

Better Solutions Since 1947





## **The HSMG**



Knowledge. Execution. Support.

#### About Gansons

Founded in 1947, Gansons is one of the world's oldest family-owned process equipment manufacturer. Through the course of our history, we have been at the forefront of industrial innovation. Today, over two billion person-hours of experience shape and refine every Gansons machine and service.

Gansons, an ISO 9001:2008 certified company, has multiple facilities across India with headquarters in Thane (near Mumbai). We also have offices in New Delhi, Kolkata, and Chennai. We have manufacturing facilities in Thane, Digha, and two in Nashik with combined floor space of over 150,000 square feet.

Gansons maintains our own Research and Development facility in Thane to drive product innovation. This is supported by close relationships with leading academic institutions.

We also have a global network of agents to support our clients from over 30 countries.

Our commitment to excellence is built on our values of Passion, Perseverance and Perfection.

To quote one of our customers: "When you buy Gansons, you buy peace of mind."

#### **Customer Support**

At Gansons, we recognize that our clients need to maximize their ROI over the entire lifecycle of ownership. For our clients, machine downtime is not acceptable.

To support our clients, Gansons maintains a dedicated team of 25 service engineers.

#### Technical support and repair

Live and immediate technical support available using all major communication tools.

Local service engineers available in selected locations.

Standard on-site response time:

- India: 24 hours
- Globally: 72 hours (some conditions may apply).

Installation and commissioning supervision is done by a single person for a seamless experience.

All of our vendors are contractually required to adhere to the same service standards.

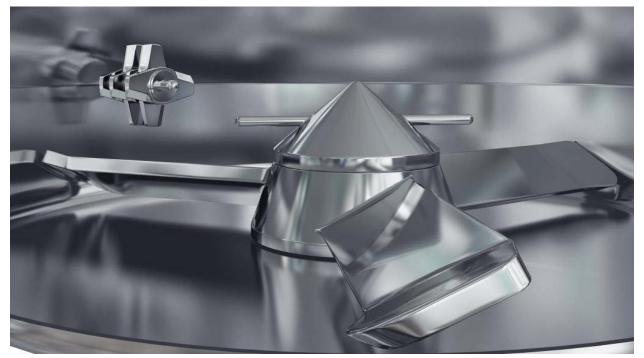
#### Value added services

We offer our clients value-added services so they can run their machines with the highest efficiency over time.

- Operator training programs.
- Process optimization and validation.
- Annual maintenance contract.
- Machine upgrade consultations.

### The Impeller and Chopper

Optimal dry blending and wet granulation for assured high-density wet granulate whose quality can be validated.





The impeller design accelerates premixing through a pronounced vortex movement and powder recirculation.

Optimized diffusion, convection and 3D shear--regardless of bulk densities-results in the best ingredient micro- and macro-mixing and rapid granule growth .

The impeller's close tolerance manufacture reduces material build-up walls of the bowl.

Cylindrical process vessel with inverted conical top enhances vortex flow for recirculation of ingredients--optimizes blending and tumbling.

For the processing of temperature sensitive products, a jacketed bowl is incorporated to circulate fluids.

Complementing the main impeller; the modular, staggered chopper, ensures:

- · Oversized agglomerates are effectively de-lumped/distributed,
- Binder fluid is evenly distributed and
- Granules are ideally compacted.

The modular chopper blade enables the most surface interaction in highest peripheral velocity zone.

The chopper height allows batch sizes as low as 40% of nominal maximum capacity.

The **HSMG** Operates in Internationally Regulated Plants.



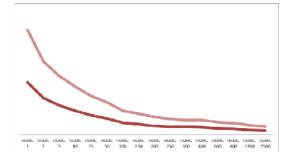


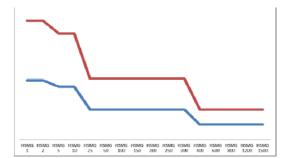


MHW Ministry of Health and Welfare (Japan's equivalen of the FDA)



### Scalability Defined. Predictable.





The Gansons HSMGs have small footprints that provide spatial setup flexibility in production-suite layouts.

### End Point-Detection Precise and accurate for a long time.

Current (Amperage), Time, Power and Torque are accurately monitored for precise and accurate end-point detection.

The bevel helical gear drive used in the Gansons production **HSMG** wears less over time and is more efficient than the worm gear drives used by other RMG manufacturers. This results in more reliable end-point detection over a longer time period.

# Cleaning and Validation cGMP compliant. Safe.

The proprietary Gansons IMPELIFT\* system raises the bottom impeller for easy cleaning—eliminates the need to remove the main impeller and reduces handling.

Easily dismantled chopper eases of cleaning and enables thorough cleaning validation.

Unique pneumatic swivel lid increases operator safety and ease of set-up.

WIP arrangement with spray balls and inbuilt pumps that are synchronised with the IPC/PLC.

Air-purged Duo Seal system on Impeller/Chopper impedes powder/granulate entry and reduces cross contamination.

Comprehensive DQ/IQ/OQ documentation for regulatory compliance is provided.

Increased operator safety with unique pneumatic swivel lid and Lockout-Tagout safety protocol.

### Automation and Controls State of the Art.

IPC/PLC systems with:

- Recipe management.
- · 21CFR11 record keeping.
- Process visualization.
- Mixing/granulation sequential control.
- Optional SCADA system for integration with other granulation equipment.



**IMPELIFT** system



Duo Seal system

Certifications





Drawn from our knowledge and experience manufacturing mixers for all application types for over 50 years, the Gansons **HSMG** is designed and built to address today's particular mixing-granulation challenges.

The Gansons *HSMG* is uniquely distinguished by its:

- Processing quality and efficiency;
- Accurate end-point detection;
- cGMP-compliant safe cleaning and validation;
- Advanced automation with regulatory compliance controls; and
- Predictable scalability.

The Gansons *HSMG* is a proven performer that leaves nothing to chance.



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