

 **ALARKO**

Premix **Full Condensing** Combi Boiler
Seradens



**EXCELLENT HARMONY OF
SAVINGS AND HIGH EFFICIENCY**



Full Condensing Combi Boiler with Superior Features

Seradens

Premix Full Condensing Boiler Seradens has been developed based on the most preferred Alarko boiler Serena. Seradens produced with high-quality using the latest technology is changing standards with highefficiency values and efficient usage.



Worked with Natural gas, propane or LPG mix, Seradens Full Condensing Boiler is manufactured using the latest technology in Gebze Plant of Alarko Carrier.

EFFICIENCY UP TO %108

Only 133 watts of energy consumption.

It consumes very little electricity with "Low Energy" labeled circulation pump. Seradens, **its efficiency of 108%*** and the European Efficiency Directive 92/42/EEC with ★★★★★ yield sign among condensing boilers has the highest efficiency. **Not only when you purchase, while using as well you win.**

(*at 50/30°C central heating temperature)

It is very small.**

Depth, height and volume, which is one of the lowest boiler Seradens, even at the narrowest of kitchen cabinets can be mounted easily. Therefore, users will love Seradens more...

**SRD 20 - 27 (W: 41cm / H: 73cm / D: 29cm)

**SRD 36 (W: 41cm / H: 73cm / D: 32cm)

- Continuous and full flame modulation in the central heating and domestic hot water circuits
- Use of motorized three-way valve
- Operating in low water pressure
- Temperature set opportunity of 35-60°C for usage hot water, 30-80°C for standard heating circuit, 25-40°C for underfloor heating system
- Longer flue distance



- 19, 27 and 36 kW capacities
- Easy mounting with its lightness and minimum size
- Self-Diagnostic
- Compliant with European norms, low emission, highly efficient environmentfriendly product

Total Comfort Control

Seradens provides extra comfort with its LCD digital operating and breakdown screen panel...

Operating and temperature indicators together with fault warnings are easily shown on LCD screen. Operating automatically in accordance with outside temperature provides maximum fuel economy*, extra comfort and extra economy is enabled by cable or wireless room thermostats*. It operates in compliance with underfloor heating systems.

Condensing Technology

Flue gas temperature is very high in conventional boilers. In Premix condensation technology thanks to boiler water produced less than 55°C, water vapour found in the flue gas with high temperature is condensed and then flue gas temperature reduced. Transferring earned latent heat to water, the yield increase up to 108% is achieved. Stainless steel or aluminium alloyed main heat exchanger resistant to acidic condensation of water should be used.

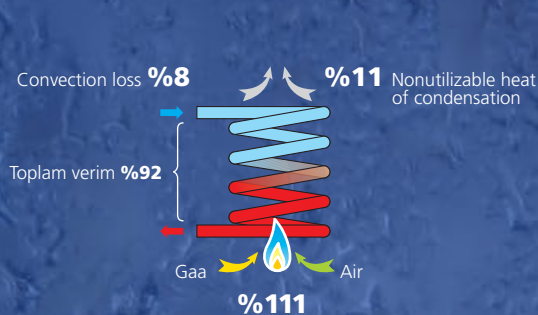
Full Condensation with Premix Combustion Technology

Together with Premix system that is the realization of combustion by premixing fuel and air with ideal ratio, full condensation is ensured and the efficiency is reached to the highest value.

Low flame length in Premix full condensing boiler, minimizes harmful flue gas emissions. Sound level of the boiler is reduced to the minimum.

