

Gassero

technology for your comfort

ANNYEONGHASHI
MARABA
PAIVAA

ВОК

OSIYO

HALITO

Goudendai

GUJENTAKH

NEIHOU

Mohi

KONTAKTY

ALUM

KONNICHWA
HALO

DOEDEI

TJKE

工

BON

ALPHA

Tous

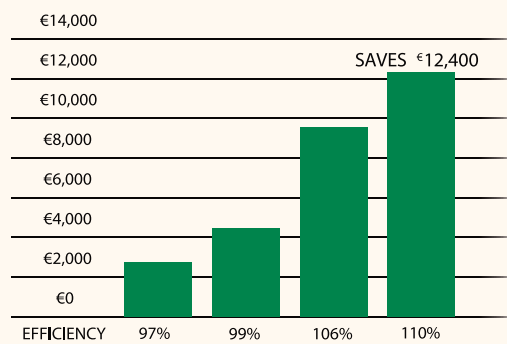
VITAYU

PAREV





3 - Year Fuel Savings



Ultrabox 210 - 765kW



A penny saved is a penny earned.

What if we would tell you that Ultrabox is the most efficient boiler in it's class? It operates on wide range of flow rates with low pressure drop.

Incredible automation. Built-in

Upto 16 boilers cascade sequencing with no extra equipment needed. In addition to one heating circle and DHW, each boiler controls upto 3 additional heat circles (zone control).

Automatic frost protection, built-in time program per each day of the week, weekdays, weeks or weekends. Just set and forget.

16

Boiler Cascade Sequencing

1:8

Modulation Ratio

Safe and reliable

Each boiler is equipped with state of the art technology available today.

Every second 9 sensors are monitoring boiler's operation feeding data to 31 safety subsystems.

%110

Annual Average Efficiency

Cutting Edge
Fire Tube
Design

ΔT = 40°C

11bar

Working Pressure

Smallest Footprint

0,70m2

0mm

Side Clearance

34 mg/kW

NOx

Installers best friend

Unparalleled installation flexibility. With zero side clearance the installed footprint is upto 30% smaller than competitive boilers.

Total control across the Globe

Keeps you in complete control across the country or across the world thanks to the web-server connectivity feature.

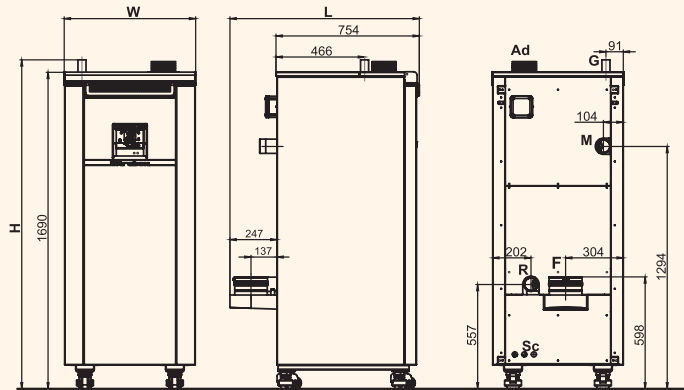


Model Name	Heat Output 50/30 °C Min kW	Heat Output 50/30 °C Max kW	Thermal Efficiency % 50/30 °C	Thermal Efficiency % 80/60 °C	Turndown Ratio	Nox Class
Ultrabox 210	32,6	212,1	107,22	97,9	1:7	5
Ultrabox 255	37,7	256,5	107,26	97,8	1:7	5
Ultrabox 420	32,6	424,3	107,22	97,7	1:13	5
Ultrabox 465	32,6	468,6	107,24	97,85	1:15	5
Ultrabox 510	37,7	513	107,26	97,8	1:14	5
Ultrabox 570	37,7	574,3	107,37	97,91	1:16	5
Ultrabox 765	37,7	769,5	107,26	97,8	1:21	5

*Information subject to change without notice

Ultrabox 210-765 kW

Dimentions & Connections



ULTRABOX 210/255/315

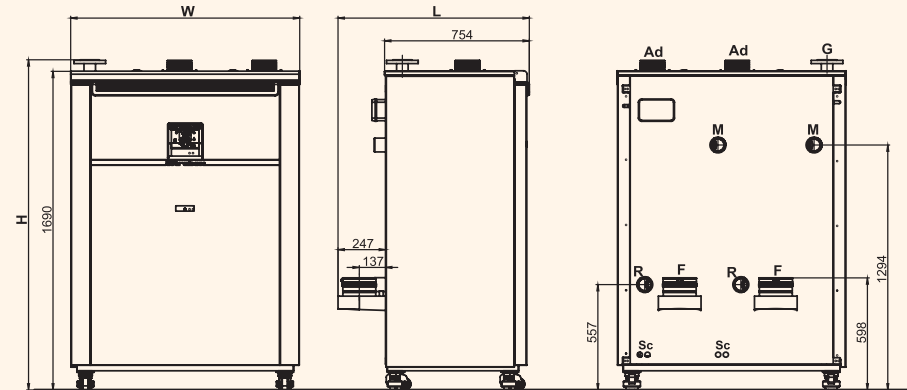
M : Water outlet connection: 2 1/2"

R : Water inlet connection: 2 1/2"

W : 690 L : 995 H : 1750

F : Flue diameter: Ø170 mm

G : Gas inlet: 1 1/4"



ULTRABOX 420/465/510/570/630

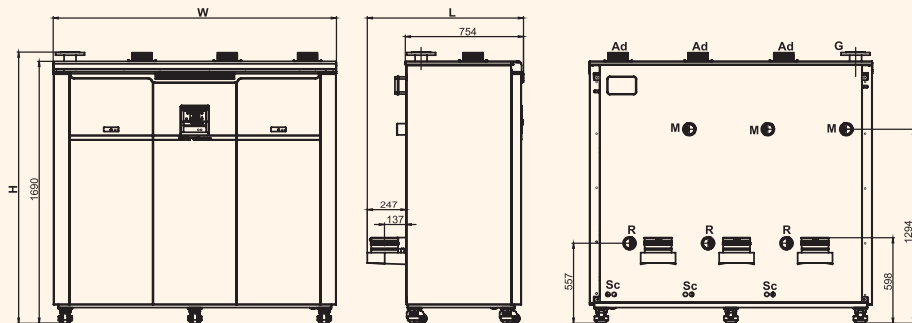
M : Water outlet connection: 2 1/2"

R : Water inlet connection: 2 1/2"

W : 1190 L : 995 H : 1750

F : Flue diameter: Ø170 mm

G : Gas inlet: 2"



ULTRABOX 765/945

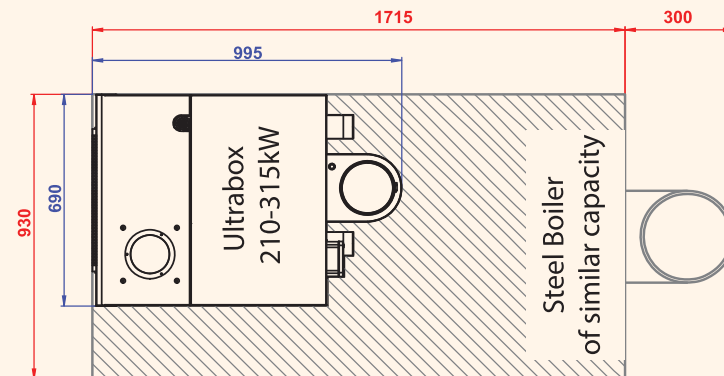
M : Water outlet connection: 2 1/2"

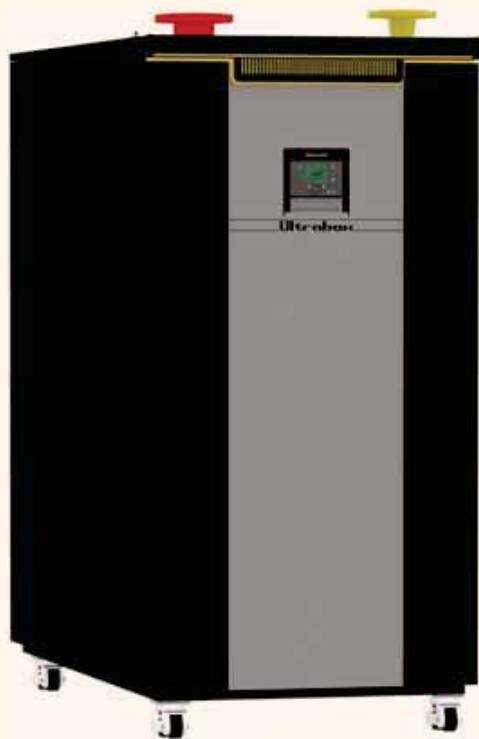
R : Water inlet connection: 2 1/2"

W : 1800 L : 995 H : 1750

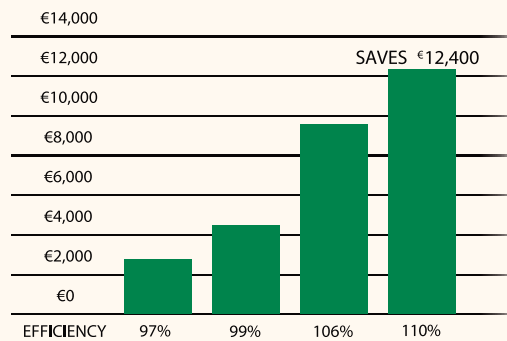
F : Flue diameter: Ø170 mm

G : Gas inlet: 2 1/2"





3 - Year Fuel Savings



Incredible automation. Built-in

Upto 16 boilers cascade sequencing with no extra equipment needed. In addition to one heating circle and DHW, each boiler controls upto 3 additional heat circles (zone control).

Automatic frost protection, built-in time program per each day of the week, weekdays, weeks or weekends. Just set and forget.

