

ROTOSTAT®

HIGH SHEAR EMULSIFIERS



Advanced Mixing Technologies

ROTOSTAT® ...Solving the Problems Conve

High Shear Mixing Technology

Since 1985, the Rotostat® disperser/emulsifier has been put to the test in over 1,000 food, cosmetic and pharmaceutical plants - specifically to solve mixing problems where conventional agitators, props, or dispersers require excessive horsepower or mixing time. The Rotostat is a multi-functional high shear mixer for dispersing, dissolving, emulsifying, homogenizing and suspending. The Rotostat includes patented refinements such as a revolving stator to promote rapid dispersion of sheared material passing through the rotor/stator head. The Rotostat's high efficiency propeller below the mixing head provides exceptional pumping and circulation, reducing mix times and heat build up.

What Makes Rotostat So Effective

The patented mixing head consists of an internal rotor surrounded by a freely revolving stator. The stator has three large external paddle blades which restrain its rotation to about 1/10th of the rotor speed. The stator will, for example, revolve at 360 rpm with a rotor shaft speed of 3600 rpm within waterlike materials.

The rotor draws the mix into the stator where the high shear action between the high-speed rotor blades and the slowly revolving stator rim subjects the material to very effective mixing, milling, and grinding action prior to being expelled with high velocity through outlets in the stator rim. When passing through these outlets, particles, agglomerates, solids, etc. are exposed to intense cutting and disintegrating action for a further reduction of the particle sizes. All contents of the mixing vessel will pass through the mixing head numerous times during the process, and a homogeneous product is achieved in minutes, whereas conventional devices may require hours.

U.S. Patent #400882

BENEFITS THAT WORK 24 HOURS PER DAY

Unmatched Performance

- Nothing compares to the combined shear and pumping rates of the Rotostat
- Prevents "overshearing" of sensitive materials
- Provides rapid dispersion and hydration of difficult to process materials such as: CARBOPOL™, METHOCEL™, CMC, XANTHAN GUM, SOY PROTEINS, STARCHES, PECTIN, CARRAGEENAN and many other GUMS and HYDROCOLLOIDS

Productivity Booster

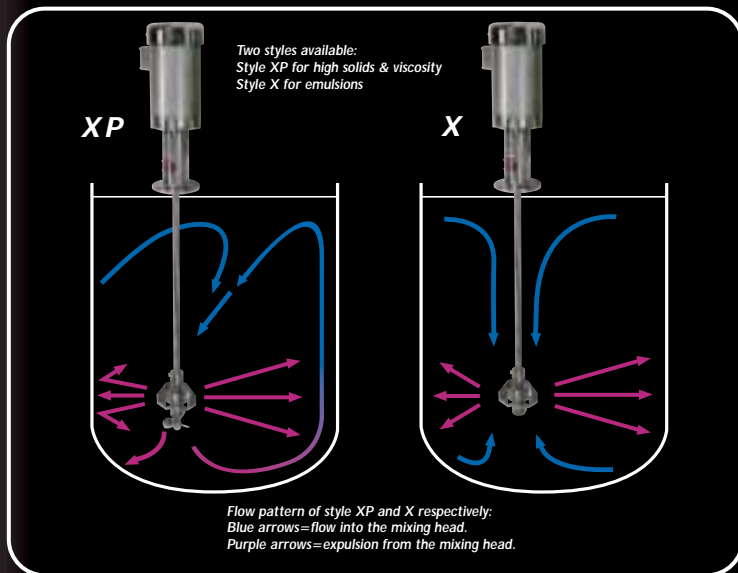
- Multi action of high speed rotor, stator and prop dramatically reduces dispersion and overall mixing time to 10 minutes or less
- Wet out or dissolve soluble powders in 1-2 minutes
- No more "fish eye" effects from unprocessed material

Power Saver

- The Rotostat stator conserves horsepower by revolving with the flow on heavy duty bushings
- The Rotostat XP requires 25-30% less power than conventional rotor/stator dispersers, and over 50% less power than open saw tooth disc blades
- There is no other disperser/emulsifier that can process fluids more efficiently than the Rotostat

USDA Approved FDA Accepted

- The Rotostat meets all criteria for USDA and FDA acceptance, and is listed in the USDA ACCEPTED MEAT AND POULTRY EQUIPMENT book, 1991 edition
- The Rotostat is also approved by the CANADIAN FOOD INSPECTION AGENCY (Agriculture Canada)
- The Rotostat 100% Stainless Steel version has nothing to peel, chip off, or corrode



Conventional High Shear Mixers Leave Behind

SANITARY FEATURES FROM TOP TO BOTTOM

The Rotostat is simply the most sanitary and easily cleaned emulsifier on the market. The single shaft design eliminates guide bars to hold the stator. The entire mixing head can be dismantled, separated and rinsed out within a few minutes, or can be cleaned in place by jogging it in cleaning solution or by the use of spray ball heads. The Rotostat also eliminates the need for shrouds or baffle plates to direct the flow currents, further simplifying cleaning.

