

6. Steam boiler / boiler ASHIMA

eco steam
eco smart hot

[Eco_Steam Solutions.pdf \(68 pages pdf\): work done as per the mail..](#)

ESBI Steam Boilers

Low Capacities 350 - 5,000 kg/h
High Capacities 1,700 - 20,000kg/h

Design, quality & construction

The ECOTHERM high output steam boilers are constructed from high quality steel and are distinguished by their solid, robust and flexible design. The boiler combines ease of operation and maintenance with optimal efficiency. The boiler is designed with all necessary inspection doors and is constructed for gas or oil firing. Construction and production is according to EN12593, the Pressure Equipment Directive 97/23/EG and CE marked. An independent authorized institution carries out quality approval at our factory. The ISO 9001 certification and internal quality control ensures excellent performance and longevity of service.

The client receives an economical, environmentally friendly compact unit, supplied ready for installation.

ESBI steam boiler

The ESBI is a three-pass flame tube/flue gas tube boiler with an inner fully water-cooled reversal chamber with finned tube wall. The boiler consists of a cylindrical shell, two endplates, gusset stay supports, flame tube, gas reversal chamber with water cooled finned tube wall and two tube bank gas passes with low gas side resistance. The boiler is completely electrically welded and provided with all required inspection openings. The spacious flame tube with low thermal heat release results in excellent combustion and low emissions. Large water content and steam space provides steady state operation.

Thermal insulation

The boiler is fully insulated with 120mm mineral wool insulation. The casing is made of 1mm thick stucco aluminum plate with neatly trim med connections and cut-outs. The flue gas collector is also thermally insulated.

Control panel

The control panel is equipped with the required controls and indicators for control and supervision of the boiler and burner. Control switches, indicator lights and alarm signals are provided. The control panel is supplied to match the burner to be used.

Efficiency & admissible maximum safety valve pressure

Efficiency of up to 91% and up to 95% with economizer can be achieved.
Standard design pressures of 10,13,16 and 20 bar(g) are available.
higher pressures can be manufactured on request.

ESBH Steam Boilers

Low Capacities	500	-	4,000 kg/h
High Capacities	2,000	-	20,000kg/h

The ECOTHERM high output steam boilers are made of high quality steel and are distinguished by their solid, robust and flexible construction, particularly by their operational ease, their easy maintenance and an optimal efficiency. The client receives an economical, environment friendly compact unit, ready for installation. The boilers are constructed for oil or gas firing.

Boiler type ESBH

The type ESBH classical 3 pass flame tube flue gas tube boiler consists of a cylindrical shell, the two head plates, the flame tube including the back flue gas turning chamber with water cooled finned tube wall, the two flue gas passes and the fitting tube, placed either on the right (standard) or on the left. The boiler door is insulated and flue gas proof for burner mounting. The boiler is completely electrically welded and provided with all required inspection openings.

The spacious flame tube with low thermal charges results in an excellent combustion and reduced emissions. The large water content secures an even burner running time and thus reduces the number of boiler starts.

Thermal insulation

The boiler is fully insulated with mineral wool insulation. The casing is made of structured

aluminium plate. Fittings and out-cuts are properly rimmed. The flue gas collector is thermal insulated.

High efficiency

Due to the above technical facts an efficiency of up to 90%, respectively up to 95% with economizer, can be achieved with minimal space requirements. Thus continuous working costs are kept low. The sources of energy are used more efficiently and ECOTHERM spares the environment.

Construction guiding, quality approval

The boiler is designed with all necessary inspection doors. Construction and production is done according to the European Pressure Directive Equipment (PED) 97/23/EC, with CE-conformity.

The quality approval at ISO 9001: 2000 certification and the quality approval at our factory with our

ECOTHERM quality performance department with works certificate guarantees the highest product quality. For installation and operation of the boiler the local laws and norms are to be respected.

Admissible maximum safety valve pressure

Standard pressures: 10, 13 and 16 bar(g)

Safety valve pressures: 11 and 14 bar(g)

Higher pressures on request.

[Eco_Smart hot water system.pdf](#)

Logic Controller

The high capacity water heater models feature ELC logic control unit for continuous, permanent control and performance monitoring of hot water output. The automated processes can be programmed and visualized by an intelligent terminal- control panel. This installation terminal has simplified the process of diagnosis as well as the operation & monitoring of automated processes.

