the HAMWORTHY

BIG BOOK

BOILERS | WATER HEATERS | CALORIFIERS | EXPANSION VESSELS | HEAT PUMPS | STORAGE TANKS
PRESSURISATION UNITS | FLUES | CONTROLS | DOSING POTS | AIR & DIRT SEPARATORS

SCAN ME

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Hamworthy

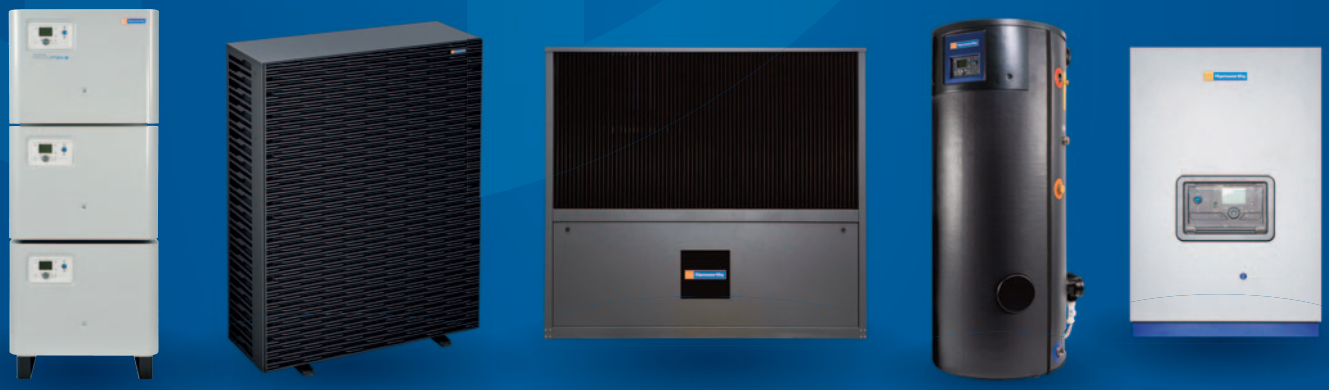
Who is Hamworthy Heating?

Whilst we may be best known for our range of modular commercial gas boilers in the UK, Hamworthy Heating is a leading authority in the commercial heating and hot water markets. Behind the scenes, we possess a wealth of expertise supporting the low carbon transformation of the UK heating industry.

Our parent company, Groupe Atlantic, has a long history in heat pumps and currently holds the market leading position in France. By combining Groupe Atlantic's technical and manufacturing heat pump expertise, with our knowledge of UK heating systems and market, we have created a successful formula for our innovative range of Tyneham commercial air source heat pumps.

Our broad product range, whether it be modular floor standing boilers or durable stainless steel water heaters, ensures our customers have the best and most advanced solutions for heating and hot water, whilst supporting their journey towards decarbonisation. Each model in our range of commercial heat pumps can be integrated with other products in our portfolio allowing for commercial hybrid heating, and hot water systems.

Collaborating through knowledge and skills in Groupe Atlantic, we have developed a range of low-carbon products, designed to simplify our customers' lives. More than just a manufacturer, Hamworthy Heating is a company that is dedicated to providing high levels of service and aftercare to its customers. From heating design support to technical assistance, whether the product is a commercial air source heat pump, floor standing boiler, or water heater, we will deliver the same outstanding customer service and support.



Trusted expertise since 1914

SCAN ME

Contents

Tyneham 290HT Commercial heat pumps

6 models
15-65 kW output

Using R290 natural refrigerant, these monobloc air source heat pumps have been designed for use in commercial buildings. The Tyneham 290HT can achieve high flow temperatures with high efficiencies and low carbon heating.

Key benefits:

- Monobloc air source heat pumps
- Single unit with the refrigeration cycle contained within the outdoor unit
- Inverter controlled compressor to accurately match the heat demand†
- Ultra-low global warming potential due to the use of R290 natural refrigerant
- High flow temperature, perfect for DHW production
- Highly efficient coefficient of performance (COP)*
- Quiet noise level as low as 64 dB(A)**
- Suited to larger installations – cascade systems to achieve higher output
- Combine with Hamworthy's boilers for a hybrid heating system
- 2 year warranty (extended to 5 years if commissioned by Hamworthy Heating)
- Back up and long-term support from our team of experienced UK based engineers

Scan to read more

Efficient heating for a new school extension

Two **Tyneham 27kW 290HT** air source heat pumps were installed in cascade for underfloor heating in a new school extension. Connected to a Hamworthy buffer with a 50°C flow temperature, this setup provides optimal heating performance.

† Tyneham 290HT 65kW model incorporates a fixed speed compressor.

Tyneham 290HT Technical information

	Tyneham model	Units	15kW	18kW	27kW	40kW	50kW	65kW
ENERGY	Heat Pump Space Heating [35°C]	ErP rating	A+++	A+++	A+++	A++	A++	A++
	Heat Pump Space Heating [35°C]	SCOP	5.02	4.99	4.46	4.09	4.2	4.08
	Heat Pump Space Heating [55°C]	ErP rating	A++	A++	A++	A++	A++	A++
	Heat Pump Space Heating [55°C]	SCOP	4.85	4.76	4	3.83	3.91	3.32
	Refrigerant		R290	R290	R290	R290	R290	R290
	Refrigerant Charge	(kg)	1.27	1.27	2.1	3.15	3.5	4.35
	Global Warming Potential	GWP	3	3	3	3	3	3
HEATING	Heating (A7/W35)	Capacity (kW)	15.84	18.77	28.6	40.1	50	63.9
	Heating (A7/W35)	Power Input (kW)	3.36	4.03	7.6	13.1	16.5	42.7
	Heating (A7/W35)	COP*	4.94	4.62	4.54	4.1	4.2	4.6
	Max Flow Temperature	Max [°C]	75	75	75	75	75	70
	Air Temperature Range	Min/Max [°C]	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)
SOUND	Sound Data Outdoor unit	Power Level dB(A)**	64	64	65	82	83	86.4
	Sound Data Outdoor unit	Pressure Level at 1m dB (A)***	47	47	45	64	65	78.4
CONNECTIONS & WATER	Pipework Connection Sizes	Heating Flow (inch)	1	1	1 1/4	1 1/2	1 1/2	2
	Pipework Connection Sizes	Heating Return (inch)	1	1	1 1/4	1 1/2	1 1/2	2
	Minimum Water Volume	Litres (l)	230	230	225	365	415	
ELECTRICS	Electrical Supply	(v)	400	400	400	400	400	400
	Phase		Three	Three	Three	Three	Three	Three
	Max Running Current	(amp)	15.8	16.5	21	38	45	70
	Fuse Rating	(amp)	25	25	25	50	63	75
DIMENSIONS	Width	(mm)	1100	1100	1610	1895	1895	2300
	Depth	(mm)	510	510	710	1110	1110	1206
	Height	(mm)	1447	1447	1270	1980	1980	1496
	Weight	(kg)	174	174	285	535	550	770

Minimum installation clearances:

15, 18 & 27kW models

Front: 1500mm
Rear: 400mm
Left: 400mm
Right: 500mm
Top: 1500mm
Bottom: 50mm
Side clearance of 1000mm when used in cascade.
The outdoor unit must be raised by at least 50mm from the ground

40 & 50kW models

Front: 1500mm
Rear: 1500mm
Left: 1200mm
Right: 1000mm
Top: 1500mm
Bottom: 50mm
Side clearance of 1500mm when used in cascade.
The outdoor unit must be raised by at least 50mm from the ground.

65kW model

Front: 1000mm
Rear: 800mm
Left: 800mm
Right: 1000mm
Bottom: 50mm
Side clearance of 1500mm when used in cascade.
The outdoor unit must be raised by at least 50mm from the ground.

Accessories and options:

	Included	Optional
External control unit – 15kW to 27kW	•	
Integral controller – 40kW to 65kW	•	
Flexible hose		•
Anti-vibration rubber feet		•
Exogel antifreeze kit		•

Terms and conditions apply:

Tyneham 290HT models all represent the output at Air 7°C & Water 35°C.

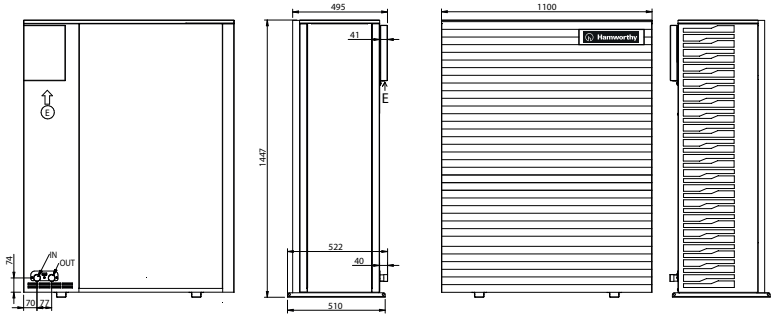
* Coefficient of Performance (COP) rated at EN14825 test conditions Water 35°C / Air 7°C.

** The sound levels refer to a fully loaded unit at standard nominal conditions according to EN12102:2022.

*** Sound pressure value calculated from the sound power using the standard UNI EN ISO 3744:2010.

Tyneham 290HT dimensions

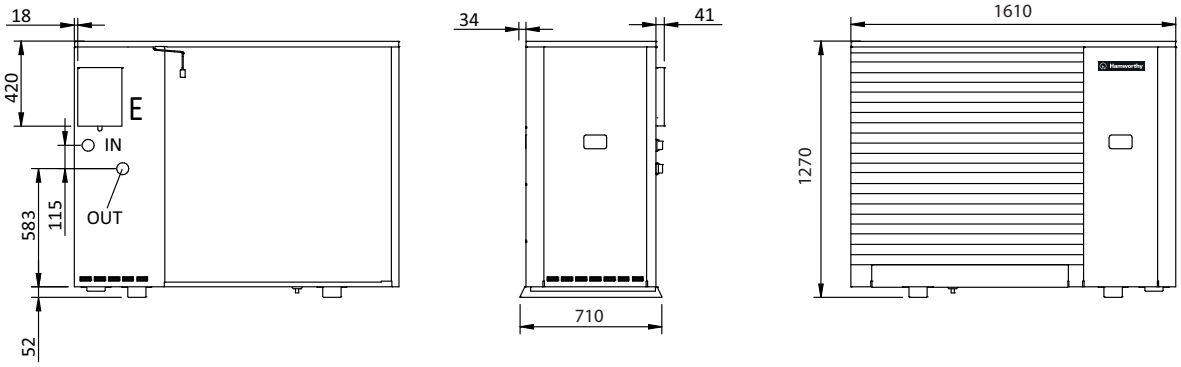
15 & 18kW models



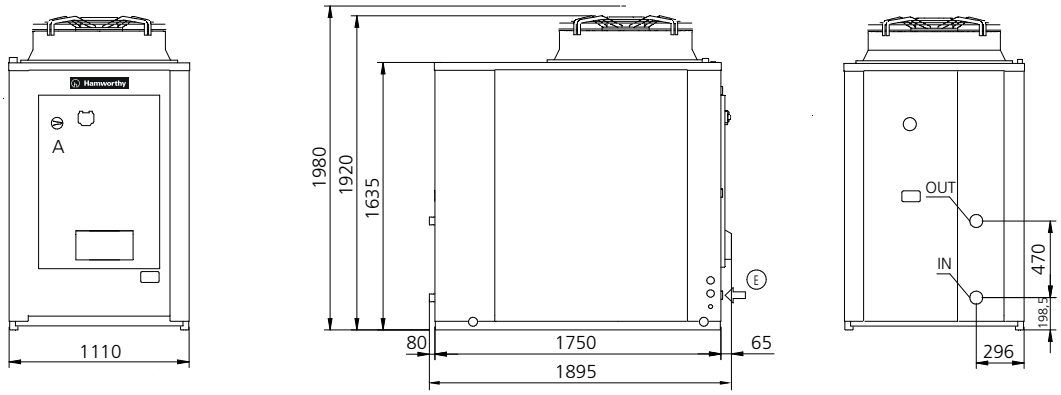
E = electrical

Note: *All dimensions in mm unless otherwise stated.*

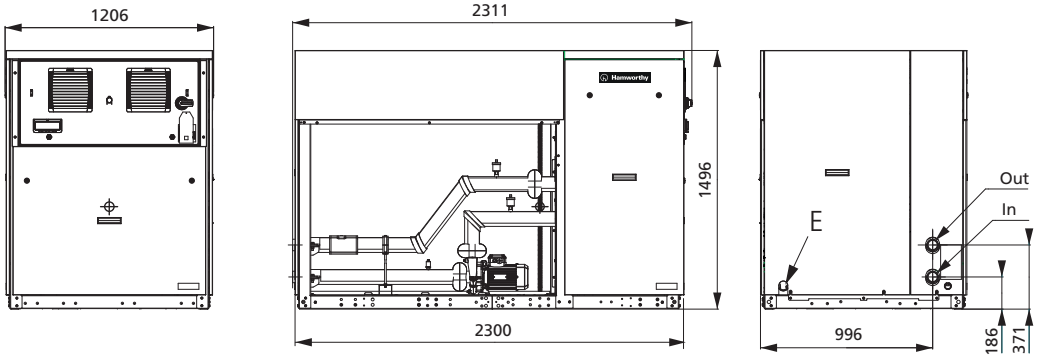
27kW model



40 & 50kW models



65kW model



Tyneham CO2 and CO2Q Commercial heat pumps

6 models
65-130 kW output

Future proof your investment with our range of CO2 natural refrigerant commercial heat pumps. Ideal for when space is limited, this range can be installed flush against a wall or back to back with another unit, and benefits from a low dB(A) rating for minimal background noise.

Key benefits:

- Made in the UK
- Ultra-low GWP due to the use of R744 (CO2) natural refrigerant
- Highly efficient coefficient of performance (COP)*
- Quiet noise levels as standard with low noise models available (CO2Q)
- Can be installed against a wall or back to back with another unit with no installation clearances required at the rear of the unit
- Inverter controlled compressor to accurately match the heat demand
- Single unit with the refrigeration cycle contained within the outdoor unit
- Suited to larger installations – cascade systems to achieve higher output
- Combine with Hamworthy's boilers for a hybrid heating system
- 2 year warranty on parts only
- Back up and long-term support from our team of experienced UK based engineers

Tyneham CO2 technical specification

	Tyneham model	Units	65kW	95kW	130kW
ENERGY	Heat Pump Space Heating [55°C]	ErP rating	A+++	-	-
	Heat Pump Space Heating [55°C]	COP	3	3	3
	Heat Pump Space Heating [65°C]	ErP rating	A+++	-	-
	Heat Pump Space Heating [65°C]	COP*	3.4	3.4	3.4
	Refrigerant		R744	R744	R744
	Refrigerant Charge	(kg)	4.8	6.5	10
	Global Warming Potential	GWP	1	1	1
HEATING	Heating (A7/W65)	Capacity (kW)	65	95	130
	Heating (A7/W65)	Power Input (kW)	17	25	34
	Heating (A7/W65)	SCOP	3.5	3.5	3.5
	Max Flow Temperature	Max [°C]	70	70	70
	Air Temperature Range	Min/Max [°C]	(-15 no max)	(-15 no max)	(-15 no max)
SOUND	Sound Data Outdoor unit	Power Level dB(A)**	74	75	75
	Sound Data Outdoor unit	Pressure Level at 10m dB (A)***	43	44	44
CONNECTIONS	Pipework Connection Sizes	Heating Flow (mm)	28	35	42
	Pipework Connection Sizes	Heating Return (mm)	28	35	42
ELECTRICS	Electrical Supply	(v)	400	400	400
	Phase		Three	Three	Three
	Max Running Current	(amp)	45.07	67.55	82.19
	Fuse Rating	(amp)	63	80	100
DIMENSIONS	Width	(mm)	2190	3051	3101
	Depth	(mm)	1160	1160	1457
	Height	(mm)	1853	1853	1853
	Weight	(kg)	935	1260	1300

Accessories and options:

	Included	Optional
Master controller		•
DHW controller		•
Flexible hoses		•
Burst disc pressure relief kit		•
Exogel antifreeze kit		•
Anti-corrosion coating for installations close to the sea (special order)		•

Minimum installation clearances:

Front: 1000mm

Rear: 0mm (Designed to back up to a wall)

Left/Right: 1000mm

Terms and conditions apply:

Tyneham CO2 & CO2Q models all represent the output at Air 7°C & Water 65°C.

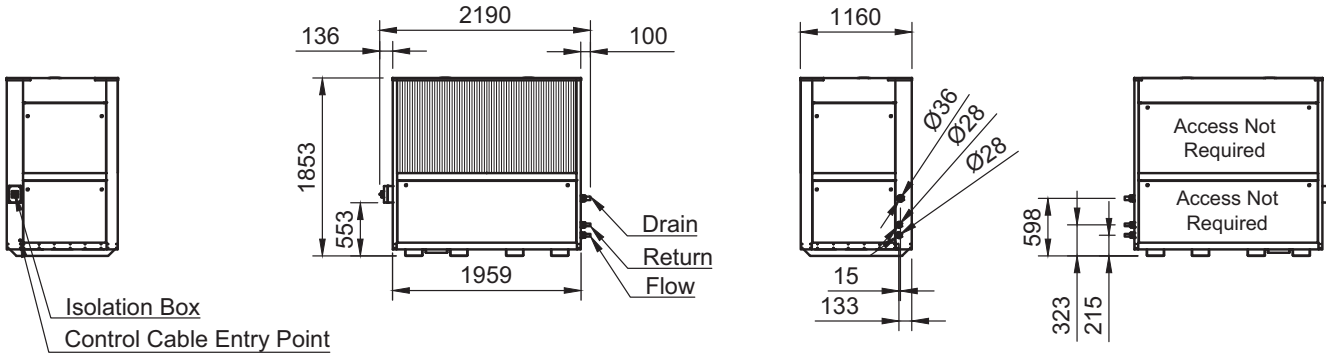
* Coefficient of Performance (COP) rated at EN14825 test conditions Water 65°C / Air 7°C.

** The sound power has been established in general accordance with BS EN ISO 3740: 2019 with a survey grade accuracy (sR0) = 4 dB.

