

Genpro ELE

Electric Pure & Clean Steam Generators



Purpose-Built for Demanding Sterile Production

The Genpro ELE is configured to support your specific production requirements, whether you need to feed a single sterilizer, serve as a centralized steam source, meet WFI-quality output standards, or support clean room humidification. Using stainless steel electric heating elements, the Genpro ELE starts up in minutes, runs only when required, and is an ideal solution for facilities where plant steam is not available. Built to your exact capacity and utility requirements, the Genpro ELE delivers tight clean steam output pressure control and steam quality you can trust, backed by a comprehensive documentation package and expert US-based field service.

- ASME pressure vessel with 316L stainless steel construction.
- Stainless steel heating elements.
- 316L stainless steel piping and valves.
- Non-proprietary components throughout.
- Capacities from 50 lbs/hr up to 1200 lbs/hr.
- Fully drainable design with automatic blowdown system.
- Allen-Bradley or Siemens PLC Controls
- Available in cGMP, laboratory, or food-grade configurations.



Biopharma

Pure and clean steam is a critical utility in pharmaceutical and biotech manufacturing, supporting equipment sterilization, aseptic filling, and sterile production environments.



CDMO

Contract manufacturers operating multiple sterilizers or pieces of process equipment rely on the Genpro ELE as a centralized pure or clean steam source, delivering consistent steam quality across every point of use.



Food

Food and beverage production relies on clean steam for sterilization-in-place, direct steam injection into food products, and sterilizing processing equipment where chemical contamination is not an option.



Beer

breweries use clean steam for keg decontamination, eliminating the chemical residues and contamination risks associated with plant steam or chemical cleaning methods.

Intelligent Controls for Precise Steam Management

Industrial-grade PLC controls continuously monitor steam pressure and temperature to maintain consistent output. Optional feedwater and steam conductivity monitoring provides an additional layer of steam quality oversight for applications requiring documented compliance.

Allen-Bradley or Siemens PLC controls maintain precise steam pressure and temperature throughout operation.

Touchscreen HMI with optional secondary panel provides intuitive real-time monitoring and control with remote operation capability.

Integrated data recording and automatic fault monitoring maintains a traceable log of system data and alerts operators to process anomalies before they affect steam quality or production.





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Models	Peak output lbs/hr	Amperage @ 480V	Feed Water ¹ Supply GPM	Vessel Configuration
ECSG 50	58	24	0.1	Vertical
ECSG 100	116	48	0.3	Vertical
ECSG 200	232	96	0.5	Vertical
ECSG 300	348	143	0.7	Vertical / Horizontal
ECSG 400	464	191	0.8	Vertical / Horizontal
ECSG 500	580	238	1.0	Horizontal
ECSG 600	696	286	1.2	Horizontal
ECSG 700	812	334	1.4	Horizontal
ECSG 800	928	381	1.6	Horizontal
ECSG 900	1044	429	1.7	Horizontal
ECSG 1000	1160	476	1.9	Horizontal
ECSG 1100	1278	524	2.2	Horizontal
ECSG 1200	1392	572	2.4	Horizontal

¹ Average flow requirement, supply capacity should be ~5 times the max usage rate. Minimum resistivity 1MΩ, no detectable chlorine

*Cold water for quench, 8 gpm (controlled) or Chilled Water 10 gpm

**Compressed air (instrument quality) 80-125 psi, 5 scfm avg. 12 scfm for drain function

***120VAC for controls, 6-8 FLA

****Open floor sink required for drain. Relief valve vent piping required.

Optional Equipment

- Steam sample system.
- Stainless steel, sanitary feedwater booster pump.
- Feedwater conductivity monitoring and recording.
- Steam separator for pure steam demands.
- Electropolishing of the vessel and piping.
- Block and bleed valve arrangement to drain feed line when fed with USP or WFI feedwater.
- Automatic drain valve for prolong shut down.
- Steam conductivity monitoring and recording.
- Sanitary feed water piping with sanitary components and connections.
- Pressure vessels available in pressure codes for most regions or countries.
- Voltage change for different regions or countries.

Pure Steam. No Additives. No Compromises.

The Genpro ELE is available with an optional steam separator for applications requiring pure steam output. The steam separator directs generated clean steam through a tortuous path where residual moisture and impurities are stripped and discharged to drain. When condensed and tested, the resulting pure steam meets U.S. Pharmacopeia (USP) standards and Water for Injection (WFI) requirements, making it suitable for the most demanding sterile production and life science applications.

Electric Operation Overview

Stainless steel electric heating elements are used to heat and evaporate RO or DI feedwater into pure or clean steam. As the feedwater reaches operating temperature, it evaporates and travels upward through the vessel where residual moisture is removed, producing clean, dry, saturated steam at the outlet. Concentrated feedwater and dissolved solids remaining in the vessel are automatically purged via the blowdown system, maintaining consistent feedwater quality and steam output throughout operation.

Steam Sterilizer-Autoclave Integration

The Genpro ELE is available as a standalone centralized steam source or integrated directly into a BMT USA steam sterilizer. BMT USA is one of the only manufacturers offering an integrated electric pure or clean steam generator with a vertical vessel configuration, delivering up to 400 lbs/hr output capacity with a significantly reduced facility footprint compared to traditional horizontal configurations.

