



STEAM &
CLEAN STEAM GENERATORS

GMS

GMS Steam Generators

Introduction

GMS "SG" steam generators produce steam at rates up to 6000 kg/hour. They are ideal when :

- Clean steam is required (see clean steam generator section below).
- Steam is required but is not available
- A supply of steam is required which is separate from a central main steam supply.
- A primary heat source of Steam or High Temperature Hot Water (HTHW) is available.

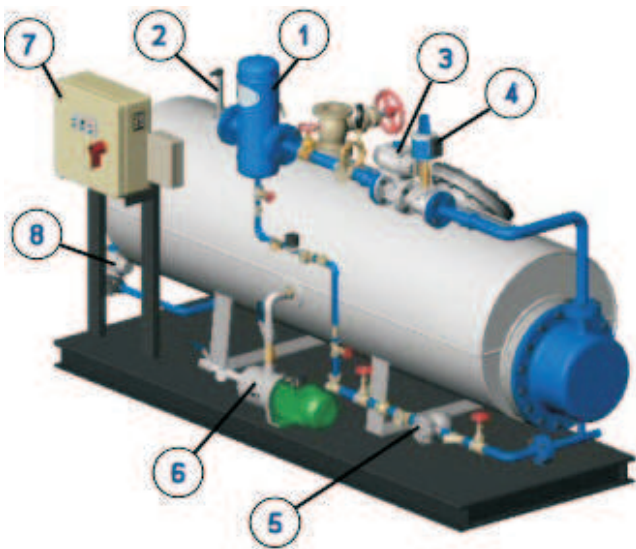
Steam generators consist of a pressure vessel and heater tube battery. The vessel is part filled with water to a controlled level. Primary steam or HTHW is passed through the heater battery to heat the water in the shell to boiling point and to generate steam. The steam generated is then drawn from the shell for use. The generated steam pressure is controlled automatically by regulating the primary steam or HTHW.

The SG steam generator package is supplied complete with all controls required. As the units are completely factory designed and packaged, costly design work for the customer is greatly reduced. The units are pre-wired and completely assembled on a fabricated mild steel skid base.

All GMS 'SG' steam generators are designed and manufactured in accordance with the latest PD5500 standards and the European Pressure Equipment Directive 97/23/EC. The generator includes full third party design appraisal and inspection and is supplied with a full certified data dossier. Full material certification can be produced if requested at time of order.

For inspection purposes the heater battery is removable and the vessel is fitted with an inspection opening.

On-site commissioning by a qualified GMS engineer is recommended and also available as an optional extra.



Level Control & Steam Quality

All GMS steam generators are supplied with an electronic level control system to ensure efficient operation. Conductance probes are used alongside digital controllers for accurate control (Capacitance on clean steam units). With this and a generous steam space and shielded steam off-take, the unit is designed to avoid any water entering the steam system

Safety Control

All GMS steam generators are supplied with a high pressure switch, an independent high limit valve and a pressure relief valve, which gives excellent protection against excess steam pressure.

Steam Pressure Control

All GMS steam generators are supplied with a fast acting control system to ensure accurate control of the steam pressure. Modulating electro-pneumatic or electric control valves are used to react to load changes in the steam system.

Control Panel

All GMS steam generators are fitted with an electrical control panel which includes a pressure controller, feed pump and feed valve circuits, remote enable facility and volt-free contacts for fault alerts.

Condensate Removal (Steam Primary)

Condensate is removed from the generator using float type steam trap set. Condensate is also removed from the primary steam line (where applicable) using a thermodynamic steam trap set.

Blow Down

Timed Blow down - Included as standard
Automatic TDS Control - Available as an optional extra

Clean Steam Generators

Clean steam generators, type 'CSG', generate clean steam from a demineralised water supply. The design of 'CSG' clean steam generators is identical to the normal 'SG' steam generators. However, the shell, tubes and tubeplate, safety valve and other clean steam-side wetted parts are of stainless steel. Demineralised water level control is by capacitance probes.

