

PRODUCT CATALOGUE



00 | 2022

 icicaldaie.com







HUMAN TECHNOLOGY

Specialists in excellent solutions

Specialists in the design and production of complete high-tech thermal systems.

Our extensive experience has allowed us to develop a range of highly qualified services capable of meeting any requirements in terms of system management, monitoring and maintenance.

No matter what the customer requirement is: we can provide a cost effective and environmentally-friendly solution for the safety of their system.



icicaldaie.com

THE STRENGTH OF ICI CALDAIE

ICI Caldaie is a young and dynamic company, characterised by an in-depth knowledge in the industrial field, great production capacity, customer support in the design phase and extreme flexibility in terms of design and production of non-standard boilers, entirely customised based on the customer's specific needs.

Complete system Technical support and consultancy

Each non-standard project is developed by our Technical Department Engineers, and our cutting-edge Research and Development laboratory is entrusted with the development of new products compliant with the increasingly stringent European standards in terms of fuel consumption and emissions. All models produced by ICI Caldaie bear the CE mark and for many of them we have obtained different national certifications for export to Countries that require specific mechanical and hydraulic tests like the ASME - American Society for Mechanical Engineers - certificates.

The international success is the result of high quality standards. ICI Caldaie has obtained international product quality certifications that allow it to produce and distribute its boilers all over the world with top quality and safety features as required by the relevant specific regulations.



CERTIFIED INNOVATION

The awarded certifications are an acknowledgement of our commitment to continual improvement proving the creation, application and maintenance of a Production, Management and Organisation System compliant with international regulations introduced to improve and standardise the internal processes as well as to enhance the effectiveness of the service to customers, thus increasing their satisfaction.

Continued Customer satisfaction is a mark of the company's continual progress

ICI Caldaie has a strong quality culture, based around continual improvement resulting in obtaining system and product certifications such as ISO 9001 certification, CE certification and marks, the construction according to Directives on gas equipment and pressurised tanks, and by several national certifications on the export to Countries that require specific mechanical and hydraulic tests, such as the ASME - American Society for Mechanical Engineers - certificates.

Beside these certifications, the company policy of ICI Caldaie S.p.A. sets further objectives in terms of low environment impact and workers' health and safety. This on-going improvement philosophy has brought ICI Caldaie S.p.A. to obtain the environment certification according to the ISO 14001 standard and the certification on the workers' health and safety as per standard BS OHSAS 18001 (Occupational Health and Safety Assessment Series). ICI Caldaie believes that meeting the Customer needs is essential for the company's continual progress.



ISO 9001 QUALITY
CERTIFICATION



OHSAS 18001 HEALTH AND SAFETY
CERTIFICATION

ISO 14001 ENVIRONMENTAL
CERTIFICATION






COMMERCIAL AREA

With our experience ICI Caldaie S.p.A. Specialised technicians will support you from the initial study to the system sizing or renewal up to the test and monitoring activities of the plant room.

Complete system Technical support and constultancy

We have a presence in countries all around the world, with headquarters and representative offices in Russia, Belarus, Kazakhstan, Romania, Great Britain, USA, China with products certified according to the specific local trade & technical regulations.

-  Commercial subsidiary
-  Representative offices
-  Official distributors

-  **ITALY**
Head Quarter
-  **U.S.A.**
Representative offices
-  **GREAT BRITAIN**
Commercial subsidiary
-  **RUSSIA**
Commercial subsidiary
-  **ROMANIA**
Commercial subsidiary





The international success is the result of high quality standards. ICI Caldaie has obtained international product quality certifications that allow it to produce and distribute its boilers all over the world with top quality and safety features as required by the relevant specific regulations.

Product certifications



EUROPE



U.S.A.



RUSSIA
BELARUS
KAZAKHSTAN



CHINA



UKRAINE



BELARUS

Representative offices



CHINA

Representative offices



KAZAKHSTAN

Commercial
subsidiary



UKRAINE

Representative offices





SUPERHEATED WATER

Fire tube superheated water boilers manufactured as either three-pass or reverse flame type suitable for processes where the operating temperature requirements are above 110°C.

All boilers can be combined with the global security systems (GSS) allowing them to be operated unmanned (up to 72 hours, i.e. arrangement 3.).




The power generation rates for these superheated water boilers are between 200 and 17,000 kW.



DESCRIPTION




Monobloc reverse flame wet back fire tube superheated water boilers. Manufactured from steel, quality tested according to the prevailing standards and welded with automatic submerged arc welding processes. Suitable for liquid and gaseous fuels. Complete with regulation and safety accessories for automatic operation.

FEATURES

-  **Design pressure: 5 or 12 bar**
-  **Heat output: 233 ÷ 3488 kW**
-  **Efficiency: > 90.0%**

For higher or lower pressures see our commercial department

ADVANTAGES

-  **Efficiency at all costs**
Integrated solutions for increased performance and efficiency through flue gas heat recovery fully integrated into the structure of the boiler.
-  **Maximum operating flexibility**
Thanks to the very high water content and the very high thermal inertia, the boiler is suitable for any system solution, even in the most difficult operating conditions.
-  **Maximum security**
The generator has been designed in accordance with the strictest international safety regulations in force.
-  **Advanced management technology**
The boiler can be equipped with programmable logic technology that allows complete compatibility with any data acquisition system, also allowing the adjustment of parameters through the display.
-  **Configurable to specific requirements**
A wide range of optional accessories are available to customize the product to meet specific requirements.
-  **Assembly and test operations performed in the factory**
ONLY FOR VERSIONS WITH GSS SYSTEM

Super-heated water boiler with reverse flame

ASX 5 bar

Design pressure: 5 bar
 Operating pressure: * (see note)
 Heat output: 233÷ 3488 kW
 Efficiency: > 90.0%

ASX 12 bar

Design pressure: 12 bar
 Operating pressure: * (see note)
 Heat output: 233÷ 3488 kW
 Efficiency: > 90.0%

* According to the requested delivery temperature (see graph on the following page)

AVAILABLE CERTIFICATIONS



RECOMMENDED TECHNOLOGIES

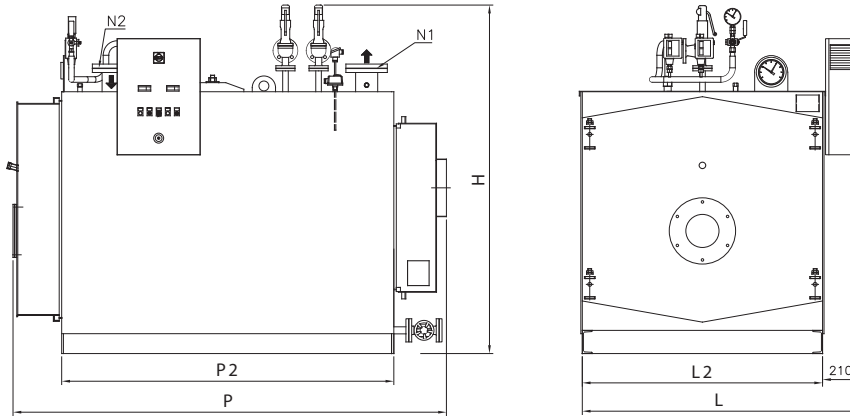
MAIN APPLICATIONS

- ⊕ Food and beverage industry
- ⊕ Manufacturing industry
- ⊕ Pasta industry

TECHNICAL DATA

Model	Heat Output	Flow thermal	Total volume H2O	Flue gas pressure drop	Gas consumption	Diesel fuel consumption	Nafta consumption	Empty weight *
ASX	kW	kW	lt	mbar	Nm3/h	kg/h	kg/h	kg
200	233	258	735	3,5	26,4	21,8	22,9	1250
300	349	387	750	3,5	39,6	32,6	34,3	1350
400	465	516	865	5	52,9	43,5	45,8	1500
500	581	645	1095	4,5	66,1	54,4	57,2	2300
600	698	774	1245	6,0	79,3	65,3	68,7	2300
800	930	1032	1535	5,5	105,7	87,1	91,5	2600
1000	1163	1292	1765	7,0	132,3	108,9	114,5	2880
1200	1395	1550	2265	8,0	158,7	130,7	137,4	3400
1500	1744	1937	2875	6,5	198,3	163,3	171,8	4200
1750	2035	2260	3155	7,5	231,4	190,6	200,4	5000
2000	2326	2584	3605	8,0	264,5	217,8	229,1	7500
2500	2907	3229	4570	9,0	330,6	272,3	286,3	8500
3000	3488	3876	5450	9,5	396,8	326,8	343,6	7700

