



SF ENGINEERING WORKS

TOOTHED COLLOID MILL



APPLICATION: FOOD: For Processing Sauces, Jams, Fruits, Vegetables, Pastes, Syrups, Emulsions, Mayonnaise, Salad Dressing, Peanut Butter, Bitumen Emulsion, etc.

CHEMICALS: Paints, Inks, Dyestuff, Greases, Textile Auxiliaries, Pesticides, Agro Chemicals, Pharmaceuticals etc.

CONSTRUCTION: Toothed Colloid Mill suitable for fine grinding, dispersing and homogenizing in a single operation. The mill consists of a SS 304 single piece casted body inside which is fitted the SS 304 Rotor and Stator grinding element. The material is fed through a SS Hopper and is forced between the Rotor and Stator where the material is sheared, dispersed, mixed and homogenized.

The rate and degree of the above process can be finely controlled during operation by adjusting the gap between the Rotor & Stator by means of a hand lever provided. The mill is mounted on a sturdy base frame and can be installed without foundation bolts if desired. All rotating parts are balanced and well lubricated for trouble free operation. The shaft is installed in a leak proof housing complete with bearings. ~O~ rings and Oil seals. The motor provided is of 3 Ph 50 cycles TEFC, 415 V 2800 RPM.

COOLING ARRANGEMENT: A SS 304 jacket complete with inlet and outlet connections is provided to cool the grinding chamber which subsequently cools the product.

OPTIONAL: RECIRCULATING SYSTEM - A pipeline system in SS 304 can be provided to recalculate the material.

OPTIONAL AVAILABLE

- Recirculating Arrangement.
- Force Feed Screw Arrangement.
- Flame Proof Motor.

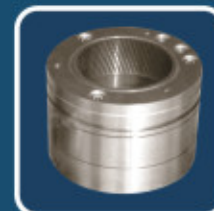
TOOTHED COLLOID MILL (CONICAL GROOVED DISC)

MODEL	MOTOR HP	CAP / HR
SFTCM - 100	5	75 - 350
SFTCM - 150	10	300 - 1000
SFTCM - 600	20	400 - 1500
SFTCM - 3000	30	1000 - 4000
SFTCM - 6000	50	3000 - 5000

Output stated above depends on various factors such as feed rate, viscosity etc.



ROTOR



STATOR



ASSEMBLY



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MILLING SYSTEM



APPLICATION: Certain materials such as lubricating greases & food pastes may require the removal of entrapped air during the process prior to packing. This machine has been developed with an online deaerating system whereby entrapped air is removed after the material is passed thru the mill. A specially designed deaerating chamber with adjustable orifice plates placed in a vacuum chamber accomplishes this online.

CONSTRUCTION: Toothed Colloid Mill suitable for fine grinding, dispersing and homogenizing in one single operation. The Mill consists of a SS304 assembled housing inside, which are fitted 3 stage, Toothed Rotor and Stator grinding elements. The material is fed through a flanged connection and is forced to shearing, dispersing, mixing & homogenizing action between the rotor and stator. The rate and degree of the above process can be finely controlled during operation by adjusting the gap between the rotor & stator by means of two levers provided. The mill is mounted on a sturdy base frame and can be installed without foundation bolts if desired. All rotating parts are balanced and well lubricated for trouble free operation. The shaft is installed in a leak proof housing complete with bearings, ~O~ rings and oil seals. The electric motor provided is of 10 HP to 30 HP 3 Ph 50 cycles, 400 / 440 V, and 3000 RPM.

COOLING ARRANGEMENT: A SS 304 jacket complete with inlet and outlet connections is provided to cool the grinding chamber which subsequently cools the product.

FEED PUMP: Feed Pump Comprising of a 3HP TO 10 HP, 3 Ph, 415 V, 720 RPM electric Motor driving a gear pump 1 ½" TO 3" complete with ~V~ groove pulleys and ~V~ belts is mounted on a M.S fabricated base frame, flow rate 1000 TO 2000 kgs per/hrs @ 5 kgs pressure. Qty 1 No.

DISCHARGE PUMP: Discharge Pump comprising of a 3HP TO 10 HP, 3 Ph, 415 V, 720 RPM electric Motor driving a gear pump 1 ½" TO 3" complete with ~V~ groove pulleys and ~V~ belts is mounted on a M.S fabricated base frame, flow rate 1000 to 2000 kgs per/hrs @ 5 kgs pressure. Qty 1 No.

DEAREATOR : The unit consists of a M.S. fabricated deaerating chamber inside, which is installed two nos deaerating M.S plates with one being fixed and the other movable so as to vary the deaeration gap between plates. De Aerator helps to remove air bubbles.

SKID: The entire unit is mounted on a M.S. fabricated skid, which is provided with pads for floor mounting.

INTERCONNECTING PIPELINES: The inlet will comprise of a 40 to 75 mm flanged connection. Balance interconnecting pipeline will be in M.S. construction seamless pipes of 40 to 75 mm. All flanges will be 40 to 75mm SORF ASA 150 table. A "T" fitting with flange will be provided at the discharge end of the mill. The vacuum inlet will be of rigid pipe connections. All valves will be ball type valves of 40 to 75 mm. With flanged connection in C.S. construction.

PANNEL: An electric panel box fabricated out of 16 swg M.S. Sheets consisting of the following operation

Mill Motor "on" and "off" with ampmeter.	Gear Pump "on" and "off" with ampmeter.
Feed pump "on" and "off" with ampmeter.	Indicating lamps for all motors.
Disch Pump "on" and "off" with ampmeter.	The panel will be powder coated.

FINISH: The entire unit is painted with metal primer and two coats of polyurethane paint.