## **PRODUCT CATALOGUE**



00 | 2022









## **HUMANTECHNOLOGY**

## 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.



## THE STRENGTH OF ICI CALDAIE

ICI Caldaie is a young and dynamic company, characterised by an indepth 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 constultancy

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.





Official distributors





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**











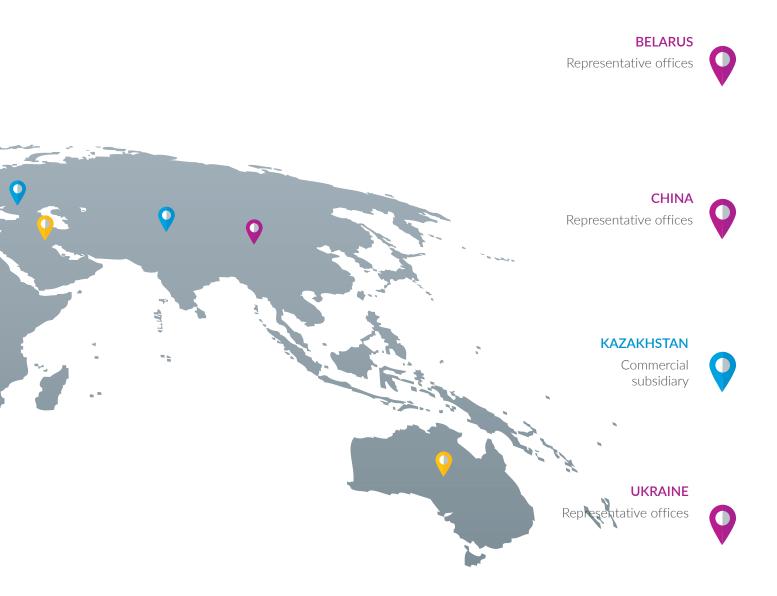
**EUROPE** 

U.S.A.

RUSSIA BELARUS KAZAKHSTAN

CHINA

UKRAINE







## STEEL FLOOR STANDING BOILERS

Steel boilers with high water content, efficient solutions that meet any heating requirements depending on the type of building and the level of energy certification required.

## **REX**



#### **DESCRIPTION**

Reverse flame boiler with cylindrical furnace completely closed on the rear side by a dished end supported by a fully submerged stub pipe. The boilers can be used with forced draft burners for the operation on liquid or gaseous fuels. These boilers are designed to be used in systems with water temperature between 60 and 100°C (safety thermostat set at 110°C).

#### **FEATURES**

**©** 

Design pressure: 5 bar



Heat output: 70 ÷ 3500 kW



Efficiency: from 92.0% to > 95.0%

For higher or lower pressures see our commercial department

#### **ADVANTAGES**



#### Maximum security

The generator has been designed in accordance with the strictest international safety regulations in force.



#### High reliability in continuous operation

The construction features are such to make it particularly suitable to high working loads and long working periods.



#### 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.



#### 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.

#### Reverse flame boiler

#### **MODELS**



**REX** (70 ÷ 1300 kW)



**REX** (1400 ÷ 3500 kW)



REX DUAL stacked combustion chambers (140 ÷ 1700 kW)

#### **AVAILABLE CERTIFICATIONS**









#### **RECOMMENDED TECHNOLOGIES**



#### **MAIN APPLICATIONS**

- (+) Commercial facilities
- (+) Hospitals
- District heating
- Heavy industry

- Residential buildings
- Industrial heating systems
  - Sports centers
- Swimming pools and water parks

## REX (70 ÷ 1300 kW)

Reverse flame fire tube boiler. Cylindrical furnace completely closed on the rear side by a dished supported by a fully submerged stub pipe. It can be used with forced draft burners for the operation on liquid or gas fuels (only gas fuels in the F version). The boiler is designed to be used in systems with water temperature between 60 and 100°C (safety thermostat set at 110°C).



## **REX**

Design pressure: 5 bar Heat output: 70 ÷ 1300 kW Efficiency: > 92,0 %

## **REX F**

Design pressure: 5 bar Heat output: 70 ÷ 1300 kW Efficiency: > 95,0 %

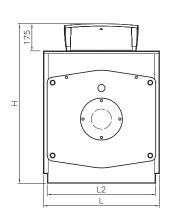


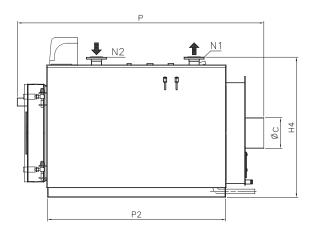


Provided with Fin-e® efficiency improvement system. This version allows the use of **only gaseous fuels.** 

#### **TECHNICAL DATA**

| Marilal | Heat Output - | Flow | Flow thermal Flue gas pressure drop Hydraulic |     | Hydraulic | Total volume  | Total | weight |       |
|---------|---------------|------|---|-----|-----------|---------------|-------|--------|-------|
| Model   | temp. 70°C    | REX  | REX F   | REX | REX F     | pressure drop | H2O   | REX    | REX F |
| REX     | kW            | k    | :W  | m   | bar       | mbar          | 1     | ŀ      | (g    |
| * 7     | 70            | 76   | 74,2  | 0,8 | 0,9       | 8             | 105   | 216    | 222   |
| * 8     | 80            | 87   | 84,7  | 1,0 | 1,1       | 10            | 105   | 216    | 222   |
| * 9     | 90            | 98   | 95,2  | 0,8 | 0,9       | 13            | 123   | 258    | 266   |
| * 10    | 100           | 109  | 105,6   | 1,0 | 1,1       | 16            | 123   | 258    | 266   |
| * 12    | 120           | 130  | 126,5   | 1,1 | 1,3       | 23            | 123   | 258    | 266   |
| * 15    | 150           | 163  | 157,8   | 1,2 | 1,3       | 35            | 172   | 346    | 357   |
| * 20    | 200           | 216  | 210   | 1,9 | 2,2       | 63            | 172   | 346    | 357   |
| * 25    | 250           | 271  | 263,5   | 2,0 | 2,4       | 98            | 220   | 431    | 442   |
| * 30    | 300           | 325  | 315,5   | 2,0 | 2,4       | 50            | 300   | 475    | 489   |
| * 35    | 350           | 379  | 368   | 2,9 | 3,4       | 67            | 356   | 542    | 558   |
| 40      | 420           | 455  | 441   | 4,5 | 5,2       | 42            | 360   | 584    | 600   |
| 50      | 500           | 542  | 524   | 4,2 | 4,8       | 60            | 540   | 853    | 871   |
| 62      | 620           | 672  | 649   | 6,4 | 7,3       | 92            | 645   | 963    | 981   |
| 75      | 750           | 813  | 786   | 5,2 | 5,8       | 55            | 855   | 1205   | 1230  |
| 85      | 850           | 921  | 891   | 7,2 | 8,0       | 71            | 855   | 1205   | 1230  |
| 95      | 950           | 1030 | 997   | 5,2 | 5,9       | 89            | 950   | 1417   | 1446  |
| 100     | 1020          | 1106 | 1069  | 4,0 | 4,5       | 42            | 1200  | 1843   | 1880  |
| 120     | 1200          | 1301 | 1259  | 5,5 | 6,2       | 58            | 1200  | 1843   | 1880  |
| 130     | 1300          | 1409 | 1364  | 6,5 | 7,3       | 68            | 1200  | 1843   | 1880  |





