Dunster Wood Boilers Ltd.

Throughout the year Dunster Wood Boilers Ltd will be holding Training Seminars. The dates for these will be published on our website.

A side section of the new Akvaterm Solar Plus Thermal Storage Tank, showing the internal copper heat exchange coils.

Mr Juho Nuosmaa on the right, the Export and Technical Development Director of Akvaterm at a Training Day, at Dunster.

For All Enquiries:
www.dunsterwoodboilers.co.uk Email:dunsterwoodboilers@hotmail.co.uk
Tel. No. (01643) 709009

VAT No. 992 141709

 Ref: 12/12/2011

Dunster Wood Boilers Ltd.

Affordable Renewable Sustainable Heating

Vigas Log Fired Central Heating Boilers and Akvaterm Accumulator Tanks

The Answer To Your Burning Question.

Loxhole Sawmills, (A39) Dunster, Minehead, Somerset TA24 6NY
www.dunsterwoodboilers.co.uk
Email: dunsterwoodboilers@hotmail.co.uk
Tel No. (01643) 709009 Mob No. 07970 737308

Dunster Wood Boilers Ltd
The Answer To Your Burning Question

We are pleased to offer the full range of Vigas log fired central heating boilers. The models range from 25kW to 80kW in nominal output. All boilers employ the latest “gasification down burning” technology, and have sophisticated electronic controls to ensure maximum efficiency and minimum emissions. All models comfortably exceed the best performance class EN303-5, The British Standard governing solid fuel boilers. This is true for both efficiency and emissions.

Vigas 25kW Log Boiler Cross Section View

The boiler is supplied with a clear installation and maintenance manual with cleaning tools. The AK 2000 controller is equipped with a full function display and comes with three built in programmes, but the user may enter up to six additional programmes to suit particular needs and any of the programmes may be selected at any time.

The manufacturer’s full guarantee extends for the first full year’s time in service, not to exceed 24 months from date of purchase. To get the maximum benefit from your wood burning boiler we recommend the use of Akvaterm accumulator tanks.

Please see separate sheet for specifications.

For further information and prices contact Dunster Wood Boilers on
(01643) 709009.
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Email:dunsterwoodboilers@hotmail.co.uk

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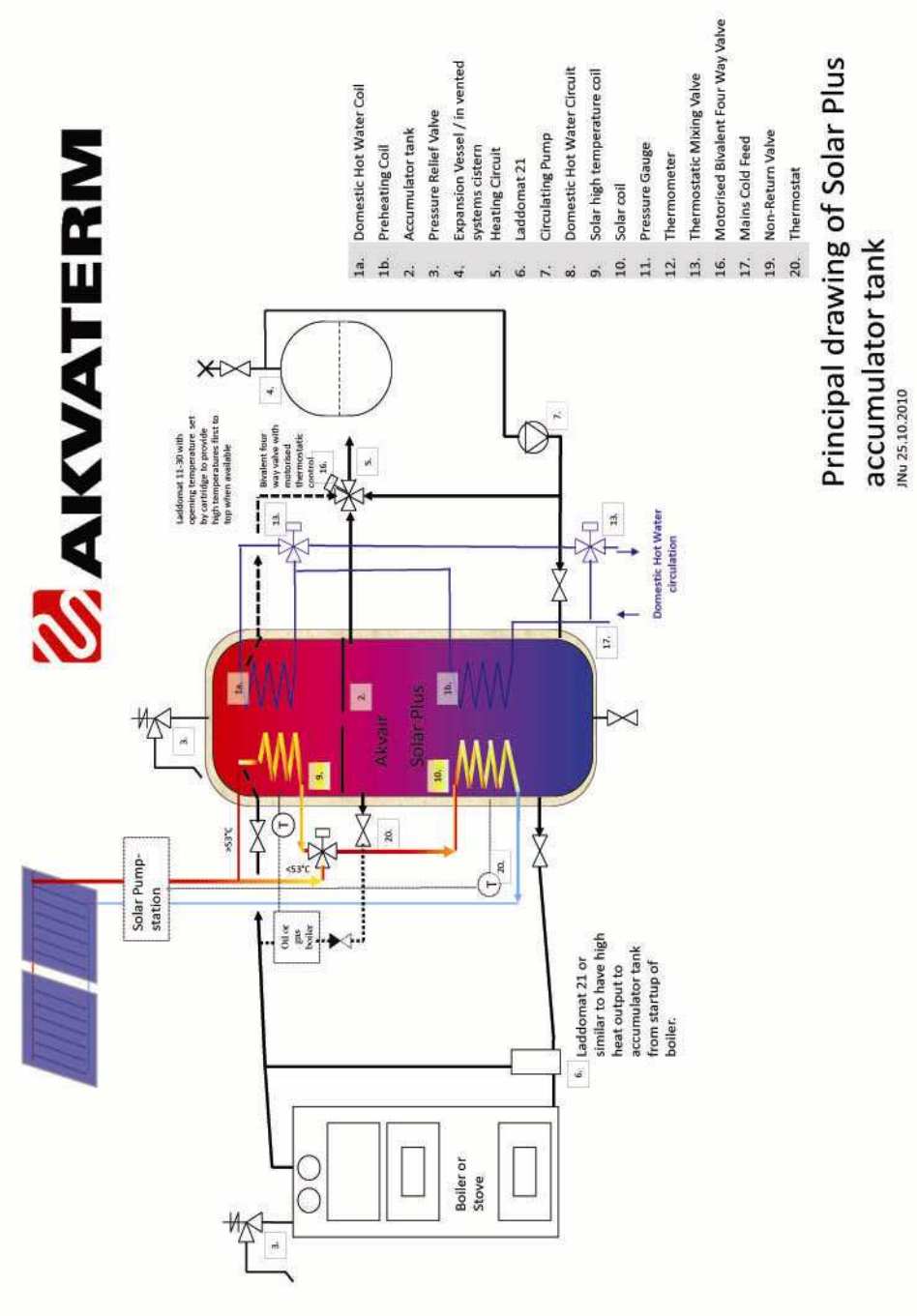

