

NHER SAP Assessment Technical Guide



Practical, affordable systems to help meet
the Code for Sustainable Homes



Alpha's CSH Level 3 solution

Faced with meeting national standards such as the Code for Sustainable Homes, there's a growing emphasis on finding alternative heating and hot water solutions that deliver greater energy efficiency and reduce CO₂ emissions.

Alpha's unique solution, incorporating the award-winning SolarSmart and GasSaver heat recovery unit, helps you achieve CSH Level 3 without having to radically rethink heating system specification, or change the fabric of the building.

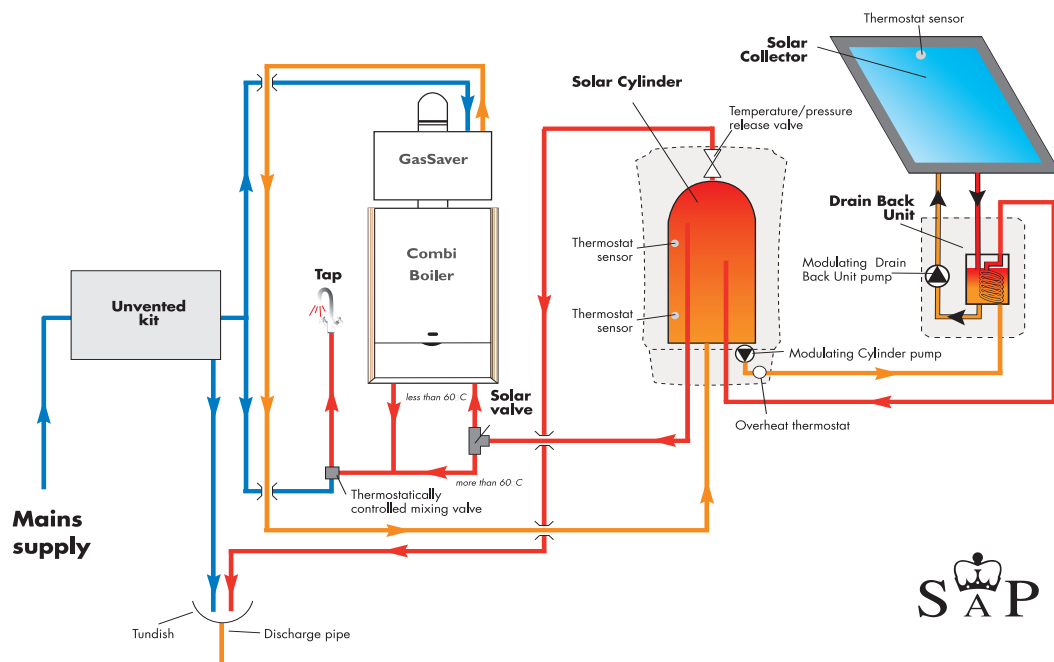
This affordable solution, which is fully recognised in SAP Appendix Q

as well as being WRAS approved, will help you significantly improve energy efficiency and Dwelling Emission Rates.

At the heart of the system is our innovative Solar Valve which enables it to operate with a combination

boiler, providing far better energy efficiency than the traditional system boiler and unvented cylinder approach more commonly specified. This system has become the preferred CSH Level 3 heating solution for a number of the UK's leading house builders and developers.

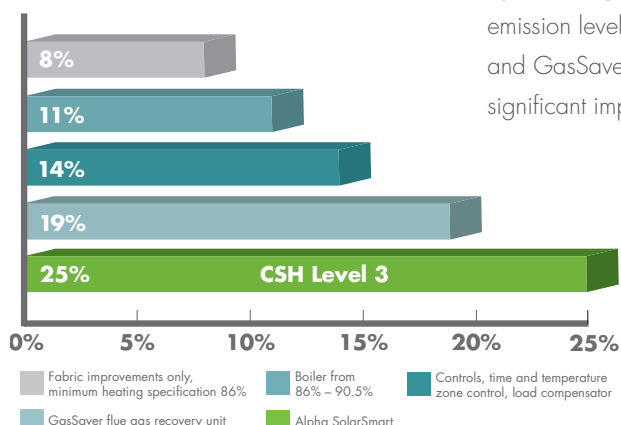
SolarSmart with GasSaver and high efficiency boiler



SAP Appendix Q example

This graph demonstrates how Alpha Heating Innovation can help you easily and affordably achieve Level 3 of the CSH.

