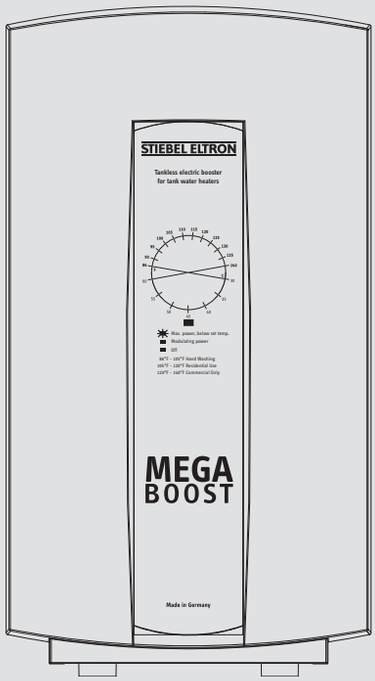
OPERATION AND INSTALLATION

TANKLESS ELECTRIC BOOSTER FOR TANK WATER HEATERS

» MEGABOOST



STIEBEL ELTRON

Conforms to ANSI/UL Std. 499
Certified to CAN/CSA Std. E335-1 & E335-2-35

Intertek

Tested and certified by WQA to NSF/ANSI 372
for lead free compliance.

OPERATION

1. General information

Note
Read these instructions carefully before using the appliance and familiarize yourself with its functions. Keep these instructions safe. Pass on the instructions to a new user if required.

1.1 Safety information

1.1.1 Structure of safety information

KEYWORD: Type of risk
Here, possible consequences are listed that may result from not observing the safety information.
▶ Steps to prevent the risk are listed.

1.1.2 Symbols. type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns or scalding

1.2 Other symbols in this document

Note
Notes are bordered by horizontal lines above and below the text. General information is identified by the symbol shown on the left.
▶ Read these notes carefully.

Symbol	
	Damage to the appliance and environment
	Appliance disposal

▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

2. Safety

Observe the following safety information and regulations.

Operate the appliance only when fully installed and with all safety equipment fitted.

2.1 Intended use

The appliance is intended to boost domestic hot water output of a tank water heater.

Any other use beyond that described shall be deemed inappropriate.

Observation of these instructions is also part of the correct use of this appliance.

2.2 General Information

Read this entire manual. Failure to follow all the guides, instructions and rules could cause personal injury or property damage. Improper installation, adjustment, alteration, service and use of this appliance can result in serious injury.

This appliance must be installed by a licensed electrician and plumber. The installation must comply with all national, state and local plumbing and electric codes. Proper installation is the responsibility of the installer. Failure to comply with the installation and operating instructions or improper use voids the warranty.

Save these instructions for future reference. Installer should leave these instructions with the consumer.

If you have any questions regarding the installation, use or operation of this water heater, or if you need any additional installation manuals, please call our technical service line, see last side.

2.3 Safety Precautions

DANGER: Injury
Please read and follow these instructions.
Failure to follow these instructions could result in serioius personal injury or death.

Damage to the appliance and the environment
The appliance must be installed by a licensed electrician and plumber. The installation must comply with all national, state and local plumbing and electric codes.
Service of the appliance must be performed by qualified service technicians.

DANGER: Electrocution
Before proceeding with any installation, adjustment. alteration, or service of this appliance all circuit breakers and disconnect switches servicing the appliance must be turned off. Failure to do so could result in serious personal injury or death.

DANGER: Electrocution
Never remove the appliance cover unless the electricity servicing the appliance is turned off. Failure to do so could result in personal injury or death.

DANGER: Electrocution
The appliance must be properly grounded. Failure to electrically ground the product could result in serious personal injury or death.

DANGER: Burns
Water temperatures over 125 °F (52°C)can cause severe burns instantly or death from scalding. A hot water scalding potential exists if the thermostat on the appliance is set too high. Households with small children, disabled or elderly persons may require that the thermostat be set at 113 °F (45°C) or lower to prevent possible injury from hot water.

WARNING: Injury
Where children or persons with limited physical, sensory or mental capabilities are to be allowed to control this appliance, ensure that this will only happen under supervision or after appropriate instructions by a person responsible for their safety.
Children should be supervised to ensure that they never play with the appliance.

3. Register your product

YOU MUST REGISTER THIS PRODUCT WITHIN 90 DAYS OF PURCHASE ON OUR WEB SITE IN ORDER TO ACTIVATE THE STANDARD WARRANTY OR TO BE ELIGIBLE FOR THE EXTENDED WARRANTY. GO TO OUR WEB SITE AT WWW.STIEBEL-ELTRON-USA.COM AND CLICK ON REGISTER YOUR PRODUCT.

