



SUPAflo EVO

Technical Specification Guide

Andrews. Built to perform.

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For further information on the SUPAflo EVO and other Andrews Water Heater products, contact your Area Sales Manager today. Details can be found at andrewswaterheaters.co.uk

Welcome to Andrews Water Heaters

Andrews Water Heaters is the market leading manufacturer of commercial gas fired water heaters. Established in 1976, Andrews has a comprehensive range, meaning we have the solution for any commercial and industrial application, however large or small.

Our water heaters are energy efficient and fully compliant with water byelaws and Part L of the Building Regulations.

With a specialist team, and a reputation for quality, reliability and high performance products, Andrews can provide hot water delivery to meet the requirements of the most demanding applications.

Introducing the SUPAflo EVO Condensing Water Heater

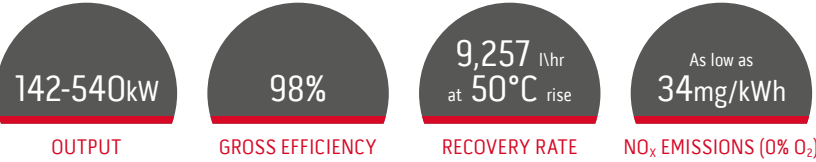
SUPAflo EVO produces a continuous supply of hot water at a recovery rate of up to 9,230 litres an hour. Digital controls are built-in as standard for easy installation, diagnostics and maintenance. SUPAflo EVO is supplied with a high grade, stainless steel heat exchanger and bronze primary pump, both helping deliver optimum efficiencies.

Designed to have a small footprint and fit through standard doorways, SUPAflo EVO is perfect for compact plant rooms and has built-in wheels for effortless manoeuvrability.

Designed for applications requiring high volumes of instant hot water such as hotels, sports and leisure facilities as well as tall buildings and office blocks.

SUPAflo EVO is suitable for use on a conventional flue or twin pipe flue, and is recommended for installation with a direct buffer vessel.

Technical specification



Features

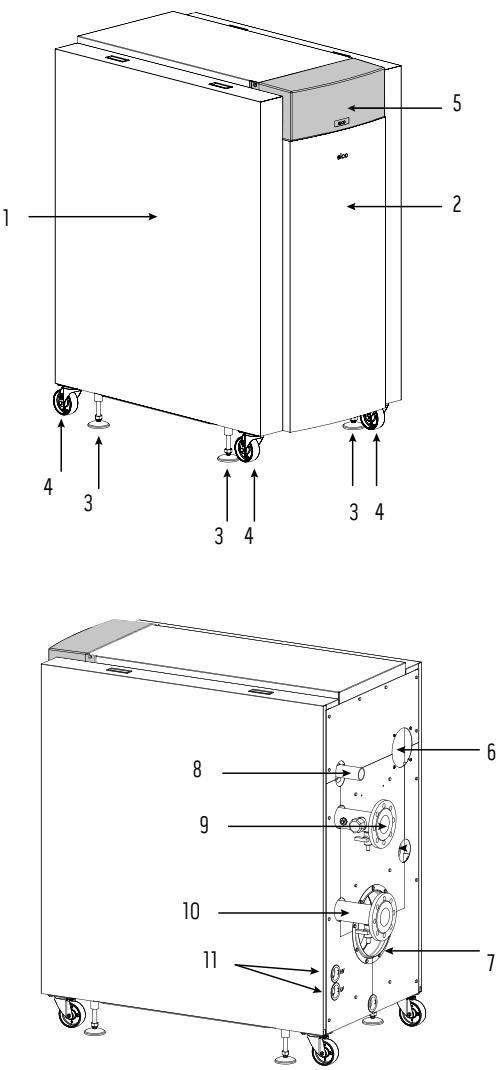
- Patented water cooled cold flame burner
- Hydroformed water cooled combustion chamber
- Compact, lightweight design with small footprint
- Hot water recovery of up to 9,257 litres per hour at 50°C
- Seven models, 142 to 540kW
- 8 bar maximum pressure
- High-quality, stainless steel heat exchanger with premix modulating burner
- Natural gas or LPG

Benefits

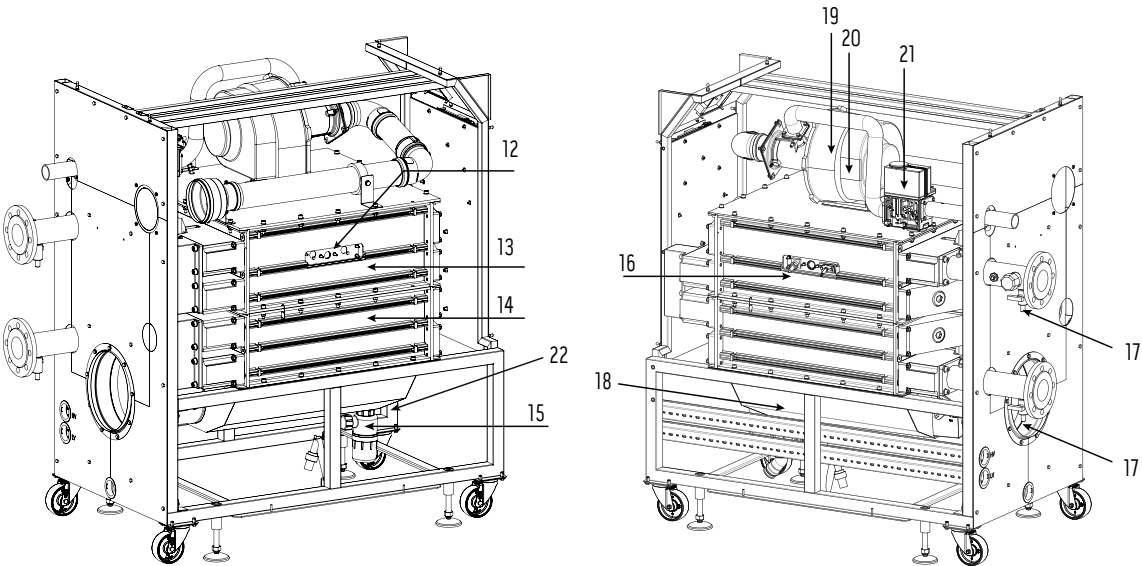
- Ensures ultra low NO_x emissions
- Provides the highest possible thermal conductivity
- Increased installation opportunities, ideal for roof top plant rooms
- Satisfies the most demanding applications
- Suitable for commercial and industrial applications requiring large quantities of hot water
- Compatible with tall buildings
- Maintains high life time efficiencies
- Can be installed in off mains gas areas