25% reduction in CO₂ emissions



By achieving a 25% reduction in CO₂ emission levels, the unique SolarSmart and GasSaver solution makes a significant impact on sustainability.

Listed below are a number of alternative products that can also be added into SAP, in conjunction with GasSaver and SolarSmart to help achieve Code Levels 3 and 4.

- Photovoltaic
- Load compensators
- Time and temperature control
- Mechanical ventilation
- Positive input vents instead of extractor fans

Step-by-step guide

Step 1: Ventilation

Input the air permeability for the properties and any mechanical ventilation if required.

The screenshot shows the 'VENTILATION' section of the NHER Plan Assessor software. The 'Air Permeability' section includes fields for 'Enter design air permeability' (set to 'Yes'), 'Pressure test (Scotland)', 'Accredited details (Scotland)', 'Seek exemption (<3 dwellings)' (set to 'No'), 'Design air permeability rate' (5 m³/m² (@50Pa)), and 'As built air permeability rate'. The 'Mechanical Ventilation' section includes 'Mechanical ventilation' (set to 'Not present (natural)'), 'Values from', 'Number of wet rooms', and 'Duct insulation'. The 'Number of Chimneys and Flues' section includes 'Open fireplaces', 'Open flues', and 'Flueless gas fires'. The 'Number of Passive Vents and Fans' section includes 'Passive Vents', 'Kitchen fans', 'Bathroom fans', 'Other fans', and 'Total vents and fans' (set to 3). The 'Air Conditioning' section includes 'A/C present' (set to 'No'). The 'Miscellaneous Details' section includes 'Main stairs enter zone 1'.

Step 2: Main Heating

Select database and choose the required Alpha Boiler.

The appropriate information will automatically filter into the boxes

The screenshot shows the 'MAIN HEATING' section of the NHER Plan Assessor software. The 'Main Heating' section includes 'Electricity tariff' (set to 'Standard'), 'Type' (Boiler), 'Efficiency from' (Boiler efficiency database), 'Manufacturer description', 'Boiler type' (Condensing combi), 'Fuel' (Mains gas), 'Second boiler/fuel', 'Fan flue' (Yes), 'System' (1998 or later - Condensing combi, auto ignition), 'Controls' (Time and temperature zone control), 'Emitter' (Radiators), 'Interlock' (Yes), 'Compensator' (Load compensator), 'Pump in heated space' (Yes), and 'Efficiency' (90.5 %). The 'Boiler Efficiency Database Details' section includes 'Manufacturer Name: Alpha Therm', 'Brand: Alpha Therm', 'Model Name: CD 35 C', 'Model Qualifier', 'Boiler ID', 'Efficiency Band: A', 'Flue: Unknown', 'Mounting: Wall', and 'Power: Modulating 28 - 28kW'.

Step-by-step guide

Step 3: Boiler Database

Search for the appropriate boiler model.

NOTE: Ensure the correct fuel type has been selected

Click select

The screenshot shows the 'BOILER EFFICIENCY DATABASE' search window. The search criteria are set to 'Brand/Model' with 'cd 35' entered in the 'Look for' field. The results table shows 60 records, with the 'CD 35 C' model highlighted. The fuel type is set to 'LPG'. The 'Select' button is highlighted.

Index	Manufacturer	Brand	Model Name	Model Qualifier	Boiler ID	Fuel	%	Band	Type	Condensing	Flue
015049	Alpha Therm	Alpha	CD24R			Gas	90.3	A	Regular	Condensing	Room-sealed
015050	Alpha Therm	Alpha	CD24R			LPG	91.3	A	Regular	Condensing	Room-sealed
015268	Alpha Therm	Alpha	CD 35 C			LPG	92.4	A	Combi	Condensing	Room-sealed
015269	Alpha Therm	Alpha	CD 35 C			Gas	90.5	A	Combi	Condensing	Room-sealed
015270	Alpha Therm	Alpha	CD 28 C			LPG	91.6	A	Combi	Condensing	Room-sealed
015271	Alpha Therm	Alpha	CD 28 C			Gas	90.3	A	Combi	Condensing	Room-sealed
015272	Alpha Therm	Alpha	CD 25 C			LPG	91.9	A	Combi	Condensing	Room-sealed
015273	Alpha Therm	Alpha	CD 25 C			Gas	90.2	A	Combi	Condensing	Room-sealed
015518	Alpha Therm	Alpha	CD25X			Gas	90.1	A	Combi	Condensing	Room-sealed
015519	Alpha Therm	Alpha	CD25X			LPG	91.3	A	Combi	Condensing	Room-sealed
015520	Alpha Therm	Alpha	CD28X			Gas	90.1	A	Combi	Condensing	Room-sealed
015521	Alpha Therm	Alpha	CD28X			LPG	91.2	A	Combi	Condensing	Room-sealed
015612	Alpha Therm	Alpha	CD20S			LPG	91.5	A	Regular	Condensing	Room-sealed

