LABORATORY SCALE MICRONIZER® JET MILL
The Sturtevant Micronizer® utilizes a unique fluid energy grinding system to generate particle-on-particle impact. The Micronizer® grinds and classifies powders to micron and sub-micron sizes in a single operation, in a single grinding chamber using compressed air or gas.

A proven performer in thousands of installations around the world, the Micronizer® processes a countless variety of materials throughout the food, chemical, ceramic, mineral, and pharmaceutical industries.

**Predictable Performance**
- 1000+ installations backed by Sturtevant reliability
- Sole-source responsibility with complete systems availability

**Product Quality**
- No heat build-up: process heat sensitive materials
- Minimized product contamination:
  - A variety of specialty ceramic; low carbon steels, and polymeric liners available for adherent or abrasive materials
  - No media contamination
  - No lubrication contamination
- Uniformity: Produces spherical particle shape for reduced agglomeration

**Safety**
Processes materials susceptible to oxidation or explosivity: easily adapts to inert gas and super-heated steam operations

Engineered to meet sanitary demands with efficiency, the Micronizer® combines high performance and Sturtevant dependability with these benefits and sanitary features:

**Simple Operation**
- Preassembled bench top design
- Grinds and sizes in one step; no additional classifier needed
- Operates in any orientation

**Low Maintenance**
- No moving parts
- No lubrication required
- Designed for easy access and cleaning
- Robust design

![Diagram of Micronizer](Image)
QUALIFICATION MICRONIZER®
Capacity of 0.12-1.0 lbs/hr (1-7 grams/min) Depending on Product Fineness

Item Q2 Consisting Of The Following Components:

- Very Few Parts for Easy Disassembly or Autoclaving
- Complete Accessibility to the Internal Material Grinding Chamber
- Peripheral Feed Entry with Anti-Blowback Design
- 316 Stainless Steel Construction for Product Contact Parts
- Pharmaceutical Finish to Product Contact Surfaces
- Quick-Opening Stainless Steel Thumb Knobs
- Replaceable Venturi & Feed Nozzle Allows Wide Range of Feed Size
- Built-In Jet Nozzles
- Integral Sanitary Feed Funnel Does Not Require Fasteners
- FDA Accepted Polyethylene Tubing for Compressed Air with Quick-Release Fittings
- Large Mill Chamber and Oversized Outlet Reduces Clogging
- Mini Exhaust Air Filter Bag with Low Emission PTFE Membrane for Maximum Product Collection & Dust Containment
- Portable Stainless Steel Table Top Base with Convenient Carrying Handles
- Micronizer Controls Consist of Valves to Regulate Feed & Grind Air and Flush-Mounted Gauges to Monitor Air Pressures
- Electro-Magnetic Vibratory Feeder with Stainless Steel "V" Trough (1Ph/60Hz/110 VAC), Feeder Controller in NEMA 1 Enclosure
- Vibratory Feeder Regulates Feed Rate to Micronizer and Controls Product Size

Option A:
Sanitary Product Collector, Mini Dust Sleeve & Shaker:
Improved Dust Containment for Small Batches of Powder with Minimal Sample Loss

- 316 Stainless Steel Construction with Pharmaceutical 20 Ra Micro-Inch Finish for Product Contact Parts
- Transition Hose from Q-Micronizer to Collector with Quick-Release Clamps
- Mini Exhaust Air Filter Sleeve with Low Emission PTFE Membrane for Maximum Product Collection & Dust Containment
- Sanitary Collection Bottle (0.5 Liter) with Large Opening for Easy Product Recovery and Cleaning
- See-Thru Safety Housing for Dust Sleeve with Exhaust Pipe for Connection to Plant Nuisance Vent (8 CFM) or to an Included Secondary Air Filter
- Rod Connected to Top of Dust Sleeve Through Top of Housing Allows Manual Shaking of Dust Sleeve Before Opening Housing
- Table Top Support Stand, Independent of Q-Micronizer Base
- Pressure Gauge to Monitor Operating Pressure and Indicate the Need to Replace the Secondary Cartridge Air Filter (Included)
- Safety Pressure Relief Valve
2" MICRONIZER® - OPEN MANIFOLD DESIGN
Capacity of 0.7-2.0 lbs/hr (5-15 grams/min) Depending on Product Fineness

