

# MIX THE IMPOSSIBLE TO PERFECTION

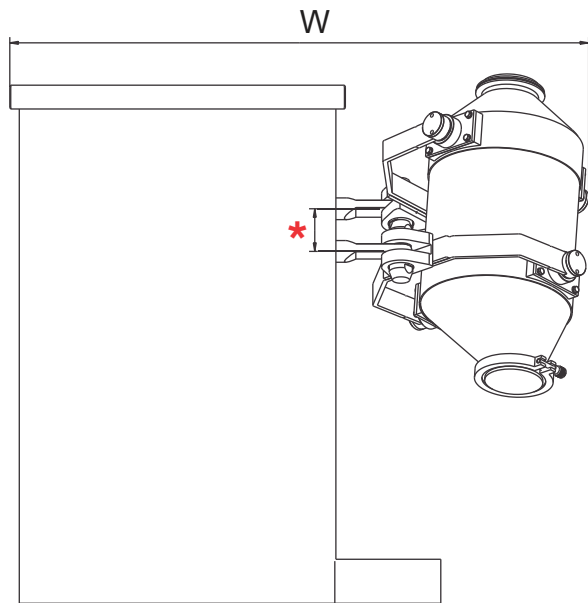
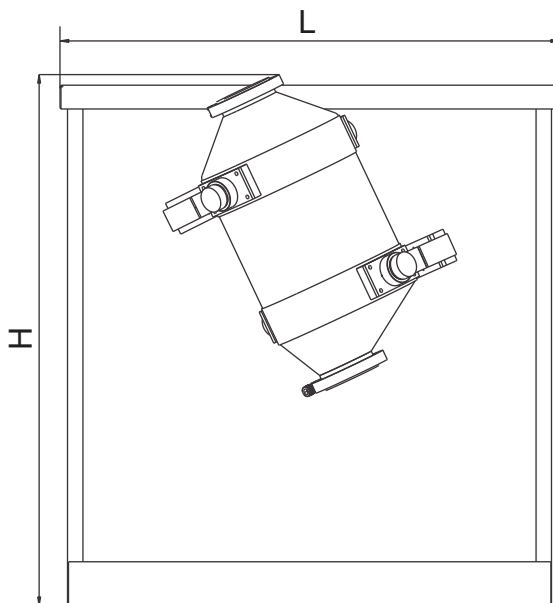
# ALPHIE®

## Three Dimensional Mixer

### (NON REMOVABLE DRUM)



- ❖ State of the art -3D mixing technology, **Manufactured in India**
- ❖ Mixer shafts are NOT in same plane, but at height difference. See '\*' below, with state of the art dynamically balanced driven shaft. This along with eccentric discharge cone ensures 100% discharge of material without any dead zone
- ❖ Mixer stops at pre-defined position for easy charging and discharging
- ❖ Mixer with manual butterfly valve at discharge and larger opening at charging side
- ❖ Material can be loaded using vacuum / pneumatic system



Specification	Alphi 20	Alphi 50	Alphi 100	Alphi 200	Alphi 400	Alphi 600	Alphi 800	Alphi 1000	Alphi 1500
Capacity (Ltr)	20	50	100	200	400	600	800	1000	1500
Effective capacity @ 80% (Ltr)	16	40	80	160	320	480	640	800	1200
Mixing capacity (Kg)	15	40	80	100	200	300	400	500	750
Motor Power (kW)	0.75	1.1	2.2	3.0	4.0	5.5	7.5	7.5	11.0
Container Revolution (rpm)	50	35	30	25	25	25	20	20	20
Machine Dimension LxWxH (mm)	1000 x 800 x 675	1200 x 1100 x 1250	1350 x 1500 x 1550	1800 x 1600 x 1725	2250 x 1900 x 1750	2400 x 2150 x 2100	2600 x 2500 x 2600	2800 x 2600 x 2800	3400 x 3200 x 3100
Weight (kg)	150	250	400	700	1100	1500	2300	2800	4400

Other capacity models also available on request.

## What is **ALPHIE**<sup>®</sup>

The motion of **ALPHIE**<sup>®</sup> is based on the kinematic Inversion Principle. The unusual, 3-dimensional mixing motion quickly and efficiently produces a homogeneous substance regardless of specific weight of the substances being mixed. This makes it an ideal powder blender or liquid mixer.

