

PRODUCT CATALOGUE



01 | 2019

 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.

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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 consultancy

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





THERMAL OIL

Three pass Thermal oil boilers/heaters. Designed with low thermal loads and high oil flow rates to eliminate the risk of thermal oil cracking and degradation.

These boilers are suitable for operation with hot thermal oil, i.e. with fluid flowing at a temperature lower than the boiling temperature at atmospheric pressure. Our range includes boilers with power generation rates of between 100 and 9,000 kW.




OPX



DESCRIPTION







The OPX range includes thermal oil heaters with three flue gas passes, single pass furnace and flue gas outlet to the rear. It is designed with low thermal loads and high oil speed to eliminate any oil cracking risk, offering a high reliability against the risks of overheating even in cases of oil circulation interruptions.

FEATURES

-  **Design pressure: 10 bar**
-  **Heat output: 116 ÷ 9302 kW**
-  **Efficiency: > 86,0 %**

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.
-  **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.
-  **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.
-  **Easy, fast and safe installation**
The installation is very easy: you just need to connect the system to the electric, hydraulic, steam and discharge lines.

Thermal oil heat boiler

MODELS



OPX



OPX REC

AVAILABLE CERTIFICATIONS



RECOMMENDED TECHNOLOGIES



- + Paper industry
- + Food and beverage industry
- + Manufacturing industry

- + Heavy industry
- + Petrochemical industry

STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS

OPX

Thermal oil heater in 3 pass configuration with single pass combustion chamber and flue gas outlet in the rear. It is designed with low thermal loads and high oil speed to eliminate any oil cracking risk, offering a high reliability against the risks of overheating even in cases of oil circulation interruptions.

Design pressure: 10 bar

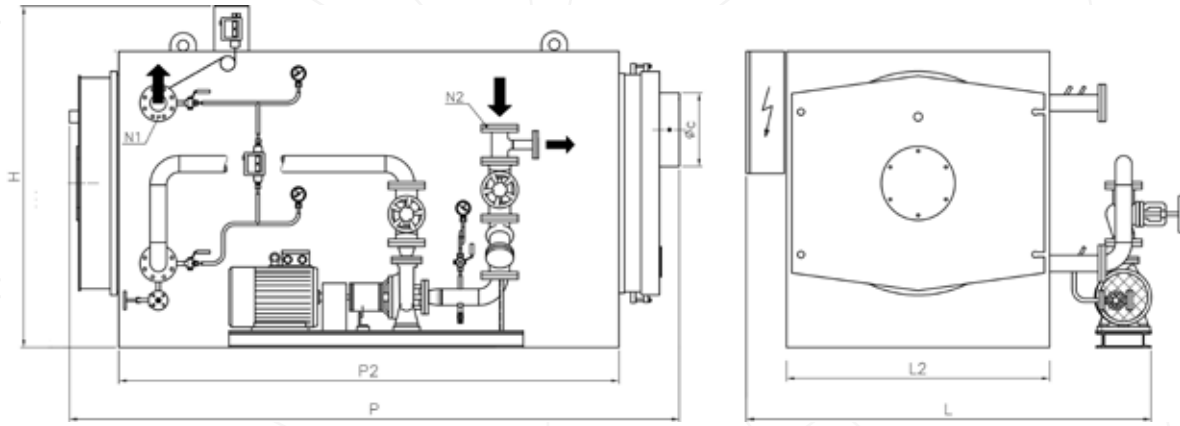
Heat output: 116 ÷ 9302 kW

Efficiency: > 86,0 %



TECHNICAL DATA

Model	Heat output	Flow thermal	Oil side pressure drop	TS max. operating temperature	Total volume oil	Flue gas pressure drop	Gas consump.	Diesel fuel consump.	Nafta consump.	Total weight
OPX	kW	kW	mbar	°C	lt	mbar	Nm3/h	kg/h	kg/h	kg
100	116	137	1440	290	33	0,5	14,0	11,6	12,2	600
200	233	270	1700	290	75	1,0	27,6	22,7	23,9	870
300	349	405	1940	290	118	1,5	41,4	34,1	35,9	1150
400	465	541	1000	290	206	2,0	55,4	45,6	47,9	1500
500	581	676	1840	290	243	4,0	69,2	57,0	59,9	1650
600	698	810	1600	290	195	3,5	83,0	68,3	71,9	1750
800	930	1081	1200	290	274	4,0	110,7	91,2	95,9	2200
1000	1163	1351	1680	290	444	3,5	138,3	113,9	119,8	2650
1200	1395	1622	1000	290	657	4,0	166,1	136,8	143,8	3750
1500	1744	2028	1700	290	673	5,0	207,6	171,0	179,8	3800
2000	2326	2707	1600	290	1350	4,0	277,1	228,2	240,0	8700
2500	2907	3380	1300	290	1600	7,5	346,1	285,0	299,7	9800
3000	3488	4050	1800	290	1520	6,5	414,6	341,5	359,1	10500
4000	4651	5410	2000	290	2300	8,5	553,9	456,2	479,7	13500
5000	5814	6760	1900	290	2500	9,0	692,1	570,0	599,4	15000
6000	6977	8100	2000	290	2800	8,5	829,3	682,9	718,1	19500
8000	9302	10820	2900	290	3650	18,0	1107,7	912,3	959,3	26000



DIMENSIONS

Model	H	L	L2	P	P2	ØC	N1	N2
OPX	mm	mm	mm	mm	mm	mm	DN/in	DN/in
100	1150	1330	850	1540	1040	200	40	40
200	1400	1510	1000	1780	1250	250	40	40
300	1600	1730	1200	1805	1275	250	50	50
400	1650	1790	1250	2070	1540	300	50	50
500	1645	1765	1255	2315	1775	350	65	65
600	1695	1885	1320	2390	1850	350	65	65
800	1725	1910	1350	2940	2440	350	65	65
1000	1805	1985	1430	3050	2720	400	80	80
1200	1915	2180	1560	3500	3170	450	100	100
1500	2050	2300	1650	3900	3300	500	100	100
2000	2700	2700	2100	4625	3925	550	125	125
2500	2900	2900	2200	5410	4775	600	125	125
3000	2850	3000	2300	5750	4850	600	150	150
4000	3300	3300	2500	6200	5500	650	150	150
5000	3800	3450	2800	6300	5600	700	200	200
6000	3800	3600	2800	7050	6350	800	200	200
8000	3800	3750	2800	7300	6600	850	200	200

STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS

STANDARD EQUIPMENT

- 2 input output connections complete with counter flanges
- 1 boiler drain valve
- 2 oil input output pressure gauges complete with steel shut-off valves
- 1 liquid expansion safety thermostat with manual reset
- 1 safety differential pressure switch for boiler oil circulation, complete with steel valves
- 1 oil flow temperature probe
- 1 oil return temperature probe
- 1 flue gas sensor

Oil circulation unit including:

- electric pump coupled directly to an electric motor with joint, cast iron body, steel shaft with self-cooled mechanical seal, positioned on support
- 2 cast iron globe valves with sealing metal bellows, mounted on suction and flow
- 1 nodular cast iron filter mounted on pump suction
- 1 pressure gauge with steel shut-off valves
- 2 stainless steel expansion compensators mounted on pump suction and flow (models > OPX / OPX REC 3000)

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

PRODUCT CODES

Model	Code
OPX 100	87110100
OPX 200	87110200
OPX 300	87110300
OPX 400	87110400
OPX 500	87110500
OPX 600	87110600
OPX 800	87110800
OPX 1000	87111000
OPX 1200	87111200
OPX 1500	87111500
OPX 2000	87112000
OPX 2500	87112500
OPX 3000	87113001
OPX 4000	87114001
OPX 5000	87115001
OPX 6000	87116001
OPX 8000	87118001



STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS

OPX REC

The OPX REC model is provided with a combustion air pre-heater installed towards the rear of the boiler in order to form a single body.

Design pressure: 10 bar

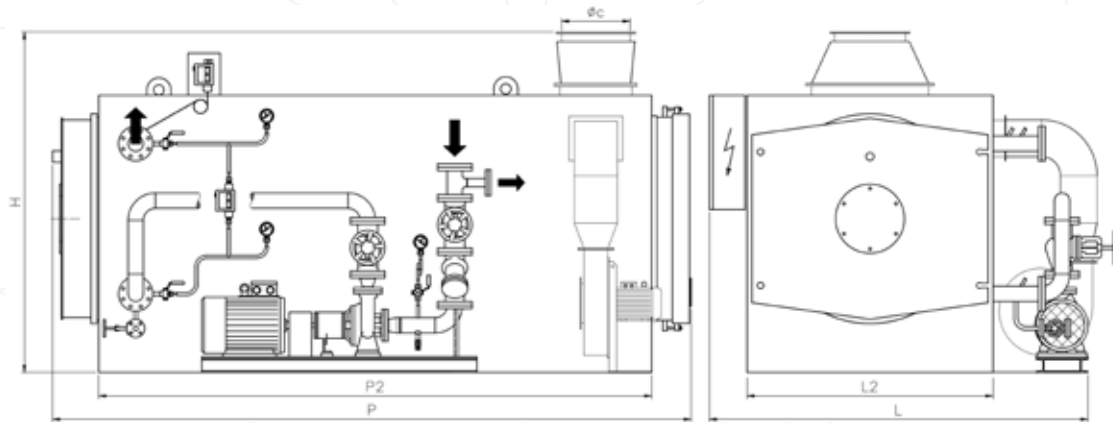
Heat output: 1163 ÷ 9302 kW

Efficiency: > 91,0 %



TECHNICAL DATA

Model	Heat output	Flow thermal	Oil side pressure drop	TS max. operating temperature	Total volume oil	Flue gas pressure drop	Gas consump.	Diesel fuel consump.	Nafta consump.	Total weight
OPX REC	kW	kW	mbar	°C	lt	mbar	Nm3/h	kg/h	kg/h	kg
1000	1163	1277	1680	290	460	5,5	130,7	107,6	113,2	3500
1200	1395	1533	1000	290	680	6,0	156,9	129,2	135,9	4800
1500	1744	1916	1700	290	700	7,5	196,2	161,6	169,9	5000
2000	2326	2555	1600	290	1350	8,0	261,5	215,4	226,5	9500
2500	2907	3194	1300	290	1600	9,0	327,0	269,3	283,2	10500
3000	3488	3833	1800	290	1520	10,0	392,4	323,1	339,8	11500
4000	4651	5110	2000	290	2300	12,0	523,2	430,9	453,1	14300
5000	5814	6388	1900	290	2500	15,0	654,0	538,6	566,4	16300
6000	6977	7666	2000	290	2800	18,0	784,9	646,4	679,7	21000
8000	9302	10222	2900	290	3650	19,0	1046,5	861,9	906,3	28000



DIMENSIONS

Model	H	L	L2	P	P2	ØC	N1	N2
OPX REC	mm	mm	mm	mm	mm	mm	DN/in	DN/in
1000	2000	2150	1430	3800	3420	400	80	80
1200	2120	2300	1560	4300	3870	450	100	100
1500	2250	2500	1650	4600	4000	500	100	100
2000	2700	2700	2100	4700	4628	550	125	125
2500	2900	2900	2200	5200	4976	600	125	125
3000	2850	3000	2300	5600	5394	600	150	150
4000	3300	3300	2500	6350	6152	650	150	150
5000	3800	3450	2800	7000	6278	700	200	200
6000	3800	3600	2800	7750	7028	800	200	200
8000	3800	3750	2800	8000	7278	850	200	200

STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS

STANDARD EQUIPMENT

- 2 input output connections complete with counter flanges
- 1 boiler drain valve
- 2 oil input output pressure gauges complete with steel shut-off valves
- 1 liquid expansion safety thermostat with manual reset
- 1 safety differential pressure switch for boiler oil circulation, complete with steel valves
- 1 oil flow temperature probe
- 1 oil return temperature probe
- 1 flue gas sensor

Oil circulation unit including:

- electric pump coupled directly to an electric motor with joint, cast iron body, steel shaft with self-cooled mechanical seal, positioned on support
- 2 cast iron globe valves with sealing metal bellows, mounted on suction and flow
- 1 nodular cast iron filter mounted on pump suction
- 1 pressure gauge with steel shut-off valves
- 2 stainless steel expansion compensators mounted on pump suction and flow (models > OPX / OPX REC 3000)

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

PRODUCT CODES

Model	Code
OPX 1000 REC	87111001
OPX 1200 REC	87111201
OPX 1500 REC	87111501
OPX 2000 REC	87112001
OPX 2500 REC	87112501
OPX 3000 REC	87113000
OPX 4000 REC	87114000
OPX 5000 REC	87115000
OPX 6000 REC	87116000
OPX 8000 REC	87118000

ACCESSORIES AVAILABLE FOR THE RANGE

Code	Description	OPX	OPX REC
See section	PMX reserve oil circulation unit	■	■

COMPONENTS FOR HEATING PLANT ROOM COMPATIBLE WITH THE RANGE



EVX
Indirect steam boiler
Page 210



VEO
Thermal oil expansion vessel
Page 212



STORAGE TANK
Thermal oil
Page 216



STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS



ACCESSORIES

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

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).

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

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.)

PMX

STANDBY THERMAL OIL PUMPING



To ensure a continuous operation of the boiler by avoiding any production downtime in case of a supply pump failure, a second backup pump is supplied and installed in parallel with the service one.

Standard equipment:

- electric pump coupled directly to an electric motor with joint, cast iron body, steel shaft with self-cooled mechanical seal, positioned on support
- 2 nodular cast iron globe valves with sealing metal bellows, mounted on suction and flow
- Steel filter mounted on pump suction
- Pump suction manometer complete with steel interception valve
- Drain valve
- General control panel electrical control comprising:
 - pump 1-pump 2 switch
 - pump 2 electrical power branch
 - pump 2 operation indicator
 - pump 2 alarm indicator

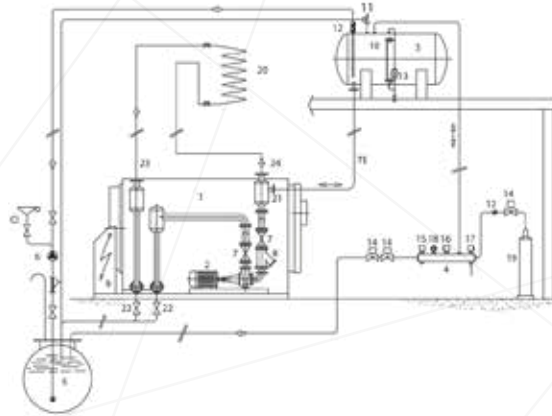
PRODUCT CODES

	Boilers	Matching models	Code
	OPX 100	PMX 100	87050100
	OPX 200	PMX 200	87050200
	OPX 300	PMX 300	87050300
	OPX 400	PMX 400	87050400
	OPX 500	PMX 500	87050500
	OPX 600	PMX 600	87050600
	OPX 800	PMX 800	87050800
	OPX 1000	PMX 1000	87051000
	OPX 1200	PMX 1200	87051200
	OPX 1500	PMX 1500	87051500
	OPX 2000	PMX 2000	87052000
	OPX 2500	PMX 2500	87052500
	OPX 3000	PMX 3000	87053000
	OPX 4000	PMX 4000	87054000
	OPX 5000	PMX 5000	87055000
	OPX 6000	PMX 6000	87056000
OPX 8000	PMX 8000	87058000	
	OPX REC 1000	PMX 1000	87051000
	OPX REC 1200	PMX 1200	87051200
	OPX REC 1500	PMX 1500	87051500
	OPX REC 2000	PMX 2000	87052000
	OPX REC 2500	PMX 2500	87052500
	OPX REC 3000	PMX 3000	87053000
	OPX REC 4000	PMX 4000	87054000
	OPX REC 5000	PMX 5000	87055000
	OPX REC 6000	PMX 6000	87056000
OPX REC 8000	PMX 8000	87058000	



SYSTEM LAYOUTS

Thermal oil system layout with direct closed circuit, boilers model OPX



Description

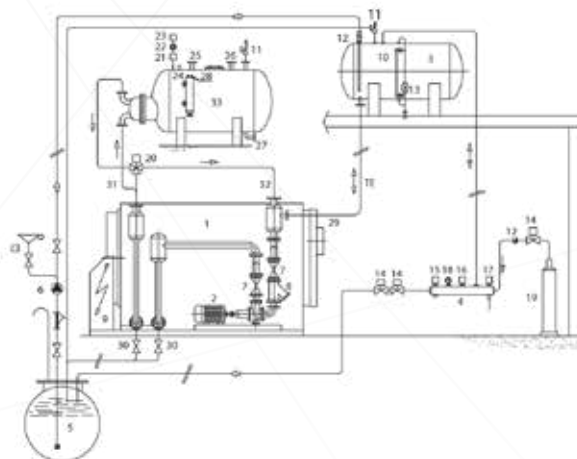
1. Thermal oil heater
2. Electric pump
3. Closed expansion vessel
4. Nitrogen manifold
5. Oil storage tank
6. Oil load pump
7. Globe valve
8. Filter
9. Control panel

10. Level indicator
11. Safety valve
12. Check valve
13. Level regulator
14. Solenoid valve
15. Nitrogen relief pressure switch
16. Safety pressure switch
17. Nitrogen load pressure switch
18. Manometer

19. Nitrogen bottle
20. Use
21. Expansion vessel fitting
22. Drain
23. Thermal oil delivery
24. Thermal oil return

- CI** System load
TE Expansion tube

Thermal oil system layout with closed circuit and evaporator, boilers model OPX



Description

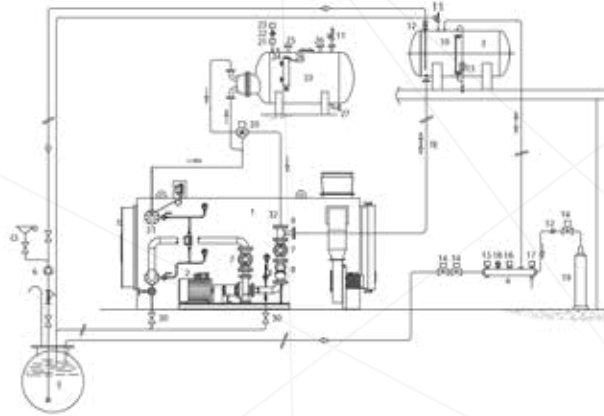
1. Thermal oil heater
2. Electric pump
3. Closed expansion vessel
4. Nitrogen manifold
5. Oil storage tank
6. Oil load pump
7. Globe valve
8. Filter
9. Control panel
10. Level indicator
11. Safety valve
12. Check valve