*** Sound pressure level at 10m determined in accordance with Annex D of BS EN ISO 13487(TC): 2019.

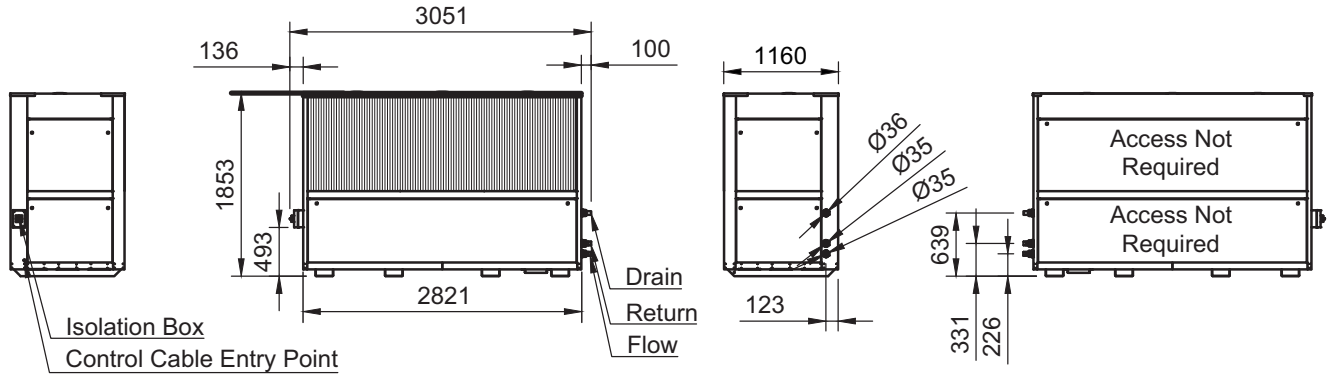
Tyneham CO2 dimensional drawings

65kW



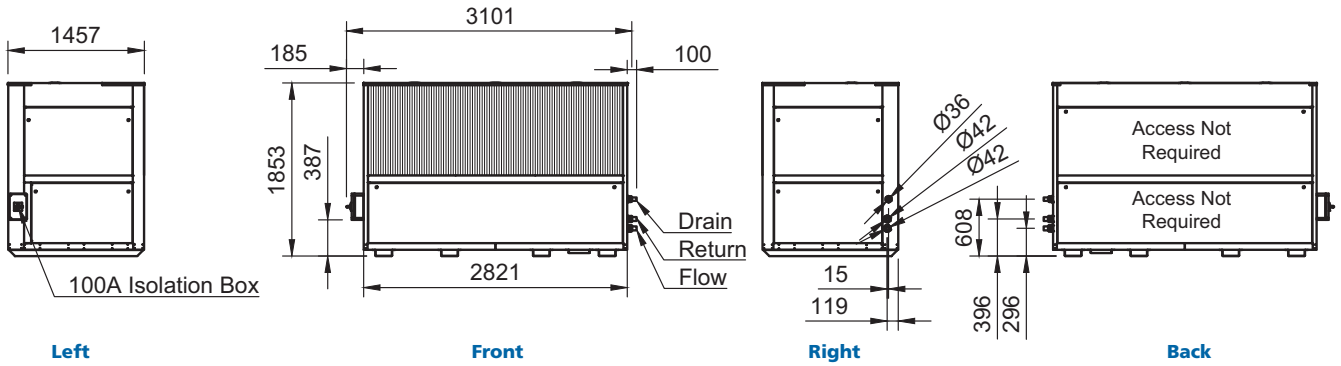
Left | Front | Right | Back

95kW



Left | Front | Right | Back

130kW



Left | Front | Right | Back

Tyneham CO2Q technical specification

	Tyneham model	Units	65kW	95kW	130kW
ENERGY	Heat Pump Space Heating [55°C]	ErP rating	A+++	-	-
	Heat Pump Space Heating [55°C]	COP	3	3	3
	Heat Pump Space Heating [65°C]	ErP rating	A+++	-	-
	Heat Pump Space Heating [65°C]	COP*	3.4	3.4	3.4
	Refrigerant		R744	R744	R744
	Refrigerant Charge	(kg)	4.8	6.5	10
	Global Warming Potential	GWP	1	1	1
HEATING	Heating (A7/W65)	Capacity (kW)	65	95	130
	Heating (A7/W65)	Power Input (kW)	17	25	34
	Heating (A7/W65)	SCOP	3.5	3.5	3.5
	Max Flow Temperature	Max [°C]	70	70	70
	Air Temperature Range	Min/Max [°C]	(-15 no max)	(-15 no max)	(-15 no max)
SOUND	Sound Data Outdoor unit	Power Level dB(A)**	71	72	72
	Sound Data Outdoor unit	Pressure Level at 10m dB (A)***	40	40	40
CONNECTIONS	Pipework Connection Sizes	Heating Flow (mm)	28	35	42
	Pipework Connection Sizes	Heating Return (mm)	28	35	42
ELECTRICS	Electrical Supply	(v)	400	400	400
	Phase		Three	Three	Three
	Max Running Current	(amp)	45.07	67.55	82.19
	Fuse Rating	(amp)	63	80	100
DIMENSIONS	Width	(mm)	2190	3051	3101
	Depth	(mm)	1160	1160	1457
	Height	(mm)	2401	2401	2401
	Weight	(kg)	1000	1365	1590

Accessories and options:

	Included	Optional
Master controller		•
DHW controller		•
Flexible hoses		•
Burst disc pressure relief kit		•
Exogel antifreeze kit		•
Anti-corrosion coating for installations close to the sea (special order)		•

Minimum installation clearances:

Front: 1000mm

Rear: 0mm (Designed to back up to a wall)

Left/Right: 1000mm

Terms and conditions apply:

Tyneham CO2 & CO2Q models all represent the output at Air 7°C & Water 65°C.

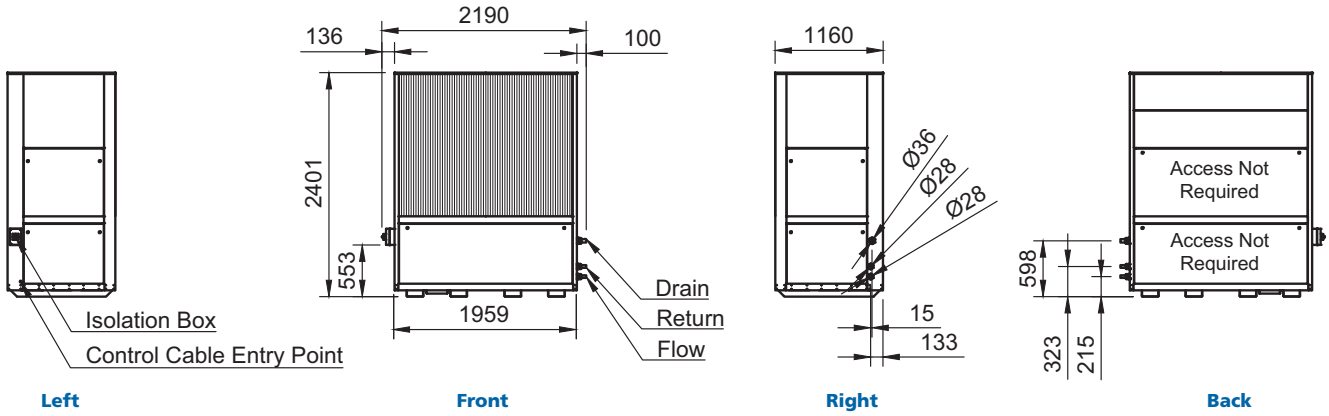
* Coefficient of Performance (COP) rated at EN14825 test conditions Water 65°C / Air 7°C.

** The sound power has been established in general accordance with BS EN ISO 3740: 2019 with a survey grade accuracy (sR0) = 4 dB.

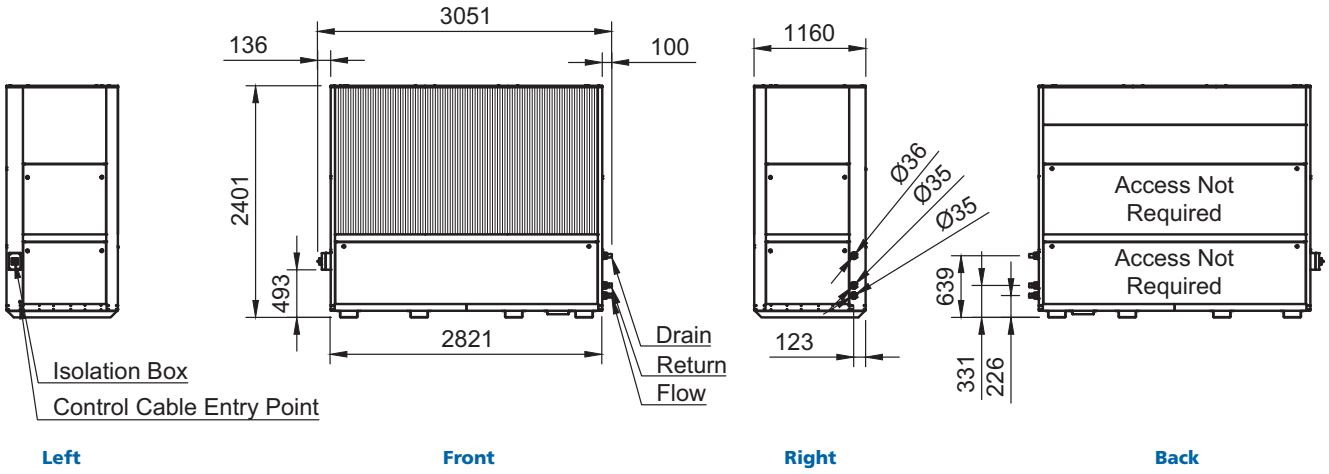
*** Sound pressure level at 10m determined in accordance with Annex D of BS EN ISO 13487(TC): 2019.

Tyneham CO2Q dimensional drawings

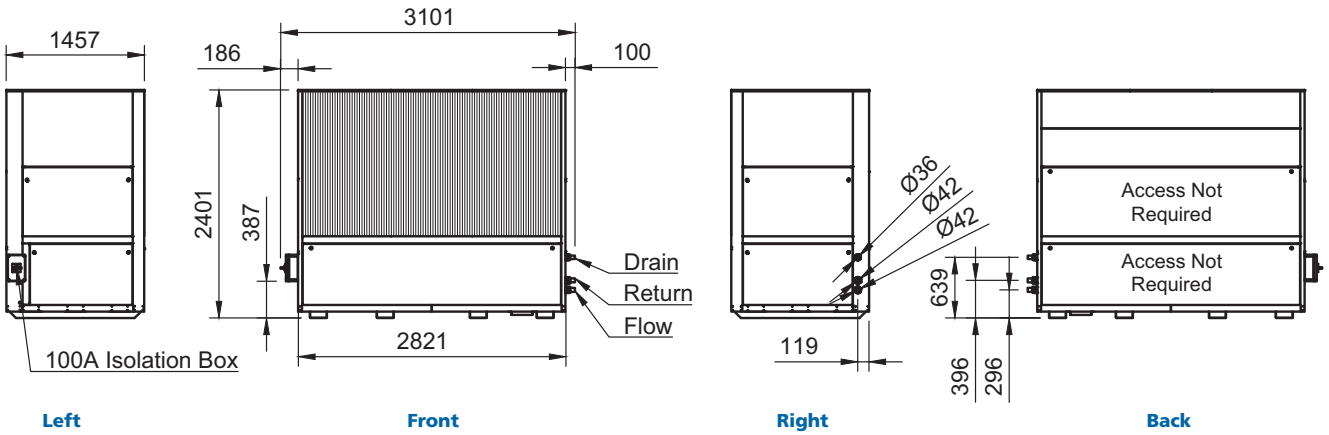
65kW



95kW



130kW



Tyneham Commercial heat pumps

6 models
14-70 kW output

The Tyneham air source heat pump is one of the smallest commercial heat pumps on the market. With a Co-efficiency of performance (COP) rating up to 4.85 and low global warming potential to provide you with efficient low carbon heating.

The model is an air source heat pump for low carbon heating with inverter compressor and uses R32 refrigerant. The monobloc design means all components are housed in the main unit.

Key benefits:

- Monobloc air source heat pump
- Single unit with the refrigeration cycle contained within the outdoor unit
- Inverter controlled compressor to accurately match the heat demand
- Low global warming potential due to the use of R32 refrigerant
- Highly efficient coefficient of performance (COP)
- Light and compact unit for ease of installation and delivery
- Suited to larger installations – cascade systems to achieve higher output.
- 2 year warranty (extended to 5 years if commissioned by Hamworthy)
- Gold Fin anti-corrosion coating as standard on the 14 & 18 kW models and Blue Fin anti-corrosion coating on the 26, 32, 50 & 70 kW models
- Back up and long-term support from our team of experienced engineers across the UK
- Combine with Hamworthy modular boilers for a hybrid heating system

Hybrid heating system with Tyneham

As part of its commitment to tackling global climate change, Sunderland Council is now benefiting from reduced carbon emissions and energy consumption thanks to a new Hamworthy Tyneham heat pump system set up in a hybrid installation at its offices in Stansfield Business Centre.

Tyneham
Technical information

Technical Specification	Unit	14kW 1PH	14kW 3PH	18kW	26kW	32kW	50kW	70kW
Heat Pump Space Heating [35°C]	ErP rating	A+++	A+++	A+++	A++	A++	A++	A++
	SCOP	4.48	4.48	4.46	4.55	4.81	4.16	3.94
Heat Pump Space Heating [55°C]	ErP rating	A++	A++	A++	A+	A+	A+	A+
	SCOP	3.31	3.31	3.36	3.14	3.14	3.08	3.04
Heating (A7/W35)	Capacity (kW)	14.1	14.1	17.9	26	32.1	50.2	66.8
	Power Input (kW)	2.91	2.91	4.07	6.44	7.84	12.2	16.3
	COP*	4.85	4.85	4.4	4.04	4.09	4.11	4.1
Air Temperature Range	Min/Max (°C)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)	(-20 +40)
Sound Data Outdoor Unit	Power Level dB(A)**	68	68	68	74	76	82	83
	Pressure level at 1m dB(A)#	53	53	53	58	60	65	66
Pipework Connection Sizes	Heating Flow (")	1	1	1	1	1¼	1½	1½
	Heating Return (")	1	1	1	1	1¼	1½	1½
Dimensions Outdoor Unit	Width (mm)	1044	1044	1044	1600	1600	1920	1920
	Depth (mm)	455	455	455	680	680	1110	1110
	Height (mm)	1409	1409	1409	1315	1315	1920	1920
Weight	kg	121	136	141	240	255	535	595
Electrical Data	Electrical Supply (v)	240	415	415	415	415	415	415
	Phase	Single	Three	Three	Three	Three	Three	Three
	Max Running Current (Amp)	29.2	9.7	12.2	23.3	27.1	54	70
	Fuse Rating (Amp)	32	25	25	25	32	63	100
Refrigerant Charge	R32 (kg)	3.2	3.2	3.5	4.3	5.1	8.5	12

Accessories and options

	Required	Optional
Control unit (sold separately)*		•
Flexible hoses		•
Anti-vibration rubber feet		•
Anti-corrosion coating for installations close to the sea (special order)		•

**Optional control units are available for cascade and where no BMS is present.*

Minimum installation clearances:

	14 & 18kW	26 & 32kW	50 & 70kW
Front (mm)	1500	1500	1500
Rear(mm)	400	400	1500
Left (mm)	400	400	1200
Right (mm)	500	700	1000
Top (mm)	500	500	1500
Bottom (mm)	50	50	50
Side clearance when used in cascade	1000	700	2200

Terms and conditions apply:

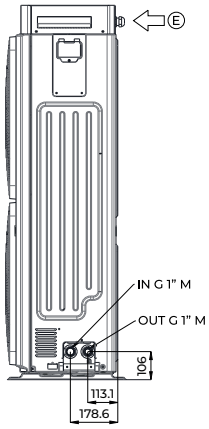
* Coefficient of performance (COP) rated at EN14825 test conditions Water 35°C/ Air 7°C.

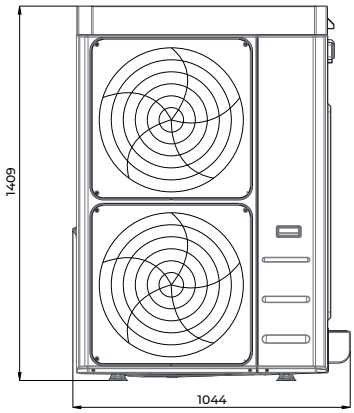
** The sound levels refer to a fully loaded unit at standard nominal conditions according to EN 12102-1: 2013.

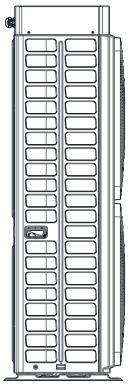
\# Sound pressure: value calculated from the sound power level using the standard UNI EN ISO 3744:2010.

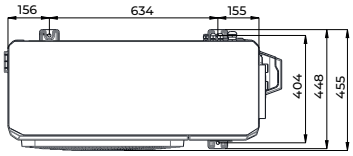
Tyneham dimensional drawings

14 & 18kW



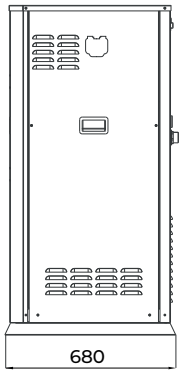


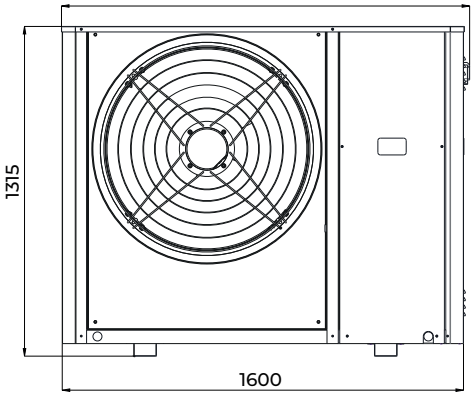


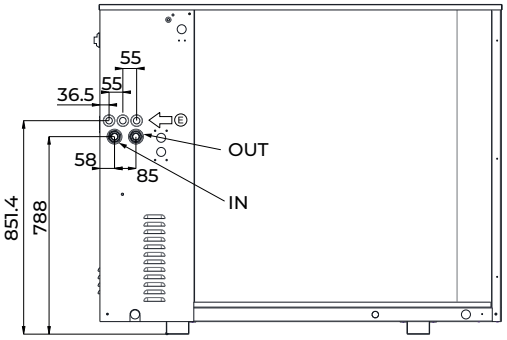


E: Electrical Connection

26 & 32kW

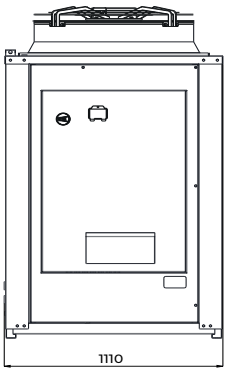


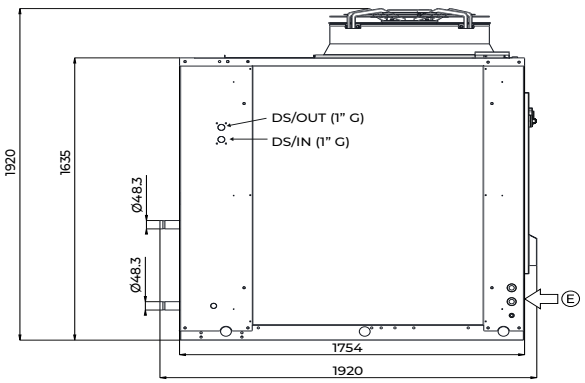


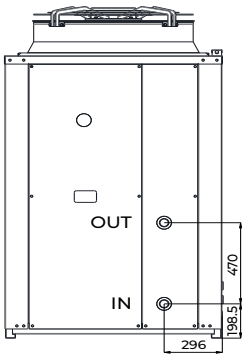


E: Electrical Connection

50 & 70kW







E: Electrical Connection

Note: *All dimensions in mm unless otherwise stated.*

Stratton mk3 wall hung boiler

7 models
40-150 kW output

The Stratton mk3 is a wall hung stainless steel condensing boiler offering a small and durable solution suitable for even the tightest plant rooms. Particularly suited to low height plantrooms, the boiler is less than 2 metres from ground to the top of the frame when mounted on our low height pipe kit.

