



GE/291/21-22/QT2

30/01/21-22

## QUOTATION

To,  
SURYAUDAY ORGANIC FARMER PRODUCER CO. LTD  
AT/P- Avandhi, Tq- Jath, Dist.- Sangali  
Mobile- 7798938109,8806008571  
Email- sambhajirkodag@gmail.com

### Subject - OFFER FOR FRUIT AND VEGETABLE PROCESSING PLANT

Dear Sir,

As Per Your Requirement, we are submitting herewith our lowest & competitive Techno-commercial offer for the supply of following Machineries / Equipment's.

CAPACITY -  
PROCESSING LINE -1000KGPER HRS  
CANING LINE - 500 CAN PER HR

Sr. No	Description	Capacity	Qty	Rate	Amount
1	TWO STAGE PULPER	1000 kg/ Hrs.	01	475000	475000
2	COLLECTION TANK	500LIT	01	65000	65000
3	PULP TRANSFER PUMP	500LITS	01	75000	145000
4	MANUAL FILLING TANK WITH INSN, NOZZLES - 500	500LIT	01	125000	125000
5	STEAM JACKETED KETTLE -250 L	250LIT	02	175000	350000
6	CAN STERIALIZER	1000 NO/HR	01	175000	175000
7	CORN DESEEDING MC	300KG/ HRS	01	345000	345000
8	WATER TUNNEL WITH CIRCULATION PUMP		01	125000	125000
9	DEWATERING VIBRATOR	1000 kg/ Hrs.	01	395000	395000
10	AUTOMATIC MEDIA FILLER	1000 kg/ Hrs.	01	475000	475000

11	TURN TABLE	500KG/hrs.	02	175000	350000
12	EXHAUSTS BOX SYSTEM	1000 kg/ Hrs.	01	545000	545000
12	BRINE PREPARATION KETTLE, PUMP AND SS PIPES		01	245000	245000
13	HORIZONTAL STERILIZER (RETORT) -500 CANS-850GRAM SS 304 retort Steam and air counter pressure Size -1100mm diameter x 2 basket holding capacity Trays holding. Fully automatic-PLC control panel	500 cans / batch of 850 grams	01	1975000	1975000
14	AIR COMPRESSOR ELGI MAKE	0.5m3/hrs	01	195000	195000
15	AIR RECEVIER 1000LIT AND PIPELINE 100FT	1000lits	01	225000	225000
16	COOLING TOWER, PUMP AND PIPELINE	50TR	01	395000	395000
17	ELECTRICAL CONTROL PANEL for all machine		01	175000	175000
18	SS 304 WORKING TABLES		02	25000	50000
19	PACKING VIBRATOR -round	500kg/hrs.	01	225000	225000
20	FRUIT MILL	500kg/ hrs.	01	445000	445000
21	VACUUM PACK MACHINE	01	01	575000	575000
22	CAN SEAMER 24 DS	1000 kg/ Hrs.	01	545000	545000
23	WOOD FIRED BOILER -1000KG/HR	1000 kg/ Hrs.	01	1400000	1400000
24	STEAM PIPELINE AND INSULATION	01	01	325000	325000
				SUBTOTAL	10345000
				GST-18% extra	1862100
				TOTAL	12207100

## TECHNICAL SPECIFICATIONS: -

### 1. TWO STAGE PULPER -

- For removing the stone & peels from mango.
- Size of sieve: 400 mm dia. X 700 mm long in both top & bottom pulper.
- Completely made in SS 304, having 2 adjusting beaters, 2 brushes in top pulper & 4 adjustable brushes in bottom refiner.
- The sieve has holes of 3mm at top pulper & 1.5 mm at bottom refiner. Both pulper & refiner totally enclosed & provided with small pulp collection pulp collection hoppers. Hopper with screw makes the inlet of the product. In top pulper discharge of product from top pulper connected to bottom refiner by means of 76 mm dairy pipe with union.
- Provided with drive motor, set of pulleys & belts.
- Installed power: 7.5Hp motor 960 rpm for pulper & 5 Hp 960 rpm for refiner

### 2. COLLECTION TANK-

- Made in 3 mm thick SS304 rectangle slope bottom tank with 4 nos. legs.
- Tank size 900 X 900 mm.\*600mm
- SS 304 top lid.
- Inlet/ outlet connection SMS 76 mm.