Data and process parameters can be added via a touch screen. There is a 5.7" VGA TFT color display for displaying the output. Through a keypad and display on the front of the control unit, the operator can completely control the functions of the water heater. The water heater functions automatically based on the performance parameters set by the operator on the control unit. The unit continues to monitor temperature and control the pumps & valves in order to match the current hot water demand with the lowest possible fuel consumption. Operator can adjust, switch on/off or manually override all automatic functions.

“Control Panel Basic”: Control for

- 1x low-temperature boiler with boiler temperature sensor and boiler control panel (TR/STL)

- 1x 2-stage burner (oil or gas)
- 1x storage tank with heating coil, external current anode and 2 sensors (for on-site immersion sleeve)
- 1x three-phase charging pump on the boiler
- 1x control via logic control

“Control Panel Pro”: Additional features:

- 1x wall bracket & 1x wiring diagram pocket
- 3D visualization
- 1x switch cabinet fan with monitoring
- 1x potential free energy request
- 1x control voltage switch
- 1x rotating field monitoring
- 1x pressure monitoring & 1x STL monitoring
- 2x manual controls
- 1x potential-free fault signal

Turnkey system with SS storage tanks and internal coil heat exchanger EWBI-ESEF-SS with triple pass boilers & double coil burners & control panel & expansion vessel & accessories

Smart Hot Water & Boiler Package*

Pre-assembled turnkey solution for hot water boiler system for compact dimensions and convenient & quick installation. This includes pre-assembling, MS interconnecting piping in accordance to the European pressure directive (PED) EN between boilers and all other delivered units up to the calorifier, including accessories and valves (doesn't include any piping insulation / only for water heaters and boiler). Control voltage is pre-wired to all delivered equipment from control panel.

Two oil/ gas fired triple pass boilers

- The boiler is a three pass reverse flame horizontal fire tube boiler apt to be used on gaseous and liquid fuels.
- The efficiency of the boiler is rated at 3 star in accordance to the 92/42/CEE.
- The boiler is robust, highly efficient, easy to maintain and serves for longer period, guaranteed by:
 - two stacked modules of equal capacity, connected with return and flow headers.
 - completely automatically laser cut and electrically welded steel body
 - dished end and flanged front plate with no T-butt weld to the furnace
 - high temperature steel spiral turbolators insert flue gas tubes
 - high water volume
 - anti condensate and anti scale design
 - ceramic, fibre insulated front door with an opening that is reversible
 - easy-to-mount painted steel panels made casing

Turnkey system with SS storage tanks with external heat exchanger EWBI-EHRE-SS with triple pass boilers & double coil burners & control panel & expansion vessel & accessories

Smart Hot Water & Boiler Package*

Pre-assembled turnkey solution for hot water boiler system to quickly install and achieve compact

dimensions. This involves pre-assembling, MS interconnecting piping in accordance to the European pressure directive (PED) EN between boilers and other delivered units up to the calorifier, including valves and accessories. From the control panel, control voltage is pre-wired to all delivered equipment.

Two gas or oil fired triple pass boilers

- This boiler is a three pass reverse flame horizontal fire tube boiler that can be used on liquid and gaseous fuels.
- The efficiency of this boiler is rated at 3 star in accordance to the 92/42/CEE.
- The efficiency, robustness, longer life and easy maintenance of the boiler are guaranteed by:
 - two similar capacity stacked modules that are connected with return and flow headers.
 - anti scale as well as anti condensate design
 - ceramic fibre insulated front door with opening that is reversible
 - automatic laser cutting and electric welding of steel body
 - flanged front plate as well as dished end with no T-butt weld to the furnace
 - high temperature steel spiral turbolators insert flue gas tubes
 - high water volume
 - casing made of steel panels that are painted and easy-to-mount

7. Electric water heater/ solar water heater

eco electric

product catalog (Product Catalogue.pdf :: no relevant information about heater is found)

Model EERI-.S: Electric Water Heaters with internal Incoloy 825 heating elements for residential applications

Storage capacity: 200 liters - 450 liters; individual nominal ratings on demand

Standard features:

- Vertical/ horizontal type
- Use of SS tank AISI 316 TI or duplex SS material
- Heating elements of Incoloy 825
- Fibre-fleece insulation with PP exterior shell RAL7037, aluminum closure strips and self-fixing covering rosettes. Fast and convenient installation, insulation with 80 mm. Completely recyclable, fire protection under class B2 (B1 upon demand).

