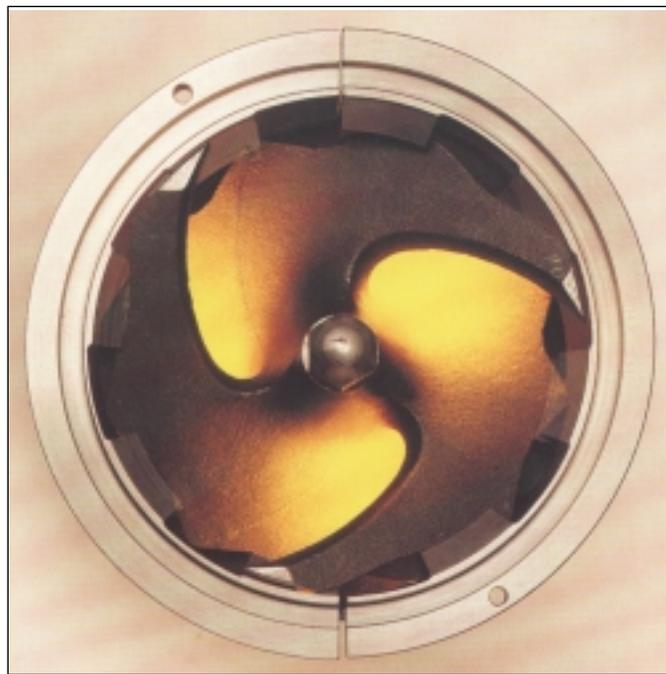


# DICON

**IN-LINE  
DISPERSING GRINDERS**



**DURABLE, VERSATILE, EFFECTIVE  
MIXING MACHINES THAT  
COMBINE GRINDING,  
DISPERSING, SHEARING  
AND EMULSIFYING  
WITH PUMPING CAPABILITIES**

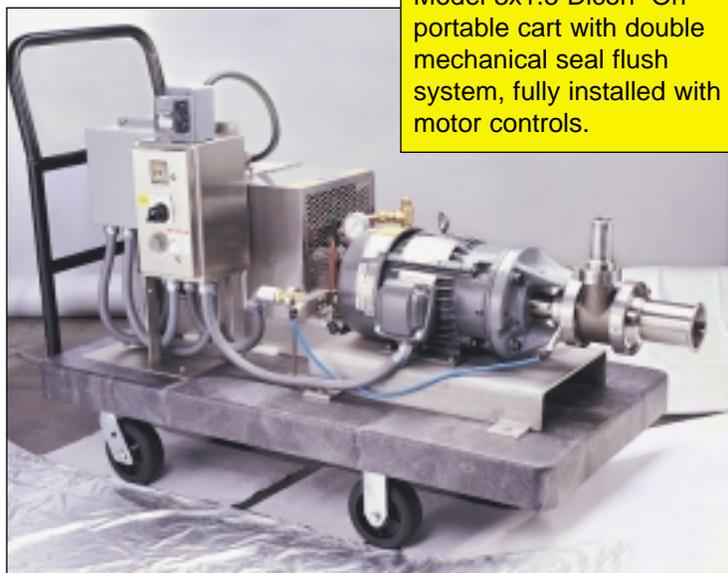
**ARDE BARINCO** INC

[abmix@ardeinc.com](mailto:abmix@ardeinc.com)



# A COMPLETE RANGE OF IN-LINE WET GRINDERS

**W**hether you're working in the laboratory, prototyping a new process, or looking for an in-line grinder that can swallow tanker trucks full of abrasive slurry -- ARDE Barinco can meet your needs.



Model 3x1.5 Dicon On portable cart with double mechanical seal flush system, fully installed with motor controls.



Model 10x6 MegaGrinder with Belt-Drive Option.

Arde Barinco Dicon in-line wet grinders, with three decades of proven performance in high-volume production applications around the world, provide solutions to a wide range of mixing, grinding and production problems.

