

## **dual motion mixer with high homogeneity and efficiency**

dual motion mixer's dual-motion design not only improves the mixing efficiency, but also optimizes the distribution characteristics of materials in space, designed for high uniformity mixing needs, widely used in pharmaceutical, chemical, food, new materials and other industries.

### **Dual Motion Mixer**

#### **Main Features**

1. Composite motion mechanism: the mixing cylinder in the rotation at the same time, the internal mixing blades are synchronized movement, to achieve the material in different directions of the multi-dimensional mixing, far better than the traditional single-axis mixing method.
2. Multi-size barrel can be switched: the equipment supports the rapid replacement of different volumes and materials of the barrel, strong compatibility, to meet the needs of a variety of experimental formulations of the mixing.
3. Structural modularity: barrel, stirrer, transmission mechanism adopts modular design, easy to disassemble, maintenance and cleaning, greatly saving equipment maintenance time.



4. Intuitive and simple operation: equipped with digital control interface, can be accurately set the mixing time, speed and direction, suitable for all types of operators, without professional training.

### **Core Advantages**

1. Excellent mixing uniformity: through the dual-motion design significantly improves the mixing effect between the particulate materials, to ensure that the composition of the sample distribution is more consistent.
2. High experimental flexibility: suitable for formulation development, proportioning research and other scenarios, can easily complete from grams to kilograms of sample mixing.
3. Reduce the risk of cross-contamination: all parts in contact with the material can be quickly disassembled and cleaned, suitable for laboratory environments with high cleanliness requirements.
4. Save time and cost: efficient mixing shortens the experimental cycle, improves the sample output rate, help accelerate product development.

### **Working Principle**

1. The overall drum rotation: the cylinder itself along the horizontal or inclined axis of rotation, so that the material in the cylinder tumbling flow, prompting a wide range of macro-mixing.
2. Internal blade stirring: the stirrer to independent axis of rotation, the formation of local high-speed shear and turbulence, to strengthen the interaction between the material particles.

This superimposed motion breaks the dead-end effect and can effectively avoid the layering of materials due to the difference in specific gravity, which is suitable for the uniform mixing of multi-phase materials such as powders and liquids, particles and micronized powders and so on.

### **Application Fields**

1. Pharmaceutical industry: used for pharmaceutical powder, additives, intermediates, pre-formulation experiments to ensure the consistency of the composition of each sample.
2. Fine chemical industry: suitable for pigments, additives, catalysts and other high-demand mixing process.
3. Food and health products: for flavorings, nutrients, functional formulations and other small sample mixing test.
4. New material research and development: applied to powder metallurgy, nano-materials, polymer material proportioning and dispersion research.
5. Scientific research institutes and university laboratories: as teaching and scientific research experimental equipment, convenient and rapid simulation of industrial mixing process.
6. Dual motion mixer is very suitable for small batch testing and new formula development stage.

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<b>Model</b>	<b>HT5L mixer(optional 2L to 5L barrel and blades)</b>
Mixing mode	Cross-axis dual motion mixing
Gear motor	250W
Voltage	Single phase 220Vac, 50hz
Time setting	0 to 999 minutes time setting, automatic shutdown
Useful capacity	80%
Load weight limit	5kg
Material barrel speed	0 to 30rpm
Barrel material	304 stainless steel
Material barrel thickness	2.0mm
Internal spiral blade speed	0 to 75rpm
Spiral blade and bracket material	304 stainless steel

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<b>Model</b>	<b>HT5L mixer(optional 2L to 5L barrel and blades)</b>
Inlet and outlet size	76mm
Dimension	645x296x480mm
Weight	35kg