Water Heater Construction



- 1 Side panel
- 2 Front panel
- 3 Adjustable feet
- 4 Casters
- 5 Control panel (below cover)
- 6 Air intake connection (under casing)
- 7 Flue gas connection
- 8 Gas connection (Gas filter provided - not shown)
- 9 Flow water connection
- 10 Return water connection
- 11 Electrical input entries (HV/LV)
- 12 Viewing glass (can be handed)
- 13 Burner/1st heat exchanger assembly
- 14 2nd/3rd heat exchanger assembly
- 15 Condensate syphon
- 16 Ignition and ionisation electrodes (can be handed)
- 17 Fill/drain valve
- 18 Condense tray
- 19 Fan
- 20 Gas/air mixing system
- 21 Gas valve / Gas pressure switch
- 22 Adjustable Flue Damper



Technical Information

		Model			
		SF61 EVO	SF62 EVO	SF63 EVO	SF64 EVO
Energy	Heat input net (gross)	kW	145 (161)	194 (215)	242 (269)
	Heat output @ 30°C return max/min	kW	142	190	238
	Thermal efficiency net (gross)	%	104.3 (94)	104.3 (94)	104.2 (93.9)
ErP	NO _x emissions (0% O ₂)	mg/kWh	38	38	36
	Noise level (EN15036-1 avg @1m)	dBA	70	70	70
Gas data	Gas flow rate (natural gas)	m³/hr	13.3	17.8	22.2
	Gas flow rate (propone)	kg/hr	11.3	15.2	18.9
Water	Water content	litre	27	31	35
	Recovery rate through 50°C Δt	litre/hr	2,434	3,257	4,080
	Recovery rate through 56°C Δt	litre/hr	2,173	2,908	3,643
	Operating pressure (unvented)*	bar	3.5	3.5	3.5
	Minimum working pressure	bar	1	1	1
	Operating temperature	°C	70°C	70°C	70°C
	Maximum pressure**	bar	8	8	8
Electrical	Voltage	volt/phase	240V/single phase	240V/single phase	240V/single phase
	Fuse rating	amp	10	10	10
	Electrical power consumption (with pump/without pump)	W	176/48	267/48	286/53
Misc	Weight full	kg	317	363	371
	Weight empty	kg	290	332	336
		*When used with Andrews Unvented System Kit (pressure reducing valve adjustable from 3.5-5.5 bar).			
		**When used without our Unvented System Kit.			

		Model		
		SF65 EVO	SF66 EVO	SF67 EVO
Energy	Heat input net (gross)	kW	388 (431)	485 (538)
	Heat output @ 30°C return max/min	kW	381	477
	Thermal efficiency net (gross)	%	104.2 (93.9)	104.2 (93.9)
ErP	NO _x emissions (0% O ₂)	mg/kWh	36	34
	Noise level (EN15036-1 avg @1m)	dBA	77	77
Gas data	Gas flow rate (natural gas)	m³/hr	35.6	44.5
	Gas flow rate (propone)	kg/hr	30.3	37.9
Water	Water content	litre	68	75
	Recovery rate through 50°C Δt	litre/hr	6,531	8,177
	Recovery rate through 56°C Δt	litre/hr	5,832	7,301
	Operating pressure (unvented)*	bar	3.5	3.5
	Minimum working pressure	bar	1	1
	Operating temperature	°C	70°C	70°C
	Maximum working pressure**	bar	8	8
Electrical	Voltage	volt/phase	415V/3-phase	415V/3-phase
	Fuse rating	amp	10	10
	Electrical power consumption (with pump/without pump)	W	504/54	620/64
Misc	Weight full	kg	564	615
	Weight empty	kg	496	540
		*When used with Andrews Unvented System Kit (pressure reducing valve adjustable from 3.5-5.5 bar).		
		**When used without our Unvented System Kit.		

SUPAflo EVO Suggested Engineer Specification

Construction

The SUPAflo EVO range is a high efficiency, fully condensing loor standing low water content water heater incorporating a three pass heat exchanger constructed from individual laser welded 316L stainless steel finned tubes, plain tubes and removable 316L stainless steel headers. Each SUPAflo EVO incorporates a patented water cooled, cold flame pre-mix fully modulating gas burner.

