QUADRO® LIQUIDS PROCESSING

Ytron ZC Disperser

QUADRO
Leading Process Equipment Innovation

Typical Applications and Specifications

COSMETIC/ PERSONAL CARE	FOOD & BEVERAGE	PHARMACEUTICAL	CHEMICAL
Creams, Lotions & Gels	Jams	Antacids	Airplane De-Icer
Deodorants	Pet Foods	Cough Syrups	Detergents
Hair Gels & Sprays	Egg Substitutes	Granulation Solutions	Paint
Shampoos & Conditioners	Salad Dressings	Tablet Coatings	Drywall Compound
Toothpaste & Mouthwash	Syrups	Vitamin Dispersions	Oilfield Products
Sunscreen	Condiments	Topical Creams	
Liquid Makeup	Gums	Ointments, Lotions & Gels	
	Stabilizers		

		MODEL			
		ZC0	ZC1	ZC3	ZC5
POWER (Maximum)	HP (kW)	3 (2.2)	7.5 (5.5)	20 (15)	60 (45)
LIQUID CAPACITY*	gpm (lpm)	3 - 12 (11 - 45)	15 - 40 (57 - 150)	40 - 120 (150 - 450)	150 - 400 (568 - 1500)
POWDER CAPACITY*	lbs/min (kg/min)	30 (14)	60 (27)	120 (55)	1000 (453)
INLET/DISCHARGE FITTING	in (mm)	1 (25)	1.5 (38)	2 (50)	3 (75)/4 (100)
EZ*FEED* OPTION		N/A	YES	YES	N/A
CIP CLEANABILITY		YES A	YES A	YES A	YES A

Actual capacities may vary depending on tooling selection and product characteristics.

Powder Dispersion

Continuous Processing

Homogenization

Emulsification

Deagglomeration

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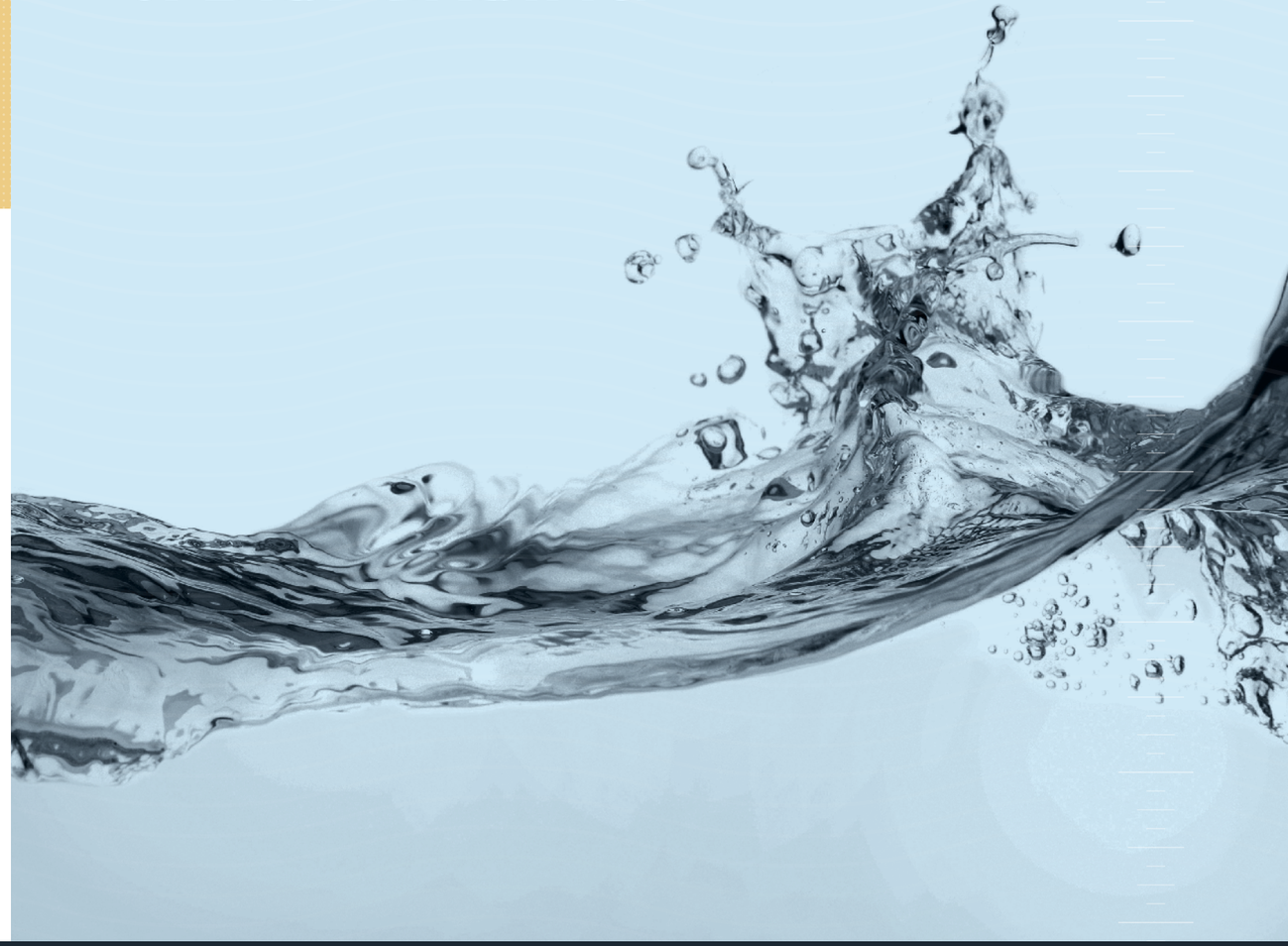
HIGH SHEAR SINGLE-PASS POWDER WETTING & DISPERSING