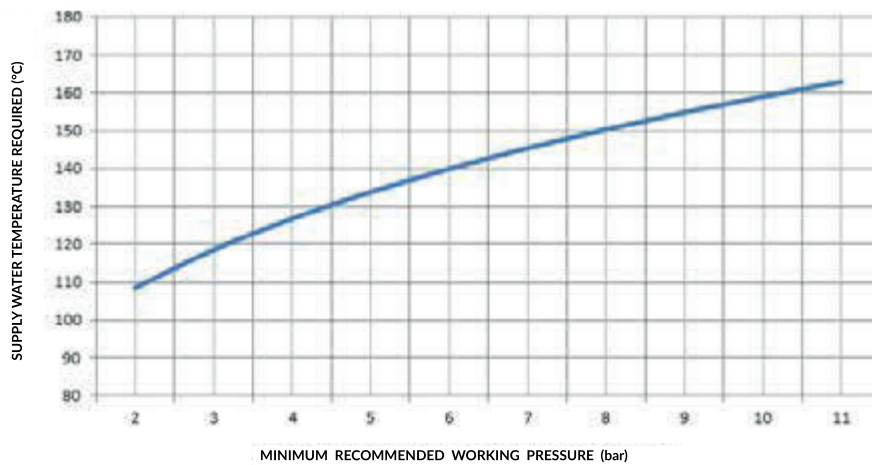
* Empty weight refers to the 5 bar model



DIMENSIONS

Model	H	L	L2	P	P2	ØC	N1	N2
ASX	mm	mm	mm	mm	mm	mm	DN/in	DN/in
200	1730	1280	1080	2000	1510	250	65	65
300	1815	1350	1150	2080	1510	250	80	80
400	1900	1350	1150	2280	1760	250	80	80
500	1980	1520	1320	2300	1760	300	100	100
600	2005	1520	1320	2540	2010	300	100	100
800	2090	1650	1450	2600	2010	350	125	125
1000	2170	1650	1450	2960	2310	350	125	125
1200	2260	1740	1540	3165	2502	400	150	150
1500	2490	1920	1720	3370	2714	450	150	150
1750	2430	1920	1720	3717	3012	450	150	150
2000	2610	2000	1800	3719	3016	500	150	150
2500	2730	2100	1900	4175	3514	550	200	200
3000	2880	2180	1980	4478	3750	600	200	200

Graph of minimum recommended pressure based on the feed water temperature



STANDARD EQUIPMENT

Pressure control instruments including:

- 2 safety valves
- Large dial 3 way test valve manometer
- Maximum safety pressure switch
- Minimum safety pressure switch

Temperature control instruments including:

- Delivery large dial thermometer
- Thermoresistance connected to on-board thermoregulator
- Safety thermostat

Bottom discharge unit including:

- 1 shut-off globe valve

Boiler control panel IP55 1/N ~ 230V 50 Hz

PRODUCT CODES

Model	5 bar	12 bar
ASX 200	86290200	86390200
ASX 300	86290300	86390300
ASX 400	86290400	86390400
ASX 500	86290500	86390500
ASX 600	86290600	86390600
ASX 800	86290800	86390800
ASX 1000	86291000	86391000
ASX 1200	86291200	86391200
ASX 1500	86291500	86391500
ASX 1750	86291750	86391750
ASX 2000	86292000	86392000
ASX 2500	86292500	86392500
ASX 3000	86293000	86393000

ACCESSORIES AVAILABLE FOR THE RANGE

Code	Description	5 bar	12 bar
86900074	GSS 72 global safety system	■	■
QASXENETERM01	Boiler MASTER control panel	■	■
QASXENETERM02	Boiler SLAVE control panel	■	■
QCTETERM	Eterm Easy manager panel	■	■

COMPONENTS FOR HEATING PLANT ROOM COMPATIBLE WITH THE RANGE



VEA
Super-heated water expansion vessel
Page 217




ASGX EN



DESCRIPTION

The ASGX EN range provides super-heated water boilers with three flue gas passes and completely wet furnace back. Manufactured from steel, quality tested according to the prevailing standards and welded with automatic submerged arc welding processes. Suitable for liquid and gaseous fuels. Complete with regulation and safety accessories for automatic operation. Intended for heating or technological systems with operating temperature above 110°C.

FEATURES

-  **Design pressure: 12 bar**
-  **Heat output: 3000 ÷ 17000 kW**
-  **Efficiency: > 90.0%**

For higher or lower pressures see our commercial department

ADVANTAGES

-  **Advanced management technology**
The boiler can be equipped with programmable logic technology that allows complete compatibility with any data acquisition system, also allowing the adjustment of parameters through the display.
-  **Efficiency at all costs**
Integrated solutions for increased performance and efficiency through flue gas heat recovery fully integrated into the structure of the boiler.
-  **Maximum security**
The generator has been designed in accordance with the strictest international safety regulations in force.
-  **High efficiency and large exchange surfaces**
Extremely high energy efficiency thanks to the large exchange surfaces allowing top efficiency values under all operating conditions.
-  **Reliability and durability**
Maximum reliability and durability guaranteed through design with low surface heat losses.
-  **Configurable to specific requirements**
A wide range of optional accessories are available to customize the product to meet specific requirements.

Superheated water boiler with three flue gas passes

MODELS



ASGX EN 3000-7000



ASGX EN 8000-17000

AVAILABLE CERTIFICATIONS



RECOMMENDED TECHNOLOGIES



MAIN APPLICATIONS

- ⊕ Food and beverage industry
- ⊕ District heating
- ⊕ Manufacturing industry
- ⊕ Pasta industry

ASGX EN 3000-7000

The ASGX EN 3000-7000 model is designed for heating or technological systems with power between 3000 and 7000 kW and operating temperatures above 110°C.



Design pressure: **12 bar**

Operating pressure: * (see note)

Heat output: **3000 ÷ 7000 kW**

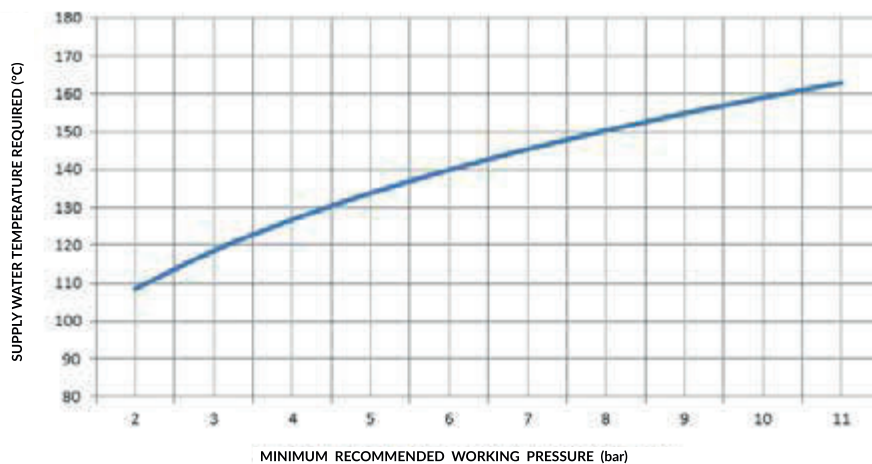
Efficiency: **> 90.0%**

• * According to the requested delivery temperature (see graph below)

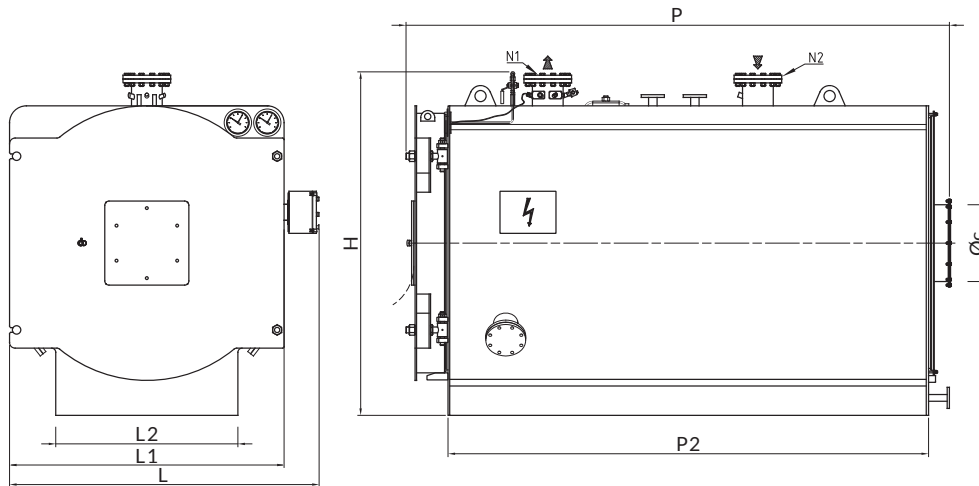
TECHNICAL DATA

Model	Heat Output	Flow thermal	100% efficiency	Water side pressure drop	Total volume H2O	Flue gas pressure drop	Gas consumption	Diesel fuel consumption	Nafta consumption	Empty weight
ASGX EN	kW	kW	%	mbar	lt	mbar	Nm3/h	kg/h	kg/h	kg
3000	3000	3333	90,00	55	4520	15,0	341,2	281,0	295,5	7000
3500	3500	3888	90,00	75	5300	18,0	398,1	327,8	344,7	7800
4000	4000	4444	90,00	98	6650	15,0	455,0	374,7	394,0	9000
5000	5000	5556	90,00	154	8600	20,0	568,8	468,4	492,6	11000
6000	6000	6666	90,00	91	9150	13,0	682,5	562,1	591,0	13000
7000	7000	7777	90,00	123	10200	15,0	796,2	655,7	689,5	14500

