades

Product	Part number
Stainless steel overpressure flue kit DN110/125 (1x flue connection set, 1 x CO Sensor, 2x Motorised non return valves DN110)	7 736 606 765

Product	Part number
Stainless steel overpressure flue kit DN160/160 (1x flue connection set, 1x CO Sensor, 2x Motorised non return valves DN160)	7 736 606 764

Product	Part number
Stainless steel overpressure flue kit DN200/200 (1x flue connection set, 1x CO Sensor, 2x Motorised non return valves DN200)	7 736 606 763

Product details and required accessories

Product Type		Required Accessories				
	Output	Image	Basic safety set (no pressure limiters)	Safety set with 2x pressure limiters	Gas filter	Control unit
Condens 7000 F	75kW		✓		✓	✓
	100kW		✓		✓	✓
	150kW		✓		✓	✓
	200kW		✓		✓	✓
	250kW		✓		✓	✓
	300kW		✓		✓	✓
Condens 7000 FP	350kW			✓		✓
	400kW			✓		✓
	500kW			✓		✓
Condens 7000 F Cascade	400kW		✓		✓	✓
	500kW		✓		✓	✓
	600kW		✓		✓	✓
Condens 7000 FP Cascade	700kW			✓		✓
	800kW			✓		✓
	900kW			✓		✓
	1000kW			✓		✓

If any Bosch commercial boilers are installed and use a cascaded flue system then a CO detector and boiler cut-off module are required.

Innovative controls

Choose from two control options, depending on your requirements.



8313 control

7 736 602 245

The 8313 control offers advanced functions and includes internet connectivity as standard. Operating temperatures up to 95°C can be accommodated and the system can be expanded to include cascade control, as well as the control of hot water and heating circuits.

- ✓ Operates multiple heating circuits
- ✓ Internet connectivity allowing remote monitoring
- ✓ Optimise efficiency by detecting faults quickly
- ✓ Compatible with various building management systems.

8313 Control options



FM-MW Heating and DHW Control Module

8 718 598 831

This controls one mixed or unmixed heating circuit and one DHW circuit (with cylinder load and circulation pump). All wiring has colour coded plugs for quick installation into the main control unit.



FM-MM Heating Circuit Control Module

8 718 598 828

This controls up to two mixed or unmixed circuits. Comes supplied with one FV/FZ temperature sensor. All wiring has colour coded plugs for a quick installation into the main control unit. An additional FV/FZ sensor is required if using two mixed circuits.



FM-CM Cascade Control Module

7 736 602 098

The FM-CM can control the modulation and sequencing strategy of up to 16 boilers.

Innovative controls



MX25 control

8 718 599 281

The MX25 control is perfect where existing BMS control systems are in place and flow temperatures are 85°C or below. It provides common electrical interfaces needed for the BMS to create a heat demand and monitor fault conditions.

- ✓ Flexible for simple or complex systems
- ✓ Functional module options
- ✓ Compatible with various building management systems.



Sense II

A Sense II is required with the MX25 control unit

- ▶ The Sense II control platform uses the EMS 2, which allows advanced functions such as weather compensated control and optimum start.
- ▶ Weather compensation is particularly useful for larger buildings where it can be difficult to locate a good reference room to suit the area being heated. A north-facing outside sensor is used to determine the correct flow temperature needed to achieve the desired room temperature, based on a heating curve. Local TRVs on radiators, for example, can then fine tune the final room temperature to suit the occupants.
- ▶ Using weather compensation allows lower flow temperatures for large parts of the heating season, which in turn leads to lower return temperatures to help make the condensing boiler more efficient.



MC400 cascade control

The MC400 can control up to 4 boilers, or combine with other MC400 controls to support up to 16 boilers (requires 5x MC400). The control will sequence the boilers to match the demand and rotate the lead boiler to ensure even use across the cascade.

MC400 has several different configuration options that allow 0-10VDC or 230V enable signals from an existing external control. A 230V alarm signal is also available to indicate a fault situation.



MM100

7 738 110 140

Used for additional heating circuit (maximum of 4) or additional DHW circuit (maximum of 1).



MS200

7 738 110 146

Module for integration of solar thermal panels.

Dedicated support and expertise

Our project team are on-hand at every stage, from feasibility to completion:

- ▶ Initial and detailed design, providing CAD & BIM drawings
- ▶ Provide installer training at our renowned training facilities
- ▶ Design meetings
- ▶ Support with installation and commissioning
- ▶ After-sales and nationwide service engineers.



Contact us to book your free,
no obligation project consultation.



Website:
bosch-industrial.co.uk/condens7000ffp



Phone:
03330 608 456



Email:
commercial.industrial@uk.bosch.com



Commission your installation

In order to book commissioning
for a boiler or cascade system,
simply scan the QR code
and complete the pre
commissioning checklist.



Training

Install with confidence

Learn all you need to know about the Condens 7000 F & FP commercial boiler range. We specifically tailor all our product courses to meet your needs. This hands-on course is perfect for those who want to specify and install the Condens 7000 F & FP boilers for commercial and domestic applications.

Supporting you

Our courses are here to support your installation from beginning to end. The Condens 7000 F & FP course covers:

- ▶ Specification and installation
- ▶ Service and maintenance
- ▶ Fault finding and diagnostics

Our product training courses will help you get hands-on experience and understand all the features and benefits.



Scan to start your training:

worcesterbosch-academy.co.uk

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