Before beginning the registration process, we suggest that you gather the necessary information which will be as follows:

Number listed after "Nr."
Place of Purchase
Purchase Date
First & Last Name
Email address
Physical Address
Phone Number
Installation Date

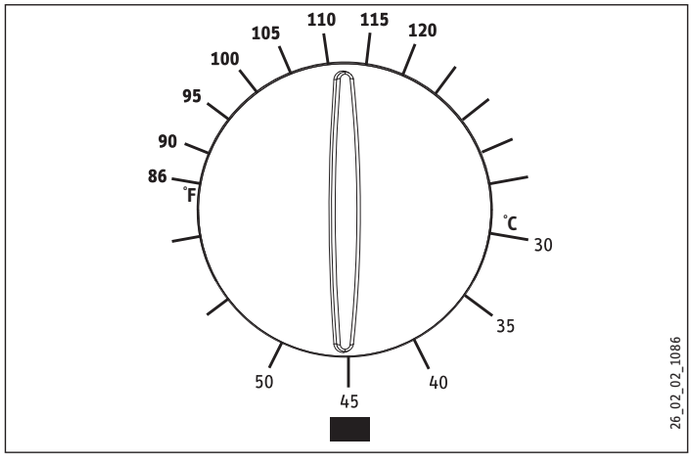
IF YOU HAVE ANY QUESTIONS CONCERNING THE REGISTRATION PROCESS OR WARRANTY OPTIONS, PLEASE CONTACT STIEBEL ELTRON USA DIRECTLY AT (800)-582-8423.

4. General

The tankless water heater differs from conventional storage type water heaters in several ways. It does not store hot water. Instead, water is heated instantaneously as it flows through the appliance. Due to the absence of stand-by losses, the appliance offers greater energy efficiency than storage type water heaters.

The MegaBoost should be installed in conjunction with a storage tank water heater.

MegaBoost can be installed on the cold water inlet or on the hot water outlet of the tank water heater. Installation at either location will greatly increase the amount of hot water the tank is able to deliver (first hour rating). Either installation location will also shorten the recovery time necessary for the tank to recharge, but this effect is far greater with installation on the cold water inlet.



The input of heat into the water is electronically controlled. The appliance will deliver any water temperature between 86°F (30°C) and 140°F (60°C). Please set the desired temperature using the knob on the front cover.

Note:
For reasons of appliance efficiency and durability (scaling), the optimum temperature setting lies between 86°F (30°C) and 120°F (50°C).

In case the “Power” light is flashing while the appliance operates, the water flow rate exceeds the heating capacity of the appliance. Reduce the hot water flow rate in order to let the appliance achieve the set point temperature. The maximum temperature is electronically limited to 140°F (60°C). In case you have questions regarding the way you plan to use the appliance, please call our technical service line, see last side.

5. Troubleshooting

Symptom	Possible Cause	Solution
No hot water	not enough flow rate to activate appliance	clean faucet aerator or shower head
Water not hot enough	water flow too high	reduce water flow rate until light on front cover stops blinking

If you cannot remedy the fault, notify the contractor who installed the appliance. To facilitate and speed up your enquiry, please provide the serial number from the type plate (000000-0000-000000).

INSTALLATION

6. Safety

Only a qualified contractor should carry out the installation, commissioning, maintenance and repair of the appliance.

6.1 General safety instructions

To prevent your warranty claim, use only original accessories and spare parts. If you need spare parts, call 800-582-8423.

7. Appliance description

The heating element is located inside a copper canister in the plastic housing. The incoming water enters the unit on the bottom right, and exits at the bottom left. There is a temperature selection knob on the front face of the unit.

