Rotosolver® CX

The Ultimate Design in High Shear Dispersion

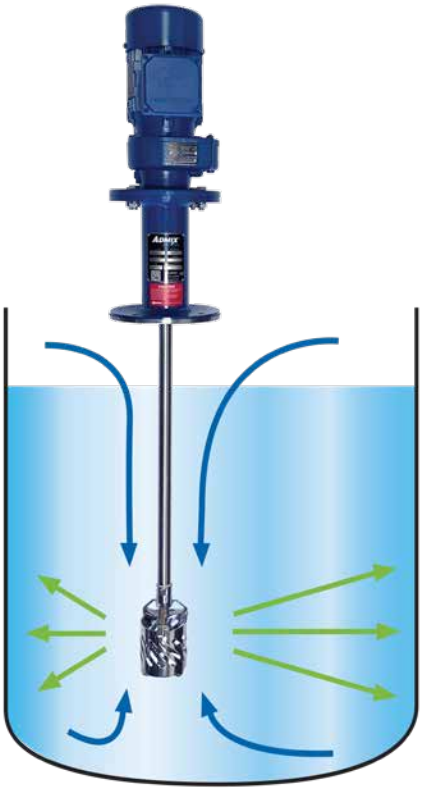
Performance & Efficiency

The Admix Rotosolver® CX is an in-tank disperser designed for fast incorporation of powders into liquids. The patented design of its shear head is the key to achieving homogenous dispersions in less time than traditional dispersion blades. Shorter batch times, higher quality dispersions, and lower energy consumption are some of the key performance advantages that the Rotosolver CX delivers.

Less Energy Consumption: The slotted shear head of the Rotosolver CX generates high pumping action within the mixing vessel, thus consuming less energy and requiring lower horsepower motors than competitive models.

Time Saving Dispersion: With the Rotosolver CX, batches can be completed in less time compared to mixing with conventional dispersion discs. Powders are 100% hydrated and dispersed, and agglomerate-free in as little as 10 minutes in many cases. This is due to multiple shear zones in the Rotosolver CX shear head, combined with high product flow which results in superior dispersion performance. Additionally, many products that typically require a two-stage process can now be completed in the same tank with the Rotosolver CX technology.

Easy-to-Clean Design: The open design of the mixing chamber ensures that cleaning for formula changeovers requires minimal time and effort.



Flow pattern:
Blue arrows = flow into the mixing head

Green arrows = expulsion from the mixing head

- Reduce energy consumption up to 30%
- Increase overall shear rates
- Reduce batch times for increased capacity
- Improved cleanability
- Retrofit available for existing installations
- Wet out and disperse powders, fillers, rheology modifiers, resin, and let down liquids in one convenient process

Typical Selection of a Rotosolver

The following table lists many of our standard Rotosolver models, along with typical working volumes based on the specific design criteria listed below. All selections are based on a moderate level of mixing (mixing intensity of 7.0) and a specific gravity of 1.0. However, we customize our mixers for specific applications.

Higher viscosities, greater mixing intensities, non-standard tank geometries or a specific gravity greater than 1.0 may require a different selection than shown. Different ingredients may require higher tip speeds for best performance and a different mixer selection may also be necessary. Please contact Admix for a design of the optimum mixer configuration.

Models and specifications

Rotosolver CX Model	Maximim Batch at 100cps (l)	Maximim Batch at 1000cps (l)	Standard (kW)	Mixing Head Diameter (mm)	Foil Head Diameter (mm)	Max Shaft Length (mm)
RS-02	100	40	1.1	60	76	-
80RS70	900	200	1.1	70	76	1000
90RS88	1000	250	2.2	88	76	1000
100RS88	1400	350	3	88	102	1300
112RS133	3400	750	4	133	178	1200
132RS101	3400	750	5.5	101	127	1700
160RS159	5500	1300	7.5	159	202	1900
180RS159	8000	2000	11	175	216	1900
200RS200	10,000	2300	15	200	203	2000
225RS250	17,000	4100	15	250	279	2000
250RS250	17,000	4100	15	250	279	3000
315RS300	35,000	9000	37	300	318	3000
355RS300	37,000	10,000	45	300	330	3200
400RS300	37,000	10,000	45	300	330	4200

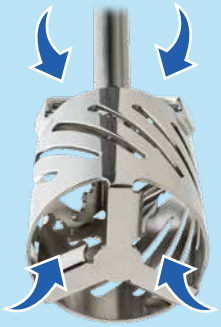
Maximum batch size (100 cps) with a standard upper foil based on 100 cps and 1.0 specific gravity.

Maximum batch size (1000 cps) with a standard upper foil based on 1000 cps and 1.0 specific gravity.

How It Works

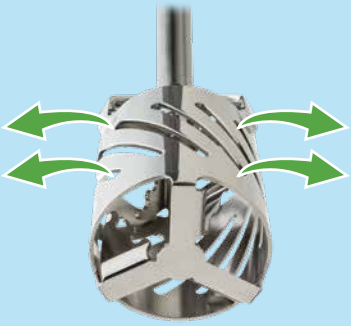
The unique design of the Rotosolver produces high flow, in addition to high shear, resulting in batch process times that are much faster than conventional in-tank rotor/stator designs. The Rotosolver mix head design generates four stages of mixing action for optimal for dispersion:

1. Product flow is drawn into the mixing head from above and below. The resultant flow creates vigorous tank motion, pulling materials and powders from the top of the tank surface (typically the toughest to disperse), instantaneously exposing them to shear zones in the Rotosolver shear head, where these materials are mechanically ripped apart (dispersed).



2. The two high-velocity, counter-current streams converge within the shear head, creating high turbulence and hydrodynamic shear.

3. Pressure, created by the two streams, forces material out the side slots of the shear head, where the resulting radial streams are subjected to further mechanical shear, as material passes through the edges of the slots in the chamber wall.



4. The high velocity radially discharged streams impact the slower moving tank flow for additional hydrodynamic shear and circulation, thus ensuring high flow, with no dead spots in the mix tank.

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