The unit shall be capable of being disassembled and reassembled on site for easy maneuverability and where access is restricted.

The water heater shall be ErP compliant and incorporate a gas filter, bronze primary pump, a condensate trap and be manufactured under the ISO 9001 quality system.

Hydraulic, gas and flue connections

The water heater shall be designed for boosted, direct mains and open vented systems up to a maximum pressure of 8 bar.

The water outlet and water inlet connections shall be 2" BSP or DN65 PN16 depending on the model. The gas connections shall be 1½" BSP or 2" BSP depending on model.

The water heater shall incorporate an integral flue damper and be suitable for either Conventional flue or Twin Pipe room sealed flue installation. The flue outlet diameter shall be between 150mm and 250mm and the air intake connection shall be either 130mm or 150mm, all dependent upon the water heater model. All flue connections shall be located on the back of the water heater.

The water heaters shall be suitable for either Natural Gas or Propane.

A range of buffer vessels are available at Andrews Water Heaters which are specifically designed for use with SUPAflo EVO.

Operation

Each SUPAflo EVO burner provides modulation of 5:1, efficiencies of 98% (gross CV and NO_x emissions of 38mg/kWh or lower).

Each unit is supplied with an appropriately sized bronze pump that is either single or 3-phase depending on the water heater model.

As standard, the SUPA lo EVO Siemens controls provides domestic hot water control with in built in built anti-legionella function via BMS integration. The control panel display shall indicate operating water temperature and lockout status.

Electrical controls

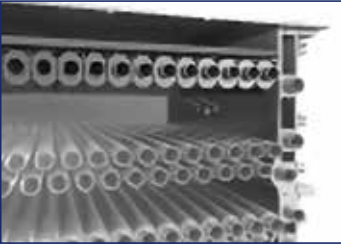
The unit shall be supplied as standard with the following controls: Full PID modulation control. Status outputs for run and fault indication via a 240 Volt output and a volt free enable.

Each SUPAflo EVO shall be CE, GAR and WRAS approved.