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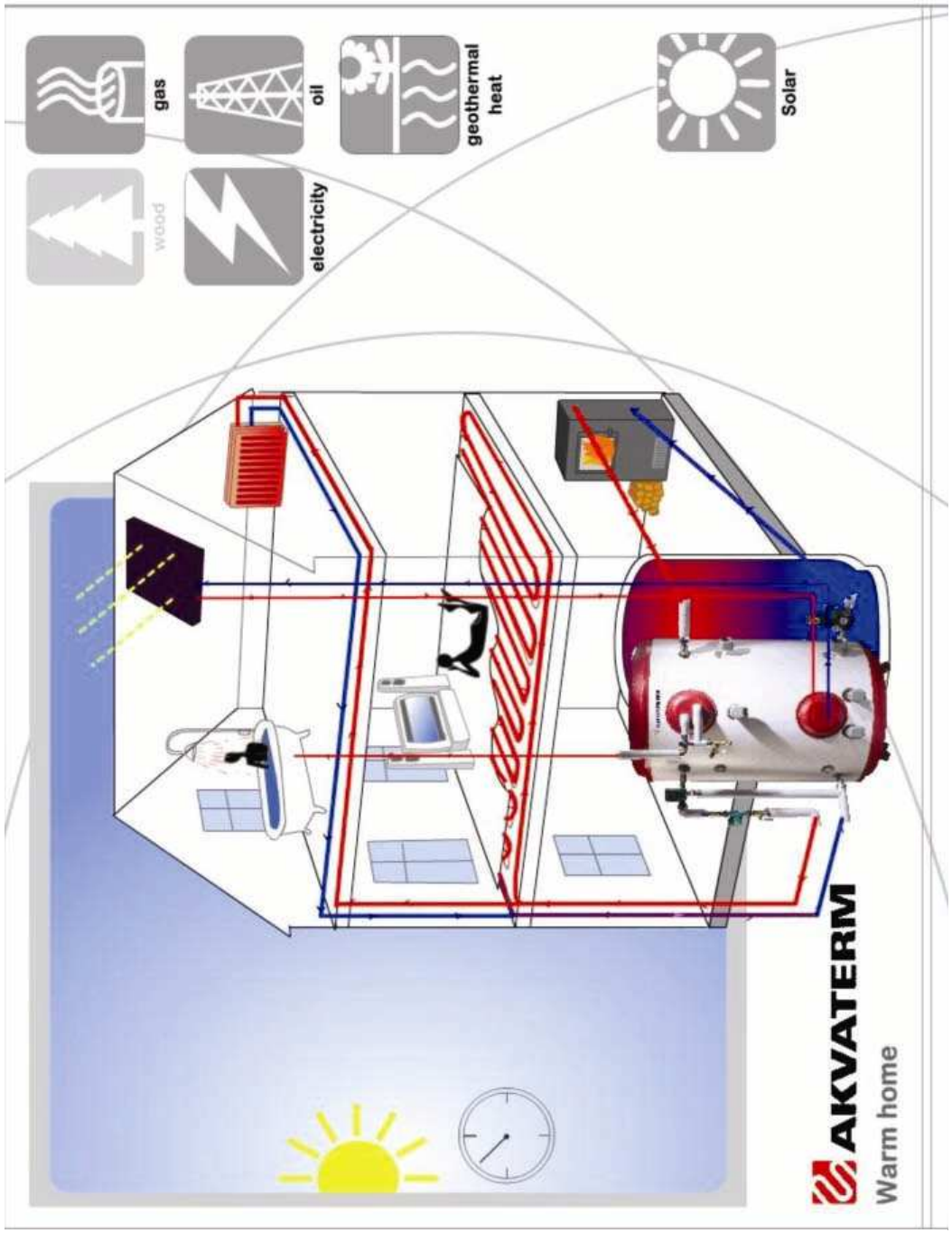