Product features:

- 7 models available with 40, 60, 70, 80, 100, 120, 150kW output models
- Wall hung condensing boiler
- Stainless steel heat exchanger for added durability
- Low height for tight plantrooms
- Up to 5:1 turndown ratio
- Up to 97% gross seasonal efficiency
- NOx class 6
- Single units can be cascaded for larger installations
- Advanced sequence control for up to 16 boiler modules
- Easy access for service and system cleaning
- Connections in recess at base of the boiler
- Suitable for natural gas (all sizes) and LPG (up to 120kW) applications
- Full range of hydraulic separation options available
- Room sealed flue options
- Associated pumps and accessories are available to support system design

PHEX

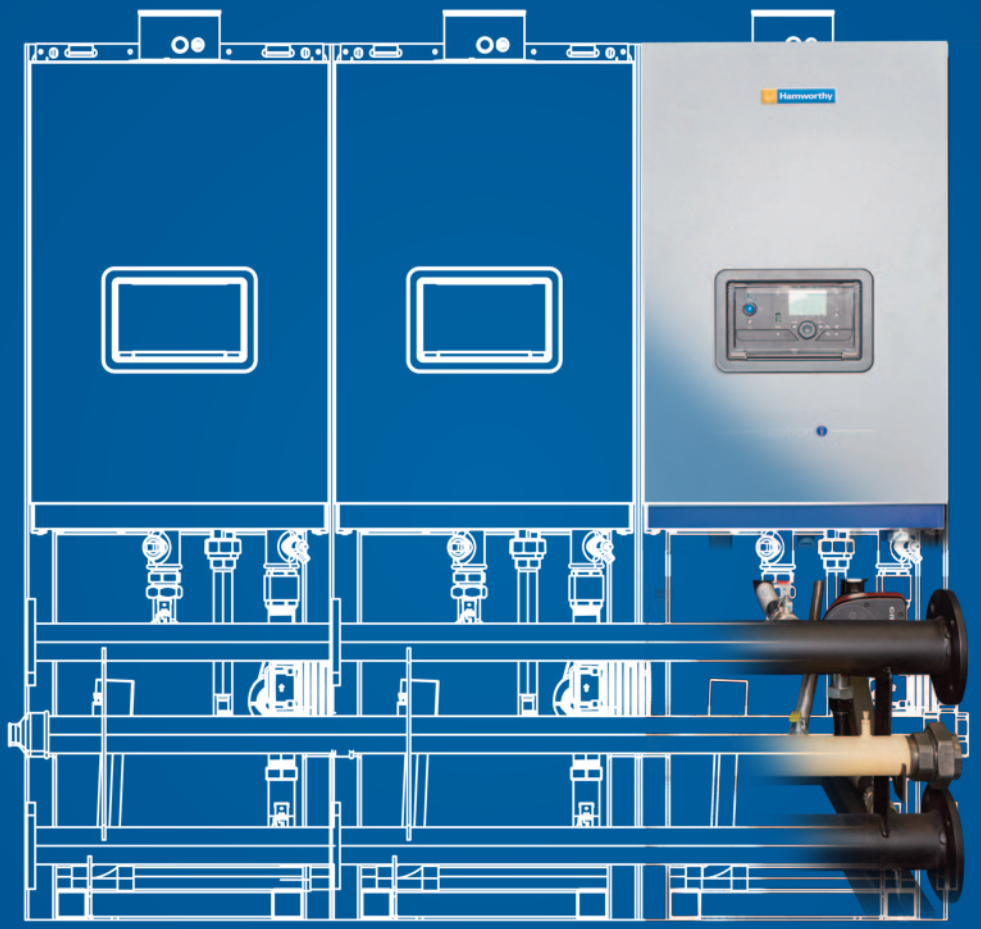
When installed with a plate heat exchanger or low loss header, the Stratton mk3 can be fitted to old systems with peace of mind that the new boiler is protected from dirt and debris in an existing secondary circuit.

Stratton mk3 Cascade information

Need a compact solution that doesn't compromise on power? Look no further.

For installations requiring more output delivered in a flexible way, up to 6 Stratton mk3 boilers can be installed in a cascade.

An output of up to 900kW is possible with this modular option which is available in both Inline (Standard and and Back to Back arrangements.



The **Stratton System Selector** guides you through the product requirements needed for a cascade set up. Boiler cascades consist of multiple boilers linked together. They ensure flexibility as each boiler can adjust its operating capacity in line with demand. Available with a range of plate heat exchangers and low loss headers, the Stratton System Selector will help ensure you have everything you need for an efficient heating system.

If your proposed system moves away from cascade operating conditions or you would prefer to speak with a member of the team, please get in touch with your local Area Sales Manager or request a free site survey.

Scan the QR code to build your cascade:

FREE commissioning

All Stratton mk3 boilers come with free commissioning. Contact the GA Commercial Service Division or your Area Sales Manager for more information

HYBRID HERO
There's a Hamworthy for that!

Grantham Health Centre in Lincolnshire has undertaken a major heating upgrade, replacing its outdated system with a high performance hybrid solution from Hamworthy Heating. The new system combines wall-hung condensing gas boilers with a natural refrigerant air source heat pump (ASHP) to deliver reliable year-round heating, enhanced control, and long-term sustainability.

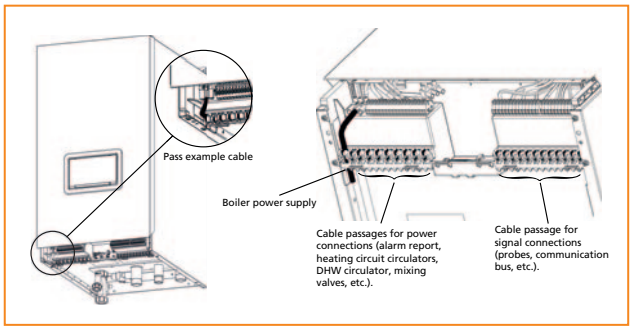
Scan to read more

Stratton mk3
Technical information

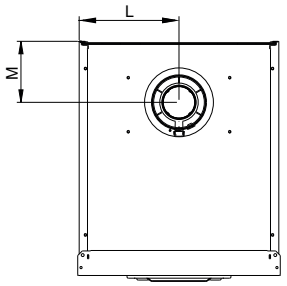
		Units	S3-40	S3-60	S3-70	S3-80	S3-100	S3-120	S3-150*
Energy	Building Regulations Part L seasonal efficiency	% gross	97.6	97.4	97.5	97.5	97.5	97.5	97.8
	ErP efficiency rating		A	A	A	N/A	N/A	N/A	N/A
	Maximum boiler output (80-60 Deg C, NG & LPG)*	kW	38.8	53.4	67.8	77.8	93.4	116.8	141.1
	Maximum boiler output (50-30 Deg C, NG & LPG)*	kW	42.2	58	73.6	84.4	101.3	127.8	154.5
	Minimum boiler output (80-60 Deg C, NG & LPG)*	kW	8	11	14	19.2	19.2	24	29
	Standby losses	W	52	54	56	63	63	72	69
Water	Water content	litres	3	4	4.5	7.5	7.5	9.5	11
	Nominal water flow rate	l/sec	0.48	0.66	0.83	1.16	1.19	1.43	1.73
	Minimum water flow rate	l/sec	0.16	0.32	0.32	0.64	0.64	0.83	0.96
	System design flow rate @ 11 Deg C rise	l/sec	0.87	1.19	1.52	1.73	2.17	2.6	3.14
	Water pressure loss @ 11 Deg C rise	mBar	1539	1560	1890	1043	1457	1648	2278
	System design flow rate @ 20 Deg C rise	l/sec	0.48	0.72	0.84	0.96	1.19	1.43	1.79
	Water pressure loss @ 20 Deg C rise	mBar	459	470	520	318	449	515	701
	System design flow rate @ 25 Deg C rise	l/sec	0.38	0.52	0.67	0.76	0.95	1.14	1.38
	Water pressure loss @ 25 Deg C rise	mBar	223	305	306	203	287	335	441
	Minimum water pressure (cold)	barg	1	1	1	1	1	1	1
	Maximum water pressure	barg	4	4	4	6	6	6	6
	Maximum flow temperature	Deg C	85	85	85	85	85	85	85
Gas	Maximum gas inlet pressure (NG)	mBar	25	25	25	25	25	25	25
	Nominal gas inlet pressure (NG)	mBar	20	20	20	20	20	20	20
	Minimum gas inlet pressure (NG)	mBar	17	17	17	17	17	17	17
	Maximum gas inlet pressure (LPG)	mBar	45	45	45	45	45	45	N/A
	Nominal gas inlet pressure (LPG)	mBar	37	37	37	37	37	37	N/A
	Minimum gas inlet pressure (LPG)	mBar	25	25	25	25	25	25	N/A
	Maximum gas flow rate (NG)	m^3/hr	4.2	5.8	7.4	8.5	10.2	12.7	15.3
	Maximum gas flow rate (LPG)	m^3/hr	1.6	2.3	2.9	3.3	3.9	4.9	N/A
Flue	Maximum flue gas temperature (80-60 Deg C, NG)	Deg C	79	75.5	74.5	66.5	72.5	73.5	73
	Dry Nox emission (0% excess oxygen, dry air free)	mg/kWh	36	39	39	39	39	39	39
Elec	Electrical supply		230V AC/50Hz	230V AC/50Hz	230V AC/50Hz	230V AC/50Hz	230V AC/50Hz	230V AC/50Hz	230V AC/50Hz
	Power consumption (at maximum modulation)	W	67	107	121	94	143	233	260
Misc	Approx. shipping weight (empty)	kg	45	51	55	77	77	81	100
	Noise emission @ 1M (maximum modulation)	db (A)	50	59	60.2	67.7	64.7	64.9	59.2

** LPG option for 150kw is not available*

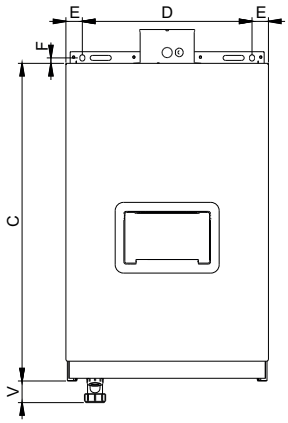
Stratton mk3
Technical information

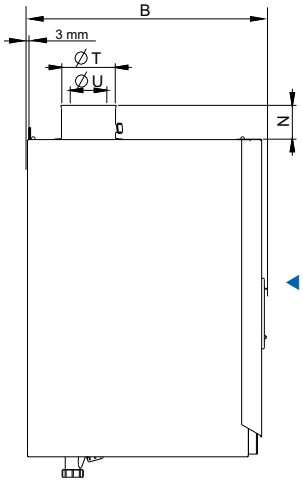


Plan view ▶



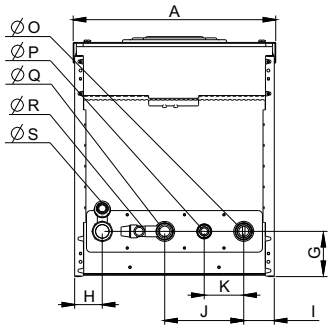
Front view ▶





◀ Side view

Underside view ▼



			Boiler Models in kW						
			S3-40	S3-60	S3-70	S3-80	S3-100	S3-120	S3-150
A	Boiler width	(mm)	487						
B	Boiler depth	(mm)	577			668			
C	Boiler height	(mm)	764			895			
D	Fixing centers	(mm)	408						
E	Distance of fixings to side of boiler	(mm)	36						
F	Fixing point centers above top of casing	(mm)	17						
G	Center of connections to rear of boiler	(mm)	108,5						
H	Center of siphon outlet to side casing	(mm)	66,5			65,5			
I	Center of return connection from casing side	(mm)	73,5			74,5			
J	Centers between flow and return connections	(mm)	190						
K	Centers between gas inlet and return connection	(mm)	95						
L	Center of flue from side	(mm)	240						
M	Center of flue from rear	(mm)	146,5			123			
N	Flue connection socket height	(mm)	83						
Ø O	Return connection		G 1"¼						
Ø P	Gas inlet connection		G 1"						
Ø Q	Flow connection		G 1"¼						
Ø R	Pressure relief valve		G ½" (female)						
Ø S	Condensate outlet	(mm)	24						
Ø T	Air inlet	(mm)	125			150			
Ø U	Flue duct	(mm)	80			100			
V	Siphon outlet from the bottom of the casing	(mm)	52						

Recommended Clearance – All Models

Front: 800mm **Sides:** 250mm* **Top:** Dependent on flue choice

** Side clearance is preferred but not compulsory.*

ModuMax mk3 stainless steel modular boiler

15 models
97-762 kW output

This lightweight, low water content boiler is ideal for city centre, basement or rooftop plant rooms. Individual boiler modules can be stacked one, two or three high in up to 15 combinations.

Key benefits:

- High efficiency fully modulating condensing pre-mix floor standing boiler
- Stainless steel heat exchanger
- Up to 15: 1 turn down 40°C differential temperature
- Up to 762kW output in less than one square metre footprint
- Close load matching
- Passes through a standard doorway
- Space-saving stacked modular design
- 10 bar rated heat cell
- 90°C maximum flow temperature
- Integral boiler sequence controller
- 10 year heat exchanger warranty

Options:

- External boiler sequencing cascade controller
- Room and outside temperature sensors
- LPB bus communications module
- Zone control
- DHW cylinder sensor kit
- Pipework header kit

Scan to read more

Corpus Christi College is one of the oldest institutions at the University of Cambridge. The college faced a familiar challenge: achieving modern energy efficiency and long term reliability within the tight constraints of a Grade I Listed building.

HYBRID HERO
There's a Hamworthy for that!

Hybrid hero

Combine our **Modumax mk3** condensing boilers with our **Tyneham** commercial air source heat pumps for a hybrid set up.

Reduce capital costs, reduce carbon emissions.

Ultra compact

762kW in less than one square metre of floor space.

Even the largest 3-high stack will pass through a standard doorway.

Can be broken down into individual modules for difficult to access plant rooms.

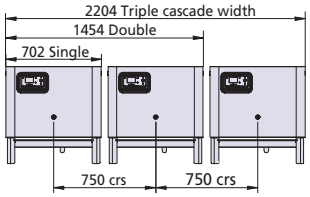
ModuMax mk3
Technical information
97-116 kW models

	Boiler model	Unit	97/97H	97/194V	97/291V	116/116H	116/232V	116/348V
	Number of modules		1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency	%	94.9	94.9	94.9	93.1	93.1	93.1
	BS EN 15502 seasonal efficiency	% gross	95.2	95.2	95.2	93.4	93.4	93.4
	Boiler output 50/30 °C	kW	97.2	194.4	291.6	116.2	232.5	348.7
	Boiler output 80/60 °C	kW	95.7	191.4	287.1	115.2	230.4	345.6
	Boiler input (gross) maximum	kW	109.0	218.0	327.0	133.0	266.0	399.0
	Boiler input (nett) maximum	kW	98.2	196.4	294.6	119.8	239.6	359.4
	Boiler output minimum 80/60 °C	kW	19.1	19.1	19.1	23.5	23.5	23.5
Water	Design flow rate @ 40°C ΔT rise	l/s	0.6	1.2	1.8	0.7	1.4	2.1
	Water side pressure loss @ 40°C ΔT rise	mbar	5	5	5	7	7	7
	Design flow rate @ 30°C ΔT rise	l/s	0.8	1.6	2.4	1.0	2.0	3.0
	Water side pressure loss @ 30°C ΔT rise	mbar	9	9	9	14	14	14
	Design flow rate @ 20°C ΔT rise	l/s	1.2	2.4	3.6	1.4	2.8	4.2
	Water side pressure loss @ 20°C ΔT rise	mbar	20	20	20	27	27	27
	Design flow rate @ 11°C ΔT rise	l/s	2.2	4.4	6.6	2.6	5.2	7.8
	Water side pressure loss @ 11°C ΔT rise	mbar	61	61	61	91	91	91
	Operating water pressure minimum	barg	Dependent on differential temperature (See full brochure)					
	Operating water pressure maximum	barg	10	10	10	10	10	10
	Maximum operating water temperature	°C	90	90	90	90	90	90
Gas	Gas flow rate natural gas (G20) – maximum	m3/h	10.8	21.6	32.4	12.7	25.4	38.1
	Gas inlet pressure natural gas (G20) – min/nom/max	mbar	17.5 min / 20.0 nom / 25.0 max					
Flue	Approx. flue gas volume @ 15°C, 9.3-9.8% C02	m3/h	143	286	429	160	320	480
	Flue gas temperature @80/60 °C	°C	83	83	83	83	83	83
	NOX emission (0% excess oxygen, dry air free) European Class 6	mg/kWh	39.8	39.8	39.8	34.3	34.3	34.3
	Pressure at flue outlet	Pa	150	150	150	150	150	150
Misc.	Nominal supply voltage		230V 1Ph 50Hz					
	Approx. shipping weight	kg	180	355	540	180	355	540
	Noise emissions/module @ 1m @max. modulation	Max dB (A)	60	60	60	60	60	60

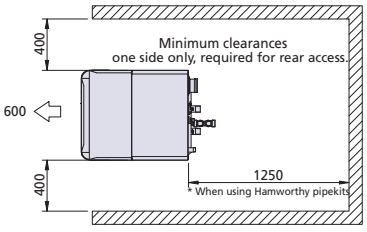
Dimensions *97-116kW models*

Height to top of flue terminal (A)	
No. of modules	mm
3	2084
2	1543

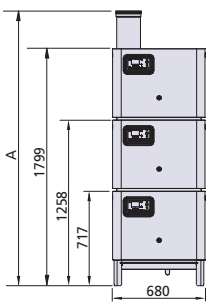
Note: *All dimensions in mm unless otherwise stated.*