Patented water cooled cold flame burner system



Water cooled combustion chamber

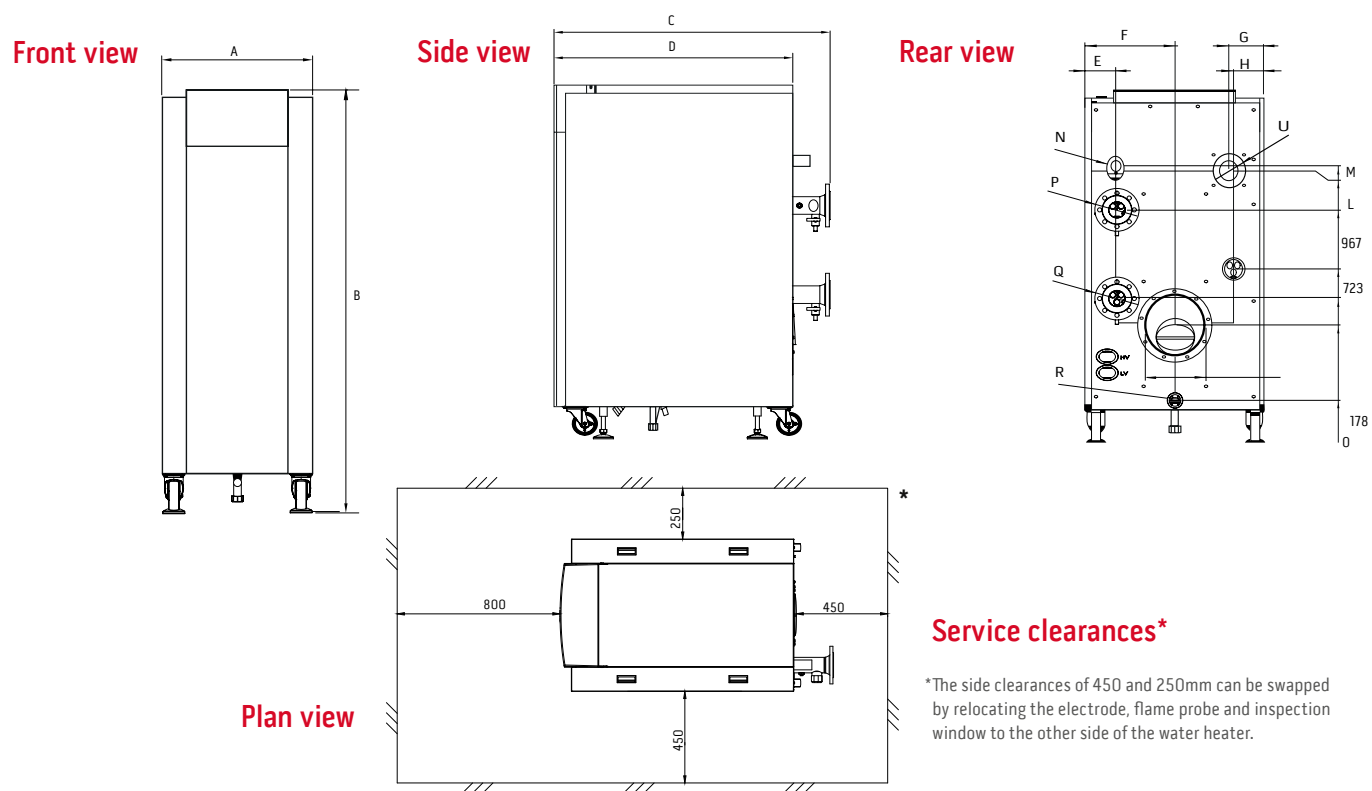


Stainless steel laser welded fin tube



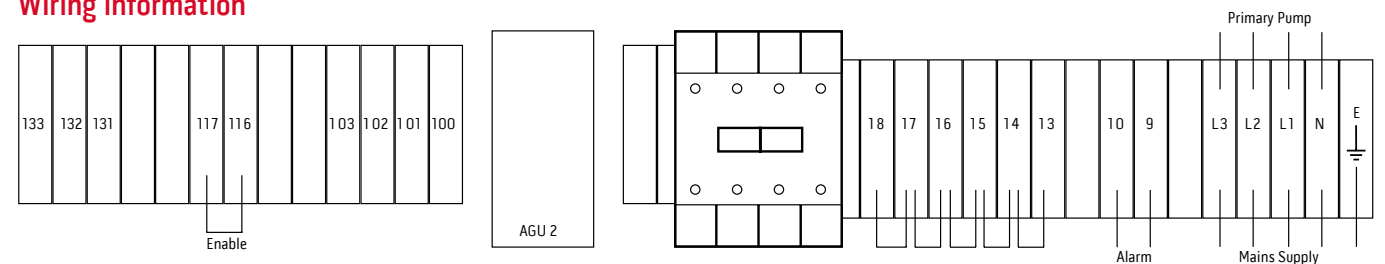
Dimensions and Connections

		Model						
		SF61 EVO	SF62 EVO	SF63 EVO	SF64 EVO	SF65 EVO	SF66 EVO	SF67 EVO
A: Heater width	mm	466	466	466	746	746	746	746
B: Max height possible inclu. feet	mm	1467	1467	1467	1470	1470	1470	1470
C: Depth overall	mm	1349	1499	1649	1348	1496	1646	1769
D: Depth of body	mm	1165	1315	1465	1152	1302	1452	1602
E: Gas, flow and return centres	mm	104	104	104	129	129	129	129
F: Flue and condense centre	mm	234	234	234	374	374	374	374
G: Air intake centre	mm	131	131	131	149	149	149	149
H: 2nd return port centre	mm	104	104	104	129	129	129	129
J: Height to flue centre	mm	482	482	482	490	490	490	490
K: Height to return in port centre	mm	602	602	602	601	601	601	601
L: Height to air intake centre	mm	1130	1130	1130	1131	1131	1131	1131
M: Height to gas connection centre	mm	1124	1124	1124	1152	1152	1152	1152
N: Gas connection diameter	inch	1 1/5"	1 1/5"	1 1/5"	1 1/5"	1 1/5"	2"	2"
P: Flow out port diameter	inch	2"	2"	2"	DN65 PN16	DN65 PN16	DN65 PN16	DN65 PN16
Q: Return in port diameter	inch	2"	2"	2"	DN65 PN16	DN65 PN16	DN65 PN16	DN65 PN16
R: Condense diameter	mm	32	32	32	32	32	32	32
S: Flue diameter	mm	150	150	200	200	250	250	250
T: 2nd return port diameter	inch	2"	2"	2"	DN65 PN16	DN65 PN16	DN65 PN16	DN65 PN16
U: Air intake	mm	130	130	130	130	130	150	150