Graph of minimum recommended pressure based on the feed water temperature



DIMENSIONS



Model	H	L	L1	L2	P	P2	ØC	N1	N2
ASGX EN	mm	mm	mm	mm	mm	mm	mm	DN/in	DN/in
3000	2460	2200	1960	1300	3879	3430	550	200	200
3500	2460	2200	1960	1300	4379	3930	550	200	200
4000	2700	2410	2170	1400	4379	3930	600	200	200
5000	2700	2410	2170	1400	5373	4930	600	200	200
6000	2820	2560	2320	1600	5389	4930	700	250	250
7000	2820	2560	2320	1600	5889	5430	700	250	250

STANDARD EQUIPMENT

Pressure control instruments including:

- 2 safety valves
- Large dial 3 way test valve manometer
- Maximum safety pressure switch
- Minimum safety pressure switch

Temperature control instruments including:

- Delivery large dial thermometer
- Thermoresistance connected to on-board thermoregulator
- Safety thermostat

Bottom discharge unit including:

- 1 shut-off globe valve

Boiler control panel IP55 1/N ~ 230V 50 Hz

PRODUCT CODES

Model	Code
ASGX EN 3000	86803000
ASGX EN 3500	86803500
ASGX EN 4000	86804000
ASGX EN 5000	86805000
ASGX EN 6000	86806000
ASGX EN 7000	86807000

ASGX EN 8000-17000

The ASGX EN 8000-17000 model is designed for heating or process systems requiring between 8000 and 17000 kW and operating temperatures above 110°C.



Design pressure: **12 bar**

Operating pressure: * (see note)

Heat output: **8000 ÷ 17000 kW**

Efficiency: **> 91,0 %**

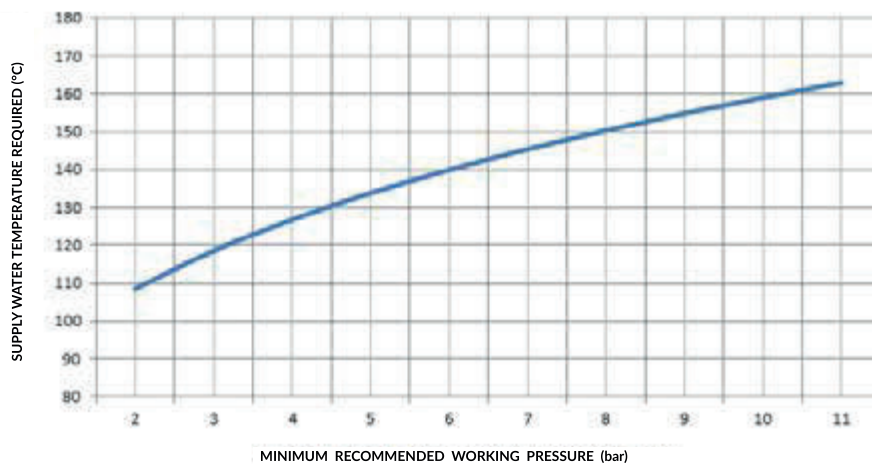
• * According to the requested delivery temperature (see graph below)

TECHNICAL DATA

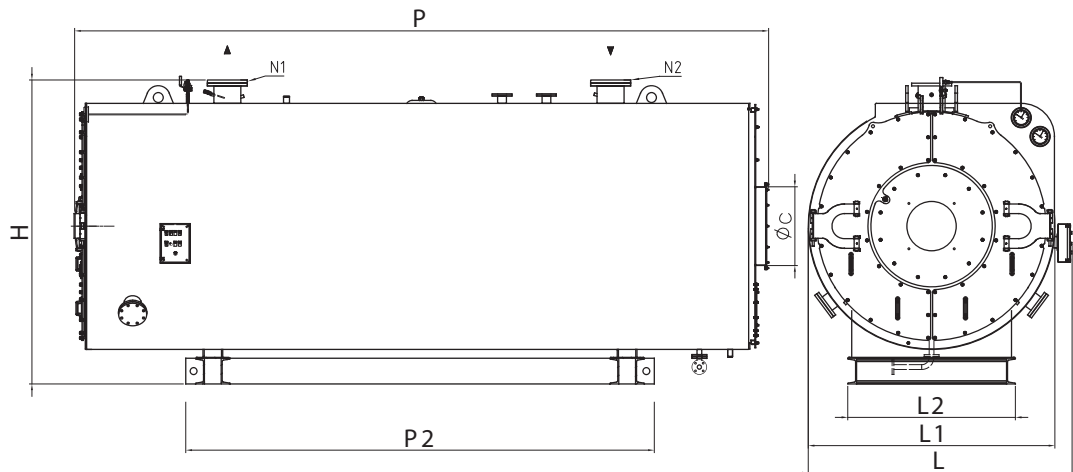
Model	Heat output **	Flow thermal	100% efficiency	Water side pressure drop	Total volume H2O	Flue gas pressure drop	Gas consumption	Diesel fuel consumption	Nafta consumption	Empty weight
ASGX EN	kW	kW	%	mbar	lt	mbar	Nm3/h	kg/h	kg/h	kg
8000	8000	8791	91,00	161	14950	17,5	900,0	741,2	779,4	15400
9000	9000	9890	91,00	98	16200	22,5	1012,5	833,8	876,8	16300
10000	10000	10989	91,00	66	20200	15,0	1125,1	926,6	974,3	24940
11000	11000	12088	91,00	79	20200	19,0	1237,6	1019,2	1071,8	24940
12000	12000	13158	91,20	94	21800	22,0	1347,1	1109,4	1166,6	25400
13000	13000	14286	91,00	111	21800	26,0	1462,6	1204,5	1266,6	25400
14000	14000	15385	91,00	128	23800	23,5	1575,1	1297,2	1364,0	28050
15000	15000	16340	91,80	86	33000	19,5	1672,9	1377,6	1448,7	37500
16000	16000	17486	91,50	98	33000	22,0	1790,2	1474,3	1550,3	37500
17000	17000	18681	91,00	111	35100	23,0	1912,6	1575,1	1656,3	45000

** powers referring to methane gas; For diesel or naphtha operation the rule may provide for a downgrade

Graph of minimum recommended pressure based on the feed water temperature



DIMENSIONS



Model	H	L	L1	L2	P	P2	ØC	N1	N2
ASGX EN	mm	mm	mm	mm	mm	mm	mm	DN/in	DN/in
8000	3050	2700	2490	1700	7035	4750	800	250	250
9000	3050	2700	2490	1700	7535	5250	800	300	300
10000	3400	3140	2940	2000	7735	5400	900	350	350
11000	3400	3140	2940	2000	7735	5400	900	350	350
12000	3400	3140	2940	2000	8235	5900	900	350	350
13000	3400	3140	2940	2000	8235	5900	900	350	350
14000	3500	3265	3065	2000	8183	5900	1000	350	350
15000	3960	3650	3450	2250	8820	6500	1100	400	400
16000	3960	3650	3450	2250	8820	6500	1100	400	400
17000	3960	3650	3450	2250	9320	7000	1100	400	400

STANDARD EQUIPMENT

Pressure control instruments including:

- 2 safety valves
- Large dial 3 way test valve manometer
- Maximum safety pressure switch
- Minimum safety pressure switch

Temperature control instruments including:

- Delivery large dial thermometer
- Thermoresistance connected to on-board thermoregulator
- Safety thermostat

Bottom discharge unit including:

- 1 shut-off globe valve

Boiler control panel IP55 1/N ~ 230V 50 Hz

PRODUCT CODES

Model	Code
ASGX EN 8000	86808000
ASGX EN 9000	86809000
ASGX EN 10000	86810000
ASGX EN 11000	86811000
ASGX EN 12000	86812000
ASGX EN 13000	86813000
ASGX EN 14000	86814000
ASGX EN 15000	86815000
ASGX EN 16000	86816000
ASGX EN 17000	86817000

ACCESSORIES AVAILABLE FOR THE RANGE

Code	Description	3000 - 7000	8000 - 17000
		1 pump	1 pump
86900074	GSS 72 global safety system	■	■
90060061	Ladder and handrail	■	
90060062	Ladder and handrail		■
90060090	Side platform	■	■
QATRXETERM01	Boiler MASTER control panel	■	■
QATRXETERM02	Boiler SLAVE control panel	■	■
QCTETERM	Eterm Easy manager panel	■	■

COMPONENTS FOR HEATING PLANT ROOM COMPATIBLE WITH THE RANGE



VEA
Super-heated water expansion vessel

ACCESSORIES

Components designed to be combined with industrial boilers and further improve their performances; products developed to be integrated in high-performance systems.