Standard accessories:

- Automatic air and vacuum vent that includes fast venting cock
- Dial thermometer 100 mm, 0°C to 120°C
- Safety pressure relieve valve
- 60mm pressure gauge, 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits to connect pipes
- Individual overheating safety for every heating element with manual reset

Simple termination control panel:

- see pages 16 - 18

Optional:

- Pressure switch
- Non sacrificial electric anode (required only for good water quality, else mandatory) - without anode warranty is reduced from 5 to 3 years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- The water heater is compact
- Customers can trust its reliable performance and maximum hygiene
- It is energy efficient
- It is certified and approved system (as per ISO 3834-2)

Features

- Constructed using stainless steel
- Distinct control panels

Model EECI-S: Electric Water Heaters with internal Incoloy 825 heating elements for commercial applications

540 liters - 750 liters storage capacity; individual nominal ratings on request

Standard features:

- Horizontal/ vertical type
- SS tank AISI 316 TI or duplex SS material
- Incoloy 825 heating elements
- Fibre-fleece, 80mm insulation with a robust PP exterior shell RAL7037, self-fixing covering rosettes and aluminum closure strips. Fast installation, entirely recyclable, fire protection class B2 (B1 provided upon request).

Standard accessories:

- Safety pressure relieve valve
- Automatic air and vacuum vent including fast venting cock
- 100 mm dial thermometer 0 - 120°C
- Pressure gauge 60 mm 0 - 16 bar
- Non sacrificial electric anode
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits to connect pipes
- Each heating element is protected from over heating protection with manual reset

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Non sacrificial electric anode (optional when there is good water quality, else mandatory) - without anode warranty reduces from five years to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Advantages:

The compact electric water heater performs well, while maintaining maximum hygiene, saving energy. It is a certified and approved system (according to ISO 3834-2)

Features:

- Constructed from stainless steel
- Variety of control panels

Model EEHI-.S: Electric Water Heaters with internal Incoloy 825 heating elements for industrial & commercial applications

Storage capacity: 1,000 liters - 10,000 liters; individual nominal ratings on request

Standard features:

- Vertical/ horizontal type
- Material used can be SS tank AISI 316 Ti or duplex stainless steel
- Heating elements made from incoloy 825
- Fibre-fleece insulation with an aluminum closure strips, PP exterior shell RAL7037, and self-fixing covering rosettes. 100 mm insulation is easy to install, recyclable and fire protected under class B2 (B1 upon request).

Standard accessories:

- Electric anode
- Safety pressure relieve valve
- Air and vacuum vent that includes quick venting cock
- 100 mm 0 – 120°C dial thermometer
- 60 mm 0 - 16 bar pressure gauge
- Equipped inspection flange cover 200 mm
- Dielectric isolator kits to connect pipes
- Over heating protection for all heating elements with manual reset

Controls:

- see pages 16 - 18

Optional

- Volt-free output contacts for BMS
- Pressure switch
- Inspection flange 400 mm for tanks less than 4,000 liters
- Electric anode (non-mandatory only for good water quality, else mandatory) – with no anode, warranty reduces from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on demand

Benefits

Customers can benefit from this water heater by its compact design, hygiene maintenance, energy saving and high performance throughout its life. It is a certified and approved system (according to ISO 3834-2).

Features

The electric water heater is constructed from stainless steel. It features different control panels.

Model EEHE-.S: Electric Water Heaters high storage capacity with external Incoloy 825 heating elements for industrial and commercial applications

Storage capacity from 1,000 liters to 10,000 liters; individual nominal ratings on demand

Standard features:

- Horizontal or vertical type of storage tank
- External Incoloy 825 based heating elements
- Material used can be either stainless steel tank AISI 316 Ti or duplex SS
- Quick and easy to install fibre-fleece 100mm insulation with PP exterior shell RAL7037, self-fixing covering rosettes and aluminum closure strips. It is entirely recyclable and fire protected under class B2 (B1 upon request).
- SS Frame for control panel
- Removable without tank draining

Standard accessories:

- Non sacrificial electric anode
- Check valve

Safety pressure relieve valve

- Automatic air and vacuum vent that includes fast venting cock
- Dial thermometer, 100 mm, 0 - 120°C
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Overheating safety for all heating elements with manual reset
- Circulation pump
- Pressure gauge 60 mm 0 - 16 bar

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Inspection flange 400 mm for tanks with capacity of less than 4,000 liters
- Volt free output contacts for BMS
- Non sacrificial electric anode (non-mandatory only for good water quality, else mandatory) - without anode, warranty reduces from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on demand

