



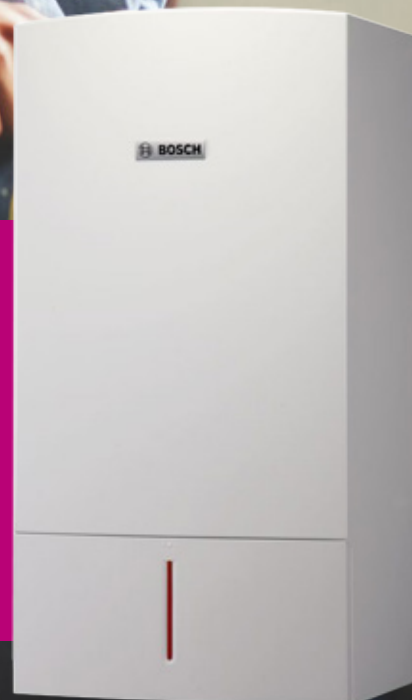
**BOSCH**

Invented for life

## Bosch Condensing Wall Boiler

Greenstar | Wall Mounted

The Bosch Greenstar is the World's Best Selling Residential Condensing Boiler System. Greenstar is ideal for providing comfortable heating and domestic hot water with a 151,000 maximum BTU rating and 95% AFUE. Greenstar's ultra quiet operation is perfect for radiant heating with panel radiators, in floor radiant, or baseboards.





# Reduce Fuel Bills, Emissions & Save Space

## Meet the Bosch Greenstar Wall Boiler

The Bosch Greenstar wall boilers deliver space and domestic hot water heating with unsurpassed performance and control. With special insulation to ensure ultra-quiet operation and the exclusive keypad safety lock feature to prevent unwanted tampering, this unit is the ideal "green" upgrade for homes and apartments. In addition, the Greenstar boiler includes a highly efficient 95% AFUE aluminum silicon heat exchanger which makes the boiler eligible for Federal Tax Credit and utility rebates.<sup>(1)</sup>

### Features

- ▶ **Broad BTU Output Range:** Floor and Wall models with 95% AFUE and up to 5:1 modulation are available in 5 Heat-Only and 3 Combi sizes
- ▶ **Simplified Installation:** Integral pump is standard on all models
- ▶ **Coated Heat Exchanger:** Reduces scale build-up, reduces service, maintains high efficiency and extends the life of the boiler
- ▶ **Combi Models High DHW Output:** Up to 4 GPM DHW output on Combi models – based on  $\Delta T$  at 72°F / 40°C. Large plate heat exchanger allows for lower operating temperatures and larger  $\Delta T$  in DHW mode for higher efficiency and condensing operation
- ▶ **Proven Reliability:** Over 4 million Greenstar boilers sold worldwide
- ▶ **Venting Material:** Options include polypropylene (PP), flexible PP chimney liner, concentric PP kit, PVC or CPVC



<sup>(1)</sup> Federal Tax Credit and utility rebates may vary depending on location.

# Bosch Greenstar Applications

The Greenstar is ideal for a townhouse, condo, apartments or single family homes. Available as a heat only boiler for use with a hot water tank, or as a combi model for heating integrated with tankless domestic hot water (DHW).

## Heat-Only Boiler

- ▶ Boiler setup with separate circuits for heating and a DHW tank
- ▶ Ideal replacement solution where the existing DHW source will stay in place
- ▶ Perfect for systems with a very high DHW demand as the tank can be matched to the hot water requirement without necessarily having to increase the boiler output
- ▶ For use with renewables like solar thermal to reduce the energy consumption even further

## Combination Boiler

- ▶ Boiler with an integrated system for providing tankless domestic hot water
- ▶ All-in-one solution with very low installation effort and very few external components
- ▶ Ideally suited for smaller properties with low to medium DHW demand and relatively short hot water pipe runs
- ▶ Smallest footprint suits properties with little space, frees up space that could otherwise be used
- ▶ Efficiency is maintained while producing domestic hot water, unlike most combi-boilers on the market

### Greenstar Heat-Only Boilers

Input Rate Range in MBH (180/79°F, 82/26°C)

Greenstar 151	36	151
Greenstar 131	36	131
Greenstar 100	24	100
Greenstar 79	24	79
Greenstar 57	12	57

### Greenstar Combi-Boilers

Input Rate Range in MBH (180/79°F, 82/26°C)

Greenstar 151	36	151
Greenstar 131	36	131
Greenstar 100	24	100



## Giving you the Ultimate Comfort you Deserve

Greenstar is ideal for providing comfortable heating and domestic hot water within the 151,000 maximum BTU rating. Greenstar's ultra quiet operation is perfect for radiant heating with panel radiators, in floor radiant, or baseboards. Radiant heat, like the sun, warms objects rather than just the air, creating a greater sense of warmth and at lower room temperatures.

