

# Quadro Ytron®

MANUFACTURING READY-TO-USE FROSTINGS

## BACKGROUND / REQUIREMENT

A large, international manufacturer of baking supplies approached Quadro to help find a solution to their ready-to-use frosting manufacturing process. The prepared frosting consisted of sugar, gums and flavors such as cocoa and vanilla which were dispersed into a solution of corn syrup and water. An eductor style powder disperser was being used to disperse the gums and flavors. The disperser did not effectively disperse the gums and some of the flavors without agglomerates causing increased batch times and often, re-work of the product. The in-tank mixer, a conventional agitator, was used to mix in the sugar and finish blending the ingredients from the eductor. This mixer had on-going maintenance issues due to the heavy-duty nature of the application. The shaft on the agitator bent or broke on a regular basis, causing the system to break down.

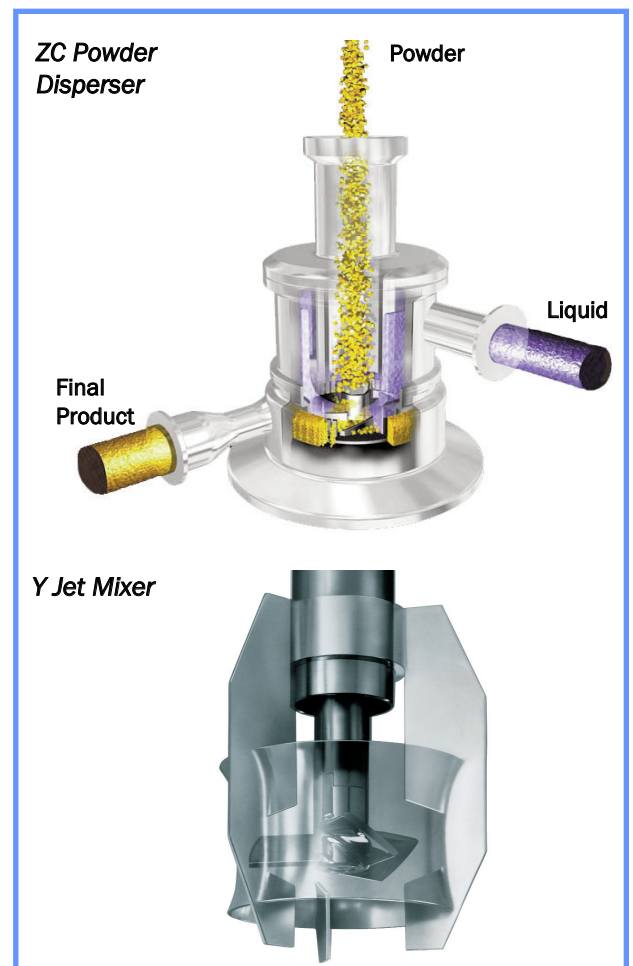
## QUADRO'S APPROACH

To help alleviate the problems experienced and achieve the consistent, reliable results the customer desired, a Quadro Ytron® Powder Disperser was employed for gum and flavor dispersion and a Quadro Ytron® Y Jet Mixer was employed to maintain a uniform blend in the mix tank. The dry powder blend of gum and flavors was drawn from the bag dump station into the Powder Disperser. The Powder Disperser incorporates a close tolerance high-shear slotted rotor/stator design. The rotor is designed to create a liquid ring generating significant vacuum in the reactor head. This vacuum ensures that powders are drawn into the reactor head where they are sheared into the liquid phase before hydration takes place. The result is a smooth consistent, lump-free slurry without recirculating and over-shearing the product after hydration takes place.

The Y Jet Mixer, using a unique rotor/stator mixing head that creates a pure axial flow discharge jet to provide efficient in-tank mixing and blending, blended the sugar with the corn syrup/water/gums/flavors solution almost instantaneously and maintained complete uniformity of the batch without damaging the equipment.

## SUMMARY

The Powder Disperser produced a smooth, lump-free product which was ideal for the final blending which was handled by the Y Jet Mixer. With this new system the manufacturer realized consistent, improved product and doubled production without an expansion to the facility, due to increased system productivity .



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