



ZENITH HUMAN MILK BANK EQUIPMENTS

An ISO 9001:2015, ISO 13485:2016,
CE & GMP Certified

Website: www.sewardsystems.com

ZENITH Fully Automatic Human Milk Pasteurizer

MP 1001 :

The MP 1001 pasteurizer has been designed especially for Human Milk Banks. Pasteurisation of Donor Human Milk for premature and other infants provides the best protection for the prevention of infections. Donor Human Milk is the preferred feed when mother's own milk is not available. Pasteurization of human milk facilitates the retention of immunological factors and eliminates HIV (Aids) virus. In particular the requirements for rapid cooling defined as the milk temperature drop from 62.5°C to 25°C (°F144.5 to °F77) in less than 15 minutes, with a resultant temperature of <4°C (°F39.2) within the pasteurization cycle and validated accordingly. This is achieved prior to refrigeration of the feeds for storage.

Greater Accuracy of Pasteurization Times & Temperatures

The control of the pasteurization cycle was previously achieved by measuring the bath temperature and using this to concern the temperature of the feed in the bath. This can lead to longer cycle times to ensure the various quantities of milk have been treated. MP1001 uses a PLC to control the pasteurization cycle via the ACTUAL temperature of the milk assisted by the external probe in the control bottle. This results in very accurate cycles, both in terms of pasteurization control and cooling set points. It also is extremely efficient in dealing with load variation.

General Features:

- Program selection to give specified temperature and times which are Fully automatic operation.
- Normally between 62.5°C 63°C (145.4F) x 30 minutes for mothers' milk.
- Rapid, precise cooling of feeds to 4°C (39.2F) in approximately 35 minutes.
- Cycle will depend on the temperature of the incoming normal water supply.
- Total complete cycle Time of Zenith MP 1001 is 2h 10m.
- Programme Logic Control (PLC) to facilitate any future changes to time and temperature.
- Special Chiller provided with this pasteurizer for rapid cooling.

Ease of use via HMI Display:

- Multilingual intuitive control Touch screen.
- Automatic levels adjustment depends upon the load.
- Water level detection.
- Screen size 7" inches (colour) display.
- Automatic temperature control of the cycle and cooling.
- Self - testing and validation of the cycle.
- Storage bottles at 4°C until stop the cycle.

Machine Pasteurization cycle time:

Sr.no.	Title	Time in min
1.	Water filling and setting	15 min
2.	First level 62.5 degree (before inserting bottles)	15 min
3.	Second level 62.5 degree (when insert the product bottles)	20 min
4.	Hold time for temperature maintain	30 min
5.	Rapid cooling cycle for achieving 4 degree (62.5 to 4 degree)	50 min

Total cycle Time of Pasteurization is 2 hour 10 minutes.

Homogenization System (Process):

- Water Agitation by FINS system that allows homogeneity of the water bath.
- Bottles Agitation to ensure the milk homogenization.



Homogenisation of milk throughout the cycle

Key Features :

- PLC operating system for monitoring the machine.
- Inner & Outer jacket made up of SS Grade Material.
- Electronic key for machine operator (individual programmable key for multiple operator's)
- Fully SS grade construction inner and outer body.
- **In case of power failure, a battery backup (Inbuilt) may be provided for continuous digital display for temperature of the pasteurizer.**
- Water agitation with FINS System for milk Homogenization.
- 50 bottles use per pasteurisation cycle.
- Four trays with this pasteuriser (2trays 250ml, 2 trays 150ml) Lockable baskets for holding the bottles.
- 7" big touch screen colour display for easy operating with PLC based system.
- Password protected with multi users.
- Temp. Graph & Animation view for cycle process will be provided on machine's screen as well as in computer's screen.
- Data recovering through Pen drive and Auto storage in computer hard drive.
- Special chiller unit provided with machine for rapid cooling cycle.
- Auto cycle-controlled machine.
- Less Water Consumption. (90 ltrs/cycle complete pasteurisation)
- Less power consumption. (32Amp / 6 KW)
- Less time consumption (2h 10minute total cycle) *
- Castor wheel provided for lifting the equipment
- Specifications meets to world HMB guidelines.
- CE, ISO 9001:2015, ISO-13485:2016, US-FDA Compliance, IEC-60601-1, RoHS & GMP Certified.

