

# Sirius three FS 50-250kW

## Floor-standing condensing boiler

Suitable for a range of projects including large domestic properties, small commercial premises and medium to large sized applications that require up to 1WM.



### Features

- Wide range of outputs:  
50, 70, 90, 110, 130, 150, 200, 250kW
- Modulation ratio of up to 9:1
- Gross seasonal efficiency up to 97.5%
- Supplied with the latest Siemens controls
- QA75 Twist Knob Controller
- Can be programmed to work with solar thermal, biomass and buffer tanks
- Suitable for LPG conversion
- Lightweight stainless steel heat exchanger
- Integrated Low Loss Headers and Plate Heat Exchangers (available as options)
- Very compact design with casters on the bottom of larger output boilers
- 1" flow and return connections (50-70kW)
- Integrated Cascade function
- 0-10 volt connection
- Weather compensation
- Low NOx under 24.7mg/kW
- ERP compliant
- Certified for the ETL\*
- 5 year parts and labour warranty\*\*

### Benefits

- Suitable for a wide range of commercial applications
- Wide modulation ratio reduces constant on/off cycling to improve efficiency and boiler longevity
- Reduced energy consumption
- State of the art PCB offering improved control options
- Simple descriptive display and easy to use advanced programming functions
- Sustainable, energy efficient solution across complete range
- LPG conversion kits available for off-grid applications
- Reliable and energy efficient heat transfer
- Professional finish, easier to install, offers a reduced footprint
- Boilers will pass through 700mm doors. Easier to position when space is at a premium
- Avoids major pipework modification
- Up to 16 boilers can be managed by the Siemens controller
- Provides a quick and simple interface with BMS
- To reduce operation costs
- Minimises impact on the environment
- Reduce carbon emissions and improve efficiencies in support of government targets
- Part of the Enhanced Capital Allowance (ECA) tax scheme for businesses
- For complete peace of mind

\*Most outputs. Please visit [www.pottertoncommercial.co.uk](http://www.pottertoncommercial.co.uk) for details.  
\*\*Terms and conditions apply. Please visit [www.pottertoncommercial.co.uk](http://www.pottertoncommercial.co.uk) for details.  
Sirius FS 400 and 525kW also available

## Specification

Performance	Fuel Type		Sirius three FS 50	Sirius three FS 70	Sirius three FS 90	Sirius three FS 110
Output @ 80/60°C	NG	kW	45.1	65.1	85.1	102
Output @ 50/30°C	NG	kW	48.6	70.3	92.2	110.2
Input (Gross) Maximum	NG	kW	51.4	74.3	97	116.4
Input (Net) Maximum	NG	kW	46.3	67.0	87.8	104.9
Output @ 80/60°C	LPG	kW	45.1	65.1	85.1	102
Output @ 50/30°C	LPG	kW	48.6	70.3	92.2	110.2
Input (LPG) (Gross) Maximum	LPG	kW	51.4	74.3	97.5	116.4
Input (LPG) (Net) Maximum	LPG	kW	47.3	68.4	89.8	107.2

Efficiency	Value %		Sirius three FS 50	Sirius three FS 70	Sirius three FS 90	Sirius three FS 110
Efficiency @ 80/60°C - 100% Load	% Gross		87.8	87.6	87.7	87.6
Efficiency at 50/30°C - 100% Load	% Gross		94.6	94.6	95.1	94.7
Efficiency @ 30% Load	% Gross		97.1	96.8	96.9	96.8
Current Building Regulations - Part L2 Seasonal Efficiency	% Gross		97.1	96.9	97.0	96.9
ErP efficiency rating			A	A	N/A	N/A

### Gas

Gas Consumption (Natural Gas)	m³/h	4.9	7.07	9.25	11.1
Gas Consumption (LPG)	Kg/h	3.59	5.19	6.79	8.15
Inlet Gas Pressure (Natural Gas - G20)	m/bar		20		
Inlet Gas Pressure (LPG - G31)	m/bar		37		
Gas Connection Size	inch	¾	¾	1	1
Gas Connection Type			Male Thread		