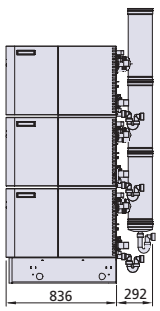
Minimum boiler to boiler stack spacing



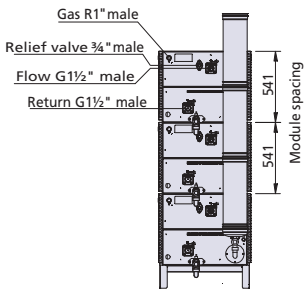
Plan



Front



Side



Rear

ModuMax mk3
Technical information

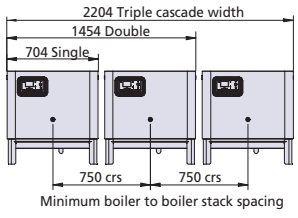
147-254 kW models

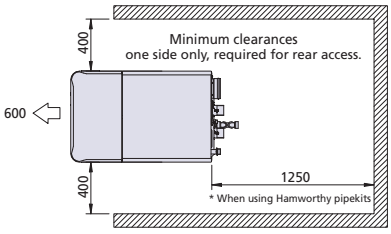
	Boiler model	Unit	147/ 147H	147/ 294V	147/ 441V	196/ 196H	196/ 392V	196/ 588V	254/ 254H	254/ 508V	254/ 762V
	Number of modules		1	2	3	1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency	% gross	94.8	94.8	94.8	93.9	93.9	93.9	95.0	95.0	95.0
	BS EN 15502 seasonal efficiency		95.2	95.2	95.2	94.1	94.1	94.1	95.3	95.3	95.3
	Boiler output 50/30 °C	kW	147.4	294.8	442.2	196.3	392.6	588.9	254.4	508.7	763.1
	Boiler output 80/60 °C	kW	142.8	285.6	428.4	191.6	383.2	574.8	239.8	479.6	719.4
	Boiler input (gross) maximum	kW	163.0	326.0	489.0	219.0	428.7	657.0	275.0	550.0	825.0
	Boiler input (nett) maximum	kW	146.8	293.6	440.3	197.2	394.4	591.6	247.6	495.3	742.9
	Boiler output minimum 80/60 °C	kW	28.7	28.7	28.7	38.6	38.6	38.6	48.4	48.4	48.4
Water	Design flow rate @ 40°C ΔT rise	l/s	0.9	1.8	2.7	1.2	2.4	3.6	1.5	3.0	4.5
	Water side pressure loss @ 40°C ΔT rise	mbar	36	36	36	62	62	62	100	100	100
	Design flow rate @ 30°C ΔT rise	l/s	1.2	2.4	3.6	1.6	3.2	4.8	2.0	4.0	6.0
	Water side pressure loss @ 30°C ΔT rise	mbar	60	60	60	120	120	120	180	180	180
	Design flow rate @ 20°C ΔT rise	l/s	1.8	3.6	5.4	2.4	4.8	7.2	3.0	6.0	9.0
	Water side pressure loss @ 20°C ΔT rise	mbar	145	145	145	246	246	246	395	395	395
	Design flow rate @ 11°C ΔT rise	l/s	3.3	6.6	9.9	4.3	8.6	12.9	5.4	10.8	16.2
	Water side pressure loss @ 11°C ΔT rise	mbar	500	500	500	850	850	850	1300	1300	1300
	Operating water pressure minimum	barg	Dependent on differential temperature (See full brochure)								
	Operating water pressure maximum	barg	10	10	10	10	10	10	10	10	10
	Maximum operating water temperature	°C	90	90	90	90	90	90	90	90	90
Gas	Gas flow rate natural gas (G20) – maximum	m3/h	16.0	32.0	48.0	21.4	42.8	64.2	27.9	55.8	83.7
	Gas inlet pressure natural gas (G20) – min/nom/max	mbar	17.5 min / 20.0 nom / 25.0 max								
Flue	Approx. flue gas volume @ 15°C, 9.3-9.8% C02	m3/h	214	428	642	279	558	837	354	708	1062
	Flue gas temperature @80/60 °C	°C	78	78	78	83	83	83	82	82	82
	NOx emission (0% excess oxygen, dry air free) European Class 6	mg/kWh	37.7	37.7	37.7	39.9	39.9	39.9	38.8	38.8	38.8
	Pressure at flue outlet	Pa	89	89	89	90	90	90	150	150	150
Misc.	Nominal supply voltage		230V 1Ph 50Hz								
	Approx. shipping weight	kg	226	452	678	226	452	678	226	452	678
	Noise emissions/module @ 1m @max. modulation	Max dB	65	65	65	65	65	65	65	65	65

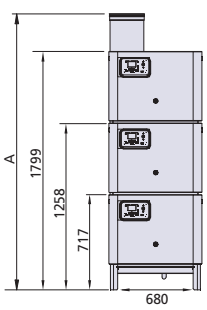
Dimensions *147-254kW models*

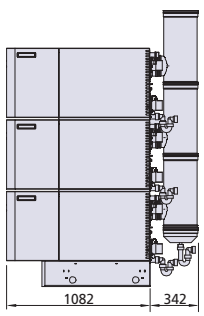
Height to top of flue terminal (A)	
No. of modules	mm
3	2084
2	1543

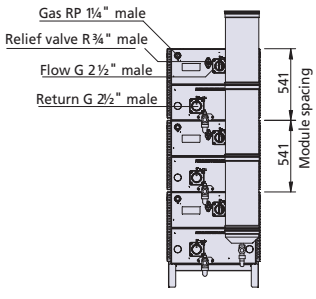
Note: *All dimensions in mm unless otherwise stated.*











Upton
floor standing aluminium modular boiler

18 models
98-1046 kW output

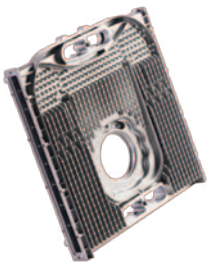
The compact, space-saving, vertically stacked design means more than 1MW output can sit on less than 1 square metre footprint.

Key benefits:

- Highly efficient
- High turndown ratio enables close load matching for improved efficiencies
- Gas and water connections identical across range
- Easy access for service and system cleaning
- Advanced controls platform with integrated sequence control
- Low noise for installation close to building occupants
- 6 bar rated heat cell
- Air inlet filter for clean combustion and reduced noise
- 5 year heat exchanger warranty

Options:

- Pipework header kits with optional matched pumps
- Low loss header with integrated air and dirt separator
- 3 port manifold
- Blanking plates for left and right sided pipe installation
- Room and outside temperature sensors
- LPB bus communications module
- Multiple heating circuit control (VT & CT)
- DHW control with Legionella protection function



Aluminium sectional heat exchanger

- Quick to respond with low water content
- Excellent heat transfer properties
- Lightweight and compact
- Parallel water flow for an even surface temperature
- 5-year warranty

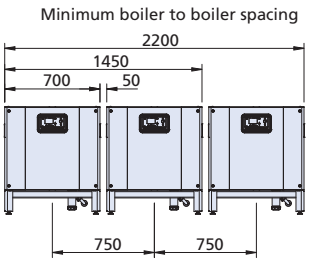
Upton
Technical information
100-150 kW models

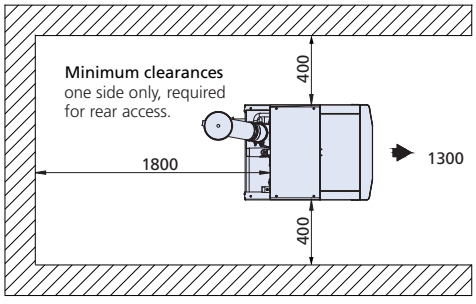
	Boiler model	Units	UF100-1	UF200-2	UF300-3	UF150-1	UF-300-2	UF450-3
	No. of modules		1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency	% gross	97.4	97.4	97.4	95.6	95.6	95.6
	Boiler output 80/60°C	kW	89.1	178.2	267.3	134.5	269.0	403.5
	Boiler output 50/30°C	kW	98.6	197.2	295.8	147.3	294.6	441.9
	Boiler input gross (maximum)	kW	103.0	206.0	309.0	154.6	309.2	463.8
	Boiler input nett (maximum)	kW	92.8	185.5	278.3	139.2	278.4	417.6
	Boiler output 80/60°C (minimum)	kW	17.8	17.8	17.8	26.9	26.9	26.9
Water	Water content	litres	9.0	18.0	27.0	12.6	25.2	37.8
	System design flow rate @ 11°C ΔT rise	l/s	2.2	4.3	6.5	3.3	6.5	9.8
	Water side pressure loss @ 11°C ΔT rise	mbar	736	736	736	820	820	820
	System design flow rate @ 20°C ΔT rise	l/s	1.2	2.4	3.6	1.8	3.6	5.4
	Water side pressure loss @ 20°C ΔT rise	mbar	225	225	225	250	250	250
	Maximum water pressure	barg	6	6	6	6	6	6
	Maximum flow temperature setting	°C	85	85	85	85	85	85
	Minimum flow temperature setting	°C	30	30	30	30	30	30
Gas	Gas flow rate (maximum)	m^3/hr	9.8	19.6	29.5	14.7	29.5	44.2
	Gas inlet pressure – minimum/nominal/maximum	mbar	17.5 min / 20.0 nom / 25.0 max					
Flue	Approx flue gas volume @ 72°C , 9.0% CO_2	m^3/hr	155	310	465	233	466	699
	Maximum flue gas temperature @ 80/60°C	°C	72	72	72	72	72	72
	Pressure available at flue connection	Pa	150	150	150	150	150	150
		mbar	1.5	1.5	1.5	1.5	1.5	1.5
	NOx, pond, Hs (gross) emission (0% excess oxygen, dry air)	mg/kWh	33	33	33	32	32	32
	NOx Class		6	6	6	6	6	6
Misc.	Electrical supply		230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz
	Approx shipping weight	kg	152	286	420	177	336	495
	Noise emission @1m @max modulation (per module)	Max dB (A)	55.8	55.8	55.8	59.4	59.4	59.4

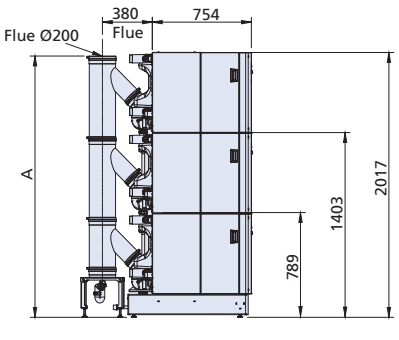
Dimensions *100-150kW models*

Height to top of flue terminal (A)	
No. of modules	mm
3	1990
2	1376

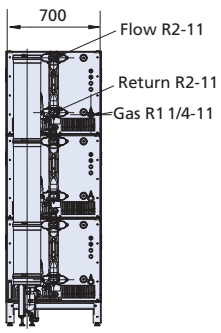
Note: *All dimensions in mm unless otherwise stated.*







Side



Rear

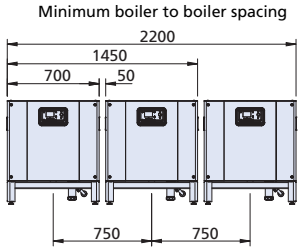
Upton
Technical information
200-250 kW models

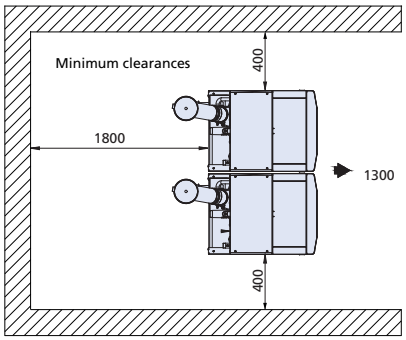
	Boiler model	Units	UF200-1	UF400-2	UF600-3	UF250-1	UF500-2	UF750-3
	No. of modules		1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency	% gross	96.5	96.5	96.5	94.3	94.3	94.3
	Boiler output 80/60°C	kW	181.7	363.4	545.1	229.4	458.8	688.2
	Boiler output 50/30°C	kW	197.9	395.8	593.7	246.9	493.8	740.7
	Boiler input gross (maximum)	kW	208.9	417.7	626.6	261.9	523.9	785.8
	Boiler input nett (maximum)	kW	188.1	376.1	564.2	235.9	471.7	707.6
	Boiler output 80/60°C (minimum)	kW	36.3	36.3	36.3	45.9	45.9	45.9
Water	Water content	litres	16.2	32.4	48.6	19.8	39.6	59.4
	System design flow rate @ 11°C ΔT rise	l/s	4.3	8.7	13.0	5.4	10.9	16.3
	Water side pressure loss @ 11°C ΔT rise	mbar	710	710	710	767	767	767
	System design flow rate @ 20°C ΔT rise	l/s	2.4	4.8	7.2	3	6.0	9.0
	Water side pressure loss @ 20°C ΔT rise	mbar	217	217	217	234	234	234
	Maximum water pressure	barg	6	6	6	6	6	6
	Maximum flow temperature setting	°C	85	85	85	85	85	85
	Minimum flow temperature setting	°C	30	30	30	30	30	30
Gas	Gas flow rate (maximum)	m^3/hr	19.1	38.2	57.3	25.0	49.9	74.9
	Gas inlet pressure - minimum/nominal/maximum	mbar	17.5 min / 20.0 nom / 25.0 max					
Flue	Approx flue gas volume @ 72°C , 9.0% CO_2	m^3/hr	314	628	942	394	788	1182
	Maximum flue gas temperature @ 80/60°C	°C	72	72	72	72	72	72
	Pressure available at flue connection	Pa	150	150	150	150	130	130
		mbar	1.5	1.5	1.5	1.5	1.3	1.3
	NOx, pond, Hs (gross) emission (0% excess oxygen, dry air)	mg/kWh	33	33	33	35	35	35
	NOx Class		6	6	6	6	6	6
Misc.	Electrical supply		230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz
	Approx shipping weight	kg	220	422	624	247	476	705
	Noise emission @1m @max modulation (per module)	Max dB (A)	59.7	59.7	59.7	58.5	58.5	58.5

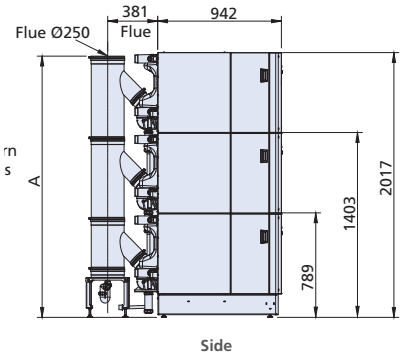
Dimensions *200-250kW models*

Height to top of flue terminal (A)	
No. of modules	mm
3	1990
2	1376

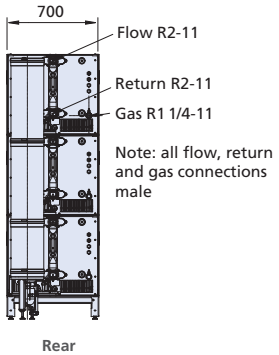
Note: *All dimensions in mm unless otherwise stated.*







Side



Rear

Upton
Technical information
300-350 kW models

	Boiler model	Units	UF300-1	UF600-2	UF900-3	UF350-1	UF700-2	UF1050-3
	No. of modules		1	2	3	1	2	3
Energy	Building regulations Part L seasonal efficiency	% gross	95.6	95.6	95.6	96.9	96.9	96.9
	Boiler output 80/60°C	kW	273.0	546.0	819.0	316.4	632.8	949.2
	Boiler output 50/30°C	kW	295.9	591.8	887.7	348.9	697.8	1046.7
	Boiler input gross (maximum)	kW	314.6	629.1	943.7	360.8	721.6	1082.5
	Boiler input nett (maximum)	kW	283.3	566.5	849.8	324.9	649.8	974.8
	Boiler output 80/60°C (minimum)	kW	54.6	54.6	54.6	63.3	63.3	63.3
Water	Water content	litres	23.4	46.8	70.2	27.0	54.0	81.0
	System design flow rate @ 11°C ΔT rise	l/s	6.5	13.0	19.6	7.6	15.2	22.8
	Water side pressure loss @ 11°C ΔT rise	mbar	807	807	807	835	835	835
	System design flow rate @ 20°C ΔT rise	l/s	3.6	7.2	10.8	4.2	8.4	12.6
	Water side pressure loss @ 20°C ΔT rise	mbar	246	246	246	255	255	255
	Maximum water pressure	barg	6	6	6	6	6	6
	Maximum flow temperature setting	°C	85	85	85	85	85	85
	Minimum flow temperature setting	°C	30	30	30	30	30	30
Gas	Gas flow rate (maximum)	m^3/hr	30.0	60.0	89.9	34.4	68.8	103.1
	Gas inlet pressure – minimum/nominal/maximum	mbar	17.5 min / 20.0 nom / 25.0 max					
Flue	Approx flue gas volume @ 72°C , 9.0% CO_2	m^3/hr	474	948	1422	543	1086	1629
	Maximum flue gas temperature @ 80/60°C	°C	72	72	72	72	72	72
	Pressure available at flue connection	Pa	100	100	80	110	70	60
		mbar	1.0	1.0	0.8	1.1	0.7	0.6
	NOx, pond, Hs (gross) emission (0% excess oxygen, dry air)	mg/kWh	34	34	34	36	36	36
	NOx Class		6	6	6	6	6	6
Misc.	Electrical supply		230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz	230V~50Hz
	Approx shipping weight	kg	287	551	815	310	597	884
	Noise emission @1m @max modulation (per module)	Max dB (A)	60.9	60.9	60.9	60.9	60.9	60.9

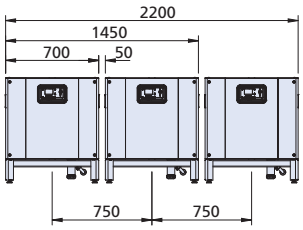
Dimensions *300-350kW models*

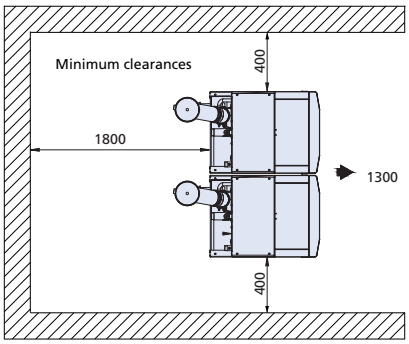
Height to top of flue terminal (A)	
No. of modules	mm
3	1990
2	1376

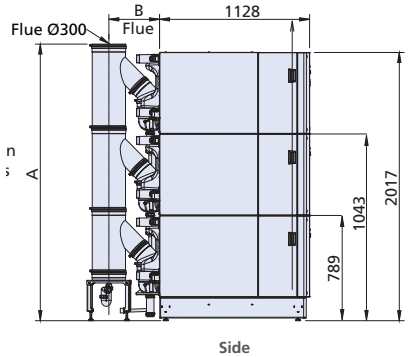
Flue depth centreline (B)	
Models	mm
3UF600-2 & UF900-3	381
2UF700-2 & UF1050-3	450

Note: *All dimensions in mm unless otherwise stated.*

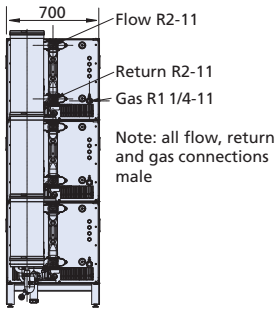
Minimum boiler to boiler spacing







Side



Rear

Varmax mk2 floor standing stainless steel boiler

8 models
180-600 kW output

Our no minimum flow Varmax boiler has had an upgrade. The improved Varmax mk2 features touch screen controls for simple, intuitive set up as well as new easy to remove casing for better service and maintenance access.