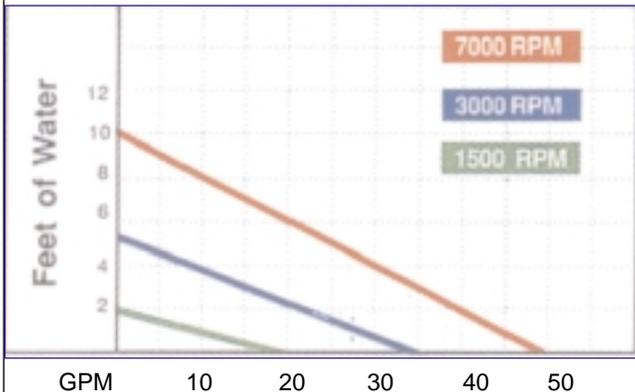
- Dispersing Grinders from 2" to 10".
- From 1 to 1000 gpm (0.1 to 240 m<sup>3</sup>/hour).
- Abrasion-Resistant Materials Available.

# A SIZE FOR EVERY PRODUCTION REQUIREMENT

## MODEL 2X1 DICON

*Dispersing Grinder*

Recirculating Tank System  
for Laboratories and Pilot Plants

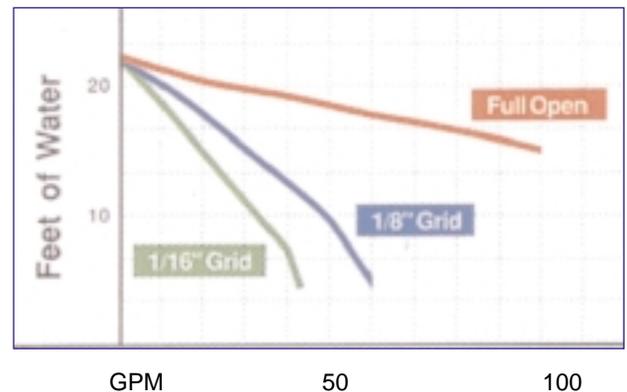


A complete system for wet grinding, dispersion, mixing and emulsifying in small-scale applications. Vertically oriented 2" diameter in-line grinder installed with a recirculation line to the top of a jacketed, 12 liter stainless steel vessel.

## MODEL 3X1.5 DICON

*Dispersing Grinder*

Compact Workhorse  
for Smaller Volume Production



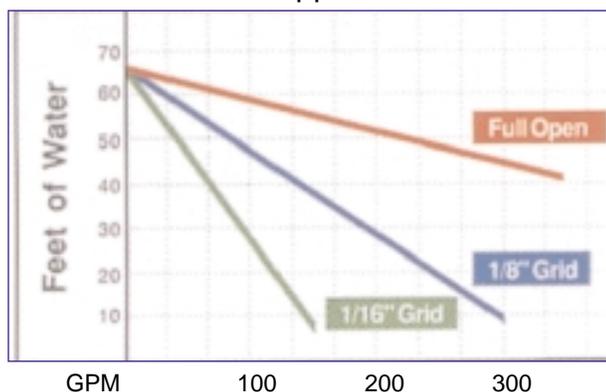
Small, precision in-line grinder manufactured primarily in Type 316 stainless steel.

Options include welded-on stainless steel stubs or sanitary ferrules for food and pharmaceutical industry applications.

## MODEL 6X3 DICON

*Dispersing Grinder*

Standard or Heavy Duty Models  
for All Applications

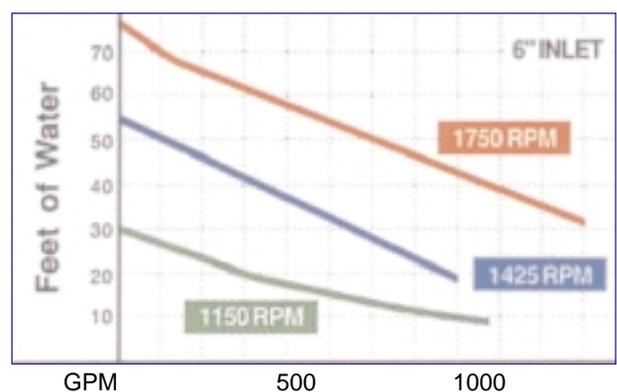


This unit combines power and high-volume production capabilities.

Heavy-duty options include specially hardened impeller and liner sets, oil-lubricated bearings, high strength steel shaft and enlarged housing to accommodate special shaft seals.