#### **DIMENSIONS**

| Model | Н    | H4   | L    | L2   | Р    | P2   | Øc  | N1    | N2    |
|-------|------|------|------|------|------|------|-----|-------|-------|
| REX   | mm   | mm   | mm   | mm   | mm   | mm   | mm  | DN/in | DN/in |
| * 7   | 1063 | 912  | 756  | 700  | 994  | 630  | 200 | 50    | 50    |
| * 8   | 1063 | 912  | 756  | 700  | 994  | 630  | 200 | 50    | 50    |
| * 9   | 1030 | 912  | 756  | 700  | 1119 | 755  | 200 | 50    | 50    |
| * 10  | 1030 | 912  | 756  | 700  | 1119 | 755  | 200 | 50    | 50    |
| * 12  | 1030 | 912  | 756  | 700  | 1119 | 755  | 200 | 50    | 50    |
| * 15  | 1080 | 962  | 806  | 750  | 1364 | 1000 | 250 | 50    | 50    |
| * 20  | 1080 | 962  | 806  | 750  | 1364 | 1000 | 250 | 50    | 50    |
| * 25  | 1080 | 962  | 806  | 750  | 1614 | 1250 | 250 | 50    | 50    |
| * 30  | 1180 | 1061 | 906  | 850  | 1614 | 1250 | 250 | 65    | 65    |
| * 35  | 1180 | 1061 | 906  | 850  | 1864 | 1500 | 250 | 65    | 65    |
| 40    | 1190 | 1095 | 946  | 890  | 1872 | 1502 | 250 | 80    | 80    |
| 50    | 1380 | 1285 | 1166 | 1110 | 1946 | 1502 | 300 | 80    | 80    |
| 62    | 1380 | 1285 | 1166 | 1110 | 2235 | 1792 | 300 | 80    | 80    |
| 75    | 1510 | 1417 | 1296 | 1240 | 2247 | 1753 | 350 | 100   | 100   |
| 85    | 1510 | 1417 | 1296 | 1240 | 2247 | 1753 | 350 | 100   | 100   |
| 95    | 1510 | 1417 | 1296 | 1240 | 2497 | 2003 | 350 | 100   | 100   |
| 100   | 1660 | 1568 | 1446 | 1390 | 2477 | 2003 | 400 | 125   | 125   |
| 120   | 1660 | 1568 | 1446 | 1390 | 2477 | 2003 | 400 | 125   | 125   |
| 130   | 1660 | 1568 | 1446 | 1390 | 2477 | 2003 | 400 | 125   | 125   |

<sup>\*</sup> Product not compliant with the requirements set out in the European regulations No. 811-813/2013 and therefore not suitable for the installation on the EU territory for plant rooms or produce domestic hot water.

The product can be supplied only for the installation in non-European Union countries for any kind of application

### **STANDARD EQUIPMENT**

- \* Product not compliant with the requirements set out in the European regulations No. 811-813/2013 and therefore not suitable for the installation on the EU territory for plant rooms or produce domestic hot water.
- The product can be supplied only for the installation in non-European Union countries for any kind of application

## **PRODUCT CODES**

| Model    | REX      | REX F    |
|----------|----------|----------|
| * REX 7  | 83801010 | 83801210 |
| * REX 8  | 83801020 | 83801220 |
| * REX 9  | 83802010 | 83802210 |
| * REX 10 | 83802020 | 83802220 |
| * REX 12 | 83802030 | 83802230 |
| * REX 15 | 83803010 | 83803210 |
| * REX 20 | 83803020 | 83803220 |
| * REX 25 | 83804010 | 83804210 |
| * REX 30 | 83805010 | 83805210 |
| * REX 35 | 83806010 | 83806210 |
| REX 40   | 83807010 | 83807210 |
| REX 50   | 83808010 | 83808210 |
| REX 62   | 83809010 | 83809210 |
| REX 75   | 83810010 | 83810210 |
| REX 85   | 83810020 | 83810220 |
| REX 95   | 83811010 | 83811210 |
| REX 100  | 83812010 | 83812210 |
| REX 120  | 83812020 | 83812220 |
| REX 130  | 83812030 | 83812230 |

## REX (1400 ÷ 3500 kW)

Reverse flame fire tube boiler. Cylindrical furnace completely closed on the rear side by a dished supported by a fully submerged stub pipe. It can be used with forced draft burners for the operation on liquid or gas fuels (only gas fuels in the F version). The boiler is designed to be used in systems with water temperature between 60 and 100°C (safety thermostat set at 110°C).



## **REX**

Design pressure: 5 bar

Heat output: 1400 ÷ 3500 kW

Efficiency: > 92,0 %

## **REX F**



Design pressure: 5 bar Heat output: 1400 ÷ 3500 kW

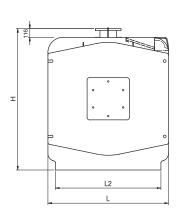
Efficiency: > 95,0 %

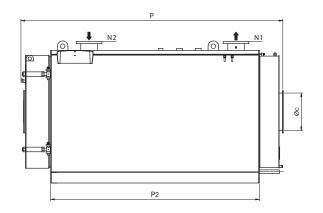


Provided with Fin-e® efficiency improvement system. This version allows the use of **only gaseous fuels.** 

#### **TECHNICAL DATA**

| Model Heat Output - temp. 70°C | Flow thermal |       | Flue gas pressure drop |       | Hydraulic     | Total volume | Total | weight |      |
|--------------------------------|--------------|-------|------------------------|-------|---------------|--------------|-------|--------|------|
|                                | REX          | REX F | REX                    | REX F | pressure drop | H2O          | REX   | REX F  |      |
| REX                            | kW           | k     | W                      | m     | bar           | mbar         | l     | K      | (g   |
| 140                            | 1400         | 1517  | 1468                   | 6     | 6,6           | 38           | 1500  | 2600   | 2665 |
| 160                            | 1600         | 1733  | 1675                   | 6,5   | 7,1           | 50           | 1500  | 2600   | 2665 |
| 180                            | 1800         | 1950  | 1885                   | 7     | 7,6           | 63           | 1650  | 2750   | 2815 |
| 200                            | 2000         | 2167  | 2094                   | 6     | 6,6           | 25           | 2000  | 3650   | 3730 |
| 240                            | 2400         | 2600  | 2518                   | 7,5   | 8,1           | 35           | 2300  | 3900   | 3980 |
| 300                            | 3000         | 3250  | 3142                   | 8     | 8,6           | 55           | 3150  | 5200   | 5300 |
| 350                            | 3500         | 3792  | 3670                   | 9     | 9,6           | 75           | 3650  | 5700   | 5800 |