LADDER AND HANDRAIL



The structure consists of carbon steel profiles connected by special joints that ensure their correct coupling.

The upper handrail parapet is suitably made and fixed by housings welded to the boiler structure to ensure perfect stability and solidity.

The access ladder to the boiler platform is manufactured in compliance with the prevailing safety standards and is provided with:

- handrail welded to the structure
- skirting
- structure to prevent falling from platforms higher than 3 metres
- anti-slip inserts on the rungs
- fall-prevention gate

The gate is provided with spring-type hinges that keep it normally closed thus preventing any accidental fall towards the access ladder.

Compatible with the following product ranges:

- GX
- ASGX EN
- TNX
- TNOX
- WH

Accessory code:	90060060
Accessory code:	90060061
Accessory code:	90060062

SIDE PLATFORM



Ideal for heating plant rooms at a limited height that do not allow the use of ladders and handrail on the top side of the boilers.

The structure, manufactured in compliance with standard EN1090 consists of carbon steel welded sections.

The upper handrail parapet is suitably made and fixed by housings welded to the boiler structure to ensure perfect stability and solidity.

Once installed and positioned next to the boiler, it must be fixed to the floor in compliance with the prevailing regional standards.

The access ladder to the boiler platform is manufactured in compliance with the prevailing safety standards and is provided with:

- handrail welded to the structure
- skirting
- structure to prevent falling from platforms higher than 3 metres
- anti-slip inserts on the rungs
- fall-prevention gate

The gate is provided with spring-type hinges that keep it normally closed thus preventing any accidental fall towards the access ladder.



Accessory code:	90060090
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ETERM EASY MANAGER PANEL



Control panel with 15" touch screen for a personalised view of the heating plant room (synoptic diagram).

The panel must be connected via bus to the boiler Eterm control panels and to Nereix devices (plant and/flat metering devices)

From the graphic panel it is possible to:

- view the instantaneous values of temperature, operating status, modulation percentage values, alarms, etc.

- send starting, stopping, forcing, setpoint and other types of commands
- view graphs of the saved variables
- export images of the graphs and Excel tables of the log data
- view the alarm log

Control panel with 15" touch screen for a personalised view of the heating plant room (synoptic diagram).

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- export images of the graphs and Excel tables of the log data
- view the alarm log

The ModBus RS485 port (2 wires) is available for only one of the following options:

1- ModBus Master

ModBus slave device management, i.e. the ability to manage other devices featuring the same interface from the graphic page. (ICI Caldaie reserves the right to check the compatibility of the devices)

2-ModBus Slave

Conversion of all eterm parameters, both in reading and in writing mode, in ModBus protocol for external supervision systems provided with such interface.

The maximum number of parameters that can be provided is 500 and they can be chosen by the customer based on the system.

The control panel is provided with a device for Internet connection:

the type of preferred connection determines the type of device installed inside the panel.

The versions/connections are divided in:

QCTETERM01	MODEM 2G/3G
QCTETERM02	LAN use
QCTETERM03	Wi-Fi

When placing your order, please confirm the type of configuration chosen and the type of connectivity available in the plant room

These connections allow to:

View and manage, from any device provided with browser, the same synoptic diagram available on the touch screen.

(Considering the constant evolution of the browser, ICI Caldaie reserves the right to indicate the fully compatible synoptic diagrams for a correct display)

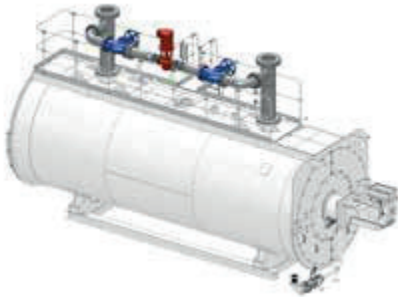
Receive remote assistance for the configuration of all connected devices with considerable time and cost saving:

in case of electronic board replacement

in case of changes to the configuration required for optimisation after a test

(example of threshold setting PID regulation, etc.)

RETURN WATER TEMPERATURE CONTROL SYSTEM



To maintain the minimum return temperature and the maximum flow/return ΔT within the allowed limits, a recirculation system is installed between the flow and return connections which recirculates a suitable water flow rate in order to raise the return temperature before it goes into the boiler.

The system is supplied hydraulically and electrically mounted on top of the boiler as an integral part of it. Connecting pipework with suitable supports and electrical wiring are included.

Boilers that can be matched

ASX - ASGX EN - TNX / EN - TNOX / EN - TNOX.e / EN

Standard equipment

- Fixed speed pump suitably sized (variable speed control upon request)
- 2 shut-off valves
- Non-return valve
- Temperature probe fitted on the return pipework
- Control by PLC (if supplied) or Eterm board (if supplied) or dedicated controller inside the boiler control panel

Accessory code: CTR-001

STEAM

SUPER-HEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS

GLOBAL SAFETY SYSTEM GSS 72 FOR SUPERHEATED WATER BOILERS



Global safety system, designed and manufactured to ensure the total operation safety of the **superheated water boilers**, in line with the new EC Directive on the operation without supervision for 72 consecutive hours.

The delivery of the global security systems for making them unmanned up to 72 hrs by ICI CALDAIE is provided with the **B+F certification module** that implies the test of the entire assembly at the manufacturing or use facility, in presence of an appointed Notified Body.

Upon commissioning, an inspection report is officially filled in and stamped to allow **the immediate start-up** of the assembly without waiting for competent Authorities to test the system safety, with the relevant required waiting time. It is the responsibility of the user to respect the Italian Ministerial Decree No. 329/2004 on commissioning (DECLARATION OF COMMISSIONING).

The system consists of a series of equipment assembled and electrically and hydraulically tested at our facility, and specifically:

Accessory code: 86900074

System main components and functions:

Safety pressure unit suitable to avoid exceeding the allowed pressure, consisting of:

- 1 safety high pressure switch of the "Fail Safe" type
- 1 safety low pressure switch of the "Fail Safe" type
- 1 burner shut-off relay for high pressure with manual reset
- 1 burner shut-off relay for low pressure with manual reset

Temperature control unit suitable to avoid exceeding the allowed pressure, consisting of:

- 1 safety high temperature thermostat of the "Fail Safe" type
- 1 burner shut-off relay for high temperature with manual reset
- 1 thermal resistance on the delivery pipe
- 1 PLC for the direct control of the burner (two-stage)
- 1 thermal resistance on the return pipe
- 1 PLC for the control of the return temperature

Water circulation control unit suitable to avoid exceeding the delta T allowed by the manufacturer, consisting of:

- 1 flow switch (set specifically according to the customer's needs)
- 1 burner shut-off relay for low circulation with manual reset

Level safety unit used to prevent a level decrease in the boiler, consisting of:

- 1 "Fail Safe" low level probe
- 1 burner shut-off relay for low level with manual reset

Management system certified to manage the safety chains, capable of monitoring, displaying and transmitting to a remote unit the status and alarm signals; it consists of:

- boiler ON
- control panel power supply
- boiler temperature view
- high pressure safety shut-down
- high temperature safety shut-down
- low level safety shut-down
- low circulation safety shut-down
- burner in operation
- burner shut-off

SUPERHEATED WATER BOILER MANAGEMENT MASTER PANEL



Control panel for superheated water boilers, with microprocessor board and updatable firmware.