Step 4: Heating Controls

Select the appropriate system controls (eg time/temperature zone control).

Select the appropriate interlocks, compensators, emitter type and pump location.

The screenshot shows the 'MAIN HEATING' configuration screen. The 'Interlock' dropdown menu is open, showing options like 'Time and temperature zone control'. The 'Boiler Efficiency Database Details' section shows the selected model: Alpha Therm CD 35 C, with a fuel type of Mains gas and an efficiency of 90.5%.

Main Heating Configuration:

- Electricity tariff: Standard
- Type: Boiler
- Efficiency from: Boiler efficiency database
- Boiler type: Condensing combi
- Fuel: Mains gas
- Second boiler/fuel: [Empty]
- Fan flue: Yes
- System: 1998 or later - Condensing combi, auto ignition
- Controls: Time and temperature zone control
- Emitter: Programmer, TRVs and bypass
- Interlock: Time and temperature zone control
- Compensator: Delayed start thermostat
- Pump in heated space: Programmer and delayed start thermostat
- Efficiency: 90.5%

Boiler Efficiency Database Details:

- Manufacturer Name: Alpha Therm
- Brand: Alpha Therm
- Model Name: CD 35 C
- Model Qualifier: [Empty]
- Boiler ID: [Empty]
- Efficiency Band: A
- Flue: Unknown
- Mounting: Wall
- Power: Modulating 28 - 28kW

Step 5: Water Heating

Select Water heating type

NHER Plan Assessor - Alpha v1

File Application Building Regs Reports Diagnosis Help

NHER

New Open Close Save Reports PEA Regs Errors

WATER HEATING

General

Water heating type: From main

Cylinder within dwelling: From main

Water heating fuel: From main

Water separately timed: []

Cylinder Details

Manufacturer loss factor: []

Declared factor: [] kWh/day

Volume *: [] litres

Insulation type: []

Insulation thickness: [] mm

Thermostat: []

In heated space: []

Primary pipework insulated: []

Pumped primary system: []

Thermal Store and CPSU

In single unit: []

Primary pipework < 1.5m: []

Store in airing cupboard: []

Combi Keep Hot

Keep hot uses electricity: []

Keep hot power rating: [] W

DHW Only Community Scheme

Provided from: []

CHP heat to power ratio: []

System: []

Efficiency: [] %

Heat Pump

Uses immersion: []

Summer Immersion

Uses summer immersion: []

* Cylinder volume must be net of any solar store volume (only applicable to combined cylinders)

Step 6: Gas Fuel Water Heating

Select mains gas

NHER Plan Assessor - Alpha v1

File Application Building Regs Reports Diagnosis Help

NHER

New Open Close Save Reports PEA Regs Errors

WATER HEATING

General

Water heating type: From main

Cylinder within dwelling: []

Water heating fuel: Mains gas

Water separately timed: []

Cylinder Details

Manufacturer loss factor: []

Declared factor: [] kWh/day

Volume *: [] litres

Insulation type: []

Insulation thickness: [] mm

Thermostat: []

In heated space: []

Primary pipework insulated: []

Pumped primary system: []

Thermal Store and CPSU

In single unit: []

Primary pipework < 1.5m: []

Store in airing cupboard: []

Combi Keep Hot

Keep hot uses electricity: []

Keep hot power rating: [] W

DHW Only Community Scheme

Provided from: []

CHP heat to power ratio: []

System: []

Efficiency: [] %

Heat Pump

Uses immersion: []

Summer Immersion

Uses summer immersion: []

* Cylinder volume must be net of any solar store volume (only applicable to combined cylinders)

Step-by-step guide

Step 7: Renewables

Input the data on the SolarSmart System.