#### **DIMENSIONS**

| Model | Н    | L    | L2   | Р    | P2   | Øc  | N1    | N2    |
|-------|------|------|------|------|------|-----|-------|-------|
| REX   | mm   | mm   | mm   | mm   | mm   | mm  | DN/in | DN/in |
| 140   | 1746 | 1470 | 1270 | 2886 | 2300 | 400 | 150   | 150   |
| 160   | 1746 | 1470 | 1270 | 2886 | 2300 | 400 | 150   | 150   |
| 180   | 1746 | 1470 | 1270 | 3096 | 2510 | 400 | 150   | 150   |
| 200   | 1876 | 1600 | 1400 | 3220 | 2510 | 500 | 200   | 200   |
| 240   | 1876 | 1600 | 1400 | 3480 | 2770 | 500 | 200   | 200   |
| 300   | 2146 | 1870 | 1670 | 3480 | 2770 | 550 | 200   | 200   |
| 350   | 2146 | 1870 | 1670 | 3935 | 3225 | 550 | 200   | 200   |

## **STANDARD EQUIPMENT**

- Complete insulation casingTurbulators
- Cleaning brush

### **PRODUCT CODES**

| Model   | Co       | ode      |
|---------|----------|----------|
| Model   | REX      | REX F    |
| REX 140 | 83813010 | 83813210 |
| REX 160 | 83813020 | 83813220 |
| REX 180 | 83814010 | 83814210 |
| REX 200 | 83815010 | 83815210 |
| REX 240 | 83816010 | 83816210 |
| REX 300 | 83817010 | 83817210 |
| REX 350 | 83818010 | 83818210 |

#### **REX DUAL stacked combustion chambers**

Double stacked reverse flame fire tube boiler. Cylindrical furnace completely closed on the rear side by a dished end supported by a fully submerged stub pipe. It can be used with forced draft burners for the operation on liquid or gas fuels (only gas fuels in the F version). The boiler is designed to be used in systems with water temperature between 60 and 100°C (safety thermostat set at 110°C).



## **REX DUAL**

Design pressure: 5 bar

Heat output: 140 ÷ 1700 kW Efficiency: > 92,0 %

## **REX DUAL F**



Design pressure: 5 bar

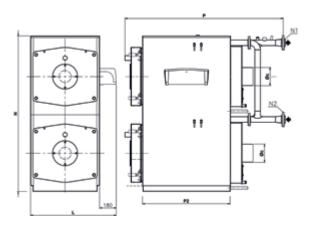
Heat output: 140 ÷ 1700 kW Efficiency: > 95,0 %



Provided with Fin-e® efficiency improvement system. This version allows the use of **only gaseous fuels.** 

#### **TECHNICAL DATA**

| Madal    | Model Heat Output - |      | hermal | Flue gas p | ressure drop | Hydraulic     | Total volume | Total | weight |
|----------|---------------------|------|--------|------------|--------------|---------------|--------------|-------|--------|
| Model    | temp. 70°C          | REX  | REX F  | REX        | REX F        | pressure drop | H2O          | REX   | REX F  |
| REX DUAL | kW                  | k    | W      | m          | bar          | mbar          | 1            | ŀ     | (g     |
| * 14     | 140                 | 152  | 148    | 0,8        | 0,9          | 11            | 210          | 465   | 477    |
| * 16     | 160                 | 174  | 169    | 1          | 1,1          | 14            | 210          | 465   | 477    |
| * 18     | 180                 | 196  | 190    | 0,8        | 0,9          | 18            | 246          | 549   | 565    |
| * 20     | 200                 | 218  | 211    | 1          | 1,1          | 22            | 246          | 549   | 565    |
| * 24     | 240                 | 260  | 253    | 1,1        | 1,3          | 32            | 246          | 549   | 565    |
| * 30     | 300                 | 326  | 316    | 1,2        | 1,3          | 22            | 344          | 726   | 748    |
| 40       | 420                 | 455  | 420    | 2,1        | 2,2          | 42            | 344          | 726   | 748    |
| 50       | 500                 | 542  | 527    | 2          | 2,4          | 60            | 440          | 898   | 920    |
| 60       | 600                 | 650  | 631    | 2          | 2,4          | 86            | 600          | 986   | 1014   |
| 70       | 700                 | 758  | 734    | 2,9        | 3,4          | 118           | 712          | 1122  | 1154   |
| 80       | 840                 | 909  | 840    | 4,5        | 4,7          | 69            | 720          | 1285  | 1317   |
| 100      | 1000                | 1084 | 1048   | 4,2        | 4,8          | 98            | 1080         | 1830  | 1866   |
| 124      | 1240                | 1344 | 1298   | 6,4        | 7,3          | 62            | 1290         | 2065  | 2101   |
| 150      | 1500                | 1626 | 1572   | 5,2        | 5,8          | 44            | 1710         | 2621  | 2671   |
| 170      | 1700                | 1842 | 1782   | 7,2        | 8            | 56            | 1710         | 2621  | 2671   |



#### **DIMENSIONS**

| Model    | H    | L    | P    | P2   | Øc  | N1    | N2    |
|----------|------|------|------|------|-----|-------|-------|
| REX DUAL | mm   | mm   | mm   | mm   | mm  | DN/in | DN/in |
| * 14     | 1693 | 939  | 1365 | 630  | 200 | 65    | 65    |
| * 16     | 1693 | 939  | 1365 | 630  | 200 | 65    | 65    |
| * 18     | 1693 | 939  | 1490 | 755  | 200 | 65    | 65    |
| * 20     | 1693 | 939  | 1490 | 755  | 200 | 65    | 65    |
| * 24     | 1693 | 939  | 1490 | 755  | 200 | 65    | 65    |
| * 30     | 1793 | 989  | 1798 | 1000 | 250 | 80    | 80    |
| 40       | 1793 | 989  | 1798 | 1000 | 250 | 80    | 80    |
| 50       | 1793 | 989  | 2048 | 1250 | 250 | 80    | 80    |
| 60       | 1993 | 1089 | 2049 | 1250 | 250 | 80    | 80    |
| 70       | 1993 | 1089 | 2299 | 1500 | 250 | 80    | 80    |
| 80       | 2244 | 1129 | 2440 | 1502 | 250 | 100   | 100   |
| 100      | 2624 | 1349 | 2490 | 1502 | 300 | 100   | 100   |
| 124      | 2640 | 1349 | 2792 | 1792 | 300 | 125   | 125   |
| 150      | 2935 | 1479 | 2756 | 1753 | 350 | 150   | 150   |
| 170      | 2935 | 1479 | 2756 | 1753 | 350 | 150   | 150   |

<sup>\*</sup> Product not compliant with the requirements set out in the European regulations No. 811-813/2013 and therefore not suitable for the installation on the EU territory for plant rooms or produce domestic hot water.

