

# MECON

ENGINEERING



**FROM PRODUCT DESIGN TO  
PERFORMANCE**

# ABOUT US



Mecon Engineering was established in the year 1990 and has since grown to be a progressive, multiproduct company that offers engineering excellence in the field of Mixing & Processing Equipment manufacturing technology. Excellent application of theoretical concepts and research and development of new mixing technology has made MECON one of the leaders in providers of mixing solutions.

We have developed a comprehensive range of advanced equipment, designed to meet exacting standards in quality & performance, best suited for a variety of user requirements in various industrial applications.

With us, customers get a reliable product, designed and manufactured by following the best engineering practices, ensuring lower downtimes and higher productivity for your equipment.

We design, manufacture and supply of all types of industrial mixers and agitators. Our team understands the customer's need for reliable partners for equipment supply, ensuring a no compromise attitude in design, sourcing and manufacturing of equipment, along with prompt response to service, during those few occasions when it may be required.

Our mixers are manufactured using the best engineering practices and stringent quality control procedures to ensure products of utmost quality that provides trouble free and almost maintenance free operation.

Our factory in Bommasandra is well equipped to manufacture our entire range of products. With machining and testing facilities in-house, quality of products is ensured by thorough in process and final inspection.

With Mecon by your side, you can rest assured that the best possible solutions are being provided for your mixing needs.

# CLIENTELE

Exceptional product quality and service enabled us to develop a large customer portfolio ranging all the way from the Food & Pharmaceutical Industry to Water & Wastewater Treatment.

The large number of products on offer enables us to be our customer's one stop solution for all their mixing requirements.

In the last two decades we have served many major companies in the Private as well as Public sector. Mecon has exported its mixers to Jordan, Saudi Arabia, Oman and Malaysia directly, and to various other countries through the company's OEM clients.

Continuous orders from our customers speak volumes about the reliability, economy and dependability of our agitators.

## ***MECON - YOUR PARTNER IN PRODUCTIVITY***

Some of the organizations that have utilized our services are:

- \* GE Water & Process Technologies
- \* Ion Exchange (I) Ltd.
- \* Pest Control (I) Pvt. Ltd.
- \* Heidelberg ProMinent Fluid Controls (I) Pvt. Ltd.
- \* McNally Sayaji Engineering Ltd
- \* Fosroc Chemicals (I) Ltd.
- \* Oil Natural Gas Corporation Ltd.
- \* IBP Co. Ltd.
- \* Defense Research Labs
- \* Bharath Electronics Ltd.
- \* Hindustan Zinc Ltd.
- \* ICI India Ltd.



Note: Industry wise detailed client list can be provided on request.

**QUALITY ASSURANCE  
FROM PRODUCT DESIGN TO PERFORMANCE**



## **AGITATORS**

MECON built agitators are designed to give high performance, easy to setup & use, keeping in mind serviceability and economic operation.

MECON follows some of the toughest quality standards in the industry. Thorough Visual Inspection, chemical analysis of material & mechanical testing is conducted to ensure conformance to Indian and International standards. In-process Manufacturing Inspection ensures minimal rejections and wastage. Rigorous product testing procedures ensure the equipment is fit for deployment in the operating load conditions, through water load testing at the In-House Test Facility, for a minimum of 4 continuous hours.

With strict adherence to Quality Procedures, we are confident that every product that leaves our factory will perform exceptionally when commissioned into service.

With vast experience in the Mixing Industry our Technical Team is more than capable of handling any mixing challenge and is confident of providing an excellent solution to your problems. Some of the applications for which we supply equipment are:

- \* Mixing
- \* Blending
- \* Emulsification
- \* Solid Suspension
- \* Dissolution
- \* Gas Dispersion
- \* Heat Transfer

These are available for a range of flow and shear sensitive applications.

### **DRIVE UNIT**

Agitators are powered with TEFC / Weather / FLAME / Explosion Proof Motors, Hydraulic and Pneumatic Drives, depending on service conditions and requirements.