Key benefits:

- Improved efficiency on split temperature systems due to high and low temperature return connections.
- Non-dependent on system flow allowing wide differential temperatures.
- Easier installation with no requirement for dedicated primary circuit and no minimum flow rates.
- Quick and easy to disassemble with updated casing access.
- Tolerant to a wide range of system water conditions with a corrosion resistant stainless steel heat exchanger.
- Long life backed up by a 5-year heat exchanger warranty.
- Well insulated for low standby losses.
- NOx emissions comply with ErP legislation lower than 56mg/kWh.
- Match heating system loads accurately with outputs up to 637kW from a single boiler and ability to cascade multiple boilers.
- Simplified flue system design as the flue gas non-return valve is built in to provide effective protection from re-circulation of flue gases through non-firing boilers.
- Built in boiler sequence controls capable of controlling up to 16 boiler modules, multiple heating circuits and a hot water circuit using the master/slave principle.
- Quick release access panels for ease of service and maintenance.
- BIM objects available to assist in design and management.

No minimum flow

Thanks to an internal circulation loop and pump the boiler does not need to be installed in a traditional primary circuit, removing the need to purchase and install ancillary equipment such as a low loss header and pumps.

Varmax mk2
Technical information

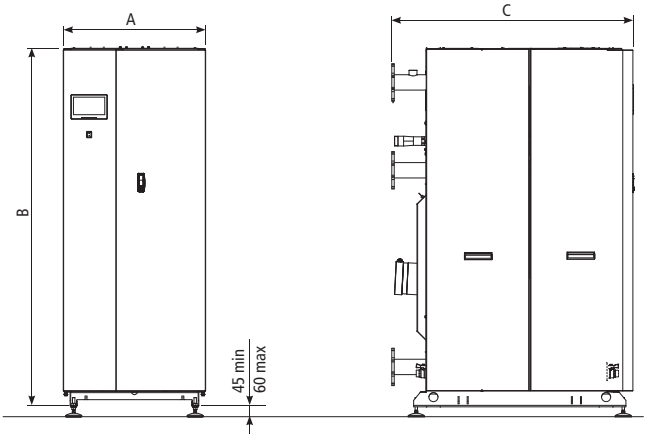
	Boiler model	Units	180	225	275	320	390	450
Energy	Building regulations Part L seasonal efficiency	% gross	96.3	96.3	96.2	96.2	96.2	96.2
	Boiler output – maximum 80/60°C, NG & LPG*	kW	175.9	219.8	269.5	313.6	382.3	441.9
	Boiler output – maximum 50/30°C, NG & LPG*	kW	191	238	290	338	415	478
	Boiler output – minimum 80/60°C, Nat Gas	kW	43	43	66	66	87	87
	Boiler input (gross) - maximum, NG & LPG*	kW	180	225	275	320	390	450
	Boiler input (net) – maximum, NG & LPG*	kW	162	203	248	288	351	405
Water	Water content	litres	151	151	239	239	287	287
	System design flow rate @ 30°C ΔT rise	l/s	1.4	1.7	2.1	2.5	3	3.5
	Water side pressure loss @ 30°C ΔT rise	mbar	25	36	36	53	34	43
	System design flow rate @ 20°C ΔT rise	l/s	2.1	2.6	3.2	3.7	4.6	5.3
	Water side pressure loss @ 20°C ΔT rise	mbar	49.5	73.5	110.6	127.3	85	107
	System design flow rate @ 11°C ΔT rise	l/s	3.8	4.7	5.8	6.8	8.3	9.5
	Water side pressure loss @ 11°C ΔT rise	mbar	188	268	271	393	255	321
	Maximum water pressure	barg	6	6	6	6	6	6
	Maximum flow temperature setting	°C	85	85	85	85	85	85
Gas	Gas flow rate natural gas (G20) - maximum	m^3/hr	19.1	23.8	29.1	33.9	41.3	47.6
	Maximum gas inlet pressure, Nat Gas	mbar	25	25	25	25	25	25
	Nominal inlet pressure, Nat Gas	mbar	20	20	20	20	20	20
Flue	Maximum flue gas temperature @ 80/60°C Nat Gas	°C	61	62.3	61.7	63.4	62.5	64.8
	Pressure at boiler flue spigot @ 80/60°C Nat Gas B23P	Pa	115	165	122	176	180	193
	Dry NOx emission**	mg/kWh	27	27	36	36	32	35
	NOx Class		6	6	6	6	6	6
Electrical	Electrical supply				230V 1Ph 50Hz			
	Power consumption – maximum boiler modulation	W	228	330	326	427	545	717
	Approx shipping weight	kg	393	393	502	502	592	592
	Noise emission @1m: @max. modulation	dB (A)	76	76	77	77	84	89

*390kW, 450kW, 525kW and 600kW models Nat Gas only **(0% excess oxygen, mg/kWh dry air free); NG/LPG

Dimensions

Dimensions	Units	180	225	275	320	390	450
A Width	mm	706	706	800	800	900	900
B Height	mm	1780	1780	1877	1877	2023	2023
C Depth	mm	1194	1194	1320	1320	1369	1369
Front clearance	mm	500	500	600	600	700	700
Back clearance	mm	500	500	500	500	500	500
Top Clearance	mm	240	240	263	263	427	427
Side Clearance	mm	450	450	450	450	450	450

Note: *All dimensions in mm unless otherwise stated.*



Purewell Variheat mk2 floor standing cast iron boiler

5 models
70-180 kW output

Purewell Variheat mk2 is the only ErP compliant cast iron condensing commercial boiler available in the UK. It is the natural replacement for old atmospheric boilers.

Key benefits:

- Robust cast iron heat exchanger
- Proven reliability with 10-year heat exchanger warranty
- Tolerant of older heating systems
- Close control and accurate load matching
- Secondary heat exchanger ensures maximum amount of residual heat from combustion is extracted
- 6 bar rated heat cell
- Integral boiler sequence controller for up to 16 boiler modules
- Suitable for open vented and sealed systems
- Easy access for servicing with quick to remove front cover hooks
- Ideal for refurbishments - sits on same footprint as many older atmospheric boilers

Options:

- External boiler sequencing cascade controller
- Room sensors
- LPB bus communications modules
- Outside air sensor
- DHW cylinder sensor kit
- Pipework header kits
- Available for use with LPG Air (for Channel Islands)

Skipton Building Society chose the Purewell Variheat mk2 condensing boilers for their heating system upgrade. Featuring a compact design, this also made them a perfect choice for transporting and accessing the plant room.

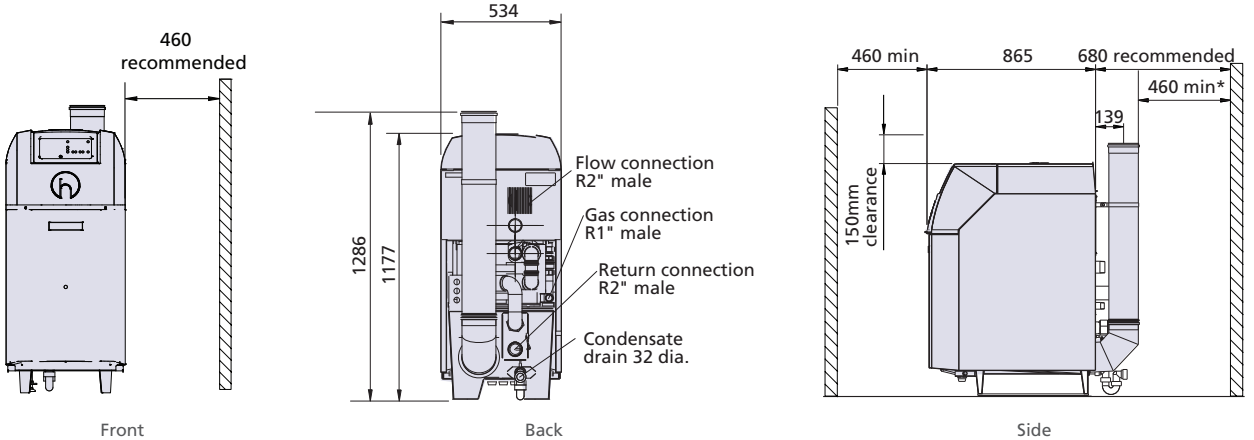
Scan to read more

Purewell Variheat mk2 Technical information

	Purewell Variheat mk2 boiler models	Units	PV70c	PV95c	PV110c	PV140c	PV180c
Energy	Building regulations – seasonal efficiency	(%) gross	95.3	95.6	95.8	95.7	94.6
	ErP efficiency rating (modules ≤ 70 kW only)		A	N/A	N/A	N/A	N/A
	Boiler output (non-condensing) mean 70°C – maximum	kW	63.5	86.3	99.8	134.4	172.8
	Boiler output (non-condensing) mean 70°C – minimum	kW	21.2	28.8	33.3	44.8	50.3
	Boiler output (condensing) mean 40°C – maximum	kW	70	95	110	140	180
	Boiler output (condensing) mean 40°C – minimum	kW	23.3	31.67	36.37	46.67	53.0
	Gross boiler input – maximum	kW	72.2	98.4	115	151.3	194.6
	Gross boiler input – minimum	kW	24.1	26.7	38.3	50.4	56.6
	Net boiler input – maximum	kW	65	88.6	103.5	136.3	175.2
	Net boiler input – minimum	kW	21.7	29.6	34.5	45.4	51.0
Water	System design flow rate @ 20°C ΔT rise	l/s	0.8	1.1	1.3	1.7	2.1
	Water side pressure loss @ 20°C ΔT rise	mbar	32	52	72	134	221
	System design flow rate @ 11°C ΔT rise	l/s	1.5	2.1	2.4	3	3.9
	Water side pressure loss @ 11°C ΔT rise	mbar	96	176	244	442	731
	Maximum water pressure	bar g	6	6	6	6	6
Gas	Gas flow rate natural gas (G20) – maximum	m3/hr	6.9	9.4	10.9	14.4	18.5
	Maximum gas inlet pressure natural gas (G20)	mbar	25	25	25	25	25
Flue	Flue Gas Flow Rate@ 15°C, 9.5% CO2	m3/hr	86	117	137	180	232
	Approx. flue gas temperature @ 80/60 (50/30)°C	°C	60 (40)	60 (40)	65 (45)	70 (50)	75 (50)
	Pressure at boiler flue spigot @full load	Pa	100	100	100	100	100
	Dry NOx emission (0% excess oxygen, dry air free) European Class 6	mg/kWh	21.3	31.1	39.1	32	37.8
	Nominal flue diameter (I/D)	mm	150	150	150	150	150
Electrics	Electrical supply				230 V 1 Ph 50 Hz		
	Power consumption @maximum	W	94	94	94	207	207
	IEC power outlet power consumption @ maximum	W	460	460	460	460	460
	Start current and run current	Amp	0.54	0.54	0.54	0.6	0.6
Misc.	Approx shipping weight	kg	195	195	195	250	250
	Noise emission @1 m and @maximum boiler modulation	Max dB (A)	53	53	53	65	65

Dimensions

Note: *All dimensions in mm unless otherwise stated.*



Front Back Side

*Rear clearance required when using Hamworthy pipe kits.
*If higher flow temperatures are required (up to 85°C maximum) please contact Hamworthy.

Dorchester DR-SG stainless steel water heater

10 models
continuous flow
360-2190 litres/hour

The Dorchester DR-SG is available in 10 power outputs over 3 storage capacities. The range features a full stainless steel tank, heat exchanger and coil offering a durable solution which maximises product service life.

The DR-SG is great option for emergency replacement and planned refurb projects due to its wide performance capability (10 models) and ease of installation when replacing units at the end of their service life.

Key benefits:

- Can deliver flow rates to satisfy high demand environments
- Enhanced durability under challenging water conditions
- Storage tank, heat exchanger and coil all manufactured from stainless steel
- Suitable for natural gas and LPG systems (conversion kit available)
- NOx under 40 mg/kWh across the range (Class 6)
- Quick and easy burner access
- Operated via the popular Siemens LMS Mini controls platform
- Integrated flue non-return valve
- 5 year warranty

Enhanced durability with anode protection

The combination of stainless steel tank with an anode within means that the water heater can maintain performance under challenging water conditions.

Scan to read more

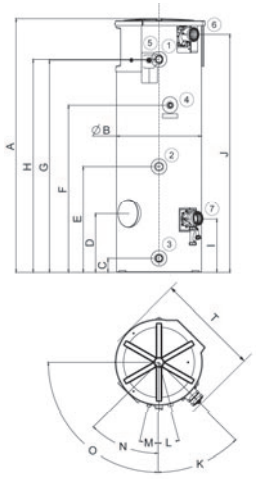
The Knaresborough Inn needed a high-efficiency low-temperature hot water (LTHW) heating system from to help minimise energy costs and maintain a comfortable environment for all bedrooms and circulation spaces.

Dorchester DR-SG
Technical information

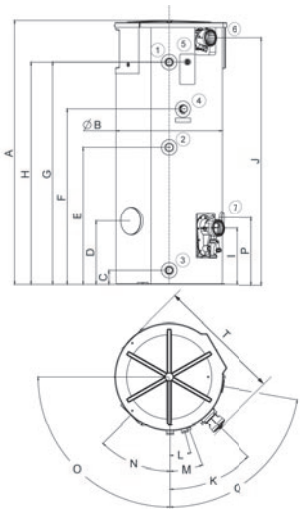
	Model:		DR-SG 20-210	DR-SG 25-210	DR-SG 30-210	DR-SG 35-356	DR-SG 50-356	DR-SG 60-356	DR-SG 70-538	DR-SG 80-538	DR-SG 100-538	DR-SG 120-538
Energy	Max Heat Input (Gross)	kW	20	25	30	35	50	56.6	69.9	80	100	120
	Max Power Output (Net)	kW	21	26.3	31.5	37	53	60	73.4	84	105	126
	Building regulations Part L, EN89 100% efficiency (NCV)	%	105	105	105	106	106	106	106	106	106	106
	Building regulations Part L, EN89 100% efficiency (GCV)	%	94.6	94.6	94.6	95.5	95.5	95.5	95.5	95.5	95.5	95.5
	Standby Loss	kWh/day	1.6	1.6	1.6	1.9	1.9	1.9	3.2	3.2	3.2	3.2
	Building regulations Part L, Maintenance Consumption (EN89)	kWh/day	2.7	2.7	2.7	3.4	3.4	3.4	5.6	5.6	5.6	5.6
	ErP efficiency rating		A	A	A	A	A	A	A	n/a	n/a	n/a
	Water Heater Efficiency (ErP)	%	95.9	91.7	93.5	90.3	92.5	91.4	92.7	91.3	90.8	90
	ErP Load Profile		XXL	XXL	XXL	XXL	XXL	XXL	3XL	3XL	3XL	3XL
Water	Storage Capacity	L	210	210	210	356	356	356	538	538	538	538
	1st 10 mins at ΔT 50°C	l/10'	175	205	220	330	400	435	475	500	550	600
	1st hour at ΔT 50°C	l/60'	450	570	580	630	1100	1210	1500	1700	2000	2300
	Continuous Flow at ΔT 50°C	l/hr	360	450	540	640	910	1090	1280	1460	1820	2190
	Max DHW temperature setpoint	°C	80	80	80	80	80	80	80	80	80	80
	Max operating pressure (open vented)	bar	7	7	7	7	7	7	7	7	7	7
	Max operating pressure (unvented)	bar	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	Heat-up time (mins) 50°C rise		36	29	24	35	24	20	26	23	18	15
	Heat-up time (mins) 55°C rise		40	32	26	39	27	22	29	25	20	17
Gas	Gas Inlet Pressure (Nominal nat gas)	mbar	20	20	20	20	20	20	20	20	20	20
	Gas flow rate (Nominal nat gas)	m^3/hr	2.1	2.6	3.2	3.7	5.3	6	7.4	8.5	11	12.7
	Gas Inlet Pressure (Nominal, LPG)	mbar	37	37	37	37	37	37	37	37	37	37
	Gas flow rate (LPG)	m^3/hr	0.8	1	1.2	1.4	2	2.4	2.7	3.1	4	4.7
	Gas connection		R ¾"	R ¾"	R ¾"	R ¾"	R ¾"	R ¾"	R 1"	R 1"	R 1"	R 1"
Flues	Max flue gas temperature	°C	100	100	100	100	100	100	100	100	100	100
	Nominal flue gas operating temp	°C	39	55	60	40.3	50.9	51.6	56.8	58.8	59.8	59.3
	Flue Gas Volume @15°C	kg/h	33.1	41.4	49.7	53.3	79.9	95	104.4	118.8	158.4	187.2
	NOx emissions	mg/kWh	29	29	29	32	32	32	39.5	39.5	39.5	39.5
	Pressure at flue outlet	Pa	110	170	200	130	200	200	65	95	155	200
	Air inlet/Flue outlet diameter	mm	80	80	80	100	100	100	130	130	130	130
	Max system length – C type flues	m	20	20	20	20	20	20	20	20	20	20
Electrical	Electrical Supply	V	230 V AC (+10%, -15%) 50Hz									
	Fuse rating	amp	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
	Power consumption (maximum)	W	12.7	12.7	12.7	18	18	18	22.5	22.5	22.5	22.5
	Power consumption (standby)	W	3.6	3.6	3.6	3.7	3.7	3.7	4.5	4.5	4.5	4.5
	Sounds Power Level (Noise emissions)	dBA	64	64	64	75	75	75	67	69	74	78
Misc	Number of Anodes		1	1	1	2	2	2	3	3	3	3
	Dry weight	kg	96	96	96	142	142	142	240	240	240	240
	Filled Weight	kg	306	306	306	498	498	498	778	778	778	778
	Height	mm	1802	1802	1802	1874	1874	1874	2028	2028	2028	2028
	Diameter (inc insulation)	mm	600	600	600	750	750	750	890	890	890	890

