

# Quadro Ytron®

## STREAMLINING TABLET COATING MANUFACTURING

### BACKGROUND/REQUIREMENT

A large international manufacturer of pharmaceutical tablets was experiencing problems with their tablet coating solution production process. The manufacturer employed a two tank mixing system; one to produce a pigment solution, the other to produce a gum-based solution. In the pigment production tank, the pigment powders were added to the surface of the liquid and an in-tank high shear mixer was used to incorporate the powders into a solution. This process was dusty and created numerous environmental and health concerns.

The other tank employed a traditional mixer to incorporate the gums. This resulted in the formation of lumps that required long periods of time in order to be broken apart, and a high percentage of waste when filtering the unhydrated product. The average batch time was 8 - 16 hours which caused a bottleneck in the tablet manufacturing process. As solvents were used, the entire production system needed to be explosion-proof.

### QUADRO'S APPROACH

To help solve these production problems, Quadro developed a system that employed the Quadro Ytron® Jet Mixer, the Quadro Vac®, the Quadro® Lift and a bottom entry magnetic mixer (see Figure 1). Powders were pneumatically conveyed into the tank, dust-free, by a special air-driven motor Quadro® Vac, thereby eliminating dusting and spark potential. The Jet Mixer, with explosion-proof electrics, rapidly incorporated both pigments and gums, lump-free. The bottom-entry, magnetic mixer was retained from the original design, as a means of keeping the solution in suspension, and to prevent settling. The Quadro® Lift enabled the mixer to be removed from the tank, creating system flexibility and permitting movement to other parts of the Facility, as required.

### SUMMARY

The Quadro® mixing system was supplied as a turnkey solution, and eliminated problems previously encountered by the manufacturer by preventing dusting and lump formations. Processing time was reduced to 1 - 2 hours, an 87% improvement when compared to the previous system.

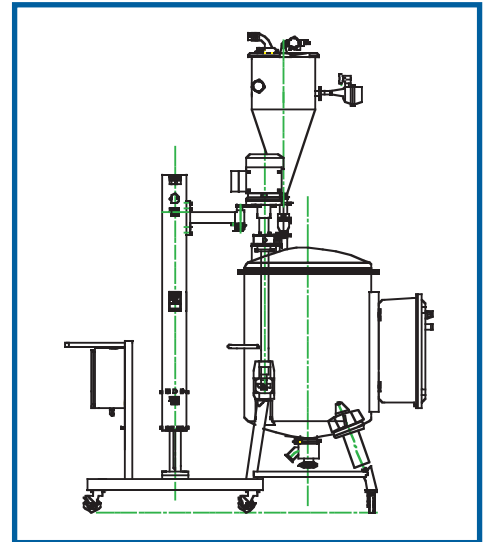


Figure 1



Tablet Coating System



**QUADRO**  
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MATERIAL PROCESSING

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