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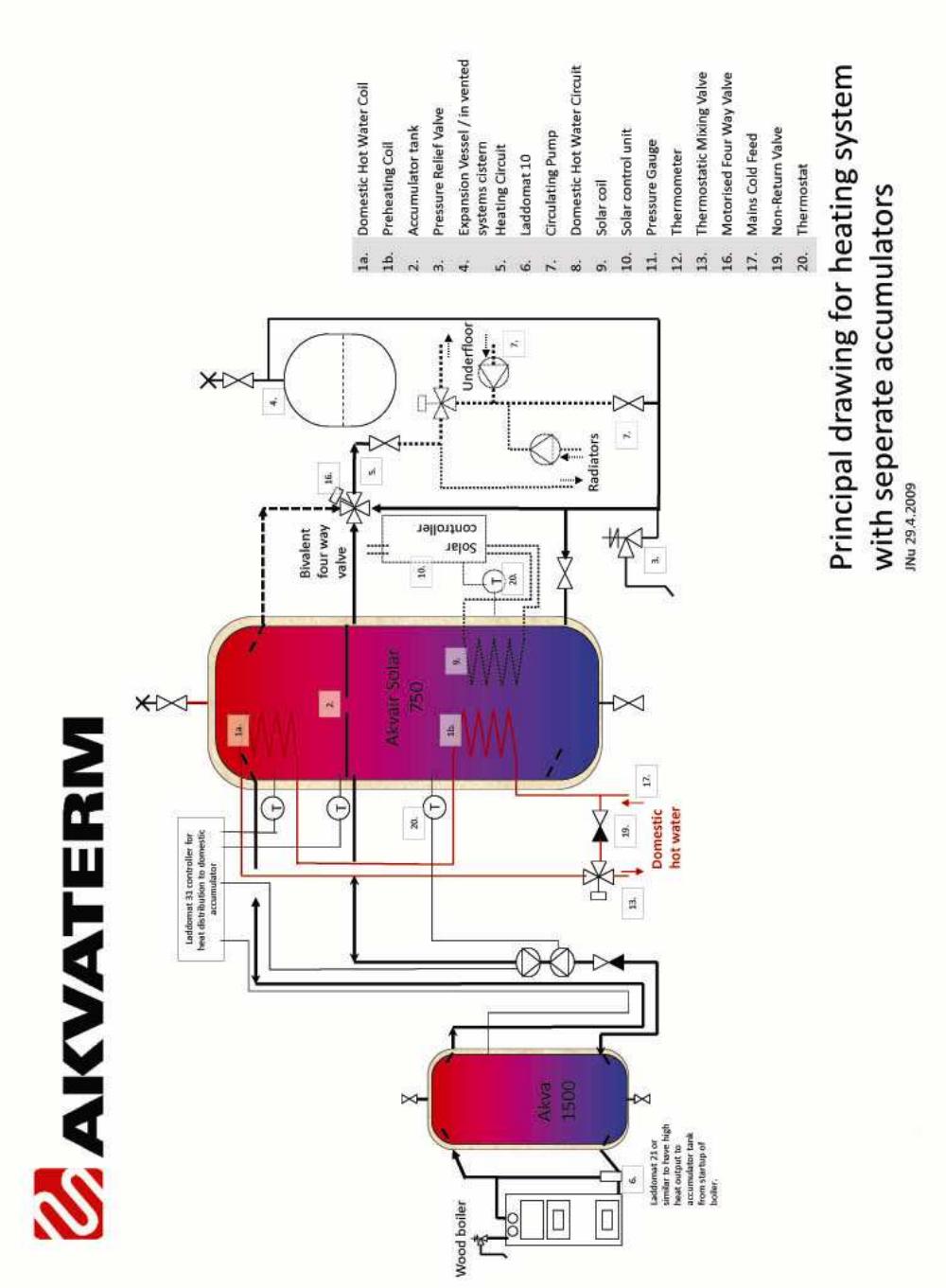
The specifications for Vigas Models 16s, 25s, 40s, 60s, 80s & 100s (16s, 25s & 40s also available with Lamda Control).

Nominal output	16kW	25kW
Range of output	12-18 kW (50,000 btu)	5-31 kW (76,200 btu)
Fuel	Hardwood/softwood logs less than 20% moisture content.	Hardwood/softwood logs less than 20% moisture content.
Fuel consumption	4.5 kg/hr	7.6 kg/hr
Fuel hopper	80 litre	120 litre
Log length	500mm –550mm	500mm –550mm
Boiler: Height	1135mm	1120mm
Width	645mm	645mm
Depth	840mm	1070mm
Hearth: Width	Width + 300mm either side	Width + 300mm either side
Depth	Depth + 600mm in front	Depth + 600mm in front
Weight	400kg	430kg
Power requirements	230v, 70W	230v, 70W
Max electrical input	70W	70W
Voltage/frequency	230ACV/50 Hz	230ACV/50 Hz
Max operating pressure	3 bar	3 bar
Flue	159mm (6”)	159mm (6”)
Chimney draught	0.2— 0.25 mbar	0.2—0.25 mbar
Flue gas temperature	150º C - 240º C	150º C - 240º C
Emissions	CO<0.2% NO<0.01%	CO<0.2% NO<0.01%
Gasification chamber	370(d) x 490(h) x 440mm(w)	560(d) x 490(h) x 440mm(w)
Door aperture	435(w) x 255mm(h)	435(w) x 255mm(h)
Flow & return	2” BSP	2” BSP
Inlet pipe height	115mm	115mm
Outlet pipe height	1045mm	1045mm
Water temperature	40ºC - 90ºC	40ºC - 90ºC
Volume of water	60 litres	75 litres
Efficiency	85%	85%
Lamda Control	Optional Extra on the 16s, 25s and 40s Models	

3.

Nominal output	40kW	60kW
Range of output	8-41 kW (122,000 btu)	15-72 kW (183,000 btu)
Fuel	Hardwood/softwood logs less than 20% moisture content.	Hardwood/softwood logs less than 20% moisture content.
Fuel consumption	11.2 kg/hr	19 kg/hr
Fuel hopper	185 litre	315 litre
Log length	500mm –550mm	700mm –750mm
Boiler: Height	1370mm	1420mm
Width	645mm	785mm
Depth	1070mm	1260mm
Hearth: Width	Width + 300mm either side	Width + 300mm either side
Depth	Depth + 600mm in front	Depth + 600mm in front
Weight	460kg	760kg
Power requirements	230v, 70W	230v, 140W
Max electrical input	70W	140W
Voltage/frequency	230ACV/50 Hz	230ACV/50 Hz
Max operating pressure	3 bar	3 bar
Flue	194mm (8”)	194mm (8”)
Chimney draught	0.2—0.35 mbar	0.2—0.35 mbar
Flue gas temperature	150º C - 240º C	150º C - 240º C
Emissions	CO<0.2% NO<0.01%	CO<0.2% NO<0.01%
Gasification chamber dimensions	560(d) x 750(h) x 440mm(w)	750(d) x 730(h) x 575mm(w)
Gasification opening dimensions	435(w) x 255mm(h)	575(w) x 318mm(h)
Connections: flow & re-turn	2” BSP	2” BSP
Inlet pipe height	125mm	215mm
Outlet pipe height	1310mm	1400mm
Water temperature	40ºC - 90ºC	40ºC - 90º C
Volume of water	93 litres	180 litres
Efficiency	84%	82%

20.



