**Typical Applications and Specifications**

### COSMETIC/PERSONAL CARE
- Perfumes
- Toothpastes
- Hair Dyes
- Creams & Lotions
- Shampoos
- Soaps

### FOOD & BEVERAGE
- Yogurt
- Salad Dressings
- Mayonnaise
- Cheese Sauce
- Condiments
- Creams
- BBQ Sauce
- Spreads

### PHARMACEUTICAL
- Antibiotics
- Topical Creams & Gels
- Ointments
- Injectables
- Suppositories
- Nutritional Drinks
- Oral Suspensions

### CHEMICAL
- Asphalt Emulsions
- Fungicides & Insecticides
- Toners
- Pigments
- Lacquers
- Resins

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**MODEL**

<table>
<thead>
<tr>
<th></th>
<th>Z1</th>
<th>Z3</th>
<th>Z5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POWER (Maximum)</strong> HP [kW]</td>
<td>10 (7.5)</td>
<td>25 (18.5)</td>
<td>60 (45.0)</td>
</tr>
<tr>
<td><strong>CAPACITY</strong> gpm [lpm]</td>
<td>30 (115)</td>
<td>100 (380)</td>
<td>300 (1150)</td>
</tr>
<tr>
<td><strong>RPM</strong></td>
<td>6000</td>
<td>3600</td>
<td>1800</td>
</tr>
<tr>
<td><strong>ROTOR &amp; STATOR SETS</strong></td>
<td>1 to 3</td>
<td>1 to 3</td>
<td>1 to 3</td>
</tr>
<tr>
<td><strong>OPERATING PRESSURE</strong> psi [bar]</td>
<td>0 - 120 (0 - 8)</td>
<td>0 - 120 (0 - 8)</td>
<td>0 - 120 (0 - 8)</td>
</tr>
<tr>
<td><strong>INLET &amp; DISCHARGE FITTING</strong> in [mm]</td>
<td>1.5 (38)</td>
<td>2 (50)</td>
<td>3 (75)</td>
</tr>
</tbody>
</table>

*Actual capacities may vary depending on inlet pressure, tooling selection and product characteristics.

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**QUADRO® LIQUIDS PROCESSING**

**Ytron Z Emulsifier**

**SINGLE-PASS EMULSION AND HOMOGENIZATION**

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**Local Representative**

quadrosales@idexcorp.com  www.quadrolliquids.com

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613 Colby Drive
Waterloo, ON, CA N2V 1A1

832 Industrial Drive
Elmhurst, IL 60126

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High differential velocities
Incorporating up to three sets of toothed rotor/stator heads, the Z Emulsifier processes product while passing multiple shear zones in a single pass. The result is consistent, repeatable quality at capacities exceeding conventional multi-pass technology.

Tooling flexibility
Rotor/stators for the Z Emulsifier are available in a variety of slot sizes which allows for a high degree of fine tuning. Through tooling selection aided by our application engineering team, as well as varying rotor tip speed, the amount of shear can be precisely controlled.

Scalable throughput
Four sanitary models are available from pilot plant capacities to >300 gpm (1136 lpm). Throughput can be scaled without altering product characteristics, texture or particle size distribution with the unique implementation of Quadro’s turbulent kinetic energy model.

ENHANCED YTRON Z PERFORMANCE
In a single-pass, the Z Emulsifier achieves tight particle size distribution with typical d90 distributions between 1-5 micron.

FEATURES
1. Sanitary design with clamped housing, easily dismantled for cleaning; CIP and SIP options available. Meets 3A® standards.
2. All stainless steel construction.
3. Single and double mechanical seals provide for high-temperature, high-pressure performance.
5. Stainless steel base with portable, locking casters.

DYNAMIC PRINCIPLES
- Product enters housing axially under pressure, typically fed from a processing pump.
- One or more liquid phases and suspended particles are then pumped through 1, 2 or 3 sets of toothed rotor/stators.
- Controlled, high-intensity shear is delivered equally to all fluid elements.