16

Boiler Cascade Sequencing

1:9

Modulation Ratio

Ultrabox 1125kW



A penny saved is a penny earned.

What if we would tell you that Ultrabox is the most efficient boiler in it's class? It operates on wide range of flow rates with low pressure drop.

%110

Annual Average Efficiency

Stainless
Heat exchanger

Safe and reliable

Each boiler is equipped with state of the art technology available today.

Every second 9 sensors are monitoring boiler's operation feeding data to 31 safety subsystems.

Total control across the Globe

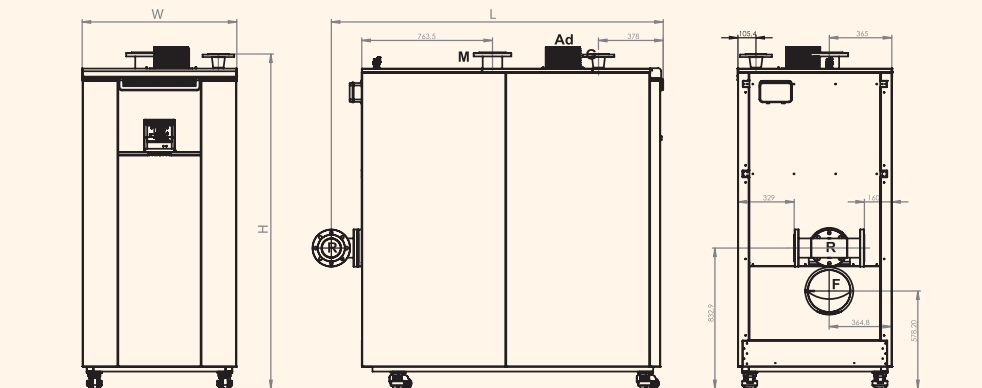
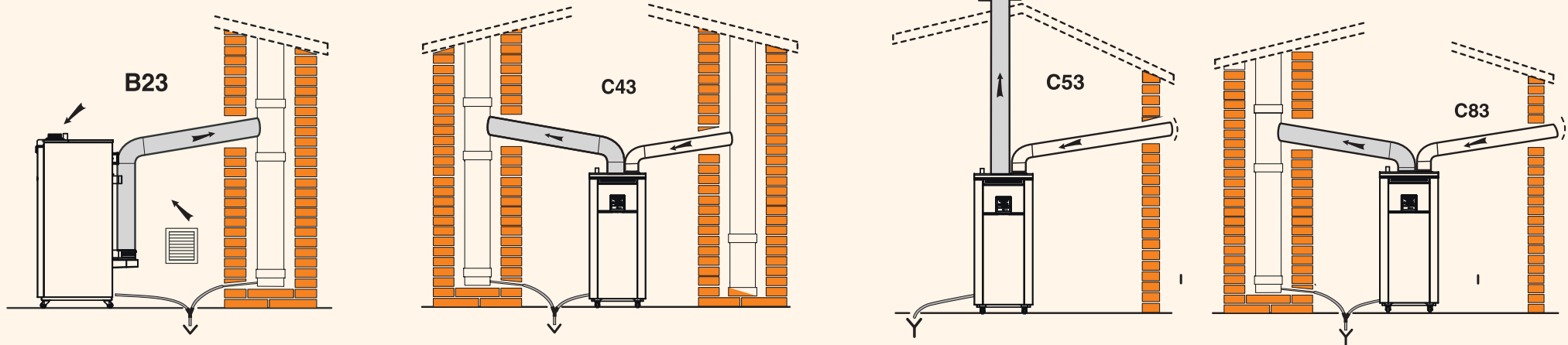
Keeps you in complete control across the country or across the world thanks to the web-server connectivity feature.



Model	Heat Output 50/30 °C		Thermal Efficiency %		Turndown	NOx	
Name	Min kW	Max kW	50/30 °C	80/60 °C	Ratio	Class	mg/kWh
Ultrabox 1125	123,2	1116,4	107,19	97,47	1:9	5	48

*Information subject to change without notice

Ultrabox 1125 kW



ULTRABOX 1125

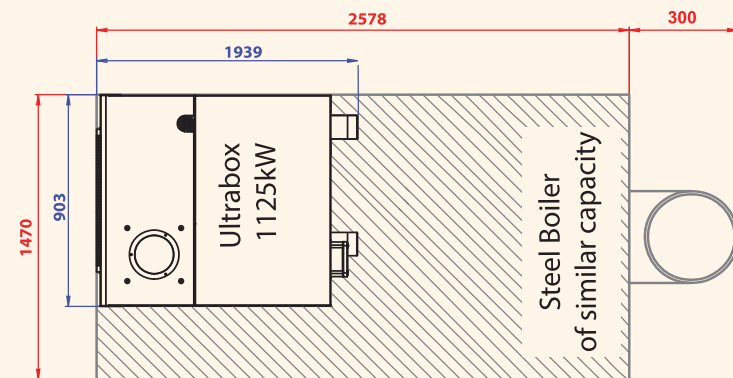
M : Water outlet connection: 4"

R : Water inlet connector: 4"

W : 903 L : 1939 H : 2021

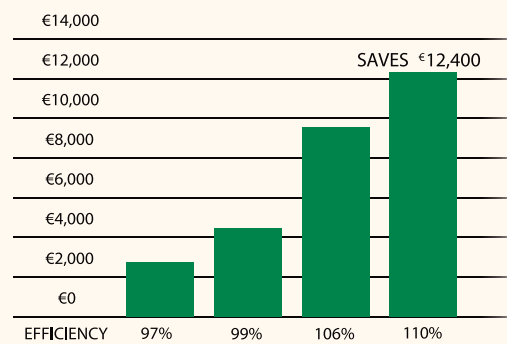
F : Flue diameter: Ø250 mm

G : Gas inlet: 2 1/2"





3 - Year Fuel Savings



Alubox 150-2200 kW



A penny saved is a penny earned.

What if we would tell you that Alubox is the most efficient boiler in it's class? It operates on wide range of flow rates with low pressure drop.

Incredible automation. Built-in

Upto 16 boilers cascade sequencing with no extra equipment needed. In addition to one heating circle and DHW, each boiler controls upto 3 additional heat circles (zone control). Automatic frost protection, built-in time program per each day of the week, weekdays, weeks or weekends. Just set and forget.

%110
Annual Average
Efficiency

Aluminium
Heat exchanger

16
Boiler Cascade
Sequencing

1:7
Modulation
Ratio

Safe and reliable

Each boiler is equipped with state of the art technology available today. Every second 9 sensors are monitoring boiler's operation feeding data to 31 safety subsystems.

Model Name	Heat Output 50/30 °C		Thermal Efficiency %		Turndown Ratio	NOx	
	Min kW	Max kW	50/30 °C	80/60 °C		Class	mg/kWh
Alubox 150	30,04	149,1	108,6	98,2	1:5	5	
Alubox 208	36,4	208	104	97,7	1:6	5	33,86
Alubox 290	51,6	290,6	107,5	97,9	1:6	5	62,6
Alubox 540	84,7	539,2	105	97,3	1:7	5	38
Alubox 700	107,8	708,4	107,4	97,3	1:7	5	48
Alubox 1100	160,7	1107,6	107,1	97,3	1:7	5	53
Alubox 2200kW	160,7	2215,2	107,1	97,3	1:14	5	53

Total control across the Globe

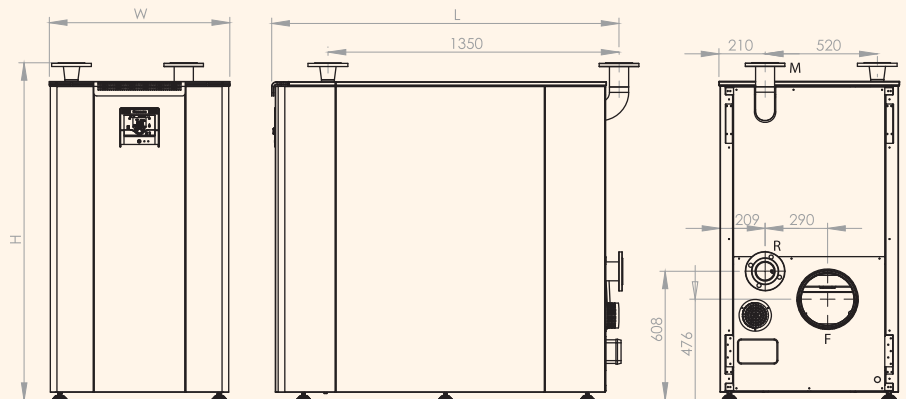
Keeps you in complete control across the country or across the world thanks to the web-server connectivity feature.



