

# Quadro® Comil®

## TEFLON POWDER - DEAGGLOMERATION AND DISPERSION

### BACKGROUND/REQUIREMENT

A number of large, international chemical manufacturers approached Quadro with applications to deagglomerate and disperse wet and dry teflon powder products. In all cases an existing hammermill caused problems such as product over heating, fines generation, low capacity and screen blinding. The hammermill was just too intensive for this sensitive product and was also very difficult to clean and service. The manufacturers required:

- 1) Dispersion of Teflon Blends: To disperse various ingredients such as bronze, carbon glass, pigments and/or graphite fillers with a fine teflon powder at a rate of 3,000 lb/hr (1400 kg/hr). The ingredients had to be completely dispersed throughout the teflon powder base with no heat generation, product degradation or screen blinding.
- 2) Deagglomeration of Wet Teflon: To deagglomerate lumpy, 30% moisture, teflon lumps to a particle size of 14 to 18 mesh without creating excessive heat or screen blinding. Due to the alcohol solvent this product contained a large amount of oil, which made it even more heat sensitive.
- 3) Deagglomeration of Dry Teflon Powder: Large agglomerates (up to 6 inches or 15 cm) of dry teflon powder are created either in mixer or a dryer. It was required that these lumps be dispersed and that the teflon be returned to its original powder without further size reduction, heat or dust generation.

### COMIL® PERFORMANCE

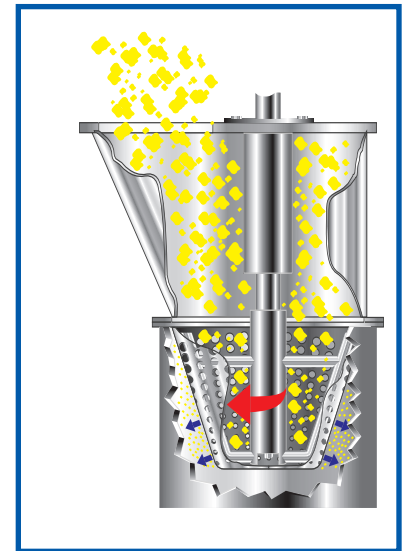
The Quadro® Comil® was able to carry out all three of the above applications without problems. The Comil®'s gentle grinding action was able to disperse and deagglomerate the various teflon products without degradation, dust, heat generation or screen blinding. The Comil® is also very easy to clean between batches which greatly assisted the manufacturing process.

### EQUIPMENT RECOMMENDATIONS

The model 196 Comil® is recommended for the above applications due to its ability to accept up to 6 inch (15 cm) lumps and its high capacity. Tooling is variable depending on the application and capacity ranges from 3,000 to 8,000 lb/hr (1400 to 3600 kg/hr). The model 194S and 197S Comil® are recommended for lower capacity requirements as well as for infeed products that do not contain very large lumps.

### SUMMARY

The Quadro® Comil® produces excellent results and dependability with all of the above applications. Several Comils® have been purchased to date and have been performing trouble-free.



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