Item OM2 Consisting Of The Following Components:

- Open Manifold Design with Complete Accessibility to the Internal Material Grinding Chamber & Compressed Air Chamber for Easy Cleaning. Disassembles in Minutes using Large Wing Head Fasteners. Easy Jet Ring Removal
- 316 Stainless Steel Construction for Product Contact Parts
- Replaceable Stainless Steel Jet Wall, Top Plate Liner, Bottom Plate Liner, Venturi & Vortex Finder
- Single Product/Air Discharge Design with O-Ring Seals
- Round Feed Funnel & Jet Wall with Built-In Jet Nozzles
- Thumb Screw Adjustment for Feed Nozzle, Vortex Finder & Venturi
- Quick-Release Connections for Feed Funnel, Bag Holder & Compressed Air
- **Option A**: Alumina Ceramic or Tungsten Carbide Construction for Jet Wall, Top Plate Liner, Bottom Plate Liner, Venturi & Vortex Finder, instead of Stainless Steel
- **Option B**: Cyclone & Container

**Option C:**
**Portable Stainless Steel Table Top Base**
- With Convenient Carrying Handles and Built-In Air Controls
- Controls for Micronizer Consist of Valves to Regulate Feed & Grind Air and Flush-Mounted Gauges to Monitor Air Pressures
- Polyethylene Tubing for Compressed Air with Quick-Release Fittings

**Option D:**
**Vibratory Feeder with 316 Stainless Steel “V” Trough**
- To Regulate Feed Rate and Control Product Size
- Electro-Magnetic Feeder Vibrator with Controller in NEMA 1 Enclosure (1Ph/60Hz/115 VAC)
- Material’s Bulk Density is Required to Confirm Feed Capacity

**Option E:**
**Volumetric Screw Feeder for Great Feed Rate Accuracy**
- 316 Stainless Steel Helix and Feed Tube
- Vinyl/Polyethylene Flexible Wall Hopper, 0.10 Cu. Ft.
- Variable Speed Controller, Feeder Mounted in NEMA 1 Enclosure Turn-Down Ratio 20:1
- 1/45 Hp, TENV Motor (1Ph/60Hz/110 or 220 VAC)
- Material’s Bulk Density is Required to Confirm Capacity and Screw Size
- **Optional** Hopper Extensions or Hopper Cover Available

**Option F:**
**316 Stainless Steel Conical Bag Holder**
- 1 Liter Collection Container
- Flexible Exhaust Hose
- One Exhaust Air Filter Bag for Small Batch Runs. Exhaust Bag has Low Emission PTFE Membrane for Maximum Product Collection & Dust Containment
- Includes Stainless Steel Table Top Support Stand

**Option G:**
**Mini Exhaust Bag for Small Batches**
- 316 Stainless Steel Bag Adaptor to Connect Micronizer Directly To Small Exhaust Bag to Maximize Product Collection
- One Low Emission Air Filter Bag with PTFE Membrane for Maximum Product Collection & Dust Containment
- **Note**: Batch Size Should Not Exceed 30 Grams When Using Small Bag
# 2” MICRONIZER® - SANITARY USDA ACCEPTED DESIGN

Capacity of 0.7-2.0 lbs/hr (5-15 grams/min) Depending on Product Fineness

## Item SDM2 Consisting Of The Following Components:
- **Sanitary USDA Accepted Design for Complete Accessibility to the Internal Material Grinding Chamber & Compressed Air Chamber**
- **Sanitary USDA Accepted Design has Built-In Jet Nozzles, No Set Screws and No Liners**
- **Disassembles in Minutes Using Hand Fasteners (No Tools Required)**
- **316 Stainless Steel Construction for Product Contact Parts; 304 Stainless Steel for Clamps**
- **Pharmaceutical 20 Ra Micro-Inch Finish to Product Contact Surfaces**
- **Top Discharge Design with FDA Accepted Gaskets & O-Ring Seals**
- **Sanitary Round Feed Funnel & Jet Wall with Built-In Jet Nozzles**
- **Ladish Quick-Release Flanges for All Connections, i.e. Feed Funnel, Discharge & Compressed Air**