*Information subject to change without notice

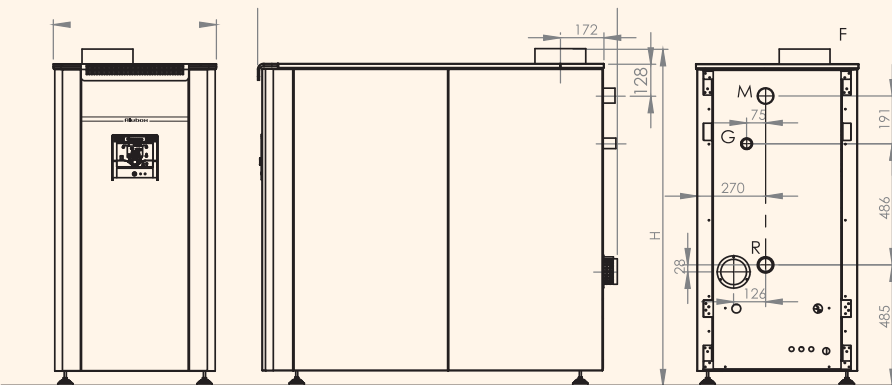
Alubox 150-2200 kW

Dimensions & Connections



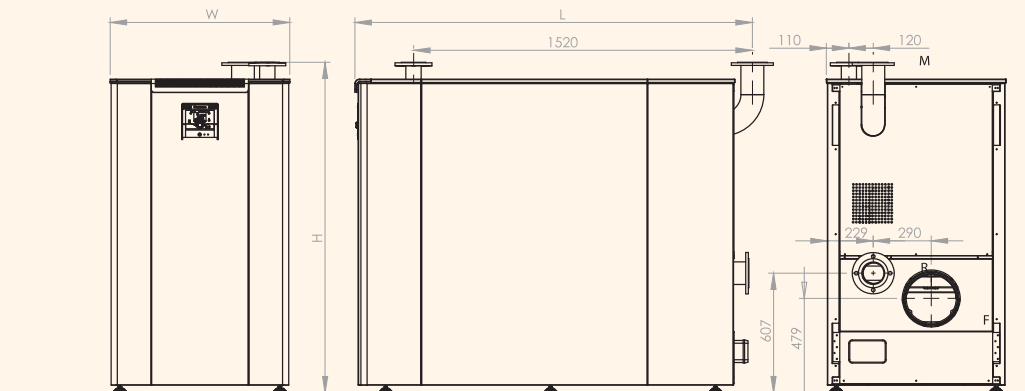
ALUBOX 208/290

M : Water outlet connection: 2" F : Flue diameter: Ø200 mm
 R : Water inlet connection: 2" G : Gas inlet: 1 1/4"
 W : 645 L : 1420 H : 1350



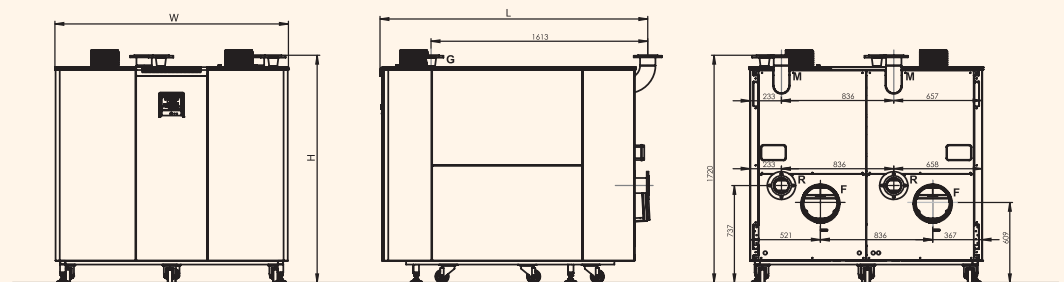
ALUBOX 540/700

M : Water outlet connection: 3" F : Flue diameter: Ø250 mm
 R : Water inlet connection: 3" G : Gas inlet: 2 1/2"
 W : 838 L : 1600 H : 1590



ALUBOX 1100

M : Water outlet connection: 4" F : Flue diameter: Ø250 mm
 R : Water inlet connection: 4" G : Gas inlet: 2 1/2"
 W : 898 L : 1993 H : 1720



ALUBOX 2200

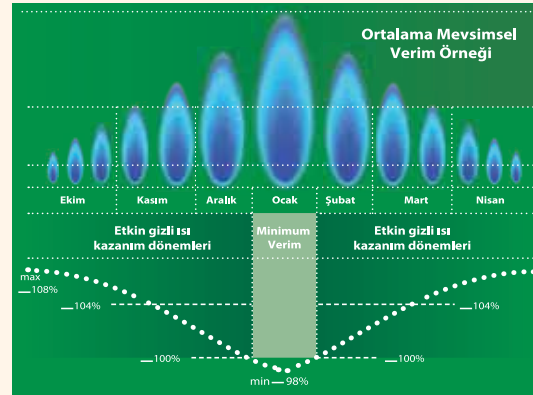
M : Water outlet connection: 4" F : Flue diameter: Ø250 mm
 R : Water inlet connection: 4" G : Gas inlet: 2 1/2"
 W : 1738 L : 1993 H : 1720

Alubox X-treme 250-1065kW

High efficiency premix burnered boiler



Alubox X-treme Boilers with the help of premix burner technology's high combustion efficiency can easily reach: 80/60°C: %98,2, 50/30°C: 106,4 values at full capacity.



Perfect Automation

Alubox X-treme Boilers offer cascade operation up to 64 boilers with touchscreen control panel (optional). An unlimited number of zones can be controlled with additional components according to the heating requirements.

64
Cascade
Control
(optional)

1:8
Modulation
Ratio

GAR
Approved

Comply with the most current energy regulations

All Alubox X-treme series boilers have 2016/426 GAR approval in accordance with the latest CE directive.

Eco-friendly

Best in class EN 483: 2000 Eco-friendly with Class 6 NOx.

%108.8
Efficiency

Aluminium
Heat exchanger

7bar
Working
Pressure

CLASS 6
NO_x



Total control across the Globe

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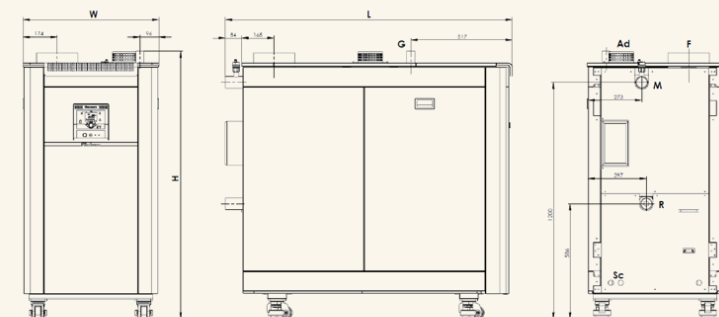


Model Name	Capacity at 50/30°C		Efficiency			NOX	
	Min. kW	Max. kW	50/30°C (max. kW)	Partial Load	Modulation	Class	Value (mg/kWh)
Alubox X-treme 250	51,4	254	105,3	107,6	1:5	6	35
Alubox X-treme 300	51,4	302	106,2	107,5	1:6	6	41
Alubox X-treme 350	70,2	351,7	106,2	107,5	1:6	6	34
Alubox X-treme 430	91,6	445,9	105	108	1:5	6	39
Alubox X-treme 535	107,1	535,6	106,1	107,4	1:5	6	21
Alubox X-treme 640	81	641,4	106,4	107,6	1:8	6	16
Alubox X-treme 710	145,9	711,3	104,1	108,5	1:5	6	31
Alubox X-treme 700LX	118,4	702	104,3	108,8	1:6	6	21
Alubox X-treme 880	142,3	885,1	104,6	108,7	1:6	6	25
Alubox X-treme 1065	171,9	1065,5	104,9	108,4	1:5	6	24

Alubox X-treme 250-1065kW

Dimensions & Connections

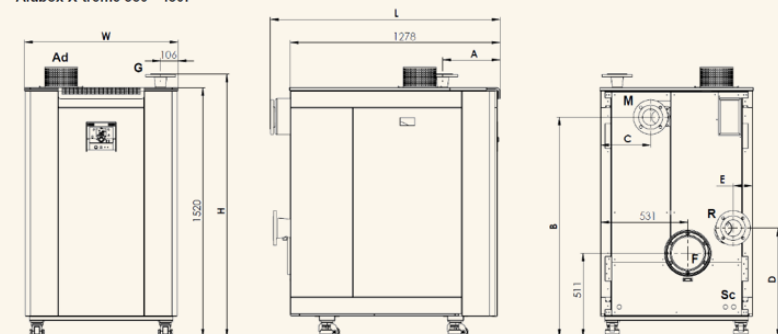
Alubox X-treme 250 - 300:



Width: 690mm
Length: 1460mm
Height: 1360mm
Weight: 280kg

M: Water outlet DN50
R: Water inlet DN50
G: Gas inlet DN32
F: Flue gas outlet Ø200mm
Ad: Air inlet Ø100mm
Sc: Condensing water outlet Ø25mm

Alubox X-treme 350 - 430:

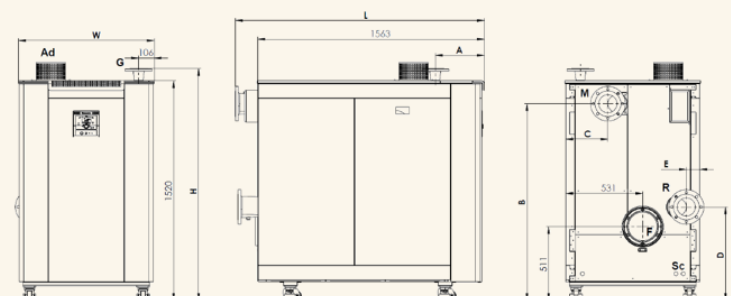


Alubox X-treme 350
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 542mm
B: 1340mm
C: 305mm
D: 664mm
E: 118mm
Weight: 351kg

Alubox X-treme 430
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 443mm
B: 1340mm
C: 305mm
D: 664mm
E: 118mm
Weight: 381kg

M: Water outlet DN100 (PN6)
R: Water inlet DN100 (PN6)
G: Gas inlet DN50 (PN16)
F: Flue gas outlet Ø250mm
Ad: Air inlet Ø125mm
Sc: Condensing water outlet Ø25mm

Alubox Xtreme 535 - 640 - 700 - 710:



Alubox X-treme 535
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 542mm
B: 1340mm
C: 305mm
D: 664mm
E: 118mm
Weight: 415kg