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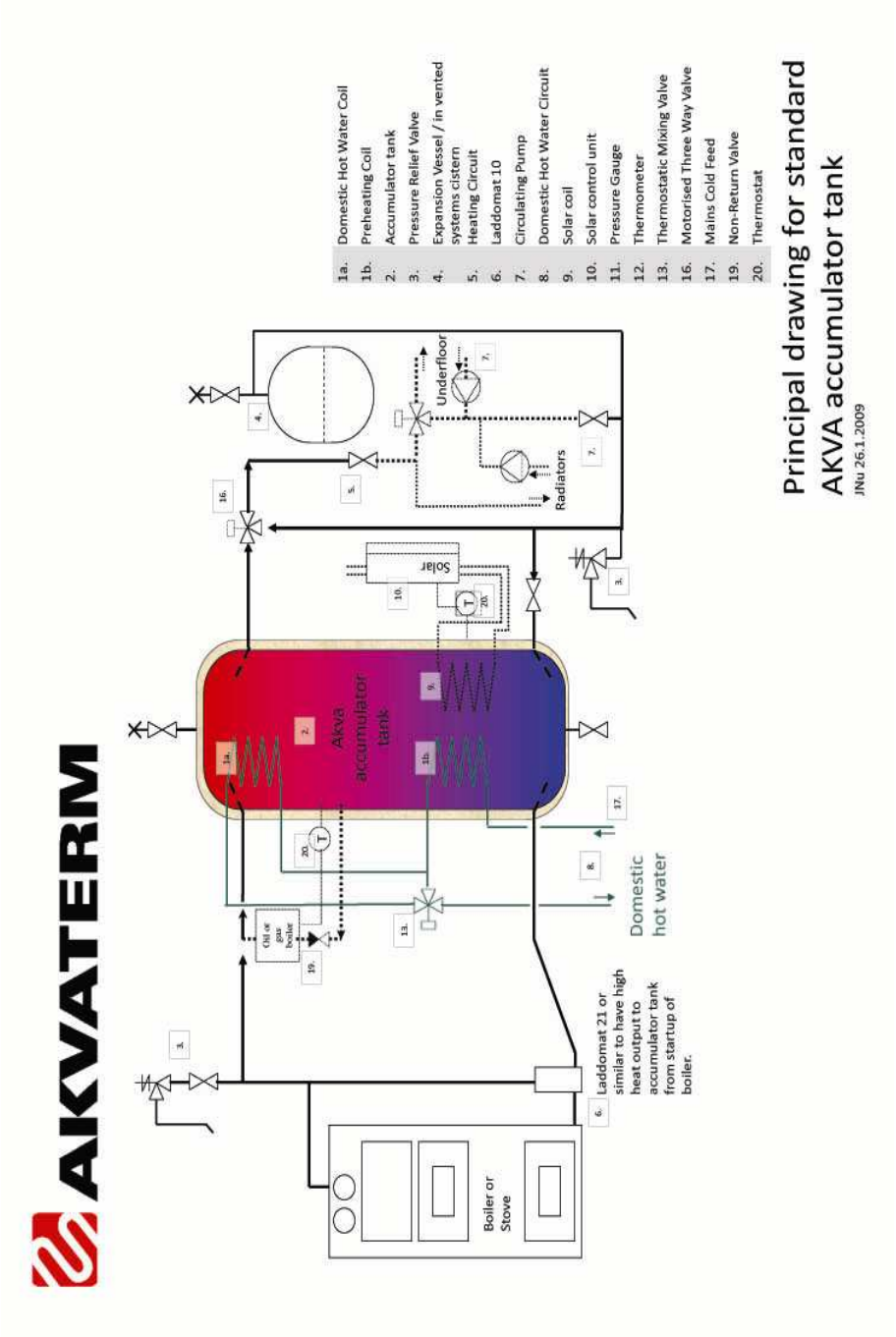

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Nominal output	80kW	100kW
Range of output	25-92 kW (244,000 btu)	25-100 kW (310000 btu)
Fuel	Hardwood/softwood logs less than 20% moisture content.	Hardwood/softwood logs less than 20% moisture content.
Fuel consumption	25 kg/hr	30.4 kg/hr
Fuel hopper	483 litre	457 litre
Log length	1100mm –1150mm	900mm
Boiler: Height	1420mm	1420mm
Width	785mm	785mm
Depth	1650mm	1650mm
Hearth: Width	Width + 300mm either side	Width + 300mm either side
Depth	Depth + 600mm in front	Depth + 600mm in front
Weight	930kd	950kd
Power requirements	230v, 140W	230v, 140W
Max electrical input	140W	140W
Voltage/frequency	230ACV/50 Hz	230ACV/50 Hz
Max operating pressure	3 bar	3 bar
Flue	194mm (8”)	194mm (8”)
Chimney draught	0.3—0.4 mbar	0.3—0.4 mbar
Flue gas temperature	150º C - 240º C	150º C - 240º C
Emissions	CO<0.2% NO<0.01%	CO<0.2% NO<0.01%
Gasification chamber dimensions	1150(d) x 730(h) x 575mm (w)	1190(d) x 730(h) x 575mm(w)
Gasification opening dimensions	575(w) x 318mm(h)	575(w) x 318mm(h)
Connections: flow & re-turn	2” BSP	2” BSP
Inlet pipe height	215mm	215mm
Outlet pipe height	1400mm	1400mm
Water temperature	40º C - 90º C	40º C - 90º C
Volume of water	205 litres	215 litres
Efficiency	82%	82%