7.1 Standard delivery

The following are delivered with the appliance:

- ½″ to ¾″couplings

8. Mounting the appliance

8.1 Application

One appliance can be used for the following applications:

Pre-heating water entering a tank water heater

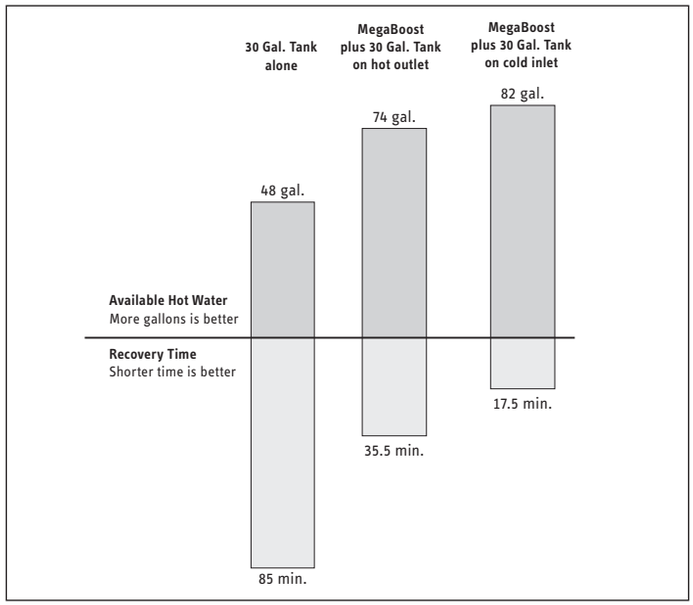
Heating water exiting a tank water heater

CAUTION: Electrocution
Unit must be installed in a vertical position with the water fittings pointing downward. In this position the unit is splashproof, so that no water can soak in.

8.2 Choosing installation configuration

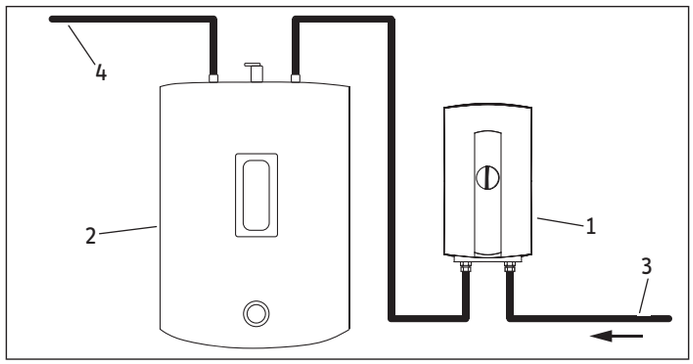
The Megaboost can either pre-heat an electric tank water heater or be pre-heated by one.

The chart shows the effect of installation on the tank cold water inlet versus on the tank hot water outlet. These results are a guidelne only as results will vary with installation of different size tanks, with different hot water tank settings, and in locations with different cold water inlet temperatures.

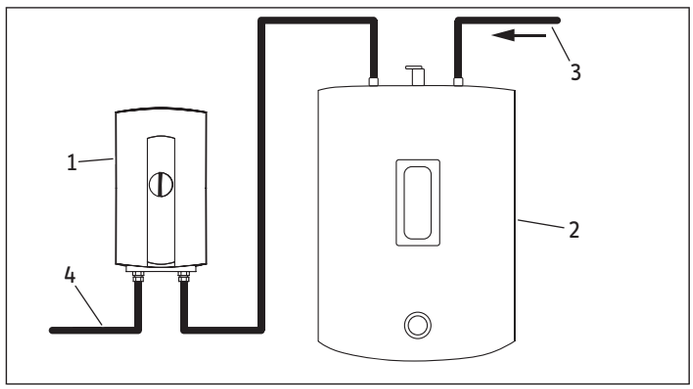


8.3 Typical installation configurations

MegBoost installation on cold water inlet of tank.



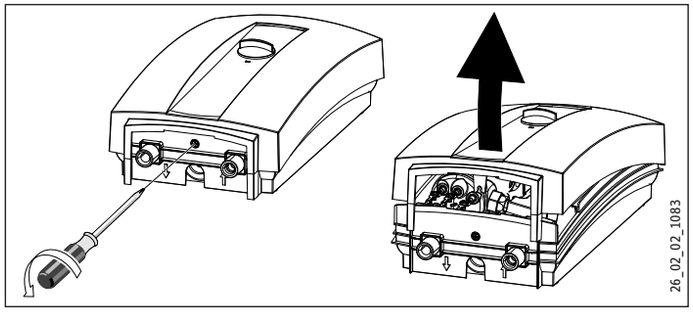
MegBoost installation on hot water outlet of tank.