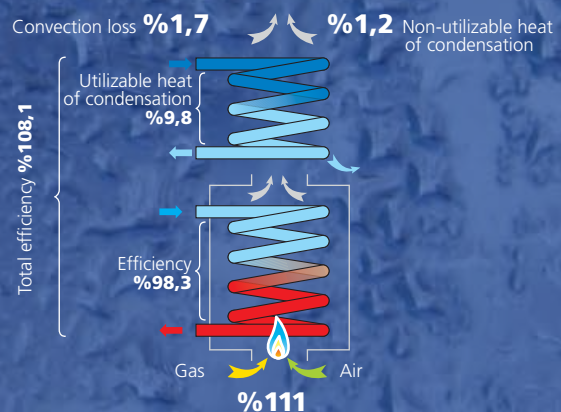
In the boilers with recuperator (secondary heat exchanger) full condensation is not occurred. Because fuel-air premixture is not provided, an ideal combustion can not be accomplished. Efficiency becomes 5-7% less. Since fan is not modulated, efficiency at low heat capacity due to an excessive air ratio in the combustion falls further. Compared to full condensing premix boilers, flame height is higher, hence harmful flue gas emissions are more, sound level is higher as well.

Superior Efficient Seradens



Classic Conventional Boiler

- Efficiency: 90 - 92% (approximately)
- Flue gas temperature: 120 - 140°C (approximately)
- High CO₂ emission (insensitive to the environment)
- Low combustion efficiency due to fixed air-natural gas mixture
- High boiler water temperature



Seradens Full Condensing Combi Boiler

- Efficiency: %107 - 108
- Flue gas temperature: 45 - 65°C
- Low CO₂ emission (environmentally sensitive)
- Premix, high-efficiency combustion with ideal mixture of air-natural gas
- Low boiler water temperature-based condensation in the flue gas

Lifetime with High Efficiency with Stainless Steel Heat Exchanger



The unique stainless steel heat exchanger is the heart of Seradens. Correct design and reliable technique combined with high-quality stainless steel makes a very strong heart.

Circular-shaped stainless steel heat exchanger, in spite of small size provides high heat transfer. When regular maintenance of heat exchanger without fins is made, efficiency remains the same throughout the lifetime without falling.

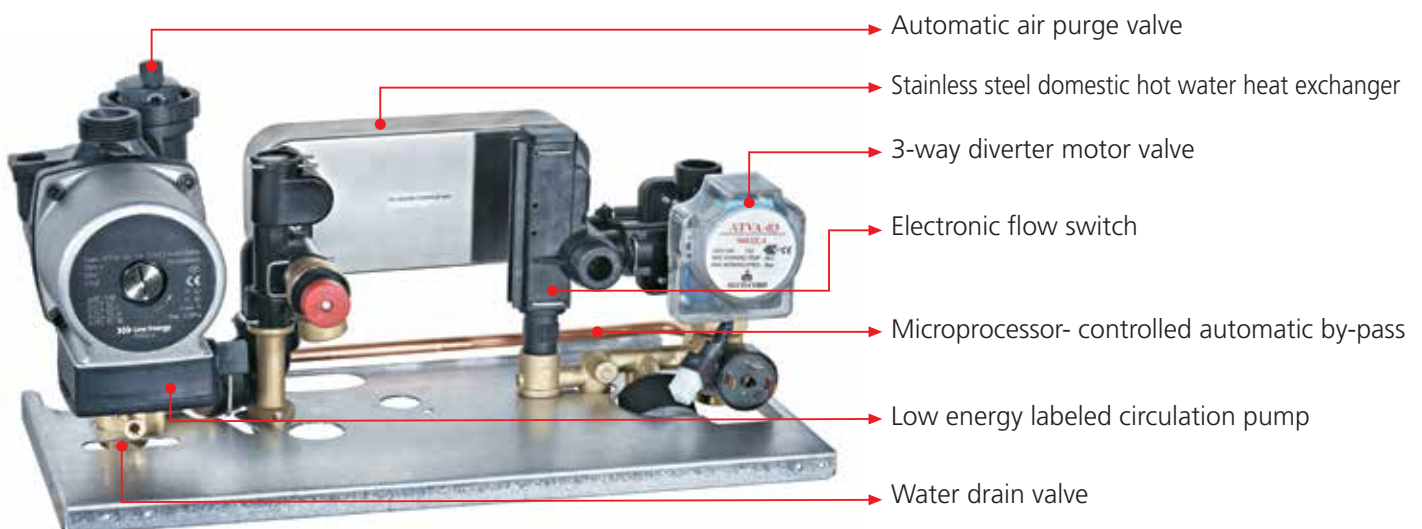
Maximum Energy Saving with Fan Modulation and "Low Energy" Labeled Circulation Pump

