



GSX STEAM BOILER



Comprehensive security system, designed and built to ensure the overall operation safety of steam generators, in line with the new CE directive concerning the conduction without supervisor for 72 continuous hours. Supplied system, (EC certificate by Notified Body as a whole in accordance with the European Directive 97/23/EC), consists of an equipment series electrically and hydraulically assembled and tested at our establishment, and more specifically:

- auto controlled security level;
- pressure security unit;
- salinity control unit (tds);
- automatic sludge removal unit;
- high level safety probe;
- boiler control panel.

High quality standards

The unit is made with materials and procedures in compliance with the regulations in force, together with the procedures laid down in the Corporate Quality System in relation to checks on acceptance of materials, during production and final tests; in particular, the following are carried out:

- sheet metal ultrasound check;
- statistical radiographic check on welds;
- hydraulic test under pressure;
- safety valve calibration check;
- steam generator functionality check.



LOW POWER, HIGH PERFORMANCE

The GSX is a three pass, wetback steam boiler. It is a compact single block unit, featuring excellent efficiency and advanced technical solutions, designed and built to ensure maximum reliability and durability, considering the industrial use for which it is mainly intended. The construction features high water volume and high energy content,

a characteristic that allows you to make variable steam withdrawals with uneven loads. The vapour quality is very high thanks to special technical measures adopted to prevent trailing of water droplets at steam collection. The combustion chamber, completely designed and built internally, was created so as to obtain very

low volumetric thermal loads to meet the most stringent European standards in terms of harmful emissions into the atmosphere (NOx). The flue gas channels were designed and sized to ensure a high coefficient of heat exchange, in order to achieve high combustion efficiency.



BENEFITS

- **High performance and low NOx emissions starting from minimum capacity**

Starting from the low power available (350kg/h), the GSX steam generator ensures optimal environmental efficiency.

- **High efficiency and large heat exchange surfaces**

Very high energy efficiency thanks to the large heat exchange surfaces that ensure maximum efficiency values in all operating conditions.

- **Low thermal load**

Low NOx emissions in accordance with the most stringent national and international regulations, through the use of a very low volumetric thermal load of the combustion chamber featuring a specially designed structure for the best combination with burners with low emissions of pollutants.

- **High water content**

Maximum operating flexibility with varying loads thanks to the high water content.

- **Reliability and durability over time**

Maximum reliability and durability guaranteed by the specific design with low surface thermal loads.

- **Constant supply of steam quantity**

The generator meets every need, even at peak demand time, thanks to the generously sized steam chamber.

- **Efficiency at all costs**

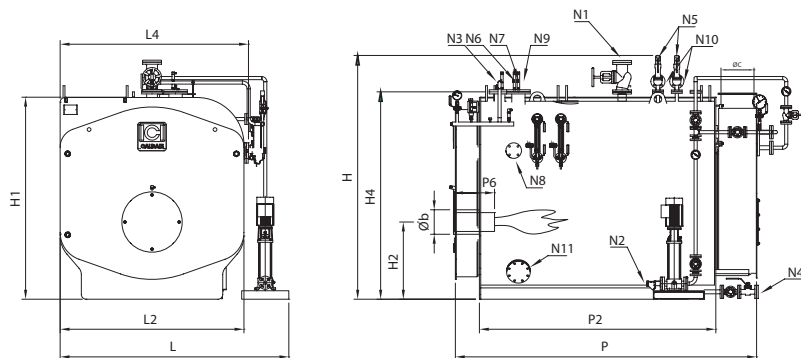
Integrated solutions for performance improvement thanks to flue gas recovery systems specially designed and integrated within the generator structure.