The product can be supplied only for the installation in non-European Union countries for any kind of application

### STANDARD EQUIPMENT

- Complete insulation casing
- Turbulators
- · Cleaning brush
- Delivery and return hydraulic pipes
- Kit for the boiler hydraulic coupling

#### **PRODUCT CODES**

| Model         | Co       | ode      |
|---------------|----------|----------|
| Model         | REX      | REX F    |
| * REX DUAL 14 | 83801030 | 83801230 |
| * REX DUAL 16 | 83801040 | 83801240 |
| * REX DUAL 18 | 83802040 | 83802240 |
| * REX DUAL 20 | 83802050 | 83802250 |
| * REX DUAL 24 | 83802060 | 83802260 |
| * REX DUAL 30 | 83803030 | 83803230 |
| REX DUAL 40   | 83803040 | 83803240 |
| REX DUAL 50   | 83804030 | 83804230 |

<sup>\*</sup> Product not compliant with the requirements set out in the European regulations No. 811-813/2013 and therefore not suitable for the installation on the EU territory for plant rooms or produce domestic hot water.

The product can be supplied only for the installation in non-European Union countries for any kind of application

| Madal        | Co       | ode      |
|--------------|----------|----------|
| Model        | REX      | REX F    |
| REX DUAL 60  | 83805030 | 83805230 |
| REX DUAL 70  | 83806030 | 83806230 |
| REX DUAL 80  | 83807040 | 83807240 |
| REX DUAL 100 | 83808040 | 83808240 |
| REX DUAL 124 | 83809040 | 83809240 |
| REX DUAL 150 | 83810070 | 83810270 |
| REX DUAL 170 | 83810080 | 83810280 |

## **AVAILABLE ACCESSORIES**

| Code         | Description.   | REX models |           |          |  |  |
|--------------|--|------------|-----------|----------|--|--|
| Code         | Description  | 7 - 130    | 140 - 350 | DUAL SOV |  |  |
| QACC10ELMCE  | Thermostatic control panel   |            |           |          |  |  |
| QETERM01CE   | Eterm boiler management control panel  |            |           |          |  |  |
| QETERM01RU2  | Eterm boiler management control panel - only for Russia and the former Soviet<br>Union |            |           |          |  |  |
| QETERM02     | Eterm system control panel   |            |           |          |  |  |
| QACC01ELMDCE | Thermostatic control panel   |            |           |          |  |  |
| QEST03110    | Thermostatic control panel **  |            |           |          |  |  |
| QCTETERM     | Eterm easy manager panel   |            |           |          |  |  |



## **ACCESSORIES**

Components designed to be used with residential boilers to further improve their performance; products designed for high-performance integrated systems.

## 





Boiler control panel with eterm ® electronic board.

The panel is able to manage a stage or modulating burner and can control, within the limits of the available outputs, pumps and plant room valves.

It is complete with regulation and safety thermostats that also allow "manual" operation through the activation of proper electro-mechanical switches.

Thanks to the updatable software, eterm ® controller features a number of functions that ICI Caldaie may implement for continuous product improvement.

Accessory codes

OETERM01CE QETERM01RU2\*

### STANDARD EQUIPMENT

- Main switch
- Burner operation switch (Manual / Off / Automatic)
- 2 programmable output operation switch (Manual / Off / Automatic)
- 2 Regulation thermostats
- Safety thermostat
- Thermometer
- Microprocessor board
- Boiler probe

#### Main functions:

- Possibility of remote control (with optional modem or connection to other master devices with modem);
- Possibility of cascade operation with other panels of the same series;
- Possibility of managing QETERM02 expansions for control of other pumps or valves;
- Possibility of ModBus connection with optional interface;
- Delivery temperature climate control (with optional external probe);
- Management of 2 configurable outputs for pumps and valves
- Mixing valve management

#### Communication

- Modem connector
- USB socket
- RS485 to connect the board to any Master unit (boiler or Master board)
- RS485 connection to connect the board to any slave units (boiler boards or system management)

#### Supply

#### Dimensions

• 170 x 170 x 500 mm.

<sup>\*</sup> Available only for markets in: Russia, Belarus, Ukraine, Georgia and Kazakhstan

## **AVAILABLE ACCESSORIES**

| OPTIONAL ACCESSORY  | CODE        |
|---|-------------|
| External probe  | 17120012    |
| PT1000 temperature probe (immersion type for water heaters, mixed area, solar panels, etc.) | 16111247    |
| NTC temperature probe (immersion type for water heaters, mixed area, solar panels, etc.)    | 18022218    |
| PT1000 flue gas temperature probe   | CB1093      |
| PT1000 temperature probe for ventilation channel  | CB1091      |
| NTC temperature probe for ventilation channel   | CB1092      |
| Modem Eterm 3G  | MODETERM02  |
| Eterm ModBus interface with GSM/GPRS modem  | QMBET01     |
| Eterm ModBus interface with LAN Ethernet RJ45   | QMBET02     |
| Eterm master with GSM/GPRS modem  | QMASTERET01 |
| Eterm master with LAN Ethernet RJ45   | QMASTERET02 |
| 24 Vdc power supply for Eterm Master  | ALQMASTER   |
| Antenna with magnetic base for 3G Modem   | ANTETERMO2  |

## eterm® BOILER MANAGEMENT ELECTRONIC CONTROL PANEL with Control Panel etermWEBready





Quadro di controllo caldaia con scheda elettronica eterm® con sistema etermWEBready. Il sistema consente la visualizzazione dell'impianto su pagina web grazie al modem e alla SIM già installati.

The panel is able to manage a stage or modulating burner and can control, within the limits of the available outputs, pumps and plant room valves.

It is complete with regulation and safety thermostats that also allow "manual" operation through the activation of proper electro-mechanical switches.

