Solution for mixing technology

Compared with top mounted shaft mixer, bottom mounted magnetic mixer has many advantages, especially in aseptic processing.

The greatest advantage of magnetic mixer is to guarantee the integrity of the tank. Non-shaft mixer installed on the wall of tank, while shaft mixer often causes leakage, and affects the cleanliness of the tank and its internal product.

Magnetic mixer is also easy to disassemble, while the top mounted mixer need a mechanical lifting device to dismantle. Bottom mounted magnetic mixer is level with the bottom tank, so it works even there is a small amount of liquid in the tank.

CIP/SIP, spray ball type or immersion type

JNB type magnetic mixer is designed to liquid mixing which is in accord with the requirements of cleanliness and asepsis. The main advantages of the JNB type magnetic mixer are completely online cleaning and online sterilization （CIP/SIP）.

Super strong mixing performance

JNB type magnetic mixer is designed to intense mixing or mild mixing of liquid materials, which apply to injection, vaccine, infusion, plasma, bacterial and cell culture and all types of suspension.

Characteristic

Main characteristics of JNB type magnetic mixer:

- Completely online cleaning and online sterilization (CIP/SIP)
  In accordance with GMP
- Mixing capacity ranges from 10L to 30000L
  Apply to the strict requirements of mixing
- Bottom mounting, magnetic drive
  No seal, non-shaft, guarantee the integrity of tank

Complete online cleaning

Methods and materials:

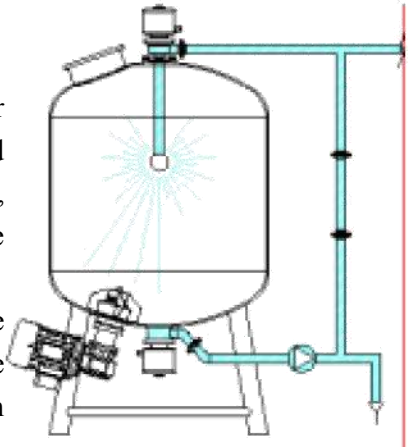
Before testing, disassemble the testing object and reference pipeline (0.5mmRa) and clean them. Removing fat and 120 ° C high temperature sterilizing for 30 minutes. Arranged with auxiliary pipe and reinstall them. Then, polluting them with sour milk solution containing bacillus spore — — thermophilic lactobacillus (NIZO C953). Emptying and drying the test object and starts to CIP online cleaning.

Online cleaning steps:

1. Rinse with cold water for1 min
2. Circulation cleaning with 63 ° C ± 2 ° C cleaning solution(1%w/v) for 10 min
3. Rinse with cold water for1 min

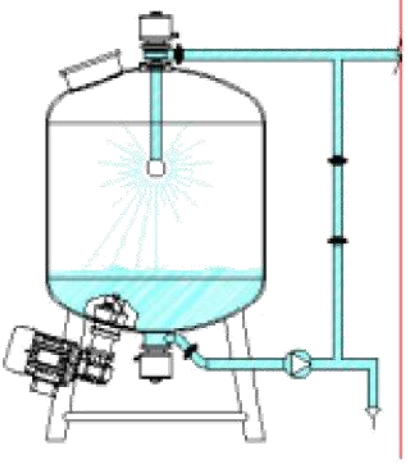
After cleaning, cover with melted agar at the inner surface of the reference pipe, mixing head and supporting bearing surface. After curing the agar, put the testing object and reference pipeline into the culture dish for 24 hours at 58° C

After training, check the yellow stain of agar in the testing object and reference pipeline. Compare the degree of yellow stain in testing object with reference pipeline.



Result

The testing result shows that online cleaning effect of JNB type magnetic mixer is at least the same as the reference pipeline under above circumstance. The two tests adopt the way of immersing the spray ball and mixing head in cleaning solution. The tests indicate that the magnetic mixer can be completely cleaned according to container or piping system cleaning step.