MODELS AND POWER

GSX

Steam production
350 ÷ 5000 kg/h

Design pressure
12 bar - 15 bar



| MODEL | H | H1 | H4 | L | L2 | P | P2 | P6 | Øb | Øc | N1 | N2 | N1/N2 | N3 | N4 | N5 | N6 | N7 | N8 | N9 | N10 | N11 |
|----------|------|------|------|------|------|------|------|---------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | DN/in | DN/in | PN | DN/in | DN/in | DN/in | DN/in | DN/in | DN/in | DN/in | DN/in | DN/in |
| GSX 350 | 2190 | 1720 | 1780 | 1850 | 1520 | 2104 | 1504 | 280-330 | 180 | 250 | 32 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 100 | 40 | 125 |
| GSX 500 | 2190 | 1720 | 1780 | 1850 | 1520 | 2104 | 1504 | 280-330 | 225 | 250 | 32 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 100 | 40 | 125 |
| GSX 650 | 2190 | 1720 | 1780 | 1850 | 1520 | 2604 | 2004 | 320-370 | 225 | 300 | 40 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 100 | 40 | 125 |
| GSX 850 | 2520 | 2050 | 2110 | 2180 | 1850 | 2658 | 2008 | 320-370 | 280 | 300 | 40 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 100 | 40 | 125 |
| GSX 1100 | 2520 | 2050 | 2110 | 2180 | 1850 | 3158 | 2508 | 350-400 | 280 | 350 | 50 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 125 | 40 | 125 |
| GSX 1500 | 2610 | 2140 | 2200 | 2280 | 1950 | 3258 | 2508 | 350-400 | 280 | 350 | 50 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 125 | 40 | 125 |
| GSX 2000 | 2610 | 2140 | 2200 | 2280 | 1950 | 3758 | 3008 | 370-420 | 320 | 400 | 65 | 1"1/4 | 16 | 1" | 32 | 25 | 1/2" | 1/2" | 50 | 125 | 40 | 125 |
| GSX 2500 | 2680 | 2328 | 2388 | 2458 | 2128 | 3808 | 3008 | 420-470 | 360 | 450 | 80 | 1"1/4 | 16 | - | 32 | 25 | 1/2" | 1/2" | 50 | 125 | 40 | 125 |
| GSX 3000 | 2680 | 2328 | 2388 | 2458 | 2128 | 4308 | 3508 | 420-470 | 360 | 450 | 80 | 1"1/4 | 16 | - | 32 | 32 | 1/2" | 1/2" | 50 | 125 | 50 | 150 |
| GSX 3500 | 2680 | 2478 | 2538 | 2648 | 2278 | 4408 | 3508 | 480-530 | 360 | 500 | 80 | 1"1/4 | 16 | - | 32 | 32 | 1/2" | 1/2" | 50 | 150 | 50 | 150 |
| GSX 4000 | 2680 | 2478 | 2538 | 2648 | 2278 | 4908 | 4008 | 480-530 | 400 | 550 | 100 | 1"1/4 | 16 | - | 32 | 32 | 1/2" | 1/2" | 50 | 150 | 50 | 150 |
| GSX 5000 | 2680 | 2650 | 2710 | 2820 | 2450 | 4908 | 4008 | 480-530 | 400 | 600 | 125 | 1"1/4 | 16 | - | 32 | 32 | 1/2" | 1/2" | 50 | 150 | 50 | 150 |

| MODEL | min-max work pressure | | Effective capacity | Flow thermal | 100% Efficiency (ref C.O.P.) | Steam production | Volume level H ₂ O | Total volume H ₂ O | Fuel gas pressure drop | Fuel consumption | | | Total weight |
|----------|-----------------------|------------|--------------------|--------------|------------------------------|------------------|-------------------------------|-------------------------------|------------------------|------------------|-------------|-------|--------------|
| | mod 12 bar | mod 15 bar | | | | | | | | Gas | Diesel fuel | Nafta | |
| | bar | bar | | | | | | | | | | | |
| GSX 350 | 8-11,5 | 12-14 | 238 | 265 | 90 | 350 | 1150 | 1500 | 4,1 | 27,1 | 22,3 | 23,5 | 2550 |
| GSX 500 | 8-11,5 | 12-14 | 341 | 379 | 90 | 500 | 1150 | 1500 | 4,7 | 38,8 | 31,9 | 33,6 | 2550 |
| GSX 650 | 8-11,5 | 12-14 | 443 | 492 | 90 | 650 | 1500 | 1950 | 5,7 | 50,4 | 41,5 | 43,6 | 3315 |
| GSX 850 | 8-11,5 | 12-14 | 579 | 644 | 90 | 850 | 2500 | 3250 | 5,0 | 65,9 | 54,3 | 57,1 | 5525 |
| GSX 1100 | 8-11,5 | 12-14 | 750 | 833 | 90 | 1100 | 3070 | 4000 | 6,0 | 85,3 | 70,2 | 73,8 | 5600 |
| GSX 1500 | 8-11,5 | 12-14 | 1022 | 1136 | 90 | 1500 | 3150 | 4100 | 7,0 | 116,3 | 95,8 | 100,7 | 5740 |
| GSX 2000 | 8-11,5 | 12-14 | 1363 | 1514 | 90 | 2000 | 3710 | 4830 | 9,1 | 155,0 | 127,7 | 134,2 | 6762 |
| GSX 2500 | 8-11,5 | 12-14 | 1703 | 1893 | 90 | 2500 | 4460 | 5800 | 9,0 | 193,8 | 159,6 | 167,8 | 8120 |
| GSX 3000 | 8-11,5 | 12-14 | 2044 | 2271 | 90 | 3000 | 5070 | 6600 | 10,2 | 232,5 | 191,5 | 201,4 | 9240 |
| GSX 3500 | 8-11,5 | 12-14 | 2385 | 2650 | 90 | 3500 | 5730 | 7450 | 9,8 | 271,3 | 223,4 | 234,9 | 9685 |
| GSX 4000 | 8-11,5 | 12-14 | 2726 | 3028 | 90 | 4000 | 6460 | 8400 | 11,2 | 310,1 | 255,3 | 268,5 | 10920 |
| GSX 5000 | 8-11,5 | 12-14 | 3407 | 3786 | 90 | 5000 | 8840 | 11500 | 11,1 | 387,6 | 319,2 | 335,6 | 14950 |



ICI CALDAIE SpA

37059 Fraz. Campagnola di Zevio (Verona) Italy

Via G. Pascoli 38 _ T +39 0458738511 _ F +39 0458731148

info@icaldaie.com _ www.icaldaie.com