### Flue

Flue Gas Volume at 80/60°C (NG)	m³/h at STP	67.6	97.7	127.6	147.2
Flue Gas Volume at 50/30°C (NG)	m³/h at STP	62.8	90.5	117.7	136.2
Flue Gas Volume at 80/60°C (LPG)	m³/h at STP	61.5	88.9	114.1	139.3
Flue Gas Volume at 50/30°C (LPG)	m³/h at STP	57.1	82.4	105.2	128.9
Max Flue Gas Pressure @ Outlet (B23)	pa		200		

### Hydraulic

Water Flow Rate @ 15°C ΔT	l/s	0.72	1.04	1.36	1.63
Water Flow Rate @ 20°C ΔT	l/s	0.54	0.78	1.02	1.22
Water Flow Rate @ 30°C ΔT	kW	0.36	0.52	0.68	0.81
Hydraulic Resistance @ 15°C ΔT	kPa	94	52	40	40
Hydraulic Resistance @ 20°C ΔT	kPa	54	32	22	22
Hydraulic Resistance @ 30°C ΔT	kPa	22	18	10	11
Water Content	litres	3	5	9	10
Flow & Return Connection Size	inch	1	1	1½	1½
Flow & Return Connection Type			Male Thread		
Flue Connection Size	mm	80/125	80/125	110/160	110/160
Maximum Boiler Operating Pressure	bar		4		
Minimum Boiler Operating Pressure	bar		1		
Maximum Flow Temperature	°C		85		

### General

Appliance Dry Weight	Kg	60	70	104	109
NOx Level (Dry @ 0% O <sub>2</sub> )	mg/kWh	29.8	34.8	39.5	24.7
CO <sub>2</sub> Content - Natural Gas	%	8.5 - 9	8.5 - 9	8.5 - 9	9 - 9.2
CO <sub>2</sub> Content - LPG	%	9.5 - 10	9.5 - 10	9.9 - 10	9.5 - 10
High Level Ventilation (BS 6644)	cm²	93	134	175	210
Low Level Ventilation (BS 6644)	cm²	185	268	350	418

### Electrical

Power consumption	W	100	117	146	185
Nominal Supply Voltage	V/Hz		230 v 1 Ph 50 Hz		

	Sirius three FS 130	Sirius three FS 150	Sirius three FS 200	Sirius three FS 250
	121	140	184	238
	130	150	200	250
	137.4	158.6	212	266.4
	123.8	142.9	191.0	240.0
	121	140	184	238
	130	150	200	250
	137.4	158.6	212	266.4
	126.6	146.0	195.3	245.4

	88.4	88.4	87.7	87.4
	95.1	95.1	93.9	93.9
	97.8	97.8	98.3	98.3
	97.3	97.3	97.5	97.5
	N/A	N/A	N/A	N/A

	13.1	15.1	20.2	25.4
	9.8	11.3	14.8	18.6
		17-25		
		27-45		
	1	1	1½	1½
		Male Thread		

	181	208	331	422
	166	191	303	386
	207	240	320	400
	190	219	292	367
	170	280	230	280

	2.08	2.71	3.19	3.99
	1.56	1.80	2.39	2.99
	1.0	1.2	1.6	2.0
	69	70	67	65
	41	41	41	41
	18	20	20	22
	10	11	13	15
	1½	1½	2	2
		Male Thread		
	110/160	110/160	150	150
		6		
		1		
		85		

	126	132	212	232
	17	23	37	39
	9.2 - 9.4	9.2 - 9.4	9.2 - 9.4	8.8 - 9
	10 - 10.2	10 - 10.2	10.2 - 10.4	10.2 - 10.4
	275	317	424	534
	550	634	848	1068