Capacity: 500 lits

### 3. TRANSFER PUMP-

Suitable for pumping the product from the collection tank

Screw pump with ms bonded nitrile stator & SS 304 rotor  
MS base plate for pump  
Fixed speed drive for electric motor, set of pulley, v-belt & gaurd etc

Electric power required 02 HP for pump

### 4. MANUALLY FILLING TANK-500L-

Consist of :-

- Upper manhole
- External level
- Discharge valve (ball valve)
- With hot insulation
- Capacity: 500 lits

#### 5. STEAM JACKETED KETTLE – 225 LITS –

- SS 304 cylindrical body with bottom hemispherical portion
- The bottom hemispherical portion will have SS jacket for steam heating
- SS supporting legs with mounting pad
- Stirrer arrangement with PTFE scrapers, shaft & supporting tripod
- Fixed speed drive for stirrer shaft
- Steam inlet, outlet & drain connections
- Holding capacity – 225 lits
- Electric power requirement = 01 HP for stirrer shaft
- Steam requirement – 100 kg per batch at 3 kg/cm<sup>2</sup>

#### 6. CAN STERILIZER -1000 CANS/ HR

- The tunnel type steam sterilizer suitable for sterilizing of cans
- At the bottom of trough one steam connection is provided. The steam is directly
- Pursed inside the trough to heat the can up to required temperature
- SS wire type belt is provided for carrying can and width – 300mm
- Conveyor frame is made in SS square pipe
- Top and bottom cover is provided and length – 15 feet
- One steam header with inlet and drain connection is provided
- Wire mesh opening 5mm and diameter – 1.6mm
- Temperature indicators and temperature sensor is provided
- Geared motor -01 HP

#### 7. CORN DESEEDING MACHINE –

- MOC –SS 304
  - Size – 600mmx700mmx1200mm
  - Feeding roller, cutting die set
  - Small gear and spur are provided
- Motor -01HP

#### 8. WATER TUNNEL WITH CIRCULATION PUMP-

- 6-inch water -10ft
- Pump and circulation pipeline

#### 9. DEWATERING VIBRATOR –

- Supply & manufacturing of vibrator
- MOC – SS 304
- Size -600mm x 1800mm x 1000mm Ht
- Vibratory feeders consist of an open or closed frame tray mounted on a vibratory drive and a material hopper that sits above the tray. The drive vibrates the tray to cause the movement of material into the process. Vibratory feeders provide accurate and reliable feeding of vegetables to the next equipment
- Capsule type mesh is provided on top
- Rosta make oscillating springs are provided – 4nos
- Vibrating motor – italvibrus / oli make in Italy  
Vibrating motor -0.5HP – 02 no's

## 10. AUTOMATIC MEDIA FILLER –

- MOC- SS 304
- Slat type belt conveyor
- Continuous filling type

## 11. TURN TABLE

- Supply and manufacturing of the rotating turn table
- Material of const- SS 304
- Size – 1200mm dia x 1000mm H
- Turn table is rest on moving wheels for support
- SS 304 flat is provided around the rotating turn table
- Turn table is moving with the help of geared motor  
Geared motor – 0.5 HP

## 12. CAN EXHAUSTER – 1000can/hr

It consists off – SS 304

- The tunnel type steam exhauster suitable for exhausting of cans
- At the bottom of trough one steam connection is provided. The steam is directly
- Pursed inside the trough to heat the can up to required temperature
- SS 304 wire mesh type belt
- Conveyor belt width – 500mm
- Conveyor frame is made in SS304 square pipe 40mm x 40mm
- Top and bottom cover is provided and length of exhauster – 5500mm
- One steam header with inlet and drain connection is provided
- Temperature indicators with control and temperature sensor is provided
- Variable frequency drive (VFD) is provided for control the speed of belt
- Geared motor is provided – 2 HP

## 13. HORIZONTAL TYPE RETORT – 2 BASKET – plc based fully automatic

Retort process – steam / air counter pressure retort

Size – 1100mm diameter x 2 baskets

Retort Type	Static Retort Model
Number of Trolley	2Nos
Basket useful dimension	725W×725H×990L
CAN	500
CAN SIZE-	850 GRAMS