Il controllore eterm®, grazie al software aggiornabile, ha una lunga serie di funzioni che ICI Caldaie si riserva di implementare per il continuo miglioramento del prodotto.

disponibile solo per il mercato Italia



<sup>\*</sup> Disponibile solo per l'Italia

#### STANDARD EQUIPMENT

#### Standard equipment:

- Microprocessor board
- Boiler probe
- Modem 3G
- 2 Regulation thermostats
- Safety thermostat
- Thermometer
- Microprocessor board
- Boiler probe
- Modem 3G
- Antenna 3G con base magnetica

#### Main functions:

- Telecontrollo etermWFBready
- Possibility of cascade operation with other panels of the same series:
- Possibility of managing QETERM02 expansions for control of other pumps or valves;
- Possibility of ModBus connection with optional interface:
- Delivery temperature climate control (with optional external probe):
- Management of 2 configurable outputs for pumps and valves
- Mixing valve management

#### Telecontrollo etermWEBready

- All'interno del quadro è presente un modem con scheda SIM che consente di usufruire gratuitamente per un anno del servizio di telegestione
- I quadri QETERM01CEM hanno un codice identificativo univoco, comunicando questo codice il cliente potrà richiedere:
- La configurazione da remoto del regolatore e degli eventuali slave
- La realizzazione di una pagina web dedicata per il telecontrollo dell'impianto;
- La pagina web sarà un sinottico che verrà realizzato schematizzando il layout di centrale fornito dal cliente.
- Grazie al servizio è possibile:
- · visualizzare il funzionamento dell'impianto real time
- eseguire comandi da remoto per cambio parametri di funzionamento, modifica programmi orari, ecc.
- · ricevere allarmi via email
- estrarre grafici o tabelle dei dati di funzionamento registrati nel tempo
- Il servizio potrà essere rinnovato o disdetto al termine dell'anno gratuito.

- Il servizio non include verifiche sulla congruità dei dati letti e/o registrati.
- ICI Caldaie declina ogni responsabilità sull'utilizzo della telegestione e dei programmi forniti da parte degli utilizzatori.
- La responsabilità dell'utilizzo della telegestione e del sinottico è del cliente. ICI Caldaie non potrà essere ritenuta responsabile dei problemi di funzionamento della centrale, di eccessivi consumi energetici, dell'usura o del guasto di apparecchiature elettromeccaniche connesse al sistema in caso di un errato utilizzo del servizio.

#### Notes

- Il presente servizio ha durata di un anno e sarà rinnovabile.
- · L'accesso ai dati memorizzati sarà garantito per un periodo significativo successivo alla scadenza del servizio (fino ad un massimo di tre mesi).
- Per garantire continuità di acquisizione il servizio deve essere rinnovato almeno un mese prima della scadenza.
- Il sinottico verrà realizzato dai tecnici ICI sulla base dello schema di centrale e pubblicato in prova per 30 giorni.
- Al termine dei 30 giorni si riterrà accettata dal cliente la forma grafica e la funzionalità.
- Se nel frattempo verranno richieste modifiche e/o integrazioni, ICI Caldaie valuterà, a suo insindacabile giudizio, se dare seguito alla richiesta o rinunciare all'incarico.
- Per richieste particolari potrebbe essere proposta un'offerta in deroga alle tariffe standard.
- Dopo l'accettazione, trascorsi 30 giorni dalla pubblicazione, successive modifiche richieste saranno oggetto di offerta da parte di ICI Caldaie.
- ICI Caldaie garantisce il servizio per l'anno in cui si acquista. Non esiste obbligo di rinnovo.
- Eventuali hardware aggiuntivi necessari alla telelettura e telecontrollo saranno oggetto di regolare offerta da parte di ICI e non sono da considerarsi inclusi nel servizio sopra descritto.
- Con l'accettazione del presente servizio il cliente autorizza ICI Caldaie al trattamento dei dati acquisiti secondo le modalità prescritte dalla legge.

#### Supply

#### Dimensions

170 x 170 x 500 mm.

## **AVAILABLE ACCESSORIES**

| OPTIONAL ACCESSORY  | CODE      |
|---|-----------|
| External probe  | 17120012  |
| PT1000 temperature probe (immersion type for water heaters, mixed area, solar panels, etc.) | 16111247  |
| NTC temperature probe (immersion type for water heaters, mixed area, solar panels, etc.)    | 18022218  |
| PT1000 flue gas temperature probe   | CB1093    |
| PT1000 temperature probe for ventilation channel  | CB1091    |
| NTC temperature probe for ventilation channel   | CB1092    |
| 24 Vdc power supply for Eterm Master  | ALQMASTER |
| Eterm ModBus interface with GSM/GPRS modem  | QMBET01   |
| Eterm ModBus interface with LAN Ethernet R145   | OMBETO2   |

## **Eterm SYSTEM CONTROL PANEL**





The QETERMO2 system control panel can communicate with boiler and Eterm Master panels.

QETERM02 can be programmed with suitable software and remotely controlled using an Eterm boiler or an Eterm Master panel as communication interface.

It is possible to connect up to 16 QETERM02 panels in a bus to increase the input and output availability.

Control panel for the management of equipment in the heating plant room; it can be used to control:

pumps

modulating pumps with analogue signals

shut-off valves

regulation valves

mixing valves

solar plants

etc.

It allows the monitoring of the following for logic management or alarm communication: operating status

temperatures

analogue signals

OETERM02

#### Main logic functions:

- Output enabling based on:
- the season
- one of the three timers
- a digital input
- a temperature threshold
- · a temperature differential
- an analogue signal threshold
- the request of Nereix utility modules connected to the same bus
- Mixing valve management:
- 0/10 Volt control
- 4/20 mA control
- · three-point control
- Analogue outputs (0/10 Volt and 40/20 mA) proportional to:
- temperatures
- temperature differentials
- the request of Nereix utility modules connected to the same bus

#### Programmable outputs

- 2 dry contact outputs (230 Vac 1 A)
- Dry contact output / phase cut (230 Vac 1 A)
- 2 switching outputs that can be used also for three-point control mixing valves (230 Vac 1 A)

#### Analogue outputs

- 0-10 Volt
- 4-20 mA

#### Inputs for temperature or digital probes

- 3 PT 1000 / digital programmable inputs
- NTC / digital programmable input

#### Analogue inputs 0/-10 Volt and 4/-20 mA - Communication

- RS485 to connect the board to any Master unit (boiler or Eterm Master board)

#### Supply

#### Dimensions

• 200 x 250 x 100 mm.

## **AVAILABLE ACCESSORIES**

| OPTIONAL ACCESSORY  | CODE     |
|---|----------|
| External probe  | 17120012 |
| PT1000 temperature probe (immersion type for water heaters, mixed area, solar panels, etc.) | 16111247 |
| NTC temperature probe (immersion type for water heaters, mixed area, solar panels, etc.)    | 18022218 |
| PT1000 flue gas temperature probe   | CB1093   |
| PT1000 temperature probe for ventilation channel  | CB1091   |
| NTC temperature probe for ventilation channel   | CB1092   |

# eterm® BOILER MANAGEMENT ELECTRONIC with Control Panel etermWEBready





Quadro di supervisione con scheda elettronica eterm® con sistema etermWEBready. Il sistema consente la visualizzazione dell'impianto su pagina web grazie al modem e alla SIM già installati.

