Genpro STS

Steam-to-Steam Pure & Clean Steam Generators

Purpose-Built for Demanding Sterile Production

The Genpro STS 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. Built to your exact capacity and utility requirements, the Genpro STS delivers tight clean steam output pressure control and steam quality you can trust, backed by a comprehensive documentation package and our expert US-based field service team.

- ASME pressure vessel with 316L stainless steel construction.
- 316L stainless steel piping and valves.
- Non-proprietary components throughout.
- Single or double-tube-sheet construction.
- Capacities from 50 lbs/hr up to 5000 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 STS 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.

Genpro STS

Steam-to-Steam Pure & Clean Steam Generators

Models	Peak Output[1] lbs/hr @ 60 psi	Feed Water[2] Supply GPM
CSG 50	50	0.1
CSG 100	100	0.3
CSG 200	200	0.5
CSG 300	250	0.7
CSG 400	400	0.8
CSG 500	500	1.0
CSG 600	600	1.2
CSG 700	700	1.4
CSG 800	800	1.6
CSG 1000	1000	2.0
CSG 1500	1500	3.0
CSG 2000	2000	4.0
CSG 2500	2500	5.0
CSG 3000	3000	6.0
CSG 4000	4000	8.0
CSG 5000	5000	10

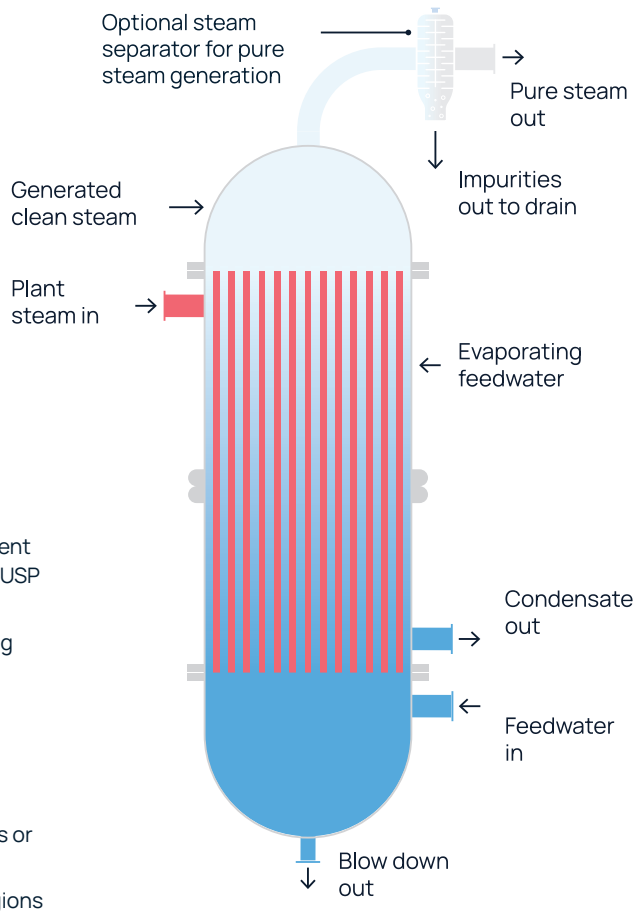
[1] At 100-120 psi plant steam pressure.
[2] Average flow requirement, supply capacity should be ~5 times the max usage rate. Minimum resistivity 1MΩ, no detectable chlorine.
*Cold water for quench, 8 gpm (controlled) or Chilled Water 10 gpm
**Compressed air (instrument quality) 80-125 psi, 5 scfm avg. 12 scfm for drain function
***120VAC for controls, 6-8 FLA
****Open floor sink required for drain. Relief valve vent piping required.

Pure Steam. No Additives. No Compromises.

The Genpro STS 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.

Steam-to-Steam Operation Overview

Plant steam is utilized as a heat source to transform RO or DI feedwater into pure or clean steam. The plant steam enters the shell side of the heat exchanger, to heat the feedwater within the tubes. As the feedwater heats and evaporates, it travels up the tubes where additional heat removes residual moisture, 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.



Optional Equipment

- Steam sample system.
- Single-tube sheet construction
- Double-tube sheet construction
- Stainless steel, sanitary feedwater booster pump.
- Feedwater conductivity monitoring and recording.
- Steam 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.
- 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.