



**ECOTHERM**<sup>®</sup>  
HEAT TRANSFER TECHNOLOGY



- Steam/steam or electric
- Clean steam stainless steel vessel
- Robust for long life and high efficiency
- Skid mounted
- Turn-Key systems

## ECOTHERM Clean Steam Generator

## Model ECSG: ECOTHERM High Efficiency Clean Steam Generator 100 to 2,000 kg/h - 6 to 8 bar design pressure\*

Clean steam generators are used wherever plant steam, generated in fired steam boilers is not suitable. Due to the necessity of chemical dosing and the black material of the fired steam boilers, plant steam is not applicable for hygienic purposes. The ECOTHERM clean steam generator is entirely made of stainless steel to suit hygienic purposes like sterilizer units in hospitals or cleaning the stainless steel pipes of beverage & food industries. It is a compact, skid mounted unit ready for easy installation at site.



Model ECSG-S-...

### Standard equipment

- Clean Steam vessel made of AISI 316 Ti or duplex stainless steel
- Pressure / temperature control by motorvalve PRV or steam generator
- Steam trap set with ball float valve and sight glass
- Plate heat exchanger to preheat make up water
- Centrifugal pump for make up
- Fully automatically control panel
- Blow down vessel, stainless steel
- Sample cooler, stainless steel
- Pressure relief valve

### Optional equipment

- with feed water tank
- with microprocessor

### Description:

The clean steam is generated or by plant steam or by electrical energy. The clean steam generator is loaded with softened and heated water (without lime, PH-neutral, 0–30  $\mu$ S). This water will become clean steam. The level control guarantees an optimised level of water and causes an alarm if the water level falls below the alarm switch.

The pressure of the clean steam is controlled according to the requirement or by temperature or by pressure.

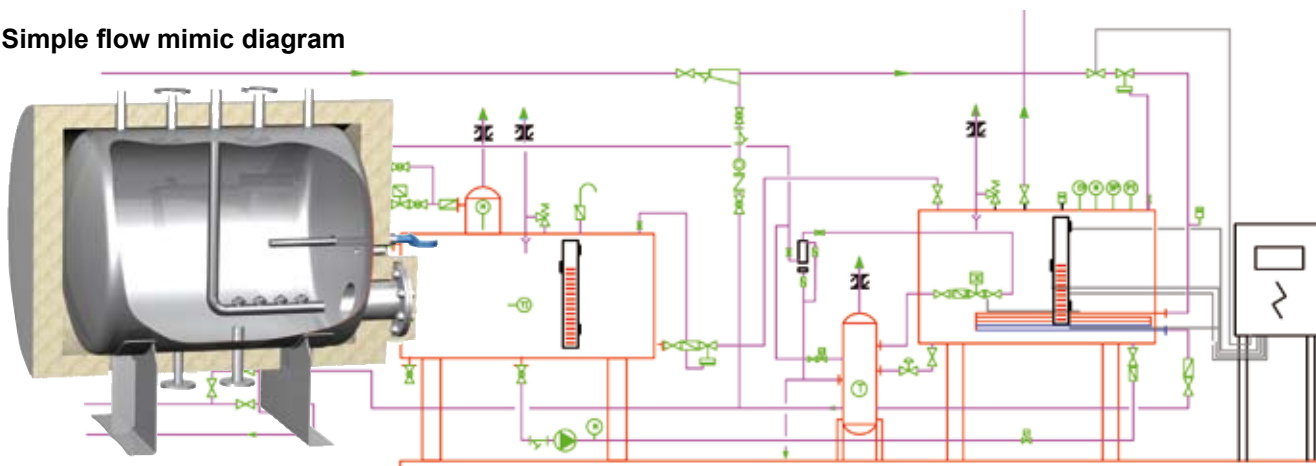
A conductivity measuring unit regulates the level of minerals in the water to protect the vessel.

To avoid any dirt inside the clean steam generator and to guarantee a high quality of water and a long life of the vessel there is a blow down valve installed which has to be pressed periodically or controlled automatically.