Specifications for MP 1001 with Chiller Unit:

Dimensions/mm MP 1001 with chiller unit (50 Bottles)	L 1100mm x D 700mm x H 800mm (900mm with wheel)
Chamber (Tank) MP 1001 (50 Bottles)	L 705mm x D 425mm x H 290mm – 45ltrs
Overall weight MP 1001 (50 Bottles)	160kg with water 185kg
Tank Capacity MP 1001 (50 Bottles)	12.5liters (50x250 ml/150ml)
No of Bottle Baskets	2 Nos.
Electrical Power supply	230v/1Ph/50Hz
Full Load Current	32 A
Electrical Consumption	4.68 kWh
Electrical Consumption with chiller	6 kwh
Internal Control Voltage	230v/24v
Noise level in decibel	45 dB /m (Bearing system reduce the sound)
Higher Temp.	63.5°C
Lower Temp.	4°C

ZENITH Fully-Automatic MP1001 (50 Bottles) with Chiller Unit



Zenith

ZENITH Deep Freezer & Refrigerator

DF 325R & RF 325

This Special Deep Freezer & Refrigerators are only made For Human Milk Banking. It's made from fully food grade Stainless steel materials. This special Deep freezer is made with Rapid cooling technology



Optional features:

- Food Grade Fully SS Construction.
- Vertical deep freezer with double door glass having temperature -18°C to -24°C .
- Vertical Refrigerator with double door glass having temperature 2°C to 8°C .
- Double door with Vacuum glass.
- Total 4 chambers.
- 200 bottles storage capacity.
- Fast cooling Technology.
- 300 litres capacity.
- Data Logger system (for Deep Freezer only) with pen drive for data storing & tracking.
- It has microprocessor control for operation with digital monitoring display.
- Audio & Visual high and Low temperature alarms
- Thermostat with digital Display.
- It is lockable and the door walls has insulated with sufficient thickness of high quality PUF insulation.
- CFC free refrigerants.
- 230v, 50Hz single phase AC supply.
- 75 mm puff insulation CFC frees R141B as blowing agent, density 30/35 Kg/Cu. m.
- Two models available Glass doors and without Glass full SS doors.
- ISO 9001:2015, ISO 13485:2016, CE, GMP RoHS Certification.

ZENITH Hot Air Oven

HAO 20

Hot Air Oven Specially use for sterilization

- A Hot air oven or autoclave in the milk bank is essential for sterilizing the container used for collection from donor, container for pasteurizing and for storing the milk
- Ovens are sturdy, with double walled construction. Inner chamber made of Stainless-Steel sheet. Outer chamber is made of mild steel sheet duly powder coated. The gap between the walls is filled up with special grade glass wool for proper insulation to avoid heat losses.
- Forced convection system ensures good mixing, strong dispersion and maintains higher temperature uniformity inside the chamber.
- Inner chamber has ribs for placing the shelves at convenient levels and supplied with 1 to 5 removable shelves. It is fitted with heavy hinges with a ball catcher. Door is duly insulated with glass wool. Big size oven is fitted with lockable castor wheels for ease of movement.

Elements:

Air type heating elements are used for quick heating of chamber and motor blower assembly helps in maintaining uniform temperature all over the work space by forced air convection.

Temperature Control:

- Microprocessor based Digital PID temperature indicator cum Controller with inbuilt timer
- Dual LED display for set value and process value
- PT 100 temp sensor Sensitivity of temp sensor is 0.1°C
- Temp accuracy of oven is $\pm 1^\circ\text{C}$
- Temp uniformity of oven is $\pm 1^\circ\text{C}$
- Over temp safety cut off using thermostat

Control Panel:

It comprises of switch to ON/OFF the power, PID temp controller, indicators for line and load, cord and plug. It works on single phase 230V AC, 50 Hz power supply.

Specifications:

- Thermostat based PID Controller 20L capacity.
- Inner SS grade material & outer galvanised powder coated material.
- Blower & heaters provides for uniform air movement as well as improved temperature distribution.
- Adjustable shelving support for making more space for different heights.
- Digital PID Controller
- Heater loads up to 1.50 KW
- Adjustable shelves 1 to 5.
- Temperature range: 50-250 °C
- Safety device: Thermostat



ZENITH Laminar Air Flow

LAF 20



Specifications:

- MSCRCA 1.2 MM Thick sheet metal fabricated body 1.2mm S.S. working table.
- Crompton make blower motor assembly 7.5x4.5x1/2 dynamically balanced aluminium impeller, FRP casing.
- 0.3-micron mini plate HEPA Filter, size 915x610x75mm, efficiency 99.97%, aluminium casing box type.
- Pre filter 10-micron, size 510x510x50mm flange type nos.
- U.V. Tube 30 watt, Phillips make, LED light 28 watts, electronic switch plate with electronic controller.
- Side glass view panel, Rexene bellow, Acrylic Manometer, Gasket, Hardware etc.,
- Glass bid sterilizer thermostat controller.
- Front shutter aluminium Extruded section + Floated Glass with counter weight balance arrangement. Manually up & down system.
- Power supply 230V/50Hz A/C.
- Sizes available 2X2, 3X2, 4X2, 6X2 (feet), (Vertical Models)

Features:

- The cabinet is fabricated of MS duly powder coated (optional SS 304)
- Work table is made of SS with mirror finish which makes it easy to clean, washable & chemical resistive, corrosion free.
- Side walls are made out of SS sheet (Optional - thick transparent glass duly framed)
- High efficiency pre filter
- HEPA filter efficiency- 99.99% with cold DOP & 99.97% with hot DOP thus retaining all airborne particles of size 0.3 micron
- Magnehelic gauge to monitor pressure drop in the unit across filter
- For easy operating 4.3" touch screen display provided
- DIDW type blower or dual brushless DC (BLDC) blower system with high RPM motor.
- Built in U.V. Germicidal Light of 254 nm for disinfection
- Fluorescent light for work space illumination with intensity greater than 800 Lux
- Velocity 95 fpm \pm 10 fpm
- Vertical sliding transparent front door made of glass with UV protective film supported by counter balance weight mechanism (For Vertical LAF) Noise level less than 60 dB
- Castor wheels for ease of movement
- Works 230 V/AC Power supply.
- CE, ISO 9001:2015, ISO-13485:2016, US-FDA Compliance, IEC-60601-1, RoHS & GMP Certified.

ZENITH Milk Warmer MW 37



Specifications:

- Constructed in fully SS.
- Digital PID Controller
- Fully automatic with Timer
- 4 Bottles tray (150ml/250bottle)
- Product sensor for temperature
- Power supply 230v/50Hz

Product dimensions:

- Outer body: l-600mm x d -550mm x h – 650mm
- INNER TANK: L- 400MM X D- 350MM X H – 300MM

ZENITH Autoclave Autoclave ACL 25



Specifications:

- These double walled units have inner chamber (Boiler) made of SS.
- Outer wall is covered with stainless steel sheet.
- Thick stainless-steel lid is tightened by radial locking system and can be lifted through a pedal lifting device for user comfort
- Fitted with joint less silicon rubber gasket.
- Heating is done through specially designed water heaters of suitable wattage to ensure optimum sterilization time in every sterilization cycle.
- Low water device cuts off electric supply to heater in case of low water level detection.
- Dimensions: 12" Dia X 22" Height.
- Power Source: 220/240 volts A/C, 50 Hz Electrical Supply, Working Pressure: 15 to 20 psi,
- Working Temperature: 121° C to 125° C, Controller: Auto set 15 psi to 121° C.
- Ideal Use: provides a physical method of sterilization by killing bacteria, viruses, and even spores present in the material put inside of the vessel using steam under pressure. used in hospitals,
- Bottle Container – 1nos. (with each autoclave)

Milk Containers

BPA Free Polypropylene Bottle



Available single packed or bulk with cap, option to include test.

- Sizes: 50ml, 100ml, 240ml
- Sterile or gamma disinfection options

Features & Benefits

- Suitable for the collection, storage and pasteurisation of breast milk or formula
- Packaged sterile and ready to use or gamma disinfected
- Freezable down to -20°C
- EU Standard bottle thread
- Calibrated graduation (meets the requirements of the standard EN 14350-1)
- Suitable for standard bottle warmers and transport baskets
- Leak proof due to seamless manufacturing

ZENITH BPA Free Milk Containers



Specifications :

- Material Used SS 304
- BPA Free Milk Containers
- Milk Storage Capacity : 200ml/250ml.

Bottle Sealer with Foil for sealing Bottles



Foil Seals

Specifications:

1. Specifically designed to avoid leakage of tank water into the breast milk bottle during the heating and cooling cycles of the breast milk
2. This equipment is intended to seal metal foiled wafer inside the capped containers. Heating takes place in the metal foil and conducts heat to its plastic coating and subsequently causes the.
3. The package should consist of the induction heating generator
4. Aluminium Foil Sealer
5. Container Sealing Machines
6. Power : 200 W
7. Foil Sealing : 2000nos (free)
8. Sealing width : 175mm
9. With digital display.