Dorchester DR-SG
Technical information

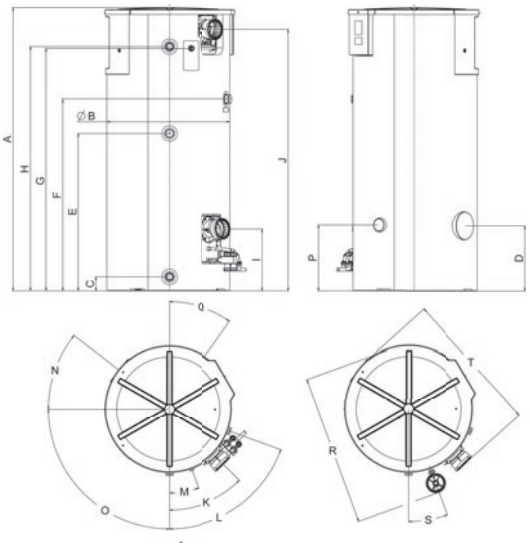
Dorchester DR-SG XX-210



Dorchester DR-SG XX-356



Dorchester DR-SG XX-538



Connections

Models	Dorchester DR-SG XX-210			Dorchester DR-SG XX-356			Dorchester DR-SG XX-538			
	20	25	30	35	50	60	70	80	100	120
1 Hot water outlet	Rp 1"½			Rp 1"½			Rp 1"½			
2 Loop return	Rp 1"½			Rp 1"½			Rp 1"½			
3 Cold water inlet	Rp 1"½			Rp 1"½			Rp 1"½			
4 T&P valve	Rp 1"			Rp 1"¼			Rp 1"½			
5 Gas inlet	R ¾"			R ¾"			R 1"			
6 Air inlet	Ø 80			Ø 100			Ø 130			
7 Flue outlet	Ø 80			Ø 100			Ø 130			

Dimensions

ref		DR-SG XX-210	DR-SG XX-356	DR-SG XX-538
A	Overall height	1802	1874	2028
B	Diameter	Ø 600	Ø 750	Ø 890
C	Height to cold water inlet	100	100	100
D	Height to inspection hatch	419	454	467
E	Height to secondary return	759	980	1129
F	Height to T&P valve connection	1193	1248	1373
G	Height to gas connection	1508	1580	1735
H	Height to hot water outlet	1514	1579	1748
I	Height to flue outlet	380	402	442
J	Height to air inlet	1691	1752	1871
K	Angle position of flue outlet	45°	45°	45°
L	Angle position of T&P valve fitting	13°	15°	70°
M	Angle position of gas connection	12.9°	20°	20°
N	Angle position of inspection hatch	45°	45°	38°
O	Angle position of HMI	90°	90°	90°
P	Height of lower anode fitting	NA	478	470
Q	Angle position of lower anode fitting	NA	80°	35°
R	Overall width with LPG conversion kit	NA	NA	639
S	Angle position of gas connection with LPG conversion kit	NA	NA	20°
T	Max installed width	699	884	1020
U	Height to condensate trap outlet	233	230	151

Clearances

ALL MODELS		DR-SG
Clearance – front (service)	mm	Min 500
Clearance – sides	mm	500
Clearance – rear	mm	500
Clearance – top	mm	175


Hamworthy
DHW HEATER NO.2

Dorchester DR-CC condensing water heater

2 models from 201-205 litres/hour

A compact, condensing unit with integrated simple to use controls. Its size and flexible flue options make it suited to small to medium sized commercial applications.

Key benefits:

- Fits through a standard doorway
- Heat exchanger design and burner location distributes heat evenly
- Electrical anode for corrosion protection
- Easy access for service and maintenance
- Low NOX
- Minimal clearances
- Flexible flue options
- 2 year warranty

Options:

- Natural gas or LPG
- Unvented supply kit
- Horizontal or vertical flue terminal kit

Even heat distribution

A 'cold zone' heat exchanger design with the coil located in the middle of the unit, gives a greater surface area for more transfer of heat as well as even heat distribution inside the tank, and reduces the likelihood of stratification.

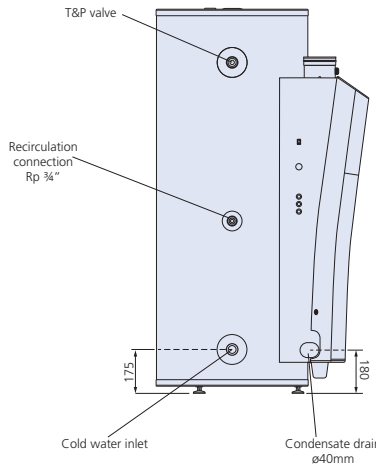
Dorchester DR-CC condensing water heater technical information

	Dorchester DR-CC model	Units	DR-CC 12-160	DR-CC 12-200
Water	Continuous output with 44°C ΔT	l/h	228	233
	1st hour output with 44°C ΔT	l	360	470
	Continuous output with 50°C ΔT	l/h	201	205
	1st hour output with 50°C ΔT	l	310	410
	Continuous output with 56°C ΔT	l/h	180	183
	1st hour output with 56°C ΔT	l	270	360
	Storage capacity	litres	162	202
	Maximum working pressure	bar	8	8
	ErP load profile	-	XL	XL
Energy	Building Regulations thermal efficiency gross	%	96	98
	ErP efficiency rating	-	A	A
	Heating-up time, ΔT = 44°C	min.	27	41
	Heating-up time, ΔT = 50°C	min.	31	47
	Heating-up time, ΔT = 56°C	min.	34	52
	Standby losses	kW/24h	2.16	2.3
Nat Gas	Input, gross – maximum	kW	12.1	12.1
	Input, net – maximum	kW	10.9	10.9
	Output – maximum	kW	11.7	11.9
	Gas inlet pressure - nominal	mbar	20	20
	Gas flow rate – maximum @1013.25 mbar and 15°C	m^3/h	1.2	1.2

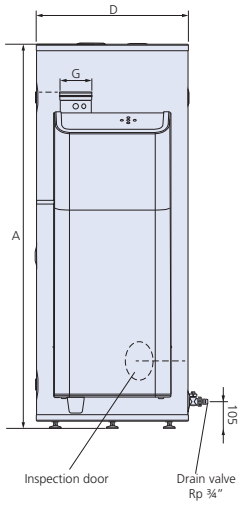
Dimensions

Reference	Dimension	DR-CC 12-160	DR-CC 12-200
A	Total Height	1270	1545
D	Width	560	560
E	Depth	805	805
G	Flue Size	80/125	80/125

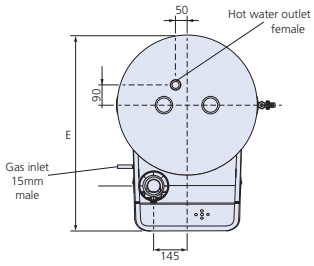
Note: *All dimensions in mm unless otherwise stated.*



Side



Front



Plan

Clearances:

- 1000mm at front
- 500mm at sides
- 1000mm at top
- No rear clearances

WATER HEATERS

Powerstock glass lined calorifier

6 models continuous outputs 600-1635 litres/hour

Offering a flexible approach to indirect heating and storage, Powerstock calorifiers can be easily coupled to any heating boiler or renewable energy source to provide highly efficient domestic hot water.

Key benefits:

- Twin coils connect to two energy sources or can be linked together for even better performance
- Safe storage of hot water
- Integration with renewable energy products
- Magnesium anode corrosion protection for longer life
- Adaptable to match load demand
- Inspection & clean out door for easy maintenance
- 2 year warranty

Options:

- Unvented supply kit
- Top-to-bottom pump recirculation kit
- Electrical anode protection
- Electric immersion heater kits with ratings of 4kW or 9kW

Easy access for service & maintenance

An easily accessible clean out door as well as all serviceable parts being located at the front of the unit make the DR-CC easy to service and maintain. This allows for minimal side and no rear clearances so the unit can be easily installed in tight plantrooms.

Twin coils

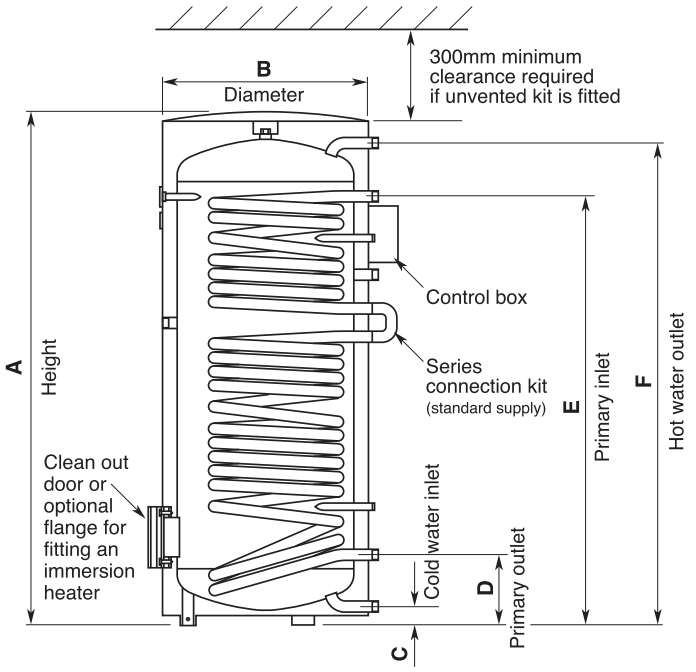
All but the smallest model (P200) have twin coil arrangements which can be connected to two heat sources such as a heating boiler and a solar thermal system.

Alternatively the coils can be connected in series to create an extended surface area single coil.

Powerstock glass lined calorifier Technical information

		Units	PS200	P300	PS400	PS500	PS750	PS1000
General data	Storage capacity	l	196	299	382	474	750	972
	ErP efficiency rating		C	C	C	C	C	C
	Top coil surface area (volume)	m^2 (l)	N/A	0/8 (6.6)	1.05 (7.0)	1.3 (8.9)	1.17 (8.2)	1.12 (7.9)
	Bottom coil surface area (volume)	m^2 (l)	0.95 (6.2)	1.55 (10.4)	1.8 (12.2)	1.9 (12.2)	1.93 (13.5)	2.45 (17.1)
	Maximum operating pressure – primary coil (secondary storage)	bar	10 (10)	10 (10)	10 (10)	10 (10)	10 (10)	10 (10)
	Maximum operating temperature – primary coil (secondary storage)	°C	110 (70)	110 (70)	110 (70)	110 (70)	110 (70)	110 (70)
	Standby losses	kW/24hr	1.63	1.99	2.06	2.4	3.1	3.41
Bottom coil only in operation	Continuous output – ΔT = 50°C	l/h	600	816	976	1109	1062	1281
	Heat input	kW	35.6	48.4	57.9	65.7	63.0	76.0
	10 min peak output – ΔT = 50°C	l	362	448	615	771	1100	1197
	Recovery time	min.	20	22	24	26	42	46
Top & bottom coil connected in series	Continuous output – ΔT = 50°C	l/h	N/A	1032	1285	1549	1432	1635
	Heat input	kW	N/A	61.2	76.2	91.8	85.0	97.0
	10 min peak output – ΔT = 50°C	l	N/A	567	889	1077	1319	1483
	Recovery time	min.	N/A	17	18	18	31	36

Dimensions



Model	Dimensions (mm)					
	A	B	C	D	E	F
PS200	1445	540	55	193	n/a	1370
PS300	1794	600	90	254	1424	1725
PS400	1591	700	55	221	1355	1526
PS500	1921	700	55	220	1604	1853
PS750	2030	950	105	293	1471	1890
PS1000	2030	1050	106	297	1423	1905

Note:
The flow rates stated are based on 80°C primary temperature from the boiler and a secondary temperature rise from 10°C to 60°C.
Products are delivered on a pallet base, please add extra 300mm to the height for shipping dimensions.

Powerstock hot water storage tank

Easily coupled to any direct or indirect water heater system to supplement storage volumes to suit large demand applications.

Key benefits:

- Safe storage of hot water
- Supplements hot water storage volumes to suit large demand applications
- Increases system security
- Magnesium anode corrosion protection for long life
- Inspection & clean out door for easy maintenance
- 2 year warranty

Options:

- Unvented supply kit
- Top-to-bottom pump recirculation kit
- Electrical anode protection
- Electric immersion heater kits with ratings of 4kW or 9kW

2 models
storage capacity
300-478 litres/hour

Increase system security

Locations with substantial and continuous hot water demands can use Powerstock storage tanks to increase the security of their DHW system.

Powerstock hot water storage tank Technical information

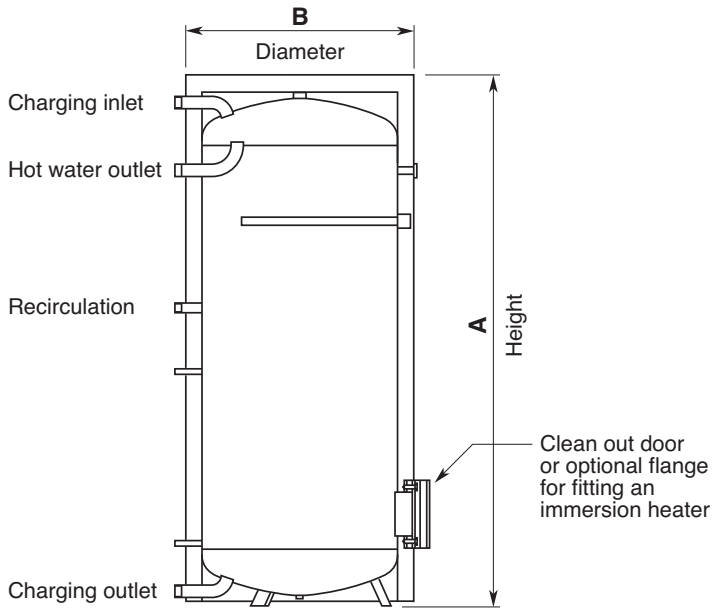
		Units	ST300	ST500
General data	ErP class		C	C
	Storage capacity	l	301	478
	Maximum operating pressure	bar	10	10
	Maximum operating temperature	°C	95	95
	Weight – empty (filled with water)	kg	87 (387)	111 (613)
	Standby losses	kW/24hr	2.4	3.12

Dimensions

Model	ST300	ST500
Charging inlet	R 1½"	R 1½"
Charging outlet	R 1½"	R 1½"
System hot water outlet	R 1½"	R 1½"
System hot water return	R ¾"	R ¾"
Height 'A'	1794mm	1921mm
Diameter 'B'	600mm	700mm

Note:
Products are delivered on a pallet base, please add extra 300mm to the height for shipping dimensions.
Clearances for anode removal: ST300 and ST500 - 1000mm above vertical anode.

ST300 & ST500



STORAGE TANKS

Halstock stainless steel calorifier

5 models
continuous outputs
344-1853 litres/hour

Simple and easy to maintain, the highly durable stainless steel Halstock comes with a 5 year cylinder guarantee.

Key benefits:

- Single and twin coil options for improved performance or connection to dual heat sources
- Corrosion-resistant stainless steel tank
- Quick heat recovery to match your hot water demands
- Low heat loss for maximum economy
- No sacrificial anode – low maintenance
- Can be installed wherever convenient – no flues needed
- Fire retardant CFC/HCFC-free insulation
- 5 year warranty

Options:

- Open vented or unvented variants
- De-stratification pump kit (factory fitted)
- Levelling feet (400L + models)

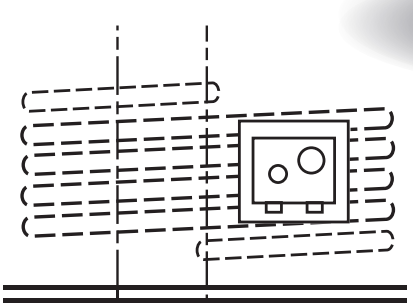
No anodes required

- An anode protection can be inserted into the water for added protection, but a more sensible and reliable option would be to choose a durable material that can withstand these conditions and provide better resistance to attack. The use of 316L stainless steel offers consistent performance under stress caused by harsh operating conditions.

  Halstock calorifiers are constructed using high quality duplex stainless steel meaning there is no requirement for additional corrosion protection anodes. This results in reduced maintenance and lower lifetime costs.

Dual heat sources

All but the two smallest models have twin coil arrangements which can be connected to two heat sources such as a heating boiler and a solar thermal system. Alternatively the coils can be connected in series to create an extended surface area single coil.



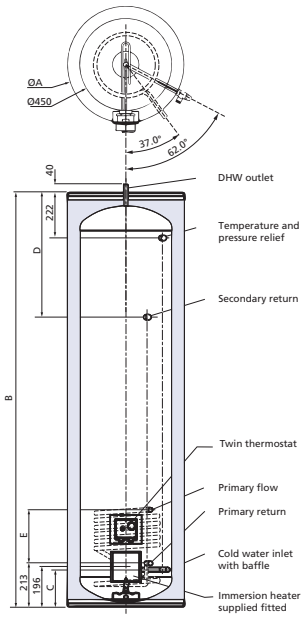
Halstock stainless steel calorifier Technical information

	Halstock model	Units	HS305UV*	HS400 / HS400UV*	HS5002CO / HS500UV2CO*	HS8102CO / HS810UV2CO*	HS9652CO / HS965UV2CO*
Energy	Lower coil output	kW	20	27	67.5	67.5	81
	Upper coil output	kW	N/A	N/A	27	27	27
	ErP efficiency rating	–	C	C	C	Compliant	Compliant
	Coil max operating temperature/ pressure	°C	100 (3)	100 (3)	100 (3)	100 (3)	100 (3)
	Heat up time @50°C ΔT, lower coil only	min	54	53	26	42	42
	Recovery time 70% @50°C ΔT, combined coils	min	38	36	13	21	22
	10 min peak output @50°C ΔT	litres	361	481	770	1080	1274
	Standby losses	kW/24hr	1.77	2.35	2.74	3.29	3.43
Water	Capacity, nominal (Capacity with coil)	litres	305 (298)	400 (396)	500 (496)	810 (803)	965 (958)
	Continuous output @44°C ΔT	l/h	390	527	1843	1843	2106
	Continuous output @50°C ΔT	l/h	344	464	1622	1622	1853
	Maximum working pressure, tank	bar	6	6	6	6	6
	Hydraulic test pressure	bar	9	9	9	9	9
Misc.	Expansion vessel size	litres	24	35	35	50	80
	Weight empty (full)	kg	75 (379)	105 (505)	115 (515)	140 (950)	180 (1145)
	Optional Immersion heater power (Phase)	kW	3 (1ph)	6 (3ph/1ph)	6 (3ph/1ph)	9 (3ph)	12 (3ph)

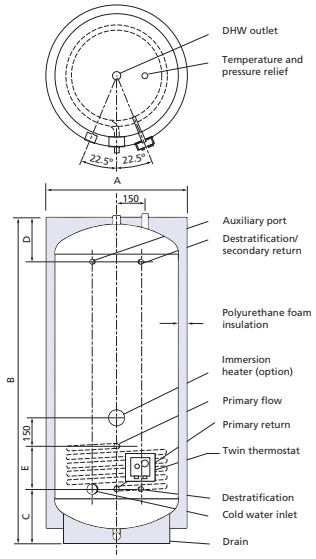
Dimensions

Dimensions	Reference	HS305UV*	HS400/ HS400UV*	HS5002CO / HS500UV2CO*	HS8102CO / HS810UV2CO*	HS9652CO / HS965UV2CO*
Tank diameter	A	570	750	750	1080	1080
Tank height	B	2028	1435	1715	1604	1850
Cold inlet	C	182	286	286	341	341
2nd return	D	610	234	234	341	341
Bottom coil centres	E	262.5	225	495	315	405

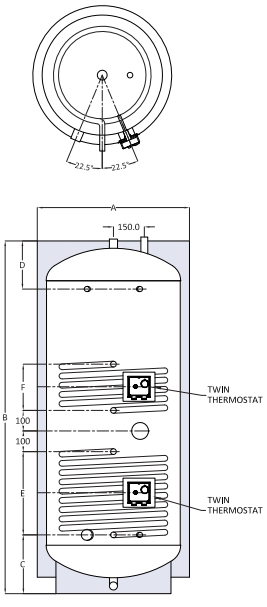
Note: *All dimensions in mm unless otherwise stated. *Supplied with unvented kit*



HS305UV



HS400 & HS400UV



HS5002CO & HS500UV2CO
HS8102CO & HS810UV2CO
HS9652CO & HS965UV2CO

STORAGE TANKS

Halstock hot water storage tank

Simple and easy to maintain, the highly durable stainless steel Halstock comes with a 5 year cylinder guarantee.