Features

- Constructed using stainless steel material
- Numerous control panels - all with touch panel
- Control panel for controlling the optimal heating by highly efficient water pump

Model EERI-.C: Electric Water Heaters with internal

Model EECI-.C ceramic heating elements for residential

Model EEHI-.C and commercial applications

1,000 liters - 10,000 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type electric water heater
- Tank can be made of stainless steel AISI 316 Ti or duplex stainless steel
- Heating elements are made of ceramic
- Upgradable design enables adding an external heating battery
- Quick and easy to install fibre-fleece insulation 100mm with a robust PP exterior shell, aluminum closure strips and self-fixing covering rosettes. 100% recyclable and fire protected under fire protection class B2 (B1 upon request).
- Removable with no requirement of tank draining

Standard accessories:

- Air and vacuum vent that includes fast venting cock
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits to connect pipes
- Dial thermometer 100 mm 0 - 120°C
- Non sacrificial electric anode
- Safety pressure relieve valve
- Over heating protection for heating elements with manual reset

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Inspection flange 400 mm for tanks of less than 4,000 liters capacity
- Volt-free output contacts for BMS
- Non sacrificial electric anode (non-mandatory only for good water quality, otherwise mandatory) - without anode, warranty falls from five years to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on customer demand

Advantages

The compact electric water heater performs well while maintaining hygienic conditions and saving significant energy. It features ventilator and safety temperature control for all heating elements.

Model EEII-.S: Instantaneous Electric Water Heaters with Incoloy 825 heating elements

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex SS
- Heating elements made from Incoloy 825
- Fibre-fleece insulation 80 or 100 mm with a robust PP exterior shell, aluminum closure strips and self-fixing covering rosettes, can be quickly and easily installed. The insulation is fire protected under fire protection class B2 (B1 upon request).

Standard accessories:

- Automatic air and vacuum vent together with fast venting cock
- Dielectric isolator kits for piping connections
- Safety pressure relieve valve
- Flow switch
- Dial thermometer
- Pressure gauge

Controls:

- see pages 16 – 18

Optional:

- Skid mounting
- Non sacrificial electric anode (optional only for excellent water quality, otherwise obligatory) - without anode warranty goes down from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

The instant electric water heater takes less space due to its compact design. It can perform reliably while maintaining maximum hygiene and saving on energy. It is an approved and certified system (according to ISO 3834-2)

Features

- Ideal for pool heating/ process heating

Model EEII-.C: Instantaneous Electric Water Heaters with ceramic heating elements

Standard features:

- Vertical or horizontal type
- Safety pressure relieve valve
- SS tank AISI 316 Ti or duplex SS
- Ceramic based heating elements

- Fibre-fleece insulation with PP exterior shell, aluminum closure strips and self-fixing covering rosettes. Fast and convenient installation, insulation with 80 or 100 mm. Completely recyclable, fire protected under fire protection class B2 (B1 upon demand).
- Removable without draining tank

Standard accessories:

- Air and vacuum vent that includes fast venting cock
- Dielectric isolator kits for piping connections
- Safety pressure relieve valve
- Flow switch
- Dial thermometer
- Pressure gauge

Controls:

- see pages 16 - 18

Optional:

- Skid mounting
- Non sacrificial electric anode - without anode warranty falls from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Pressures higher than abovementioned on demand

Advantages of using Instantaneous Electric Water Heaters with ceramic heating elements

There are many advantages of using this water heater, some of them are compact design, maximum hygiene, high performance, and energy saving. It enables controlling of ventilator and safety temperature for heating elements.

T2: Microprocessor control panel

Industrial control panel:

- Industrial standard control panel installed on tank with microprocessor and hinged door
- 8 stages
- IP55 protection (spray, dust)
- Mains power cut-off switch along with door lock
- Electronic temperature sensor
- Logic control
- Individual fault indication of safety cut-out tripping or short circuit for every heating stage by blinking indicator of heater, remote control through personal computer and volt free output contacts for Building Management System "HEATING FAULT STAGE TO BMS"
- High and low pressure sensing device results in low water cut-out
- Easy installation of electrically tested, wired and pre-assembled elements
- All parts meet European safety standards
- 40°C is maximum ambient air temperature

Manual control for alternative operation:

- Auto-off-manual switch for all heating stages

- Heater indicator LED for all heating stages
- Power-on LED

T1: Microprocessor control panel

Industrial control panel:

- Electronic temperature sensor
- IP55 protection (dust, spray)
- Industrial standard control panel installed on tank with hinged door and microprocessor
- 3 heating stages
- Mains power cut-off switch together with door lock
- PMA KS 40 Peak-off control timer with LED digital display and programmable stage cascading control
- Short circuit or safety cut-out tripping fault indication at each heating stage, remote control through personal computer and volt free output contacts for Building Management System “HEATING FAULT STAGE TO BMS”
- Minimum water cut-out with low as well as high pressure sensing device
- All elements are electrically tested, wired and pre-assembled to make the installation procedure easier
- All parts are according to the European safety standards
- 40°C is the maximum ambient air temperature

Manual control for alternative operation:

- Auto-off-manual switch for all heating stages
- Heater indicator LED for all heating stages
- Power-on LED

B0: Mains Switch

- I-O switch
- Industrial standard IP 65 protection class
- All parts are according to the European safety standards
- Ideal only for maximum of two heating elements, each maximum and 12kW and 18kW as a total maximum nominal rating

B1: Simple control panel

Simple termination control panel:

- Manual reset
- All elements are electrically tested, wired and pre-assembled to easily install
- Industrial standard IP 54 enclosure
- Control panel installed on tank
- Magnetic type trip switch for protection of over current
- All parts are according to European safety standards
- 50°C is the maximum ambient air temperature
- Ideal only for maximum of four heating elements, each maximum and 12kW and a total maximum nominal rating of 24kW

B2: Basic control panel

- Industrial standard basic control panel mounted on tank with hinged door

- Standard volt free contact with common fault indication
- IP55 protection (dust, spray)
- Main power cut-off switch provided with door lock
- Automatic electric cut-outs for all individual heating stages
- Selector switch 0/1 automatic all individual heating stages
- Individual fault indication (blinking heater indicator) of safety cut-out tripping as well as short circuit for every heating stage and volt free output contacts for Building Management System “HEATING FAULT STAGE TO BMS”
- All parts are according to the European safety standards
- 50°C is the maximum ambient air temperature
- Ideal for all nominal ratings
- Heating element indication light
- Automatic temperature limiter with high limit switch
- All elements are electrically tested, wired as well as pre-assembled to ease the task of installation

Optional:

- Low water cut-out along with low pressure sensing device

Incoloy 825 heating elements

- Incoloy 825 (UNS NO 8825/W.Nr. 2.4858) Nickel-iron-chromium molybdenum, copper and titanium alloy is designed for providing resistance to corrosive environments.
- Thermostat: TR/STB
- Low watt density down to 4.57 W/cm² minimizes the situations of fouling and improves service life
- 1 year warranty

Electrical flange-heaters

- Material flange plate: SS 316Ti
- With welded heating rods
- Material heating surface: SS 1.4539-X1NiCrMoCu25-20-5
- 1 year warranty

Ceramic heating elements

- Removable without even draining the tank
- Longer life expectancy
- 1 year warranty

Non sacrificial titanium anodic protection

- Non sacrificial electric anode given with 240V power socket
- Zero maintenance needed
- No consumption of anode
- Permanent potential control
- Warranty increases from 2 years to 5 years using the non sacrificial electric anode

Vacuum breaker

- Prevents vacuum in the tank
- Set differential pressure: 6bar
- Connection: ½"
- Material: SS

Pressure / Temperature Safety Valve

- Material: brass
- SS drain pipe included
- Added temperature monitoring
- Set temperature 93-98°C

Advantages

Electric water heaters have several advantages for individual heat transfer solution of different clients:

- Supreme quality
- Maximum hygiene
- Fresh water system
- Fibre-fleece insulation
- Easy control
- Simple on-site assembly

Electric water heater solar water heater ECO_Electric Heaters.pdf

Model EERI-.S: Electric Water Heater with internal Incoloy 825 heating elements for residential applications Page 8

200 liters - 450 liters storage capacity

200 liters - 450 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Incoloy 825 heating elements
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 80 mm. 100% recyclable, fire protection class B2 (B1 upon request).

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer 100 mm 0 - 120°C
- Safety pressure relieve valve
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Individual over heating protection for each heating element with manual reset

Simple termination control panel:

- see pages 16 - 18

Optional:

- Pressure switch
- Non sacrificial electric anode (optional only for good water quality,

otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Features

- Stainless steel construction
- Different control panels

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Certified and approved system (according to ISO 3834-2)

Model EECI-.S: Electric Water Heaters with internal Incoloy 825 heating elements for commercial applications Page 9

540 liters - 750 liters storage capacity

540 liters - 750 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Incoloy 825 heating elements
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 80 mm. 100% recyclable, fire protection class B2 (B1 upon request).