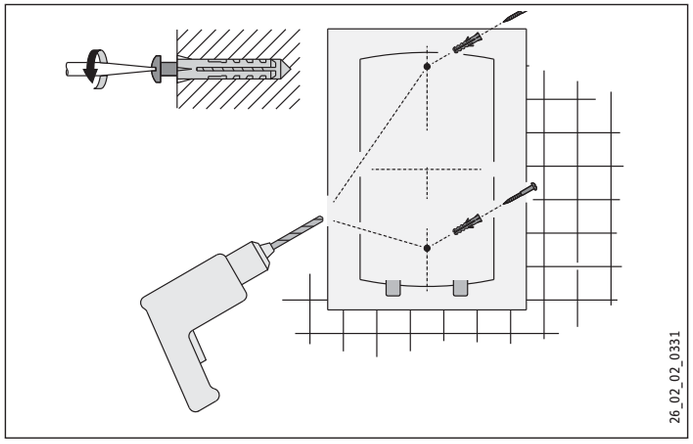
1 MegaBoost
2 Electric water heater
3 Cold water inlet
4 Hot water outlet

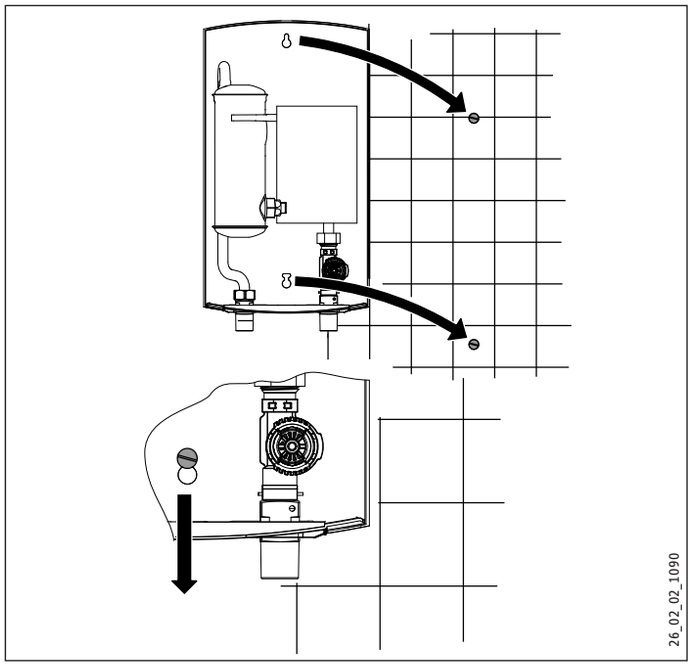
8.4 Mounting

- Securely install the appliance in a location affording easy piping to the hot water tank.
- Install appliance in a frost free area. If frost may occur, remove appliance before freezing temperatures set in.
- Leave a minimum of 5" of clearance on all sides for servicing.



- Remove plastic cover.





- Screw the screws into the wall and hang the appliance. Screws and plastic wall anchors for mounting on masonry or wood are provided.
- Secure the screws.

9. Water connections

Damage to the appliance and the environment:
Excessive heat from soldering on copper pipes near the MegaBoost may cause damage.

- All plumbing work must comply with national and applicable state and local plumbing codes.
- A pressure reducing valve must be installed if the cold water supply pressure exceeds 150 PSI (10 bar).
- Make certain that the cold water supply line has been flushed to remove any scale and dirt.
- Install isolating valve in cold water line as shown in 8.3, "Typical installation configurations", pg. 5. This allows the appliance to be isolated for maintenance purposes. The tank water heater should have its own isolation valve in addition to the valve for the MegaBoost.
- Cold water connection (inlet) is on the right side of the appliance, hot water connection (outlet) is on the left side of appliance.
- Tankless water heaters such as the MegaBoost are not required to be equipped with a Pressure and Temperature Relief Valve (P&T). If the local inspector will not pass the installation without a P&T, it should be installed on the hot water outlet side of appliance.
- The appliance is designed for connection to copper tubing, PEX tubing or a braided stainless steel hose with a ½" NPT female tapered thread. If soldering near the appliance is necessary, please direct the flame away from the plastic housing of the appliance in order to avoid damage. Two couplings that adapts ½" to ¾" NPT are included with the MegaBoost.
- When all plumbing work is completed, check for leaks and take corrective action before proceeding.

10. Electrical connection

DANGER: Electrocution
Carry out all electrical connection and installation work in accordance with relevant regulations.

DANGER: Electrocution
Only use a permanent connection to the power supply. The appliance must be able to be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.

