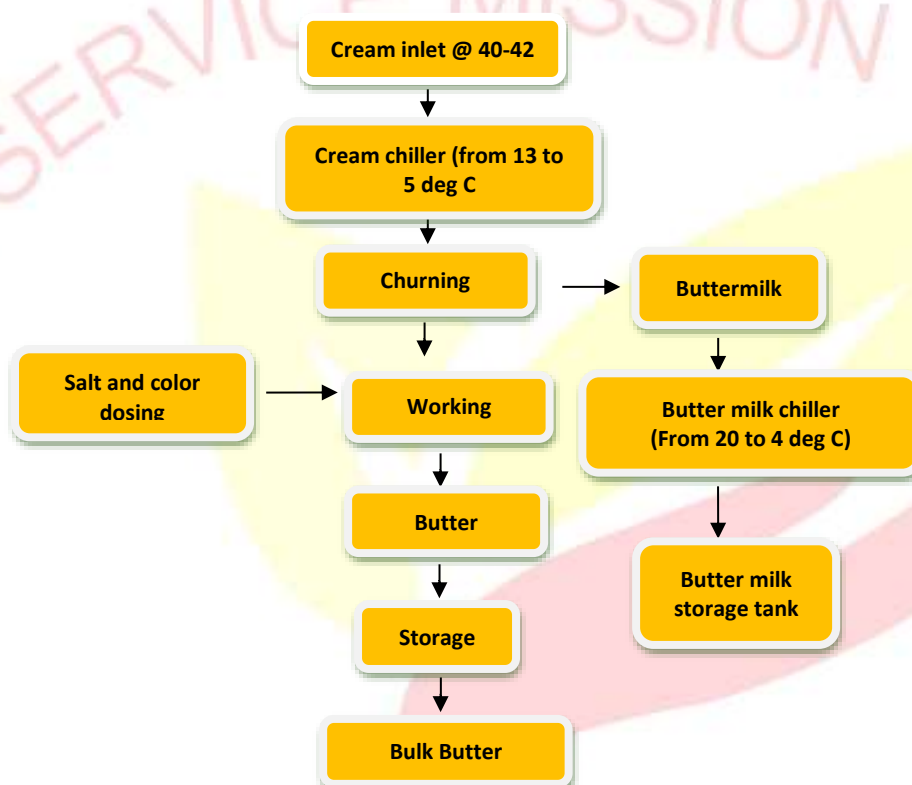


**CONTINUOUS BUTTER-MAKING
MACHINE
CONBUT_TFR12**

CONTINUOUS BUTTER MAKING MACHINE

YSM design and manufacture fully automatic Continuous butter making machine with cream handling system, salt dosing system, color dosing system, CIP system, Butter Silo and Bulk butter packing machine.

PROCESS FLOW DIAGRAM



1. DESCRIPTION

Machine is designed as to produce continuous butter. The butter produced in this machine meets the high requirement of the market. Dosing facility in this CBMM can be used to produce salted and color butter.

In this method, cream churns into butter granules in 1-2 seconds, churning cylinder rotates at 800 - 1200 rpm. Two major working sections are provided, one is wet and another one is dry. In wet working section washing and cooling of butter granules and removal of buttermilk takes place. In dry working section, butter is further worked and reduces the moisture content to 13 to 14%. Further butter travels to dosing

section, where adjustment of salt and moisture will happen. At the end vacuum chamber is provided to reduce the air content of the butter.

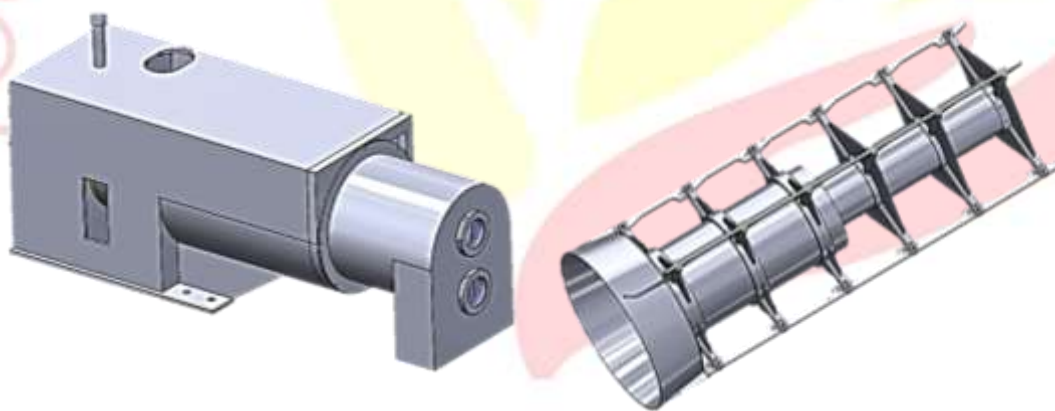
Our equipment's are designed for maximum efficiency to produce butter under hygienic conditions. The flow control through the working sections has been automated compared with the traditional manual operator-controlled machines. YSM offers not only a high degree of remote and automatic operation but also a great flexibility for control and optimization of the working intensity and moisture distribution during production