Dunster Wood Boiler Ltd

The New Vigas AK3000 Log Burning Boiler
Affordable Renewable Sustainable Heating

Each pack comprises:

Vigas Boiler (output as indicated) with Lambda Control
Akvaterm Thermal Store (size as indicated) c/w 1 LK35, 1.5 bar
TS130 Thermal Mechanical Safety Valve
Flue Thermostat
1.5 bar Pressure Relief Valve
Laddomat 21-60 (or equivalent)
Safety Group
Moisture Meter

Lambda Control Pack with the 16s, 25s & 40s Models		
Vigas 16s	**Vigas 25s**	**Vigas 40s**
POA with 750 Lt Thermal Store	**POA** with 1000 Lt Thermal Store	**POA** with 1500 Lt Thermal Store
POA with 1000 Lt Thermal Store	**POA** with 1500 Lt Thermal Store	**POA** with 2000 Lt Thermal Store
POA with 1500 Lt Thermal Store	**POA** with 2000 Lt Thermal Store	**POA** with 2500 Lt Thermal Store

Prices + VAT & Delivery (subject to change).
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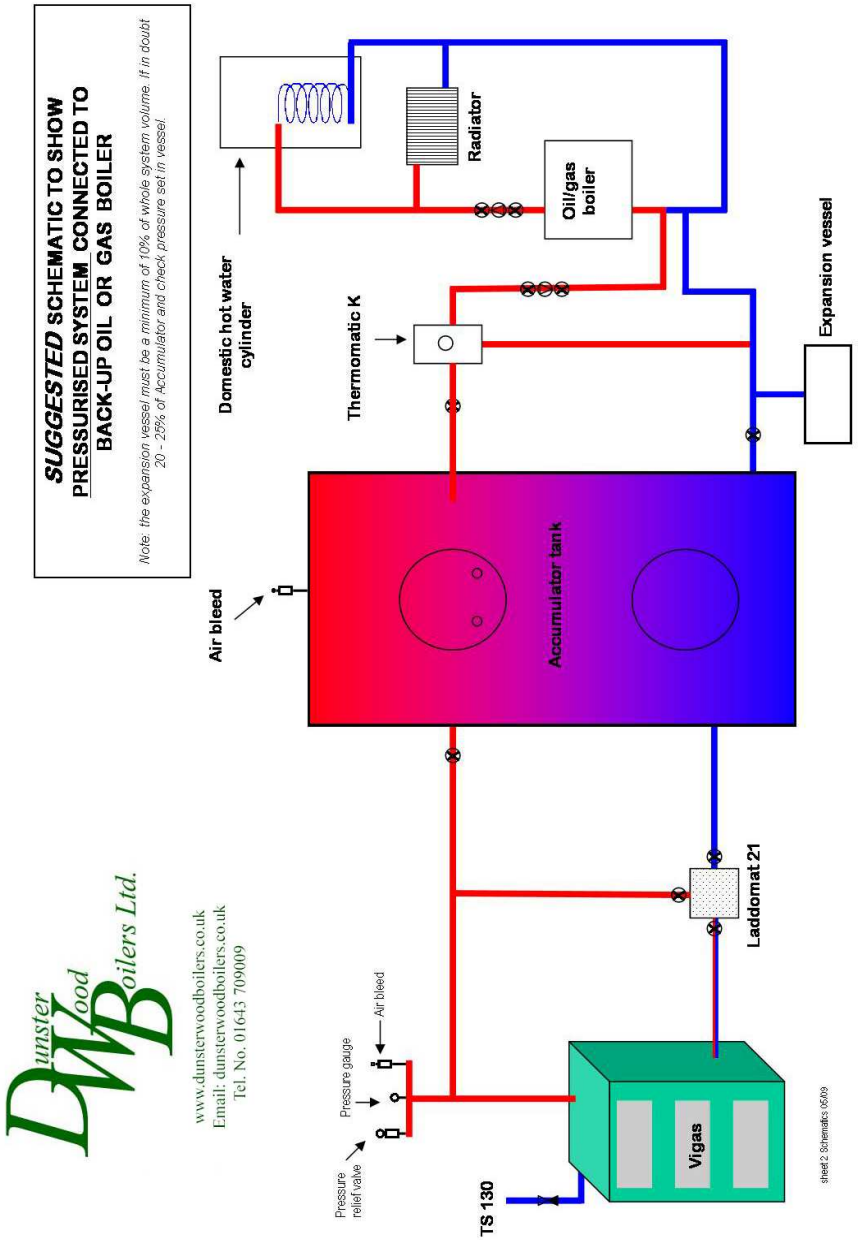