13. Level regulator
14. Solenoid valve
15. Nitrogen relief pressure switch
16. Safety pressure switch
17. Nitrogen load pressure switch
18. Manometer
19. Nitrogen bottle
20. Three-way valve
21. Limit pressure switch
22. Manometer
23. Safety pressure switch
24. Safety probe

25. Steam outlet
26. Evaporator supply
27. Drain
28. Level regulation probes
29. Expansion vessel fitting
30. Drain
31. Thermal oil delivery
32. Thermal oil return
33. Evaporator

- CI** System load
TE Expansion tube

Thermal oil system layout with closed circuit and evaporator, for boilers model OPX REC



Description

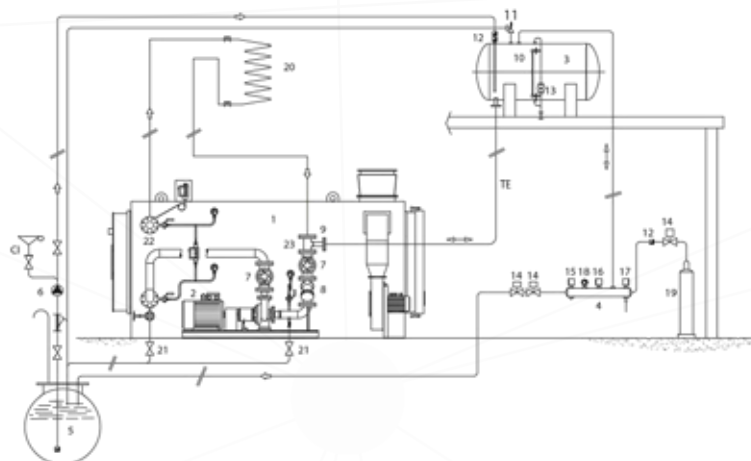
1. Thermal oil heater
2. Electric pump
3. Closed expansion vessel
4. Nitrogen manifold
5. Oil storage tank
6. Oil load pump
7. Oil flow shut-off valve
8. Filter
9. Expansion vessel fitting
10. Level indicator
11. Safety valve
12. Check valve

13. Level regulator
14. Solenoid valve
15. Nitrogen relief pressure switch
16. Safety pressure switch
17. Nitrogen load pressure switch
18. Manometer
19. Nitrogen bottle
20. Three-way valve
21. Limit pressure switch
22. Manometer
23. Safety pressure switch
24. Safety probe

25. Steam outlet
26. Evaporator supply
27. Drain
28. Level regulation probes
30. Drain
31. Thermal oil delivery
32. Thermal oil return
33. Evaporator / other use

- CI** System load
TE Expansion tube

Thermal oil system layout with direct closed circuit, for boilers model OPX REC



Description

1. Thermal oil heater
2. Electric pump
3. Closed expansion vessel
4. Nitrogen manifold
5. Oil storage tank
6. Oil load pump
7. Oil flow shut-off valve
8. Filter
9. Expansion vessel fitting

10. Level indicator
11. Safety valve
12. Check valve
13. Level regulator
14. Solenoid valve
15. Nitrogen relief pressure switch
16. Safety pressure switch
17. Nitrogen load pressure switch
18. Manometer

19. Nitrogen bottle
20. Use
21. Drain
22. Thermal oil delivery
23. Thermal oil return

- CI** System load
TE Expansion tube

STEAM

SUPERHEATED WATER

THERMAL OIL

HOT WATER

ACCESSORIES

SYSTEM LAYOUTS



Range of products and accessories dedicated to heat recovery.

Solutions characterised by production flexibility, capable of satisfying any market requirement, regulatory constraint or installation criticality.

ENERGY EFFICIENCY AREA



ENERGY EFFICIENCY

RANGE	WH	p. 184
	BAX	p. 188
	ECXV	p. 190
	ECO-G	p. 192
	Fin-e	p. 194

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.

WH



DESCRIPTION

The waste-heat boilers of the WH range recover energy from hot flue gases as heat source without any supplementary combustion. These boilers are of the monobloc type, with fully automatic operation and are provided with all accessories required for quick commissioning. The WH range is characterized by a great flexibility of design and use; the boilers are designed specifically to meet any particular requirements.

ADVANTAGES

- + **Modular versions**
The boiler is available as flexible modular sections dependant on the range of required power.
- + **High water content**
- + **High operating flexibility**

FEATURES

- + **Design pressure from 1 to 25 bar**
- + **Heat output 100 ÷ 20000 kW**

- + **Easy, fast and safe installation**
The installation is very easy: you just need to connect the system to the electric, hydraulic, steam and discharge lines.
- + **Assembly and test performed in the factory**
- + **Minimum operating costs**

Waste heat recovery boiler

MODELS



WHB

Design pressure: 1 ÷ 25 bar

Steam capacity: 50 ÷ 32000 kg/h

Steam boiler with fire tubes, waste heat recovery and monobloc type, compliant with the PED Directive 2014/68/EU for indoor or outdoor installations. Complete with regulation and safety accessories for the automatic operation and control panel certified to manage the safety links of the entire boiler.



WHS

Design pressure: 4,9 ÷ 12 bar

Heat output: 233 ÷ 17000 kW

Super-heated water boiler with fire tubes, waste heat recovery and monobloc type, compliant with the PED Directive 2014/68/EU for indoor or outdoor installations. Complete with regulation and safety accessories for the automatic operation and control panel certified to manage the safety links of the entire boiler.



