











## Wenzhou Qiangzhong Machinery Technology Co.,Ltd.

QiangZhong Technology is Committed to a China's professional provider of dairy, food, beverage, daily chemical, agrochemical, bio-pharmaceutical, etc. industries.

## MAGNETIC STIRRER

The magnetic stirrer is a stirrer that is mounted on the bottom of a container and is driven by magnetic force. It adopts a fully closed, non-leaking, non-fouling mixing method. Because it is magnetically driven, it is a non-contact, torque-free transmission shaft. It uses the static seal of the insulating sleeve isolation method to replace the dynamic seal of the drive shaft and completely solves the leakage problem that can not be solved by the mechanical seal. The equipment is mainly used in the dissolution, mixing and batching in pharmaceuticals, foods and other industries.



**SDN Magnetic Stirrer** 



**QLK Magnetic Stirrer** 



**Magnetic Suspension Stirrer QLK** 



**Magnetic Mixing Tank** 



**Magnetic Mixing Tank** 



**Magnetic Mixing Tank** 



High Shear and Emulsification Magnetic Stirring Tank



**Magnetic Stirring Tank** 



Magnetic Mixing Tank(with Automatic Thermostat Control)

## With Magnetic Drive Device, No Mechanical Seal, No Leakage

- Welded isolation sleeve static dead seal replaces dynamic mechanical seal, that completely solves the leakage problem of dynamic mechanical seal, ensuring no leakage, no external pollution, strong safety and it's simple structure, easy to disassemble and clean, no dead corner.
- A mixer at the bottom even can mix very few materials with unique designed mixing blade, mixing speed ranging from 20r/min to 400r/min, which can mix and blend various materials. Since the mixer is installed at an angle of 10at the tank bottom, the materials are twisted within the tank at an angle of 10°during agitation, not rotating in the circumferential direction, bringing about turbulent flow.
- The mixing speed is regulated steplessly by the inverter, and the optimal mixing speed can be adjusted below the maximum speed to meet the requirements of various processes on the mixing speed.
- Tank capacities available range from 50L to 20,000L, which could be designed and manufactured according to actual needs of customers.





#### **Magnetic Stirrer Advantages:**

With a bottom agitator to ensure that very low level materials are also fully agitated.

No mechanical seal, no risk of cross-contamination and leakage of lubricant, no baffle.

Fast online cleaning and sterilization, easy to verify and easy to maintain.

#### CIP Design:

Large cleaning gap, easier to clean, and less material cutting

#### **Magnetic Drive Technology:**

No mechanical seal --fuly integrated Open design-the best online cleaning effect No baffles required-easy to verify, easy to maintain

#### **Characteristics of Silicon Carbide Bearings:**

- 1. The hardest bearing, very durable;
- 2. Better heat transfer efficiency than tungsten carbide and zirconia;
- 3. Small wet friction coefficient;
- 4. Most inert, no heavy metal residues;
- 5. After dry-running fatigue test, no shedding

#### **Dry-turn Bearing Technical Features:**

- 1. Effectively reduce the cost and time of testing and maintenance.
- 2. Good O-ring air tightness, can be CIP/SIP.
- 3. If there is no liquid in the container, continuous wear at full speed for ten hours will not cause wear sleeve and desquamation.

# Magnetic stirring structure replaces the ordinary structure of mechanical seal stirring

Realizes online cleaning and aseptic operation, and is widely applicable to biological products, cell suspensions, large infusions, etc. The mixing and liquid preparation adopts a unique impeller design, and the material in contact with the material is made of stainless steel 316L, and the internal surface mechanical polishing accuracy is 0.2-0.4MM

Applicable Vessel Capacity:20L-30,000L

Model: SDN-50 to SDN-30000

Connection Type: weld

Highest Work Temp: 180°C

Applicable Viscosity:700Cp

Impeller Type: 3-piece/4-piece

Motor/Reducer: 0.18kw-7.5kw,3 phase

Motor Brand: Nord/SEW

Installation Method: Horizontal/Vertical

Material of Contact Raw Material Components:316L

Material of Non-contact Raw Material Components:304

Bearing Material: silicon carbide/tungsten carbide

Main Advantages











## **SDN Magnetic Stirrer Technical Parameters:**

Model No.	Motor Power (kw)	Speed (r/min)	Stirring Capacity (L)
SDN-50	0.18	50-450	10-50L
SDN-100	0.25	50-450	50-100L
SDN-500	0.55	50-450	100-500L
SDN-1000	0.75	50-450	500-1000L
SDN-2000	1.1	50-450	1000-2000L
SDN-5000	2.2	50-450	2000-5000L
SDN-10000	3	50-450	5000-10000L
SDN-20000	4	50-450	10000-20000L
SDN-30000	4/7.5	50-450	20000-30000L

<sup>\*</sup> The above information is for reference only and can be customized according to customer requirements.

<sup>\*</sup> This equipment can be customized according to the nature of raw materials to meet the needs of the process, such as greater viscosity, homogenization and other requirements.

## Magnetic Mixing Tank Technical Parameters:

Capacity (L)	Diameter (mm)	Height (mm)	Motor Power (kw)	Mixer Speed (r/min)
100	500	500	0.18	20~400(Can be customized according to customer's requirements)
200	600	700	0.25	
300	750	700	0.37	
500	900	800	0.75	
800	1000	1000	0.75	
1000	1100	1000	1.5	
1500	1200	1200	1.5	
2000	1350	1500	2.2	
3000	1600	1500	2.2	
5000	1900	1800	3	

<sup>\*</sup> The above information is for reference only and can be customized according to customer requirements.



# Use and Maintenance of Magnetic Stirring Tank

### Maintenance of Magnetic Stirring Tank Equipment:

- 1. Frequently check whether the reducer has oil leakage and whether the shaft seal is intact.
- 2. Listen to whether the sound of the reducer is normal, and feel the operating temperature by touching the reducer, motor and frame bearing. The general temperature is less than or equal to 40°C, and the highest temperature is less than or equal to 60°C (it is normal that it can stay on the back of the hand for more than 8 seconds).
- 3. Check whether safety devices such as safety valves, explosion-proof membranes, pressure gauges, and thermometers are accurate, sensitive and easy to use, and whether safety valves and pressure gauges have been calibrated.
- 4. If the outer cover is dirty, please wipe off the dirty materials with a soft cloth. If the dirt is difficult to clean, wipe it with a cloth moistened with detergent or alcohol.
- 5. Always listen for abnormal vibrations and noises in the tank.
- 6. Keep the mixing shaft clean and visible, and check whether the rotation direction of the mixing shaft is correct.
- 7. Regularly check the stirring conditions in the magnetic stirring tank, tighten the loose bolts, and replace relevant parts if necessary.
- 8. Check whether all the inlet and outlet valves of the magnetic stirring tank are intact and available. If there are any problems, they must be replaced in time.
- 9. If there is abnormal noise in the magnetic stirrer in the tank, please do not turn it on. First remove the outer magnetic coupling of the outer motor and the magnetic stirrer, and then enter the tank through the manhole (or tank flange) to take out the magnetic head. Check whether the bearing is in good condition. (Do not forcefully remove the inner magnetic head before removing the outer motor) When replacing the magnetic bearing, first remove the hexagonal screws and take out the bearing. It is not advisable to overtighten during assembly, and tighten the screws when installed in place.
- 10. Check the flange and machine base of the magnetic stirring tank for loose bolts, and check the stirring anchor for cracks, perforations, corrosion, leakage, etc.
- 11. Check the stirring anchor for cracks, perforations, corrosion, leakage, etc.

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