Technical specification of Retort: -

- MOC – SS 304
- Vessel Diameter – 1400mm
- Shell Length – 2200mm
- Overall length – 2700mm

- Overall size -2500mmWx2500mmH x4500mmL
- Full thermal insulated Vessel - 50mm
- Vessel clad with stainless steel sheets
- Single door retort with tangential opening
- Manual Door opening with hydraulic system
- Hydraulic system operates automatic by on/off switch
- Hydraulic system includes pump, motor, forward return hose and small control panel
- Steam distributor double header
- Water distributor header with spray nozzles
- Heat exchanger for indirect and sterile cooling
- Opening on the shell for heat distribution tests with multiple thermocouples
- Trolley guide
- Trolleys Base number -2
- Automatic valves for on/ off control of heating, cooling, pressure and the vent drain
- Shell thickness -5mm

#### Accessories -

- Spraying system like steam, air, water inside the retort, cooling circulating pump, track for movement of trolley, safety valve, pressure gauge, PT 100.
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#### Performance characteristic -

- Fully Automatic control by PLC computer /order input by touch screen easily.
- Mechanical interlocking safety system.
- Electronic and mechanical protection of overpressure

#### Design Conditions -

- |    |   |                |
|----|---|----------------|
| a) | Basket size - 725mmW x 725mmH x 990 mmL |                |
| b) | Maximum Working pressure                | 5 Bar relative |
| c) | Minimum working Pressure                | 0 Bar Relative |
| d) | Maximum working temperature             | 145 C          |
| e) | Voltage                                 | 400 Volts      |
| f) | Frequency                               | 50HZ           |

#### Product Contents

- Steam / Air Retort (Fully automated PLC based)
- Pressure and temperature indicator
- Provide with probe for the measure of product temperature
- Hot Water circulation pump - 5 HP
- Pneumatic control valves modulation for filling, emptying, condensation and entrance of vapor, water, air and water exhaust
- Safety valve is provided to avoid in being opened while pressure exist in the retort
- Valve assembly -
- Steam inlet valve -1 inch
- Cooling water inlet- 1 1/2 inch
- Compressed air inlet -1/2 inch
- Air vent -1/2 inch

- Process water inlet – 1inch

## Warranties

Our responsibility, once it is proved in a certified manner is limited to the following warranty.

1. Materials warranted: Any equipment including parts and components manufactured by us.
2. Duration: 12 Months from the date of commissioning under condition of a normal use i.e. based on 8 hours daily operating time. Even if this limit of working hours is not reached, the warranty will stop after 12 months in any case.

## Process Cycle

The process cycle starts after the door is closed and locked

Time require per batch has been given below: and it varies from product to products

Water filling	: 10 min
Venting/Temperature come up phase	: 20-30 min approx.
Sterilization cycle	: 15 min
Cooling cycle	: 30-40 min
End of Cycle	: 10-15 min

The retorts include all the necessary equipment for automatic control.

Main control system features are:

- @ PID control of temperature and pressure
- @ Automatic PID temperature controller, temperature error within  $\pm 0.3$
- @ Sterilization recipes storage
- @ Different levels of password protection (recipes, manual time control, PID settings, calibration and maintenance)
- @ Alarm management
- @ Curves visualization

Main control items are:

- @ Stainless steel electric cabinet assembled in the retort –
- @ PLC - Color touchscreen HMI – 7”
- @ PID controlled valves for steam inlet

ON/OFF controlled valves:

- @ Water fill
- @ Water total drain
- @ Air pressure
- @ Pressure relief

@Flow meter for water circulation control

@ Magnetic type water level control

@ Pt100 probe for temperature control

@ Pt100 probe for temperature recording

@Electronic pressure transmitter - Light alarms

@ 0-6 bar pressure gauge

Safety devices

@ Pressure safety relief valve

@ Door lock is doubly ensured electrically and mechanically against residual pressure

Electrical specifications

Standard electrical specifications are 400 V 50 Hz 3ph

Main components and standard materials

1. All the actuator valves, gauges, transmitters, sensor -SS
2. Safety valve- Gun metal
3. Heat exchanger: STD - GE
4. Pumps: zeutech/Inoxpa make
5. Valves: pneucon / Sankey
6. PLC: Siemens / delta make
7. Pneumatic components: Festo/Janatic
8. Electrical components: Telemecanique / siemens
9. Electric cabinet: MOC - SS- Guru Engineers
10. Flowmeter: std

Process description –

(a) Sterilization by Water Spraying (directly heated by Steam injection)

(b) Water is injected at the bottom of the retort until

it reaches a certain level to allow the pump to correctly function (or the water is kept from the previous cycle).

