




R&D SOLID DOSAGE PROCESSING SUITE



PHARMX® PX1 - HIGH-SHEAR GRANULATING MIXER,
GRANUMILL® JR. - SIZE REDUCTION MILL,
MAGNAFLO® 0002 - FLUID BED SYSTEM

**FLUID
AIR**

**Experts in Solid
Dosage Technology**

A Division of *Spraying Systems Co.*



A COMPLETE SOLID DOSAGE SUITE FOR YOUR R&D NEEDS

DESIGN FLEXIBILITY ENSURES PEAK PERFORMANCE
FOR YOUR SOLID DOSAGE PROCESSING SYSTEMS

At Fluid Air, we understand the need for innovative new products on the market. The success of your R&D depends on having reliable equipment to work with, which is why we have developed an entire R&D suite of solid dosage processing equipment. Fluid Air is dedicated to helping you take on even the most complex projects every step of the way.

Discover the next generation of drug development.

BENEFITS:

- All three systems work cohesively to produce a more consistent product
- Custom configurations available to meet your process requirements
- Critical factors remain consistent to simplify scale-up
- Configurable for contained processing applications

Improve Performance with Spraying Systems Co. Spray Technology

Equip your machine with state-of-the-art Spraying Systems Co. spray technology, including anti-bearding, in-process adjustable top-spray granulation nozzles and lances, fluid bed nozzles, and Wurster coating nozzles for superior liquid delivery and precision tablet coating.



PHARMX® PX1 HIGH-SHEAR GRANULATING MIXER

SIMPLIFIED SCALE-UP & VALIDATION

The PHARMX® PX1 high-shear granulator is a fully customizable bottom-driven mixing system engineered to provide homogeneous mixing and efficient granulation. Equipped with an in-bowl, bottom-driven mixing impeller and side-mounted chopper, the PX1 ensures uniform dry mixing and granulation.

FEATURES & BENEFITS

- Efficient granulation — 30-90% bowl capacity
- Homogeneous mixing for wet and dry granulation
- Robust variable speed side-mounted chopper and bottom-driven mixing impeller drive systems for maximum energy transfer
- Consistent impeller tip speed for all models ensures easy scale-up
- Process control software maximizes operating flexibility

PHARMX® PX1 SPECIFICATIONS

Total Bowl Volume (L)	1, 2, 4, 6, 8.4
Impeller Speed Range (RPM)	5 - 1107
Impeller Power (HP)	0.5 - 1
Chopper Speed Range (RPM)	1500 - 9750
Chopper Power (HP)	.25

OPTIONS

- Peristaltic pump & nozzle liquid feed
- Product temperature
- Side discharge/vacuum unload
- Torque sensor



GRANUMILL® JR. SIZE REDUCTION SYSTEM

EASY MAINTENANCE & CLEANING

Our GRANUMILL® Jr. size reduction system offers a solution for milling, grinding, and comminuting both wet and dry materials. A cost-effective combined system with low-speed screening and high-speed impacting customized to meet your unique processing challenges.

FEATURES & BENEFITS

- Three interchangeable rotor designs available (square/flat, round, and knife)
- GMP design and quick-release housing allow entire mill to be broken down in minutes for cleaning
- Virtually identical tip speed from R&D through production scale ensures easy scale-up and validation
- Approved for USDA 3A applications including dairy processing
- Compact design

GRANUMILL® JR. SPECIFICATIONS

Speed (RPM)	500 - 10000
Finished Particle Size (micron)	175 - 2000
Throughput ((lbs/kg)/hour)	0.2 - 60 / 0.1 - 25

OPTIONS

- Screw feeder
- Contained discharge
- Aseptic & cryogenic milling



CONFIGURABLE TO MEET YOUR PROCESS REQUIREMENTS

Fluid Air's MAGNAFLO® Model 0002 fluid bed system is designed to maintain critical scale-up factors to our largest available units. Each system operates with nearly identical bed depths, air velocities, and air ratios, greatly simplifying the scale-up of product from one unit to the next.

FEATURES & BENEFITS

- Modular drying, top-spray granulation, and Wurster coating capabilities
- Easy-to-use controls, adjustable touch screen and data logging
- Precise, in-process air flow and temperature controls for improved batch accuracy
- Effortless product loading, discharge, and bowl cleaning with tilted bowl and inflatable seals
- Clear filter chamber with easy filter change-out, patented reverse-pulse cleaning for maximum cleaning efficiency

MAGNAFLO® MODEL 0002 SPECIFICATIONS

Standard Bowl Volume (L)	2*
Max. Granulating Capacity (L)	2*
Max. Coating Capacity	1.8**
Reduced Volume Bowl (L)	0.5
System Height (inches/mm)	72/1829
System Width (inches/mm)	32/813

* Total bowl volume is 6.7 liters. Depending on the physical characteristics of the product being processed, up to 5 liters of material can be dried/top spray granulated

** Extended Wurster partition is available for the 2-liter bowl. Depending on the physical characteristics of the powder/bead used for coating, up to 4 liters of product can be coated.

OPTIONS

- Fine powder processing
- Hot melt system
- High temperature
- Vacuum loading
- Humidification & dehumidification



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