### **SPEED REDUCTION**

Reduction of Motor Speed is achieved by means of Belt Drive, Gear Reduction or speed variations through the use of VFD. Also, we optionally provide dual / triple speed agitators.

### **SEALS**

Positive leak proof arrangement by means of stuffing box, lip seal or mechanical seal with or without shut-off / retract devices for on-line maintenance is provided.



**TOP ENTRY AGITATOR  
SUPPLIED TO MINING SECTOR**

## TOP / BOTTOM / SIDE ENTRY AGITATORS

Heavy Duty Agitators available in a variety of configurations to suit the tank type and customized to ensure exceptional mixing performance under a multitude of conditions. Agitator specifications are chosen to ensure client mixing requirements are fulfilled and reliable and durable operation in the site conditions.

Available in vast range from 0.25 H.P to 600 H.P.

Material of Construction: MS / CS / SS available in various finished based on application.

Also provided with options of linings such FRP [with a choice of various resin types], Rubber, PVC, PTFE.

Note: Other Lining Options can also be provided on request.

Agitators also available conforming to GMP Standards for the Food & Pharmaceutical Industry.

Top Entry Agitators are Ideal for:

- \* Petro Chemicals
- \* Aromatics
- \* Fertilizers
- \* Pesticides
- \* Metallurgical
- \* Water Sewage / Effluent Treatments
- \* Paper & Pulp
- \* Chemicals & Dyes
- \* Dairy & Food Products
- \* Drugs & Pharmaceuticals
- \* Crude Oil & Fuel Oil Blending
- \* Salt Cakes Dissolving
- \* Breweries etc.



## PORTABLE MIXERS

Portable Mixers are agitators that are provided on a portable stand facilitating movement of the agitator. Alternatively, these Agitators are also provided on a removable type clamping arrangement. Agitator impellers are specifically designed to suit application. Available in TEFC, Explosion or Flame Proof Drive Units, with single, dual or variable speed options. Designed with materials with or without lining specifically suited for the operating medium. Available in Rubber, FRP, PVC, Lead or PTFE Coatings.

They are available in various capacities as follows

### High Speed

Capacity- 0.25 H.P. to 3 H.P.

Speed- 720 / 960 / 1440 RPM

### Slow Speed

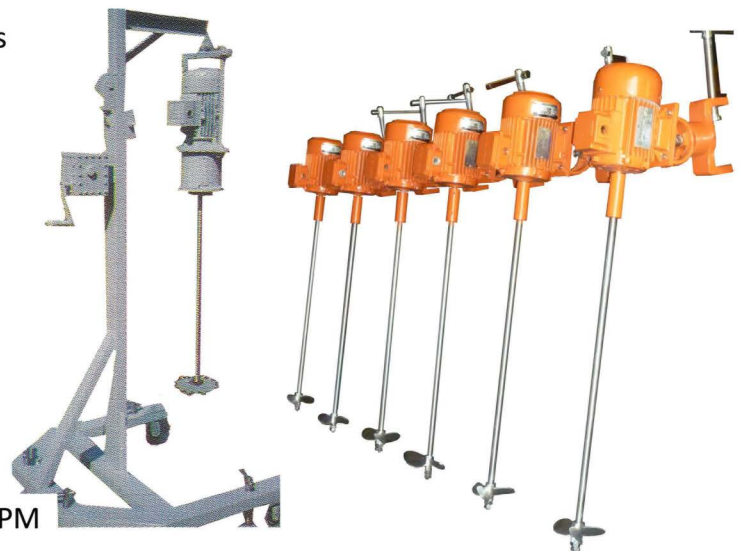
Capacity - 0.25 H.P to 5 H.P.

Speed - 60 / 90 / 150 / 200 / 300 RPM.

### Dual Speed Portable Mixers

Capacity- 0.25 H.P. to 3 H.P.

