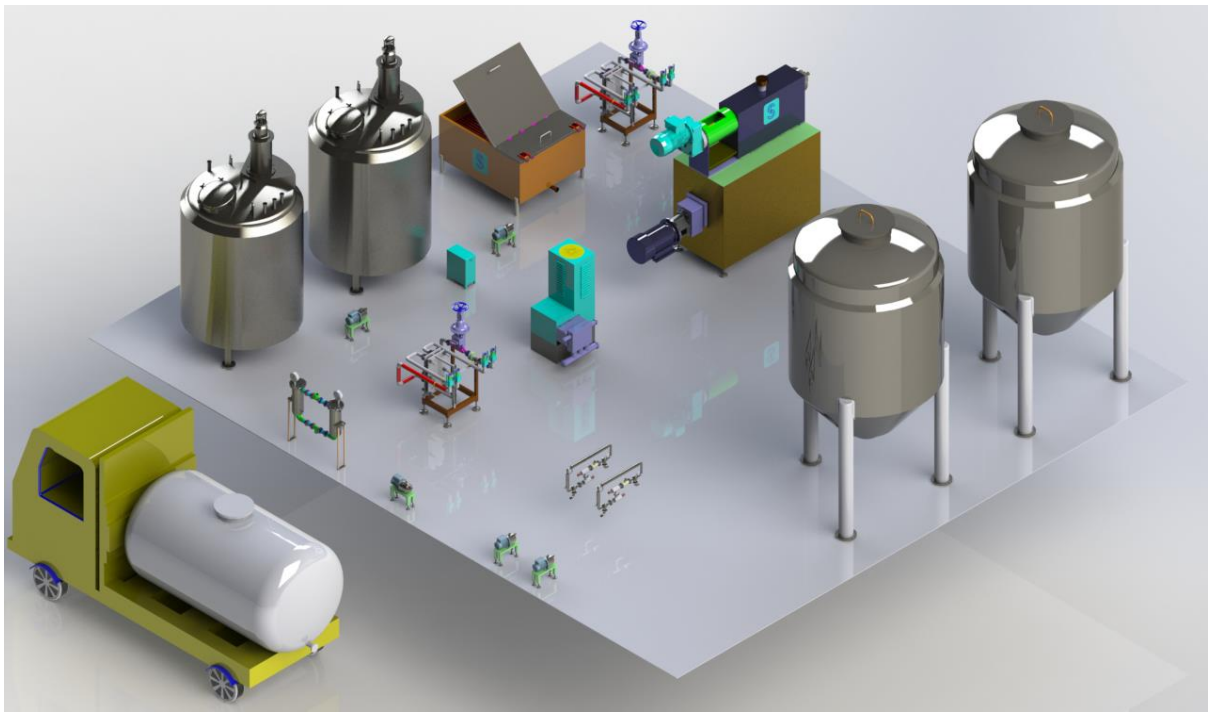
In-House Shortening Plant for Biscuit Manufacturers

In-house Shortening Plants is specifically manufactured to save costs for Biscuit manufacturers by having an inline shortening plant. Such a plant shall be complete with SS Tanks, Duplex Filters, Transfer Pumps, Pre-Cooler, High Pressure Plunger Pump, Sinitators and Crystallizers, Homogenizing Valves and Remelting Section. The shortening thus produced shall be mixed online into the biscuit dove for further processing.



Benefits of In-house production of Shortening

- The total cost of Production for in-house manufacturing of Shortening can be estimated at a maximum of 82-85% of the cost incurred by sourcing Shortening from Edible Oil Refineries in corrugated boxes.
- Investment can be recovered within 10-12 months of successfully commissioning the plant for a assuming a production of 200 tonnes of Shortening and approximately 24-26 months for a production of 100 tonnes of Shortening per month.
- Power Savings as a result of use of appropriate size motors. In the Oil refineries, since the same machine is used for the manufacture of various products which require higher capacity motors, the Power Consumption is higher.
- Savings in packaging of the material. Carton Boxes and polythene bags will not be required if shortening produced in house. Additional Manpower for the packing of the materials can be eliminated.
- Savings on Packaging Machines.
- Savings on Transport as transport of Edible Oil in bulk to cost much less than the transport of 15 kg Cartons.
- Profits accounted for the manufacture of Shortening can be saved.