All information can be found at the back of this guide.

The screenshot shows the 'RENEWABLES' section of the NHER Plan Assessor software. The interface includes a menu bar (File, Application, Building Regs, Reports, Diagnosis, Help), a toolbar with icons for New, Open, Close, Save, Reports, PEA, Regs, and Errors, and a sidebar with a tree view of categories. The main content area is divided into three sections: 'Solar Water Heating', 'Photovoltaic Panels', and 'Additional Allowable Generation'. The 'Solar Water Heating' section has fields for 'Is there solar water heating' (Yes), 'Collector type' (Flat plate, glazed), 'Collector orientation' (South), 'Collector tilt' (45°), 'Overshading' (None or Very Little < 20%), 'Is area gross' (Yes), 'Gross area of solar panel' (2.5 m²), 'Zero loss collector efficiency (η0)' (0.74), 'Heat loss coefficient of collector (α1)' (3.63), 'Is solar store combined' (No), 'Dedicated solar store volume' (91 litres), and 'Solar circulating pump' (Electrically powered). The 'Photovoltaic Panels' section has fields for 'Is there PV' (No), 'Installed peak power' (kWp), 'Collector orientation', 'Collector tilt', and 'Overshading'. The 'Additional Allowable Generation' section has fields for 'Is there additional electricity generation' (No), 'Electricity generated' (kWh/yr), and 'Total floor area *' (m²).

Step 8: GasSaver Input


Select 'Yes' for special features and click 'Details' to add Zenex GasSaver.

The screenshot shows the 'OTHER' section of the NHER Plan Assessor software. The interface includes a menu bar (File, Application, Building Regs, Reports, Diagnosis, Help), a toolbar with icons for New, Open, Close, Save, Reports, PEA, Regs, and Errors, and a sidebar with a tree view of categories. The main content area is divided into three sections: 'Thermal Bridging', 'Summer Overheating', and 'Separated Heated Conservatory'. The 'Thermal Bridging' section has fields for 'Enter details of thermal bridges' (No), 'y value type' (0.08 (Accredited construction details)), 'User defined y value' (0.08), and 'y value calculation method'. The 'Summer Overheating' section has fields for 'Cross ventilation on most floors' (Yes), 'Window ventilation' (Fully open half the time), 'Internal partition construction' (Plasterboard, timber/steel frame), 'Party wall construction' (Plasterboard, timber/steel frame), 'Curtains closed in daylight hours' (Yes), 'Fraction curtains closed' (1), and 'Blind/curtain type' (Light-coloured curtain or roller blind). The 'Separated Heated Conservatory' section has a field for 'Is a heated conservatory present' (No). The 'Special Features' section has a field for 'Are there any included' (Yes) and a 'Details' button.

Step 9: SAP Examples

Run a draft SAP worksheet to get values for appendix Q

Take values from the data boxes and input into Appendix Q, sections 5-87e.



SAP Worksheet: Design - Draft

This Design submission has been carried out by an Authorised SAP Assessor. It has been prepared from plans and specifications and may not reflect the property as constructed.

Assessor Name: _____ Assessor Number: _____

Client: _____

Date Last Modified: _____

Address: _____

This draft SAP Worksheet report is for internal purposes only and should not be accepted as evidence of compliance by Building Control

1. Overall dwelling dimensions

	Area (m ²)	Average storey height (m)	Volume (m ³)
Ground Floor	36.39 (1a)	2.46	89.52 (1)
First Floor	34.98 (2a)	2.26	79.05 (2)
Total floor area (1a)+(2a)+(3a)+(4a)+(4b)+(4d)+(4f)+(4h) =	71.37 (5)		
Dwelling volume		(1)+(2)+(3)+(4)+(4c)+(4e)+(4g)+(4i) =	168.57 (6)