- Main switch
- Boiler delivery PT1000 probe
- Boiler return PT1000 probe
- Header PT1000 probe
- External probe
- Boiler remote management modem
- (data SIM card and antenna not included)

Accessory code

QASXENETERM01

Compatible with superheated water boilers of the industrial line:

- ASX
- ASGX EN

Electronic board main functions:

- Management of one-stage, two-stage, three-stage, modulating burners with three-point control 0-10 Volt or 4-20 mA
- Delivery temperature climate control with optional external probe
- 2 programmable outputs (230 Vac. / 2 A) that can be configured for:
 - boiler circulation pump
 - anti-condensation circulation pump
- Boiler PT1000 probe input
- 2 programmable inputs that can be configured for:
 - PT1000 probes
 - digital enabling
- Programmable input that can be configured for:
 - NTC probe
 - digital enabling
- Management of the mixing valve with 0-10 V control (if not already used for a modulating burner with 0-10 Volt control)
- Management of three-point mixing valve (if not already used for a single-stage or modulating burner with three-point control)
 - 0-10 Volt input that can be programmed for:
 - digital enabling
 - display of 0-10 Volt transducers
 - Cascade management (to be specified in relation to the accessories matched to the boiler)
 - Flue gas probe control
 - Anti-freeze protection

Communication:

- Modem connector
- USB socket
- RS485 to connect the board to the Master (QASXENETERM01/Nereix)
- RS485 connection to connect the board to any slaves units (QASXENETERM01/ QASXENETERM02)
- 230 Vac supply

SUPERHEATED WATER BOILER MANAGEMENT SLAVE PANEL



Accessory code

QASXENETERM02

Compatible with superheated water boilers of the industrial line:

- ASX
- ASGX EN

Control panel for superheated water boilers with microprocessor board and updatable firmware

- Main switch
- Burner operation switch (0-1)
- Boiler delivery PT1000 probe
- Boiler return PT1000 probe

Electronic board main functions:

- Management of one-stage, two-stage, three-stage, modulating burners with three-point control 0-10 Volt or 4-20 mA
- Delivery temperature climate control with optional external probe
- 2 programmable outputs (230 Vac. / 2 A) that can be configured for:
 - boiler circulation pump
 - anti-condensation circulation pump
 - cascade header circulation pump
- Boiler PT1000 probe input
- 2 programmable inputs that can be configured for:
 - PT1000 probes (water heater, mixed zone, flue gases, etc.)
 - digital enabling
- Programmable input that can be configured for:
 - NTC probe
 - digital enabling
- Management of the mixing valve with 0-10 V control (if not already used for a modulating burner with 0-10 Volt control)
- Management of three-point mixing valve (if not already used for a single-stage or modulating burner with three-point control)
- 0-10 Volt input that can be programmed for:
 - digital enabling
 - display of 0-10 Volt transducers
- Cascade management (with slave function)
- Flue gas probe control
- Anti-freeze protection

STEAM

SUPER-HEATED WATER

THERMAL OIL

HOT WATER

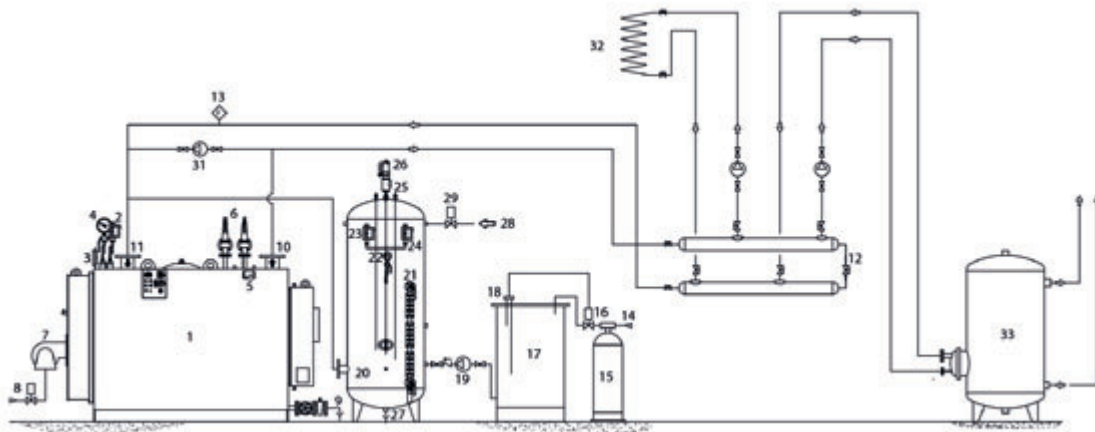
ACCESSORIES

SYSTEM LAYOUTS



SYSTEM LAYOUT

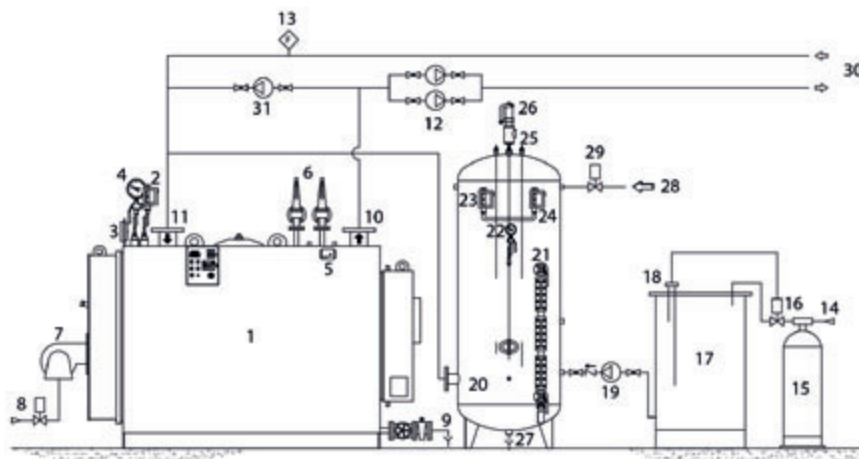
Closed-circuit system layout for heating and DHW production, boilers model ASX-ASGX EN-TNX-TNOX-TNOX.e



Description

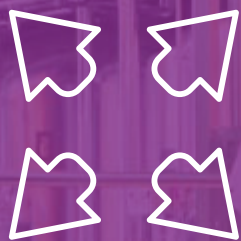
- | | | |
|---------------------------------|--------------------------------|-----------------------------------|
| 1. Boiler | 12. By-pass valve | 23. Air supply pressure switch |
| 2. Safety pressure switch | 13. Flow switch | 24. Safety pressure switch |
| 3. Thermometer | 14. Water supply | 25. Level regulation probes |
| 4. Manometer | 15. Water softener | 26. Expansion vessel safety valve |
| 5. Safety thermostat | 16. Water load solenoid valve | 27. Expansion vessel drain |
| 6. Safety valves | 17. Water supply tank | 28. Air supply |
| 7. Burner | 18. Water tank level regulator | 29. Air supply solenoid valve |
| 8. Fuel shut-off solenoid valve | 19. System replenishing pump | 30. Use |
| 9. Boiler drain | 20. Closed expansion vessel | 31. Recirculation pump |
| 10. Delivery | 21. Level indicators | 32. Heat exchanger |
| 11. Return | 22. Manometer | 33. D.H.W. storage |

Closed-circuit system layout for heating, boilers model ASX-ASGX EN-TNX-TNOX-TNOX.e



Description

- | | |
|---------------------------------|--------------------------------|
| 1. Boiler | 12. System pumps |
| 2. Safety pressure switch | 13. Flow switch |
| 3. Thermometer | 14. Water supply |
| 4. Manometer | 15. Water softener |
| 5. Safety thermostat | 16. Water load solenoid valve |
| 6. Safety valves | 17. Water supply tank |
| 7. Burner | 18. Water tank level regulator |
| 8. Fuel shut-off solenoid valve | 19. System replenishing pump |
| 9. Boiler drain | 20. Closed expansion vessel |
| 10. Delivery | 21. Level indicators |
| 11. Return | |



Components and accessories to build complete heating plant rooms.

VEA

Super-heated water expansion vessel



Design pressure 5 or 12 bar

The VEA expansion vessel has been designed to absorb the volumetric variations of the water in the system, due to the temperature increase.

The system is kept at a certain air/nitrogen pressure, according to the operating pressure of the hot water or super-heated water boiler.

It usually tops up the supply to super-heated water boilers.

The VEA expansion vessel complies with the PED Directive 2014/68/EU.

