



Ace HΞ

HIGH PERFORMANCE
COMBINATION CONDENSING BOILER



 **halstead**

simplicity in heating

THE ACE HE CONDENSING COMBI BOILER OFFERS EVERYTHING THE HOMEOWNER NEEDS FROM A HIGH EFFICIENCY BOILER.

Available in a choice of 24, 30 and 35kW models, the Ace HE gives exceptional central heating performance and impressive hot water delivery. With flow rates of 10.9, 14.7 and 16.7 litres per minute respectively (specific flow rate as EN 625) the Ace HE will provide heating and hot water requirements of most medium to small households.

Ace HE's stainless steel heat exchanger and pre-mix burner system are extremely robust and efficient, giving reliable and effective performance even at minimum operating levels and meeting the demanding requirements of the SEDBUK A efficiency rating. Its high quality components go hand in hand with a sleek new look and compact dimensions, making the Ace HE a stylish addition to both traditional and contemporary kitchens.

The siting of the boiler is also made significantly

easier by the availability of a wide range of optional flueing kits which enable the boiler flue outlet to be positioned to avoid nuisance to neighbours from flue 'fogging' or plumbing. The boiler's simple wiring and easy access plumbing points also simplify installation and maintenance.

THE BENEFITS OF A COMBINATION CONDENSING BOILER

A 'high efficiency' or 'condensing' combi boiler offers not only lower fuel bills due to significantly greater efficiency but also far lower CO₂ emissions than a conventional boiler making it much more environmentally friendly and helping to cut down on greenhouse gases and conserve fossil fuel resources. Importantly, changes in Building Regulations in April 2005 have now made the installation of a condensing boiler compulsory in all but a handful of installations.



PERFORMANCE

- DHW Output
 - ACE HE 24: 24kW (82,000 Btu/hr)
 - ACE HE 30: 30kW (102,400 Btu/hr)
 - ACE HE 35: 35kW (119,400 Btu/hr)
- Central Heating Output*
 - ACE HE 24: 6.0kW (20,500 Btu/hr) up to 18.0kW (61,500 Btu/hr)
 - ACE HE 30: 7.2kW (24,600 Btu/hr) up to 23.1kW (78,900 Btu/hr)
 - ACE HE 35: 8.3kW (28,300 Btu/hr) up to 24.0kW (81,900 Btu/hr)
- SEDBUK A means maximum efficiency

RELIABILITY

- UK designed, UK manufactured
- Top quality components
- Digital electronics ensure reliable operation
- Pump anti-seize feature and frost protection

INSTALLATION

- Lightweight - ACE HE 24: 42kgs
 - ACE HE 30: 48kgs
 - ACE HE 35: 48kgs
- Easily accessible plumbing connections
- Built in trap and easily accessible waste connection
- Long flue runs - horizontal 5m, vertical 12m
- Range of flue kits (see back cover for range of options)
- Additional 90° bend copper 'pipe tails' supplied with ACE HE to make plumbing connections significantly easier
- Improved wall fixing bracket with additional 'side guides' and integral 'bubble vessel' makes boiler location and installation faster and more accurate

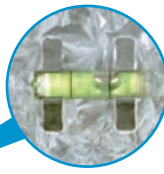
USER BENEFITS

- Dimensions (mm): 758(H) x 446(W) x 327(D)
- Specific flow rate at 30° temp rise (EN 625)
 - ACE HE 24: 10.9 lpm
 - ACE HE 30: 14.7 lpm
 - ACE HE 35: 16.7 lpm
- 24 hour central heating timer
- Neat, recessed panel with clearly marked user controls
- Pre-set hot water temperature
- British Gas Service Listed
- 2 year parts and labour warranty**

DHW = Domestic Hot Water
* Outputs stated are non condensing. When condensing, boiler output will exceed these figures
** Subject to conditions - see back page of brochure



ACE HE



Simple wall fixing bracket with integral 'bubble vessel'

Manual bleed valve

Flue gas sensor

Flue supplied separately horizontal, vertical and special 'anti-plume' options available

Stainless steel coil heat exchanger

SEDBUK A means top efficiency rating

Choice of three outputs with wide CH modulation range
ACE HE 24: 6.0 - 18.0kW
ACE HE 30: 7.2 - 23.1kW
ACE HE 35: 8.3 - 24.0kW