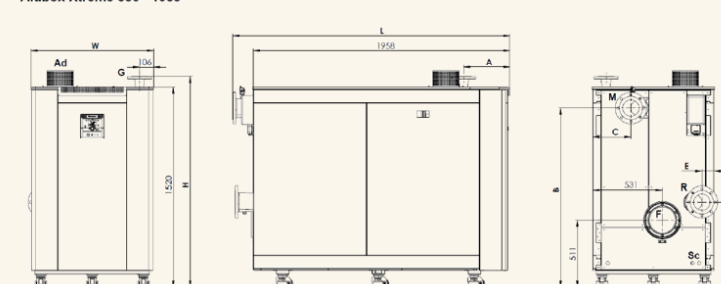
Alubox X-treme 640
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 443mm
B: 1340mm
C: 305mm
D: 664mm
E: 93mm
Weight: 446kg

Alubox X-treme 700
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 338mm
B: 1360mm
C: 291mm
D: 647mm
E: 93mm
Weight: 485kg

Alubox X-treme 710
Width: 935mm
Length: 1715mm
Height: 1600mm
A: 338mm
B: 1340mm
C: 305mm
D: 664mm
E: 118mm
Weight: 468kg

M: Water outlet DN100 (PN6)
R: Water inlet DN100 (PN6)
G: Gas inlet DN50 (PN16)
F: Flue gas outlet Ø250mm
Ad: Air inlet Ø125mm
Sc: Condensing water outlet Ø25mm

Alubox Xtreme 880 - 1065



Alubox X-treme 880
Width: 935mm
Length: 2110mm
Height: 1600mm
A: 543mm
B: 1360mm
C: 291mm
D: 647mm
E: 93mm
Weight: 574kg

Alubox X-treme 1065
Width: 935mm
Length: 2110mm
Height: 1600mm
A: 353mm
B: 1360mm
C: 291mm
D: 647mm
E: 93mm
Weight: 640kg

M: Water outlet DN125 (PN6)
R: Water inlet DN125 (PN6)
G: Gas inlet DN65 (PN16)
F: Flue gas outlet Ø250mm
Ad: Air inlet Ø200mm
Sc: Condensing water outlet Ø25mm

High Water Capacity for All Your Needs

300lt stainless steel (both body and serpentine) DHW capacity with each boiler

High Efficiency & Quiet Operation

- %110 efficiency and quiet operation with premix powered burner
- 1/5 modulation ratio

Capacitive Touch Panel

- Unique user experience with capacitive touch panel
- Fully compatible with Building Management Systems
- Detailed working status and history information
- Precise DHW supply
- Legionella protection function to provide clean DHW
- Programmable DHW demands according to your daily routine

Aluminum Heat Exchanger

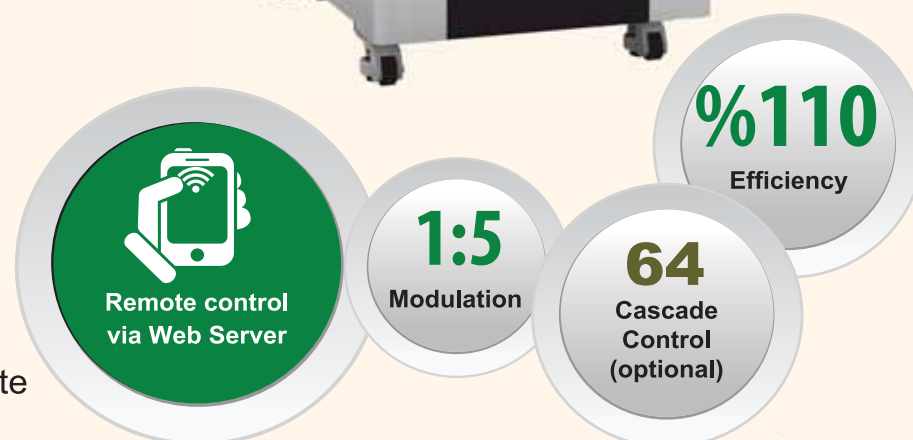
High quality aluminum heat exchanger with 6mm thickness

Installers Best Friend

Unique installation flexibility with wheeled and fixable carriage system

Polycarbonate Front Panel

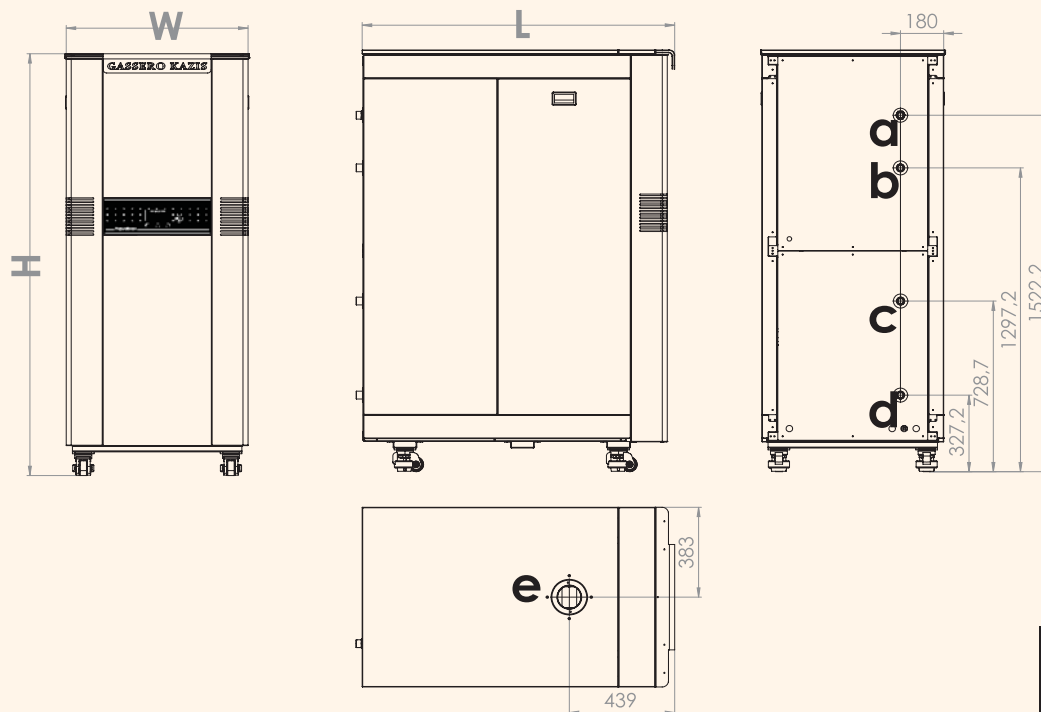
Front panel and control panel made from high resistance polycarbonate



Aquabox 300

Condensing Water Heater

Dimensions & Connections



- a:** Domestic hot water inlet 1"
- b:** Re-circulation 1"
- c:** Gas inlet 1"
- d:** Cold water inlet 1"
- e:** Flue diameter Ø100 - Air intake Ø150 (Ø100-150)

W: 750 L: 1300 H: 1800

Net Weight: 336 kg

Gross Weight: 401 kg

L/H AT ΔT INDICATED

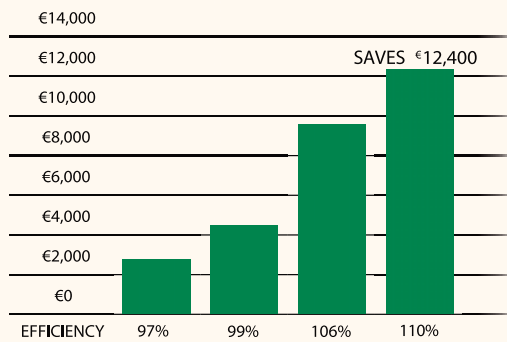
	1241	938,5	563,3
CH Supply (°C)	80	80	80
Nominal Load (kW)	50	46	34
System	10/45	10/50	10/60

BOILER SPECIFICATIONS

Working Pressure (bar)	0,8 - 6
Gas Category	I2H - I2E
Flue Insulation Type	B23, B53, C33, C43, C53, C63, C83
CO ₂ Emissions (%)	9,3
CO Emissions (ppm)	27 - 120
NO _x Emissions (ppm)	10 - 31
Flue Gas Mass Flow Rate (g/s)	30,2 - 44,8
Gas Consumption (m3/h)	1,5 - 9,1



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Upto 16 boilers cascade sequencing with no extra equipment needed. In addition to one heating circle and DHW, each boiler controls upto 3 additional heat circles (zone control).

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Installers best friend

Unparalleled installation flexibility. With zero side clearance the installed footprint is upto 30% smaller than competitive boilers.

16
Boiler Cascade
Sequencing

1:5
Modulation
Ratio

Model Name	Heat Output 50/30 °C		Thermal Efficiency %		Turndown Ratio	NOx Class
	Min kW	Max kW	50/30 °C	80/60 °C		
Alucon 90	26,6	91	108,1	98,4	1:4	5
Alucon 115	26,6	118,1	108,1	98,2	1:5	5
Alucon 125	30,4	128	108,6	98,3	1:5	5
Alucon 150	30,4	149,1	108,6	98,2	1:5	5

*Information subject to change without notice

Alucon 90 -150kW



A penny saved is a penny earned.

What if we would tell you that Alucon is the most efficient boiler in it's class? It operates on wide range of flow rates with low pressure drop.

%110
Annual Average
Efficiency

Aluminium
Heat exchanger

Safe and reliable

Each boiler is equipped with state of the art technology available today.