WHO

Design pressure: 10 bar

Heat output: 116 ÷ 9300 kW

Thermal oil heater with water finned pipes, waste heat recovery and monobloc type, compliant with the PED Directive 2014/68/EU for indoor or outdoor installation. Complete with regulation and safety accessories for the automatic operation and control panel certified to manage the safety links of the entire boiler.



WHC

Design pressure: 6 ÷ 25 bar

Heat output: 3000 ÷ 25000 kW

Hot water boiler with fire tubes, waste heat recovery and monobloc type, compliant with the PED Directive 2014/68/EU for indoor or outdoor installations. Complete with regulation and safety accessories for the automatic operation and control panel certified to manage the safety links of the entire boiler.

AVAILABLE CERTIFICATIONS



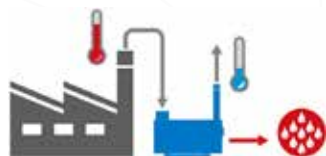
RECOMMENDED TECHNOLOGIES



APPLICATIONS

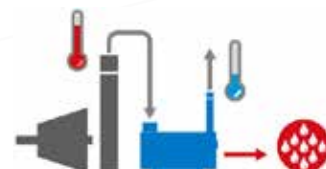
INDUSTRIAL PROCESSES

- Furnaces
- Post-combustion chamber
- Incinerators
- Industrial processes with flue gas at high temperature



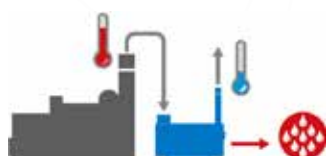
POWER PLANTS

- Turbogas plants

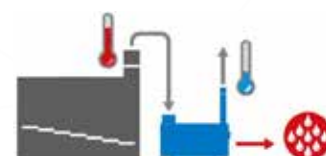


COGENERATORS

- Diesel engines
- Gas and biogas engines
- Vegetable oil engines



BIOMASS PLANTS



AVAILABLE ACCESSORIES

Code	Description	WH			
		B	S	O	C
See "Accessories" section	Automatic blowdown system for boilers of the SIXEN and GX series	■			
17090037	Salinity control unit (pneumatic TDS)	■			
17090035	Salinity control unit (electric TDS)	■			
38040100	Sample cooler	■			
See "Accessories" section	Standby feed water pump	■			
See "Accessories" section	Modulating level regulation with electric valve	■			
See "Accessories" section	Modulating level regulation with pump/s + inverter	■			
See "Accessories" section	Modulating level regulation, panel + inverter for 1 pump	■			
See "Accessories" section	Modulating level regulation, panel + inverter for 2 pumps	■			
90060010	High level safety kit	■			
90060040	Self-checking High level safety unit	■			
90060050	Self-checking Low level safety units	■			
86900071	GSS72/WH global safety system	■	■	■	■
90060060	Ladder and handrail	■	■	■	■
90060090	Side platform	■	■	■	■
90060070	2nd stage regulation pressure switch	■	■	■	■
90060078	Cascade control panel for steam boilers	■	■	■	■
QCTETERM	Eterm Easy manager panel	■	■	■	■

COMPATIBLE COMPONENTS FOR HEATING PLANT ROOM



ECXV
Vertical energy saver
Page 190



VEX
Steam accumulator
Page 213



VRC
Feed water tank
Page 198



VRC-V
Feed water tank
Page 200



DEG
Atmospheric deaerator
Page 202



EVX
Indirect steam boiler
Page 210



DEG/P
Atmospheric deaerator
Page 204



STORAGE TANK
Thermal oil
Page 216



ADD
Feed water treatment unit for steam boilers
Page 206



VEO
Thermal oil expansion vessel
Page 212



BDV
Blowdown vessel
Page 208



VEA
Super-heated water expansion vessel
Page 214



BAX



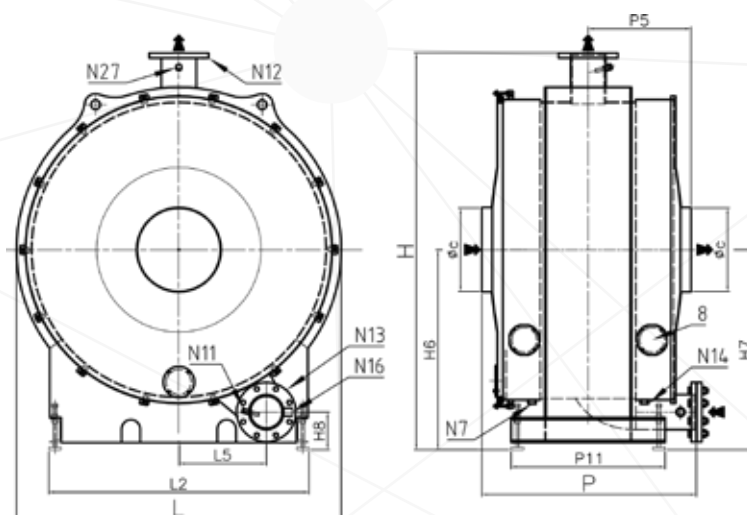
BAX is a condensing heat recovery unit built from AISI 316 Ti stainless steel that must be located after the flue gas exit output of boilers running only on natural gas or LPG. The flue gases passing through the recovery unit undergo a considerable reduction in temperature, and, if the system return temperature is below 57°C, the water contained in the gas condenses by exploiting the latent heat of condensation. The recovery unit must be hydraulically connected in series to matching boiler; the increase in water temperature is only a few degrees centigrade and it is therefore necessary to verify the minimum working temperature allowed by the boiler.

