

## SAIZONERS ON SITE

- 1) Elevator loading system .
- 2) 50 Ltrs. Saizoner for oncological product.
- 3) Vacuum Loading Syatem
- 4) 600 Ltrs Saizoner with Turbo Sifter.

## TECHNICAL SPECIFICATION

Machine Model	Working Volume In Ltrs.	Working Volume In Kgs.	Gear Box Size	Gear Box Ratio	Main Motor - HP (1500 / 750 RPM)	CHPR.Motor - HP (1500 / 2880 RPM)	Approx Weight
SAI - 10	8L	4 / 2	W 75	7:1	2.0 / 2.0	0.5 / 1.0	600 Kgs.
SAI - 25	20L	10 / 5	V 400	5:1	3.0 / 5.0	1.5 / 2.0	800 Kgs.
SAI - 50	40L	20 / 10	V 500	5:1	5.0 / 7.5	2.0 / 3.0	1100 Kgs.
SAI - 100	80L	40 / 20	V 500	7.5:1	7.5 / 10.0	2.0 / 3.0	1800 Kgs.
SAI - 150	120L	60 / 30	V 600	7.5:1	10.0 / 15.0	3.0 / 5.0	2300 Kgs.
SAI - 250	200L	100 / 50	V 700	10:1	22.5 / 30.0	3.0 / 5.0	3000 Kgs.
SAI - 300	240L	120 / 60	V 700	10:1	22.7 / 30.0	3.0 / 5.0	3600 Kgs.
SAI - 400	320L	160 / 80	V 800	10:1	35.0 / 40.0	5.0 / 7.5	3600 Kgs.
SAI - 600	480L	240 / 120	V 1000	10:1	40.0 / 50.0	5.0 / 7.5	4700 Kgs.
SAI - 700	560L	280 / 140	V 1000	10:1	40.0 / 50.0	5.0 / 7.5	4700 Kgs.
SAI - 800	640L	320 / 160	V 1000	15:1	50.0 / 60.0	5.0 / 7.5	5600 Kgs.
SAI - 1000	800L	400 / 200	V 1200	15:1	63.0 / 85.0	10.0 / 15.0	5600 Kgs.
SAI - 1200	1000L	500 / 250	V 1400	15:1	80.0 / 100	10.0 / 15.0	5800 Kgs.
SAI - 1400	1120L	560 / 280	V 1400	20:1	100 / 100	10.0 / 20.0	6200 Kgs.

## SAIZONER

Integrated Processing  
with Versatile Saizoner  
mixer Granulator

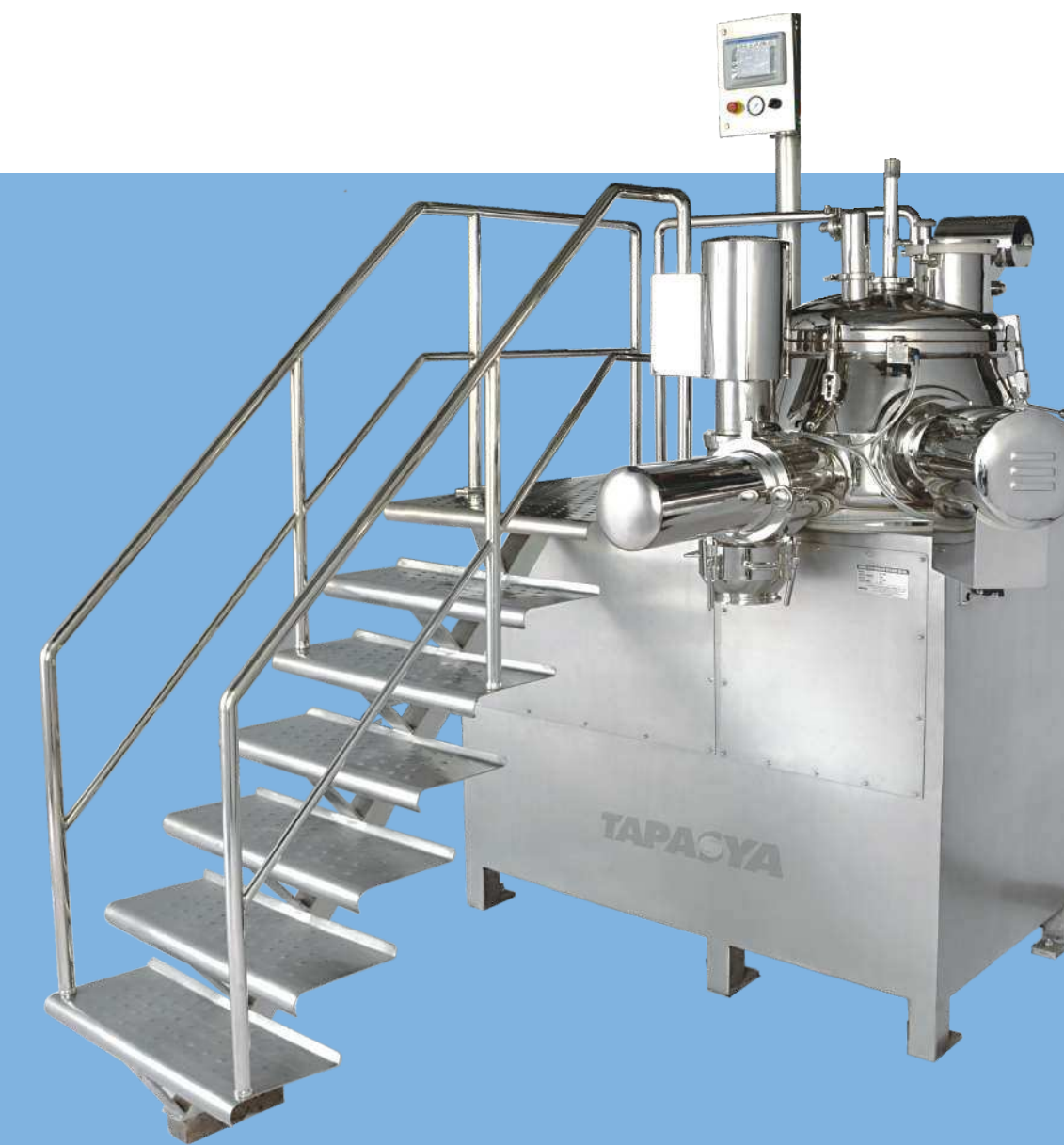
SAIZONER Mixer Granulator is designed to meet special needs of tablet manufacturing technology. This is achieved by reducing processing time, more homogeneous mixing, uniformity of Granule size and above all maintaining improved hygiene compliant to cGMP norms.