Ignition electrode

Detection electrode

Spark generator

Expansion vessel with easy accessible top-up valve

Burner assembly

CH return thermistor

Gas/air control and pre-mix fan

CH flow thermistor

Easyclean condensate trap with easily accessible waste pipe connection

Grundfos pump and diverter assembly

Large plate heat exchanger supports specific flow rate (EN 625) at 30° temperature rise
ACE HE 24: 10.9 lpm
ACE HE 30: 14.7 lpm
ACE HE 35: 16.7 lpm

Compact design
ACE HE 24, 30 & 35:
758(H) x 446(W) x 327(D)mm

DHW outlet thermistor

DHW flow switch

Simple plug-in electrics

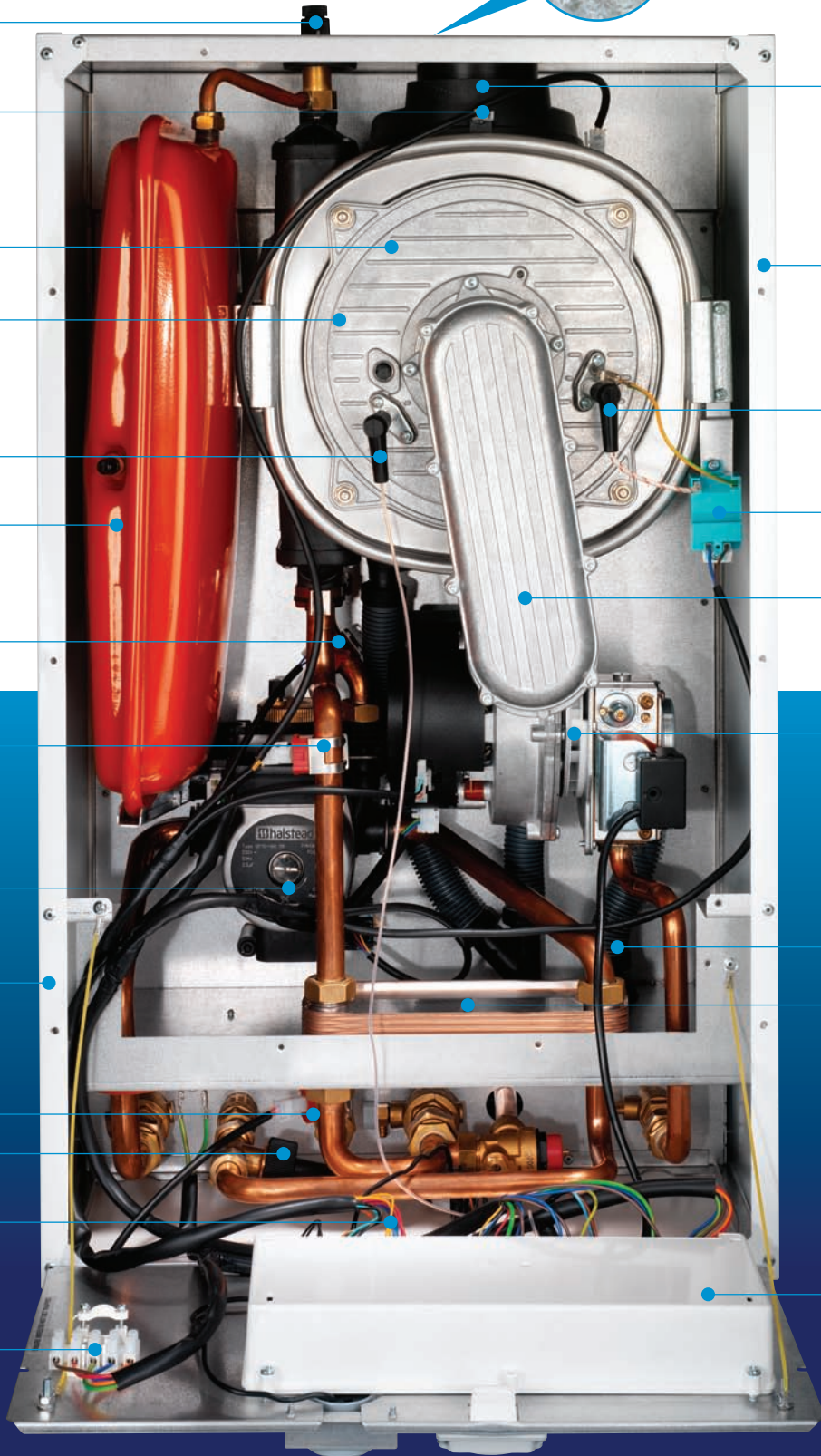
Fully enclosed electronics

Mains and room thermostat connection terminal

System pressure gauge

Simple user control for central heating temperature with digital display to indicate boiler status