(c) With spray nozzles, this water is in turn heated by injecting steam directly in the retort and between each stack.

(d) For the cooling, the water is sucked in by the pump and circulates on treated products. These same spray nozzles.

(e) Ensure the performance cooling also.

SS 304 CAN BASKET AND TROLLEY

- It consists of SS 304 square frame in square tube of 40x40mm
- One handle is provided for movement of trolley in 32 mm SS 304 pipe
- One channel guide with both side rollers is provided mounting base
- Trolley consist of two fixed wheels & two moving /swivel wheels with brake & fitted to back side of trolley & loading carriage holding pin

#### Can mounting basket –

- It consists of SS 304 square box and both side half opening for can loading and unloading
- Vertical and bottom frame is in SS 304 40x40 angle
- Centre and top frame is in SS 304 flat 40x5mm
- Four side is covered by SS 304 10mm bar at equal distances
- At bottom frame is SS 304 flat 25x3 and 10mm bar reinforcing  
At bottom on C- channel is provided for movement of trolley

#### SS 304 HEAT EXCHANGER/CONDENSER

- It is consisting off –
- MOC –SS 304
- SS 304 cylindrical type hot water battery
- Overall size – 300mm dia x 1800mm height
- It has water inlet and outlet connections of cooling tower and hot water circulation pump inlet and outlet connections and drain connection and pressure and temperature gauge
- All nut bolt washer in SS 304

#### 14. AIR COMPRESSOR –

- CAPACITY – 7.5 HP
- WITH 300 LTR AIR TANK
- COMPRESSOR WITH ALL ACCESSORIES FOR FITTING INCLUDE

#### 15. AIR RECIEVER -1000LITS-

- Air receiver size – 800mm dia x 1800mm shell length
- Overall size – 1000mm x 1000mm x 2100mm H
- Connections – air inlet, outlet, pressure gauge, safety valve, drain  
GI pipeline from compressor to next retort

#### 16. COOLING TOWER, PUMP AND PIPELINE –

Sr. No.	Model No.	Flow Rate	Qty.	HWT	CWT	WBT	Absorbed bkW
1.	HPS 52.55 (Cooling Tower with FRP Basin)	60 m3/hr	1 No.	35 °C	30 °C	26 °C	1.8 kW

MODEL : HPS – 52.55 (C.T. With FRP Basin)  
Type : INDUCED DRAFT SQUARE COUNTER FLOW  
Quantity / Number of Cells : 1 No.

Tower Size (LxWxH) : 1828 x 1828 x 2700 mm. – PER CELL  
 Basin Size (LxWxH) : 1828 x 1828 x 300 mm – PER CELL  
 Shipping Weight / Operating Weight : 411 Kgs. / 1323 Kgs. – PER CELL

DESIGN PARAMETERS PER CELL

Water Flow Rate : 60 m3/hr  
 Inlet (HWT) : 35 °C  
 Outlet (CWT) : 30 °C  
 Design Wet Bulb Temperature : 26 °C  
 Cooling Capacity : 3,00,000 Kcal/hr  
 Total Wetted Surface Area : 482 m2

AUXILIARY EQUIPMENT PER CELL

Type of Fan : Axial Flow, Direct Driven  
 Air Quantity / Fan : 9.8 m3/sec  
 Fan Diameter / Speed : 1200 mm / 1000 RPM Direct Driven.