Aseptic Structure Design of Agitator

The design idea of JNB type magnetic mixer is to make the equipment with optimum properties, reliability and durability. The R&D of each component is based on the experience of aseptic design.

Mixing Head

All of the resistant surfaces in contact with the material can be easily cleaned online, because of the unique and opening design of the mixing head. It is designed for aseptic pharmaceutical technology, which has smooth surface without dead angle and sharp corners.

Support Bearing

Support bearing is a solid body, which is fixed and sealed in the tank plate with pharmaceutical grade gasket. The material of support bearing is silicon carbide, which is fixed in the stainless steel tray by heat shrink technology.

Tank Plate

Tank plate is made of stainless steel. It is welded to the bottom of the tank. Magnetic driving force is conveyed from the driving mechanism to the mixing head through the tank plate.

Driving Mechanism

Driving Mechanism is composed of a gearbox and a motor driving head. The motors have various types like AC, DC and pneumatic. The drive mechanism is easy disassembly. It can be equipped with speed sensor for showing the speed of the mixing head. The vessel with jacket shell can be provided an extended type of reduction box.

Control Device

The control system of the driving mechanism can be configured according to your request. Pneumatic control system can be used in the explosion proof occasion.

Control system adopts stainless steel cabinet.

Production and quality

The magnetic mixer meets the GMP requirements of CIP/SIP

Start from Scratch

Because of different market requirements and different standards, ASME, ASTM and European specifications, etc should take into consideration.

Important Check

The quality control procedures include a series of tests to ensure the components of the mixer are in accord with the requirements of high quality standards.

Firstly, perform a visual inspection in order to identify the batch number and ensure the number is consistent with the number of orders.

Measure the size of bearing to ensure the size is within tolerance. Doing dye penetration test to ensure that there is no holes between the bearing material and stainless steel.

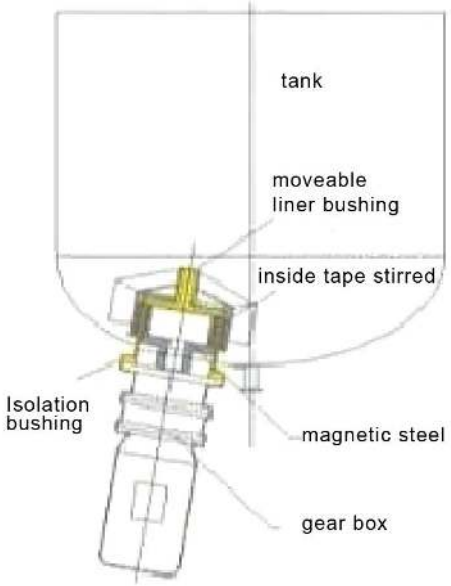
Check the mark that corresponds to the material certificate. (3.1.B certificate)

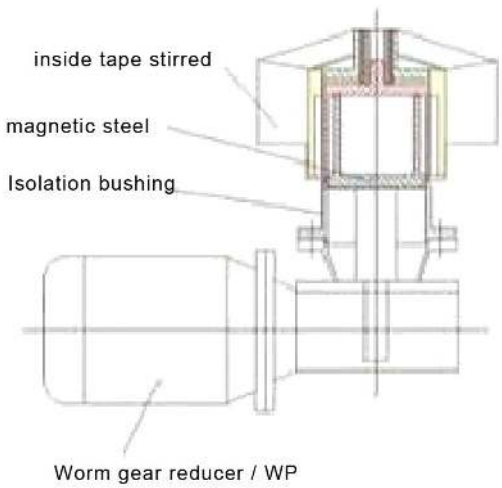
Check the mixer is marked a separate ID number.

Check the entire important dimension is consistent with relative size of drawing.

Measure the surface roughness to ensure Ra < 0.5μm.

Check the operation condition of each driving structure before delivery.