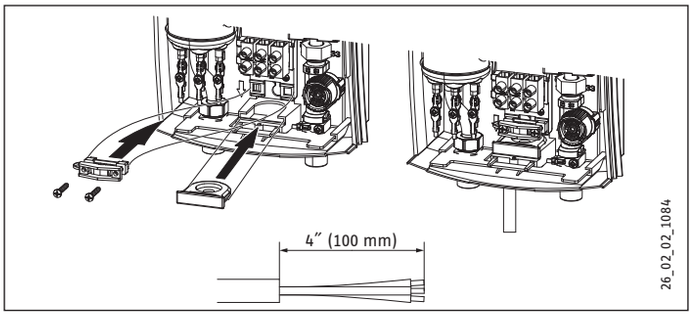
ELECTRICAL CONNECTION

Damage to the appliance and the environment:
Observe the type plate. The specified voltage must match the mains voltage.

DANGER: Electrocution
Before beginning any work on the electric installation, be sure that main breaker panel switch is „off“ to avoid any danger of electric shock. All mounting and plumbing must be completed before proceeding with electrical hook-up. Where required by local, state or national electrical codes the circuit should be equipped with a „ground fault interrupter“.

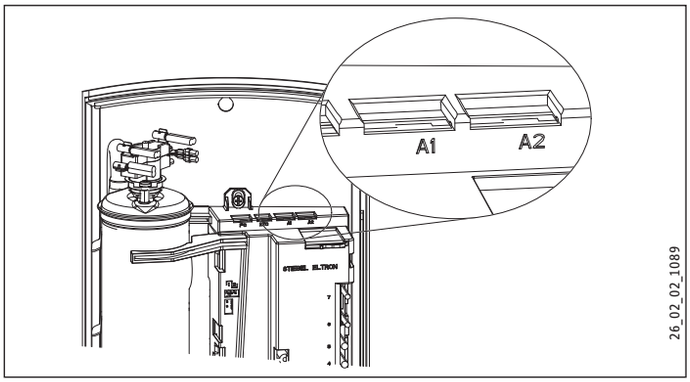
DANGER: Electrocution
As with any electric appliance. failure to electrically ground appliance may result in serious injury or death.

- The appliance should be connected to a properly grounded dedicated branch circuit of proper voltage rating. In installations with several appliances, each appliance requires an independent circuit. Please refer to the technical data table for the correct wire and circuit breaker size.



- The wire must be fed through the rubber seal located between the hot and cold water connections. Then feed wires through strain relief clamp and tighten clamp down on wire. The “live” wires must be connected to the slots on the terminal block marked L and L. The ground wire must be connected to slot marked with the ground symbol. Strain relief clamp with screws and rubber seal are provided.

10.1 Temperature setting/anti-scalding protection



- Connect the lead of the electronic temperature control to position „A1“ in order to get the maximum outlet temperature of 140°F (60°C).

The maximum temperature can be limited to 109°F (43°C):

- Connect the lead of the electronic temperature control to position “A2”.
- Reinstall the plastic cover.

10.2 Terminal block

Consult the chart below for the recommended torque amounts on the terminal block screws.

Screw Size (mm)	Min. Torque (N•cm)	Min. Torque (lbf•in)
M6	200-250	17.7-22.1

Using the proper torque specifications to secure wire to the wiring block helps to avoid personal loss or property damage.

11. Commissioning

DANGER: Electrocution
Commissioning must only be carried out by an authorised contractor in accordance with safety regulations.

Damage to the appliance and the environment:
Open hot water faucet for a few minutes until water flow is continuous and all air is purged from water pipes. The appliance's plastic cover must be installed before the circuit breaker is turned on.

- ▶ Turn on circuit breaker to bring electrical power to the appliance.
- ▶ Turn the temperature selector clockwise and anti-clockwise, to calibrate the temperature selector.
- ▶ Adjust the water temperature to the desired level using the knob on the front cover of the appliance.
- ▶ Turn on hot water and wait twenty seconds until temperature has stabilized.
- ▶ Check the water temperature with your hand and make sure that it does not feel too hot. Reduce temperature if this is necessary.
- ▶ Explain to the user how the appliance works and familiarise him or her with its use.
- ▶ Advise the user about possible hazards (hot water temperature up to 140 °F (60 °C). Hand over these instructions, to be kept for future reference.
- ▶ A setting of 110°F (43°C) is recommended when the MegaBoost is installed on the outlet of the tank. When installed on the tank inlet, a setting of 120°F (49°C) is recommended.