## Option A:
**Portable Stainless Steel Table Top Base**
- **304 Stainless Steel Construction with Carrying Handles**
- **Built-In Air Controls Controls Consisting of Valves to Regulate Feed & Grind Air and Flush-Mounted Gauges to Monitor Air Pressures**
- **FDA Accepted Silicone Hoses for Compressed Air**

## Option B:
**Vibratory Screw Feeder With Stainless Steel “V” Trough**
- **To Regulate Feed Rate and Control Product Size**
- **Electro-Magnetic Feeder Vibrator with Controller in NEMA 1 Enclosure (1Ph/60Hz/115 VAC)**
- **Material's Bulk Density is Required to Confirm Feed Capacity**
- **Pharmaceutical Finish to Product Contact Surfaces.**

## Option C:
**Volumetric Screw Feeder (Single Screw)**
- **FDA Accepted Vinyl Polyethylene Flexible Wall Hopper (0.10 ft³)**
- **1/45 HP, TENV Motor (1Ph/60Hz/115VAC)**
- **316 Stainless Steel Screw & Feed Tube with Pharmaceutical Finish**
- **Hopper Cover with Handle**
- **Variable Speed Controller, Feeder Mounted in NEMA 1 Enclosure Turn-Down Ratio 20:1**
- **Optional Extension Hopper in NEMA 4 Enclosures**

## Option D:
*(See Open Manifold Design Option F for Illustration)*
**316 Stainless Steel Conical Bag Holder**
- **1 Liter Collection Container**
- **Flexible Exhaust Hose**
- **One Exhaust Air Filter Bag for Small Batch Runs. Exhaust Bag has Low Emission PTFE Membrane for Maximum Product Collection & Dust Containment**
- **Includes Stainless Steel Table Top Support Stand**

## Option E:
**Sight Glass Assembly (Contains Dust)**
- **Couples Screw Feeder to Micronizer Feed Funnel, Allows Feed Venturi Aspiration & Contains Dust in Case of Blowback**
- **316 Stainless Steel Construction**
- **Sanitary 20 Micron Feed Filter Cartridge with Adapter**
- **Sight Glass to View Powder Transfer from Feeder to Micronizer**
- **Triclamp Quick-Release Flanges for all Connections**

## Option F:
**Mini Exhaust Bag for Small Batches**
- **316 Stainless Steel Bag Adaptor to Connect Micronizer Directly To Small Exhaust Bag to Maximize Product Collection**
- **One Low Emission Air Filter Bag with PTFE Membrane for Maximum Product Collection & Dust Containment**
- **Note: Batch Size Should Not Exceed 30 Grams When Using Small Bag**
PROVEN PERFORMERS

For most dry material size reduction or separation needs, Sturtevant’s extensive line of products can meet your requirements.

Micronizer®: Jet mills dry particles to sub-micron size; some models USDA-accepted.

Powderizer®: Air-swept impact mill with integral classifier; grinds to low-micron range with tightest particle size distribution.

Simpactor®: Centrifugal, pin-type impact mill; reduces low-to-medium-density materials to 50-200 mesh.

Air Classifiers: Air streams separate fine and coarse particles with mechanical rejector for product quality assurance.

Hammermill: Versatile, perfect for friable materials; easy access for maintenance or inspection.

Roll Crusher: Best-suited for controlled reduction of friable materials; minimal fines.

Jaw Crusher: Ideal for coarse and intermediate crushing; minimal fines production.

Screening Machines: Separates powders into several fractions for multiple products or eliminating dust and oversized particles.

Sample Grinders: Disk type grinder for very fine work at small throughput rates.

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