Steam Generator Thermal Insulation Options

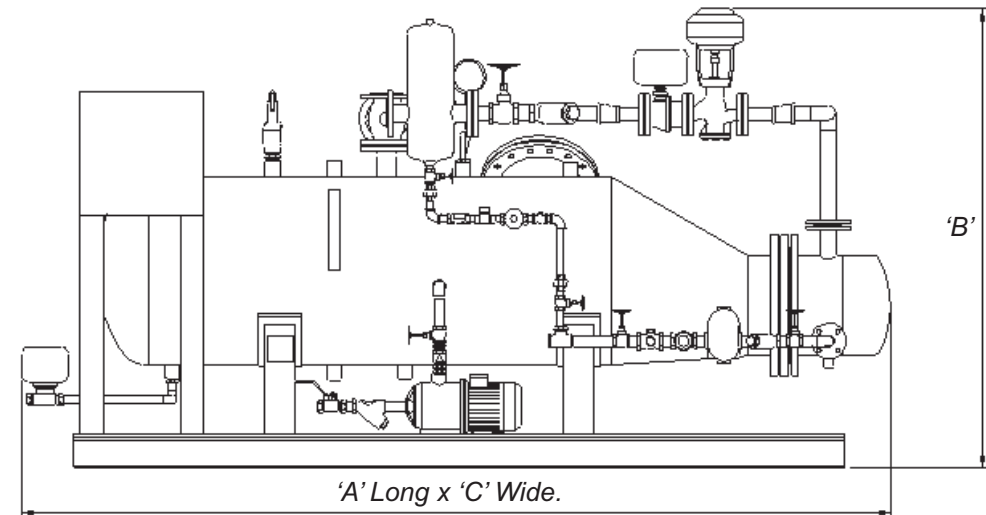
✓ **Type MA** Consists of 50mm mineral wool with stucco aluminium cladding. this gives good thermal insulation and a quality finish.

For some installations there will be a high risk of damage to the factory fitted insulation. In these instances it is preferable to insulate on site.

- ① Steam Conditioning Equipment
- ② Electronic Level Control
- ③ High Limi Shut-Off Valve
- ④ Control Valve
- ⑤ Condensate removal Equipment
- ⑥ Water Feed Pump
- ⑦ Electronic Control Panel
- ⑧ Timed Bottom Blow Down Valve

Steam Generation Made Easy

Model shown is a steam primary generator.
The water primary model may vary in layout.



Approximate Dimensions (mm) Primary Inlet Primary Outlet Water Feed Inlet Steam Outlet Blow Down Connection

Unit	A	B	C	1	2	3	4	5
(C)SG-W1	2075	1450	900	40	40	25	50	15
(C)SG-W2	2565	1475	900	50	50	25	65	20
(C)SG-W3	3850	1550	1000	65	65	32	80	25
(C)SG-W4	3908	1650	1100	100	100	40	100	25
(C)SG-W5	3950	1850	1250	100	100	40	100	25
(C)SG-W6	4650	2000	1500	125	125	40	125	25
(C)SG-S1	1850	1250	850	40	25	25	50	15
(C)SG-S2	2400	1250	850	40	25	25	65	20
(C)SG-S3	3250	1350	950	65	40	32	80	25
(C)SG-S4	3650	1475	1000	80	40	40	100	25
(C)SG-S5	3800	1600	1200	100	50	40	100	25
(C)SG-S6	4250	1900	1400	125	50	40	125	25

Please note all dimensions are given as a guide only and are subject to change to suit package and site requirements. Dimensions shown are for both clean steam (CSG) and standard steam (CG) generators. 'SG-W*' represents a model with primary water, the 'SG-S*' represents a steam primary model.

Materials (Clean Steam 'CSG' Units)

Shell	Stainless Steel
Header	Carbon Steel
Tubeplate	Stainless Steel
Heater Tubes	Stainless Steel
Cradles	Mild Steel

Materials (Standard 'SG' Units)

Shell	Carbon Steel
Header	Carbon Steel
Tubeplate	Carbon Steel
Heater Tubes	Stainless Steel
Cradles	Mild Steel

Please note all dimensions are given as a guide only and are subject to change to suit package and site requirements. For steam generator thermal sizing, please contact our sales office.

Limiting Conditions

Standard Units Design Pressure: 6 BarG

Design Temperature: 165°C

(Other design pressures and temperatures available on request.)

Other materials may be available on request

Please note all information shown within this leaflet is subject to change without prior notice.

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Products by GMS

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