Il quadro è in grado di controllare caldaie che accettano segnali digitali di start e segnali analogici per impostazione di temperatura o di potenza.

Può controllare, nel limite delle uscite disponibili, pompe e valvole di centrale.

Il controllore eterm®, grazie al software aggiornabile, ha una lunga serie di funzioni che ICI Caldaie si riserva di implementare per il continuo miglioramento del prodotto.

#### Attention:

disponibile solo per il mercato Italia

Accessory codes

QETERM03

#### Standard equipment:

- Microprocessor board
- Boiler probe
- Modem 3G
- Antenna 3G con base magnetica

#### Funzioni principali:

- Telecontrollo etermWEBready
- · Possibility of cascade operation with other panels of the same series;
- Possibility of managing QETERM02 expansions for control of other pumps or valves;
- · Possibility of ModBus connection with optional interface;
- Delivery temperature climate control (with optional external probe);
- Management of 2 configurable outputs for pumps and valves
- Mixing valve management

#### Telecontrollo etermWEBready

- All'interno del quadro è presente un modem con scheda SIM che consente di usufruire gratuitamente per un anno del servizio di telegestione.
- I quadri QETERMO3 hanno un codice identificativo univoco, comunicando questo codice il cliente potrà richiedere:
- La configurazione da remoto del regolatore e degli eventuali slave
- La realizzazione di una pagina web dedicata per il telecontrollo dell'impianto;
- La pagina web sarà un sinottico che verrà realizzato schematizzando il layout di centrale fornito dal cliente.
- Grazie al servizio è possibile:
- visualizzare il funzionamento dell'impianto real time
- eseguire comandi da remoto per cambio parametri di funzionamento, modifica programmi orari, ecc.
- ricevere allarmi via email
- estrarre grafici o tabelle dei dati di funzionamento registrati nel tempo
- Il servizio potrà essere rinnovato o disdetto al termine dell'anno gratuito.

#### Not included

- Il servizio non include verifiche sulla congruità dei dati letti e/o registrati.
- ICI Caldaie declina ogni responsabilità sull'utilizzo della telegestione e dei programmi forniti da parte degli utilizzatori.
- La responsabilità dell'utilizzo della telegestione e del sinottico è del cliente. ICI Caldaie non potrà essere ritenuta responsabile dei
  problemi di funzionamento della centrale, di eccessivi consumi energetici, dell'usura o del guasto di apparecchiature elettromeccaniche
  connesse al sistema in caso di un errato utilizzo del servizio.

#### Notes

- Il presente servizio ha durata di un anno e sarà rinnovabile
- L'accesso ai dati memorizzati sarà garantito per un periodo significativo successivo alla scadenza del servizio (fino ad un massimo di tre
  mesi)
- Per garantire continuità di acquisizione il servizio deve essere rinnovato almeno un mese prima della scadenza.
- Il sinottico verrà realizzato dai tecnici ICI sulla base dello schema di centrale e pubblicato in prova per 30 giorni.
- Al termine dei 30 giorni si riterrà accettata dal cliente la forma grafica e la funzionalità.
- Se nel frattempo verranno richieste modifiche e/o integrazioni, ICI Caldaie valuterà, a suo insindacabile giudizio, se dare seguito alla richiesta o rinunciare all'incarico.
- Per richieste particolari potrebbe essere proposta un'offerta in deroga alle tariffe standard.
- Dopo l'accettazione, trascorsi 30 giorni dalla pubblicazione, successive modifiche richieste saranno oggetto di offerta da parte di ICI Caldaie.
- ICI Caldaie garantisce il servizio per l'anno in cui si acquista. Non esiste obbligo di rinnovo.
- Eventuali hardware aggiuntivi necessari alla telelettura e telecontrollo saranno oggetto di regolare offerta da parte di ICI e non sono da considerarsi inclusi nel servizio sopra descritto.
- Con l'accettazione del presente servizio il cliente autorizza ICI Caldaie al trattamento dei dati acquisiti secondo le modalità prescritte dalla legge.

#### Supply

230 vac.

#### Dimensions

• 200 x 250 x 100 mm.

<sup>\*</sup> Disponibile solo per l'Italia

## **AVAILABLE ACCESSORIES**

| OPTIONAL ACCESSORY  | CODE     |
|---|----------|
| External probe  | 17120012 |
| PT1000 temperature probe (immersion type for water heaters, mixed area, solar panels, etc.) | 16111247 |
| NTC temperature probe (immersion type for water heaters, mixed area, solar panels, etc.)    | 18022218 |
| PT1000 flue gas temperature probe   | CB1093   |
| PT1000 temperature probe for ventilation channel  | CB1091   |
| NTC temperature probe for ventilation channel   | CB1092   |

### **MASTER Eterm**





Communication interface for eterm equipment and Nereix modules:

By means of a Bus system (proprietary protocol) it is possible to connect:

Nereix Climate and Nereix Metering heat interface units

Meter Bus Centralisers

Boiler management control panels

System management control panels

With eterm Bus it is possible to manage from PC all devices either in local or remote mode:

RS232

USB

Modem GSM/GPRS (code QMASTERET01)

LAN Ethernet RJ45 (code QMASTERET02)

The data can be managed with:

etermPCmanager, program to be installed on PC that can be connected

Via USB or RS232

Via Modem (optional for PC)

Via internet

etermEASYmanager, WEB program available on www.eterm.it to view the system synoptic diagram

Accessory codes QMASTERET02

ALQMASTER

ALQMASTER

#### The Eterm Master unit is also provided with:

- 4 inputs for meters provided with pulse output installed in the heating plant room: Gas, Hot water, Cold water, Electric energy
- NTC input for external probe, such information will be available to all system slave units
- digital output (closed contact if at least one heat interface unit module is in request mode)

#### Master ModBus function

 With suitable configuration, the Eterm Master can manage as Master unit the ModBus slave devices, in order to transmit on etermEASYmanager web application the data acquired by these ModBus devices. ModBus two-wire RTU RS485 connection.

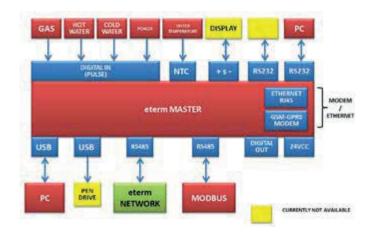
#### Slave ModBus function

With suitable configuration, the Eterm Master can become the slave unit of a ModBus data
acquisition device. In this way, all eterm equipment connected to the master can be managed via
ModBus (both in reading and writing based on the type of parameter). ModBus two-wire RTU
RS485 connection.