Wiring Information and Typical Flue Data

Wiring information



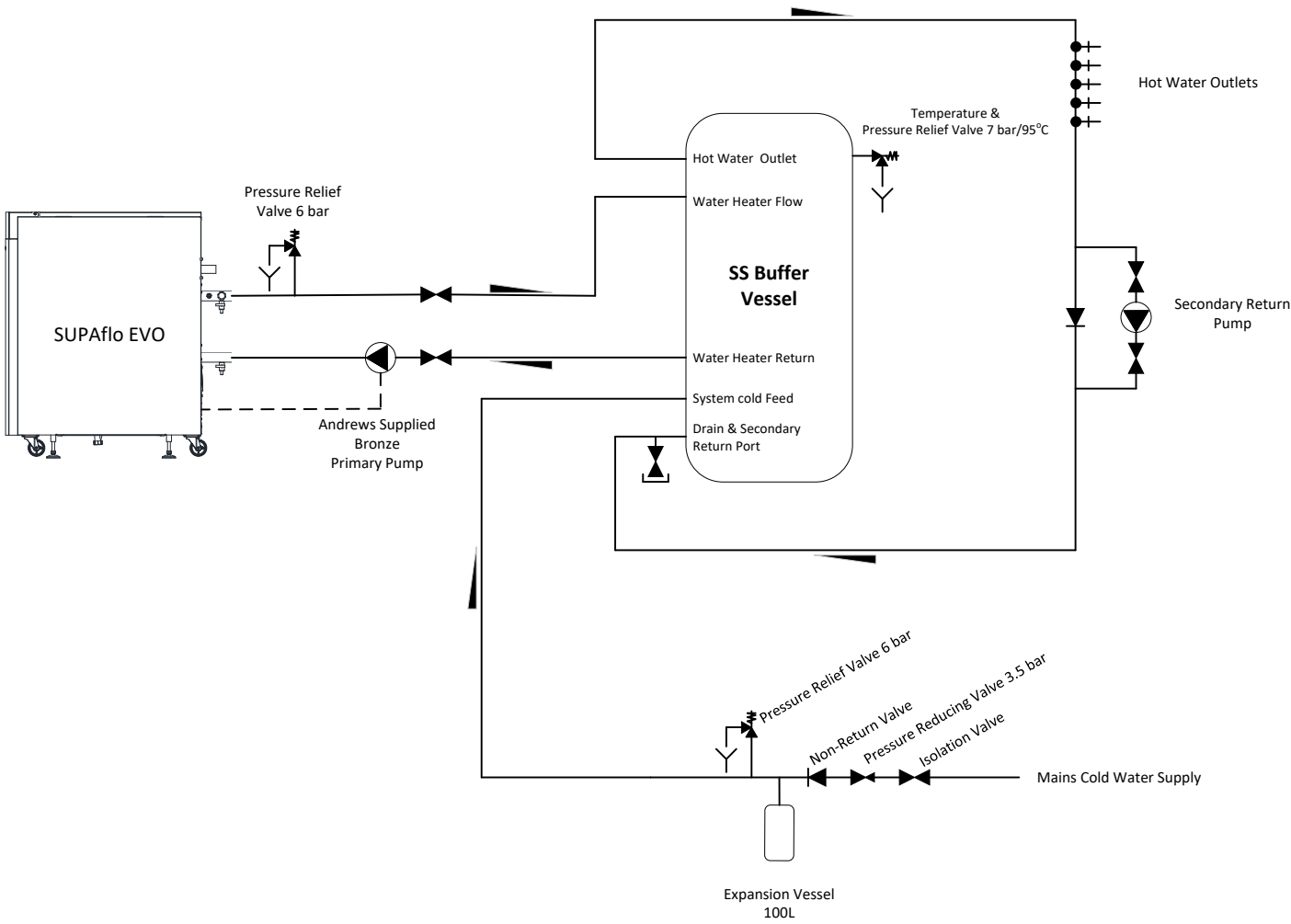
Terminals 9 & 10	Alarm signal terminals. Terminal 9 and 10 provide a 240 volt output during a fault condition. Terminal 9 being the 240 volt live and Terminal 10 the neutral.
Terminals 13 to 18	Heater interlock. Breaking any of the 240 volt link wires between terminals 13 to 18 will shut the heater down.
Terminals 116 & 117	Enable Control. By opening and closing a 240 volt link wire across these terminals enables the heater to be enabled and disabled.
Terminals L1, L2 L3 & N	Primary Pump connections. These are the control and power supply to the primary circulator. Please note that the models SF65 Evo and SF67 EVO have 3-phase primary circulators. Terminals L1, L2 and L3 are the phases and terminal N is the neutral to the circulator.
	Additional information is available on wiring from the Installation Manual. Visit Andrewswaterheaters.co.uk

Typical Flue Data

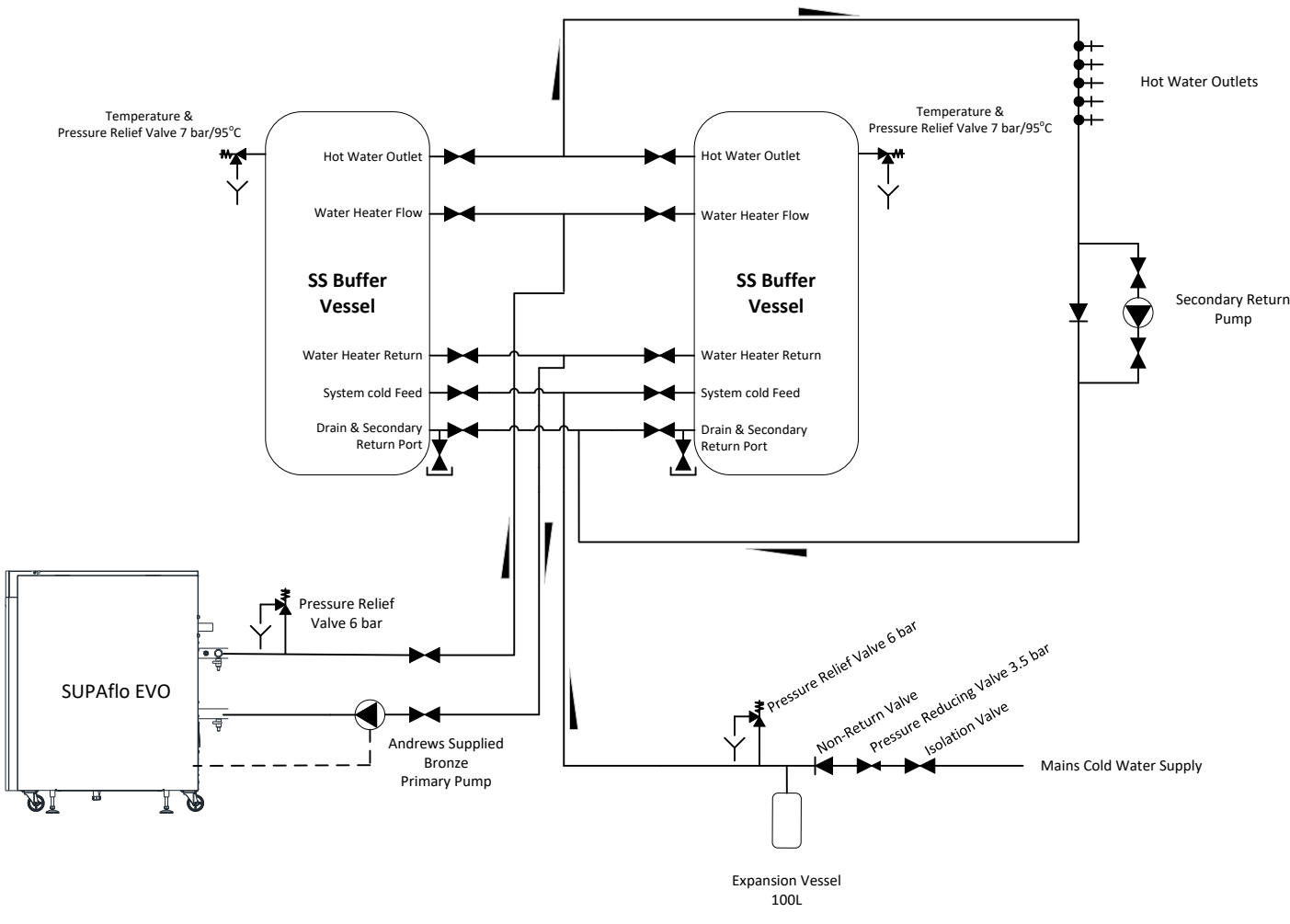
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Suggested Schematics