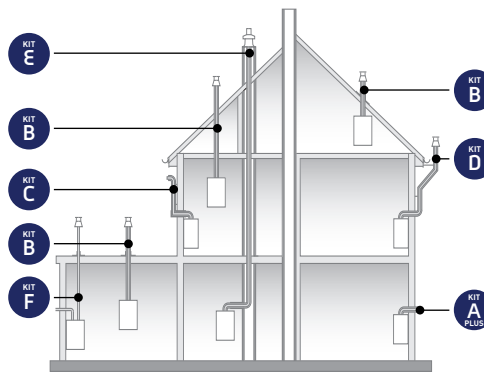
24 hour time control (supplied separately)



ACE HE 24, 30 & 35 FLUE KITS

ACE HE CAN BE INSTALLED IN A WIDE RANGE OF DOMESTIC APPLICATIONS. IN ADDITION TO THE COMMON HORIZONTAL AND VERTICAL FLUE SYSTEMS FAMILIAR TO MOST, WE HAVE ALSO DEVELOPED A RANGE OF FLUE SYSTEMS DESIGNED TO OVERCOME THE POSSIBLE NUISANCE CAUSED BY FLUE PLUMBING. THESE KITS ARE DETAILED BELOW.

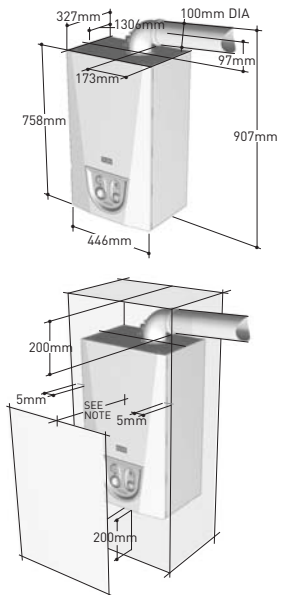
- KIT A PLUS** **TELESCOPIC HORIZONTAL FLUE KIT 956120**
Standard flue length 430-615mm
Maximum flue length 5m
- KIT B** **STANDARD VERTICAL FLUE 956081**
Standard flue length 600mm
Maximum flue length 12m
- KIT C** **RAISED EXTERNAL FLUE OUTLET 956084**
Standard flue length 1100mm
Maximum horizontal 5m and 1m vertical
Maximum vertical 8.5m and 1m horizontal
- KIT D** **EXTERNAL VERTICAL FLUE 956085**
Standard flue length 2.3m
Maximum flue length 6.5m
- KIT E** **CHIMNEY FLUE LINER 956082**
Flexi tube available in lengths of:
10m 956110
20m 956111
30m 956112
Maximum flue length 30m
- KIT F** **SPLIT PIPE VERTICAL FLUE OUTLET 956080**
Standard flue length 2.7m
Maximum flue length 30m



For flueing accessories, see price list or product and flue guide.

PLUME DIVERTER KIT 956103
For use with Kit A Plus only.

OVERALL DIMENSIONS AND MINIMUM CLEARANCES



NOTE: 5mm for normal operation.
450mm for installation and servicing.