#### Supply

• 24 Vdc (ALQMASTER supply unit code)

#### Connections:



### **Eterm MODBUS INTERFACE**





| Accessory codes | QMBET04   |  |
|-----------------|-----------|--|
|                 | QMBET02   |  |
|                 | ALQMASTER |  |

Communication interface for eterm devices. Complete with 3G modem and SIM activated for one year (subject to availability limitations depending on the country of destination). Remote configuration will be possible in countries where the SIM is active and where there is signal coverage. Otherwise, the configuration must be carried out by a qualified technician (not included).

By means of a Bus system (proprietary protocol) it is possible to connect:

Meter Bus Centralisers

Boiler management control panels

System management control panels

With eterm Bus it is possible to manage from PC all devices either in local or remote mode:

RS232

USB

Modem GSM/GPRS (code QMASTERET01)

LAN Ethernet RJ45 (code QMASTERET02)

The data can be managed with:

etermPCmanager, program to be installed on PC that can be connected

Via USB or RS232

Via Modem (optional for PC)

Via internet

etermEASYmanager, WEB program available on www.eterm.it to view the system synoptic diagram

#### The Eterm Master unit is also provided with:

- 4 inputs for meters provided with pulse output installed in the heating plant room:
- Gas
- Hot water
- Cold water
- Electric energy
- NTC input for external probe, such information will be available to all system slave units
- digital output (not used)

#### Master ModBus function

With suitable configuration, the Eterm Master can manage as Master unit the ModBus slave devices, in order to transmit on etermEASYmanager web application the data acquired by these devices. ModBus two-wire RTU RS485 connection.

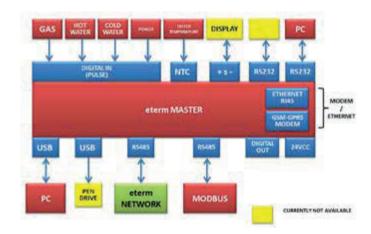
#### Slave ModBus function

With suitable configuration, the Eterm Master can become the slave unit of a ModBus data acquisition device. In this way, all eterm equipment connected to the master can be managed via ModBus (both in reading and writing based on the type of parameter). ModBus two-wire RTU RS485 connection.

#### Supply

• 24 Vdc (ALQMASTER supply unit code)

#### **Connections:**



## THERMOSTATIC CONTROL PANELS

## For REX, REX F and GREENOx.e boilers

#### Panel complete with:

- illuminated main switch
- 2 boiler regulation thermostats
- manual reset safety thermostat
- system circulation pump enabling thermostat
- burner switch
- system circulation pump switch
- boiler thermometer



| Code        | Boiler reg. thermostat | Safety thermostat |
|-------------|------------------------|-------------------|
| QACC10ELMCE | 60° - 100° C           | 110° C            |
| QEST03110*  | 55° - 110° C           | 115° C            |

<sup>\*</sup> Available only for markets in: Russia, Belarus, Ukraine, Georgia and Kazakhstan

#### For REX DUAL and REX DUAL F boilers

#### Panel complete with:





- 2 manual reset safety thermostats (1 in the QEST03110 model)
- system circulation pump enabling thermostat
- burner switch
- system circulation pump switch
- boiler thermometer
- 2 hour counters (only for QACC01ELMDCE model)



| Code         | Boiler reg. thermostat | Safety thermostat |
|--------------|------------------------|-------------------|
| QACC01ELMDCE | 42° - 87° C            | 110° C            |
| QEST03110*   | 55° - 110° C           | 115° C            |

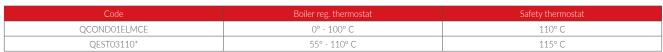
<sup>\*</sup> Available only for markets in: Russia, Belarus, Ukraine, Georgia and Kazakhstan

## THERMOSTATIC CONTROL PANELS

## For MONOLITE GT, CODEX and CODEX GT boilers

#### Panel complete with:

- illuminated main switch
- 2 boiler regulation thermostats
- manual reset safety thermostat
- system circulation pump enabling thermostat
- burner switch
- system circulation pump switch
- boiler thermometer



<sup>\*</sup> Available only for markets in: Russia, Belarus, Ukraine, Georgia and Kazakhstan

#### For GREENOx BT COND boilers

#### Panel complete with:

- voltage presence light indicator
- voltage presence light indicator
- manual reset safety thermostat
- burner switch
- system circulation pump switch
- boiler thermometer
- system circulation pump enabling thermostat



| Code          | Boiler reg. thermostat | Safety thermostat |
|---------------|------------------------|-------------------|
| QACCBT01ELMCE | 0° - 100° C            | 110° C            |
| QEST03110*    | 55° - 110° C           | 115° C            |

<sup>\*</sup> Available only for markets in: Russia, Belarus, Ukraine, Georgia and Kazakhstan

## ETERM BOILER MANAGEMENT CONTROL PANEL



#### **Standard equipment:**

- main switch
- manual or automatic burner operation switch
- INAIL regulation twin thermostat
- INAIL safety thermostat
- INAIL thermometer
- microprocessor board
- boiler probe

| Туре                            | Code         | Boiler reg. thermostat | Safety thermostat |
|---------------------------------|--------------|------------------------|-------------------|
| Boiler management control panel | QETERM01CE   | 0° -100° C             | 110° C            |
| Boiler management control panel | QETERM01RU2* | 55° - 110° C           | 115° C            |

| Optional accessories   | Code     |
|--|----------|
| External probe   | 17120012 |
| Immersion temperature probe (boiler, water heater, mixed zone) | 16111247 |
| GSM modem  | CB955    |
| Flat cable for GSM modem                                       | CB926    |
| GSM antenna with 10 m cable                                    | CB913    |

# ETERM SYSTEM CONTROL BOARD PLC



## Main functions:

## Output enabling based on:

- the season
- with time schedule
- - with digital input
- with temperature thresholds
- temperature differentials
- analogue signal thresholds
- with requests of Nereix line utility modules of ICI Caldaie connected to the same bus

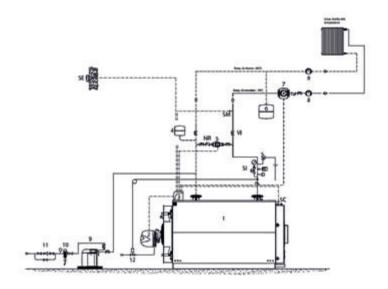
| Туре                 | Code     |
|----------------------|----------|
| System control board | QETERM02 |

| Optional accessories     | Code     |
|--------------------------|----------|
| External probe           | 17120012 |
| PT1000 temperature probe | 16111247 |