Key benefits:

- Supplements hot water storage volumes to suit large buildings with large and peak hot water demand
- Minimal heat loss for maximum economy thanks to layer of CFC-free polyurethane tank insulation under protective plastisol cladding
- Light weight
- 5 year warranty

Options:

- Immersion heaters (6, 9 or 12kW)

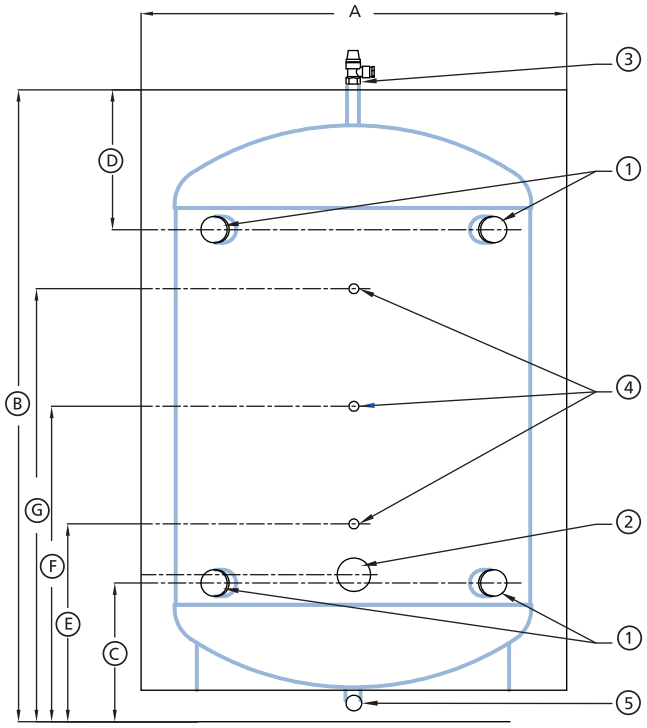
5 models
storage capacity
300-965 litres

Increase System security

Locations with substantial and continuous hot water demands can use Halstock storage tanks to increase the security of their DHW system.

Halstock hot water storage tank Technical information

Parameter	Units	HB300	HB400	HB500	HB810	HB965
Capacity nominal	litres	300	400	500	810	965
Max operating temperature	°C	100	100	100	100	100
Max operating pressure	bar	6	6	6	6	6
Standby loss	kW/hr/24hr	1.77	2.35	2.74	3.29	3.43
ErP category		C	C	C	Compliant	Compliant
Hydraulic test pressure	bar	9	9	9	9	9
Immersion heater option power	kW	3	6,9 or 12	6,9 or 12	6,9 or 12	6,9 or 12
Phase		1ph	1ph or 3ph	1ph or 3ph	3ph	3ph
Weight empty	kg	55	80	95	155	175
Weight full	kg	355	480	595	965	1140



Dimensions

Models	Dimensions mm								Connections (BSP female)				
	A	B	C	D	E	F	G		1	2	3	4	5
	Width	Height	Bottom inlet	Top inlet	Bottom sensor pocket	Middle Sensor pocket	Top sensor pocket	Insulation	Top/Bottom inlet	Immersion	T&P	Sensor pockets	Drain
300	570	2028	185	222	355	1029	1653	60	28mm stub	1¾"	¾"	½"	None
400	750	1430	295	254	445	736	1027	50	2"	2¼"	¾"	½"	1"
500	750	1715	295	254	445	878	1312	50	2"	2¼"	¾"	½"	1"
810	1080	1604	352	355	502	800.5	1098	90	2"	2¼"	¾"	½"	1"
965	1080	1850	352	355	502	923	1345	90	2"	2¼"	¾"	½"	1"

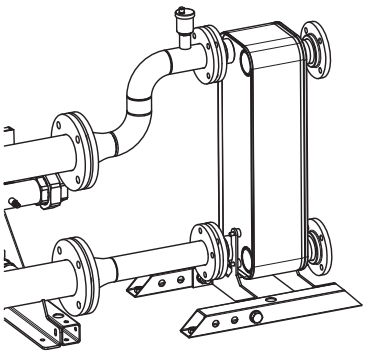
Note: *All dimensions in mm unless otherwise stated.*

Hydraulic system separation

Hydraulic seperation is vital when installing new condensing boilers on old systems. Protecting the new system from dirt and debris will prolong the life of the new boiler.

Plate heat exchangers

- Available with Stratton mk3 boilers
- Used to separate systems, allowing two circuits to operate independently
- Ensures boilers can operate under optimum system conditions
- Brazed plate heat exchangers offer compact, resiliant, gasket-free design
- Stainless 316 channel plates with copper sealing
- Exchangers AHRI certified
- Low maintenance



7 models
60-900 kW capacity

Low loss headers

- Available with Stratton mk3, Wessex Modumax mk3 and Upton boilers
- Used to separate systems, allowing two circuits to operate independently
- Ensures boilers can operate under optimum system conditions
- Welded steel construction

Merley sequence controller

A common control platform that can be used with the Wessex ModuMax mk3, Stratton mk3, Varmax mk2, Upton and Purewell Variheat mk2 condensing boilers.

Key benefits:

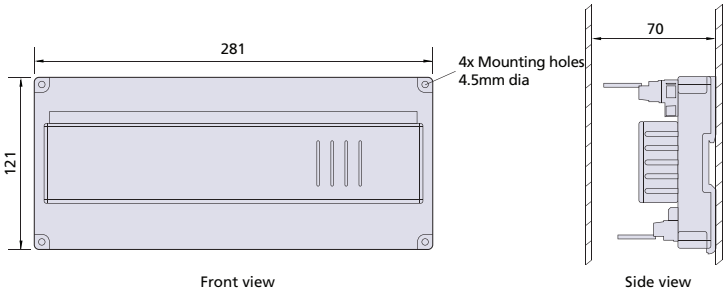
- Boiler sequence controller for up to 15 modules in cascade or unison mode
- Energy saving functionality
- Reduces carbon emissions by accurately matching load
- Lead boiler rotation and load sharing
- Intelligent self-learning control
- ersatile control strategies
- Heating zone and DHW management
- 2 year warranty

Options:

- Loose kit controller
- External air sensor
- Choice of room sensors
- Hard wired controls
- Domestic hot water sensor
- Strap on flow temperature sensor

Dimensions

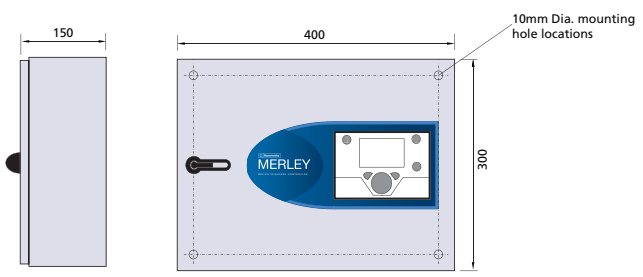
Display unit dimensions



Front view

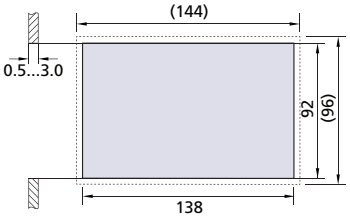
Side view

Display unit



Electrical cable gland plate located on underside of control panel (6 x loose 20mm glands supplied)

Wall mounted dimensions



Fascia panel cut-out for mounting display unit

Loose kit dimensions

Note: *All dimensions in mm unless otherwise stated.*

ANCILLARY PRODUCTS

Horton dosing pot

Facilitates safe insertion of liquid chemicals into a sealed heating system.

Key benefits:

- Carbon steel pipe body and tundish with brass valves
- Simple and safe to operate without needing to drain down the system
- Easy to isolate and flush clean
- Working pressure up to 14 bar
- 2 year warranty

4 models capacities of 3.5-15 litres

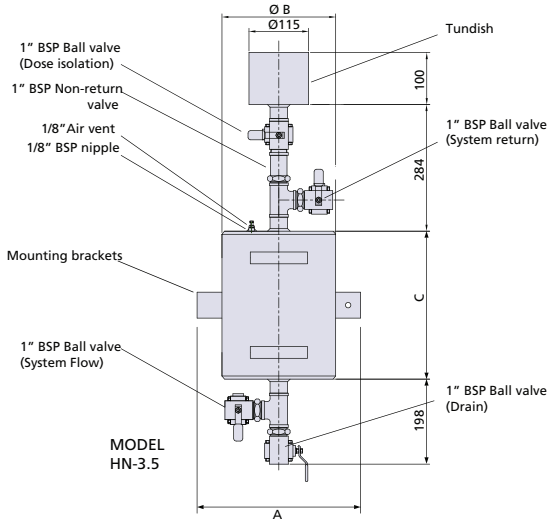
Technical data

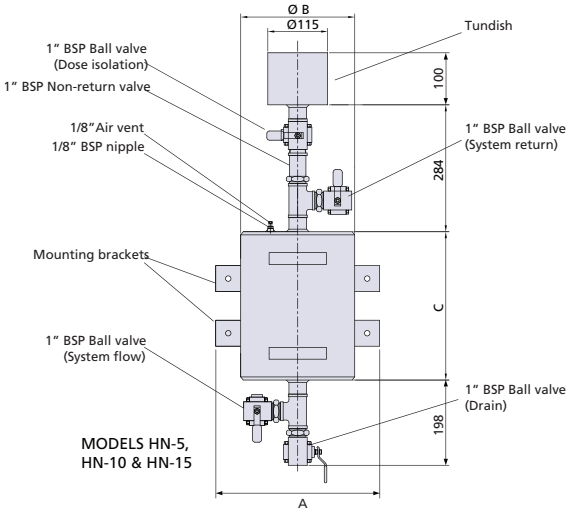
Horton product code	Installed boiler output (kW)	Maximum system volume (litres)
HN-3.5	0-250	0-2499
HN-5	250-500	2,500-4,999
HN-10	500-1000	5,000-9,999
HN-15	1,000 and above	10,000 and above

Dimensions

Dimension	Reference	HN-3.5	HN-5	HN-10	HN-15
Overall width	A	265	265	315	315
Diameter	B	166	168	219	219
Body height	C	186	258	293	446

Note: *All dimensions in mm.*





Clenston air and dirt separator

7 models DN50-DN200 pipe sizes

Air and dirt separator for the removal of dissolved gases and dirt particles from heating systems.

Air collects in the air chamber before being removed by the high capacity automatic air vent (AAV). Dirt and sludge are removed via a ball valve at the bottom of the unit.

Key benefits:

- Combines the removal of both air and dirt in a single unit
- Protects boilers and helps prevent pump failure, energy loss and corrosion
- Carbon steel pipe
- Stainless steel concentrator
- Flanged to BS4504 PN16
- Brass automatic air vent
- 1" BSP flushing valve
- Supplied with gasket and bolts for system mounting
- Working pressure up to 10 bar
- 2 year warranty

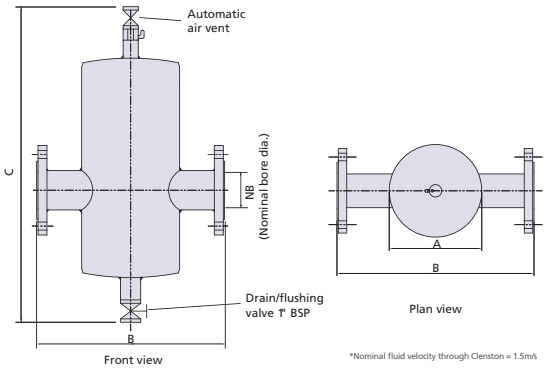
Technical data

Clenston product code	Nominal bore (mm)	Pipe connection	Dry weight (kg)	Volume flow rate*		Optimum boiler power* (kW)		
				(m^3/hr)	(l/s)	@11°C ΔT	@20°C ΔT	@30°C ΔT
CL-50	50	DN50-PN16	15	12.2	3.39	156	283	425
CL-65	65	DN65-PN16	16	20.4	5.67	261	474	711
CL-80	80	DN80-PN16	29	28.2	7.83	360	655	982
CL-100	100	DN100-PN16	31	47.6	13.22	608	1105	1658
CL-125	125	DN125-PN16	39	72.3	20.08	923	1679	2518
CL-150	150	DN150-PN16	46	103.3	28.69	1319	2399	3598
CL-200	200	DN200-PN16	62	174.3	48.42	2226	4048	6071

Dimensions

Dimension	Ref.	CL-50	CL-65	CL-80	CL-100	CL-125	CL-150	CL-200
Diameter	A	165	165	219	219	273	324	407
Width	B	350	350	460	460	630	630	780
Height	C	583	583	733	733	1003	1003	1083

Note: *All dimensions in mm unless otherwise stated.*



ANCILLARY PRODUCTS

Burstock expansion vessel

A floor standing expansion vessel for use with sealed heating and hot water systems.

Burstock expansion vessels are designed to complement pressurisation units and ensure design pressures are maintained. Suitable for use in sealed DHW systems, sealed heating circuits and sealed glycol based solar circuits.

Key benefits:

- Nitrogen pre-charge for extended service period
- Accommodates system water due to expansion in sealed heating and hot water circuits
- Greater flexibility with a maximum operating temperature of 70°C
- 2 year warranty

10 models capacities of 25-1000 litres

Often bought with chesil pressurisation unit

A sealed system, created using a pressurisation unit, will require a matched expansion vessel to deal with the expansion and contraction of system water.

Nitrogen pre-charge

Burstock expansion vessels are pre-charged with nitrogen which has larger molecules than air resulting in less permeation through the diaphragm so extending the time between pressure top ups.

Vessels are pre-charged to 1.7 bar for heating circuits and 3.5 bar for DHW circuits.

Burstock expansion vessel Technical data

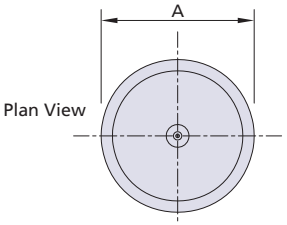
Model	Capacity litres	Connection size (inches)	Max. pressure (bar)	Shipping weight (kg)	Pre-charge pressure (bar)
PV25W	25	G ¾"	10	5	3.5
PV25W kit with wall bracket	25	G ¾"	10	5	3.5
PV60W	60	G 1"	10	14	3.5
PV60W 1.7bar	60	G 1"	10	14	1.7
PV80W	80	G 1"	10	16	3.5
PV80W 1.7bar	80	G 1"	10	16	1.7
PV100W	100	G 1"	10	19	3.5
PV100W 1.7bar	100	G 1"	10	19	1.7
PV200W**	200	G 1¼"	10	40	1.7
PV300W**	300	G 1¼"	10	54	1.7
PV400W**	400	G 1¼"	10	70	1.7
PV500W**	500	G 1¼"	10	79	1.7
PV800W**	800	G 1½"	10	195	1.7
PV1000W**	1000	G 1½"	10	228	1.7

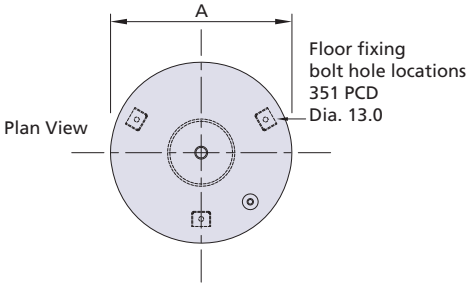
**3.5 bar pre-charge available on request

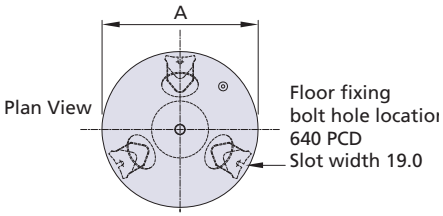
Dimensions

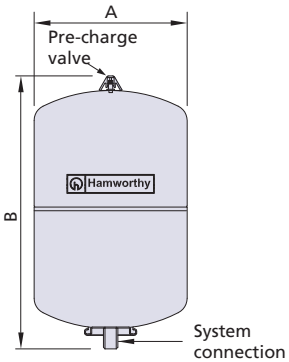
Dimension	Reference	PV25W	PV60W	PV80W	PV100W	PV200W	PV300W	PV400W	PV500W	PV800W	PV1000W
Diameter	A	280	409	480	480	634	634	740	740	740	740
Height	B	499	734	729	834	967	1267	1245	1475	2325	2604

Note: *All dimensions in mm unless otherwise stated.*



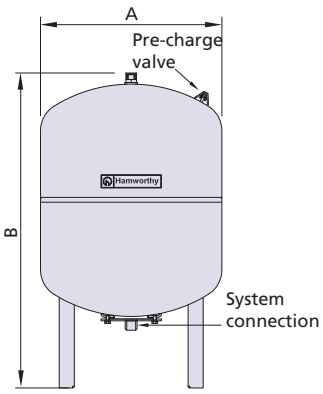






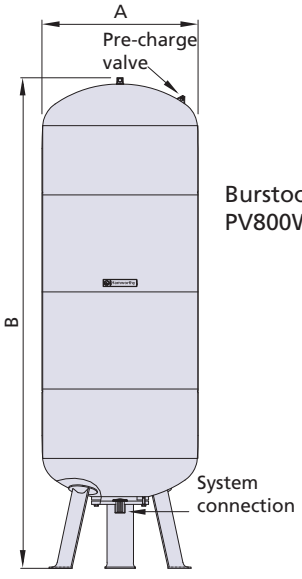
Front View

Burstock PV25W



Front View

Burstock PV100W



Front View

ANCILLARY PRODUCTS

Chesil mk2 pressurisation unit

5 models single/twin pump

Wall hung and floor standing pumped pressurisation units for sealed heating systems.