2. Ventilation rate

	m ³ per hour		Air changes per hour
Number of chimneys	0	× 40 =	0 (7)
Number of open flues	0	× 20 =	0 (8)
Number of intermittent fans or passive vents	3	× 10 =	30 (9)
Number of flueless gas fires	0	× 40 =	0 (9a)
Infiltration due to chimneys, flues and fans = (7)+(8)+(9)+(9a) =	30	+ box (6) =	0.18 (10)
<i>If a pressurisation test has been carried out, proceed to box (19)</i>			
Number of storeys in the dwelling	2		(11)
Additional infiltration		[(11) - 1] × 0.1 =	N/A (12)
Structural infiltration: 0.25 for steel or timber frame or 0.35 for masonry construction			N/A (13)
If suspended wooden floor, enter 0.2 (unsealed) or 0.1 (sealed), else enter 0			N/A (14)
If no draught lobby, enter 0.05, else enter 0			N/A (15)
Percentage of windows and doors draught stripped	N/A		(16)
<i>Enter 100 in box (16) for new dwellings which are to comply with Building Regulations</i>			
Window infiltration		0.25 - [0.2 × (16) ÷ 100] =	N/A (17)
Infiltration rate		(10)+(12)+(13)+(14)+(15)+(17) =	N/A (18)
If based on air permeability value, then [$\frac{1}{10} \times (10) + (19)$] in box (19), otherwise (19) = (18)			0.68 (19)
<i>Air permeability value applies if a pressurisation test has been done or the design air permeability is being used</i>			

This draft SAP Worksheet report is for internal purposes only and should not be accepted as evidence of compliance by Building Control

Page 1 of 8

Step-by-step guide

Step 10: Appendix Q

Input Zenex GasSaver in to step one

Input boiler details

Input values from draf SAP worksheet.

Take value from appendix Q, to input into special features page

SAP Appendix Q calculation process for Flue Gas Heat Recovery System (FGHRS) or Passive Flue Gas Heat Recovery Device (PFGHRD)

SAP Assessment Reference

Step 1 : Record details of FGHRS (NB: Select the brand and model on worksheet "Select FGHRS")

FGHRS index number (taken from "Select FGHRS")	101	Box Q01
FGHRS brand name	Zenex GasSaver	
FGHRS model name	GS-1	
This FGHRS is intended for use with a boiler using the fuel	Mains gas	
This FGHRS is intended for use with a boiler of type(s)	No No Regular Combi (storage)	

Step 2 : Identify boiler and enter details in green cells below. Fuel and boiler type must match those for which the FGHRS is applicable, otherwise no savings will be credited.

Boiler brand name		
Boiler model name		
Fuel (select answer from box)	Mains gas	Box Q02
Boiler type (select answer from box) §	Combi instantaneous - no keep hot facility	Box Q03
Is it a condensing or non-condensing boiler? (select answer from box)	Condensing	Box Q04

§ If unsure of boiler type: if Q09 = 0 and Q08 > 0 then it is storage combi. For keep-hot status check your SAP calculator water heating section.

Step 3 : Enter data into the SAP calculator, ignoring any boiler efficiency adjustments in Table 4c (section 1). This means underfloor heating or load/weather compensation must not be selected.

Step 4 : Obtain data from the SAP calculator (box number in red) and enter in the green cells below.

Total floor area (m ²)	box (5)	71.37	Box Q05
Volume of hot water store (litres)† *	box (43)	0	Box Q06
Temperature factor‡	box (44b)	0	Box Q07
Water storage heat loss (kWh/year) † *	box (47)	0	Box Q08
Primary circuit heat loss (kWh/year) (select from answer from drop downbox) ‡	box (48)	0	Box Q09
Combi loss (kWh/year), if any, ‡	box (49)	573.66	Box Q10
Contribution from any solar water heating (not photovoltaic) ‡	box (50)	844.33	Box Q11
Space heating requirement (useful)	box (81)	4,436	Box Q12
Fraction of heat from secondary/supplementary system ‡	box (82)	0	Box Q13
Electricity used by keep hot facility ‡	box (87e)	0	Box Q14

† If box (41) is greater than zero obtain the volume from the same source as the manufacturers declared storage loss factor and not from box 43.

‡ A value must be entered even if it is zero. If the SAP calculator box is blank enter zero also.

* Q06 and Q08 must be either both zero (instantaneous combi) or both positive (regular or storage combi).

Step 5 : Results from the energy saving calculation are shown in the yellow boxes below. Copy them into the Special Features section of the SAP calculator, as indicated.