# **SYSTEM LAYOUTS**

# System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 1 boiler



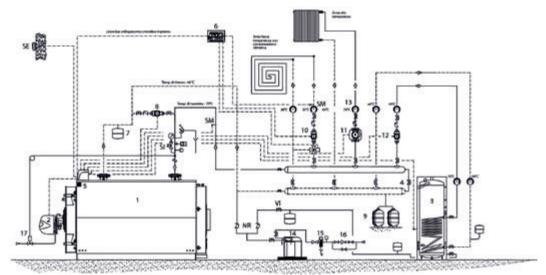
## Description

- 1. Boiler
- 2. Burner
- 3. Eterm control panel
- 4. Boiler expansion vessel
- 5. Anti-condensate pump
- 6. System expansion vessel

- 7. System pump
- 8. Thermometer
- 9. Water treatment
- 10. Filter
- 11. Water feed system
- 12. Fuel shut-off valve

- SE External probe
- **SM** Water delivery probe
- **SC** Boiler probe
- NR Non-return valve
- VI Shut-off valve
- SI I.S.P.E.S.L safety

# System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 1 mixed zone, 1 boiler, 1 water heater



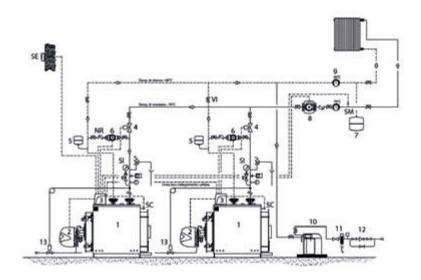
## Description

- 1. Boiler
- 2. Burner
- Water heater
- 4. By-pass valve
- 5. Eterm control panel
- 6. System management board
- 7. Boiler expansion vessel
- 8. Anti-condensate pump

- 9. System expansion vessel
- 10. Low temperature system pump
- 11. High temperature system pump
- 12. Water heater pump
- 13. Thermometer
- 14. Water treatment
- 15. Filter
- 16. Water feed system

- 17. Fuel shut-off valve
- SE External probe
- **SM** Water delivery probe
- NR Non-return valve
- VI Shut-off valve
- SI I.S.P.E.S.L safety

# System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 2 cascade boilers



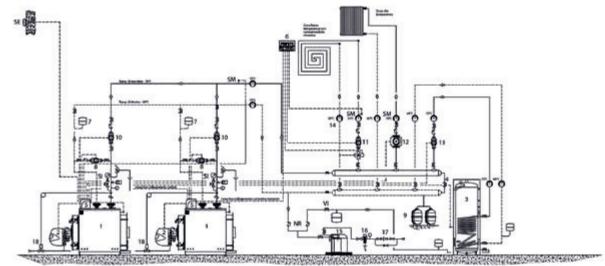
## Description

- 1. Boiler
- 2. Burner
- 3. Eterm control panel
- 4. Shut-off valve
- 5. Boiler expansion vessel
- 6. Anti-condensate pump
- System expansion vessel

- 8. System pump
- 9. Thermometer
- 10. Water treatment
- 11. Filter
- 12. Water feed system
- 13. Fuel shut-off valve

- E External probe
- **SM** Water delivery probe
- **SC** Boiler probe
- NR Non-return valve
- VI Shut-off valve
- SI I.S.P.E.S.L safety

System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 1 mixed zone, 2 cascade boilers, 1 water heater



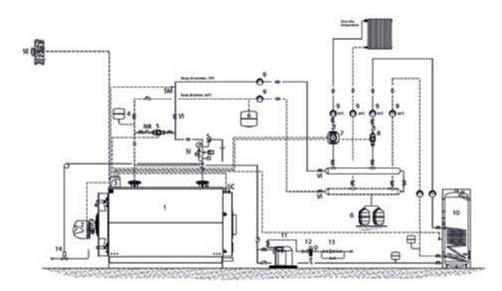
## Description

- 1. Boiler
- 2. Burner
- Water heater
- 4. By-pass valve
- 5. Eterm control panel
- 6. System management board
- 7. Boiler expansion vessel
- 8. Anti-condensate pump

- 9. System expansion vessel
- 10. Boiler circuit pump
- 11. Low temperature system pump
- 12. High temperature system pump
- 13. Water heater pump
- 14. Thermometer
- 15. Water treatment
- 16. Filter

- 17. Water feed system
- 18. Fuel shut-off valve
- SE External probe
- SM Water delivery probe
- NR Non-return valve
- VI Shut-off valve
- SI I.S.P.E.S.L safety

## System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 1 boiler, 1 water heater

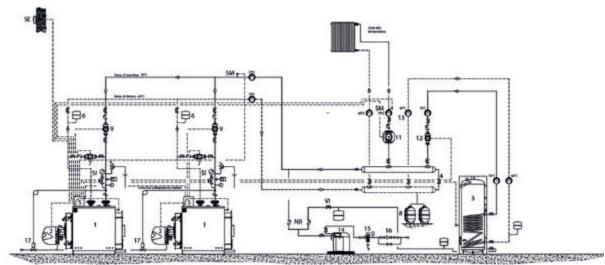


### Description

- Boiler
- Control panel
- Boiler expansion vessel
- Anti-condensate pump
- System expansion vessel High temperature system pump
- 8. Water heater pump
- Thermometer
- 10. Water heater
- Water treatment 11.
- Filter
- 13. Water feed system
- Fuel shut-off valve

- SE External probe
- SM Water delivery probe
- SC Boiler probe
- NR Non-return valve
- VI Shut-off valve
- I.S.P.E.S.L safety

## System layout for REX, REX F and GREENOX.e boilers: 1 direct zone, 2 cascade boilers, 1 water heater



## Description

- Boiler 1.
- Burner
- Water heater
- By-pass valve
- Control panel
- Boiler expansion vessel
- Anti-condensate pump

- System expansion vessel
- Boiler circuit pump
- 11. High temperature system pump
- Water heater pump
- Thermometer
- Water treatment
- 15. Filter

- Water feed system 17.
- Fuel shut-off valve
- SE External probe
- Water delivery probe
- NR Non-return valve
- Shut-off valve VI I.S.P.E.S.L safety

Cooke Industries - Phone: +64 9 579 2185 Email: sales@cookeindustries.co.nz Web: www.cookeindustries.co.nz



# **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 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.

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## 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.



**RESIDENTIAL AREA** 

## 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.





## 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.





## 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.



**RESIDENTIAL AREA** 

## **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™

 $Eterm^{\mathbb{T}}PC$  manager is a Windows software for PC that allows the configuration and remote control of all  $Eterm^{\mathbb{T}}$  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<sup>™</sup> Master equipment;
- GSM modem for eterm<sup>™</sup> 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:

## $\textbf{Eterm}^{\text{\tiny{TM}}} \textbf{PCmanager base version:}$

• 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.

#### 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.

#### 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,

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.

#### 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.

#### 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.

#### 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.

#### 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

#### 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

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.

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