



INSTRUCTIONS BOOKLET

ISTRUZIONI FOR: INSTALLATION, USE, MAINTENANCE



BHP-EN

STEAM GENERATORS

Dear Customer,

Thank you for choosing an IVAR boiler.

In your interest and to maintain the highest level of performance and duration of your appliance, we recommend that you follow the instructions contained in this booklet and have regular maintenance checks performed by qualified personnel.

We would like to remind you that failure to follow the instructions contained in this booklet may invalidate the guarantee.



The boiler identified below is in conformance with Regulation 2014/68/UE (PED), regarding the instruments and pressure.

Identification boiler data:

series:	BHP-EN
model:	2000
Serial n°:	16168/I
Manufacturing year:	2025
Rated output:	1385 kW
Rated input:	1539 kW
Design pressure PS:	12 bar
Test pressure PT:	19 bar
Minimum temperature TS:	0 °C
Maximum temperature TS:	191,6 °C
Steam production:	2000 kg/h
Heating surface:	33 m ²
volume:	2650 l
Fluid content:	WATER + STEAM
Hydraulic test date:	11/07/2025

Type of equipment: Assembly working under surveillance

INDEX

pag. 4 -	GENERAL WARNINGS
pag. 5 -	GENERAL SAFETY RULES
pag. 6 -	APPLIANCE DESCRIPTION
pag.10 -	INSTALLATION SITE
pag.11 -	ELECTRICAL SYSTEM
pag.12 -	DISCHARGE OF COMBUSTION PRODUCTS
pag.12 -	FUEL SUPPLY
pag.13 -	BURNER CONNECTION
pag.14 -	OPENING AND ADJUSTMENT OF THE DOOR
pag.15 -	HYDRAULIC CONNECTION
pag.16 -	FEED WATER – FEEDING DEVICES
pag.17 -	FEED WATER – THE CONDENSATE BASIN
pag.19 -	FEED WATER – SPECIFICATIONS
pag.21 -	WATER-CAUSED TROUBLES IN STEAM GENERATORS
pag.23 -	PRELIMINARY OPERATIONS PRIOR TO STARTING UP FOR THE FIRST TIME
pag.24 -	FIRST START UP AND FURTHER CHECKS
pag.25 -	ALKALINE WASHING OR BOILING
pag.26 -	DRAINING AND CHECKING
pag.27 -	TURNING OFF THE GENERATOR
pag.28 -	MAINTENANCE
pag.29 -	RECOMMENDED SPARE PARTS
pag.29 -	TROUBLESHOOTING

GENERAL WARNINGS

This instruction booklet is an integral and essential part of the product.

Should the appliance be sold or transferred to another owner, or if you move and leave the appliance behind, always ensure that this booklet accompanies the appliance so that the new owner and/or installation technician can consult it.

This appliance must be used for the purpose for which it was specifically intended.

All contractual or non-contractual responsibility of the manufacturer is excluded in the event of damages to persons, animals or things caused by errors in installation, adjustment, maintenance and improper use.

The manufacturer's responsibility is excluded for all damage to persons and/or things resulting from a clear risk for the user which he could have avoided by taking suitable safety measures.

After having removed the packaging, check the contents for breakages. If you are in doubt, do not use the appliance and contact your supplier.

Do not leave the packaging materials (wooden cage, nails, staples, plastic bags, polystyrene foam, etc.) within the reach of children, as they are potential sources of risk.

The installation must be performed in compliance with the regulations in force, following the manufacturer's instructions, by professionally qualified personnel.

The term "professionally qualified personnel" means persons with specific technical skills in the sector of steam systems.

To guarantee the efficiency of the appliance and ensure correct operation, it is indispensable to have regular maintenance performed by professionally qualified personnel, following the manufacturer's instructions.

Any repairs to the appliance must be carried out using only original spare parts.

If you decide not to use the appliance for a long period, ensure you have professionally qualified personnel to carry out the necessary operations to preserve the generator (see chapter "Turning Off the Generator ", page 27).

GENERAL SAFETY RULES

The use of any component utilising energy power, fuels and water requires that certain fundamental rules be respected, such as:

Do not allow children or unskilled people to use the appliance;

If you notice smell of gas, do not turn on electric switches, household appliances, telephone or any other objects that could cause sparks. In this case:

- open doors and windows immediately to clear the air in the room;
- turn off the fuel taps;
- contact professional qualified personnel.