Energy saved (kWh), to be entered in box (95)	Box Q15	353 kWh
Fuel for the above	Box Q16	Mains gas
Additional energy consumed (kWh), to be entered in box (96)	Box Q17	0 kWh
Fuel for the above	Box Q18	Mains gas

IMPORTANT NOTES

(1) If the boiler brand or model is changed, the energy saving must be re-calculated.

(2) If an error message appears above, or the energy saving (Box Q15) is zero, then an assessment of savings cannot be made.

Errors are reported when not all input data has been entered, the FGHRS and boiler type are not compatible, floor area is less than 30m², and other consistency checks as indicated.

Version 5 - 27 Feb 2009

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Step 11: Special Features

Add in energy saved value from Appendix Q to complete calculation

Complete description as Zenex GasSaver and select mains gas.

The screenshot shows the 'SPECIAL FEATURES' dialog box in the NHER Plan Assessor software. The dialog has a title bar with 'NHER Plan Assessor' and a close button. The main title is 'SPECIAL FEATURES'. It contains several input fields: 'Description' with the text 'Zenex GasSaver', 'Energy saved/produced' with the value '365' and unit 'kWh/year', 'Applicable fuel' with a dropdown menu showing 'Mains gas', and 'Energy used' with the value '0' and unit 'kWh/year'. There is also an empty 'Applicable fuel' dropdown field. Below the input fields, there is explanatory text: 'This section is used in conjunction with the Appendix Q procedures described at www.sap-appendixq.org.uk' and 'The NHER calculation will not include special features that consume fuel not already used in the dwelling for other purposes.' At the bottom, there are 'OK' and 'Cancel' buttons.

Step 12: Results

Here is the page that shows the DER/TER saving

Code 3 achieved.

The screenshot shows the 'RESULTS' page of the NHER Plan Assessor - Alpha v1 software. The page has a menu bar with 'File', 'Application', 'Building Regs', 'Reports', 'Diagnosis', and 'Help'. Below the menu bar is a toolbar with icons for 'New', 'Open', 'Close', 'Save', 'Reports', 'PEA', 'Regs', and 'Errors'. The main content area is titled 'RESULTS' and is divided into several sections. On the left, there is a navigation tree with items like 'Job Details', 'Built Form', 'Floors', 'Walls', 'Roofs', 'Openings', 'Ventilation', 'Main Heating', 'Main Heating Details', 'Secondary Heating', 'Water Heating', 'Renewables', 'Lights & Appliances', 'Occupancy', 'Other', and 'Results'. The 'RESULTS' section contains the following data:

- SAP 2005 Assessment:** SAP 86 (band B), EI 86 (band B), CO2 emissions 1195 kg/yr. A 'View SAP Worksheet' button is present.
- Building Regs L1A Assessment:** DER 18.05 kg CO2/m²/yr, TER 24.36 kg CO2/m²/yr, Criterion 1 (CO2) ✓, Overall compliance ✓. A 'View Building Regs Report' button is present.
- Code for Sustainable Homes:** Level 3 achieved, 25.9% improvement over TER. Reduce DER by 4.41 to reach Level 4. A 'View CSH Report' button is present.
- NHER Assessment:** NHER -1. A 'View NHER Report' button is present.
- Annual CO2 Emissions:** CO2 emissions - kg/yr, CO2 emissions rate - kg/m²/yr.
- Annual Running Costs:** A table with columns 'Type', 'GJ/year', and '£/year'.

Technical data

SAP – Performance Technical Data

Solar Cylinder – Material		Stainless Steel
DHW Storage Cylinder Volume		91L
DBU Heat Exchanger – Material		Copper
Covers/Insulation Material		EPP
Global Warming Potential	GWP	Zero
Ozone Depletion Potential	ODP	Zero
Solar Cylinder Nominal Insulation Thickness		50mm
Standing Energy Loss of Solar Cylinder		0.92 kWh/24hr - 0.43 watts/litre
Energy Performance		3.5GJ/yr
Total Collector Surface Area		2.5m ²
Collector Aperture Area		2.27m ²
Aperture to Gross Collector Area Ratio		0.9
Zero Loss Collector Efficiency	(no)	74%
Collector Heat Loss Coefficient	(a1)	3.629W/m ² k

