

A LEADER IN THE CREATIVE MIXING INDUSTRY

Trusted Since 1976



Sigma Mixer



**Reynolds
Industries**

www.reynoldsmixers.com

SIGMA MIXER

DESCRIPTION

Sigma mixers are known as “Universal Mixers” because they are almost unlimited in application. They are equipped to process batches of material in wide viscosity range. The universal mixing and kneading machine consists essentially of a rectangular trough curved at the bottom to form two half-cylinders, with two blades horizontally disposed, and driven by suitable gearing on one or both ends of the trough. The blades sweep the entire area of the half-cylinder on each revolution, revolving toward each other at unequal speed and imparting both transverse and lateral motion to the batch.

Clearance between blades and trough is extremely close so that no particle of the batch can escape the mixing action of the blades, with every particle constantly in motion while the blades are moving. An intensive kneading action is performed simultaneously with the mixing as the material is pulled and squeezed against blades, saddle, and sidewalls. Sigma mixers can efficiently handle mixes ranging in consistency from dry powders to very stiff plastic masses.

Vacuum Mixers serve a very definite purpose in many industries mixing operations. It is often advantageous, and many times imperative, that mixing can be carried out under vacuum conditions. A batch can be economically dried by vacuum which remove solvents or moisture while material is being mixed. Oxidation of sensitive materials can be prevented by mixing; occluded gasses can also be efficiently removed and air will not be worked into mixes.



MIXER FEATURES

- Working capacity of up to 1,000 gallons and custom models available
- Choice of stationary or tilting units for loading and unloading to suit your production needs; bottom valve discharge units also available
- Mono-screw extruder models available
- Jacketed trough design for heating or cooling.
- Independent blade arm drive with differential rotating speeds and adjustable ratio
- Two sigma shaped blades fitted horizontally in each trough of the bowl
- Vacuum or pressure designs
- The complete mixer is mounted on steel fabricated stand of suitable strength to withstand the vibration and give noise free performance
- Explosion-proof constructions available

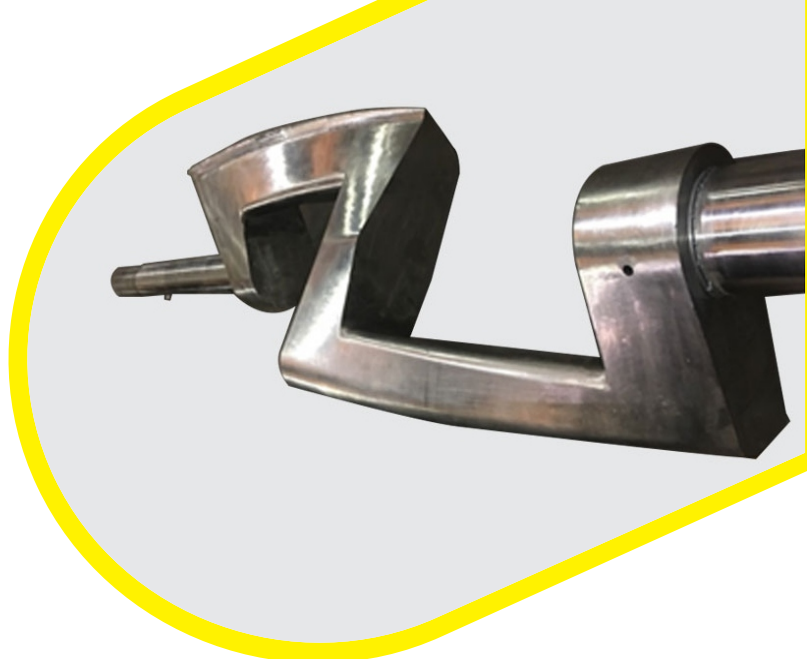


For more information on Sigma Mixers visit www.reynoldsmixers.com or call 1-803-548-4301 to speak with mixing specialists about your application

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MIXER APPLICATIONS

- Adhesive
- Biscuit dough
- Butyl Rubber
- Bakery
- Carbon Pastes
- Ceramics
- Chemicals
- Chewing Gum
- Crayon and pencil lead
- Fiberglass resin dough
- Gasket and gland packing
- Hot-Melts
- Inks and pigment product
- Marzipan
- Mastics
- Metal powders
- Molding preparations
- Plastic
- Sealing compounds
- Silicon rubber
- Soap and detergents
- Solid Propellants
- Sugar pastes
- Viscous rubber solutions



MIXER OPTIONS

- Special metal or alloys such as stainless steel, Monel, Nickle, Ni-clade, ect., can be used either as linings or as base materials for Trough, Trough Ends, Blades and Cover.
- Hardened coating on blades can be provided to permit mixing abrasive materials.
- The inter meshing of sigma shaped blades creates high shear and kneading actions.
- The trough shell and ends are split for ease in maintenance.
- Automatic bearing lubrication.
- Cored Blades are employed to increase the heating or cooling of the batch.
- Special vacuum machines are employed for mixing under vacuum, vacuum drying, or recovery of solvents and other liquids at low temperatures with vacuum distillation

STANDARD MODELS

Motor Power	5 – 350 HP
Discharge Auger	5 – 250 HP
Operating Pressure	Vacuum - 100 psi
Blade Type	Sigma, Dispersion, Double Naben, Single Curve
Materials (product wetted)	Carbon steel, rust- & acid resistant steel, nickel-base alloy, Duplex- & Super Duplex steel, titanium & titanium alloys

OTHER INFORMATION

Reynolds offers a complete line of laboratory mixers to enable the research chemist or engineer to properly evaluate pilot scale mixing operations with accuracy. Exact formulations of mixes made in the laboratory models cab be directly extrapolated to the large production machine.

Most of the feature of full-size production unit are available in these machines such as jacketed construction for heating or cooling, arrangement for vacuum operation, and iron and steel or alloy construction. Standard or special mixing blades can be installed. Standard, vacuum, or compression covered can be furnished.

A world map in shades of blue with a grid pattern. White lines with dots at the ends connect various locations across the globe, representing a global network or distribution system.

Manufacturer of process equipment since 1976

CONTACT US

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REYNOLDS INDUSTRIES PRODUCTS

- Reynolds Dual Shaft Mixer – RDSM
- Reynolds High Speed Disperser – RHSD
- Reynolds Low Speed Agitator – RLSA
- Reynolds Coaxial Mixer – RCM
- Reynolds Sigma Mixer – RSM
- Reynolds Ribbon Blender – RRB
- Reynolds Press-out station – RPS
- Vessels
- Turn-key systems

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