ZENITH Human Milk Bank Tracking & Management Software

HMBM S/W

Zenith HMB is a Web- Based Application That provides a centralized track and trace control system for Milk Bank Management. HMB software enables you to manage human breast milk from banking and donation to testing and labelling

Snapshots of running software :



Specifications:

- Specifically designed for managing Mother Milk Bank.
- Full traceability, with a comprehensive trail of all modifications.
- User Management, Admin management etc.,
- Day to day notifications.
- Milk Donation, Dispatched milk Qty, Storage milk qty etc., for milk bank management.
- Healthy donor reports.
- Total milk analysis shows on screen with the help of pie diagram.
- QR code for donor certification. As well as DONOR Certificate to donors' mail after successful donation.
- Can Download certificate in PDF Format for Donor Mothers.
- Consistent and rigorous testing regime with testing profiles for donors and products defined at site level
- Control of milk samples to ensure only authorized samples are released
- Immediate visibility of milk stocks and their processing status
- Facility to manage milk in batches with maintain as below:
 - a. Multiple User System.
 - b. Confirmation of negative serological tests
 - c. DONOR Certificate to donors' mail after successful donation.
 - d. Donor Record File: This is maintained
 - e. Recipient Record: Recipient record would be maintained by mother's milk requisition form.

Printer with Water proof Label TSC Printer

Labels



Specifications:

- Printer Type: thermal Paper
- Diameter: 50mm
- Printing Width: 58mm
- Paper Thickness: 0.06-0.08mm
- Character: 24 * 24
- Barcode type: CODE39, CODE128
- Printing Speed: Up to 90mm/s
- Printing Density: 384dot/s
- Interface: USB Voltage Input: AC220V
- Power Output: 12V/3A
- Operating System: for Android/iOS/PC
- Plug: EU/US/UK(optional)
- Item Weight: 400g / 14.11oz
- Package Weight: 790g / 27.87oz
- Item Size: 11.2 * 10.7 * 8.8cm / 4.41 * 4.21 * 3.46in (L * W * H)
- Package Size: 23.2 * 15.4 * 9 cm / 9.13 * 6.06 * 3.54in (L * W * H)
- Package List: 1 * Printer 1 * USB Cable 1 * Charging Cable 2 * Paper

ZENITH R.O. Water Plant RO 50 (50LPH)



Specifications:

- Suitable for Both Automatic & Semi-Automatic Human Milk Pasteuriser's.
- With your own RO system running pure water any time in a day, you can have as much as pure water all you want, at the touch of the finger. Free to use fresh, clear & safe water.
- For Purity, Health, Convenience & Economical to use.
- Purify any source of water Like under - ground water, bore-well, overhead storage tank & municipal tap.

Features:

1. Capacity: 50Ltrs/hr.
2. Compact Institutional RO System with Automatic Flushing.
3. Consist with 2 nos. of booster pump and 4 nos. of RO Membranes.
4. Duty cycle: 500ltrs/day i.e., 8~10 hrs/day.
5. TDS Rejection†: 90±5%
6. Permissible input water quality† (TDS Max.): 2000 ppm

More Specifications:

Sr. No.	Parameter	Specification
1	Purification capacity	50Litres per hour *
2	Max Duty Cycle	500Ltrs/ Day
3	Membrane	3 Nos.
4	Purification	3 stages
5	RO Membrane	1812-75 GPD
6	Minimum let Water Pressure	0.3 kg/sq cm
7	Maximum Inlet water Pressure	4 kg/sq. cm.
8	Input Voltage	160-300V AC (50Hz)
9	Operating Voltage	48V DC
10	Input water Temperature	Min 5°& Max 50°
11	Total Dissolved Solids (TDS)	Up to 2000 ppm
12	Total Hardness	500 ppm (max)
13	Rejection of TDS	Up to 95%
14	Recovery	Up to 25%
15	Dimensions (mm)	W 485 x D 300 x H 840
16	Net Weight	30 kgs.



Save Milk Save Life...!

Marketed By: Seward Systems Inc, Maharashtra

India - 400 066,

Service support Email ID: info@sewardsystems.com

Mobile. No +91- 9820426021, 9820426011