	187	283	242	369
		230 v 1 Ph 50 Hz		

#### Single boiler outputs

**50kW to 250kW**

#### Gross seasonal efficiency

Up to **97.5%**

#### Modulation ratio

Up to **9:1**

#### Cascade output

Up to **1MW**

High efficiency condensing boilers

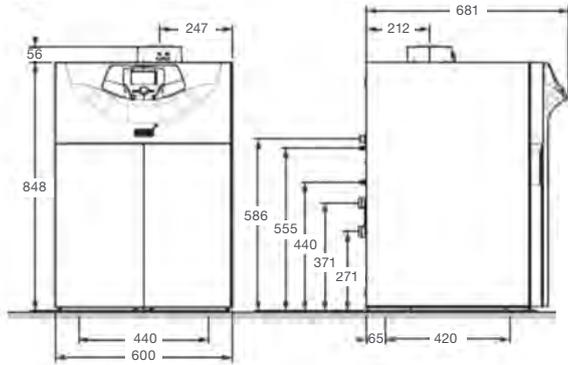
Designed to meet carbon reduction targets

Lifetime service and support



# Dimensions

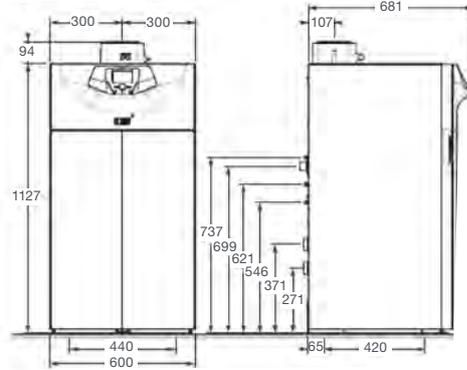
## Sirius three FS 50/70kW



Front View

Side View

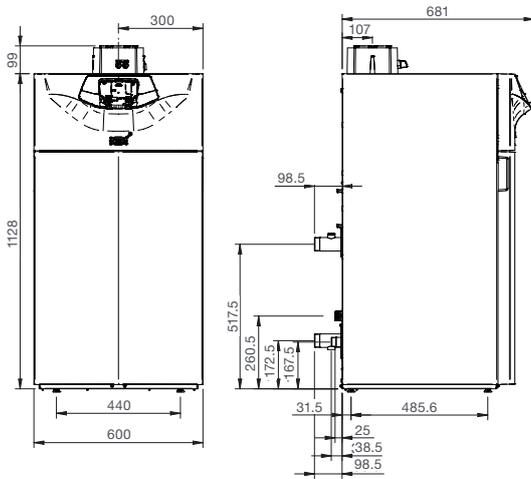
## Sirius three FS 90/110kW



Front View

Side View

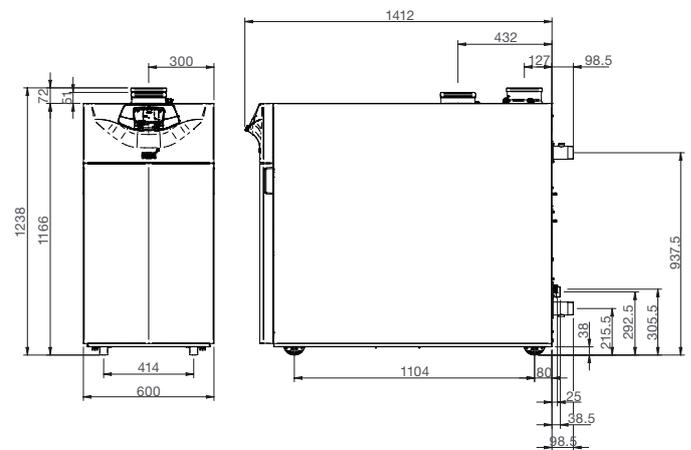
## Sirius three FS 130/150kW



Front View

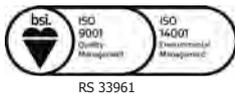
Side View

## Sirius three FS 200/250kW



Front View

Side View



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