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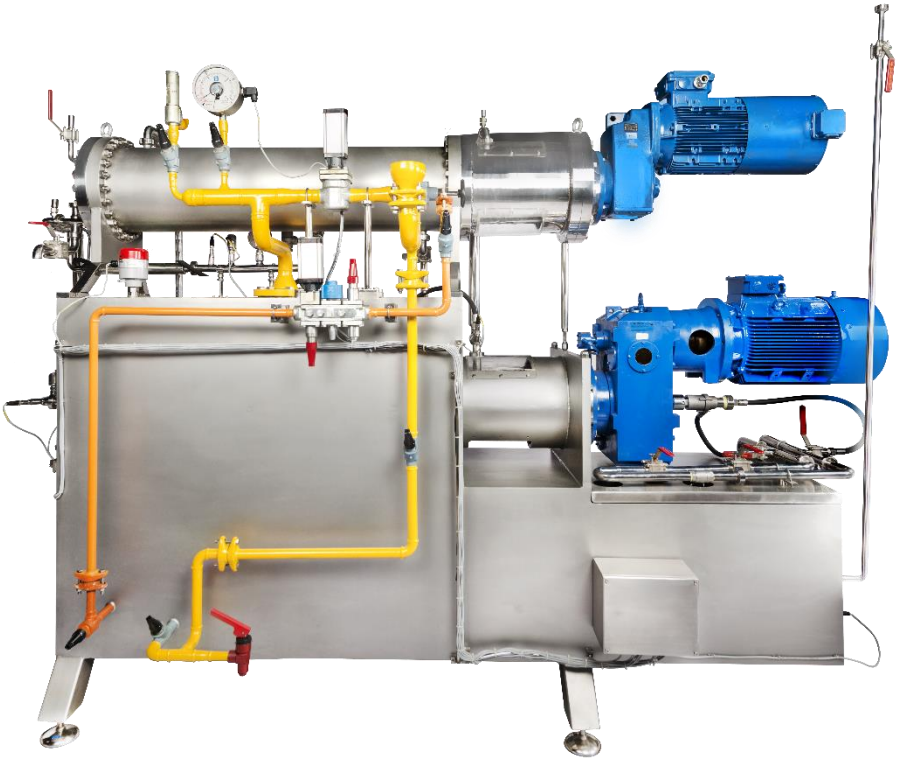
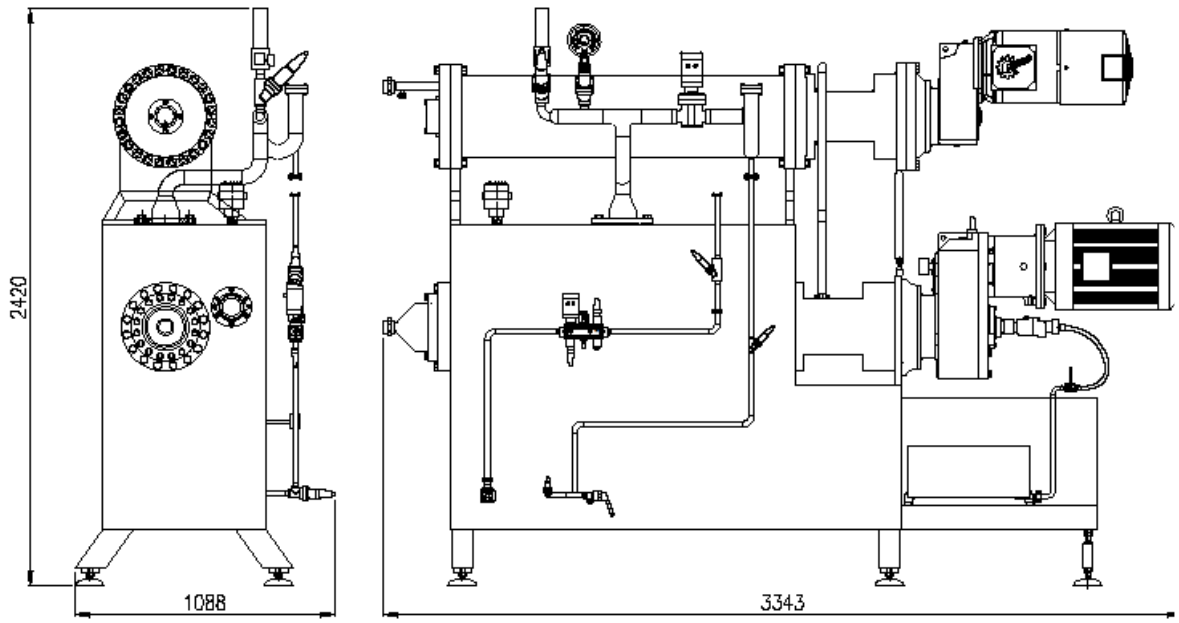
Shortening Equipment

The heart of the In-house Shortening Plant shall be complete with one Sinitator and one Crystallizer designed for a maximum throughput of 1,350 kgs/hr. However, configurations for higher throughput can be designed upon request.



Machine Layout



Machine Specifications

Plant Capacity	
Soft Shortening, 2 % SFC @ 35°C - BIB Packing	1500
General Purpose Shorteing, 8 % SFC @ 35°C - BIB Packing	1000
Sinitator™ SI-16135 Technical Specifications	
Configuration	6" X 1.35 m - 1 No
Design Pressure	120 kg / cms^2
Refrigerant	Ammonia
No. of Refrigerant Circuits	1
Chilling Tube Diameter and Length	Ø 152.4 mm, 1.35 m long
Surface Area for Heat Transfer per Tube	0.6463 m^2
Refrigeration Controls	Inbuilt
Motors	18.5 kW
Speed Reduction	Gear
Rotor RPM	≃600
Speed Variation	Fixed
Annular Space	7 mm
No. of Rows of Scrapers	2
No. of Scraping Blades per Tube / Material	20 nos / Delrin
PT 100 Sensors	At all Inputs and Outputs
End Connection	1 " NB Sch 40 Pipe
MOC: Contact Parts: SS 316L, Non-Contact Parts: SS 304, Inner Tube: CS, Hard chrome Plated	
Crystallizer Specifications	
Configuration	90 ltrs
Design Pressure	120 kg / cms^2
No. of Rows of Pins on Body	3
Diameter of Pins on Body	12 mm
No. of Rows of Pins on Shaft	2
Diameter of Pins on Shaft	16 mm
Motors	15 Kw
Speed Reduction	Gear
Rotor RPM	0-300
Speed Variation	Variable Speed
PT 100 Sensors	At all Inputs and Outputs
Motor RPM	1440
End Connection	1" NB Sch 40 Pipe
MOC: Contact Parts: SS 316L, Non-Contact Parts: SS 304	
Hot Water Tank Specifications	
Water Heater	1 X 9 kW
Water Tank Capacity	40 ltrs
PT 100 Sensors with Temperature Control	Y