### STANDARD PROCESSING DURATION

Dry Mixing	approx.	3-5	Mins.
Wet Mixing	approx.	5-10	Mins.
Wet Granulation	approx.	5-10	Mins.
Discharge	approx.	1-1.5	Mins.

### cGMP

Saizoner is designed to achieve all the requirements of cGMP - Current Good Manufacturing Practices. The components can be easily dismantled, cleaned thoroughly and assembled in quick time. The shaft seals are very effective to check any leakages and cross contamination due to adherents. The bowl, and all the components are of highly polished Stainless Steel with smooth contours and is crevice free.



Specification and technical data are subject to change without prior notice



Manufactured & Exported By:

**Tapasya Engineering Works Pvt. Ltd.**

A/212, Road No.30, Wagle Industrial Estate, Thane (W) – 400 604. India

Tel.: +91 - 22- 6157 9400 / 2582 2287 • Fax : +91 - 22- 2582 5243

E-mail: sales@tapasyaindia.net • info@tapasyaindia.net • Web : www.tapasyaindia.net

Our Representatives in USA:

**Daiichi Jitsugyo (America), Inc.**

939 AEC Drive, Wood Dale, IL 60191

Phone : 630-776-2459 • Email: Rnelson@djausa.com

Web : www.dja-pharma.com • www.tapasyaglobalusa.com

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## DESIGN

The mixing bowl : It is circular with a large diameter and flat base. The top portion of the bowl is conical in shape to assist mixing of cohesive powders.

Constructed from SS 304/316/316L

A large diameter tube surrounds the drive shaft where it enters the base of the bowl. The main drive, shaft seal is on the top of tube and thus well above the normal powder level. The SHAFT SEAL is provided with AUTOMATIC AIR PURGE.

The seal housing and drive shaft may be flushed with cleaning water, which is then drained away from the machine through built in drain tubes.



## GRANULATOR

A high speed Granulator (Chopper) is located so as to assist blending of powder and to break the product to granules of required size.

The Granulator rotates at two speeds - 1500 / 3000 RPM.

The Granulator head is of highly polished stainless steel and is easily removable for cleaning.

The Granulator shaft where it enters the bowl incorporates AIR PURGED SEAL.

The motor is provided with a removable stainless steel shroud which covers it to meet cGMP norms.

## ONLINE CO-MILL

The online Co - Mill is provided on the discharge port to reduce the oversized lumps, resulting in reduced drying time by approximately 20%.

As the lumps are small the product can be uniformly dried at lower temperature, thus giving it a longer shelf life beside eliminating caseing & capping of tablet due to improper drying.



## SIDE DISCHARGE VALVE

It is provided on the side of the bottom, operated by a S.S. Spindle connected to a pneumatic cylinder. In closed position, the gate is flushed with the contour of the bowl.

A cover with removable silicone rubber seal gives unrestricted access into the chute for easy cleaning.

A safety lock in the form of a limit switch is provided at the discharge port to prevent the valve or the motors to start during the cleaning operation.

The pneumatic cylinder is covered by a stainless steel shroud to meet cGMP standard.