TECHNICAL DATA

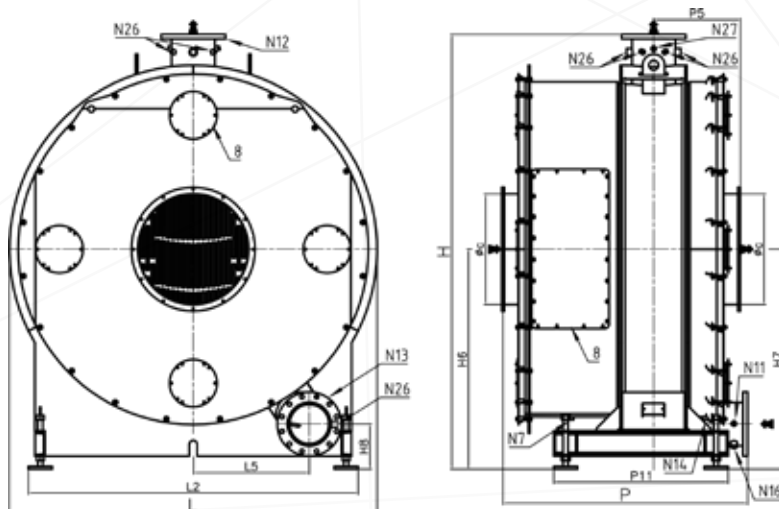
Model	Code	Boiler power	Heat output		Flue gas pressure drop	Flue gas T at output		Condensate production Delivery/ Return T 50/30°C	Hydraulic pressure drop	Total capacity	Total weight
			Return T 60°C	Return T 30°C		Return T 60°C	Return T 30°C				
			kW	kW		°C	°C				
BAX 88	88220011	500	529,7	591	0,06	68,5	38,5	80	7	393	310
		1000	1057,4	1169	0,25	72,6	42,6	144	27	393	310
		1500	1583,1	1740	0,56	76,7	46,7	201	61	393	310
		2000	2106,8	2306,9	1	80,8	50,8	254	108	393	310
BAX 128	88250018	1500	1585,9	1752,6	0,26	72,9	42,9	215	28	610	570
		2000	2111,8	2324	0,47	75,7	45,7	272	49	610	570
		2500	2636,3	2892,4	0,74	78,5	48,5	326	77	610	570
		3000	3159,5	3458,2	1,06	81,3	51,3	379	111	610	570
BAX 200	88220025	2500	2642,5	2917,5	0,3	73,5	43,5	355	23	626	1254
		3000	3168,4	3488,7	0,43	75,3	45,3	411	33	626	1254
		3500	3693,4	4058	0,59	77,1	47,1	466	44	626	1254
		4000	4217,5	4625,6	0,77	78,9	48,9	520	58	626	1254
BAX 230	88220035	3500	3696,2	4069,1	0,45	75,4	45,4	478	17	831	1619
		4000	4221,2	4638,3	0,58	77	47	533	23	831	1619
		4500	4745,4	5206,1	0,74	78,6	48,6	587	29	831	1619
		5000	5268,8	5772,5	0,91	80,1	50,1	640	36	831	1619
BAX 290	88220050	4500	4751,8	5229,7	0,46	75,6	45,6	613	29	896	2088
		5000	5276,8	5798,9	0,57	76,9	46,9	668	36	896	2088
		5500	5801,1	6366,9	0,69	78,1	48,1	722	43	896	2088
		6000	6324,8	6933,9	0,82	79,4	49,4	775	51	896	2088
BAX 350	88220070	5500	5807,4	6390,3	0,48	75,8	45,8	747	43	1036	2590
		6000	6332,3	6959,5	0,57	76,8	46,8	802	51	1036	2590
		6500	6856,8	7527,6	0,66	77,8	47,8	857	60	1036	2590
		7000	7380,7	8094,9	0,77	78,9	48,9	910	70	1036	2590
		8000	8430	9200	1	84	53	1015	91	1036	2590

CONDENSING HEAT RECOVERY UNIT

MODEL 88 ÷ 128



BAX 200 ÷ 350



Key:

N7 Boiler-side condensate drain
N11 Return temperature control
N12 Recovery unit delivery
N13 Recovery unit return

N14 Chimney-side condensate drain
N16 Condenser drain
N27 Delivery temperature control

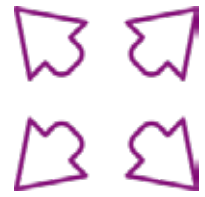
DIMENSIONS

Model	H	H6	H7	H8	L	L2	L5	P	P5	P11	Øc	N17	N12	N13	N14	N16	N27
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	DN/in	DN/in/mm	DN/in	in	in	in
BAX 88	1760	890	890	163	1420	1300	250	1037	495	740	400	1"	125 PN16	125 PN16	1"	1"	1/2"
BAX 128	2064	1038	1038	181	1710	1400	420	1030	494	740	400	1"	125 PN16	125 PN16	1"	1"	1/2"
BAX 200	2380	1210	1210	256	1960	1390	410	1555	552	1160	550	1"	200 PN16	200 PN16	1"	1"	1/2"
BAX 230	2592	1317	1317	266	2170	1480	452	1552	548	1100	600	1"	200 PN16	200 PN16	1"	1"1/4	1/2"
BAX 290	2742	1387	1387	285	2321	2080	733	1552	546	1100	700	1"	250 PN16	250 PN16	1"	1"1/4	1/2"
BAX 350	3052	1602	1602	315	2491	2126	598	1622	546	1100	800	1"	250 PN16	250 PN16	1"	1"1/4	1/2"



Components and accessories to build complete heating plant rooms.

BOILER ROOM ANCILLARIES AREA



⊕ BOILER ROOM ANCILLARIES

RANGE	VRC	p. 198
	VRC-V	p. 200
	DEG	p. 202
	DEG-P	p. 204
	ADD	p. 206
	BDV	p. 208
	EVX	p. 210
	VEO	p. 212
	VEX	p. 213
	VEA	p. 214
	STORAGE TANK	p. 216
	COV	p. 217

The provided figures and data are for reference only.

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EVX

Indirect steam boiler



Design pressure 12 (15 bar upon request)

The EVX-series steam boilers are horizontal semi-fixed boilers provided with an exchange coil containing a primary fluid such as thermal oil or super-heated water, complete with regulation and safety accessories.

Provided with:

- sheet steel support saddles and section bar support base.
- insulating coating with high density mineral wool and aluminium sheet finish.