In today's world where energy saving is critical, with the new generation **"Low Energy"** labeled circulation pump operating with less energy during both central heating and domestic hot water, energy is saved up to 15% compared to the conventional pumps.

Thanks to fan modulation gas - air mixture before combustion is provided in all capacities with the ideal ratio the maximum combustion efficiency is reached.



Easy Maintenance with MULTIPLEX® Hydraulic Group



Compact and safe MULTIPLEX® system is designed to offer combi boiler with minimum dimensions suitable for modern living environments. MULTIPLEX® also makes service operations easy.

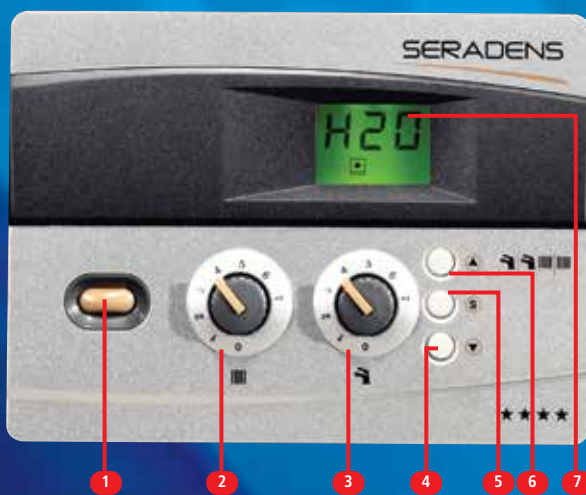
Comfort and More Safety with DIGITECH 2® Electronic Printed Circuit Board

Simple and elegant, self-diagnostic, new DIGITECH 2® electronic printed circuit board makes operation modes, operating temperatures, outside temperature, codes for warnings and faults possible to display and to set parameters on the LCD screen. It continuously checks the combi boiler for safety, comfortable and high-efficient operation.

- Selection of operating central heating temperature in compliance with radiator or underfloor heating
- Electronic ignition, two ignition attempts
- Temperature control with domestic hot water and central heating sensors, sensor fault warnings
- Continuous modulation for both domestic hot water and central heating
- Two separate high temperature safety with boiler water and flue gas check
- Flame extinguishing and sensing safety
- Heating thermostat standby feature and time setting
- Heating and domestic hot water frost protection
- Time setting for full load arrival in heating
- Safety for high and low system water pressure
- Pump jamming prevention
- Central heating and domestic hot water pump overrun and time setting
- Instant hot water supply with the feature of micro-storage in domestic hot water
- Automatic by-pass
- Fan malfunction safety
- Water pulse (hammering) prevention function
- Selection of operating curve in accordance with outside air
- Fast, cost-saving conversion from LPG to natural gas and from natural gas to LPG with only a fan frequency setting



Easy Use with LCD Screen



1. On/off switch
2. Central heating temperature control knob
3. Domestic hot water temperature control knob
4. Domestic hot water display button*
5. Service button
6. Summer / winter /summer + winter mode selection button
7. Illuminated LCD screen

**Shows also outside temperature if an optional outdoor sensor is fitted*

Automatic Control Devices for Superior Comfort and Fuel Economy*



**Room
Thermostat**

It operates the combi boiler in accordance with desired room temperature.



**Cable and Wireless
Weekly Programmable
Room Thermostat**

It operates the combi boiler for the desired time period per week in accordance with desired room temperature.