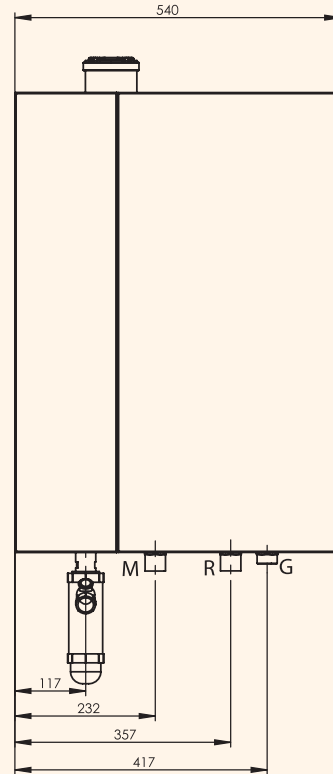
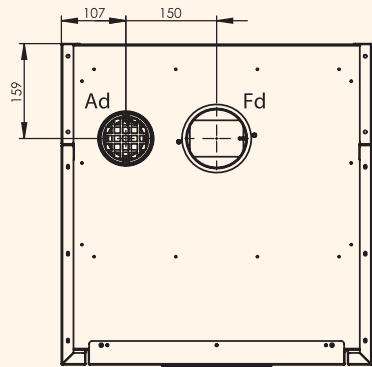
Every second 9 sensors are monitoring boiler's operation feeding data to 31 safety subsystems.

Total control across the Globe

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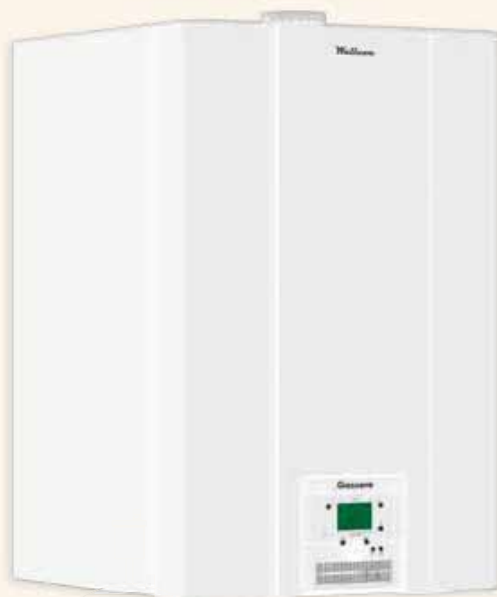
Dimensions & Connections



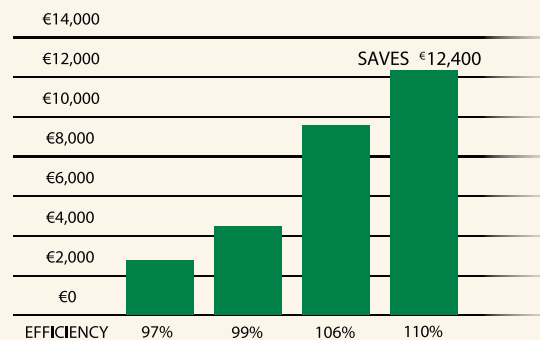
Sc : Condensate drain - 25mm
M : Flow 1"
R : Return 1"
G : Gas inlet 1"
Fd : Flue outlet 100mm
Ad : Air intake 85mm

A detailed schematic diagram of a three-circuit gas boiler system. On the left, a three-circuit boiler is shown with three digital displays and three sets of control valves. A gas pipe with a shut-off valve enters the top. A manifold connects the boiler's three heating circuits to a central vertical riser. From the manifold, two parallel loops of red (supply) and blue (return) pipes lead to two radiators. A third loop leads to a water tank with a heating coil. The tank has its own cold water inlet and a pressure tank. Arrows indicate the flow direction throughout the system.

Wallcon 42-160kW



3 - Year Fuel Savings



A penny saved is a penny earned.

What if we would tell you that Wallcon is the most efficient boiler in it's class? It operates on wide range of flow rates with low pressure drop.

Incredible automation. Built-in

Upto 16 boilers cascade sequencing with no extra equipment needed. In addition to one heating circle and DHW, each boiler controls upto 3 additional heat circles (zone control).

Automatic frost protection, built-in time program per each day of the week, weekdays, weeks or weekends. Just set and forget.

%110

Annual Average Efficiency

Stainless
Heat exchanger

16

Boiler Cascade Sequencing

1:7

Modulation Ratio

Safe and reliable

Each boiler is equipped with state of the art technology available today.

Every second 9 sensors are monitoring boiler's operation feeding data to 31 safety subsystems.

Installers best friend

Unparalleled installation flexibility. With zero side clearance the installed footprint is upto 30% smaller than competitive boilers.

Model Name	Heat Output 50/30 °C		Thermal Efficiency %		Turndown Ratio	NOx	
	Min kW	Max kW	50/30 °C	80/60 °C		Class	mg/kWh
Wallcon 42	8,5	42	106,8	97,1	1:5	5	35,68
Wallcon 50	8,5	51	106,3	96,4	1:6	5	42,99
Wallcon 67	16	67,1	107,2	96,9	1:4	5	34,1
Wallcon 115	29,3	116,1	108,4	97,1	1:4	5	17,13
Wallcon 125	18,4	126	108,2	96,4	1:7	5	51,72
Wallcon 160	23,4	158,8	109	97,2	1:7	4	98,76

*Information subject to change without notice

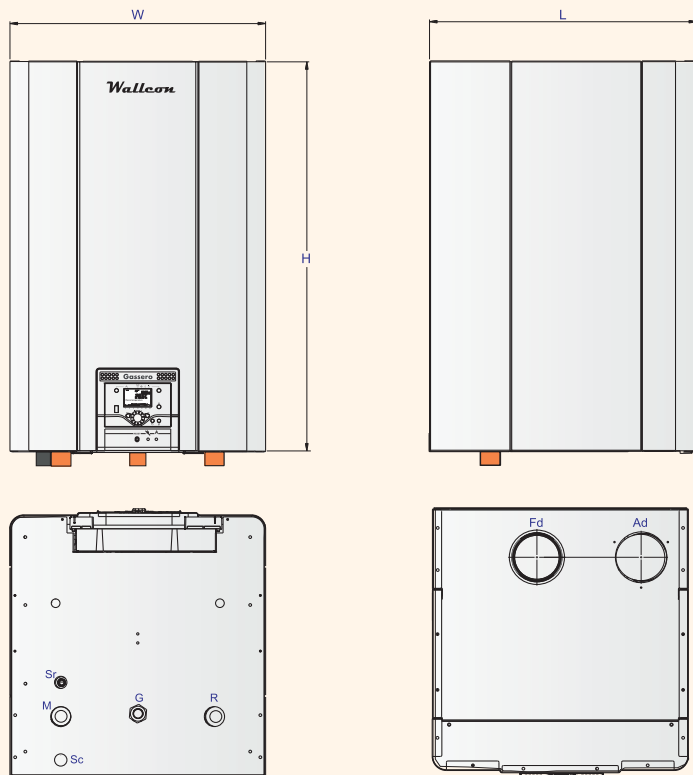
Total control across the Globe

Keeps you in complete control across the country or across the world thanks to the web-server connectivity feature.



Wallcon 42-160kW

Dimensions & Connections



WALLCON 42-50 kW

Sc : Condensate drain - 25mm
Sr : Safety drain - 1/2"
M : Flow 1"
R : Return 1"
G : Gas inlet 3/4"
Fd : Flue outlet 80mm
Ad : Air intake 80mm
W x L x H = 446 x 390 x 654

WALLCON 67 kW

Sc : Condensate drain - 25mm
Sr : Safety drain - 1/2"
M : Flow 1"
R : Return 1"
G : Gas inlet 3/4"
Fd : Flue outlet 80mm
Ad : Air intake 80mm
W x L x H = 446 x 480 x 654

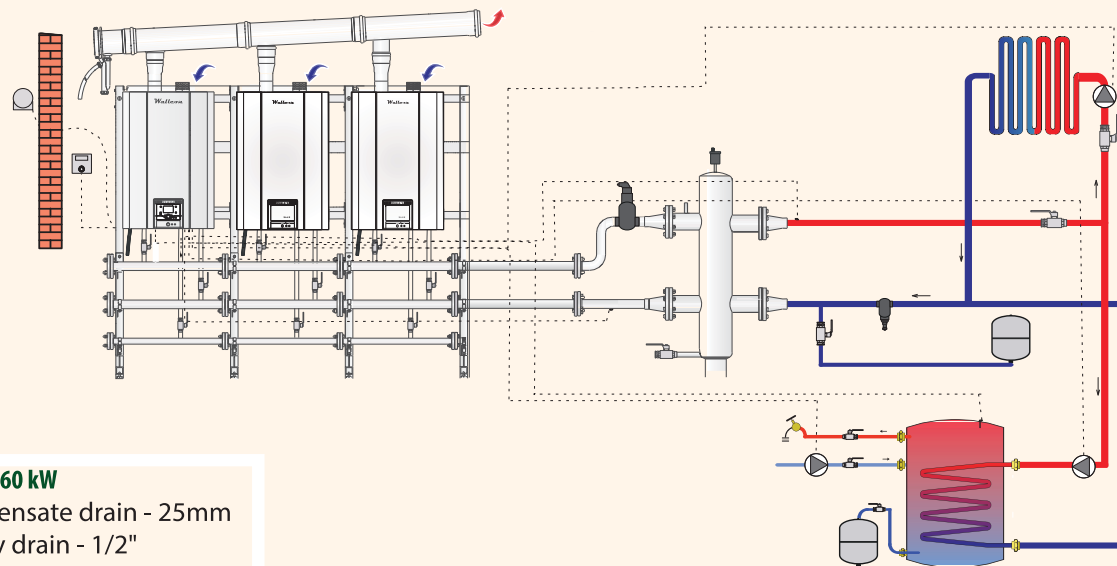
WALLCON 160 kW

Sc : Condensate drain - 25mm
Sr : Safety drain - 1/2"
M : Flow 1 1/4"
R : Return 1 1/4"
G : Gas inlet 1"
Fd : Flue outlet 100mm
Ad : Air intake 100mm
W x L x H = 557 x 690 x 860

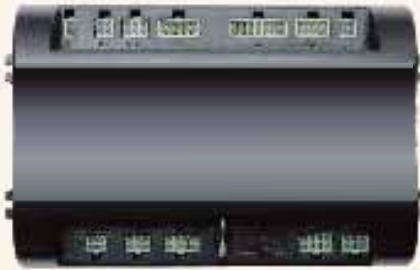
WALLCON 115-125 kW

Sc : Condensate drain - 25mm
Sr : Safety drain - 1/2"
M : Flow 1 1/4"
R : Return 1 1/4"
G : Gas inlet 1"
Fd : Flue outlet 100mm
Ad : Air intake 100mm
W x L x H = 557 x 580 x 865

Cascade Installation Example



Accessories



Control Card

- Cascade boiler control upto 64 boilers
- Freeze protection, comfort and economy modes
- Weekly programme, holiday programme
- Legionella protection, automatic summer/winter switching
- DHW, pool, solar collector, underfloor heating applicaitons
- Compatible with building automation systems (Modbus, BACnet(optional))
- On/Off, 0...10V, OT and AL-BUS external outputs



Zon Control Unit

- Upto 10 zones management



Touch Screen Display

- Cascade control via same display up to 64 boilers
- 7 "graphical touch color display
- Internet connection via web server
- Boiler status, control and quick access settings



Mobile Application

- Full system control over the mobile app.



