



STEAM STERILIZER

Natural Steam Sterilization for Food Safety &
Quality Assurance



Steam Sterilizer Manufacturer & Supplier | India

ENGINEERING THE FUTURE OF PROCESSING

www.millnest.com

PRODUCT OVERVIEW

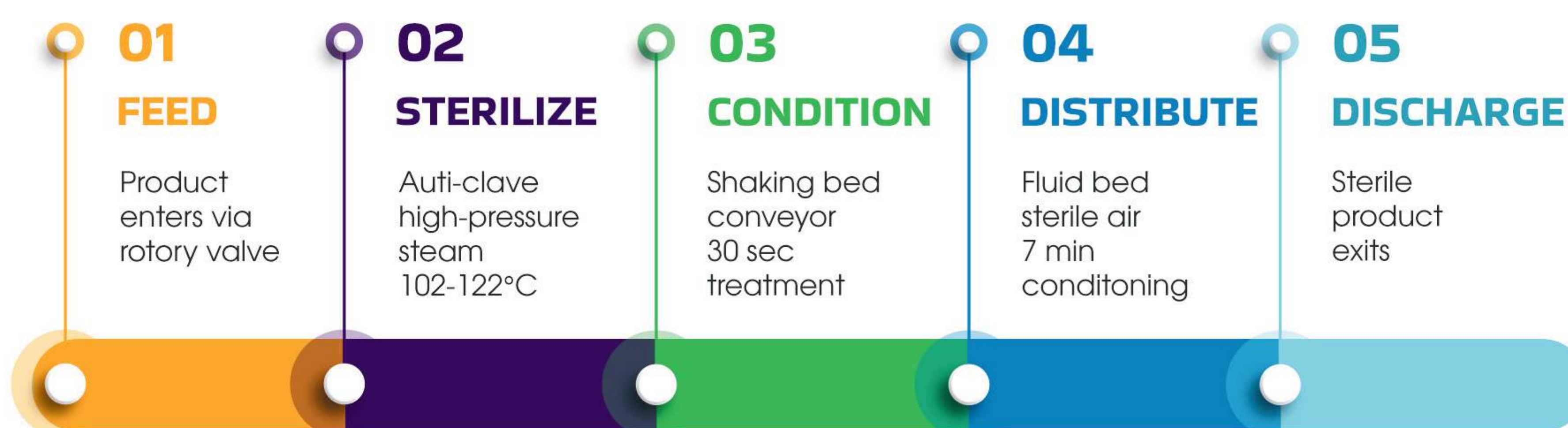


What is a Steam Sterilizer?

A continuous HT-ST (High Temperature-Short Time) steam decontamination system that achieves microbial reduction without compromising product quality. Pure steam treatment (20-40 seconds at 102-122°C) combined with sterile air drying eliminates pathogens while preserving volatile oils, color, flavor, and nutritional values—offering natural sterilization superior to chemical fumigants or irradiation.



How It Works



Original Line Components

Recommended wear & service components:



ROTARY VALVES

Self-cleaning pressure seals



SHAKING BED

Conveyor elements



VARIABLE FREQUENCY DRIVE

varies motor speed



PLC

controls machines using programmed logic.



Fast-moving critical spares supported

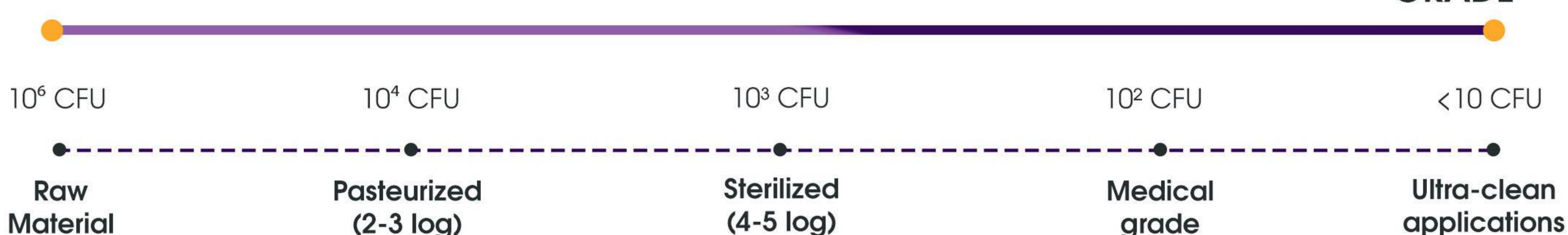


Genuine parts help maintain process stability

Material Capability

CONTAMINATED

PHARMACEUTICAL GRADE



Reduction Level: **Application dependent; validated per product and protocol**

Process Time: **Sterilization and conditioning time are system and product dependent**

Temperature Exposure: **Product exposure is managed through process settings and air handling design**



SPECIFICATIONS & APPLICATIONS



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Technical Specifications — MST Series

Model	Capacity (kg/hr)	Steam Temp (°C)	Process Time (s + min)	Footprint L x W x H (m)
MST-500	500 kg/hr	102–122°C	30 sec + 7 min	8.0 x 3.5 x 4.5 m
MST-1000	1000 kg/hr	102–122°C	30 sec + 7 min	10.0 x 4.0 x 5.0 m
MST-2000	2000–4000 L	102–122°C	30 sec + 7 min	12.0 x 4.5 x 5.5 m
MST-3000	4000–6000 L	102–122°C	30 sec + 7 min	14.0 x 5.0 x 6.0 m

Note: Specifications are indicative and may vary with material characteristics, feed condition, target particle size, selected configuration, and the connected airflow/collection system where applicable. Footprints are approximate and can change with inlet-outlet orientation, drive arrangement, safety/accessories, and line integration; final sizing should be confirmed through application data or trials.