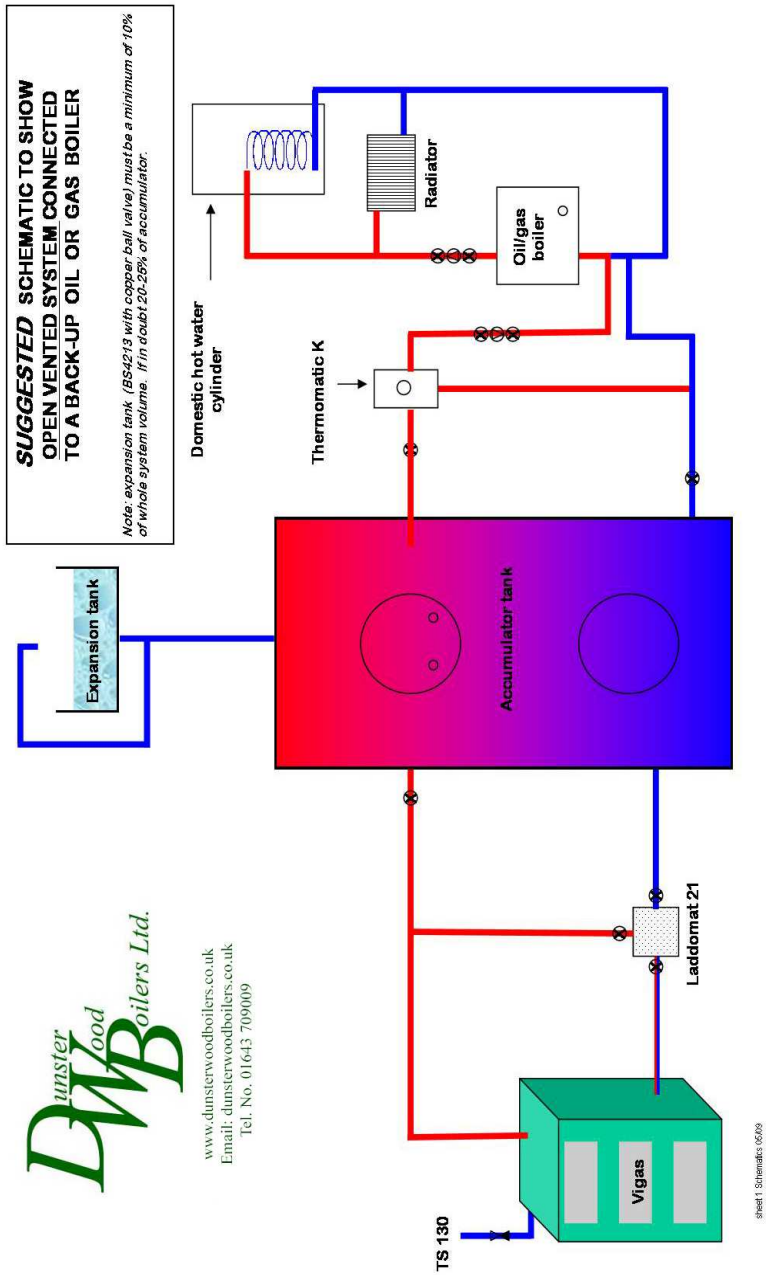

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Laddomat 21-60 (or equivalent)
Safety Group
Moisture Meter

25s, 40s, 60s, 80s, & 100s Models without Lambda Control

Vigas 25s	Vigas 40s	Vigas 60s
POA with 1000 Lt Thermal Store	**POA** with 1500 Lt Thermal Store	**POA** with 2000 Lt Thermal Store
POA with 1500 Lt Thermal Store	**POA** with 2000 Lt Thermal Store	**POA** with 2500 Lt Thermal Store
POA with 2000 Lt Thermal Store	**POA** with 2500 Lt Thermal Store	**POA** with 3000 Lt Thermal Store
		POA with 4000 Lt Thermal Store

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Affordable Renewable Sustainable Heating

Each pack comprises:

Vigas Boiler (output as indicated)
Akvaterm Thermal Store (size as indicated) c/w 1 LK35, 1.5 bar
TS130 Thermal Mechanical Safety Valve
Flue Thermostat
1.5 bar Pressure Relief Valve
Laddomat 21-60 (or equivalent)
Safety Group
Moisture Meter

Vigas 80s	Vigas 100s
POA 1.5 Bar with 3000 Lt Thermal Store	**POA** 3 Bar with 4000 Lt Thermal Store
POA 3 Bar with 4000 Lt Thermal Store	**POA** 3 Bar with 5000 Lt Thermal Store
POA 3 Bar with 5000 Lt Thermal Store	**POA** 3 Bar with 6000 Lt Thermal Store

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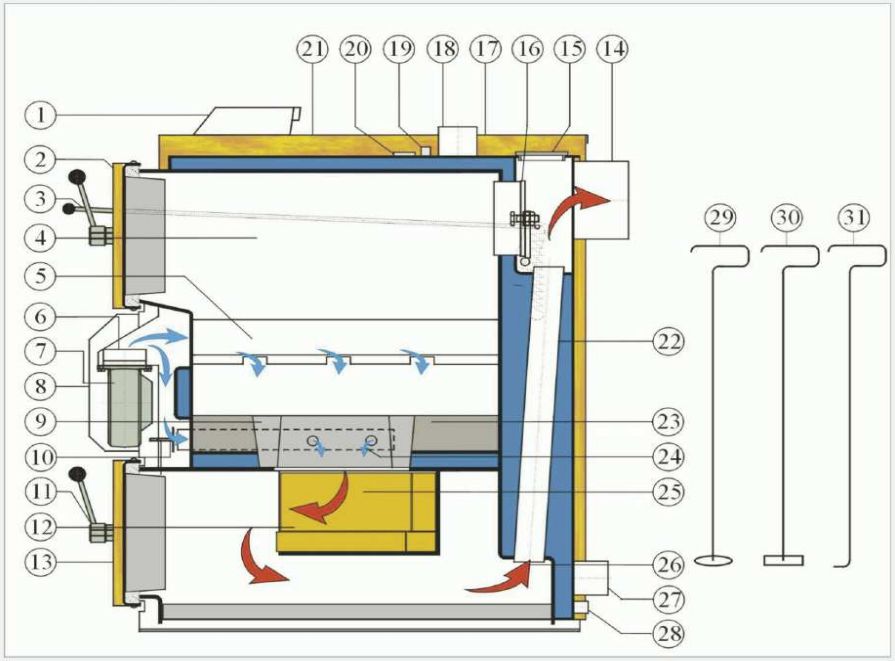
1. AK 2000 controller
2. Upper door
3. Chimney flap operation rod
4. Fuel chamber
5. Primary air
6. Fan flap
7. Fan
8. Fan cover
9. Heat proof/concrete/nozzle
10. Secondry air screen
11. Door handle
12. Fireclay bricks
13. Bottom door
14. Chimney neck
15. Exchanger cover
16. Lighting up damper
17. Upper back cover
18. Outlet water
19. Upper front cover
20. Thermometer
21. Thermal fuse
22. Exchanger pipes
23. Heat proof/concrete/filling
24. Secondry air
25. Combustion chamber
26. Direction of waste gases
27. Return water
28. Filling inlet
29. Cleaning plate
30. Cleaning scraper
31. Cleaning hook