## Bosch, the Quality Name you Know and Trust

Bosch has been producing products since 1886. We first produced water heaters and boilers in 1895. Since 2001 more than 20 million units have been installed worldwide. The Bosch Greenstar condensing boiler line is engineered to offer the ideal solution for residential heating and hot water needs at an affordable price, without compromising quality or fuel economy.

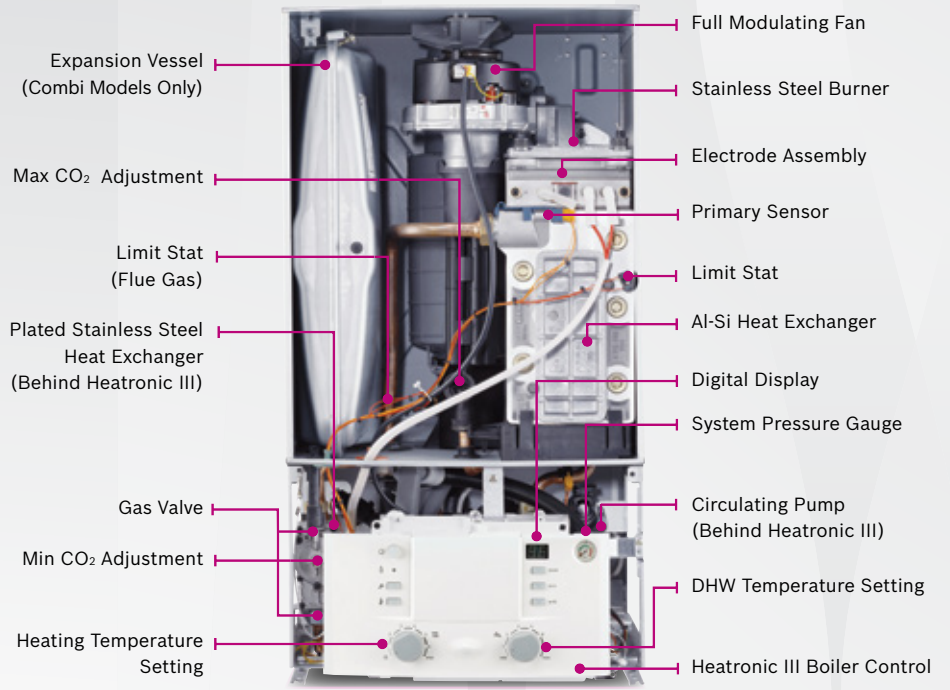
## Peace-Of-Mind Warranties That are Best in Industry

Bosch products are built using top-grade materials and are tested to meet the highest standards for performance and sustainability, which is why Bosch can back each product with the most generous warranties in the industry. Our 5-year parts and labor limited warranty and lifetime heat exchanger limited warranty<sup>§</sup> ensure longevity of your investment.

<sup>§</sup> Copies of original warranties in their entirety are available at [www.boschheatingandcooling.com](http://www.boschheatingandcooling.com)

# Bosch Greenstar Superior Design & Components

The new Bosch Greenstar series features industry-leading design and technology components built for years of reliable operation and optimal energy efficiency.



## Al-Si Heat Exchanger

Each unit features an ASME approved Al-Si heat exchanger constructed of advanced magnesium-aluminum-silicon alloy offering increased flexibility versus traditional stainless steel. This highly durable heating block is corrosion resistant and designed to optimize clean burning combustion over an extra large surface area. The heat exchanger has a coating that prevents scale build-up, reduces service, maintains high efficiency and extends the life of the boiler.



## Full Modulating Fan Assembly

A full modulating fan automatically increases or decreases its speed depending on the heat demand controlling the amount of gas coming into the boiler. This process, called modulation, prevents the boiler from either having too little or too much air in the unit for optimal combustion ensuring high efficiency.

## Stainless Steel Plate Heat Exchanger

All Greenstar Combi boilers are equipped with a high-strength stainless steel flat plate heat exchanger with double passage ensuring consistent DHW temperature output based on demand. This heat exchanger, with its large surface area and advanced technology, allows the boiler to use a lower water temperature and to condense even while producing DHW for greater efficiency and helps reduce the build-up of scale within the heat exchanger.



## Heatronic III Boiler Control

Bosch Heatronic III, a device integrated into the boiler, provides instant access to the hot water and heating control buttons. Furthermore, it enables the easy setting and testing of many customized appliance functions and applications. The exclusive keypad safety lock feature prevents unwanted tampering with the control.

# Bosch Greenstar Accessories



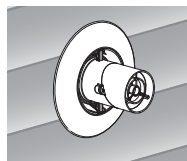
## Domestic Hot Water Tanks

Combine your Bosch boiler with one of our indirect hot water tanks. A Bosch tank is extremely well insulated for minimal stand-by heat loss. Available in 32 up to 119 gallons, these tanks have a higher recovery rate than direct fired or tankless coil versions.



## Panel Radiators

Radiant heat, like the sun, warms objects rather than just the air, creating a greater sense of warmth and at lower room temperatures. Panel radiators provide the perfect combination of both radiant and convection heat. Depending on system and designed supply temperatures, panel radiators can offer additional energy savings.