Standard equipment

Steam-side accessory unit including:

- Steam outlet/crown valve
- 2 spring safety valves
- 2 reflex level indicator gauges
- 2 indicator drain and shut-off valve units

Pressure monitoring instrumentation manifold including:

- Large dial 3 way test valve manometer
- Limit pressure switch
- Manual reset safety pressure switch

Automatic conductivity probe level regulator including:

- Pump start probe
- Pump stop probe
- Probe for low level

Blowdown unit including:

- Purge shut-off valve
- Quick exhaust valve with manual lever

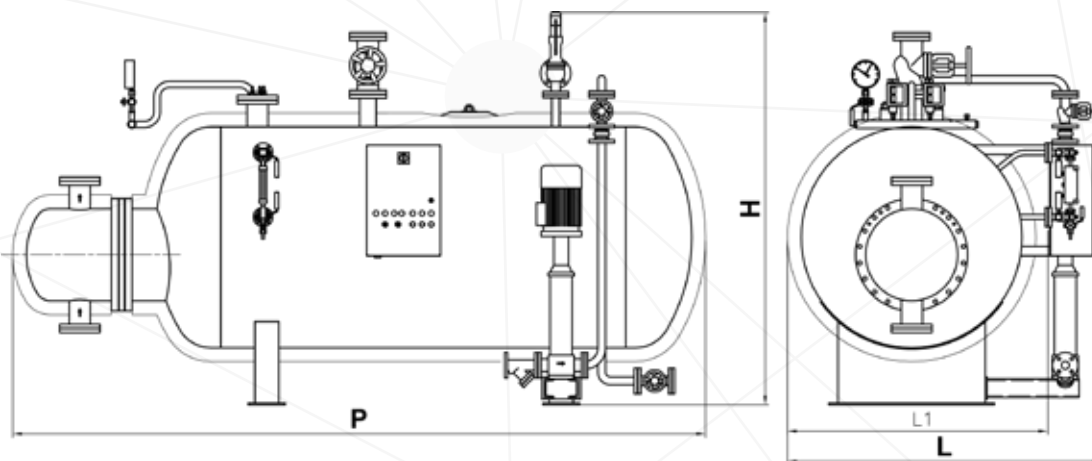
Feed water unit mounted on support including:

- 1 vertical multistage centrifugal pumps suitable for 120°C water
- 1 shut-off globe valve
- 1 pump suction filter
- 2 non-return valves

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

CODES AND TECHNICAL DATA

Model	Code	Heat output		Steam prod. kg/h	Min.-max. operating pressure bar	Volume level H2O l	Total volume H2O l	Total weight kg
		kW	kcal/h					
EVX 200	87140212	233	200.000	341	8-11,5	481	650	600
EVX 300	87140312	349	300.000	512	8-11,5	592	750	850
EVX 400	87140412	465	400.000	680	8-11,5	960	1270	1000
EVX 500	87140512	581	500.000	855	8-11,5	962	1300	1150
EVX 600	87140612	698	600.000	1024	8-11,5	1295	1750	1350
EVX 800	87140812	930	800.000	1370	8-11,5	1517	2035	1550
EVX 1000	87141012	1163	1.000.000	1710	8-11,5	2070	2710	1700
EVX 1200	87141212	1395	1.200.000	2050	8-11,5	2220	2915	1850
EVX 1500	87141512	1744	1.500.000	2560	8-11,5	2916	3170	2400
EVX 2000	87142012	2326	2.000.000	3400	8-11,5	3384	3775	2550
EVX 2500	87142512	2907	2.500.000	4250	8-11,5	3390	4450	3000
EVX 3000	87143012	3488	3.000.000	5100	8-11,5	3960	5500	3400
EVX 4000	87144012	4651	4.000.000	6820	8-11,5	4680	6500	3800
EVX 5000	87145012	5814	5.000.000	8500	8-11,5	5760	8000	4500
EVX 6000	87146012	6977	6.000.000	10000	8-11,5	7776	10800	5500
EVX 8000	87148012	9302	8.000.000	13600	8-11,5	8856	12300	7200
EVX 9000	87149012	10465	9.000.000	15300	8-11,5	11870	15450	9000



DIMENSIONS

Model	H	L	L1	P
	mm	mm	mm	mm
EVX 200	1450	1300	900	2000
EVX 300	1500	1350	950	2200
EVX 400	1600	1400	1000	2400
EVX 500	1700	1500	1100	2700
EVX 600	1850	1650	1250	3000
EVX 800	1850	1650	1250	3500
EVX 1000	2000	1750	1350	3600
EVX 1200	2000	1750	1350	3800
EVX 1500	2250	1950	1550	3800
EVX 2000	2250	1950	1550	3800
EVX 2500	2300	2050	1550	4300
EVX 3000	2400	2150	1650	4500
EVX 4000	2500	2250	1750	4600
EVX 5000	2650	2350	1850	4900
EVX 6000	2800	2500	2000	5900
EVX 8000	3000	2650	2150	6300
EVX 9000	3325	2790	2290	6415

Thermoregulating unit (REG) for controlling and setting the evaporator output pressure
 Hydraulic connections between the EVX indirect steam boiler and the relevant boiler

VEO

Thermal oil expansion vessel



Design pressure 5 bar

The expansion vessel is designed to absorb the oil volumetric changes caused by the temperature variation. It consists of a horizontal tank pressurised with nitrogen. The pressure changes from 1 bar with cold oil to 4 bar with oil at 280°C. The tank complies with the PED Directive 2014/68/EU.

It is made of Fe 410.1 carbon steel. KWUNI 5869/75, externally painted. VEO is provided with the accessories required for the pressure and automatic level control. Switches, fuses and indicator lamps are located in the OPX heater control panel.

On request:

If the VEO expansion vessel is not paired with an ICI thermal oil boiler of the OPX or OPX REC series but rather to a boiler of a different brand, it is possible to request a control panel.