Absorbed BKW at Fan Shaft : 1.8 kW  
 Electric Motor Rating : 2.2 kW / 3 HP / 1000 RPM

Description : SABAR ENGG Or Equivalent MAKE  
 : Vertical Flange Mounted, Squirrel Cage TESC/TEAO  
 Weather Proof Induction Motor suitable for  
 supply of 415<sub>±</sub> 6% 50 Hz ± 3% with class of  
 insulation “F” and IP-55 Degree of Protection.

WATER LOSSES PER CELL

Evaporation Loss : 0.76 % of Circulating Water. Drift Loss (Max.) :  
 0.005 % of Circulating Water.  
 Blow Down (With 5 COC) : 0.19 % of Circulating Water.

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 ----- Make-up Water Quantity (Peak) (Incl. B.D) : 0.955 % of Circulating Water.

MATERIAL OF CONSTRUCTION

Casing : Seamless FRP one piece moulded  
 Fills : 12 mm Flute Virgin PVC Fills Himgiri Make  
 Drift Eliminators : PVC  
 Nozzles : PP/ABS LOW PRESSURE DROP  
 NON CLOGGING TYPE  
 Water Distribution Headers : PP WITH FRP MOULDED. NON COROSSIVE  
 Fan Blades / Hub : FRP. (Non Corrosive Type)  
 (Manufactured by in Technical  
 Collaboration with IIT Powai Mumbai  
 Resting : MS HDG  
 PVC Fills Support/ Eliminators Support : FRP Pultruded  
 Fasteners : GI

## 17. ELECTRICAL CONTROL PANEL -

Suitable for above motors

The panel consists of:

- Contactors, relay, push buttons, starter, etc.
- MS powder coated panel

Electrical panel for all above machine

## 18. WORKING TABLE -

- SIZE- 1150MM X2400MM X900MM
- LEG -6 NOS IN SQUARE TUBE 30MM X30MM

## 19. PACKING VIBRATOR -ROUND

## 20. FRUIT MILL

## 21. VACUUM PACKING MACHINE

## 22. CAN SEAMER 24 DS-

### CAN SEAMER -24 DS -

- Capacity 30-40 High Speed cans per minute. Can still type Seamer Suitable for seaming cans between 202 - 700 dia range. Sturdily built & very robust construction. Complete body of graded cast iron. Seaming operation is fully automatic after the can is placed & pedal is pushed. The can is stationary while the seaming head with roller rotate, thus seaming the can hermetically.
- Change parts comprising of Seaming Rollers, Can Slide Can Guide and Seaming Chucks for
- To suit your 401 CHANGEPARTS [ 850 gm]

Electicals:2 HP 930 RPM motor, Switchgear, Starter, (Suitable for operation of 400 V ! 5% 3 phase 50 cycles supply) Pulley, V-belt, Cables, Conduits and fittings

## 23. WOOD FIRED BOILER -1000KG-

- No. of Complete Smoke Tube Type Boiler with grate multiple nozzles Bubbling Bed arrangement.
- Boiler capacity -1000kg/hr
- Maximum working pressure -7kg/cm<sup>2</sup>
- Maximum working temperature -150 deg cel
- Design pressure -10.5 kg/cm<sup>2</sup>
- Thermal efficiency of boiler on wood with GCV of 35000kcal/kg - 85%+-2
- Fuel consumption - 50 kg/hrs.
- No of passes - two
- Type of grate with nozzles - bubbling bed
- Boiler skid size- 2400mm X 3000mmx 1500mm
- 1 Set of Mountings and Fittings
- 1 Nos. ID Fan, FD Fan, Feed Pumps with Motor & control panel with cabling
- 1Job of Air Ducting, Flue Gas Ducting) and feed pump to boiler Piping IBR.
- 1 No. of NON IBR Economiser (water temp 95° C)
- 1 No. of Air Pre-Heater (Temp 70-100°C)
- 1 No. of Dust Collector

- Non IBR piping water tank to eco to pump
- Boiler skid structure, water service tank 800lit
- Steam piping 6 mtr from boiler to Pressure reducing station from 7 kg/cm<sup>2</sup> to 3.5 cm<sup>2</sup> IBR
- Water Softener
- Chimney 20 ft
- Boiler and piping insulation