Construction:
SS316L pressure vessel,
GMP-compliant

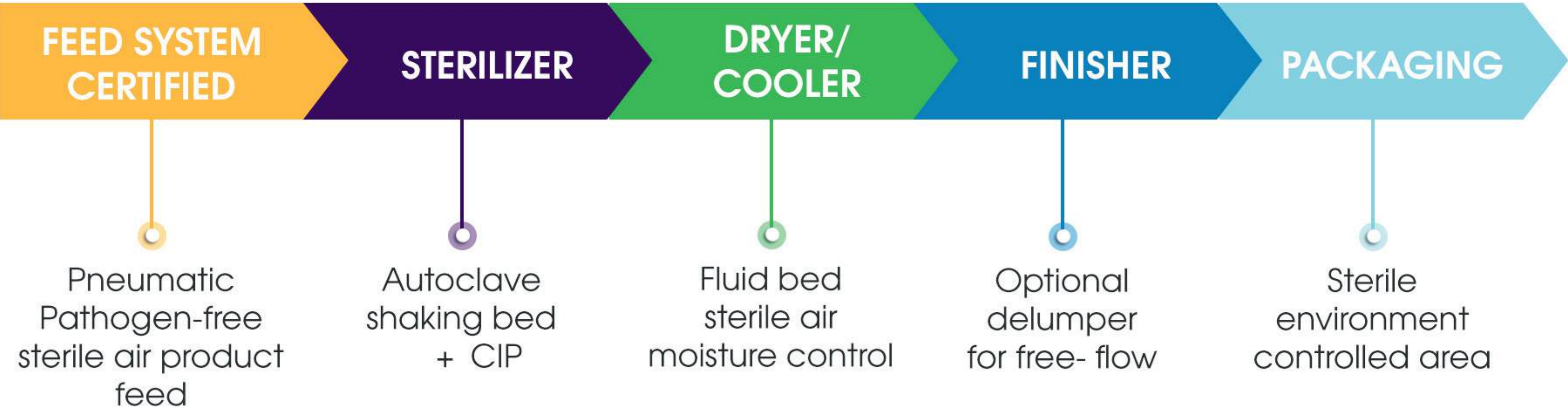


Features:
Automatic CIP system,
PLC control with HACCP data logging



Drying:
Fluid bed with sterile
HEPA-filtered air

Integrated Sterilization System



Turnkey Solutions Available — Sterile pneumatic handling to certified packaging room integration

Applications

 SPICES	 HERBS & BOTANICALS	 SEEDS & GRAINS	 SPECIALTY
Turmeric	Medicinal herbs	Sesame seeds	Dried vegetables
Chili powder	Ayurvedic botanicals	Flax seeds	Dehydrated onion
Black pepper	Oregano	Quinoa	Dehydrated garlic
Cumin	Basil	Chia seeds	Nuts & almonds
Coriander	Moringa	Wheat	Protein powders
Paprika	Herbal teas	Rice	Specialty ingredients





MillNest Originals

Refurbished Equipment Program

Select machines rebuilt under MillNest standards. Each unit is inspected, restored with genuine parts where required, and function-tested for dependable operation. Availability depends on incoming equipment and rebuild scope.

- ✓ Warranty as per rebuild scope
- ✓ Typically shorter lead times
- ✓ Spares and service support
- ✓ Rotor sets as per scope

Equipment Buy-Back / Trade-In Options

Upgrade Pathways for Existing Installations

MillNest evaluates eligible equipment and recommends retrofit, rebuild, or replacement routes based on condition, application needs, and logistics feasibility.

- ✓ Evaluation-led recommendation
- ✓ Trade-in or buy-back options (case dependent)
- ✓ End-to-end coordination support

Spare Parts & Maintenance

Spare Parts & Maintenance Lifecycle Support	Planned Maintenance Guidance
Recommended spares (rotor elements, screens, bearings, liners) aligned to your configuration	Preventive maintenance plans and inspection checkpoints to help maintain stable output

MillNest Academy

Process Intelligence That Strengthens Processing

Structured resources and application guidance to help teams run consistent cutting outcomes: blade selection logic, clearance baselines, sampling checks, and changeover discipline.

- ✓ academy.millnest.com

Ready to Discuss Your Requirements?

Whether establishing a new facility, expanding capacity, or optimizing an existing line — MillNest supports equipment selection, system integration, and commissioning aligned to your product and plant reality.



Contact Us :

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Quick Decision Guide

- Need coarse to fine grinding with high throughput - **Hammer Mill (MHAM)**
- Need ultra-fine powder with tight cut control - **Air Classifying Mill (MACM)**
- Need one mill for multiple products - **Universal Mill (MUNI)**
- Need fibrous size reduction by cutting, not impact - **Cutter Mill (MCUT)**
- Need to break lumps and restore flow, not grind - **Delumper (MLUM)**
- Need uniform dry blending of free-flowing powders - **Ribbon Blender (MRBL)**
- Need fast-cycle mixing, trace ingredient distribution, or liquid addition - **Paddle Blender (MPBL)**

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