Speed - Combination of 1440 / 960 / 720 / 540 RPM



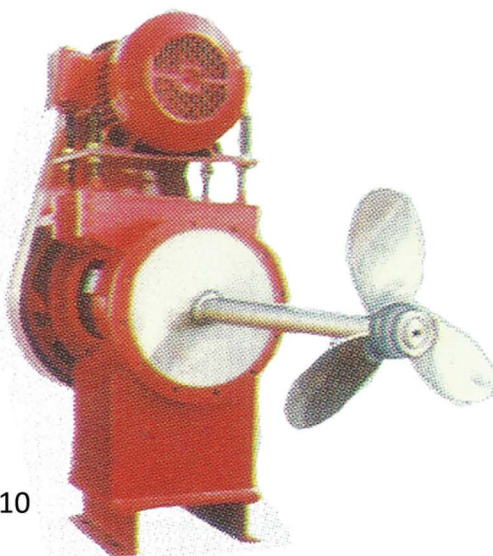
## SWIVEL ANGLE AGITATORS

These agitators are ideally suited to meet the mixing requirements in large storage tanks with floating roofs. These mixers are used for blending, tank cleaning and to prevent settling of solids.

By ensuring uniform suspension tank volume reduction is prevented and so is formation of water pockets, thereby preventing tank corrosion. Swivel angle agitators are typically used in Crude oil storage tanks for controlling the bottom sludge and water (BS &W). An adjustable angle of entry variable up to 60 degrees avoids any dead spots as they scrub the entire tank bottom. Mixers are supplied with Mechanical seals with Positive shut down arrangement.

The mixers are provided with optional indexing at increments of 10 degree with either manually or automatic indexing arrangement.

Available in capacities from 3 HP to 60 HP.



## EMULSIFIERS

Mecon High speed homogenizers / emulsifiers are ideally suited for mixing immiscible liquids using a high shear rate to ensure effective mixing. They are widely used in food, pharma, textile, cosmetic industries.

Typical examples are mixing of creams, lotions, ointments in cosmetic and pharma industries, sauces and flavours in food industry and printing pastes in the textile industry. A combination of high mechanical and hydraulic shear ensures particle reduction up to 2 micron size, thereby creating a uniform stable emulsion / colloidal suspension.

Available in a range from 1 H.P. to 100 H.P with TEFC or Flame Proof Motors.

Speeds of 1440 or 2800 RPM.

Supplied to GMP Standards & Mirror Finish for Food & Pharmaceutical Applications. Provided with Rubber / FRP / PVC / Lead / PTFE Lining for specific applications.



## STATIC MIXERS

A static mixer is a precision engineered device for the continuous mixing of fluid materials. The energy needed for mixing comes from a loss in pressure as fluids flow through the static mixer.

Mecon's Static Mixers are perfect for achieving homogenous mixing with minimal drop in pressure. Typical applications include wastewater treatment and chemical mixing.

Available in MOC of MS / SS with multiple lining options such as FRP in a range of Sizes from 1/2" to 6m in diameter.



## PLANETARY MIXERS

Planetary mixers are ideal for pastes of different consistencies. Acceleration of mixing time is achieved by the planetary movement of the blade. Rugged design allows mixing of high viscosity materials with ease. The scraping mechanism (optional) positioned in the vessel ensures thorough and uniform mixing in minimal time.

Large Capacity models are provided with hydraulic lifting arrangements to simplify loading discharge and cleaning procedures.

Available in capacities: 5L to 500L.

Can be provided with heating / cooling and vacuum arrangements

Drive: Single / Dual / Three speed of stepless variants.



## SIGMA MIXERS

Sigma Mixers are best suited where mixing is to be combined with kneading, shredding, shearing, folding and dividing of medium in high density ingredients.

Made in SS / CS the vessel and double arms are machined to ensure constant close clearance and are designed to suit atmospheric / vacuum / pressurized modes.

Best suited for solutions like adhesives, resins, wax polishes, tooth pastes, chalking compounds, gel and rubber.

Available in various speeds and capacities from 5L to 500L.



## ROCKING MIXERS

The Rocking Mixer is recommended for rapid and fine blending of powders of low / medium density. Designed such that the drum is simultaneously rolling and oscillating to give it the "rocking" motion, it provides to give quick, thorough and homogeneous blend.

