

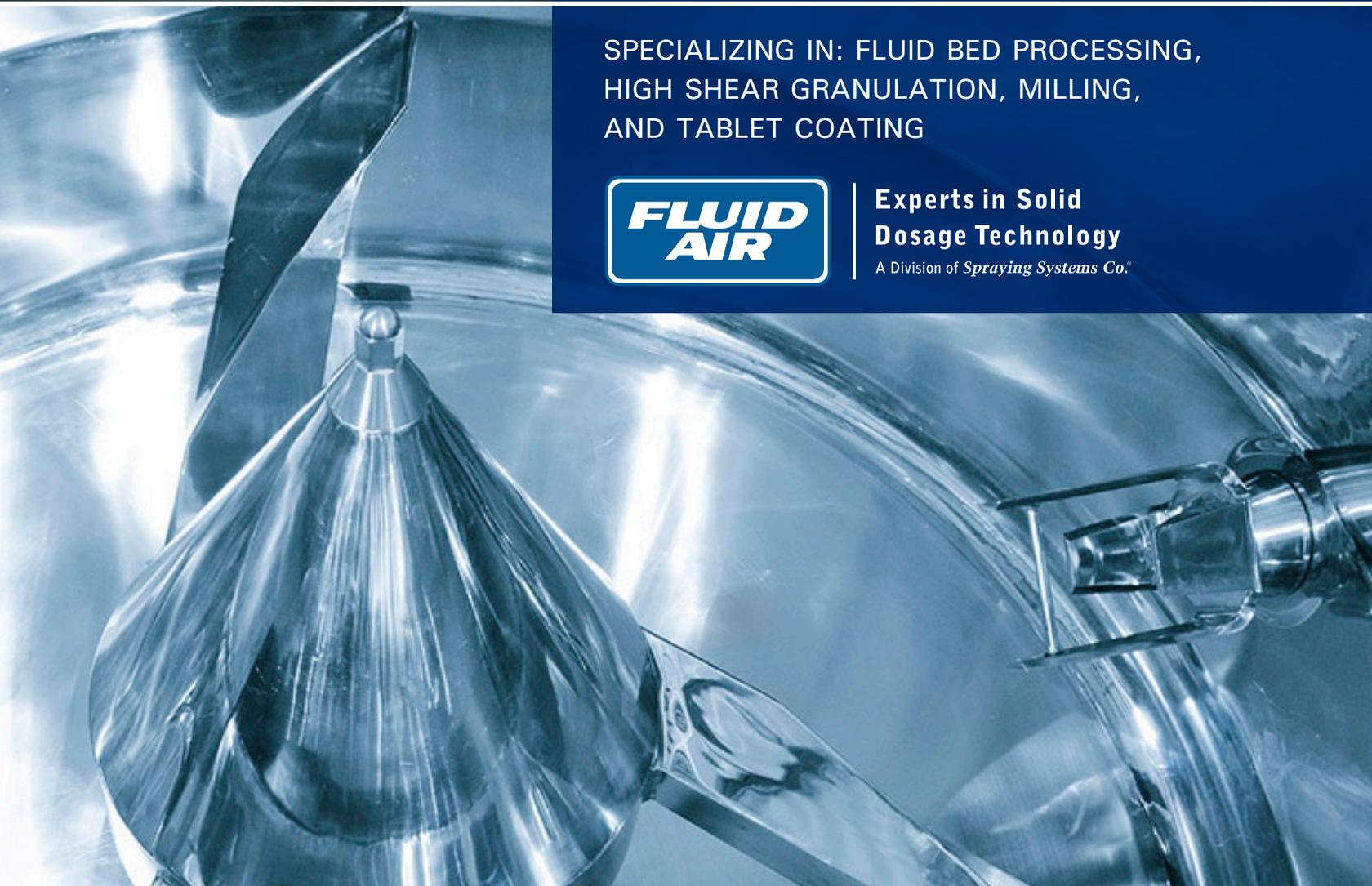
SOLID DOSAGE PROCESS EQUIPMENT

SPECIALIZING IN: FLUID BED PROCESSING,
HIGH SHEAR GRANULATION, MILLING,
AND TABLET COATING



Experts in Solid
Dosage Technology

A Division of *Spraying Systems Co.*





COMPLETE SOLID DOSAGE SOLUTIONS FOR PHARMACEUTICAL PROCESSING

CUSTOMIZE A SYSTEM TO MEET YOUR PROCESSING NEEDS

Fluid Air is a manufacturer of solid dosage processing equipment and controls for the pharmaceutical, nutraceutical, food, cosmetics, and fine chemical industries. From small research and development applications to full production scale, we offer custom-designed solutions to your solid dosage processing challenges. With these new technologies in hand, we are able to provide:

- The right combination of science and technology to dry, granulate, mix, coat, or mill
- Equipment available in production scale, pilot scale, and laboratory scale
- Fluid Bed Processors for drying, granulating, top-spray coating and bottom spray Wurster coating of powders, granules, beads and tablets
- Size Reduction Systems for wet or dry milling, impact and screening mill in one
- High Shear Granulating Mixers
- Engineering Services include project, field, process engineering, and retrofitting