1. Stainless Steel Motors and Speed Controllers

Three grades of all stainless steel motors, including end bells, are available up through 20 Hp. Larger units feature a white washdown finish with stainless steel components and Class F insulation. A full line of AC speed controllers is also available with stainless washdown enclosures.

2. Stainless Bearing Supports

Most models feature bearing frames machined from 316 SS, with stainless steel internal components for maximum protection and durability. All bearings are sealed and the output of the frame is double sealed.

3. The Only Detachable Shaft Rotor/Stator Emulsifier

The Rotostat is available with a detachable shaft coupling below the mounting flange to allow easy inspection and servicing of the rotor/stator head. This is especially useful where shaft lengths are long or where access to the mixing head is difficult. Low headroom installations can be more easily accommodated, especially when combined with our low profile belt drive model. Note back cover for coupling and belt drive options.

4. Optishear® Your Process

The Rotostat emulsifier is like no other high shear mixer. The unique patented revolving stator, when combined with the close clearance rotor, and high efficiency lower propeller, optimizes shear rates, pumping rates and particle size reduction. The interchangeability of different rotors, stators and props provides maximum flexibility for fine tuning your mixing application...and will never overshear sensitive materials or formulas.

ROTOSTAT XP Models

(For high solids & viscosity)

Selections shown based on 100 CPS viscosity

SPECIFICATIONS						
MODEL	MAX. BATCH SIZE (GAL)	STD. HP	FLOW RATE (GPM)	MIXING HEAD DIA. (IN)	MAX. SHAFT LENGTH (IN)	APPROX. WEIGHT (LBS)
80XP63	60	1.5	410	5.1	32	75
80XP63	110	3	860	5.1	36	92
100XP81	250	5	1160	6.5	56	145
112XP94	400	7.5	1720	7.7	64	215
132XP124	600	7.5	2300	10.2	67	258
160XP148	1000	10	3490	12.6	92	350
180XP175	1500	20	5090	14.3	84	560
200XP200	2500	15	6010	16.5	102	710
225XP225	3500	25	7910	18.6	94	950
250XP250	5000	30	11,690	20.7	114	1210
280XP300	7500	40	14,060	24.8	128	1600
355XP300	10,000	50	19,140	24.8	135	1950

ROTOSTAT X Models

(For low to moderate viscosity emulsions)

Selections shown based on 100 CPS viscosity

SPECIFICATIONS						
MODEL	MAX. BATCH SIZE (GAL)	STD. HP	FLOW RATE (GPM)	MIXING HEAD DIA. (IN)	MAX. SHAFT LENGTH (IN)	APPROX. WEIGHT (LBS)
80X63	30	1	230	5.1	48	60
90X81	75	3	500	6.5	46	95
100X94	150	5	770	7.7	52	130
112X124	225	5	890	10.2	54	160
132X148	450	7.5	1520	12.6	62	245
160X175	750	15	2400	14.3	68	490
180X200	1000	10	2490	16.5	91	530
200X225	1500	15	3550	18.6	93	645
250X250	2500	25	4860	20.7	115	980
280X300	4000	30	6300	24.8	128	1250
355X350	7000	50	10,010	29.0	140	1930
400X400	10,000	75	14,950	33.0	160	2850

EXCLUSIVE OPTIONS TO FIT YOUR PROCESSING NEEDS



Sanitary intank couplings and a choice of gas or flush mechanical seals are exclusive Rotostat options.

Models through 10 Hp are available with all stainless mobile or wall lift stands.



Another Rotostat exclusive is the low profile belt drive arrangement for low headroom applications.

Washdown epoxy frames and motors available (shown on a typical flange mount).



Benchtop lab models allow precision scaling of all applications.

Complete mix stations may include jacketed tanks, vacuum, or scrape surface (shown on typical bridge mounts).



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