

# Quadro® Comil®

## TABLET MANUFACTURING PROCESS

### BACKGROUND

Tablets are the most popular dosage form of medication. It is estimated that 80% of all pharmaceutical preparations are in the form of tablets.

Pharmaceutical companies worldwide have been successfully using the Quadro® Comil® for wet sizing after the mixer/granulator, dry sizing after the dryer, homogenous mixing, conditioning, and dispersion of pigments in the manufacture of tablets.

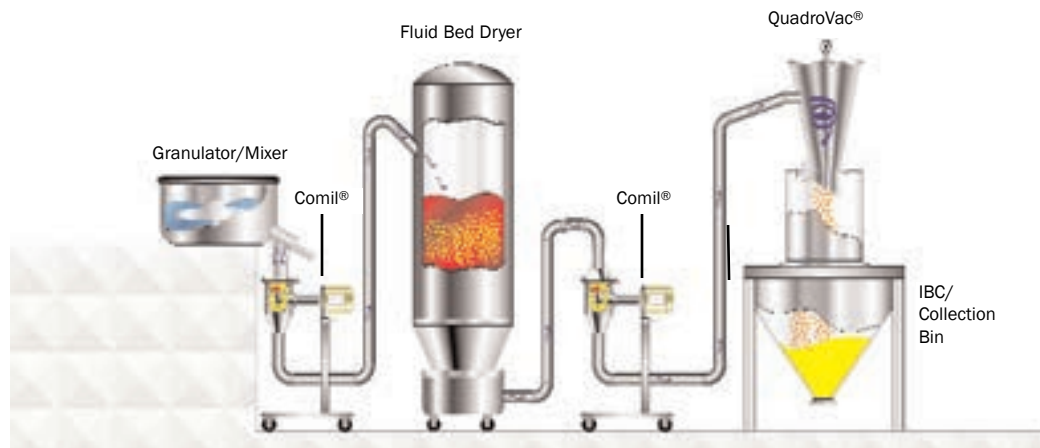
### SIZING FOR SUCCESS

The Versatile Comil® can be used for:

- Sizing Wet Granulation
- Sizing Dry Granulation
- Dispersing Pigment Homogenously
- Size Reducing Sugar
- Size Reducing Compacted Slugs (Direct Compression Method)
- Replacing less efficient types of size reduction equipment such as Hammermills and Oscillating Screen Mills - same class as oscillating mills in FDA SUPAC guidelines



U20 Quadro® Comil®



# QUADRO® COMIL®

## SIZING FOR SUCCESS IN TABLET PRODUCTION

In the tablet manufacturing process, powders such as lactose, the active ingredient, binders and water or solvent are mixed to form a wet mass. High shear mixers/granulators are often used to mix and granulate this wet mass. The resulting granules tend to lump. These lumps, when passed through a dryer, would not dry evenly. This causes uneven moisture content and some product may be damaged due to the excessive time required to completely dry larger lumps. The Comil® uniformly disperses the wet product for homogenous drying and process repeatability thus decreasing drying time and manufacturing costs.

After the dryer, the granules are size reduced with a Comil® to a specified particle distribution. Sizing after the dryer improves compressability and fluidity; two key factors in successful tablet pressing.

### COMIL® FEATURES

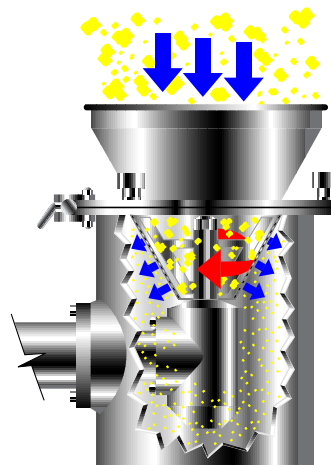
- *High Capacity - plug/flood feed can be directly connected to the granulator discharge*
- *Low heat, noise and energy - gentle, low speed operation*
- *Cost Savings - reduces drying time - eliminates moist centres and hard, over dried particles - low dust eliminates the need for costly dust containment devices*
- *Tight particle sizing - low percentage of fines even with fragile granulations - improves flowability and uniformity before the tablet press - fine tunes the bulk density for packaging*
- *User friendly design - quick tooling changeover, easy clean, low maintenance, flexible feeding conditions - manual, mechanical, or pneumatic (optimum results with plug feeding) - no metal to metal contact eliminates potential contamination*
- *Flexibility - interchangeable tooling available for sizing wet granulation, dry granulation, powder/compacted product delumping, and capsule breaking*

## TRY BEFORE YOU BUY

Determine the exact savings and improvements to your process with free product testing in our R&D Test Centre, or by trying a rental Comil® in your plant. Quadro offers complete engineering/design services to accommodate variable process conditions or requirements.

## QUADRO'S APPROACH

The infeed product falls into the conical screen chamber. A rotating impeller imparts a vortex flow pattern to the incoming material. The material is then forced to the screen surface by centrifugal acceleration ensuring continuous delivery into the "action zone" between the screen and impeller. In the "action zone" the material is sized and instantaneously discharged through the screen openings. The finished product is discharged at the bottom of the milling chamber. Particle size can be optimized by screen, impeller and speed selection.



### LOCAL REPRESENTATIVE



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