A pressurisation unit removes the need for cold water header tanks and associated pipe work, or eliminates reliance on mains pressure to provide the system head.

Key benefits:

- Compact design saves space
- Choice of configurations
- Increases security of heating system
- Electronic controls
- BMS compatible for system integration
- Easy access for operation and settings
- Reduces installation costs
- 2 year warranty

Options:

- Floor standing or wall hung
- Single or twin pumps
- Expansion vessels

	Chesil mk2 Pressurisation Unit Type		Chesil mk2 SW	Chesil mk2 SF	Chesil mk2 TW	Chesil mk2 TF	Chesil mk2 TFHP
	UIN		241437	241438	241439	241440	241441
	Configuration		Wall Mounted	Floor Standing	Wall Mounted	Floor Standing	Floor Standing
	Pump		Single	Single	Twin	Twin	Twin
	Controls		Electric	Electric	Electric	Electric	Electric
GENERAL DATA	Weight (empty)	kg	23.5	25	40	40	41
	Weight (full)	kg	30.5	35	49	50	51
	Maximum cold fill pressure	bar	3	3	3	3	6
	Minimum cold fill pressure	bar	1	1	1	1	3
	Maximum water flow rate	l/min	35	35	35	35	50
	Maximum water flow rate @ max cold fill pressure	l/min	12	12	12	12	28
	Noise level	dBA	<70	<70	<70	<70	<70
ELECTRICAL	Electrical supply		230V AC 50Hz 1Ph	230V AC 50Hz 1Ph	230V AC 50Hz 1Ph	230V AC 50Hz 1Ph	230V AC 50Hz 1Ph
	Pressure transducer contact rating		4-20ma	4-20ma	4-20ma	4-20ma	4-20ma
	Volt free contact rating		6a/240v	6a/240v	6a/240v	6a/240v	6a/240v
	Start current (per pump motor)	Amps	2.6	2.6	2.6	2.6	3.6
	Run current (per pump motor)	Amps	2.6	2.6	2.6	2.6	3.6
FACTORY SETTINGS	Cold fill pressure	bar	2.5	2.5	2.5	2.5	5
	Low pressure setting	bar	0.7	0.7	0.7	0.7	0.7
	High pressure setting	bar	4	4	4	4	7
	Expansion vessel charge pressure	bar	1.7	1.7	1.7	1.7	1.7
SYSTEM PARAMETERS FOR FACTORY SET-	Maximum water flow temperature	°C	80	80	80	80	80
	Maximum static height	m	40.5	40.5	40.5	40.5	62
	Minimum system operating pressure	bar	0.7	0.7	0.7	0.7	1
	Maximum system operating pressure	bar	4	4	4	4	7
	Nominal pressure differential	bar	0.3	0.3	0.3	0.3	0.3
DIMENSIONS	Height	mm	580	800	680	800	800
	Width	mm	570	500	670	500	500
	Depth	mm	300	300	315	350	350
CONNEC- TIONS	Mains cold water inlet	inch	1/2	1/2	1/2	1/2	1/2
	Overflow (polythene pipe) diameter	mm	20	20	20	20	20
	System connection compression fitting, diameter	mm	15	15	15	15	15

Tyneham buffer tanks

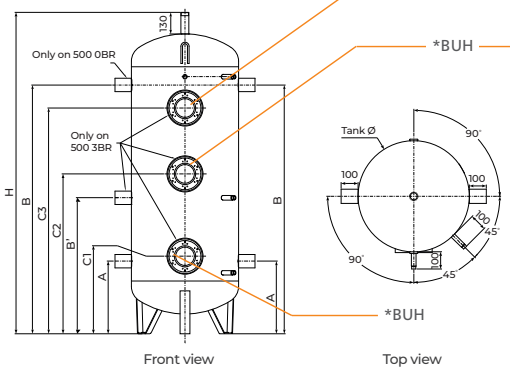
Technical features and performance capabilities

Features	Tank Models			
	500 0F*	500 3F*	900 2F*	1500 2F*
Useful capacity (L)	517	517	904	1425
Passage width (mm)	680	680	795	1015
Min. room height for installation (mm)		2100	2100	2415
Tilting dimension (mm)(1)	1980	1980	2240	2270
Empty tank weight (kg)	72	72	140	180
Thermal losses(2) Ua (W/K). Flexible M1	1.38	1.657	2.231	2.778

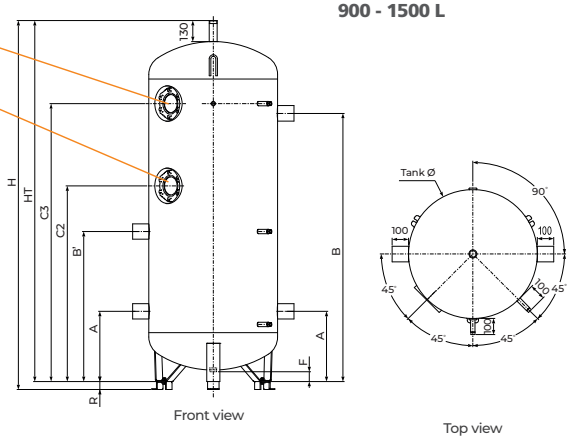
(1) Risers not mounted.
(2) Storage at 65°C – Ambient temperature at 20°C. Values supported per RT2012.

Dimensions

500 L



900 - 1500 L



500 OF, 500 3F, 900 2F, 15000 2F models

Refs	Designation	Units	Tank Models			
			500 0F*	500 3F*	900 2F*	1500 2F*
Tank Ø	Tank diameter without insulation	mm	650	650	790	1000
HT	Tank overall height (height without riser)	mm	1950	1950	2215	2215
H	Height with risers	mm	1950	1950	2265	2265
A	Lower connection	mm	440	440	430	500
B	Upper connection	mm	1510	1510	1645	1460
B'	Intermediate connection	mm	-	825	920	915
C1	Lower flange height	mm	-	470	-	-
C2	Intermediate flange height	mm	-	970	1200	1077
C3	Upper flange height	mm	-	1370	1705	1630
F	Drainage height	mm	110	110	60	60
R	Riser height	mm	-	-	50	50
1	Temperature probe branch pipe		1/2" F Through type			
2	Thermometer branch pipe		1/2" F Through type			
3	Branch pipe connection		2 1/2" F			3" F
4	Purge		1 1/2" M			2" M
5	Drain		1 1/4" F			
BUH	Back-up heater mounting			3-of	2-of	2-of

* 0F = 0 Flanges, 2F = 2 Flanges, 3F = 3 Flanges

Building Information Modelling (BIM)

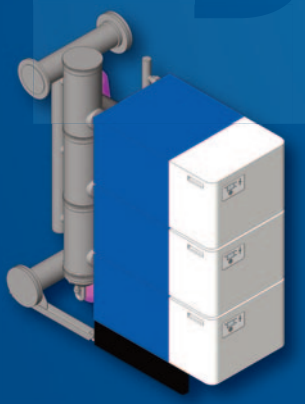
Working in partnership with **bimstore**, we have produced data enriched 3D BIM objects available for our range of commercial heating and hot water products.

Our range of BIM objects offer a host of configurable options built in for you. They are loaded with extensive metadata including size, outputs, efficiencies, dimensions, clearance zones and pipe kit options.

The benefits of BIM are huge, including improved collaboration and design co-ordination. Wastage in materials and on-site production are reduced and BIM will also assist in asset and lifecycle management.

Visit our website to download the latest BIM drawings for your project.

SCAN ME



Modumax mk3
15 models, 97kW – 762kW

Tyneham 290HT
5 models, 15kW – 65kW

Dorchester DR-SG
10 models, 360kW – 2190 l/hr

Stratton mk3
7 models, 40kW – 150kW

Flues

Our boilers and water heaters are suitable for many flue systems and we can provide flue components to suit these schemes. You can choose from the flue types below or a bespoke flue system can be designed by our flue partner, Jeremias.

Types of flue systems available

Open flue

Combustion air supply is drawn directly from the room, and flue gases may be discharged through a flue system using either an existing chimney (subject to suitability) or a ducted flue system. The plant room requires ventilation to provide air for combustion and cooling the plant room, in accordance with BS5440 and BS6644.

The flue system will typically rise to the top of the building and discharge above roof level, although some modern low output gas boilers may have an open flue system terminating at low level (in accordance with flue discharge requirements).

Subject to specific risk assessment procedures detailed in IGEM/UP/10 Edition 4, room sealed appliance installations up to 333kW total Nett input may be terminated at low level.

Room sealed

Combustion air supply is drawn via ducts from outside. Flue gases may be discharged through either a concentric or twin duct flue system. The plant room requires ventilation in accordance with BS5440 and BS6644. Plant rooms will require less ventilation than open flue systems, and with reduced airflow, warmer room temperatures are possible - a useful point when designing tighter buildings.

Room sealed appliances reduce the risk of flue gases spilling back into the plantroom due to poor flue operating conditions. In certain buildings the boiler can be installed within occupied spaces where a dedicated plant room may not exist.

Concentric flue

A concentric flue system provides a very compact room sealed flue, where the air supply and flue gases are managed within a one piece concentric duct system. Typically using a duct within a duct, the flue gases are expelled through the inner duct with combustion air being drawn in via the outer annulus.
A concentric flue system will have the option for the terminal to be positioned horizontally for exiting the building through the wall, (subject to IGEM UP10) or vertically through the roof. The need to only penetrate the building (roof or wall) with a single hole is an advantage

Modern condensing boilers generate condensate from the flue gases at a rate of around 13 litres per hour for a 100kW boiler, in condensing conditions.

Coping with condensate

When changing from atmospheric boilers to condensing, the existing flues on this type of system are not able to deal with a modern pressurised and wet system where condensate will form. The flue system must be water and pressure tight, and designed to drain the condensate from the flue and prevent flow back into the boiler. Where possible, you may be able to make use of the existing chimney with a liner, thus, enabling it to cope with condensing operation.

How to order flue components

Speak to your Hamworthy Area Sales Manager about ordering flue components and requirements.

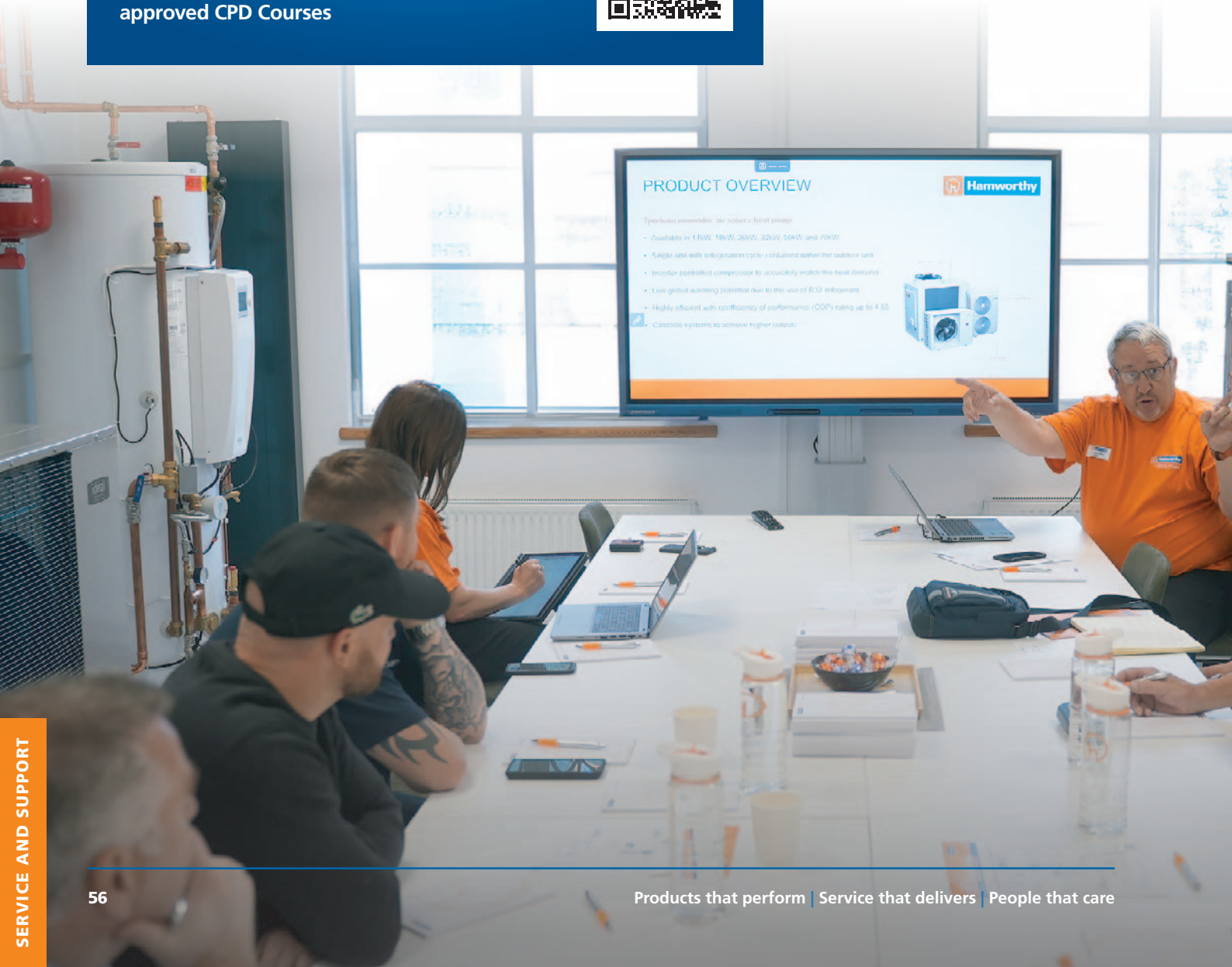
CIBSE approved
CPD courses

Our CIBSE approved CPD courses are beneficial for anyone wishing to understand the latest industry developments and discover new ways to add value, performance and efficiency to your commercial heating and hot water projects.

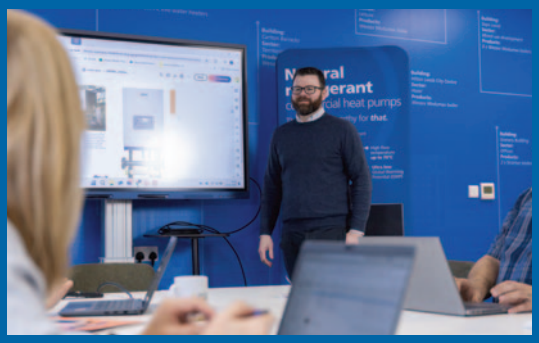
We can offer seminars online, or in person, at our site, or yours.

Book now

Please speak to your Area Sales Manager to discuss and book one of our CIBSE approved CPD Courses



CIBSE CPD



Courses

> Considerations for commercial ASHP selection, specification and system application

This CIBSE approved CPD seminar builds on our Introduction to commercial heat pumps – technology and principles course to guide you through selection and specification of the right heat pump and/or heating system for your customers requirements and expectations.

> Introduction to heat pumps – technology and principles

Heatpumps will play a major part in the future of commercial heating and hotwater in the UK.Learn about the technology and principles behind heat pumps to help you with your system design and specification.

> Boiler controls – unwiring the jargon

Get to know the terminology used in controls and how best to setup your boilers for highest efficiency and performance.

> New boilers on old heating systems – hydraulic design

Understand the hydraulic design options available when installing new boilers on old systems.

Learn the difference between open and closed heating systems and how to choose the best method of separating the primary and secondary circuits.

> Best practice in DHW

DHW in commercial applications is a big topic, so we've developed a series of 3 independent, 1 hr CPD seminars. Each seminar is CIBSE approved and topics include system design, safety and legislation, and sizing.

Expert Academy
Training

Get the most from your Hamworthy commercial heating and hot water products with the Groupe Atlantic award-winning Expert Academy.

Our experience shows that those who take part in our training sessions have more confidence and competence in running the machinery, meaning less chance of downtime.

Good quality, technical training is our number one priority. We pride ourselves in providing you with honest, balanced information. We don't do sales presentations and we certainly don't try to push anything during our training courses. We also love learning from your experiences – we are all about providing you the best quality training programme.

We offer the following training courses at a number of purpose built sites across the UK:

- Commercial gas boiler range training
- Commercial air source heat pump training

Each day you will be provided with free reserved parking, refreshments and lunch. We also have a range of specialist tools and equipment available for you to try throughout the course.

You can find more detail about the course content on our website or by speaking with your Area Sales Manager.

"We really enjoyed our training days, the tutor was good and really knowledgeable on Hamworthy products. Our engineers really liked the Hamworthy handouts which will come in handy for them on site. We were also really impressed with the facility."

Michael Bird,
Beauchamp and Bird Ltd
Course attendee

Book now

Visit our website to see the upcoming dates for training courses and reserve your place.

EXPERT ACADEMY

Service and support

Our Group Commercial Service Division is a dedicated commercial service team created to support all our commercial brands and customers.

A new dedicated Group Service team that unites our commercial product knowledge into a single source of expertise, making us the most responsive and easiest to work with in the industry.

What this means for Hamworthy customers:

New industry-leading dedicated commercial service team

Expert knowledge on all group commercial products

Faster, more responsive support when you need us most

A single service team for commissioning, warranty, servicing and breakdowns on all commercial product ranges

Easier to work with providing best-in-class service

UK nationwide coverage with next-day breakdown cover for critical sites*

* Terms and conditions apply. Speak to a member of the commercial service division team for more information.

Looking for trusted support on your next commercial installation?

Contact your area sales manager or visit our website to find out how the Commercial Service Division can help.

Notes

Notes

British engineering excellence from Hamworthy Heating; the commercial heating and hot water specialists.

SUPPORT BRITISH MANUFACTURING

Hamworthy Heating Accreditations
ISO 9001 Quality Management System
ISO 14001 Environmental Management System
ISO 45001 Health & Safety Management System

Hamworthy Heating Limited

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Email: **sales@hamworthy-heating.com**
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