Internet Unit

- System access and control via Ethernet or GPRS
- Includes SD card for external viewing

Model		WALLCON 42		WALLCON 50		WALLCON 67		WALLCON 115		WALLCON 125B		WALLCON 160B		SUPERBOX 160B		SUPERBOX 265		SUPERBOX 530		SUPERBOX 1060SV		SUPERBOX 1060SH			
General		min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.		
Type Of Flue Installation		B23-C13-C33-C43-C53-C63-C83								B23-C43-C53-C63-C83				B23-C43-C53-C63-C83		B23		B23		B23		B23			
Fuel type-Gas category		2H.2E.2LL.3+B/P								2H.2E.2LL.3P		2H.2E.3P		2H.2E.2LL.3P		I2H G20 mbar		I2H G20 mbar		I2H G20 mbar		I2H G20 mbar			
Nominal heat input Qn	kw	8.0	39.4	8.0	48.0	15.0	63.0	27.0	108.5	17.0	121.0	21.5	152.0	21.5	152.0	25	250	27.2	498.5	27.2	996.9	27.2	996.9		
Nominal heat output Pn (80-60) °C	kw	7.6	38.3	7.6	46.3	14.4	61.0	26.1	105.4	16.4	116.2	20.9	146.1	20.9	146.1	24.175	242.75	26.2	481.6	26.2	962.0	26.2	962.0		
Nominal heat output Pn (50-30) °C	kw	8.5	42.1	8.5	51.0	16.1	67.1	29.3	116.1	18.4	126.0	23.4	158.8	23.4	158.8	26.75	264.75	29.0	525.9	29.0	1049.7	29.0	1049.7		
Working pressure	bar	0.8	3.0	0.8	3.0	0.8	4.0	0.8	6	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0		
Maximum operation temperature	°C	85		85		85		90		90		90		90		90		90		90		90			
Cut-off temp. for limit termostad	°C	85		85		85		105		105		105		105		105		105		105		105			
Efficiency & Emissions																									
Heating Efficiency Q max (80-60) °C	%	97.1		96.4		96.9		97.1		96.0		96.1		96.1		97.1		96.6		96.5		96.5			
Heating Efficiency Q min (80-60) °C	%	94.9		94.9		96.0		96.8		96.4		97.2		97.2		96.7		96.6		96.5		96.5			
Heating Efficiency Q max (50-30) °C	%	106.8		106.3		106.5		107.0		104.1		104.5		104.5		105.9		105.5		105.3		105.3			
Heating Efficiency Q min (50-30) °C	%	106.0		106.0		107.2		108.4		108.2		109.0		109.0		107.0		106.5		106.6		106.6			
Partial Load, Return 30°C (Direct Method)	%	106.7		106.9		107.9		107.6		109.2		109.1		109.1		106.4		107.0		106.9		106.9			
Flue Gas Temperature (80-60) °C	°C	63.4	74.9	63.4	81.7	62.9	82.0	58.9	77.1	56.3	88.0	59.4	82.5	59.4	82.5	55.4	80.8	59.8	80.3	59.7	80.5	59.7	80.5		
Flue Gas Temperature (50-30) °C	°C	42.7	52.8	42.7	64.1	39.8	62.7	32.7	63.5	31.5	64.8	32.4	62.6	32.4	62.6	31.0	51.0	30.6	43.2	30.6	43.9	30.6	43.9		
CO2 Emissions G20 (Hi: 34.02 MJ/m³)	%	8.9	9.2	8.9	9.2	8.9	9.2	8.8	9.3	8.7	9.4	9.2	9.4	9.2	9.4	8.6	9.2	9.00	9.20	9.00	9.20	9.00	9.20		
CO2 Emissions G25 (Hi: 29.25 MJ/m³)	%	8.9	9.4	8.9	9.4	8.9	9.2	8.7	9.2	8.8	9.6	-	-	-	-	-	-	-	-	-	-	-			
CO2 Emissions G30 (Hi: 116.09 MJ/m³)	%	10.6	11.1	10.6	11.1	10.7	11.1	10.3	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-			
CO Emissions G20 (Hi: 34.02 MJ/m³)	ppm	1	84	1	98	2	80	1	98	1	144	1	176	1	174	2	144	3	105	5	122	5	122		
CO Emissions G25 (Hi: 29.25 MJ/m³)	ppm	2	98	1	124	2	104	2	110	1	186	-	-	-	-	-	-	-	-	-	-	-			
CO Emissions G30 (Hi: 116.09 MJ/m²)	ppm	1	134	1	160	2	194	4	184	-	-	-	-	-	-	-	-	-	-	-	-	-			
NOX Emissions G20 (Hi: 34.02 MJ/m³)	mg/kWh	35.68		42.99		34.1		17.13		51.72		98.76		98.76		42.56		50.00		59.00		59.00			
NOX Emissions G25 (Hi: 29.25 MJ/m³)	mg/kWh	39.77		38.38		37.89		26.43		54.83		-		-		-		-		-		-			
NOX Emissions G30 (Hi: 116.09 MJ/m³)	mg/kWh	42.65		72.81		73.53		38.61		-		-		-		-		-		-		-			
NOX Class		5		5		5		5		5		4		4		5		5		5		5			
Flue Gas Mass G20 (Hi: 34.02 MJ/m³)	g/sec	3.70	17.70	3.70	21.6	6.90	28.40	12.60	48.40	8.03	53.53	9.69	67.25	9.69	67.25	11.93	112.61	12.61	226.67	12.61	449.12	12.61	449.12		
Flue Gas Mass G25 (Hi: 29.25 MJ/m³)	g/sec	3.70	17.40	3.70	21.3	7.00	28.40	12.70	48.90	7.96	52.61	-	-	-	-	-	-	-	-	-	-	-			
Flue Gas Mass G30 (Hi: 116.09 MJ/m³)	g/sec	3.50	16.60	3.50	20.2	6.50	26.50	12.20	46.30	-	-	-	-	-	-	-	-	-	-	-	-	-			
Gas Consumption G20 (Hi: 34.02 MJ/m³)	m³/h	0.85	4.17	0.85	5.08	1.59	6.67	2.86	11.48	1.80	12.80	2.28	16.08	2.28	16.08	2.65	26.46	2.88	52.75	2.88	105.49	2.88	105.49		
Gas Consumption G25 (Hi: 29.25 MJ/m³)	m³/h	0.98	4.85	0.98	5.91	1.85	7.75	3.32	13.35	2.09	14.89	-	-	-	-	-	-	-	-	-	-	-			
Gas Consumption G30 (Hi: 116.09 MJ/m³)	m³/h	0.25	1.22	0.25	1.49	0.47	1.95	0.84	3.36	-	-	-	-	-	-	-	-	-	-	-	-	-			
Water Pressure Loss Δt=20 C°	mbar	250		380		410		260		325		460		460		480		84		162		162			
Residual Draught, Fan	Pa	100		140		170		200		190		310		310		160		100		100		100			
Condensing Water Mass	kg/h	7.5		10		14		16		17.5		22.4		22.4		37.1		69.79		139.56		139.56			
Condensing pH Value	pH	approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0			
Water pH, on Primary (constant)	pH	7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5		7.5 - 8.5			
Water Hardness, on Primary (constant)	french°	15 > Wh > 5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5.5		15 > Wh > 5		15 > Wh > 5		15 > Wh > 5			
Water Conductivity (constant)	µs/cm	<600		<600		<600		<600		<600		<600		<600		<600		<600		<600		<600			
Electrical & Gas Connections																									
Gas Supply G 20 (Hi: 34.02 MJ/m³)	mBar	20		20		20		20		20		20		20		20		20		20		20			
Max Gas Supply Pressure G 20	mBar	25		25		25		25		25		25		25		25		25		25		25			
Min Gas Supply Pressure G 20	mBar	17		17		17		17		17		17		17		17		17		17		17			
Power Supply Voltage / Frequency	VAC/Hz	230-50												230-50											
Power Supply Voltage Tolerance	%	(+%10) / (- %15)												(+%10) / (- %15)											
Electrical Power Max.Absorbed	W	220		250		280		390		300		400		400		450		900		1800		1800			
Electrical Power on Stand-By	W	17		17		17		17		17		17		17		17		34		34		34			
Working Conditions, Temperature	°C	+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40			
IP Class	-	IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D			