2. PRODUCT SPECIFICATION

MODEL: CONBUT_TFR12/250

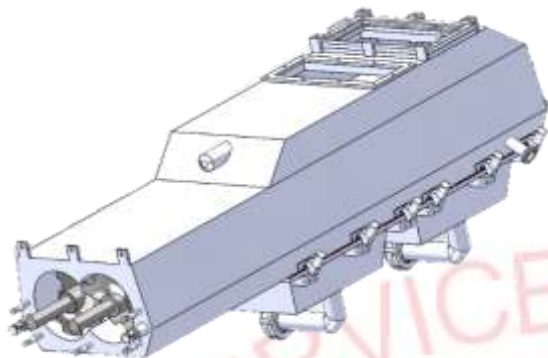
- Output Capacity: 2.5 Ton / Hr.
- Product Contact Part: SS316 and non-contact part SS304
- Gearbox Housing: CI

TECHNICAL DESCRIPTION:



CHURNING SECTION

- High-Speed Beaters equipped with double jacketed multi-flex cylinder
- Churning Motor Details:
 1. Make: Siemens
 2. Motor Efficiency and Protection Class: IE 2 / TEFC



CANON 1 (SEPARATION SECTION)

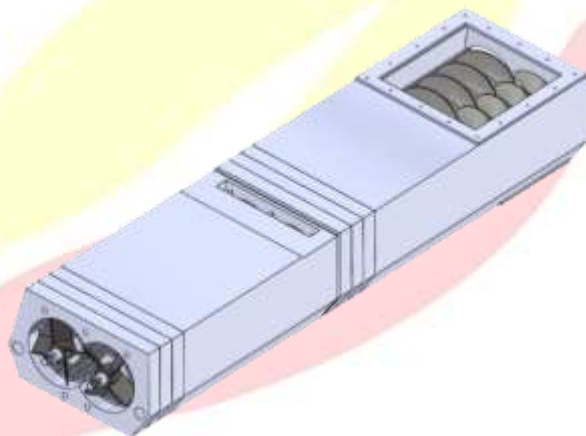
- Buttermilk separation section with a nozzle for re-injection of chilled buttermilk as well as clarification
- Easy observation of butter-grains through Sight Glass
- Extraction section with chilled water circulation in the double jacket
- Two sets of augers
- Gear Motor Details:

1. **Motor Make: Siemens; Reduction Gear Box Make: Nord/ Bonfiglioli**
2. Motor Efficiency and Protection Class: IE 2 / TEFC

CANON 2 (WORKING SECTION)

- Vacuum Port
- Chilled water circulation in the double jacket (40% of Canon Length)
- Two sets of augers
- Final working section made of 6 draw blocks with winglets and draw plates and 1 injection block with specific winglets for additive injection (brine, starters, water, buttermilk, etc.)
- Outlet nozzle
- Gear Motor Details:

1. **Motor Make: Siemens; Reduction Gear Box Make: Nord/ Bonfiglioli**
2. Motor Efficiency and Protection Class: IE 2 / TEFC



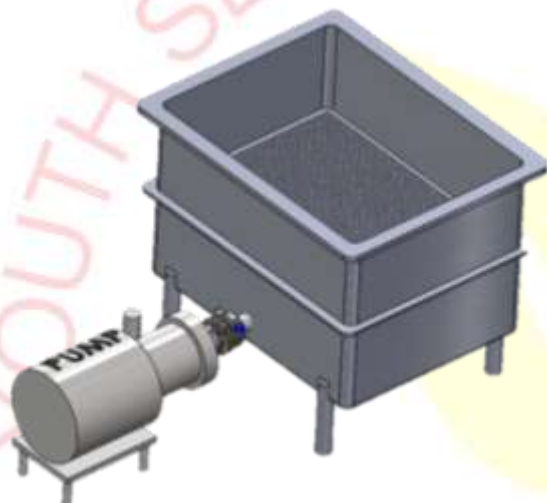
VACUUM PUMP

1. Type: Water Ring
2. Power Rating: 1.5 HP



MCC CUM PLC PANEL

- HMI: 12"
- Panel consist of 3 Nos VFD (7.5 HP, 20 HP, 60 HP), (**Make: Danfoss/ Schneider**)
- MOC: SS 304
- **Note:** Cables up to 3 Mtr. will be in YSM Scope, beyond that will be in Purchaser Scope