Alpha boiler efficiency and products of combustion data

Boiler Model	SEDBUK Efficiency			Combustion Data – Natural Gas – G20					
	Efficiency Band	Natural Gas SAP Seasonal Efficiency %	LPG SAP Seasonal Efficiency %	NOX			CO ²	CO	
				Class	PPM	Mg/kWh	%	PPM	Mg/kWh
CD32C	A	90.7	92.0	5	18	31	9.5	20	22
CD24C	A	90.7	91.8	5	31	55	9.2	23	25
CD24S	A	90.8	91.9	5	31	55	9.2	23	25
CD50	A	91.2	92.5	5	18	31	9.5	20	22
CD13R	A	90.1	91.1	5	19	34	9.2	14	15
CD18R	A	90.1	91.2	5	21	37	9.2	31	33
CD24R	A	90.3	91.3	5	18	32	9.2	24	26
CD18S	A	90.5	91.5	5	12	21	9.1	11	12
CD30S	A	90.4	—	5	22	39	9.6	22	24
CD25C	A	90.2	91.9	5	22	39	9.4	47	50
CD28C	A	90.3	91.6	5	21	36	9.3	28	30
CD35C	A	90.5	92.4	5	13	22	9.3	22	24
CD25X	A	90.1	91.3	5	22	39	9.4	15	16
CD28X	A	90.1	91.2	5	22	39	9.4	5	6
CD12S	A	90.1	91.2	5	13	23	9.4	8	9
CD20S	A	90.1	91.5	5	18	31	9.4	7	7
CD28S	A	90.1	91.6	5	20	35	9.4	8	8
CD50S	A	90.4	91.4	5	22	38	9.3	35	37
CD70S	A	90.0	91.3	5	8	14	9.4	43	46

Features

General	Combination					System			Regular			Storage Combi	System	
	CD25C	CD28C	CD35C	CD25X	CD28X	CD12S	CD20S	CD28S	CD13R	CD18R	CD24R	CD50	CD50S	CD70S
SEDBUK rating	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Lift weight (kg)	41	42	43	41	42	37	38	40	27	27	28	70	63	68
DHW flow rate (l/min)	9.6	11.4	14.2	9.6	11.4							18		
Max horizontal flue (m)	12	12	12	12	12	12	12	12	12	12	12	12	30	30
Max vertical flue (m)	15	15	15	15	15	15	15	15	15	15	15	15	30	30
Standard guarantee (years)	3	3	3	2	2	3	3	3	1	1	1	3	3	3

Boiler Dimensions

Height (mm)	720	720	720	720	720	720	720	720	600	600	600	900	950	950
Width (mm)	440	440	440	440	440	440	440	440	390	390	390	600	600	600
Depth (mm)	300	300	300	300	300	300	300	300	305	305	305	450	525	525

Installation Clearances (relative to the casing)

Above (mm)	235	235	235	235	235	235	235	235	235	235	235	220	350	350
Below (mm)	250	250	250	250	250	250	250	250	100	100	100	250	250	250
Side (mm)	5	5	5	5	5	5	5	5	5	5	5	10	10	10
Front (mm)	450	450	450	450	450	450	450	450	450	450	450	450	450	450

GasSaver compatible

	•	•	•	•	•	•	•	•	•	•	•	•		
--	---	---	---	---	---	---	---	---	---	---	---	---	--	--

SolarSmart compatible

	•	•	•	•	•							•		
--	---	---	---	---	---	--	--	--	--	--	--	---	--	--

Features

Stainless steel heat exchanger	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Seasonality Valve	•	•	•											
Built-in filling loop	•	•	•									•		
Factory fitted valves and copper tails	•	•	•	•	•	•	•	•						
Pipes clip distance from the wall	•	•	•	•	•	•	•	•				•		
Pre-wired	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Electronic ignition	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Anti-cycling device	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pump overrun on heating	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Daily pump kick	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Frost thermostat	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Fully modulating burner	•	•	•	•	•	•	•	•	•	•	•	•	•	•
One man lift									•	•	•			
Cyclone protection	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹						
Earth bonding plate	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹						
Rear piping	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹						
Split flow tails	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹	• ¹						

¹ When fitted with optional PremierPack

Head Office:

Nepicar House
London Road
Wrotham Heath
Kent
TN15 7RS

Scotland:

Unit 8
Crest Business Centre
2 Glen Tye Road
Stirling
FK7 7LH

Ireland:

Alpha Therm (Ireland) Ltd
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Useful numbers:

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