QUADRO® LIQUIDS PROCESSING

Ytron ZC Disperser

Unmatched performance. Exceptional service.

SINGLE-PASS AND CONTINUOUS HIGH SPEED POWDER DISPERSION

INTENSE POWDER SHEARING ACTION

The Quadro Ytron® ZC Disperser is uniquely engineered to disperse even the most difficult to wet powders into a liquid stream in a single pass.

The advanced design of the ZC Disperser's rotor/stator reactor provides intense shearing of powders prior to hydration. This leads to homogeneous suspensions free of lumps and "fish eyes".

Close tolerance rotor/stator tooling

Sanitary design options

There are four models designed to meet 3-A Sanitary Standards, offering liquid throughputs from pilot scale capacity up to several hundred gallons per minute production. Dust free options to transfer powders are also available, including wanding accessories and third party solutions such as IBC (intermediate bulk container) systems.

Quadro Continuous Dispersion System (CDS)

The Quadro CDS is designed to continuously disperse powders into a controlled liquid stream, optimizing dispersion efficiency and powder concentration control within a compact footprint. Every CDS capitalizes on the benefits of the ZC Disperser, with the unique implementation of a Quadro UFI.

UFI technology

Uniform Film Interface (UFI) technology provides a high degree of control accuracy in continuous mixing applications, with achievable inline concentrations up to 50% by weight or higher. The sealed environment around the UFI also minimizes dusting in process areas.

Dramatic powder & batch time savings

A near perfect vacuum is created in the ZC's reactor housing, promoting high speed incorporation rates and up to 70% solids flow by weight in a single pass with minimal air entrainment. Powder is completely hydrated after passing through the Disperser, which maximizes product yield and reduces/eliminates waste.

The high speed dispersion and hydration performance of the ZC technology can reduce batch times up to 90%, while eliminating the need for dispersion aids such as preheating the liquid phase, or pre-dispersing ingredients into a non-aqueous solvent. Even with difficult products such as hydrocolloid gums, cellulose gums and carbomers, complete dispersion is achieved in a single pass.

**Actual capacities may vary depending on tooling selection and product characteristics*

THE EZ*FEED* OPTION

- Ergonomic powder dump table integrated into the design
- Large enough table top to stage bags of powder
- Stainless steel construction and gasketed hopper design are well-suited to wash down duty environments and sanitary processing
- Maintenance-friendly features such as tool-less disassembly and one-handed base adjustment allows COP items to be removed with ease
- Product contact areas below the powder valve can be left connected and easily cleaned with a typical CIP process

Continuous inline dispersion set-up: 1. Continuous feeder, 2. Uniform film interface (UFI) 3. ZC Powder Disperser.