**Outdoor
Temperature
Sensor**

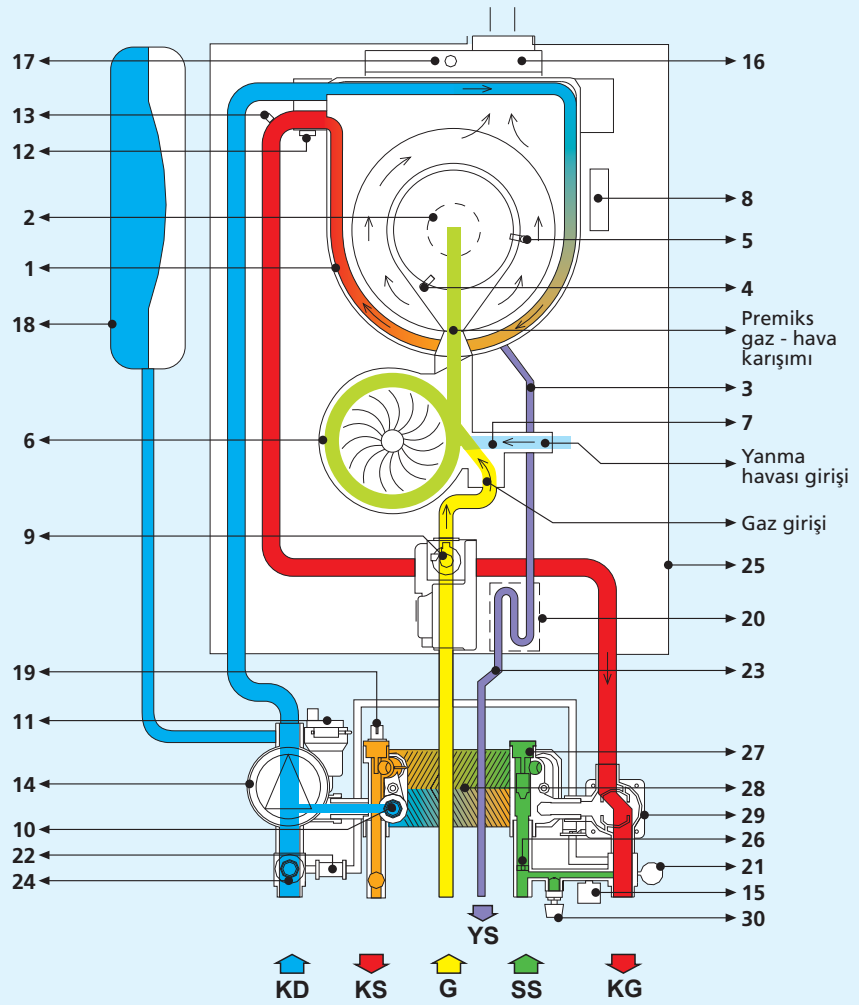
It automatically operates the combi boiler in accordance with outdoor conditions. It can be used with room thermostats.

There are analog and digital models.

**All these devices are optional*

Operation Diagram

1. Primary Condensing Heat Exchanger
2. Premix Combustion Unit (Gas Manifold + Burner)
3. Condensate Drain Pipe
4. Ionisation Electrode
5. Ignition Electrode
6. Fan
7. Venturi
8. Ignition Transformer
9. Electronic Gas Valve
10. 3 Bar Safety Valve
11. Automatic Air Vent
12. Heating Safety Thermostat
13. Heating Sensor
14. Pump
15. Water Pressure Switch
16. Flue Hood
17. Flue Safety Thermostat
18. Expansion Tank
19. Domestic Hot Water Sensor
20. Siphon
21. Manometer
22. Automatic By-Pass
23. Condensate Drain Pipe
24. System Drain Valve
25. Hermetic Cabinet
26. Flow Limiter
27. Electronic Flow Switch
28. Domestic Hot Water Heat Exchanger
29. 3-Way Diverter Motor Valve
30. Water Filling Tap