ACE HE 24, 30 & 35 TECHNICAL SPECIFICATIONS

PERFORMANCE DATA

APPLIANCE		ACE HE 24	ACE HE 30	ACE HE 35
MODE	Rate			
	Central Heating Output (non-condensing) (80 - 60°C)	Max kW (Btu/h) 18.0 (61,500) Min kW (Btu/h) 6.0 (20,500)	23.1 (78,900) 7.2 (24,600)	24.0 (81,900) 8.3 (28,300)
Central Heating Output (condensing) (50 - 30°C)	Max	kW (Btu/h) 19.7 (67,300)	25.4 (86,700)	26.0 (88,700)
	Net	kW (Btu/h) 18.4 (62,800)	23.9 (81,600)	24.5 (83,600)
Central Heating Input Max Rate	Gross	kW (Btu/h) 20.4 (69,700)	24.8 (84,700)	27.2 (92,800)
	Net	kW (Btu/h) 5.6 (19,100)	6.9 (23,600)	8.5 (29,000)
Central Heating Input Min Rate	Gross	kW (Btu/h) 6.2 (21,200)	7.5 (25,600)	9.4 (32,100)
	Max	kW (Btu/h) 24.0 (82,000)	30.0 (102,400)	35.0 (119,400)
Domestic Hot Water Output	Min	kW (Btu/h) 6.0 (20,500)	7.2 (24,600)	8.3 (28,300)
	Net	kW (Btu/h) 24.6 (84,000)	31.3 (106,900)	35.7 (121,800)
Domestic Hot Water Input Max Rate	Gross	kW (Btu/h) 27.3 (93,200)	34.8 (118,900)	39.6 (135,200)
	Net	kW (Btu/h) 5.6 (19,100)	6.9 (23,600)	8.5 (29,000)
Domestic Hot Water Input Min Rate	Gross	kW (Btu/h) 6.2 (21,200)	7.5 (25,600)	9.4 (32,100)
	Design Domestic Hot Water Performance Raised 35°C	l/min (gpm) 9.8 (2.2)	12.3 (2.8)	14.3 (3.1)
Specific DHW Rate (D) EN 625	l/min	10.9	14.7	16.7
Central Heating Gas Rate (after 10 min operation - hot)	Max	m ³ /h (ft ³ /h) 1.95 (68.9)	2.49 (87.9)	2.59 (91.5)
	Domestic Hot Water Gas Rate (after 10 min operation - hot)	Max	m ³ /h (ft ³ /h) 2.6 (91.8)	3.31 (116.9)
Seasonal Efficiency	%	90.1	90.1	90.1
Seasonal Efficiency (SEDBUK)	Band		"A"	
NOx Classification	Class		"5"	

GENERAL

APPLIANCE	ACE HE 24	ACE HE 30
Total Weight (full)	kg 45.1	51.7
Total Weight (empty)	kg 43.0	49.0
Max Lift Weight	kg 42.0	48.0
Total Water Capacity	ltr 1.8	2.1
Integral Expansion Vessel Capacity	ltr 8	
Maximum Heating System Water Content Using Fitted Expansion Vessel @0.75 bar	ltr 84	
Electrical Supply	230V 50Hz	
Internal Fuse	T4H 4A 250V	
Maximum Power Consumption	w 140	160
IP Rating	IP20	
Flue Gas Temperature 50/30	°C 53	49
CO ₂ Value Max Rate	9.2 ± 0.3 case on 9.0 ± 0.2 case off	
CO ₂ Value Min Rate Ref Only	% 8.6 +/- 0.3	
CO ₂ /CO Ratio	0.005 ^{+0.005} ₋₀	0.003 ^{+0.005} ₋₀
Flue Products Mass Flow Rate	g/s 14.7	11.0
Gas Valve Offset @ Min Rate	Pa -5	
Min Mains Water Inlet Pressure for Max Heat Output	Bar (psil) 1.0 (14.5)	1.0 (14.5)
Min Mains Water Inlet Pressure for Operation	Bar (psil) 0.3 (4.4)	0.3 (4.4)
Max Mains Water Inlet Pressure	Bar (psil) 10 (145)	10 (145)
Min Domestic Hot Water Flow Rate for Operation	l/min (gpm) 2.0 (0.45)	2.0 (0.45)
Min Central Heating System Pressure	Bar 0.5	0.5
Max Central Heating System Pressure	Bar 3.0	3.0
Max Domestic Hot Water Temperature	°C 55	55
Min Domestic Hot Water Temperature	°C 40	40
Max Central Heating Flow Temperature	°C 80	80
Min Central Heating Flow Temperature	°C 30	30

CONNECTIONS

Gas	15 mm compression	22 mm compression
CH Flow	22 mm compression	
CH Return	22 mm compression	
DHW Inlet	15 mm compression	
DHW Outlet	15 mm compression	
Pressure Relief Valve Outlet	15 mm compression	
Condensate Drain	21.5 - 22 mm plastic overflow pipe	

WARRANTY CONDITIONS

2 YEAR PARTS AND LABOUR WARRANTY ON ALL COMPONENTS

Subject to: 1. Registration of installation. 2. Satisfactory completion of Benchmark logbook. 3. Service after 12 months by Corgi registered engineers.

British Gas Service Listed
Gas Council Numbers

ACE HE 24 G.C. No. 47-333-19
ACE HE 30 G.C. No. 47-333-20
ACE HE 35 G.C. No. 47-260-13



EC 87/90/44

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Halstead Boilers is continuously improving its products and may therefore change specifications without prior notice. The statutory rights of the consumer are not affected.

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FOR ALL TELEPHONE ENQUIRIES CALL: 0844 371 1111