Do not touch the appliance with wet or damp parts of the body and/or with bare feet.

Do not perform any maintenance and cleaning operations without having disconnected the electric power and turned off the fuel supply tap(s).

Do not pull, disconnect, unwind electric cables coming from the boiler, even if they are disconnected from the mains supply.

Do not block or reduce the ventilation openings in the room to prevent the formation of toxic and explosive mixtures caused by gas leakage; it is also uneconomic and harmful to the environment because it causes bad combustion.

Do not expose the appliance to atmospheric agents.

The generator has not been designed to work outdoors and is not provided with automatic anti-freezing systems. Keep the boiler turned on in freezing conditions.

Other important warnings to be respected:

- If the power cable of the appliance is damaged, have it replaced by professionally qualified personnel;
- do not fix (and do not allow other persons to fix) electric cables on the system pipes or near sources of heat;
- do not touch the hot parts of the system (in particular the door and the smoke box) as they normally remain hot even for some time after the appliance has been turned off.

In the event of a water leak, turn off the system and contact exclusively professionally qualified personnel.

APPLIANCE DESCRIPTION

The BHP EN steam generators are enbloc pressurised combustion steam generators: the flame produced by the burner develops in the furnace and, since this is closed at the bottom, smokes return towards the front and enter the tube nest through the hollow in the door insulation.

Here smoke is forced by turbulatrts to follow a whirling path which increases the heat transfer due to convection. In this way maximum heat absorption is obtained without harmful thermal stress.

On leaving the tube nest, smokes are collected in the rear box and conveyed to the flue.

Any burner fired by traditional liquid and gaseous fuel can be installed. The burner is installed on a hinged door in order to facilitate adjustment and maintenance operations of both boiler and burner without having to dismantle the latter.

The thermal insulation of the boiler body is obtained by applying a pad of highly insulating mineral wall.

Elegant aluminium panels complete the outside finish.

The operation is completely automatic: the maximum steam pressure is 12 bar (diverse pressures can by proportioned by request).

BHP EN steam generators are constructed and tested in accordance with Regulation 2014/68/UE (PED): in addition to this booklet, the generator is supplied with the Certificate of Conformity and documentation of the accessories installed.

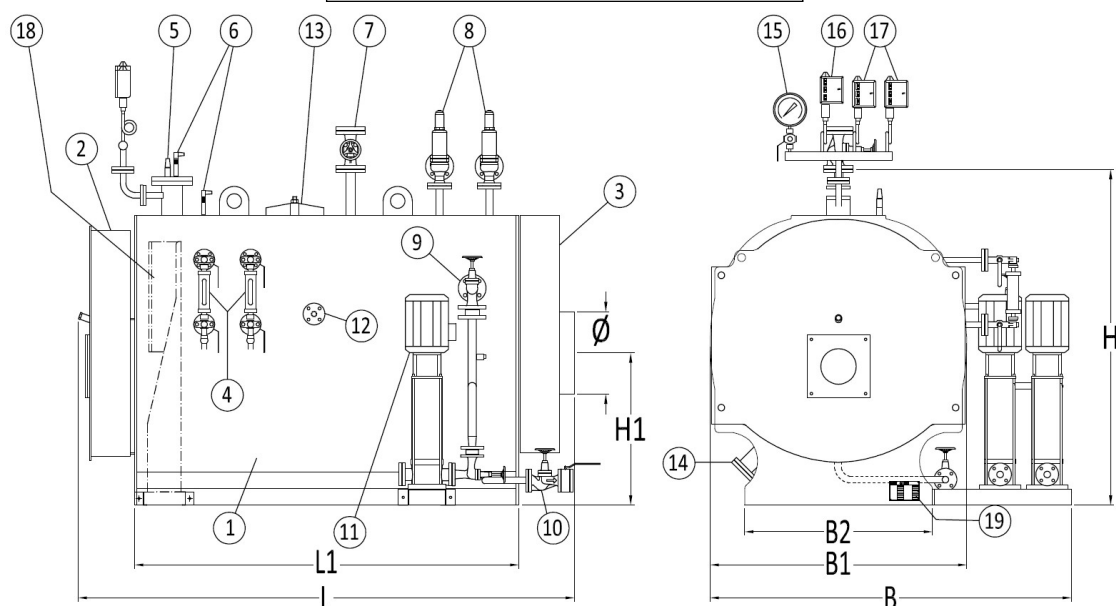
The test plate can be found in the front lower section of the generator, to the right.