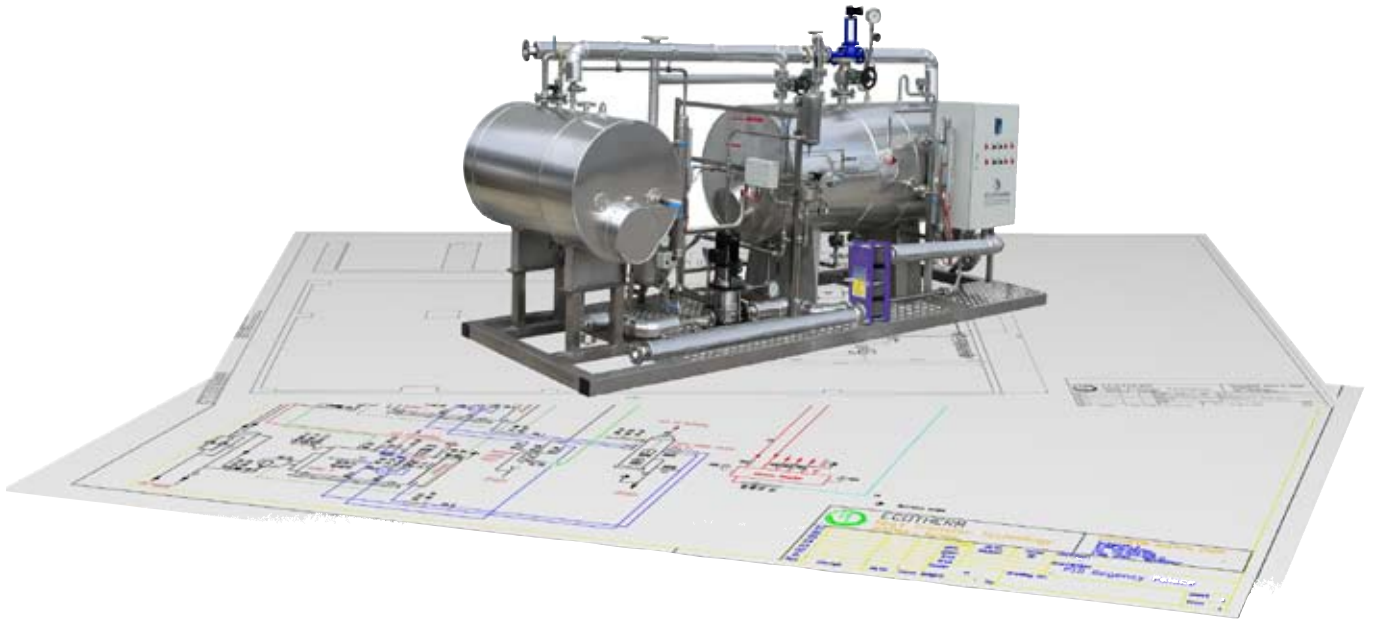
The blow down cooler cools the hot water of the blow down water down to 40°C to drain the water and to avoid burnings.

Last but not least the safety valve protects the vessel against explosion: if the pressure is over 5,5 bar, it opens and blows the steam into free air outside of the building.