11.1 Appliance handover

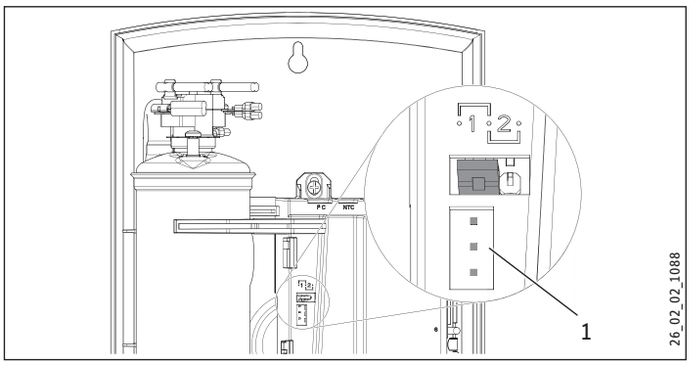
Explain the functions of the appliance to the user. Draw special attention to the safety information. Hand the operating and installation instructions to the user.

12. Troubleshooting

DANGER: Electrocution
To test the appliance, it must be supplied with power.

12.1 Display options LED diagnostic „traffic lights“

Display options		
	red	illuminates in case of faults
	yellow	illuminates when the appliance is heating water
	green	flashing: The appliance is supplied with power



1 LED diagnostic “traffic lights“

12.2 Fault table

Symptom	Possible Cause	Solution
No hot water	circuit breaker off	turn circuit breaker on
	safety thermal cut-out tripped	reset thermal cut-out
	not enough flow rate to activate appliance	clean filter screen at appliance
		clean faucet aerator or shower head
Not enough hot water	filter screen clogged	clean filter screen at appliance
Water not hot enough	water flow too high	reduce water flow rate until light on front cover stops blinking
		supply correct voltage to appliance

- ▶ If you are not able to resolve a problem please contact us, see last side, before removing the appliance from the wall. STIEBEL ELTRON is happy to provide technical assistance. In most instances, we can resolve the problem over the phone.

13. Normal maintenance

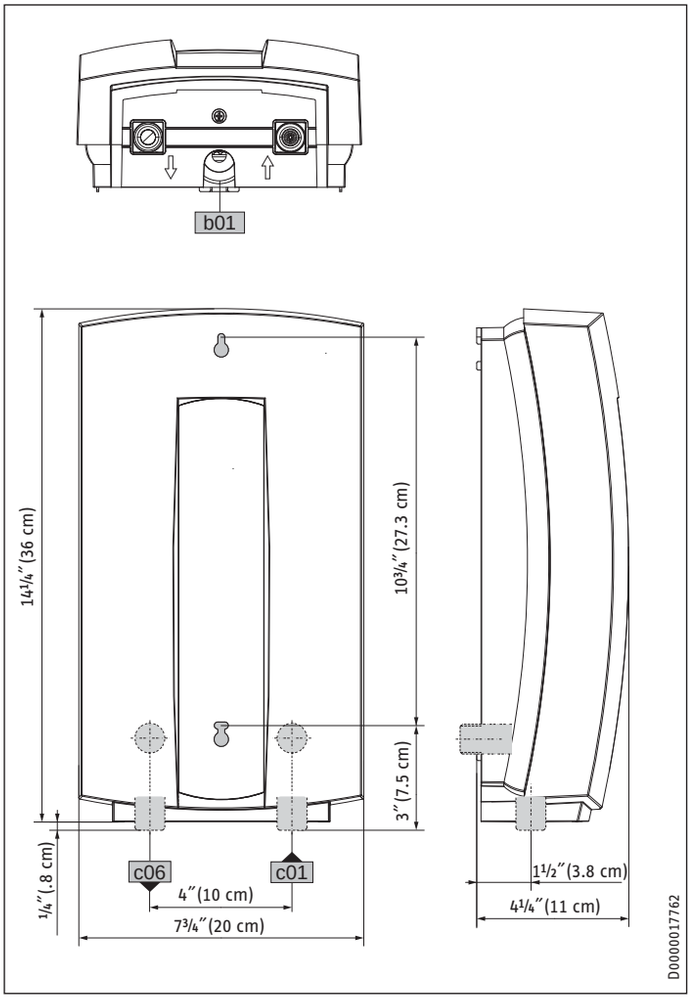
STIEBEL ELTRON tankless water heaters are designed for a very long service life. Actual life expectancy will vary with water quality and use. The appliance itself does not require any regular maintenance.

However, to ensure consistent water flow, it is recommended to periodically remove scale and dirt that may build up at the aerator of the faucet(s), the filter screen in the appliance, or in the shower head.