Provided with:

- steel sheet supporting legs
- hatch, connections and fittings
- external finish with paint

Standard equipment

Air or nitrogen supply including:

- 1 air/nitrogen intake solenoid valve
- 2 nitrogen release solenoid valves
- 1 non-return valve
- Pressure control instrumentation including:
 - 1 safety valve certified according to PED Directive 2014/68/EU
 - 1 pressure gauge with three-way test valve
 - 1 feed pressure switch
 - 1 vent pressure switch
 - 1 safety pressure switch with manual reset, approved according to PED Directive 2014/68/EU

Level control instrumentation including:

- 1 refilling pump start probe (pump not supplied)
- 1 refilling pump stop probe (pump not supplied)
- 1 low level alarm probe
- 1 high level alarm probe
- 1 level indicator

Boiler control panel, IP 55 400V/3 +N/ 50Hz

On specific request it is possible to add the kit **VEACERT01** which allows to obtain **assembly CE certification (module B+D)**

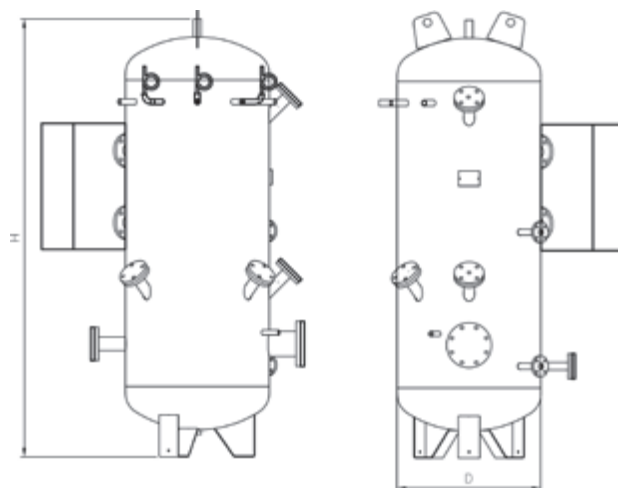
The kit consists of a series of accessories, which are assembled and electrically and hydraulically tested at our facility, and specifically:

- 1 minimum level probe **with self-diagnosis**
- 1 maximum safety pressure switch **PED certified**
- 1 nitrogen load pressure switch **PED certified**
- 1 nitrogen drain pressure switch **PED certified**
- 1 control panel **certified according to standards EN 764-7 and EN50156**

TECHNICAL DATA

Model	Capacity	design pressure	Max. design temperature
	lt	bar	°C
VEA 500/5	500	5	191,7
VEA 1000/5	1000	5	191,7
VEA 1500/5	1500	5	191,7
VEA 2000/5	2000	5	191,7
VEA 2500/5	2500	5	191,7
VEA 3000/5	3000	5	191,7
VEA 4000/5	4000	5	191,7
VEA 5000/5	5000	5	191,7
VEA 6000/5	6000	5	191,7
VEA 8000/5	8000	5	191,7
VEA 9000/5	9000	5	191,7
VEA 10000/5	10000	5	191,7

Model	Capacity	design pressure	Max. design temperature
	lt	bar	°C
VEA 500/12	500	12	191,7
VEA 1000/12	1000	12	191,7
VEA 1500/12	1500	12	191,7
VEA 2000/12	2000	12	191,7
VEA 2500/12	2500	12	191,7
VEA 3000/12	3000	12	191,7
VEA 4000/12	4000	12	191,7
VEA 5000/12	5000	12	191,7
VEA 6000/12	6000	12	191,7
VEA 8000/12	8000	12	191,7
VEA 9000/12	9000	12	191,7
VEA 10000/12	10000	12	191,7



DIMENSIONS

Model	D	H	Total weight
	mm	mm	kg
VEA 500/5	635	2016	256
VEA 1000/5	800	2461	350
VEA 1500/5	950	2600	485
VEA 2000/5	1100	2664	650
VEA 2500/5	1250	2600	765
VEA 3000/5	1250	2950	850
VEA 4000/5	1450	3155	1110
VEA 5000/5	1450	3685	1265
VEA 6000/5	1450	4185	1415
VEA 8000/5	1700	4270	1800
VEA 9000/5	1700	4720	1965
VEA 10000/5	1700	5200	2120

PRODUCT CODES

Model	Code
VEA 500/5	85510009
VEA 1000/5	85510021
VEA 1500/5	85510024
VEA 2000/5	85510027
VEA 2500/5	85510089
VEA 3000/5	85510023
VEA 4000/5	85510007
VEA 5000/5	85510053
VEA 6000/5	85510091
VEA 8000/5	85510093
VEA 9000/5	85510094
VEA 10000/5	85510095

Model	D	H	Total weight
	mm	mm	Kg
VEA 500/12	635	2016	256
VEA 1000/12	800	2461	350
VEA 1500/12	950	2600	485
VEA 2000/12	1100	2664	650
VEA 2500/12	1250	2600	765
VEA 3000/12	1250	2950	850
VEA 4000/12	1450	3155	1110
VEA 5000/12	1450	3685	1265
VEA 6000/12	1450	4185	1415
VEA 8000/12	1700	4270	1800
VEA 9000/12	1700	4720	1965
VEA 10000/12	1700	5200	2120

Model	Code
VEA 500/12	85510010
VEA 1000/12	85510013
VEA 1500/12	85510063
VEA 2000/12	85510034
VEA 2500/12	85510003
VEA 3000/12	85510011
VEA 4000/12	85510001
VEA 5000/12	85510108
VEA 6000/12	85510049
VEA 8000/12	85510110
VEA 9000/12	85510111
VEA 10000/12	85510112



Highly-qualified services capable of meeting the requirements of the the heat and energy saving fields.

SERVICE AREA



SERVIZI

300

The provided figures and data are for reference only.

ICI CALDAIE SpA reserves the right to apply any modification it deems necessary to improve its products, without prior notice.



INDUSTRIAL AREA

The services on this page are available for:

Industrial start-up

The start-up assistance of an industrial line boiler (steam, super-heated water and waste-heat boilers) is divided into the following categories.

- Start-up assistance of boilers without GSS
- Start-up assistance of boilers with GSS24/GSS 72 module B+D
- Hot functional test of boilers with GSS24/GSS 72 module F
- Industrial start-up assistance abroad
- Industrial start-up assistance with performance test

Start-up assistance of boilers without GSS

The start-up assistance of a boiler without GSS is provided by specialised technicians of ICI Caldaie or authorised service centres at the customer's heating plant room. During the start-up, the presence of a technician is not compulsory, but it is very useful as a training occasion for the maintenance technician.

With regard to boilers installed in Italy, the only obligation of the customer is the request of the boiler commissioning to the competent INAIL office as per Ministerial Decree No. 329 of 1 December 2004.

Start-up assistance of boilers with GSS24/GSS72

The start-up assistance of a boiler with GSS 24/72 is provided by specialised technicians of ICI Caldaie or authorised service centres at the customer's heating plant room. During the start-up, the presence of qualified technicians is very useful as a training occasion.

Boilers with GSS 24/72 are supplied by ICI Caldaie already certified according to modules B+D as per PED Directive 2014/68/EU. With regard to boilers installed in Italy, the only obligation of the customer is the request of the boiler commissioning to the competent INAIL office as per Ministerial Decree No. 329 of 1 December 2004.

Hot functional test of boilers with GSS24/GSS 72 module F

The assembly test of a boiler with GSS 24/72 can be performed in the presence of an appointed Notified Body at the ICI Caldaie facilities or customer's heating plant room. If the assembly test is performed at the ICI Caldaie facilities, the presence of a technician, after the installation of a boiler, is not compulsory, but it is useful as a training occasion for the maintenance technician.

Boilers with GSS 24/72 are certified by ICI Caldaie according to modules B+D as per PED Directive 2014/68/EU. The customer does not have to request the commissioning since the product is compliant with art. 5, letter D of the Ministerial Decree No. 329 of 1 December 2004. The only obligation of the customer is to notify boiler commissioning to the competent INAIL office.

Industrial start-up assistance abroad

Assistance activities during start-up will be carried out by an Italian technician appointed by ICI CALDAIE, who does not own licences or local permits to operate on steam generators.

During assistance activities the customer will have to ensure the presence of personnel authorised to operate on the above-mentioned boilers.

The activity will only have technical-functional valence but not regulatory valence.

The technician in charge cannot sign the documents having this kind of valence.

The start-up of the burner is not included, and will have to be carried out by the local service centre authorised by the manufacturer of the burner and appointed directly by the customer.

The burner technician will have to be present during the carrying out of all the assistance activities performed by the ICI CALDAIE technician.

Start-up Assistance with performance test

The performance test is performed by specialised technicians of ICI Caldaie or authorised service centres at the customer's heating plant room. It involves testing of noise and/or efficiency and/or performance values agreed at the time of sale.



INDUSTRIAL AREA

The services on this page are available for:

Preventive maintenance of steam, superheated water and WHB boilers

The customer can at any time sign with ICI an ordinary maintenance agreement that, thanks to the scheduled inspections, guarantees the boiler control and the purchased product trouble-free operation over time. The preventive maintenance requires an annual inspection by our authorised Technical Service Centres (CAT) including the following operations:

- Cleaning and visually checking the level probes
- Checking the instrument train
- Checking the safety device operation
- Checking the flue gas side
- Checking the supply pump operation through the sight glasses
- Checking the seals for any leak and replacing them if needed (material not included)
- Checking the turbulator conditions (if any)
- Checking the main control panel
- Checking the boiler functionality
- Checking the access door internal coating

Requalification of the boilers to avoid constant surveillance for 72 or 24 hours

The steam and super-heated water boilers, during their operation in a heating plant room, must be monitored by duly authorised control personnel. ICI Caldaie offers the possibility of requalification of said boilers and to extend such obligation to 72 or 24 hours by installing a Global Safety System (GSS72 or GSS24) for steam and super-heated water boilers; this system allows leaving the operating heating plant room "unattended" for maximum 72 or 24 operating hours. Such operation has a variable cost according to the accessories already present in the boiler.