## SAIZONER IMPROVED PROCESSING

- ! Uniform distribution of all formulation ingredients.
- ! Short mixing and granulation time.
- ! Useful working capacity of upto 80% to 40% of bowl volume.
- ! Uniform granules by gentle processing.
- ! Wide range of applications.
- ! Easy scale up & Scale down between machine sizes.
- ! Bowl shape designed to have no dead spaces.



## ELECTRICALS

Saizoner mixer granulator is offered in Flameproof and Non-Flameproof constructions. The machine has two panels.

Main panel made out of M. S. Powder coated casing, housing the main contractors, overload relays, MCB'S and the various other control instrumentations.

Operating panel made in SS304 and comes with 3 options.

- ! Standard Operating Panel with digital Ammeters, Digital timers and Push Buttons in Non-Flame Proof Construction, housed in an SS 304 housing panel.
- ! Flame Proof Panel having FLP Ammeters, Analog Timers and Push buttons.
- ! PLC Operating system.

## AUTOMATION

To achieve constituency in the product quality it is desirable to minimize / eliminate the human intervention in monitoring the operational parameters of the machine including the end point control. It is also desirable to record / store the critical data which may contribute to product quality. The desired operational data can be saved and hard copy (Print out) can also be taken out.



- ! Product name
- ! Product code
- ! Operator name
- ! Batch number
- ! Batch date
- ! Batch cycle time
- ! Dry mixing time
- ! Wet mixing time
- ! Granulation time
- ! End point value
- ! Various faults if any during cycle

## R & D

SAIZONER Mixer granulator's can be offered in 10Ltrs., 25Ltr. and 50Ltr. for R&D or Pilot Plants. The process parameters derived in the Lab/Pilot plant scale machines can be scaled up into production machines. These machines can also be offered with PLC'S with or without endpoint detection.

## DOCUMENTATION

SAIZONER Mixer Granulator comes along with all documents like Design Qualifications (DQ), Installation Qualifications (IQ) and Operational Qualifications (OQ) as a part of standard documentation package.



# SAIZONER

Integrated Processing  
by Versatile Saizoner  
mixer Granulator

## GENERAL

All internal and External surfaces of Mixing Bowl, Mixing Bowl cover, Granulator, Agitator and Discharge Chute are constructed in SS 304/316.

All Non-Contact parts are in SS 304.

All MS Parts are Epoxy painted.

All Parts can be easily dismantled and cleaned.

All Pneumatics are pre tubed.

All Gaskets are [ Teflon / Silicon].

Bowl surface finish is 0.3RA (inside / outside).

## OPTIONAL

- ! Jacketed Models
- ! Vacuum Charging
- ! Gravity Charging
- ! Mechanical Seals
- ! Binder Spraying Systems
- ! CIP / WIP Systems
- ! Vacuum Drying
- ! Scada Solutions



## SAIZONER DRYER

The drying of Pharmaceuticals (Formulations and Bulk Drugs) is a controlled, channelised process in a quest to achieve product homogeneity, fluidity, stability by lower heat transfer, clean & hygienic air medium using pneumatics, superior MOC, proven manufacturing expertise and application of cGMP at all stages.

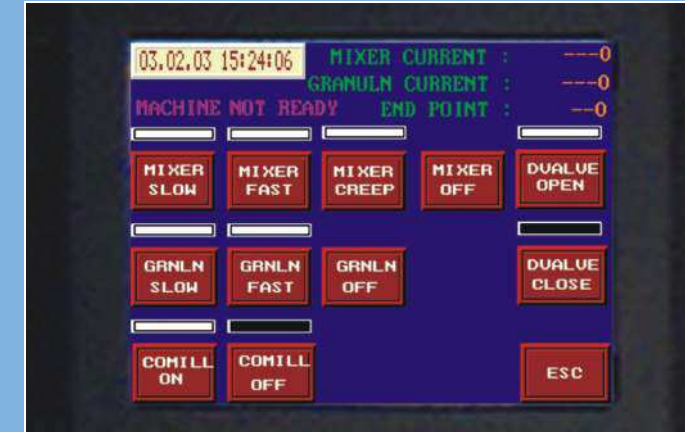
## SALIENT FEATURES

- ! Single equipment for Mixing-Granulating-Drying.
- ! All Saizoner process advantages of Granules Manufacturing.
- ! Drying under vacuum, at lower temperature with solvent recovery system.
- ! Resultant product is superior in quality due to low attrition, lower drying temperature and time.
- ! CUIP system included enhancing cGMP, reducing product change over time.

## OPTIONALS

PLC control with printer.

Turnkey with hearing, vacuum and solvent recovery system.



## CAPACITY

- ! 25 Liters
- ! 50 Liters
- ! 100 Liters
- ! 150 Liters
- ! 250 Liters
- ! 300 Liters
- ! 400 Liters
- ! 600 Liters
- ! 700 Liters
- ! 800 Liters
- ! 1000 Liters
- ! 1200 Liters
- ! 1400 Liters