APPLICATIONS

- Fluid Bed Drying/Granulating
- High Shear Granulation
- Wurster Coating
- Wet or Dry Milling
- Liquid Delivery Systems
- Mixing
- Tablet Coating

EFFICIENT, HOMOGENEOUS MIXING EVEN AT LARGER CAPACITIES

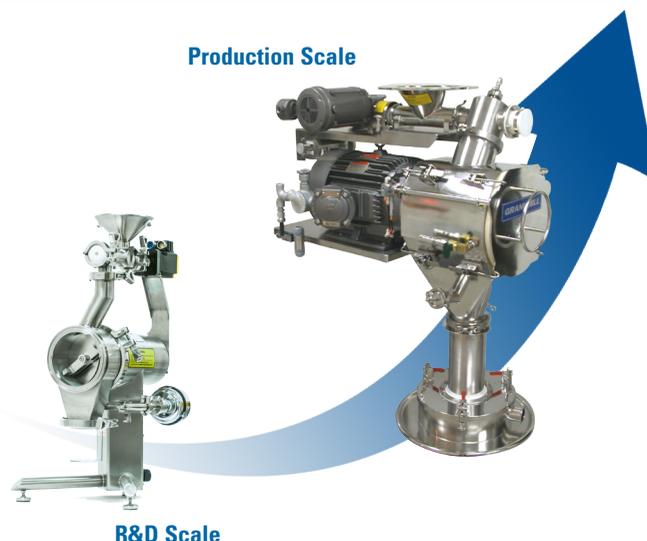
- Maximize working capacity up to 90%
- Mix, wet and granulate powders
- Variable speed operation of impeller and side-mounted chopper
- Jacketed bowls provide uniform heating and cooling of bowl
- Automate end points using power, torque, or combined means
- Lifiable tool system on production scale models
- Auto-cleaning and seal purging systems for easy clean-up
- One pot processors for special applications



GRANUMILL® IMPACT AND SCREENING MILLS

COST-EFFECTIVE, QUIET OPERATION – HAMMER & SCREENING MILL IN ONE SYSTEM

- Deagglomerate or grind powders
- Product containment options
- Maximize throughputs
- Tight particle size distribution profiles
- Classified under FDA SUPAC guidelines as both hammer mill & screening mill
- Minimize operating/product temperature
- Quiet operation
- Rotor blade types and tip speeds maintained for easier validation & scale up



MAGNAFLO®/MAGNACOATER® FLUID BED SYSTEMS
MODEL 0002 FLUID BED SYSTEM WITH ULTRASONIC ATOMIZING LANCE

IMPROVE QUALITY, REDUCE PROCESS TIME – CUSTOMIZE A SYSTEM TO YOUR UNIQUE PROCESS

- Superior granulation and spray distribution with "chandelier" spray delivery on production scale models
- Agitator system in bowl bottom eliminates dead spots when drying/granulating
- Plenum geometry provides improved air dispersal
- Even fluidization when coating (Wurster process)
- 3 filter options maximize product yields while minimizing process times
- Custom automated process end points
- Simplify scale up with bowl geometry design
- Vacuum conveying system
- MAGNALIFT option available for bulk material handling



IMPROVE COATING RESULTS WITH MODULAR AIR ATOMIZING MANIFOLDS

- Patent-pending internal recirculating guns for continuous flow
- Anti-bearding nozzles eliminate clogging
- Shut-off valve keeps liquid moving, reducing product build-up
- Custom GMP design configured for process area
- Precise, low-pulsation peristaltic pumps eliminate "dead-leg" liquid distribution
- Manual and automatic operation



Bulletin FA108

SERVICE & SUPPORT

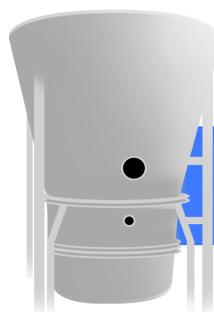
FIELD SERVICE

- Field service for troubleshooting, system installation, and integration
- Upgrading/automation of existing equipment
- Process control upgrades

VPN REMOTE SERVICE ACCESS

- Remote service, less costly than traditional field service visits
- Enables engineers to analyze and correct problems in real time via the internet

Malfunctioning/Inoperable System
(Identified by end-user/operator)



Remote Computer
(Accessible by Fluid Air service personnel only)



Secure Connection/Transmission
(Via integrated router)

Bulletin FA103

RETROFIT

UPDATE AND EXPAND THE CAPABILITIES OF BATCH EQUIPMENT AND CONTROLS

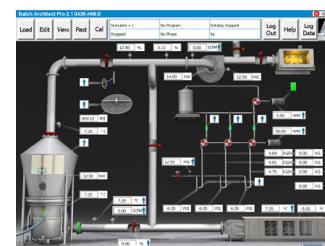
- Discuss options for upgrades and explore custom solutions
- Provide budgetary quotations/estimates
- Update spray nozzles
- Equipment conversion
- Add new functionality



Chandelier Spray



54700 Wurster Nozzle with Shutter



Batch Architect Pro™



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