Rotosolver®

The Ultimate Energy Saver High Shear Mixer

Rotosolver Delivers Performance & Efficiency

The Admix Rotosolver® high shear mixer has been an industry leader since 1993. Its patented design provides processors with significant advantages that greatly improve mixing operations. The Rotosolver delivers high shear and flow patterns that result in faster overall batch times, energy savings, batch to batch consistency, and improved product quality.

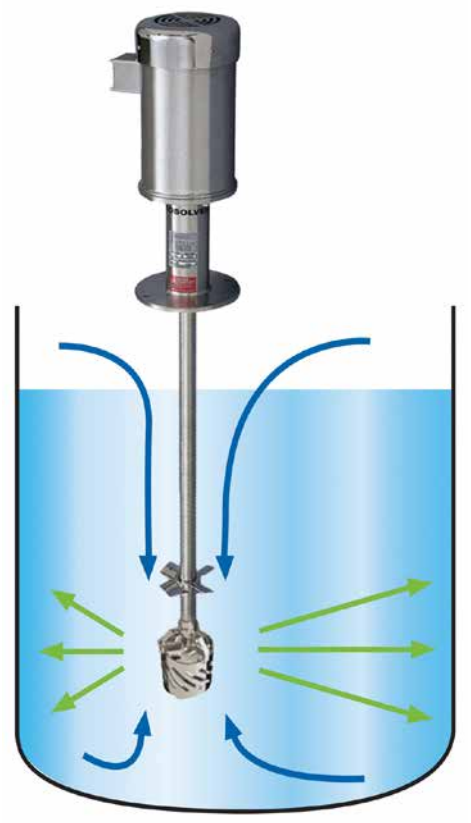
Less Energy Consumption: Through extensive streamlining and utilizing the latest CFD software and rigorous physical testing, our Rotosolver mixing impeller has been designed to maximize efficiency while producing mechanical and hydrodynamic shear and optimally direct flow that is beneficial to the process.

Improved Dispersion: With the Rotosolver, batches can be completed in less time. Powders are 100% hydrated and dispersed, with most mixtures becoming agglomerate-free in under 10 minutes. This is due to the Rotosolver's multiple shear zones in combination with a high product flow that enhances the mixing performance in the tank.

Easy-to-Clean Design: The open design of the mixing chamber ensures that conventional CIP procedures provide maximum cleanability.

3-A® #36-01

USDA APPROVED



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 Carbopol®, Methocel®, Opadry®, Avicel®, CMC, xanthan and guar gum, soy proteins, starches, pectin, carrageenan and other "tough" hydrocolloids and ingredients

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 Model	Maximim Batch at 100cps (l)	Maximim Batch at 1000cps (l)	Standard (kW)	Speed (rpm)	Mixing Head Diameter (mm)	Foil Head Diameter (mm)	Max Shaft Length (mm)
RS-02	100	40	1.1	3000	60	76	-
80RS70	900	200	1.1	3000	70	76	1000
90RS88	1000	250	2.2	3000	88	76	1000
100RS88	1400	350	3	3000	88	102	1300
112RS133	3400	750	4	1500	133	178	1200
132RS101	3400	750	5.5	3000	101	127	1700
160RS159	5500	1300	7.5	1500	159	202	1900
180RS159	8000	2000	11	1500	175	216	1900
200RS200	10,000	2300	15	1500	200	203	2000
225RS250	17,000	4100	15	1000	250	279	2000
250RS250	17,000	4100	15	1000	250	279	3000
315RS300	35,000	9000	37	1000	300	318	3000
355RS300	37,000	10,000	45	1000	300	330	3200
400RS300z	37,000	10,000	45	1000	300	330	4200

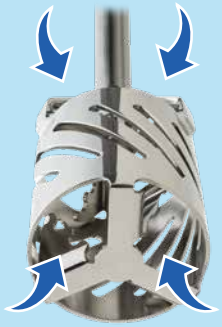
Maximum batch size (100 cps) with a standard upper foil based on 100 cps and 1.0 specific gravity.

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

How It Works

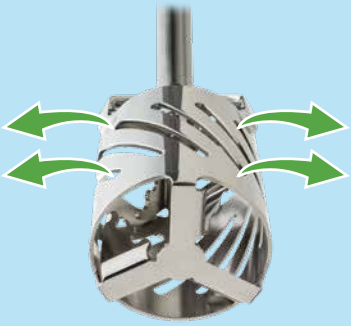
The unique design of the Rotosolver produces high flow, in addition to high shear, resulting in batch process times that are much faster than conventional in-tank rotor/stator designs. The Rotosolver mix head design generates four stages of mixing action for optimal for dispersion:

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.

ADMIX®
Advanced Mixing Technologies

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