ENGLISH

14. Technical Data

14.1 Dimensions

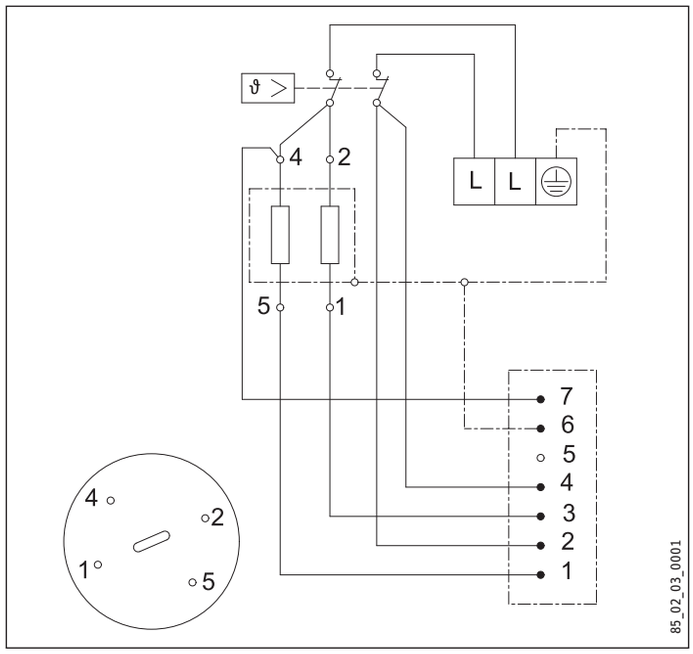


b01	Electrical cable entry	
c01	cold water inlet	½" NPT
c06	hot water outlet	½" NPT

14.2 Wiring diagram

MegaBoost

L L ⏚ 2/GRD ~ 208 / 240 V



14.3 Data table

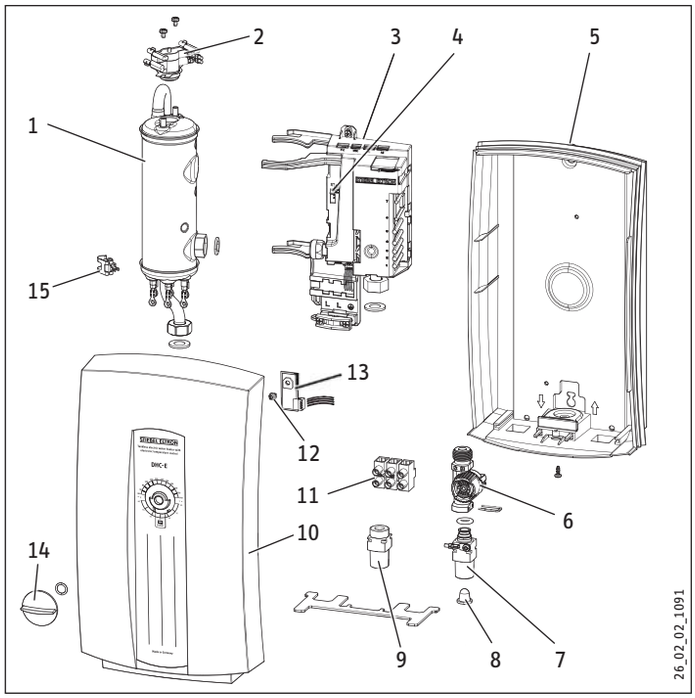
		Mega Boost	
Part number		524201	
Phase		1	1
Voltage	V	208	240
Frequency	Hz	50 / 60	50 / 60
Output power	kW	7.2	9.6
Amperage	A	35	40
Min. recommended circuit breaker[1] (DP)	A	35	40
Min. recommended wire size[2] (copper)	AWG	8	8
Min. water flow to activate appliance	GPM / l/min	0.26 / 1	
Protection level according to		IP 24	
Max. inlet water temperature	°F / °C	131 / 55	
Nominal water volume	GAL / l	0.13 / 0.5	
Working pressure max.	PSI / bar / MPa	150 / 10 / 1	
Tested to pressure	PSI / bar / MPa	300 / 20 / 2	
Weight	lbs. / kg	5.9 / 2.7	
Water connections		1/2" NPT*	

[1] This is our recommendation for overcurrent protection sized at 100% of load. Check local codes for compliance if necessary. Tankless water heaters are considered a non-continuous load.

[2] Copper must be used. Conductors should be sized to maintain a voltage drop of less than 3% under load.