Application

Strongly mixed or mild mixed

Application

JNB type magnetic mixer is fit for the situation of high demand for aseptic mixing. JNB mixers apply to different technological process. Besides a series of standard mixer, the mixer can be designed as a structure that is satisfied with special operating conditions. The material of JNB type magnetic mixer is SS304 or SS316L.

General mixing

JNB type magnetic mixer applies widely. The most common application is general mixing, which is keeping the suspended particles in a good dispersion, adjusting the temperature and dissolving the material in liquid. When selected a suitable mixer, the shape of container, size, viscosity and the type of mixer should be provided.

Cell culture

Cell culture has a harsh technology, which is why many companies regard JNB magnetic mixer as a first choice. The mixer provides low shear extended mixing head. This is also the reason why the JNB type magnetic mixer is welcomed by customers all over the world.

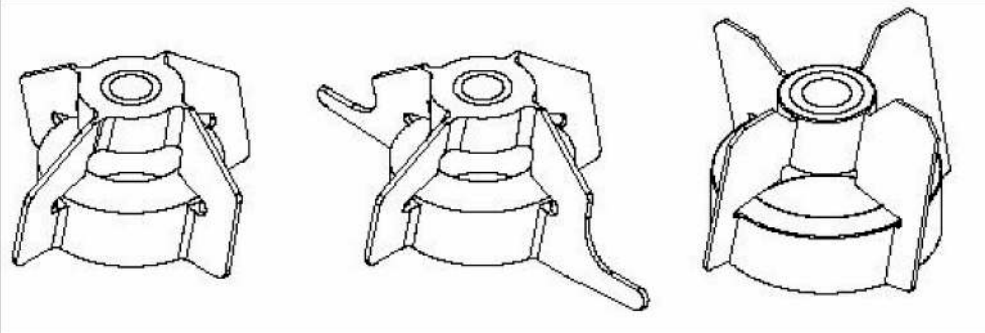
Plasma

The use of JNB magnetic mixer means the establishment of a complete production equipment.

Flexibility is an important characteristic of a magnetic mixer. Many customer choose this item because it can be customized according to a specific requirement.

Food and Dairy Products

JNB type magnetic mixer applies to many food plants, such as milk, chocolate, beverage, fruit juice production. JNB type magnetic mixer becomes a first choice for many companies in the food industry because of the feature of CIP/SIP.



rinciple and technical parameters

Working principle

The magnetic mixer uses the principle that the magnetic material with the same nature attracts each other. Changing the polarity of the base at both ends in order to rotating magnetic mixer. JNB type magnetic mixer applies to the pharmaceutical, biological engineering and food industries. It has a good performance, reasonable structure, small volume and reliable use. It is suitable for all kinds of stainless steel reaction tank with mixing device. It is mainly composed of inner magnetic pot, external magnetic pot, isolation cover, driving motor, etc.

JNB type magnetic mixer is made of stainless steel 304 or 316L. According to the principle of permanent magnetic clutch, the agitating shaft is running. Changing kinetic mechanical seal to static seal, magnetic mixer can avoid the problem of leakages.

Technical parameters

Model	Capacity(L)	Power(KW)	Speed(RPM)
JNB-20	50-200	0.2/0.4	≤320RPM
JNB-40	200-500	0.55/0.75	≤320RPM
JNB-60	500-1000	1.1/1.5	≤320RPM
JNB-80	800-2000	1.5/2.2	≤320RPM
JNB-100	1500-3000	3.0/4.0	≤320RPM
JNB-120	2000-5000	4.0/5.5	≤320RPM
JNB-140	3000-8000	7.5	≤320RPM

Above the configuration is used for material same as water property perpdissolving and mixing normally.

1 W--horizontal gear box L-- Vertical gear box

2.Must choose the L type(vertical R series gear box or motor) when rev ≥320 per minute

3.Vessel volume according to agitating condition:Big vessel for soft mixing,small vessel for fierce mixing

4.Single layer select type 1,jacketed vessel choose lengthened type 2.

5.The fill color data is suitable for material with higher viscosity than water when ACJ magnetic torque>motor power.