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer 100 mm 0 - 120°C
- Non sacrificial electric anode
- Safety pressure relieve valve
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Individual over heating protection for each heating element with manual reset

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Certified and approved system (according to ISO 3834-2)

Features

- Stainless steel construction
- Different control panels

Model EEHI-.S: Electric Water Heaters with internal Incoloy 825 heating elements for industrial & commercial applications Page 10

1,000 liters - 10,000 liters storage capacity

1,000 liters - 10,000 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Incoloy 825 heating elements
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer 100 mm 0 - 120°C
- Non sacrificial electric anode
- Safety pressure relieve valve
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Individual over heating protection for each heating element

with manual reset

Controls:

- see pages 16 - 18

Optional

- Pressure switch
- Inspection flange 400 mm for tanks < 4,000 liters
- Volt free output contacts for BMS
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Certified and approved system (according to ISO 3834-2)

Features

- Stainless steel construction
- Different control panels

Model EEHE-.S: Electric WaterHeaters high storage capacity with external Incoloy heating elements for industrial and commercial applications Page 11

1,000 liters - 10,000 liters storage capacity

1,000 liters - 10,000 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type of storage tank
- External Incoloy 825 heating elements
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).
- Frame for control panel made of stainless steel
- Removeable without draining the tank

Standard accessories:

- Automatic air and vacuum vent including fast venting cock

- Dial thermometer 100 mm 0 - 120°C
- Non sacrificial electric anode
- Safety pressure relieve valve
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Individual over heating protection for each heating element with manual reset
- Circulation pump
- Check valve

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Inspection flange 400 mm for tanks < 4,000 liters
- Volt free output contacts for BMS
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Features

- Stainless steel construction
- Different control panels - also with touch panel
- High efficiency water pump for optimal heating controlled by control panel

Model EERI-.C & EECI-.C & EEHI-.C: Electric Water Heaters with internal ceramic heating elements for residential & commercial applications Page 12

1,000 liters - 10,000 liters storage capacity

1,000 liters - 10,000 liters storage capacity; individual nominal ratings on request

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Ceramic heating elements

- Unique upgradable design allows subsequent addition of external heating battery
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).
- Removeable without draining the tank

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer 100 mm 0 - 120°C
- Non sacrificial electric anode
- Safety pressure relieve valve
- Pressure gauge 60 mm 0 - 16 bar
- Fitted inspection flange cover 200 mm
- Dielectric isolator kits for piping connections
- Individual over heating protection for each heating element with manual reset

Controls:

- see pages 16 - 18

Optional:

- Pressure switch
- Inspection flange 400 mm for tanks < 4,000 liters
- Volt free output contacts for BMS
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Ventilator and safety temperature control for heating elements

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Incoloy 825 heating elements
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 80 or 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer
- Pressure gauge
- Dielectric isolator kits for piping connections
- Safety pressure relieve valve
- Flow switch

Controls:

- see pages 16 - 18

Optional:

- Skid mounting
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Certified and approved system (according to ISO 3834-2)

Features

- Optimal for pool heating or process heating

Model EEII-C: Instantaneous Electric Water Heaters with ceramic heating elements

Vertical or horizontal type Page 14

Standard features:

- Vertical or horizontal type
- Stainless steel tank AISI 316 Ti or duplex stainless steel
- Ceramic heating elements
- Fibre-fleece insulation with a robust PP exterior shell RAL7037, patented aluminum closure strips and patented self-fixing covering rosettes. Quick and easy installation, insulation with 80 or 100 mm. 100% recyclable, fire protection class B2 (B1 upon request).
- Safety pressure relieve valve
- Removeable without draining the tank

Standard accessories:

- Automatic air and vacuum vent including fast venting cock
- Dial thermometer
- Pressure gauge
- Dielectric isolator kits for piping connections
- Safety pressure relieve valve
- Flow switch

Controls:

- see pages 16 - 18

Optional:

- Skid mounting
- Non sacrificial electric anode (optional only for good water quality, otherwise mandatory) - without anode warranty is reduced from five to three years

Operating pressure:

- 6, 10 or 16 bar
- Higher pressures on request

Benefits

- Compact design
- High performance
- Maximum hygiene
- Energy saving
- Ventilator and safety temperature control for heating elements