Retubing Boilers

The service involves the replacement of the fire tubes of boilers by ICI Caldaie or third parties, where the presence of leaks was ascertained. The job involves the mechanical removal of the broken tube and subsequent replacement involving welding. Upon each step of the procedure, the necessary non-destructive tests required by law will be carried out to ensure the success of the work.



INDUSTRIAL AREA

RESIDENTIAL AREA

The services on this page are available for:

Warranty extension

ICI Caldaie allows extending the commercial warranty according to the selected duration, starting from the delivery date. The base warranty extension provides only the warranty extension.

No warranty is provided if the damage is caused by:

- improper or unsuitable use
- installation or first start-up performed by the purchaser or third parties in a wrong way
- use or presence of chemical substances, electro-chemical or electric flow, not due to us
- failure to comply with the instructions provided in the user manual, improper changes or modifications, in any case performed by the purchaser or third parties
- faults of the elements not supplied by ICI Caldaie
- aggressive or halogen vapours in the environment (combustion air)
- corrosion due to oxygen
- presence of limestone
- use of the product even if faulty
- wrong electric power supply or connections
- pressure or gas type different from the ones specified for the product

Warranty application is granted by ICI CALDAIE SPA and is subjected to standard conditions of sale shown in the PRODUCT CATALOGUE.

WARRANTY

Any faults detected must be reported immediately by registered letter sent to ICI CALDAIE which reserves the right to carry out an inspection using its own personnel (direct or appointed) at the heating plant room where the problem has arisen. The part to be tested must be sent, carriage paid, to the ICI CALDAIE SPA Service to be examined. Only after this inspection, it will be possible to establish whether the fault is due to faulty material and/or manufacture, or whether it is due to an external cause. After this verification, the customer will be informed of whether or not the fault is covered by the warranty.

Furthermore, the water circulating in the system must be analysed 2 or 3 weeks after the boiler has started operation. This analysis is to be carried out by the installing company which will also bear the relative costs and the results must be attached to the plant register and communicated to ICI Caldaie within two months following the start-up of the boiler. The analysis must comply with the characteristics identified in technical manuals.

The warranty will cover only the defective part; any other expense, for example labour used for the replacement, will be charged to the person requesting the replacement.

The services on this page are available for:



INDUSTRIAL AREA



RESIDENTIAL AREA

Warranty extension

WARRANTY LIMITATIONS

Defects due to different causes not resulting from manufacturing defects are excluded from this warranty, and in particular:

- Tampering or improper adjustment of the boiler performed by the purchaser or third parties who are not part of the network of authorised Technical Assistance Centres on behalf of ICI CALDAIE SPA.
- Conditions of use not envisaged in the instructions and warnings provided on the instruction booklets of ICI CALDAIE SPA supplied with the boiler.
- Use of non-original ICI CALDAIE SPA spare parts.
- System faults, installation errors or non-conformity of the system in relation to the instructions, warnings, Laws, Regulations and applicable Technical Standards (for example: incorrect regulation, boiler supplied with incorrect gas or electrical power, use outside of the boiler type-approval field).
- Absence of exchanger between the primary circuit and the secondary one.
- Thermal shocks due for example to sudden and continuous filling of cold water into the system.
- In the event of operation with pressure below or exceeding the pressure indicated on the data plate of the boiler.
- In the event of clogging from limestone, deposits and sludge, presence of corrosion, overheating of the boiler body.
- No water in the system.
- Use of a fuel other than the indicated one to supply the boiler.
- In the case of inappropriate installations, operation or maintenance which cause damage to the boiler installed, for example poor regulation of the burner, absence of the safety elements required by current Regulations such as safety valves or suitable expansion system, or inappropriate chemical cleaning of the system.
- Use of an unsuitable product for treating the water in the system or an anti-freeze which is incompatible with the construction materials of the system.
- Failure to remove the processing waste and residues in the case of new system or removal of sludge and subsequent cleaning in pre-existing system. In both cases, the operations recommended must be carried out before the boiler of ICI CALDAIE SPA is assembled.
- Wrongful or negligent behaviour, attributable to a seller or other person unrelated to ICI CALDAIE SPA, during the transportation, handling, storage, assembly, installation and adjustment of the boiler.
- The warranty extension only refers to the boiler and excludes the accessories and materials used for the construction of the system and electrical parts.
- Failure to perform the ordinary maintenance as required by current regulations in force for the type of system and as required by the product user manual.
- Events of force majeure (for example: lightning, floods, earthquakes) or vandalism.
- Normal wear of parts (electrodes, refractory products, gaskets, knobs, indicator lights...).

Any technical assistance required to eliminate defects or faults attributable to one of the exclusion causes indicated above must be agreed separately from this Warranty and all related charges and costs will be charged to the applicant according to the price list in force of ICI Caldaie.

The ICI CALDAIE SPA warranty on the manufactured products is limited to the replacement or repair of parts of the boiler identified as being faulty and it does not extend to the repair of other materials present in the system or damage which could be caused or be related to, directly or indirectly, with the faulty part, and not even if the faulty part, or part of it, is unavailable.



INDUSTRIAL AREA



RESIDENTIAL AREA

The services on this page are available for:

Assistance for positioning and/or accessory assembly

This service includes the assistance by one of our specialised technicians during the positioning phases of the boiler in the heating plant room or during the accessory installation in the boiler.

Accessory assembly

The service includes the assembly of the accessories to the boiler once the latter is positioned in the plant room. In this case, for transport reasons, for the boiler introduction in the plant room, or because of specific needs of the customer, the accessories are installed only once the boiler is in its final position.

The following are excluded:

- Connection to the control panel and cable ducts
- Hydraulic connections to the system
- Any building and civil works
- Any crane, platforms and machinery for handling rental

Synoptic diagram

ICI Caldaie can set up a synoptic diagram for all boiler panels already connected to the Internet, allowing the remote reading and management of the systems. The dedicated web page or pages will be created based on the supplied plant layout. The synoptic diagram will be available to be viewed on any PC, tablet or Smartphone connected to the Internet (with compatible browser). For a demo, visit the website <http://www.eterm.it/ita/sinottico/lista> by entering MCE2016 as username and password.

Operation

- Saving the log data.
- Exporting the log data in tables.
- Displaying of log data on graphs (histograms, lines, pie charts, etc.). It is also possible to have more variables on a same graph or graphs of variables that cannot be measured directly but need to be calculated with mathematical formulas.
- Checking the functionality of the panel and accessories connected to it.
- Personalised alarms.
- E-mail service activation for configured alarms.
- Possibility to request one year of remote service for configuration checks and changes.

Flue gas analysis

This service includes the combustion analysis using a certified instrument; at the end of the analysis, the plant register is filled in.

Welding

We can provide assistance for repairs and/or modifications on the boilers using professional and qualified wire, electrode and TIG welders.

This service can be combined with non-destructive tests in case the repairs or changes are requested or have to be performed with the presence of third-party supervisors.



INDUSTRIAL AREA

RESIDENTIAL AREA

The services on this page are available for:

Endoscopy

Our technicians can perform endoscopic visits on ICI products in order to detect any sludge deposit or scale build-ups that can be found on the internal surfaces over time thus reducing the efficiency and performance of the boilers and leading to possible failure. We always recommend a suitable water treatment to avoid the formation of deposits and build-ups.

Burner start-up

In Italy, the start-up of the burner is normally included in the burner price whereas abroad is to be listed separately depending on the country of destination of the parts.

Maintenance of hot water and WHC boiler

The customer can at any time sign with ICI an ordinary maintenance agreement that, thanks to the scheduled inspections, guarantees the boiler control and the purchased product trouble-free operation over time. The preventive maintenance requires an annual inspection by our authorised Technical Service Centres (CAT) including the following operations:

- Visual inspection of the flue gas side;
- Checking the turbulator conditions (if any);
- Checking the main control panel;
- Inspection of the boiler insulation;
- Inspection of the gate operation (only for WHC boilers).

Software license Eterm™

Eterm™PCmanager is a Windows software for PC that allows the configuration and remote control of all Eterm™ and Nereix equipment. This software can be connected to the equipment by means of:

- Direct USB connection to all equipment;
- RS232 (serial port) direct connection to eterm™ Master equipment;
- GSM modem for eterm™ Master equipment and Boiler Control Board;
- Internet connection after free-of-charge registration of the system on www.eterm.it.

Software licenses are available in three versions:

Eterm™PCmanager base version:

- permanent base version that allows configuration, management and remote control according to the above-mentioned methods. It does not allow reading, storing and processing consumption data.