SECTION OF VIGAS LOG BOILER
SHOWING DOWN BURNING TECNOLOGY

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Vigas Boilers Information Sheet

Vigas boilers are designed to burn dry wood material from sawdust to logs. Differing moisture content and size of fuels will affect efficiency heat output and the length of burning time. During gasification the quantity of released gas depends on the size and surface area of the fuel. The greater the surface area the bigger the volume of gas produced.

Hardwoods are gasified more slowly than softwoods and generally burn for a greater length of time. It is possible to gasify all kinds of wood in Vigas boilers however, **the optimum moisture content should not exceed fifteen to twenty percent.**

A rule of thumb for timber consumption in the UK for is ½ tonne/kW/pa, therefore a 25kW boiler would require approximately 10-15 tonnes pa.

Split logs cut to half metre lengths ready to charge a Vigas 25kW or 40kW log burning boiler.

Ideal moisture content of split logs 20% or less.

The AK 2000 electronic control system for the Vigas Boiler.

The AK2000 unit has a programme which allows you to set a constant heat for the accumulator. The AK2000 will indicate when fuel is low or when the boiler has closed down. Should malfunction occur the AK2000 unit is able to carry out a self-analysis fault programme displaying the relevant problem. The electronic control of the AK2000 monitors change of temperature and will increase or decrease the speed of the air induction fan continuously during the process of gasification or combustion.

Technical description of Vigas Boilers

Vigas boilers are constructed from special boiler steel sheet of 4 and 6 mm thickness. All areas of the boiler directly in contact with fuel or combustion products are constructed of 6mm sheet, whilst all other parts of the boiler are constructed of 4mm sheet. The heat exchange section of the boiler is constructed of welded steel pipe.

The floor of the log magazine is constructed of refractory concrete material. Replaceable fireclay moulded bricks are used to line the combustion chamber. The boiler is insulated from the outer casing by an insulating material (Nobasil).

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AKVA Standard Accumulator Tank

AKVA 1500 EK

Capacity 300-5000 litres. The insulation is 100mm seamless polyurethane faced with steel sheet. Detachable side panels are also an option. An uninsulated accumulator tank coated with corrosion protection paint can also be delivered. The upper hatch has a standard hot water coil.
A domestic hot water pre-heating coil, a solar heating coil, heat collector exchanger and other units can be placed in the lower hatch. Below are 2” ports for the electrical resistors used during the night. The resistors used during the day are in the centre, and built-in guide pipes ensure the proper layering of heat.

EK = Insulated and with one coil. Diameter 200mm smaller without insulation. E = Insulated.

MODEL	DIAMETER mm	HEIGHT mm	WEIGHT kg	RESISTOR UNITS
AKVA 300 EK	710	2050	130	2
AKVA 500 EK	800	2050	155	2
AKVA 750 EK	950	2050	200	2
AKVA 1000 EK	1050	2100	230	2
AKVA 1500 EK	1250	2150	280	3
AKVA 2000 EK	1400	2200	330	4
AKVA 2500 EK	1500	2250	360	4
AKVA 3000 EK	1600	2300	400	4
AKVA 4000 EK	1800	2350	480	6
AKVA 5000 EK	2000	2500	600	6

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AKVANTTI Oval Accumulator Tank 1.5 BAR

AKVANTTI 2000 EK

AKVANTTI 1400 EK

For new constructions and renovations. Capacities 1400 litres, 2000 litres and 2400 litres. The most efficient hot water coil on the market (45 litres per min), also available without a domestic hot water coil. The depth is only 810mm.

EK = Insulated with one coil. E = Insulated.

MODEL	HEIGHT/WIDTH mm	DEPTH mm	WEIGHT kg	RESISTOR UNITS
AKVANTTI 1400 EK	1660/1630	810	420	3
AKVANTTI 1400 EK	1660/1630	810	410	3
AKVANTTI 2000 EK	1840/2060	810	500	4
AKVANTTI 2000 EK	1840/2060	810	490	4
AKVANTTI 2400 EK	2160/2060	810	560	4
AKVANTTI 2400 EK	2160/2060	810	550	4

Prices + VAT & Delivery (subject to change).
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Dunster Wood Boilers Ltd
Accumulator Tank & Accessories
Price List July 2011

ACCESSORIES	£
Laddomat 21-60 charging unit Laddomat 21-100 charging unit	307.30 353.00
Laddomat 31 charging unit	409.00
Flue thermostat	44.80
3 way 61ºC thermovar mechanical valve	65.95
Thermomatic K motorised blender (combined price £365.90)	283.75
3 way blender valve for use with Thermomatic K (25mm or 32mm)	82.15
Safety Group: 3 bar prv; pressure gauge and automatic air bleed	52.00
TS130 thermo mechanical safety valve	89.60
4½kW and 3kW electric immersion elements single or 3 phase. (6kW single or 3 phase & 9kW 3 phase)	POA
Thermometer (63mm short stem)	20.50
Removable sides (reduces tank diameter by 200mm—for areas with restricted access)	From 105.00
1.5 bar pressure relief valve	22.40
V25 exhaust fan	278.80
V80 exhaust fan	298.75
Red nose + insulation disc	22.45
63º; 72º; 78º; 83º; 88º widgets (waxed thermostatic cartridges ref Laddomat 21)	26.90

