vacuum emulsifying mixer with lift for high-viscosity mixing

Vacuum emulsifying mixer adopts vacuum environment for emulsification treatment, which can remove air bubbles efficiently and ensure the uniformity and stability of emulsion.

Vacuum Emulsifying Mixer

Vacuum emulsifying mixers use a vacuum environment for emulsification, which can efficiently remove air bubbles and ensure the homogeneity and stability of emulsions. Through highly customized configurations, the vacuum emulsifying mixer is able to meet different customer's process requirements, such as high shear emulsification, heating, cooling, PH value control and many other functions, providing efficient and precise production solutions.

Features

- **Frame-type wall scraping agitation:** the design of frame-type wall scraping agitation ensures that the materials are evenly mixed during the mixing process, which is suitable for handling high viscosity materials. The wall scraping mixing effectively prevents the material from sticking to the container wall, which improves the working efficiency.

- **Teflon scraper:** Teflon material scraper has good high temperature and corrosion resistance, adapt to different working environments, and can reduce the loss and residue of materials in the mixing process.
- **Homogenizing emulsifying structure:** the equipment is equipped with high efficient homogenizing emulsifying head, which generates shear force through high speed rotation to disperse the particles in the material and ensure the fineness and homogeneity of the emulsion. It is suitable for products with strict requirements on granularity.
- **Double-end face mechanical sealing:** Double-end face mechanical sealing can ensure the sealing in the emulsification process, avoid material leakage, ensure the long-term stable operation of the equipment, and also improve the safety of the equipment.
- **Vacuum pumping and defoaming function:** in the emulsification process, the vacuum pumping system in the equipment can efficiently remove the air bubbles, avoid the influence of air bubbles on the material, and ensure the stability and uniformity of the emulsion.
- **Hydraulic lifting of the lid:** the lid is equipped with a hydraulic lifting system, which is convenient for rapid dumping and discharging of materials, simplifies the operation process and improves the production efficiency.
- **Diversified heating and cooling methods:** the equipment supports electric heating or steam heating, which can be selected according to the production requirements. At the same time, it is equipped with circulating water cooling system to avoid overheating affecting the stable operation of the equipment.

- **Intelligent control system:** the equipment is equipped with advanced control system, supporting PLC control, temperature control, vacuum control, etc., to ensure accurate and stable production process. PH value online measurement, CIP cleaning and other functions can also be added according to demand to meet different process requirements.

Working Principle

1. The core principle of the vacuum emulsifying mixer is to remove air bubbles in the material by emulsifying and mixing in a vacuum environment to ensure the uniformity of the emulsion.
2. During the emulsification process, the materials are quickly broken up under the high shear action of the homogenizing emulsifying head to form fine and uniform colloids or emulsions.
3. The hydraulic lifting system makes the lifting and lowering operation of the main pot more convenient, thus enhancing the material discharge efficiency.
4. Vacuum pumping function extracts air bubbles during the emulsification process and reduces the effect of air on the emulsion.
5. The electric heating or steam heating system can precisely control the temperature of the material, making the emulsification process more stable and efficient.

Application Areas

1. **Cosmetic Industry:** Lift type vacuum emulsifier is widely used in the production of creams, lotions, skin care products and other cosmetics. Through homogeneous emulsification and vacuum defoaming, it ensures the fineness, uniformity and high quality of the products, which is suitable for the production of high-grade skin care products.
2. **Pharmaceutical industry:** The equipment is used for the production of ointment, ointment, cream and other topical drugs. Through precise emulsification and vacuum defoaming, it ensures uniform distribution of the ingredients of the medicine and improves the therapeutic effect, and at the same time reduces the influence of air bubbles and impurities on the medicine.
3. **Food industry:** Lift type vacuum emulsifier is widely used in the food industry for the production of various high-viscosity foods, such as sauces, syrups, jams and so on. It can ensure that the food has a smooth texture and meets the hygienic standards.
4. **Chemical and biological preparations:** In chemical preparations, pesticides, paints, coatings and other industries, lift vacuum emulsifier is used for emulsification, homogenization, dispersion and other processes. It can handle high viscosity chemical materials to ensure product quality and stability.
5. **Laboratory and Pilot Stage:** It is suitable for small and medium scale production and laboratory research, and can meet the needs of different scale production. In the stage of new product development and process validation, it can provide reliable data support and process testing.