



Environmental Tectonics Corp. (ETC)-----Sterilizer Division

General Specifications		
Item description	Standard	Optional
Chamber Configuration	Pass-through, Double Door, Pit or Floor Mounted	Single Door, Pit or Floor Mounted
Chamber Shell Material	316L Stainless Steel	None
Chamber Steam Jacket material	304 Stainless Steel	304L, 316L Stainless Steel
Pressure Temperature Ratings	40 PSIG (2.76 Bar) @ 300°F (149°C)	45 PSIG (3.1 Bar) @ 300°F (149°C)
Insulation	Low Chloride Mineral Wool Chamber & Door(s)	Insulated & Jacketed Piping
Chamber Insulation Jacket	Embossed Aluminum	304 or 304L Stainless Steel
Door(s) Insulation Jacket	304L Stainless Steel	316L Stainless Steel
Chamber and Door Interior Finish	≤Ra-25 μinch (0.64μm)	≤Ra-15 μinch (.38μm)
Door Type	Horizontal Sliding	Vertical Sliding, Roller Lock Hinged, Radial Arm (Small systems)
Door Travel	Open left	Open Right
Biological Seal	Hermetic type, unload end, flanged compression gasketed with back-up ring	Second seal on load end
Fascia	Included on unload end	Second Fascia set load end
Controls Configuration	CP-1 Power & Distribution panel on equipment CP-2 Operator interface panel with HMI on load end CP-3 Switch and Alarm Panel Unload End	CP-3 Operator Interface Panel Unload end with HMI (Replaces standard CP-3)
Control Platform	Allen Bradley PLC with PanelView Plus HMI	Processor and HMI upgrades SCADA Systems
Vacuum System	Liquid Ring Vacuum Pump with once through cooling	100% Closed Loop Indirect Cooling
Piping		
Steam, Gas Inlet and drain up to first isolation valve	SA-270 316L St. Stl. Orbitally Welded high purity tubing and 316L St. Stl. Angle seat valves	SA-270 316L St. Stl. Orbitally Welded high purity tubing and 316L St. Stl. High purity ball valves
Jacket Steam Inlet	Copper Brass or Bronze tubing and valves	SA-270 316L St. Stl. Orbitally Welded tubing and 316 St. Stl. valves
Drain after isolation valve	Copper Brass or Bronze tubing and valves	SA-270 316L St. Stl. Orbitally Welded high purity tubing and 316L St. Stl. valves
Vent Filter	SIP housing and cartridge, Code 7, hydrophilic Multilayer 0.22 micron filter	Dual series flow filters
Chamber Steam Regulator	Pressure Compensated spring biased sanitary type Standard	Price Deduct
Jacket Steam Regulator	Pressure Compensated spring biased non-sanitary type Standard	Price Deduct
Chamber Pressure Relief Devices	Rupture Disk with visual indicator, and Pressure Relief Valve	Electronic Indicator
Jacket Pressure Relief Devices	Pressure Relief Valve	N/A
Pressure Gages	Chamber: 3-1/2" Sanitary type both doors Jacket: 3-1/2" Non-Sanitary both doors General: 2-1/2" all utilities	4-1/2" Gage or Digital Display 4-1/2" Gage or Digital Display
Standard Cycles	General Purpose Gravity Displacement High Vacuum with multiple Purges Filter Sterilization Leak Test	Filter Integrity Test Air Overpressure (AOP) Rapid Cooling Air / Fluid (Cascade) "ONE-STEP™" Sterilization-Drying Process
Documentation	Two (2) copies Operations, Maintenance and Spare Parts Manual	FAT, IQ/OQ/PQ; GAMP quality documentation package



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General Equipment Specifications ([Navigate here with link](#)**(Requires Contact info entry to download)**)

Industry Standards and Codes Compliance (All systems)

- ASME Code Section VIII, Div 1
- ASME BPE-2007
- Underwriters Laboratories UL 61010A
- Canadian Standards Association CSA C22.2
- ASTM
- NEC
- FDA 21 CFR Parts 210 through 212, Subpart M for cGMP
- FDA 21 CFR Part 11, for Electronic Record Keeping and Electronic Signatures
- ISPE GAMP5 Good Automated Manufacturing Practice

European Standards Compliance (Systems destined for participating European locations requiring CE compliance and stamping)

- CE
- IEC
- EN

Optional Seismic Design Standards Compliance

(Systems destined for seismic Zone 4 locations)

- UBC
- IBC