Standard equipment:

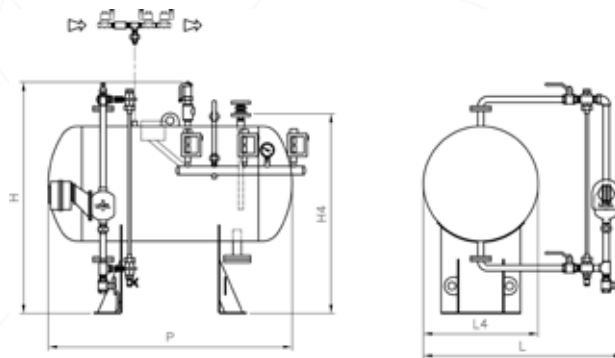
Nitrogen supply system for the pressure control including:

- Nitrogen manifold
- Manometer
- Pressure switch
- Nitrogen supply valve
- Safety pressure switch

- 2 loading solenoid valves
- 2 non-return valves
- Level indicator

Oil supply level control system including:

- Level float regulator with integrated low level alarm
- Oil load pump
- Safety valve certified according to PED Directive 2014/68/EU



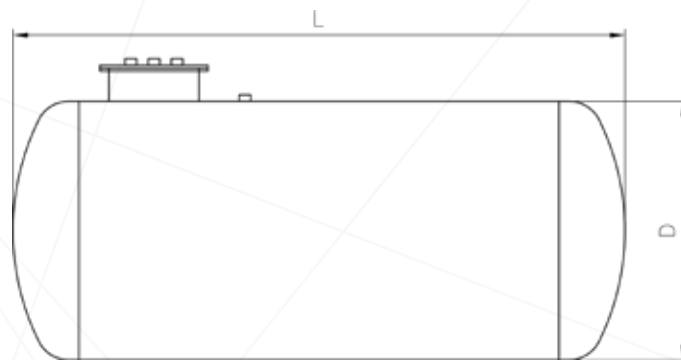
CODES, TECHNICAL SPECIFICATIONS AND DIMENSIONS

Model	Code	Nominal pressure	Design temperature	Total volume H ₂ O	Total weight	H	H ₄	L	L ₄	P
		bar	°C	lt	kg	mm	mm	mm	mm	mm
VEO 200	87170200	5	300	200	150	1250	950	900	500	1320
VEO 400	87170400	5	300	400	250	1300	1160	1050	650	1380
VEO 600	87170600	5	300	600	280	1500	1350	1200	800	1380
VEO 800	87170800	5	300	800	320	1500	1350	1200	800	1780
VEO 1000	87171000	5	300	1000	360	1500	1350	1200	800	2180
VEO 1500	87171500	5	300	1500	430	1700	1500	1400	1000	2130
VEO 2000	87172000	5	300	2000	500	1700	1500	1400	1000	2780
VEO 3000	87173000	5	300	3000	950	1930	1750	1480	1250	2720
VEO 6000	87176000	5	300	6000	1400	2150	2055	1730	1500	3720

STORAGE TANK

Thermal oil

Horizontal cylindrical double skin design, for the collection and the storage of the oil volume contained in the system and in the boiler. Built in carbon steel with external bitumen lining, complete with drain valve, manhole and various fittings for the connection to the system.



CODES, TECHNICAL SPECIFICATIONS AND DIMENSIONS

Tank	Code	Capacity	Tube bundle outer diameter	Width	Weight
		lt	mm	mm	kg
LT. 500	87080501	500	700	1600	160
LT. 1000	87081001	1000	900	1930	270
LT. 1500	87081501	1500	1270	1420	370
LT. 2000	87082001	2000	1270	1740	420
LT. 2500	87082501	2500	1270	2200	510
LT. 3000	87083002	3000	1430	2070	554
LT. 5000	87085001	5000	1430	3340	823
LT. 6000	87086001	6000	1430	3890	940
LT. 8000	87088001	8000	1860	3400	1483
LT. 10000	87089901	10000	1860	4000	1702

COV

Distribution header

Distribution headers are designed to allow economic distribution of the media (steam, water, thermal oil) to the individual users.

The Distribution headers are individually designed to match the system requirements using ASTM A 106 Gr.B pipe with dished ends, and a sufficient number of flanged fittings suitably sized to match the customer's requirements.

Steam headers are also provided with a dirt leg.

External paint finish for insulation and coating purposes, undertaken on site by the customer.

Wall fixing brackets or floor support saddles are available upon request. COV headers are manufactured and tested with procedures approved according to the PED Directive 2014/68/EU.

Diameter, length and connections are designed according to the customer's requirements specified in the enquiry.



Benefits:

- Reduction of installation costs owing to use of prefabricated elements
- Space saving
- PED 2014/68/EU certification included, according to the requested category



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

SERVICE AREA



⊕ SERVICES

p.

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.



RESIDENTIAL AREA

The services on this page are available for:

Assembly

Some boilers can be assembled directly in the plant room. This service is provided for all those situations where it is impossible or too difficult and expensive to introduce the whole boiler in the plant room because of its dimensions or too limited access.

The assembly operations are performed by our reliable welders on site and consequently travelling expenses are excluded. With reliable welders we mean expert professional welders already certified to perform such delicate operation.

Some boilers can be assembled directly in the plant room.

Basic service Nereix (BSN)

The service is dedicated to condominiums where ICI Nereix modules are installed and tested.

It can be applied to residential buildings with heat meters with Meter Bus output, by installing the suitable centraliser.

The service consists in loading and saving on the website www.eterm.it the consumption data transmitted automatically by the system. On the website there is a web application (etermEASYmanager) that allows the users and administrator to view and download the consumption data.

This service does not include:

- allocation calculations;
- checking the data consistency;
- alarms for faults, errors and tampering;
- ordinary and extraordinary maintenance;
- warranty extension.

Advantages for the condominium:

- reading of consumptions and monitoring of historical data using graphs;
- sending of commands to the ICI Kronos and e-Kronos environment unit (if any).

Advantages for the administrator:

- reading and storing on the web the consumption data of all residential buildings;
- exporting the consumptions in Excel tables.

Should it be not technically possible to connect or configure the system from remote, ICI Caldaie will perform an on-site operation that will be invoiced in accordance with the rate book.

ICI Caldaie reserves the right to examine whether it is possible to provide the service, that is, network coverage GSM – GPRS, presence of the “master” control unit with modem and a bus network correctly wired and functioning.

Start-up of Nereix modules

In Italy, the start-up of Nereix modules is a necessary condition before drawing up a Basic Service Nereix (BSN) contract

The described service could be unavailable in some Countries.
Please, contact our commercial department for confirmation.

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) 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.

10) 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.

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.



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