## Better than conventional mixers

- ◆ In conventional mixers, the centrifugal force of the motion of rotation tends to favor segregation rather than mixing.
- ◆ The limits of conventional mixers are reached when mixing compounds with different densities or sizes are used.
- ◆ Barrel mixer has disadvantage of smaller / heavier particles sink deeper and segregation zones are generated.
- ◆ In Mixers with blades are rotated on horizontal, vertical or inclined shafts. The speed and the forced motion generate shear forces harming the compounds.

## Our Other Designs

### For explosive / Clean Room requirements :

Mixing drum and drive units are in different rooms, separated by wall partition

### Liquid Dosing while mixing :

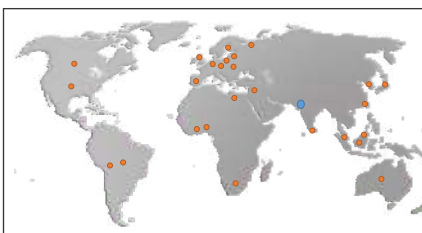
Can transfer hot / cold liquid at metered flow rate while the drum is rotating. So no need to stop mixer and add liquid manually

### Removable mixing drum :

The mixing drum / container is removable from mixer so no problem of cross contamination and validation. Product does not come in contact with mixer or environment.

**HEXAGON**  
*The Knowledge Centre*

Global Customer Base



For more details contact us at :-

**HEXAGON PRODUCT DEVELOPMENT PVT. LTD.**

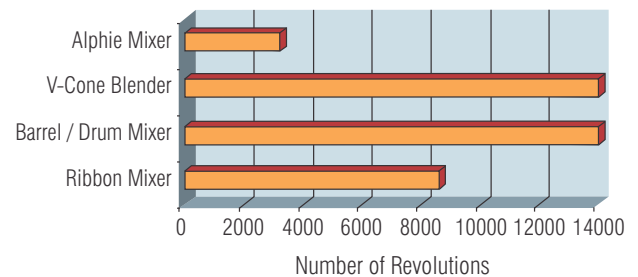
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\* We reserve the right to change content, picture & specification as per continuous research & development.

## Mixing Benefits

- ◆ High Mixing efficiency
- ◆ Dust free hygienic mixing in closed container
- ◆ Short Mixing time
- ◆ No segregation of the different compounds
- ◆ Gentle mixing

Number of Revolutions to Reach Homogeneity



As you can see, Alphie 3D Mixer gives 3 to 4 times faster homogeneous mixing result than conventional mixer

## Mixer Applications

Industry	Application
Abrasive Powder	For grinding wheel and diamond coring bit manufacturing
Bakery	For mixing of cocoa, wheat flour and additives
Battery	For dry mixing of mobile battery powder ingredients
Cement	Making blend of OPC, Fly ash, Slag, Limestone etc
Coating	For coating of oil layer on rubber bush
Dentistry	Preparation of dental amalgam - to mix metal, liquid mercury and powdered alloy
Diamond Tool	For resin bond as well as industrial diamond powder mixing
Fire crackers	For dry and wet mixing of crackers of Aluminium powder, Sulphur etc
Glass	For incoming sand testing and quality measurement
Homeopathy	For potentization rise using "mother tincture" with ethanol
IOL	For tinting powder dyestuff homogenization
Metal Finishing	For deburring and polishing using media and chemical
Metal Powder	Mixing of iron with copper, cobalt, Nickel and other elements
MIM	For Feedstock pre mix making
Nano particle	For dispersion of material like transition metal oxide, sulphide in organic solvents
Nuclear Fuel	For mixing of Uranium Oxide with binders
Paint	Mixing of Ag Nano powder, epoxy and pigments
Particle size reduction	For milling operation using steel or other balls
Pharmaceuticals	Dry powder Inhalation and formulation of drug
Plastic	Mixing of polycarbonate with Carbon nano tubes
Polymer	For compounding and master batch mixing
Soft drink	Mixing of salt, citric acid, colour powder and Sodium Benzoate
Concentrates	Benzoate
Spices	Seasoning mixing from spices such as cinnamon, cloves and ginger



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