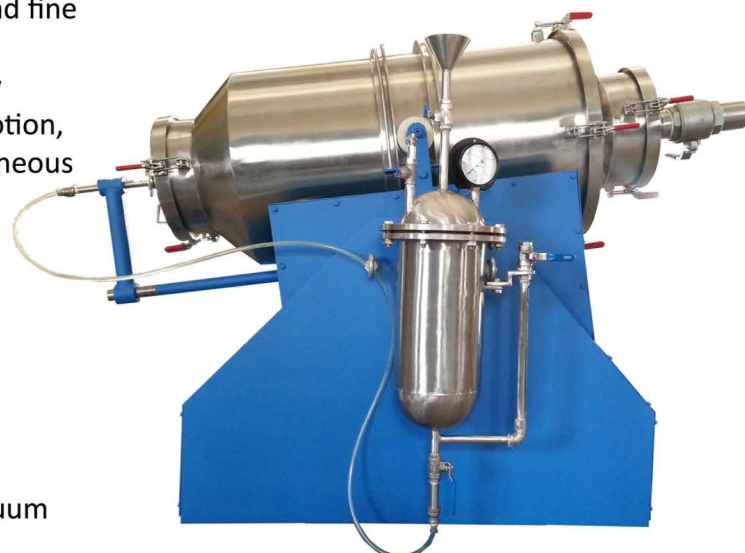
Built for loading while rolling and for easy discharge, with direct access for cleaning.

Available in MS or SS construction.

Drives with TEFC / Flame Proof specifications.

Capacity from 50L to 5000L.

Can be provided with heating / cooling and vacuum arrangements.





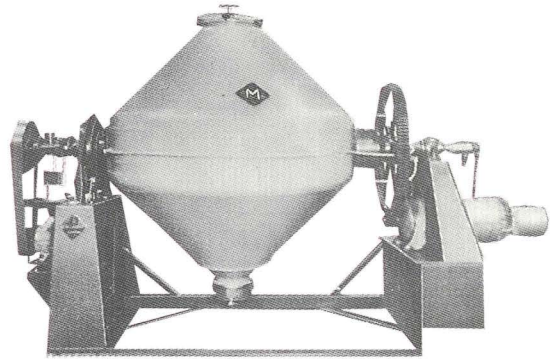
## DOUBLE CONE / POLYGONAL BLENDERS

MECON's Double Cone Blenders are apt for blending of dense powders and ensure constant delivery of blended products in large batches with short mixing time.

Mecon's Mixers effectively prevent the plug flow present in the conventional mixers and thereby increase the efficiency of mixing. Used widely in the food, spices, pharma and powder industry for pigments, colours, chemicals, dyes, pharmaceuticals, fertilizers, resins, tobacco and food products.

Designed for superior blending, speedy discharge and easy access for cleaning.

Available in capacities for varying batch sizes of 50L to 3000L.



## ATTRITION SCRUBBERS &

## DELAMINATORS

Mecon's Attrition Scrubbers are Designed and constructed for High Efficiency opposite action axial impellers with low power consumption having removable moulded rubber blades making them more durable and easily replaceable.

Ideally suited for Soil Remediation, Mineral Grain cleaning and polishing, and disintegration of clay agglomerates & cementing materials, high intensity conditioning and effective lime slaking as well as on line leaching operations.

Mecon's Attrition Scrubbers come with carbon steel shafts with rubber lining for long trouble free operation, aptly designed compartments with baffles for optimal scrubbing and high torque direct drive motors with option of variable speed, for easy maintenance and assembly.

Available in Capacities starting at 0.5 Tonne per hour.