## Concentric Vent Kit

A concentric vent is designed to use only one pipe for both the intake for combustion air and the exhaust vent. This design is an alternative to the standard two pipe intake/vent. Unlike standard venting, which requires cutting two holes through the home, one for intake and one for exhaust, a concentric vent only requires one hole through the wall to the outside.

## Technical Specifications

Model	Heating and Tankless Hot Water			Heating*				
	GREENSTAR COMBI 100	GREENSTAR COMBI 131	GREENSTAR COMBI 151	GREENSTAR 57	GREENSTAR 79	GREENSTAR 100	GREENSTAR 131	GREENSTAR 151
Wall Model	ZWB28-3	ZWB35-3	ZWB42-3	ZBR16-3	ZBR21-3	ZBR28-3	ZBR35-3	ZBR42-3
<b>Performance Specifications</b>								
Fuel	NG / LP			NG / LP				
Input Maximum (MBH)	100.0	131.9	151.6	57.2	79.2	100.0	131.9	151.6
Input Minimum (MBH)	24.6	36.0	36.0	12.9	24.6	24.6	36.0	36.0
DOE Heating Capacity (MBH)	91	118	135	52	71	91	118	135
Net I=B=R (MBH)	79	103	117	45	62	79	103	117
AFUE	95%							
DHW Flow Max (ΔT at 72°F), GPM	2.65	3.2	4.0	not applicable				
Water Volume, Gal (L)	0.952 (3.5)			0.952 (3.5)				
<b>Technical Data</b>								
Dimensions, in. (W x H x D)	17 <sup>7</sup> / <sub>5</sub> x 33 <sup>1</sup> / <sub>2</sub> x 13 <sup>9</sup> / <sub>10</sub>			17 <sup>7</sup> / <sub>5</sub> x 33 <sup>1</sup> / <sub>2</sub> x 13 <sup>9</sup> / <sub>10</sub>				
Weight, lbs (without Packaging, kg)	110.2 (50)			103.6 (47)				
Optional Base Dimensions	Stand dimensions: 13 <sup>3</sup> / <sub>4</sub> " deep, by 17 <sup>3</sup> / <sub>8</sub> " wide by 20 <sup>5</sup> / <sub>8</sub> " high. Total height of stand and boiler: 54 <sup>1</sup> / <sub>8</sub> "							
Wall Boiler Supply & Return Tappings in.	1							
Domestic Cold Water Supply, in.	¾			not applicable				
Domestic Hot Water Supply, in.	¾			not applicable				
Gas Connection Size, in.	¾							
Vent Size, in.	2 - 3							
Vent Material	PVC / CPVC / PP / PP-Flex / SS							
Combustion Air Size, in.	2 - 3							
High Altitude Capability	No De-Rating up to 6,000'	No De-Rating up to 6,000'	De-Rating 3% per 1,000'	No De-Rating up to 6,000'	No De-Rating up to 6,000'	No De-Rating up to 6,000'	No De-Rating up to 6,000'	De-Rating 3% per 1,000'
Permissible Inlet Gas Pressure NG in. W.C. LP (propane) in. W.C.	3.5-10.5" 8-13"							

\* Heat only Greenstar models may be used with indirect water tanks to provide domestic hot water



# About **Bosch**

## **Bosch Group**

The Bosch Group is a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology. The company was founded in Stuttgart, Germany, in 1886 and presently has more than 440 subsidiaries and is represented in over 150 countries.

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances and software solutions. The Bosch Group's products and services are designed to improving quality of life by providing innovative and beneficial solutions. In this way, the company offers technology worldwide that is "Invented for life." Additional information is available online at [boschheatingandcooling.com](http://boschheatingandcooling.com) and [bosch.ca](http://bosch.ca).

## **Bosch Thermotechnology in North America**

Bosch Thermotechnology is a leading source of high quality water heating and comfort systems. The company offers gas tankless, electric whole house and point-of-use water heaters, Bosch and Buderus floor-standing and wall mounted boilers, Bosch and FHP geothermal, water-source and air-source systems as well as controls and accessories for all product lines. Bosch Thermotechnology is committed to being Simply Smart by offering products that work together as integrated systems that enhance quality of life in an ultra-efficient and environmentally friendly manner. For more information, visit [boschheatingandcooling.com](http://boschheatingandcooling.com).

## **Bosch Water-Source Heat Pumps: Made in the U.S.A.**

Bosch and FHP water-source and geothermal heat pumps are made by highly trained and skilled workers in our factory based in Fort Lauderdale, Florida. They are manufactured with rigorous standards and factory testing ensuring high efficient operation over the life of the unit. Bosch's ISO 9001 and ISO 14001 certified facilities provide consistent quality in every unit built.



Heating



Cooling



Hot Water



Controls

### **Bosch Thermotechnology Corp.**

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