CW: Condensation water

Dimensions



- HR** : CH return (3/4")
HWO: DHW outlet (1/2")
G : Gas inlet (1/2")
CWI : Domestic cold water inlet (1/2")
HF : CH flow (3/4")

Flue Types



Ø60/100 Horizontal Flue Kit



Ø60/100 Vertical Flue Kit



Ø80/125 Horizontal Flue Kit



Ø80/125 Vertical Flue Kit



Ø80/80 Twin Flue Kit

Technical Specifications

		SRD 20	SRD 27	SRD 36
CE Certificate	No	0694BU3121	0694BU3121	0694BU3121
Types of Flue Application		B23p-B33-C13-C33-C43-C53-C63-C83-C93	B23p-B33-C13-C33-C43-C53-C63-C83-C93	B23p-B33-C13-C33-C43-C53-C63-C83-C93
Gas Category		I12H3B/P	I12H3B/P	I12H3B/P
Heating Inlet Max.	kW	18	25	34
Domestic Hot Water Inlet Max.	kW	23.5	25	34
Heating Inlet Min.	kW	4 (G20/G25) - 5.5 (G30/G31)	9	10
Heating Outlet Max. (50/30°C)	kW	19.26	26.68	36.24
Efficiency at 100% load (50/30°C)	%	107	106.7	106.60
Efficiency at 30% load (50/30°C)	%	108.1	106.3	107.90
Heating Outlet Max. (80/60°C)	kW	17.69	24.6	33.42
Heating Outlet Min. (80/60°C)	kW	3.9 (G20/G25) - 5.4 (G30/G31)	8.73	9.73
Efficiency at 100% load (80/60°C)	%	98.3	98.4	98.3
Efficiency at 30% load (80/60°C)	%	101.1	100.1	100.7
According to the Gas Directive 92/42/EEC Efficiency marking		★★★★	★★★★	★★★★
Heating Circuit				
Heating Temperature Setting Range (min.-max.)	°C	30-80 / 25-40	30-80 / 25-40	30-80 / 25-40
Max. Heating Operation Temperature	°C	95	95	95
Expansion Tank Capacity	liter	7	7	7
Max. Operating Pressure (Heating)	bar	3	3	3
Min. Operating Pressure (Heating)	bar	0.3	0.3	0.3
Domestic Hot Water Circuit				
Domestic Hot Water Temperature Setting Range (min.-max.)	°C	35-60	35-60	35-60
Max. Hot water Operating Pressure	bar	6	6	6
Min. Hot water Operating Pressure	bar	0.5	0.5	0.5
Hot Water Flow Rate (Δt: 30°C)	liter/min.	11.53	12.25	16.63
Dimensions				
Width	mm	410	410	410
Height	mm	730	730	730
Depth	mm	292,5	292,5	324,5
Weight (net)	kg	38	40	44
Flue Systems				
Horizontal Concentric Flue System	Ø mm	60/100	60/100	80/125
Max. Flue Length	m	6	5	8
Twin Flue System	Ø mm	80/80	80/80	80/80
Max. Flue Length (from terminal to terminal)	m	50	50	50
Twin Flue System	Ø mm	60/60	60/60	60/60
Max. Flue Length (from terminal to terminal)	m	30	30	30
Vertical Concentric Flue System	Ø mm	60/100	60/100	80/125
Max. Flue Length	m	6	5	8
Gas Consumption				
Natural Gas G20 Gas Consumption	m³/h	1.9	2.65	3.60
Butane Gas G30 Gas Consumption	kg/h	1.42	1.97	2.68
Propane Gas G31 Gas Consumption	kg/h	1.4	1.94	2.64
Electrical Supply				
Power Supply	V/Hz	230/50	230/50	230/50
Electricity Consumption	W	133	138	138
Protection Class	IP	X4D	X4D	X4D



The right to amend specifications under technologic developments is reserved



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