Schematic A: SUPAflo EVO used with one SS buffer vessel

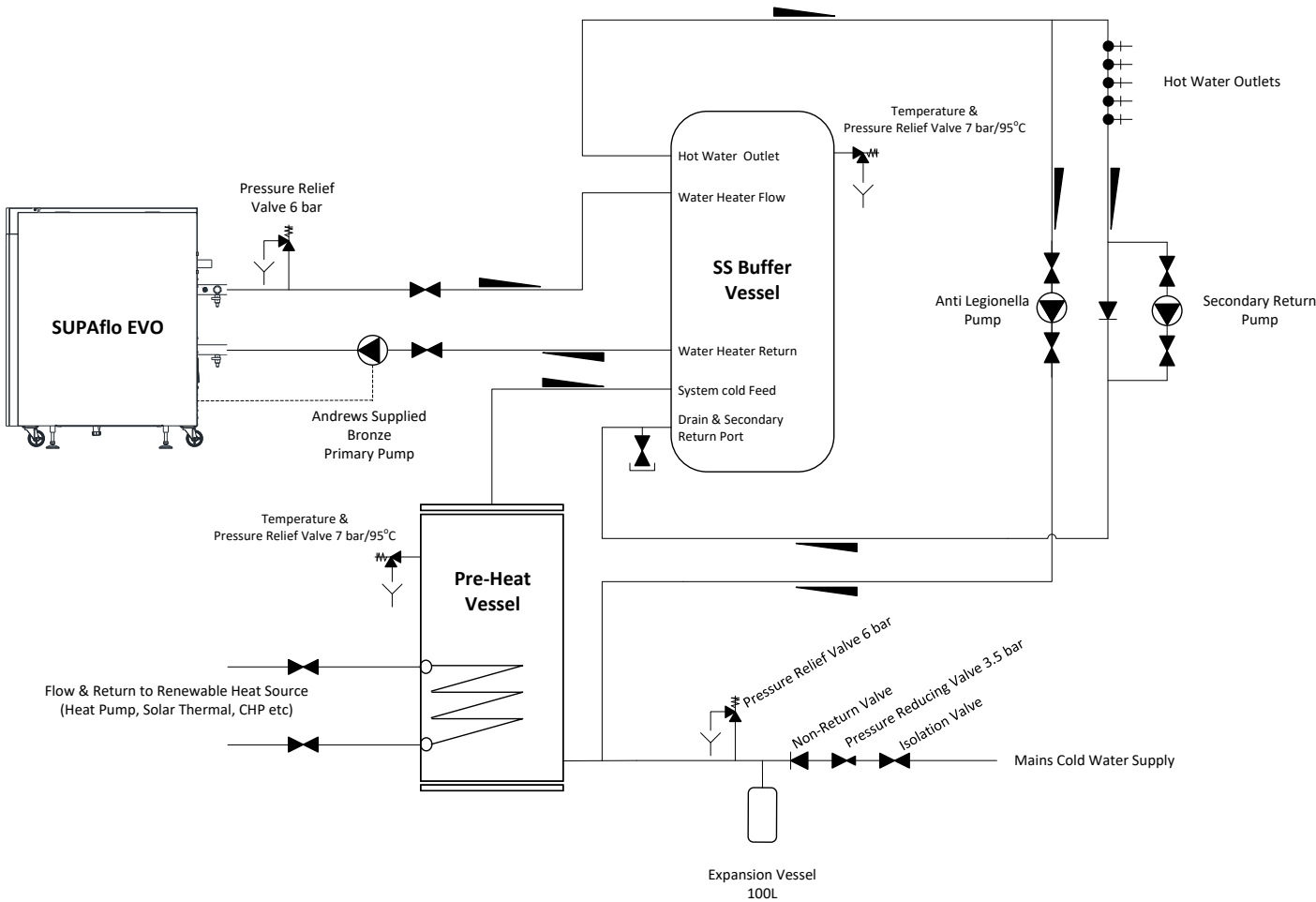


Schematic B: SUPAflo EVO connected to two SS buffer vessels



Suggested Schematics

Schematic C: SUPAflo EVO used in conjunction with a pre-heat vessel and SS buffer vessel