Model		ALUBOX 50		ALUBOX 70		ALUBOX 90		ALUBOX 115		ALUBOX 125		ALUBOX 150		ALUBOX 208H		ALUBOX 290S		ALUBOX 540S		ALUBOX 700S		ALUBOX 1100S		ALUBOX 1100S		ALUBOX 2200			
General		min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.
Type Of Flue Installation		B23-B53-C13-C33-C43-C53-C63-C83				B23-B53-C13-C33-C43-C53-C63-C83										B23		B23		B23		B23		B23		B23		B23	
Fuel type-Gas category		I2H,I2E - Natural Gas G20-20-25 mbar				I2H,I2E - Natural Gas G20-20-25 mbar										I2H G20 mbar		I2H G20 mbar		I2H,I2E G20 mbar		I2H,I2E G20 mbar		I2H G20 mbar		I2H,I2E G20 mbar		I2H G20 mbar	
Nominal heat input Qn		kw	7,6	49,2	10,2	65,6	14,9	88,3	14,9	112,3	19,9	123,5	19,9	143,1	35,3	200,0	48,0	280,0	81,9	517,0	101,4	661,0	150,5	1028,8	150,5	1029,6	150,5	2059,2	
Nominal heat output Pn (80-60) °C		kw	7,4	48,1	9,9	63,8	14,4	86,9	14,4	110,3	19,3	121,4	19,3	140,5	34,5	195,2	46,7	274,1	79,1	503,0	97,9	643,2	146,0	999,1	146,0	1001,8	146,0	2003,6	
Nominal heat output Pn (50-30) °C		kw	8,2	52,1	11,0	68,2	16,1	92,7	16,1	117,7	21,5	128,9	21,5	147,7	36,4	208,0	51,6	290,6	86,0	537,7	108,5	709,9	161,2	1098,7	161,2	1101,7	160,7	2203,3	
Working pressure		bar	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	
Maximum operation temperature		°C	85		85		85		85		85		85		90		90		90		90		90		90		90		
Cut-off temp. for limit thermostat		°C	95		95		95		95		95		95		95		95		95		95		95		95		95		
Efficiency & Emissions																													
Heating Efficiency Q max (80-60) °C		%	97,7		97,2		98,4		98,2		98,3		98,2		97,6		97,9		97,3		97,3		97,3		97,3		97,3		
Heating Efficiency Q min (80-60) °C		%	96,9		96,7		96,8		96,8		97		97		97,7		97,3		96,6		96,5		97,0		97,0		97,0		
Heating Efficiency Q max (50-30) °C		%	105,9		103,9		105		104,8		104,4		103,2		104,0		103,8		104,0		107,4		107,0		107,0		107,0		
Heating Efficiency Q min (50-30) °C		%	108,1		108		108,2		108,2		108,1		108,1		103,2		107,5		105,0		107,0		107,1		107,1		107,1		
Partial Load, Return 30°C (Direct Method)		%	108,6		108,4		108,5		108,7		108,5		108,4		107,4		107,3		106,7		108,6		108,0		108,0		108,0		
Flue Gas Temperature (80-60) °C		°C	54,7	65,6	55,4	72,1	54,7	61,4	56,8	64,9	56,9	61,8	56,9	70,3	53,2	63,4	54,2	64,6	55,5	63,6	61,4	65,8	61,9	64,6	61,9	64,6	61,9	64,6	
Flue Gas Temperature (50-30) °C		°C	29,5	45,1	30,1	52,3	30,2	44,8	30,2	53,5	30,5	44,9	30,5	47,1	29,0	52,7	29,0	47,4	30,3	40,1	34,2	34,5	29,4	33,8	29,4	33,8	29,4	33,8	
CO2 Emissions G20 (Hi: 34.02 MJ/m³)		%	9,32	9,36	9,05	9,6	9,4	9,3	9,44	9,36	9,54	9,49	9,54	9,56	8,8	9,3	8,8	9,8	8,9	9,1	8,9	9,4	9,0	9,3	9,0	9,3	9,0	9,3	
CO2 Emissions G25 (Hi: 29.25 MJ/m³)		%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CO2 Emissions G30 (Hi: 116.09 MJ/m³)		%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CO Emissions G20 (Hi: 34.02 MJ/m³)		ppm	44	89	29	152	27	120	27	156	24	140	24	169	1	24	2	34	2	29	5	33	6	44	6	44	6	44	
CO Emissions G25 (Hi: 29.25 MJ/m³)		ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CO Emissions G30 (Hi: 116.09 MJ/m³)		ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NOX Emissions G20 (Hi: 34.02 MJ/m³)		mg/kWh	37		28		39		43		46		44		33,86		62,60		38,00		53,00		48,00		48,00		53,00		
NOX Emissions G25 (Hi: 29.25 MJ/m³)		mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NOX Emissions G30 (Hi: 116.09 MJ/m³)		mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NOX Class			5		5		5		5		5		5		5		5		5		5		5		5		5		
Flue Gas Mass G20 (Hi: 34.02 MJ/m³)		g/sec	3	22	5	28	6	39	6	49	9	54	9	63	16,51	90,1	22,45	119,63	37,95	235,09	46,98	292,42	69,05	459,64	69,05	459,64	69,05	919,28	
Flue Gas Mass G25 (Hi: 29.25 MJ/m³)		g/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Flue Gas Mass G30 (Hi: 116.09 MJ/m³)		g/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gas Consumption G20 (Hi: 34.02 MJ/m³)		m³/h	0,80	5,21	1,08	6,94	1,57	9,34	1,58	11,88	2,11	13,07	2,11	15,14	3,74	21,16	5,08	29,63	8,67	54,71	10,73	69,95	15,93	108,66	15,93	108,95	15,93	217,90	
Gas Consumption G25 (Hi: 29.25 MJ/m³)		m³/h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gas Consumption G30 (Hi: 116.09 MJ/m³)		m³/h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Water Pressure Loss Δt=20 C°		mbar	130		180		170		280		310		400		130		250		48		50,3		44,6		44,6		140		
Residual Draught, Fan		Pa	100		130		170		200		220		330		160		160		150		150		150		150		150 x 2 pcs		
Condensing Water Mass		kg/h	10		15		12,6		16,1		17,5		21		29,12		40,6		75,48		99,17		155,06		155,06		155,06 x 2 Pcs		
Condensing pH Value		pH	approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		approx. 4,0		
Water pH, on Primary (constant)		pH	6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		
Water Hardness, on Primary (constant)		french°	10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		
Water Conductivity (constant)		µs/cm	<600		<600		<600		<600		<600		<600		<600		<600		<600		<600		<600		<600		<600		
Electrical & Gas Connections																													
Gas Supply G 20 (Hi: 34.02 MJ/m³)		mBar	20		20		20		20		20		20		20		20		20		20		20		20		20		
Max Gas Supply Pressure G 20		mBar	25		25		25		25		v		25		25		25		25		25		25		25		25		
Min Gas Supply Pressure G 20		mBar	17		17		17		17		17		17		17		17		17		17		17		17		17		
Power Supply Voltage / Frequency		VAC/Hz	230-50																			400-50							
Power Supply Voltage Tolerance		%	(+%10) / (- %15)																										
Electrical Power Max.Absorbed		W	52		97		116		203		212		313		450		450		1400		1400		2650		2650		5300		
Electrical Power on Stand-By		W	5		5		5		5		5		5		17		17		17		17		17		17		17		
Working Conditions, Temperature		°C	+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		
IP Class		-	IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		

