The quotes are invited for providing and installing Horizontal sterilizers (Autoclaves) with all the accessories for the upcoming Small Animals Facility for Experimentation (SAFE) at IISER Mohali

Specifications for Horizontal Sterilizer 680 Litres Capacity (Quantity 1)

- Chamber volume minimum 680 Liters with approximate inside dimensions as 2’ W x 3’ H x 4’ D
- Double hinged Door configuration
- Design standard must meet ASME and PED requirements
- Temperature range 105 °C to 137 °C
- Unit must have in built electrical steam generator
- User friendly control system with touch screen display on both sides of autoclave
- Unit to have multiple set programs, test programs & programmable cycle programs
- Unit to have built-in printer
- Unit to have ethernet connection port for PC access via network & USB port to download cycle data
- Pressure gauges on front panels
- Chamber & door construction material to be from stainless steel SS 316L grade
- Piping material from Stainless steel SS 304 grade
- Unit must conforms & certified for Medical Device Directive 93/42 EEC, PED 97/23 EEC, ASME & EN 285 standards
- Service access to be from loading side
- Electrical control panel to include solid state relays for the command of the vacuum & water pumps, circuit breakers for protection, overload switch and must conform to IP44 protection leve& IEC60529 standard
- Jacket Construction from 304L grade stainless steel
- Chamber to be fully jacketed
- Manual hinged door gasket to be from silicone material
- Sterilizer jacket and door to be completely insulated with a 1" chloride free glass wool
- Door to have safety features like pressure switch to prevent door opening under pressure, Steam not to enter with door open, cycle not to start if door open or not properly locked
- Both chamber and jacket to be equipped with pressure relief valves
- Built-in Steam Generator to have safety feature related to water level control for ensuring safeoperation of the heaters
- Unit must be equipped with Emergency Shut-Off
- Unit to have four pressure gauges for indicating pressure in the chamber, jacket, door gasket & steam generator
- Unit must have loading cart & transfer carriage made from SS 304 for easy handling of heavy loads

- Unit must be provided with silent air compressor for pneumatic operations

Control system Features

- PID (Proportional Integral Differential) pressure controller
- Measures chamber pressure and steam generator pressure
- FLASH memory stores cycle data for at least 200 cycles
- Preventative maintenance notification based on number of cycles
- Control system must control all system functions, monitors system operations, visually alerts the operator of cycle malfunctions and provides visual indication of the chamber temperature and pressure.
- Fully automated menu driven multi-color touch screen display
- Identification codes and passwords to be provided to control access/operation of unit
- User interface to have built-in view of historical cycle data, graphical display of temperature and pressure graphs
- Alarm features to include alarms for Temperature & pressure sensor failure, Phase time-outs, Door not properly closed, Power failure, No water in the feed water reservoir
- **A warranty of at least three years for system should be provided after installation. Additionally the quotes for AMC are to be provided.**

Specifications for Horizontal Sterilizer 250 Litres Capacity (Quantity 1)

- Chamber volume minimum 250 Liters with approximate inside dimensions as 1.7’ W x 1.7’ H x 3.2’ D
- Double hinged Door configuration
- Design standard must meet ASME and PED requirements
- Temperature range 105 °C to 137 °C
- Unit must have in built electrical steam generator
- User friendly control system with touch screen display on both sides of autoclave
- Unit to have multiple set programs, test programs & programmable cycle programs
- Unit to have built-in printer
- Unit to have ethernet connection port for PC access via network & USB port to download cycle data
- Pressure gauges on front panels
- Chamber & door construction material to be from stainless steel SS 316L grade
- Piping material from Stainless steel SS 304 grade
- Unit must conforms & certified for Medical Device Directive 93/42 EEC, PED 97/23 EEC, ASME & EN 285 standards

- Service access to be from loading side
- Electrical control panel to include solid state relays for the command of the vacuum & water pumps, circuit breakers for protection, overload switch and must conform to IP44 protection leve& IEC60529 standard
- Jacket Construction from 304L grade stainless steel
- Chamber to be fully jacketed
- Manual hinged door gasket to be from silicone material
- Sterilizer jacket and door to be completely insulated with a 1" chloride free glass wool
- Door to have safety features like pressure switch to prevent door opening under pressure, Steam not to enter with door open, cycle not to start if door open or not properly locked
- Both chamber and jacket to be equipped with pressure relief valves
- Built-in Steam Generator to have safety feature related to water level control for ensuring safe
- operation of the heaters
- Unit must be equipped with Emergency Shut-Off
- Unit to have four pressure gauges for indicating pressure in the chamber, jacket, door gasket & steam generator
- Unit must have loading cart & transfer carriage made from SS 304 for easy handling of heavy loads
- Unit must be provided with silent air compressor for pneumatic operations

Control system Features

- PID (Proportional Integral Differential) pressure controller
- Measures chamber pressure and steam generator pressure
- FLASH memory stores cycle data for at least 200 cycles
- Preventative maintenance notification based on number of cycles
- Control system must control all system functions, monitors system operations, visually alerts the operator of cycle malfunctions and provides visual indication of the chamber temperature and pressure.
- Fully automated menu driven multi-color touch screen display
- Identification codes and passwords to be provided to control access/operation of unit
- User interface to have built-in view of historical cycle data, graphical display of temperature and pressure graphs
- Alarm features to include alarms for Temperature & pressure sensor failure, Phase time-outs, Door not properly closed, Power failure, No water in the feed water reservoir
- A warranty of at least three years for system should be provided after installation. Additionally the quotes for AMC are to be provided.