Level 2 Eterm™PCmanager version:

- in addition to configuration, management and remote control according to the above-mentioned methods, this version allows reading, storing and processing consumption data. In order to be able to exploit the advantages of this software, it is advisable to participate in the training courses (subject to payment) that ICI Caldaie organises at its headquarters at 38 Via Giovanni Pascoli, situated in Zevio (Verona). Software license can be installed on a single computer and it provides for the management of a single system.

Synoptic configurator version:

- this software version enables the user to create a synoptic of the system, that is a scheme through which it is possible to view the system and data detected by the installed equipment. The whole process can be made via WEB without installing the eterm™PCmanager software. The eterm™PCmanager software requires Windows operating system.

GENERAL CONDITIONS OF SALE

1) INTRODUCTION

The sale is carried out under the following general conditions, which form an integral part of the contract drawn up between the Parties. Entering into the contract decrees approval of the conditions below and any modifications of the aforesaid must be carried out exclusively in writing.

2) COMPLETION OF THE CONTRACT

The contract is completed when, after receiving a purchase order, the seller confirms its acceptance to the purchaser. This acceptance can be made by a sale confirmation or by the commencement of the contract without any obligation of having to give notice to the other party.

3) DESCRIPTIVE DOCUMENTS AND STRUCTURAL CHANGES

The weights, dimensions, capacity, price, performance, and any other data represented in catalogues, lists, circulars, advertisements, illustrations and price lists are for information purposes only and are not obligatory. The seller reserves the right to make any structural changes to his products at any time, which is deemed necessary in order to guarantee operation and efficiency.

4) PACKAGING

Unless otherwise agreed upon, the prices listed in the offers also include standard packaging of the goods:
Maritime, wood, or any other type of non-standard packaging is deemed not included in the sale price, and is to be borne by the purchaser.

5) RISK TRANSFER

Unless otherwise agreed upon in writing, the goods are sold "ex works" with reference to the EXW Incoterms® 2010 clause.
In particular, the risk, transport expenses and other relative expenses to load the goods onto the vehicle are to be borne by the purchaser from the time in which the goods are made available in compliance with the contract, provided that the seller notifies the purchaser in writing with regard to the date from which the goods can be collected.

6) DELIVERY

Unless otherwise agreed upon, the delivery period shall start from the later date from the following:

- the date of completion of the contract as stipulated in Art. 2;
- the date of receipt of any payment on account or deposit made by the seller, which is provided for in the contract prior to delivery of the goods;

Unless otherwise agreed upon in writing, the delivery conditions of the said goods to be sold are deemed estimated.

If, for whatever reason, which is not an action or negligence by the seller, the purchaser fails to collect the goods at the time and place agreed upon in the contract, he shall in any case effect all payment established in the contract as though the goods were delivered. In this case, when the goods are identified, the seller shall store them at the expense and risk of the purchaser. The seller also has the right to reimbursement of all expenses incurred to enforce the contract and not covered by any payments received, with the exception of the right to compensation for damages.

7) PRICE AND PAYMENT

Unless otherwise agreed upon, the price for the goods is agreed upon as "Ex Works". Therefore, transport expenses and any additional expenses are therefore excluded, including taxes due as local taxes.
Payment is due by the date established in the contract, without any other request or formality by the seller. Delay in payment shall result in interest accrued pursuant to Italian Legislative Decree 231/2002, which adopts and implements EU directive 2000/35/EC.

If the purchaser delays any payment whatsoever, the seller, at his discretion, shall:

- suspend or postpone obligations held;
- declare the contract terminated by way of simple written notice without prejudice to his right to be reimbursed for all expenses incurred in the performance of the contract, except for the right to compensation for damages.

8) WARRANTY AND EXCLUSIONS

The seller shall undertake to repair faults resulting from design, material or processing defects, exclusively within the following limits.

The obligation undertaken by the seller is limited to defects that occur during the period called "warranty period", which shall come into effect from risk transfer, which corresponds to the provisions of Art. 5, until the expiry of the terms set forth below;

The parties agree that the warranty includes repairs or replacement of parts, which, at the discretion of the seller, are necessary for the proper operation of the product, within the said warranty conditions, in particular, the seller recognises each construction defect found, in the following terms, for:

- Commercial range steel boiler body 36 months
- Industrial range steel boiler body 12 months
- Condensing range boiler body 36 months
- Storage tank body 12 months
- Electrical and electronic parts and/or accessories 12 months

from the aforesaid date of risk transfer.

The warranty does not include maintenance operations of the devices regarding the contract of sale, which shall be borne by the purchaser;

In order to make use of the warranty as indicated in this article, the purchaser shall, without delay, give notice in writing not later than eight days, under penalty of invalidation, from the date of delivery, the defects that were detected. This action is barred after a period of one year, or other period as indicated above;

The aforesaid notification shall not release the purchaser from his obligation of payment under the terms agreed upon. Delay, failure, or incorrect payment shall result in a disclaimer of the warranty referred to in this article.

Execution of the warranty shall take place upon technical verification and recognition of the alleged defect at the premises of the seller, and according to company procedure. The purchaser of the device is to pay the fixed minimum charge for any intervention required, of the cost of transport of the pieces to be replaced, of labour costs, with the exception of those related to any repairs and any travel, food and accommodation expenses of the seller's personnel using the rate in force. Technical personnel shall be sent within the time granted by organisational requirements.

Any replacements or repairs shall not modify the start date and duration of the warranty established in the sales contract or in these general conditions. The replaced parts and components shall be the property of ICI CALDAIE S.p.A. and must be returned by, and at the expense of, the purchaser.

The seller's responsibility is solely extended to defects that emerge in the operating conditions provided by the contract and used correctly, as specified in the relative user instructions in the installation manual that always precedes or accompanies the delivery of the product. The seller's responsibility is excluded for defects resulting from faulty installation, maintenance, and use; due to insufficient capacity or abnormality of hydraulic systems, fuel supply; for use that differs from what the product was built for; for unsuitability or otherwise erroneous and incorrect supply water treatment; for corrosion caused by water condensation and aggressiveness; for badly conducted treatments; for stray currents; for negligence or inability of use; due to frost; due to lack of water; for inefficiency of the chimneys or discharges; for tampering by unqualified or unauthorised personnel; for parts subject to normal wear and tear of use, for anodes, refractories, gaskets, knobs, warning lights, etc., and in any case, for reasons not to be ascribed to ICI CALDAIE S.p.A.

In the event of failure to find the manual of use mentioned in the previous point, the purchaser shall submit a notice in writing to the seller within a period of eight days from delivery of the product. Failure to submit the said notice shall imply the manual was delivered with one of the products.

Subject to what is provided in this article, from the risk transfer of the goods and also for defects whose cause is prior to the said transfer, the seller shall not undertake other responsibilities. It expressly provides that the purchaser cannot raise any claim for injury to persons or damage to property.

The parties can also establish to limit the seller's responsibility of gross negligence, unwavering the significance of all references in this regard made in these general conditions.

After the warranty duration terms, technical assistance can be carried out by charging the purchaser for any replaced parts or for expenses related to repairs, provided that all labour and travelling expenses of personnel and transport of materials are to be borne by the purchaser according to the rate in force by the seller.

9) REASONS FOR EXEMPTION FROM EXECUTION

A party is not responsible for the failed execution of any of its obligations should:

- Failed execution be due to an impediment beyond his control;
- The party, upon concluding the contract, could not be reasonably held to envisage the said impediment and its effects on the position to execute the contract;
- The party could not have reasonably avoided or overcome such an impediment or its effects;

A cause of exemption from liability pursuant to this article exempts the defaulting party from payment of damages, penalties and other contractual sanctions.

It also suspends the terms of execution of the contract for a reasonable period, excluding any counter-party's right to cancel or terminate it.

Each party can retain what he has held from execution of the contract before it was ended. The final payment must be effected without delay.

10) INSTALLATION AND OPERATION

ICI sells a product.

Installation is to be carried out by the purchaser, who must execute the provided technical provisions by the laws and regulations in force and, in any case, by the relative technical manual, including assembly, start-up, and operation.

11) AMENDMENTS

Any amendment to these General Conditions of Sale can be effective only if made by means of a written act.

12) APPLICABLE LAW AND PLACE OF JURISDICTION

With regard to any disputes, the parties agree that the contract shall be governed by the United Nations Convention on contracts for the international sale of goods, concluded in Vienna on 11 April 1980, signed by the Italian State on 30 September 1981, ratified by Law No. 765 on 11 December 1985, and entered into force on 1 January 1988.

The right to apply Italian law with regard to what is not expressly governed by the United Nations Convention on contracts for the international sale of goods shall be valid.

For any dispute or litigation that may arise or result from this provision, the Court of Verona shall have jurisdiction.



ICI Caldaie S.p.A.

Via G. Pascoli 38 - 37059
Campagnola di Zevio (Verona) Italy
Tel. +39 045 8738511
Fax +39 045 8731148
icicaldaie.com