Model	ULTRABOX 210		ULTRABOX 255		ULTRABOX 315		ULTRABOX 420		ULTRABOX 465		ULTRABOX 510		ULTRABOX 570		ULTRABOX 630		ULTRABOX 765		ULTRABOX 945		ULTRABOX 1000		ULTRABOX 1125		
General	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	min	max.	
Type Of Flue Installation	B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		B23-C43-C53-C83		
Fuel type-Gas category	I2H I2E - Natural Gas G20-20-25 mbar																								
Nominal heat input Qn	kw	30.3	198.3	35.0	237.7	35.0	295.3	30.3	396.6	30.3	436.0	35.0	475.4	35.0	533.0	35.0	590.6	35.0	713.1	35.0	886.0	115.8	998.9	115.8	1069.9
Nominal heat output Pn (80-60) °C	kw	29.5	194.2	34.1	232.5	34.1	289.5	29.5	388.3	29.5	426.6	34.1	465.0	34.1	522.0	34.2	579.0	34.2	697.4	34.2	868.5	112.6	967.8	112.9	1037.3
Nominal heat output Pn (50-30) °C	kw	32.5	212.2	37.5	254.4	37.6	316.0	32.6	424.4	32.6	466.6	37.7	513.0	37.7	574.3	37.7	635.6	37.7	769.6	37.7	953.5	124.1	1061.3	124.1	1135.7
Working pressure	bar	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0	0.8	6.0
Maximum operation temperature	°C	90		90		90		90		90		90		90		90		90		90		90		90	
Cut-off temp. for limit thermostat	°C	95		95		95		95		95		95		95		95		95		95		95		95	
Efficiency & Emissions																									
Heating Efficiency Q max (80-60) °C	%	97.9		97.8		98.03		97.9		97.85		97.8		97.92		98.03		97.8		98.03		96.89		96.96	
Heating Efficiency Q min (80-60) °C	%	97.47		97.5		97.51		97.47		97.49		97.5		97.51		97.51		97.5		97.51		97.26		97.47	
Heating Efficiency Q max (50-30) °C	%	107		107.03		107.01		107		107.02		107.03		107.02		107.01		107.03		107.01		106.25		106.15	
Heating Efficiency Q min (50-30) °C	%	107.22		107.26		107.48		107.22		107.24		107.26		107.37		107.48		107.26		107.48		107.19		107.19	
Partial Load, Return 30°C (Direct Method)	%	108.38		108.41		108.4		108.38		108.40		108.41		108.41		108.4		108.41		108.4		107.35		107.4	
Flue Gas Temperature (80-60) °C	°C	60.3	62.1	60.3	64.8	60.2	60.7	60.3	62.1	60.3	63.45	60.3	64.8	60.25	62.75	60.2	60.7	60.3	64.8	60.2	60.7	61.32	61.81	61.32	63.01
Flue Gas Temperature (50-30) °C	°C	32.1	36.1	32.1	35.5	32.2	36.5	32.1	36.1	32.1	35.8	32.1	35.5	31.15	36	30.2	36.5	32.1	35.5	30.2	36.5	31.22	30.53	30.53	33.61
CO2 Emissions G20 (Hi: 34.02 MJ/m³)	%	9.6	9.4	9.4	9.2	9.7	9.4	9.6	9.4	9.5	9.3	9.4	9.2	9.6	9.3	9.7	9.4	9.4	9.2	9.7	9.4	9.1	9.4	9.2	9.4
CO2 Emissions G25 (Hi: 29.25 MJ/m³)	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2 Emissions G30 (Hi: 116.09 MJ/m³)	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO Emissions G20 (Hi: 34.02 MJ/m³)	ppm	4	50	6	48	3	86	4	50	-	-	6	48	-	-	3	86	6	48	3	86	6	22	7	28
CO Emissions G25 (Hi: 29.25 MJ/m³)	ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CO Emissions G30 (Hi: 116.09 MJ/m³)	ppm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOX Emissions G20 (Hi: 34.02 MJ/m³)	mg/kWh	35		37		39		35		-		39		-		39		37		39		41		48	
NOX Emissions G25 (Hi: 29.25 MJ/m³)	mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOX Emissions G30 (Hi: 116.09 MJ/m³)	mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NOX Class		5		5		5		5		-		5		-		5		5		5		5		5	
Flue Gas Mass G20 (Hi: 34.02 MJ/m³)	g/sec	13	88	15	107	15	129	13	176	13	195	15	214	15	236	15	258	15	321	15	387	87	440	87	471
Flue Gas Mass G25 (Hi: 29.25 MJ/m³)	g/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flue Gas Mass G30 (Hi: 116.09 MJ/m³)	g/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gas Consuption G20 (Hi: 34.02 MJ/m³)	m³/h	3.21	20.99	3.70	25.15	3.70	31.25	3.21	41.97	3.21	46.14	3.70	50.31	3.70	56.40	3.70	62.50	3.70	75.46	3.70	93.76	12.26	105.70	12.26	113.21
Gas Consuption G25 (Hi: 29.25 MJ/m³)	m³/h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gas Consuption G30 (Hi: 116.09 MJ/m³)	m³/h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Pressure Loss Δt=20 C°	mbar	19		26		36		?		?		?		?		?		?		?		44		49	
Residual Draught, Fan	Pa	160		160		160		160 x 2pcs		160 x 2pcs		160 x 2pcs		160 x 2pcs		160 x 2pcs		160 x 3 pcs		160 x 3 pcs		100		100	
Condensing Water Mass	kg/h	29.4		35.7		44.1		58.8		65.1		71.4		79.8		88.2		107.1		132.3		140		157.5	
Condensing pH Value	pH	approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0	
Water pH, on Primary (constant)	pH	6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5		6.6 - 8.5	
Water Hardness, on Primary (constant)	french°	5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1		5 > Wh > 1	
Water Conductivity (constant)	µs/cm	<400		<400		<400		<400		<400		<400		<400		<400		<400		<400		<400		<400	
Electrical & Gas Connections																									
Gas Supply G 20 (Hi: 34.02 MJ/m³)	mBar	20		20		20		20		20		20		20		20		20		20		20		20	
Max Gas Supply Pressure G 20	mBar	25		25		25		25		25		25		25		25		25		25		25		25	
Min Gas Supply Pressure G 20	mBar	17		17		17		17		17		17		17		17		17		17		17		17	
Power Supply Voltage / Frequency	VAC/Hz	230-50																							
Power Supply Voltage Tolerance	%	(+%15) / (- %10)																							
Electrical Power Max.Absorbed	W	184		300		470		368		484		600		770		940		900		1410		-		-	
Electrical Power on Stand-By	W	3		3		3		3		3		3		3		3		3		3		3		3	
Working Conditions, Temperature	°C	+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40	
IP Class	-	IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D	

Model		ALUCON 50		ALUCON 70		ALUCON 90		ALUCON 115		ALUCON 125		ALUCON 150	
General		min	max.	min	max.	min	max.	min	max.	min	max.	min	max.
Type Of Flue Installation		B23-B53-C13-C33-C43-C53-C63-C83											
Fuel type-Gas category		I2H,I2E - Natural Gas G20-20-25 mbar				I2H,I2E - Natural Gas G20-20-25 mbar							
Nominal heat input Qn	kw	7,6	49,2	10,2	65,6	14,9	88,3	14,9	112,3	19,9	123,5	19,9	143,1
Nominal heat output Pn (80-60) °C	kw	7,4	48,1	9,9	63,8	14,4	86,9	14,4	110,3	19,3	121,4	19,3	140,5
Nominal heat output Pn (50-30) °C	kw	8,2	52,1	11,0	68,2	16,1	92,7	16,1	117,7	21,5	128,9	21,5	147,7
Working pressure	bar	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0	0,8	6,0
Maximum operation temperature	°C	85		85		85		85		85		85	
Cut-off temp. for limit thermostat	°C	95		95		95		95		95		95	
Efficiency & Emissions													
Heating Efficiency Q max (80-60) °C	%	97,7		97,2		98,4		99,2		98,3		98,2	
Heating Efficiency Q min (80-60) °C	%	96,9		96,7		96,8		96,8		97		97	
Heating Efficiency Q max (50-30) °C	%	105,9		103,9		105		104,8		104,4		103,2	
Heating Efficiency Q min (50-30) °C	%	108,1		108		108,2		108,2		108,1		108,1	
Partial Load, Return 30°C (Direct Method)	%	108,6		108,4		108,5		108,7		108,5		108,4	
Flue Gas Temperature (80-60) °C	°C	54,7	65,6	55,4	72,1	54,7	61,4	56,8	64,9	56,9	61,8	56,9	70,3
Flue Gas Temperature (50-30) °C	°C	29,5	45,1	30,1	52,3	30,2	44,8	30,2	53,5	30,5	44,9	30,5	47,1
CO2 Emissions G20 (Hi: 34.02 MJ/m³)	%	9,3	9,4	9,1	9,6	9,4	9,3	9,4	9,4	9,5	9,5	9,5	9,6
CO2 Emissions G25 (Hi: 29.25 MJ/m³)	%	-	-	-	-	-	-	-	-	-	-	-	-
CO2 Emissions G30 (Hi: 116.09 MJ/m³)	%	-	-	-	-	-	-	-	-	-	-	-	-
CO Emissions G20 (Hi: 34.02 MJ/m³)	ppm	44	89	29	152	27	120	27	156	24	140	24	169
CO Emissions G25 (Hi: 29.25 MJ/m³)	ppm	-	-	-	-	-	-	-	-	-	-	-	-
CO Emissions G30 (Hi: 116.09 MJ/m³)	ppm	-	-	-	-	-	-	-	-	-	-	-	-
NOX Emissions G20 (Hi: 34.02 MJ/m³)	mg/kWh	37		28		39		43		46		44	
NOX Emissions G25 (Hi: 29.25 MJ/m³)	mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-
NOX Emissions G30 (Hi: 116.09 MJ/m³)	mg/kWh	-	-	-	-	-	-	-	-	-	-	-	-
NOX Class		5		5		5		5		5		5	
Flue Gas Mass G20 (Hi: 34.02 MJ/m³)	g/sec	3	22	5	28	6	39	6	49	9	54	9	63
Flue Gas Mass G25 (Hi: 29.25 MJ/m³)	g/sec	-	-	-	-	-	-	-	-	-	-	-	-
Flue Gas Mass G30 (Hi: 116.09 MJ/m³)	g/sec	-	-	-	-	-	-	-	-	-	-	-	-
Gas Consuption G20 (Hi: 34.02 MJ/m³)	m³/h	0,80	5,21	1,08	6,94	1,57	9,34	1,58	11,88	2,11	13,07	2,11	15,14
Gas Consuption G25 (Hi: 29.25 MJ/m³)	m³/h	-	-	-	-	-	-	-	-	-	-	-	-
Gas Consuption G30 (Hi: 116.09 MJ/m³)	m³/h	-	-	-	-	-	-	-	-	-	-	-	-
Water Pressure Loss Δt=20 C°	mbar	130		180		170		280		310		400	
Residual Draught, Fan	Pa	100		130		170		200		220		330	
Condensing Water Mass	kg/h	10		15		12,6		16,1		17,5		21	
Condensing pH Value	pH	approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0		approx. 4.0	
Water pH, on Primary (constant)	pH	6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5		6,5 - 8,5	
Water Hardness, on Primary (constant)	french°	10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5		10 > Wh > 5,5	
Water Conductivity (constant)	µs/cm	<600		<600		<600		<600		<600		<600	
Electrical & Gas Connections													
Gas Supply G 20 (Hi: 34.02 MJ/m³)	mBar	20		20		20		20		20		20	
Max Gas Supply Pressure G 20	mBar	25		25		25		25		25		25	
Min Gas Supply Pressure G 20	mBar	17		17		17		17		17		17	
Power Supply Voltage / Frequency	VAC/Hz	230-50											
Power Supply Voltage Tolerance	%	(+%15) / (- %10)											
Electrical Power Max.Absorbed	W	52		97		116		203		212		313	
Electrical Power on Stand-By	W	5		5		5		5		5		5	
Working Conditions, Temperature	°C	+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40		+5 / +40	
IP Class	-	IP X4D		IP X4D		IP X4D		IP X4D		IP X4D		IP X4D	



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