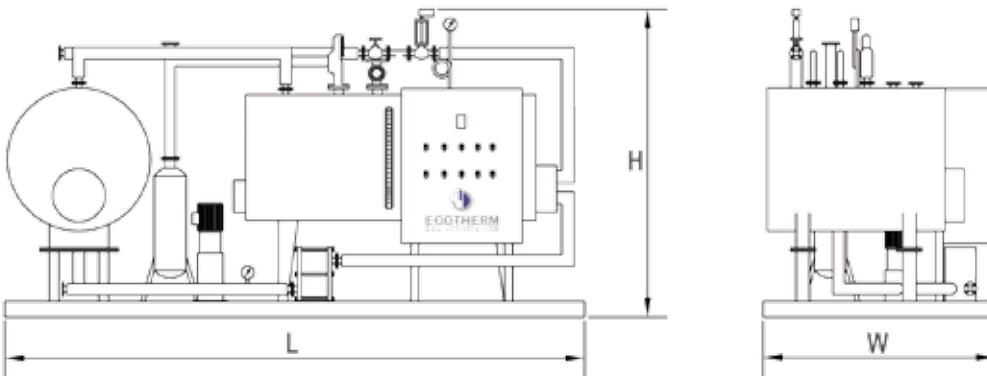
### Simple flow mimic diagram



**Model ECSG-S-...: ECOTHERM Clean Steam Generator**



**Dimensions**



**Capacity 100 - 2000\* kg/h**

Model No.	Capacity* kg/h	Design pressure* bar	Operating pressure* bar	Dimensions without EFWT (L x W x H in mm)	EFWT litres
ECSG-.-100	100	6 - 8	4 - 6	2200 x 1000 x 1900	80
ECSG-.-250	250	6 - 8	4 - 6	2500 x 1000 x 2000	200
ECSG-.-500	500	6 - 8	4 - 6	2800 x 1200 x 2100	400
ECSG-.-620	620	6 - 8	4 - 6	3000 x 1300 x 2300	500
ECSG-.-750	750	6 - 8	4 - 6	3000 x 1300 x 2300	600
ECSG-.-1000	1000	6 - 8	4 - 6	3400 x 1500 x 2600	800
ECSG-.-1500	1500	6 - 8	4 - 6	3600 x 1500 x 2700	1200
ECSG-.-2000	2000	6 - 8	4 - 6	3800 x 1600 x 3000	1600

\* Other/higher capacities and operating pressures are available on request.

ECSG-S/E = ECOTHERM Clean Steam Generator, S.. Steam/Steam or E..Electric

EFWT = ECOTHERM Feed Water Tank

**Al Salam International Hospital - Kuwait**



12x EEHI-TS-060-01900-VAF Electric water heaters with internal (Incoloy 825) heating elements  
1x EEHI-TS-060-01900-HAF Electric water heaters with internal (Incoloy 825) heating elements  
2x EESG-C270/270 kW Electric clean steam generator



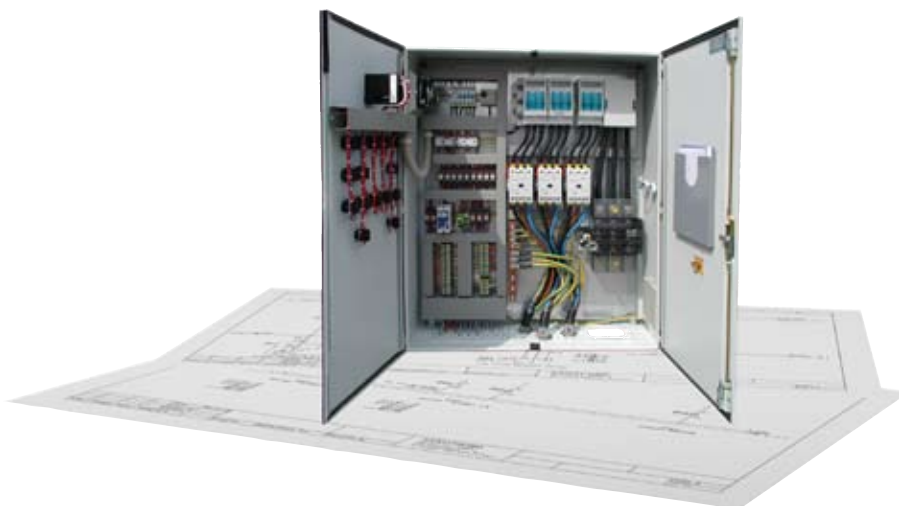
EEHI-TS-060-01900-...



EESG-C270/270 kW Electric clean steam generator



Electric flange heating system



Industrial standard control panel

Distribution & Service:



High Capacity Water Heaters & Boilers

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