* 1/2" to 3/4" fittings are supplied with the unit

14.4 Spare parts



No.	No. Spare part	MegaBoost
1	Heating system	292575
2	Safety thermal cut out	286369
3	Electronic control appliance	291851
4	Coding plug	283455
5	Back panel	292578
6	Flow sensor DFE	286461
7	Cold water connection	291699
8	Filter screen	252430
9	Hot water connection	278634
10	Plastic cover	
11	Wiring block	279998
12	Axis connection plug	254312
13	Electronic temperature control	286359
14	Temperature adjustment knob	254307
15	Outlet temperature sensor	280677

15. Warranty

Subject to the terms and conditions set forth in this limited warranty, Stiebel Eltron, Inc. (the "Manufacturer") hereby warrants to the original purchaser (the "Owner") that each Tankless Electric Domestic Hot Water Heater (the "Heater") shall not (i) leak due to defects in the Manufacturer's materials or workmanship for a period of seven (7) years from the date of purchase or (ii) fail due to defects in the Manufacturer's materials or workmanship for a period of three (3) years from the date of purchase. As Owner's sole and exclusive remedy for breach of the above warranty, Manufacturer shall, at the Manufacturer's discretion, send replacement parts for local repair; retrieve the unit for factory repair, or replace the defective Heater with a replacement unit with comparable operating features. Manufacturer's maximum liability under all circumstances shall be limited to the Owner's purchase price for the Heater.

This limited warranty shall be the exclusive warranty made by the Manufacturer and is made in lieu of all other warranties, express or implied, whether written or oral, including, but not limited to warranties of merchantability and fitness for a particular purpose. Manufacturer shall not be liable for incidental, consequential or contingent damages or expenses arising directly or indirectly from any defect in the Heater or the use of the Heater. Manufacturer shall not be liable for any water damage or other damage to property of Owner arising, directly or indirectly, from any defect in the Heater or the use of the Heater. Manufacturer alone is authorized to make all warranties on Manufacturer's behalf and no statement, warranty or guarantee made by any other party shall be binding on Manufacturer.

Manufacturer shall not be liable for any damage whatsoever relating to or caused by:

1. any misuse or neglect of the Heater, any accident to the Heater, any alteration of the Heater, or any other unintended use;
2. acts of God and circumstances over which Manufacturer has no control;
3. installation of the Heater other than as directed by Manufacturer and other than in accordance with applicable building codes;
4. failure to maintain the Heater or to operate the Heater in accordance with the Manufacturer's specifications;
5. operation of the Heater under fluctuating water pressure or in the event the Heater is supplied with non-potable water, for any duration;
6. improper installation and/or improper materials used by any installer and not relating to defects in parts or workmanship of Manufacturer;
7. moving the Heater from its original place of installation;
8. exposure to freezing conditions;
9. water quality issues such as corrosive water, hard water, and water contaminated with pollutants or additives;

Should owner wish to return the Heater to manufacturer for repair or replacement under this warranty, Owner must first secure written authorization from Manufacturer. Owner shall demonstrate proof of purchase, including a purchase date, and shall be responsible for all removal and transportation costs. If Owner cannot demonstrate a purchase date this warranty shall be limited to the period beginning from the date of manufacture stamped on the Heater. Manufacturer reserves the right to deny warranty coverage upon Manufacturer's examination of Heater. This warranty is restricted to the Owner and cannot be assigned.

Some States and Provinces do not allow the exclusion or limitation of certain warranties. In such cases, the limitations set forth herein may not apply to the Owner. In such cases this warranty shall be limited to the shortest period and lowest damage amounts allowed by law. This warranty gives you specific legal rights and you may also have other rights which vary from State to State or Province to Province.

Owner shall be responsible for all labor and other charges incurred in the removal or repair of the Heater in the field. Please also note that the Heater must be installed in such a manner that if any leak does occur, the flow of water from any leak will not damage the area in which it is installed.

The installation, electrical connection and first operation of this appliance should be carried out by a qualified installer.

The company does not accept liability for failure of any goods supplied which have not been installed and operated in accordance with the manufacturer's instructions.

Environment and recycling

Please help us to protect the environment by disposing of the packaging in accordance with the national regulations for waste processing.

This Warranty is valid for U.S.A. & Canada only. Warranties may vary by country. Please consult your local Stiebel Eltron Representative for the Warranty for your country.

STIEBEL ELTRON, Inc.
17 West Street | 01088 West Hatfield MA
Tel. 0413 247-3380 | Fax 0413 247-3369
info@stiebel-eltron-usa.com
www.stiebel-eltron-usa.com

STIEBEL ELTRON

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Stand 8643

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