For any servicing operations and spare parts it is indispensable to identify correctly the generator through its test plate.

The technical sheets of the BHP EN generators are included in the following pages.

BHP-EN

GENERATORE DI VAPORE (Alta pressione)
STEAM GENERATOR (High pressure)



- 1- Corpo caldaia / Boiler
- 2- Portellone / Front door
- 3- Camera fumo / Smoke chamber
- 4- Indicatore di livello visivo / Level gauge
- 5- Regolatore di livello automatico / Level regulator
- 6- Sonda di sicurezza / Safety probe
- 7- Valvola di presa vapore / Steam outlet
- 8- Valvole di sicurezza / Safety valves
- 9- Gruppo di alimentazione / Feeding unit
- 10- Gruppo di scarico / Discharged unit

- 11- Elettropompa di alimentazione / Feeding pump
- 12- Predisposizione regolazione conducibilità acqua / Predisposition control salinity water
- 13- Passo uomo / Manhole
- 14- Passa mano / Handhole
- 15- Manometro con rubinetto di prova / Manometer and test cock
- 16- Pressostato di sicurezza / Safety pressure switch
- 17- Pressostato di servizio / Service pressure switch
- 18- Quadro elettrico / Electrical panel
- 19- Targa dati / Name plate

MODELLO -TYPE	BHP-EN	140	200	300	400	500	700	800	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Potenza max utile - Max power output	kW	97	138	208	277	346	485	554	692	865	1038	1212	1385	1731	2077	2423	2769	3463
Potenza focolare - Furnace output	kW	108	153	231	308	384	539	616	769	961	1154	1347	1539	1923	2308	2692	3077	3847
Produzione di vapore - Steam production	kg/h (l)	140	200	300	400	500	700	800	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Rendimento - Efficiency	%	89,8	90,2	90,0	89,9	90,1	90,0	89,9	90,0	90,0	89,9	90,0	90,0	90,0	90,0	90,0	90,0	90,0
Pressione in camera di combustione Combustion chamber pressure	mbar	1,5	2,5	3	3,5	4,2	4,5	5	6	6,5	6,8	7	7	8	8,2	9	10	10,2
Contenuto di acqua totale Water content full	dm³	475	475	670	670	1020	1020	1280	1410	1900	2120	2330	2650	3540	3960	4340	6050	8000
Contenuto di acqua a livello Water content at level	dm³	320	320	440	440	685	685	870	960	1280	1440	1580	1860	2550	2680	2830	4150	5800
Dimensioni Dimensions	B mm	1514	1514	1606	1606	1750	1750	1870	1870	2060	2060	2060	2180	2310	2420	2420	2660	2750
	B1 mm	994	994	1086	1086	1230	1230	1350	1350	1540	1540	1540	1660	1790	1900	1900	2140	2230
	B2 mm	704	704	796	796	910	940	1060	1060	1250	1250	1250	1370	1500	1640	1640	1850	1940
	L mm	1782	1782	2032	2032	2336	2336	2339	2539	2541	2791	3041	3042	3348	3350	3550	3841	4900
	L1 mm	1274	1274	1524	1524	1828	1828	1831	2031	2033	2283	2533	2534	2832	2835	3035	3286	4186
	H mm	1334	1334	1426	1426	1570	1570	1690	1690	1880	1880	1880	2000	2150	2270	2270	2496	2575
Attacchi Connections	H1 mm	657	657	638	638	710	710	760	760	810	810	810	865	1265	1320	1320	1460	1510
	Ø mm	200	200	250	250	250	250	250	250	300	300	300	350	350	400	400	450	550
	V DN	25	25	32	32	40	40	50	50	65	65	80	80	80	80	100	100	100
	S DN	25	25	25	25	25	25	25	25	25	25	25	40	40	40	40	40	40
Peso a vuoto - Empty weight	kg	1150	1150	1450	1450	2200	2310	2550	2800	3480	3650	3900	4650	5500	6400	6850	8600	12500

Acqua di alimento 70°C – Pressione 12 bar / Feedwater 70°C – Pressure 12 bar

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