## MODEL 10X6 MEGAGRINDER

High Capacity, Reliability and Durability



Heavy-duty, hydrodynamically optimized grinder pump with the highest capacity, lowest power requirements and greatest resistance to abrasion and side-load problems caused by solid particles.

# MESHED TEETH TAKE A BITE OUT OF THE TOUGHEST MIXING TASKS

1/8" and 1/2"  
Discharge Grid Halves



The Dicon grinding action repeatedly accelerates and decelerates the materials, forcing them to undergo numerous changes in direction.

A patented impeller with three helical blades rotates at high-speed inside a matching, tubular housing. The rotating impeller creates a negative pressure differential, centrifugal-shoveling and positive axial thrust - - drawing materials into intensive shear zones.

The centrifugal force abruptly changes the direction of the materials and drives them against the inner surface of the toothed cylindrical liner. Sharply angled teeth on the edges of the impeller blades shear the materials and force them through a tortuous path.



Two 100 HP. Model 10X6 MegaGrinders



6X3 Dicon  
Toothed Impeller/Liner

The materials are crushed and subjected to eddy currents in a very high turbulence zone between the two sets of intermeshing teeth. The grinding action is continuously repeated as the materials move toward the discharge port.

An optional discharge grid plate with a precisely positioned series of venturi-type orifices (from 1/32" to 3/4" I.D.), provides positive particle size control.

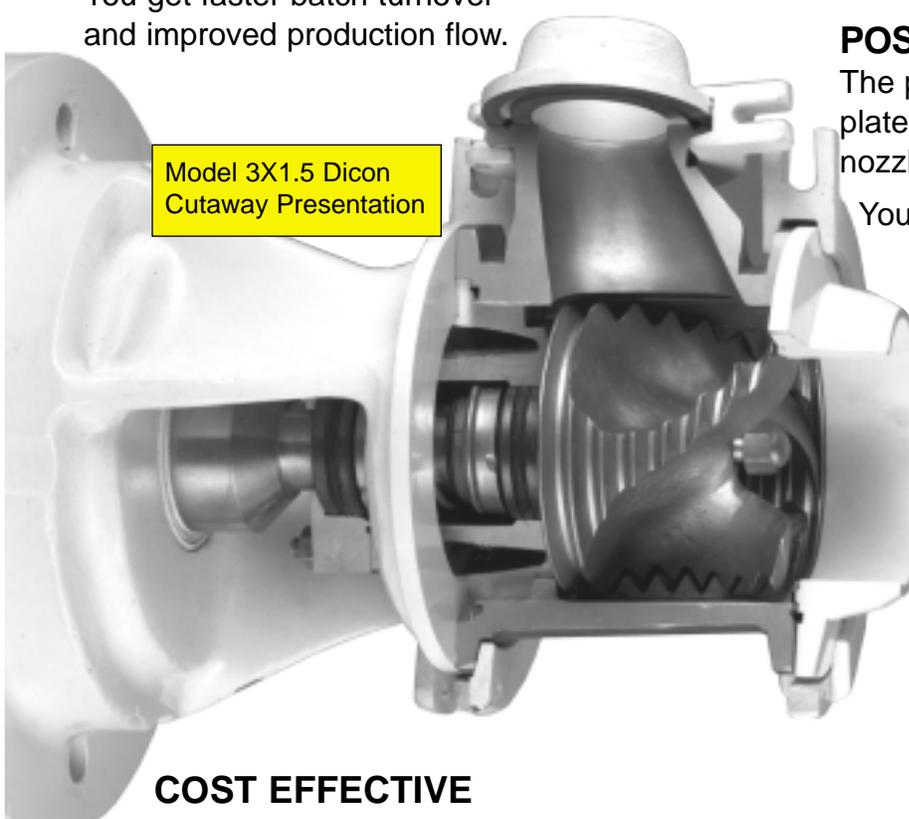
Materials must exit through one of the small precision ports. The partially-restricted discharge area provides reproducible control of both retention time and dispersion.