Butter Milk balance tank with Strainer

- MOC: SS 316

Buttermilk transfer cum CIP Return Pump

- Type: Centrifugal
- MOC: SS 304
- **Make: Alfa Laval**

3. TECHNICAL FEATURE AND CAPACITIES

TYPE	BUTTER CAPACITY in Kg/H	POWER RATING IN KW (TOTAL)
CONBUT_TSR12/80	800 kg/hr	25 HP
CONBUT_TSR12/100	1000 kg/hr	32.5 HP
CONBUT_TSR12/150	1500kg/hr	47.5 HP
CONBUT_TSR12/200	2000kg/hr	80.5 HP
CONBUT_TSR12/250	2500kg/hr	82.5 HP

3. ADVANTAGES OF OUR CONTINUOUS BUTTER MAKING MACHINE

Continuous operation ensures the following advantages:

- More economical - due to lower capital cost, lower running cost (reduced labor, refrigeration, steam etc.)
- Reduced floor space as because no expensive foundations are required.
- Less butter wastage.
- More hygienic due to its being a closed system, free from air borne contamination
- Butter has greater shelf life as compare to butter churn methods.
- Minimum maintenance cost.
- Time required is very less.

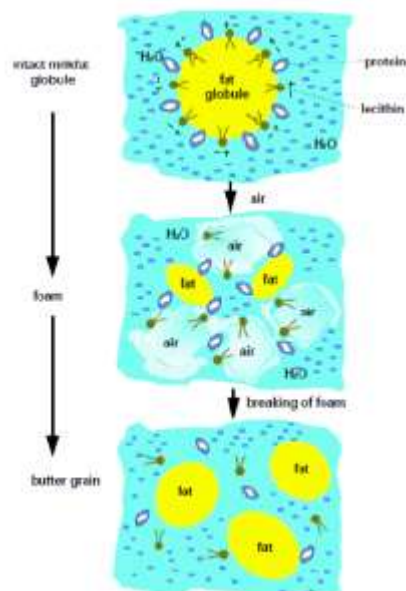
4. FULLY AUTOMATIC CONTINUOUS BUTTER MAKING MACHINE (CBMM)

YSM designed CBMM has fully automatic continuous churn which produces premium quality of butter from cream.

In this method, cream churns into butter granules in 1-2 seconds, churning cylinder rotates at 600 - 800 rpm. Two major working sections are provided, one is wet and another one is dry. In wet working section washing and cooling of butter granules and removal of buttermilk takes place. In dry working section, butter is further worked and reduces the moisture content to 13 to 14%. Further butter travels to dosing section, where adjustment of salt and moisture will be happened. At the end vacuum chamber is provided to reduce the air content of the butter.



**YSM Dairy &
Biotech Pvt. Ltd.**
GSTIN: 06AAACY8854D1Z6
ISO 9001:2015 & ISO 14001:2015 Certified Co.



YSM Designed CBMM works on Churning or frothing principle.

In this method butter grain is formed by aggregation of the fat globules under the action of air present in the cream. During churning, air is beaten into the cream and is dispersed into small bubbles. The fat globules touch these bubbles, often spread part of their membrane substances and some of their liquid fat over the air-water interface, and become attached to the bubbles. One bubble can catch several globules.

Fig-2: Formation of butter granules according to frothing principle.

This resembles flotation, although in true flotation the foam is collected. In the churning process, however, the air bubbles keep moving through the liquid and collide with each other due to the rotation of beater. They thus coalesce and adhering together. In this way small fat clumps are formed. This involves the use of high-speed beaters to destabilize the fat emulsion in chilled cream, and cause the formation of grains of butter in few seconds. The buttermilk is then drained out and butter granules are worked in kneading section consists of screw type kneader.

The proportion of solid fat is crucial, if the globules contain very little solid fat, then the cream does not churn. Higher the proportion of solid fat, the slower the churning, and the lower the fat content in the buttermilk. The temperature will therefore have a considerable effect on the churning.

ABOUT YSM

YSM Dairy and Biotech Private Limited is an Engineering Company engaged in Consultancy, Designing, manufacturing and export of Dairy, Coffee, Chicory, Malt, Starch, Fruit, Food, Industrial effluent & Biotechnology projects on turn-key basis.

YSM Biotech International is the sister concern company of YSM Dairy and Biotech Pvt. Ltd. Both the companies are pouring their best in research, production and quality control, to widely expand its swings into vast Indian adverse as market.

To keep pace with fast changing technology in Industry, YSM is in continuous process to create an aura of latest technology by developing latest model so energy efficient and cost-effective plants.



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YSM believes that progress must be achieved in harmony with the environment. The aim of the company is to overcome the various problems being faced by processing companies due to poor workmanship and poor knowledge of process technology.

The Faridabad (Haryana, India) based company is run by team of technocrats having more than 25 years of experience in Dairy and Food Sector.