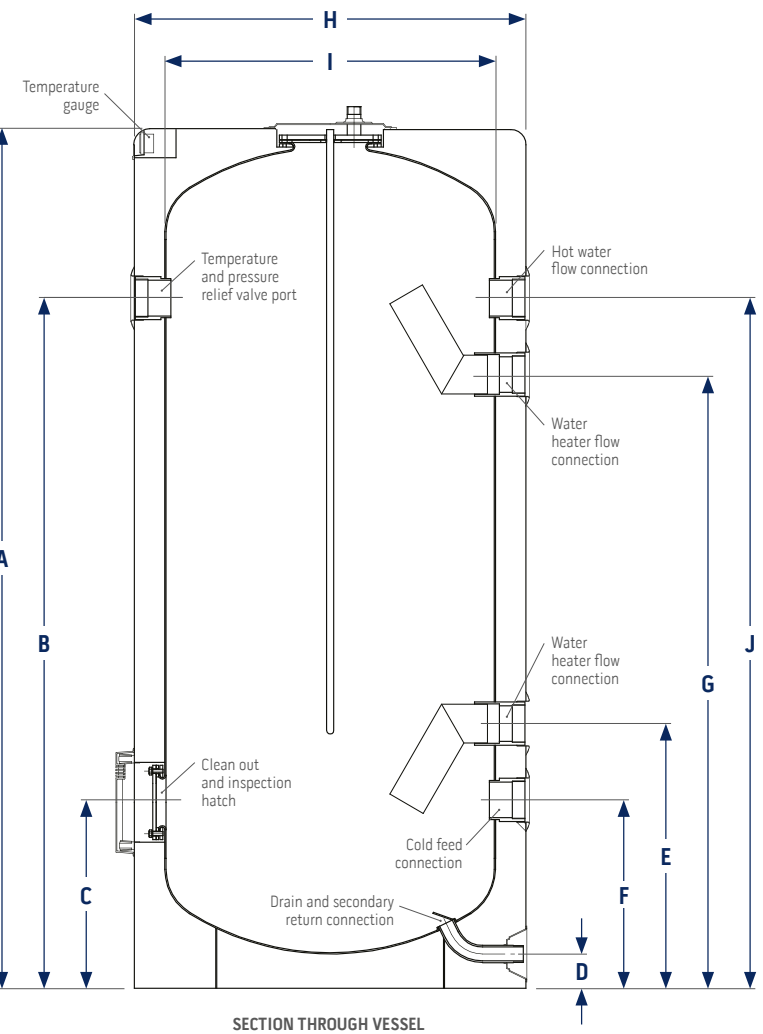
Optional Extras and Unvented Systems Kits

Stainless Steel Buffer Vessels

All buffers can be used with any SUPAflo EVO model

Andrews SUPAflo EVO are required to be installed with buffer vessels such as our 316L Stainless Steel BUFFERS

	Model			
	BUFFER-SS300-2.5"	BUFFER-SS500-2.5"	BUFFER-SS800-2.5"	BUFFER-SS1000-2.5"
A	Height (mm)	1685	1690	1840
B	Height to temperature and pressure relief valve port (mm)	1400	1356	1457
C	Height to clean out and inspection hatch	323	370	347
D	Height to drain and secondary return connection (mm)	70	70	100
E	Height to water heater return connection (mm)	473	520	497
F	Height to cold feed connection (mm)	323	370	347
G	Height to water heater flow connection (mm)	1250	1206	1307
H	Outside diameter (mm)	620	770	950
I	Cylinder diameter (mm)	500	650	790
J	Height to hot water flow connection (mm)	1400	1356	1457



Unvented Systems Kit

7820334 – Unvented kit for SUPAflo EVO SF61 to SF63

Suitable for SF61 to SF63

- Pressure limiting valve 1 ½" 3.5 bar
- Non-return valve 1 ½"
- Expansion relief valve 6 bar 1¼" x 1½" DN32
- Expansion vessel 100L
- Temperature and pressure relief valve 2" DN40
- Straight tundish 1 ½" x 2"
- Straight tundish 2" x 2 ½"

7820335 – Unvented kit for SUPAflo EVO SF64 to SF67

Suitable for SF64 to SF67

- Pressure limiting valve 2" 3.5 bar
- Non-return valve 2"
- Expansion relief valve 6 bar 1½" x 2" DN40
- Expansion Vessel 100L
- Temperature and pressure relief valve 2½" DN50
- Straight tundish 2" x 2 ½"
- Straight tundish 2 ½" x 3"

Technical Support and Declaration of Compliance

From brochures to CAD drawings and BIM files, you can access all the information you need at andrewswaterheaters.co.uk. Or call our sales or technical departments on 0345 070 1057.

We can provide you with:

- Brochures
- Technical sheets
- Case studies
- Installation manuals
- CAD and BIM files
- Size-it – sizeit.co.uk
- Energy-related Products directive data
- Commissioning
- Technical Information
- Free training courses and CPDs, available at andrewswaterheaters.co.uk/training
- 24/7 Out of Hours Engineer Support

**24/7 OUT-OF-HOURS
ENGINEER SUPPORT**
In an emergency, we offer
technical advice
0345 070 1058

The water heater must be installed in accordance with the following regulations:

- BS 5440:** Installation of flues and ventilation for gas appliances of rated output not exceeding 60kW.