Prices quoted are ex yard, ex VAT and may be subject to alteration without prior notice.
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Dunster Wood Boilers Ltd
Accumulator Tank & Accessories
Price List July 2011

AKVA AIR SMART TANK HEAT & STYLE FOR INDOOR SPACES	
240 Litre	£1780.00
500 Litre	£2135.00

AKVASAN RETRO FIT TANK 1.5 bar. Single Coil.	
0.5 (500 Litre)	£1340.00
0.7 (700 Litre)	£1390.00

AKVATERM HEATING COILS (rated 10 bar)
Tanks supplied with extra hatch for 2nd coil if required.

Model	Length mm	Diam mm	Coupling	Rating KW	Price £
LK35	750	160	¾ inch	90	265.00
LK45	750	460	¾ inch	120	370.00
LK60	1250	160	1 inch	150	560.00
LK80	900	250	1 ¼ inch	205	900.00
Twin Coil	750	2 x 35	¾ inch	2 x 90	640.00
LK100	1000	300	1 ½ inch	255	1195.00
LK120	1100	300	2 inch	310	1480.00
LK140	1100	300	2 inch	358	POA
LK160	1100	300	2 inch	410	POA

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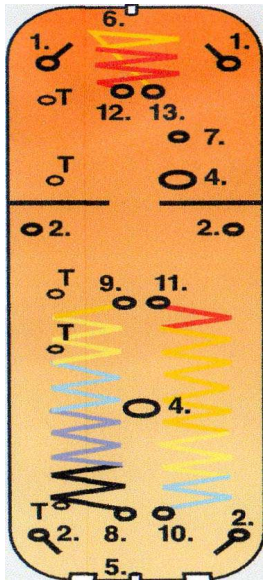
SOLAR Accumulator Tanks 3.0 BAR

AKVAIR SOLAR



500, 750, 1000

	SIZE	PURPOSE
1.	1 ¼”	From boiler/to central heating
2.	1 ¼”	From central heating/to boiler
4.	2”	Immersion heater
5.	1”	Drain coupling or to boiler
6.	1”	Bleed
7.	¾”	Thermostat or thermometer unit
T.		Thermostat pocket

COIL CONNECTIONS		
8.	Ø18	Output solar
9.	Ø18	Input solar
10.	Ø22	Input (mains), DHW preheat
11.	Ø22	Output, DHW preheat
12.	Ø22	Input, DHW
13.	Ø22	Output, DHW

MODEL (SOLAR)	DIAMETER mm	HEIGHT mm	COILS	INSULATION mm
AKVAIR 300	650	2050	LK + Solar Coil	70 seamless urethane
AKVAIR 500	800	2050	2 x LK + Solar Coil	100 seamless urethane
AKVAIR 750	950	2100	2 x LK + Solar Coil	100 seamless urethane
AKVAIR 1000	1050	2100	2 x LK + Solar Coil	100 seamless urethane

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AKVASAN Renovation Accumulator Tank

AKVASAN 0.7 EK

AKVASAN 0.7 E

MODEL	DIAMETER mm	HEIGHT mm	WEIGHT kg	RESISTOR UNITS
AKVASAN 0.5 EK	810	1550	1`30	2
AKVASAN 0,.5 E	810	1550	120	1
AKVASAN 0.7 EK	810	2050	160	2
AKVASAN 0.7 E	810	2050	150	1

Developed for constrained spaces and narrow openings, this model's diameter is only 800mm. The AKVASAN 0.5 series is particularly compact; the advantages of the efficient cylinder format have been retained.

The insulation is the same as in the standard accumulator tanks, but its thickness is 50mm due to smaller surface area. The EK models are equipped with hot water coil, as well as daytime and night time resistor ports. When further equipped with an electric resistor, its characteristics make it an excellent domestic hot water heater.

EK = Insulated with one coil. E = Insulated.

Accumulator Tank & Accessories Price List July 2011

AKVA EK STANDARD Accumulator Tank		
With 1 Coil LK35	**1½ bar**	**3 bar**
300 litre	£1325.00	£1445.00
500 litre	£1385.00	£1505.00
750 litre	£1510.00	£1630.00
1000 litre	£1810.00	£1930.00
1500 litre	£2085.00	£2460.00
2000 litre	£2295.00	£2805.00
2500 litre	£2435.00	£2975.00
3000 litre	£2645.00	£3215.00
4000 litre	£3580.00	£4205.00
5000 litre	£4975.00	£5945.00
6000 Litre	-	£7095.00
7500 Litre	-	£8365.00
10,000 Litre	-	£10,755.00

AKVANTTI OVAL Accumulator Tank 1.5 bar only. Single Coil LK45.	
1400 Litre	£2780.00
2000 Litre	£3290.00
2400 Litre	£4110.00

AKVATERM ACCUMULATOR TANK
(complete with LK35 and insulated as standard)
Tanks up to 10 bar can be supplied to special order POA
Tanks can be supplied with extra hatch for extra coils POA

AKV Air SOLAR Accumulator Tank 3 bar only.		Solar Plus
300 Litre (1x LK35 + solar coil)	£1340.00	£1675.00
500 Litre (2x LK35 + solar coil)	£2200.00	£2645.00
750 Litre (2x LK35 + solar coil)	£2325.00	£2775.00
1000 Litre (2x LK35 + solar coil)	£2640.00	£3085.00

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