# INSIDE THE DICON IN-LINE DISPERSING GRINDER

## HIGH-VOLUME PRODUCTION

Dicon in-line grinders shred solid surfaces, grind particles, smash agglomerates, and reduce dissolving or dispersing time. The unique, high-shear design insures fast mixing and complete solid-to-liquid contact.

You get faster batch turnover and improved production flow.



Model 3X1.5 Dicon  
Cutaway Presentation

## LOW ENERGY CONSUMPTION

The Dicon in-line grinder subjects a small volume of material to intense shear, using energy more efficiently than mixing equipment that swirls large volumes of liquids. The powerful pumping action usually eliminates the need for transfer pumps.

You save on energy costs.

## POSITIVE PARTICLE SIZE CONTROL

The precisely machined orifices of the discharge plate grid assure particle size control and prevent nozzle clogging - - even in single-pass processes.

Your process is protected from down-time.

## VERSATILITY

Easy to change impellers, liners and discharge gates allow one ARDE Dicon in-line grinder to disperse, grind, emulsify, shear, mix or blend up to 70% solids or liquids with viscosities as high as 250,000 centipoise. Designed for use in-line or recirculating to process vessels. You get a durable, versatile in-line grinder and pump with hundreds of potential applications.

## COST EFFECTIVE

The Dicon in-line grinder's ability to grind and pump fluids with a wide range of viscosities, high-solid slurries and other hard to handle liquids may allow you to replace two pieces of equipment with one. In conjunction with metered feed streams, you may even be able to replace mixing vessels, agitators and transfer pumps.

You get savings in capital equipment costs, installation charges, space requirements, maintenance and energy consumption.

## TOUGH, DURABLE & EASY TO MAINTAIN

Aerospace-quality engineering and precision manufacturing using the finest materials assure trouble-free start-up and long life. The standard cantilevered impeller requires no lubrication. Loss of fluid won't damage the dependable Dicon or heavy-duty Megagrinder. Specially hardened, abrasion-resistant models with heavy-duty bearings and seals are available for extra-tough applications. The simplicity of the design assures easy inspection and maintenance.

You get reliability.

# ARDE BARINCO...

**Innovation, Precision and Our Commitment to Help You Improve Your Process  
With Advanced Mixing Technology**

Arde Barinco is a subsidiary of ARDE Inc., one of the nation's leading aerospace manufacturers and a key participant in the nation's space program. Our parent company's background in metallurgy, precision manufacturing and quality assurance forms a unique background for ARDE Barinco and its mixing technology.

Our engineering, manufacturing, quality and product support programs draw on these qualifications. You'll find them reflected in our per-

formance -- durable, reliable products and fast, customer-oriented technical support.

## **Equipment To Meet Your Needs**

We're specialists in finding solutions to mixing problems -- and we bring a wide range of mixing technologies to bear. Our standard product line includes specialized equipment to mix hard-to-wet dry solids into fluids and to create fine-grain emulsions (droplet sizes of 1-2 microns).

**We're ready to meet your needs with:**

- Low Shear Solids/Fluid Dispersers ● Reversible Homogenizers
- Continuous In-Line Mixers ● Batch Processing Mixers ● Sanitary Mixers ● High-Viscosity Mixers
- Multi-Viscosity, Multi-Shear Mixing Systems with Comprehensive Process Analysis Capabilities
- Propellor Mixers ● Axial and Radial-Flow Turbines ● Anchor-Scraped Surface Agitators



## **Test Facilities and Rental Machines to Assure Your Satisfaction**

We're committed to total customer satisfaction. The ARDE Barinco mixers in our 2,000 square foot pilot test facility are fully equipped to measure significant process parameters such as viscosity, solid particle size distribution, liquid emulsion droplet size distribution, percent solids, density, power consumption, pH, RPM, temperature, amperage draw, shear rate and shear stress.

On-line digital monitoring allows us to provide continuous, real-time feedback on many of these parameters. We'll videotape tests and demonstra-

tions to provide a visual record -- to give everyone in your operation a firsthand look at the process.



Our full inventory of rental equipment, available in most commonly used configurations, allows us to provide mixers for short-term use, to allow you to test them in your plant.

All ARDE Barinco equipment is sold with free lifetime technical support. If you have any questions or require assistance, we're always available.

**Need more information? Contact us today.**

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