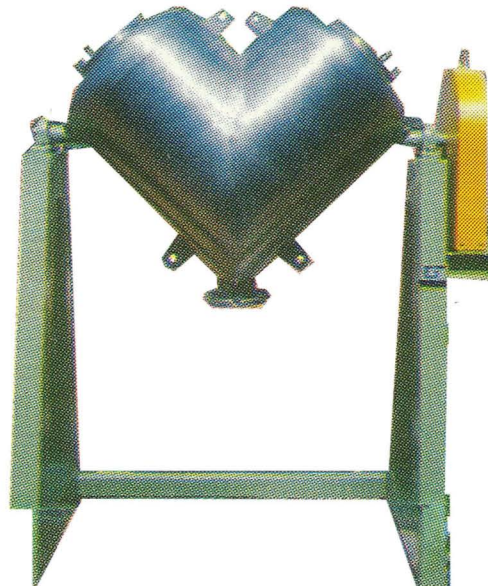


## TWINSHELL BLENDERS

MECON's Twinshell Blenders are recommended when blending should be devoid of change in particle shape or size. Suitably designed for efficient, rapid, hygienic blending and mixing at low speed without heat generation. It can also be used to combine several conventional process operations into a single step.

Most effective for high density powders.

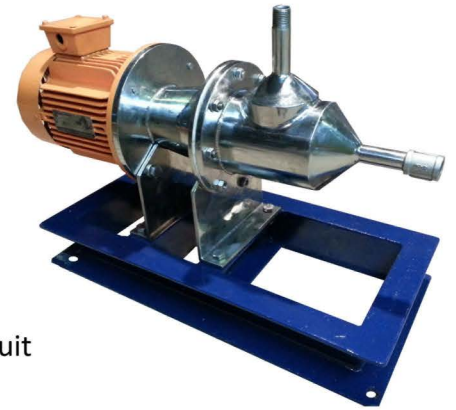
Available in a range of 50L to 3000L.



## INLINE MIXERS

High Shear In-Line mixers are supremely efficient and rapid in operation and are capable of drastic reduction in mixing times. In Line Mixers can mix, emulsify, homogenize, solubilize, suspend, disperse and disintegrate solids. Inline Mixers have the added advantages of being self-pumping, while enabling rapid dissolution of solids, particle size reduction, acceleration of reactions, and also being easy to maintain.

Available in sanitary construction and in a range of capacities to suit specific process mixing requirements.



## MULTI MILL / PULVERISER

Pulverisers are ideally suited for particle size reduction when the required output is in the range of 1mm to 5mm. Purpose built design and excellent manufacturing and quality standards for blades and grinding chamber ensure high productivity.

Interchangeable mesh design allows one machine to cater to a variety of output size requirements. Simple assembly procedure allows for simplified cleaning process. Careful design of the loading chamber ensures minimal backflow and increases safety during the loading process.

Customized design of machines to suit customer requirements and output ranging from 25kg to 5 tonnes per hour can be provided. Also available with multi-speed option.



## RIBBON BLENDERS

MECON's Ribbon Blenders are recommended where uniform dry mixing of colours, dyes, rubber, cements, slurries and paste are required. The unique design provided has ribbon blades with twisted paddings. The inner and outer spiral arrangement quickly mixes and forces the mix to the middle or the end for effective and easy discharge.

The ribbon is designed so as to blend, lift and convey the material effectively.

Available in different materials of construction.

Power ranging from 3 to 150 H.P.

Optional arrangement for spraying / coating can be provided.

Capacities from 100L to 10,000L.



# CUSTOM BUILT MIXING TANKS & REACTORS

MECON also designs customized Reaction Tanks / Mixing Kettles and Holding Tanks for process material along with Agitator Supply for these tanks.

Tanks can be provided with Heating / Cooling arrangement, option for working under vacuum and / or pressurized conditions. Charging ports and nozzles are customized based on customer requirements.

These are made to suit all process industries and can be supplied in GMP finish for the food and pharmaceutical industry.

Depending on customer requirements, we also undertakes turnkey projects for mixing systems, covering design, fabrication, assembly, erection and commissioning of the entire system for the customer at their factory.





# **MECON**

## **ENGINEERING**

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*Our R&D cell is constantly innovating and developing equipment for various industrial applications, and above details are subject to modification/improvement, without any prior notice.*