Part 1: Specification for installation of flues.

Part 2: Specification for installation of ventilation for gas appliances.

BS 5546: Installation of gas hot water supplies for domestic purposes.

BS 6891: Installation of low pressure gas pipework of up to 35mm in domestic premises.

BS EN 806 (Parts 1 – 5): Specifications for installations inside buildings conveying water for human consumption.

BS 6644: Installation of gas fired water boilers of rated inputs between 70kW and 1.8MW.

BS EN 12897 Water Supply: Specification for indirectly heated unvented (closed) storage water heaters.
- IGE/UP/1A,1B:** Strength/tightness testing and direct purging.

IGE/UP/2: Installation pipework.

IGE/UP/10 – 1 (Edition 4): Installation of gas appliances in industrial and commercial premises.

BS 8558: Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages. Complementary guidance to BS EN 806.

HSE L8: Control of legionella bacteria in water systems.

HSG247 – Part 2: The control of legionella bacteria in hot and cold water systems.

Building Regulations Part G: Sanitation, hot water safety and water efficiency.

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- User-friendly and intuitive
- Accessible online on any device
- Up-to-date UK legislative guidance
- Manage a portfolio of projects



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Six reasons it has to be Andrews

-  **Britain's No.1**

Established in 1976, Andrews is the leading supplier of gas-fired commercial water heaters in the UK.
-  **Market-leading expertise**

As active members of CIBSE, SOPHE and ICOM, we are at the forefront of setting industry standards, keeping our customers one step ahead of changing legislation.
-  **Reliability you can trust**

Our products are built to perform, even in the most demanding environments. We have a focus on innovation and our range is continually evolving to answer customer needs and exceed building regulations.
-  **Unrivalled design support**

Technical data sheets, BIM and CAD files are available online, 24 hours a day, 365 days a year.
-  **Expert technical advice**

You can rely on our dedicated team every step of the way from planning and commissioning to servicing and maintenance. We offer on and off-site assistance, including expert advice on system design and hydraulic schematics.
-  **Exceptional aftersales service**

You can trust in our continued support with commissioning visits and in-warranty service and repairs – and if you need expert engineer support, we're here for you round the clock with our 24/7 hotline.

Andrews is an Investors in People organisation. All of our systems and procedures meet the highest standards, including ISO 9001 (quality management) and ISO 14001 (environmental management).

Andrews. Built to perform.

Andrews Water Heaters Range Overview

Condensing



MAXXflo EVO

Delivers superior flow outputs and low NO_x for a class-leading performance, and is future-proofed with advanced BMS connectivity.

Available in **30-150kW** outputs.



MAXXflo EVO Lite

A highly energy efficient water heater, designed to deliver a high volume of hot water from a small output.

Available in **14-44kW** outputs.



SUPAflo EVO

Produces a continuous supply of hot water and is designed for high demand environments that need high volumes of instant hot water.

Available in **142-539kW** outputs.



ECOflo

Fully-condensing direct-fired efficient water heater suitable for large commercial properties where there's a high demand for hot water.

Available in **35-96kW** outputs.



ECOflo COMPACT

High efficiency condensing floor-standing storage water heater designed to meet your toughest installation challenges and hot water demands.

Available in **20kW** outputs.



COMBIflo

A range of condensing stainless-steel water heaters. With space heating capability, it produces both hot water and heating from a single heat generator and storage vessel enclosed in one cabinet.

Available in **100-150kW** outputs.



FASTflo PLUS

Wall-hung condensing instant water heater. It's very easy to install with only three simple connections to fit.

Available in **56kW** outputs.

Non-condensing



Hiflo EVO

High efficiency floor-standing storage water heater designed for bigger applications that require larger quantities of hot water.

Available in **30-65kW** outputs.



CLASSICflo

Standalone gas-fired water heater that can be installed on vented or unvented systems. It's quick and easy to install, particularly as a replacement for existing water heaters

Available in **10-20kW** outputs.



CLASSICflo FAN FLUED

Has the addition of a fan assisted flue, making them the perfect choice for installations where longer flue runs are required.

Available in **18kW** outputs.



CLASSICflo BALANCED

Offers all the advantages of the CLASSICflo but with the additional benefit of a balanced flue. The concentric flue system draws air from outside the building, making it suitable for properties where the air might be contaminated.

Available in **9kW** outputs.



Cylinders and Buffers

Four our full range of stainless steel and glass lined cylinders and buffers, contact our Technical Sales Managers or visit our website andrewswaterheaters.co.uk

From June 15 2022, the minimum heat generator seasonal efficiency for direct-fired water heaters will be 91% (GCV) for natural gas and 92% (GCV) for liquefied petroleum gas (LPG). All indirect-fired water heaters will be required to achieve a minimum seasonal efficiency of 91% (GCV) for both natural gas and LPG.

So, there will be no opportunity to carry out like for like replacements with non-condensing water heaters except in exceptional circumstances.*

* Exceptional circumstances to be signed off by local building control



Sales 0345 070 1055

Technical 0345 070 1057

Web andrewswaterheaters.co.uk

 [linkedin.com/company/andrews-water-heaters](https://www.linkedin.com/company/andrews-water-heaters)

 @AndrewsWH

Registered office address: Baxi Heating UK, Brooks House, Coventry Road, Warwick CV34 4LL

August 2022

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BAXI
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