Sr No	Items	Qty	Make
1	Safety Valve Spring Loaded	Two Nos.	NETA/ Equivalent
2	Blow Down Valve	One No.	KSB/ Equivalent
3	Reflex water Level Gauge	One Nos.	DELTA/ Equivalent
4	Pressure Gauge	One Set.	Pioneer/Baumer/ Equivalent
5	Pressure switch	One No.	Indfoss /Switzer/ Equivalent
6	Main Steam Stop Valve	One No.	ONE Nos. Equivalent
7	AIR VENT	ONE Nos.	KSB /Equivalent
8	Fusible Plug	One No. one Nos.	KSB
9	Auxiliary Valves	Nos.	Neta
10	Water Level Controller.	One No.	KSB/Leader/Equivalent
11	Pump	One Nos.	Malhotra
12	Water column	ONE nos One	Bros/Equivalent
13	Non-IBR Valves	No.	Shakti/Equivalent
14	FD FAN Blowers	One Nos.	Delta
15	ID FAN	One Nos	Leader/Equivalent DELTA

#### 24. STAEM PIPELINE AND FITTINGS

- Non IBR pipeline from boiler to steam supplied up to equipment  
Aluminum cladding with insulation

## Exclusion –

1. CIVIL, LAND AND INFRASTRUCTURE
2. TRANSPORT
3. ELECTRICAL MAIN PANEL, CABLE, CABLE TRAY TO OUR MOTOR THROUGH OUR CONTROL PANEL
4. WATER PIPELINE AND FITTINGS
5. UNLOADING OF EQUIPMENTS ONSITE
6. DG SET

## COMMERCIAL TERMS & CONDITION:

1	Price Basic	Ex-Works Pune
2	P & F	Extra @ 3%
3	GST	Extra 18%
4	Freight	Extra to be borne by Purchaser
5	Transit & Insurance	to be arranged by Purchaser
6	Payment Terms	60 % advance along with Purchase Order. 40 % balance along with taxes & duties against Performa invoice before dispatch of equipment.
7	Delivery Period	Within -12 weeks from the date of receipt of your techno-commercially clear purchase order / Drawing approval whichever is later.
8	Validity	120 days from the date of this offer.
9	Inspection and Design	We will carry out inspection as per standard Procedure. In case you desire to inspect, one Week notice will be given for final inspection At our works/our subcontractor's works. In inspection is not arranged within the period, it will be treated as waiver and equipment will be dispatched with our internal inspection Report. In case of 3rd party inspection, the charges If required any design changes in above mentioned equipment's and layout drawing, we can right to change.
10	Supervision During Erection & Commissioning	1. Our charges for supervision of Erection and Commissioning will be Rs. /- per man day. To and fro Air/Rail fare shall be borne by you. You shall provide free lodging and boarding and local charges 2. and same for our executive 3.Tools and tackles, labor for erection and commissioning of all equipment – on client scope
11	Specifications	Specifications, dimensions, design, description, shades of paint etc are not binding on supplier in minute details and are subject to reasonable alteration / change without notice.
12	Cancellation	Order received and acknowledged by supplier shall not be subject to cancellation, either wholly or partly for any reason whatsoever without supplier's written consent
13	Jurisdiction	All contracts between purchaser and supplier are deemed to have entered into at Pune and are therefore subject to the Jurisdiction of Courts at Pune
14	Warranty	We will warrantee the equipment for a period of 12months from the date of commissioning or 18 months from the date dispatch whichever is earlier The warrantee hold good for defective material and or faulty workmanship only and does not apply to normal wear and tear during operation as also to damage due to faulty handling/ operation of equipment. This

		warrantee is subject to the equipment being erected / commissioned under our supervision
15	Force Majeure	Acts of God, Natural Phenomenon including but not limited to flood, earthquake, typhoon and epidemic Acts of Government, Domestic or Foreign, including but not limited to declared or undeclared war, priorities, embargoes, quarantines , power cuts, strikes, lockouts, sabotages and acts of workmen including those of our subcontractor's workmen If the work gets delayed due to force majeure conditions, suitable extension of time shall be granted to enable us to complete the work

We hope you will find our offer in line with your requirement. In case you require any additional information, please feel free to contact us.

Thanking you and assuring you of our best attention and services at all times, we remain.

Yours faithfully

For GURU ENGINEERS,  
PUNE