

DD-6000 Floor Standing Low Speed Large Capacity Centrifuge

Instruction

Thanks for using Sichuan SHUKE Centrifuge.

In order to play the best performance and security, please read this instruction carefully before you installing, using or mending this instrument.

CAUTION

Welcome to use SHUKE centrifuge, please read the below caution carefully before you use this machine to prevent any accident may occur.

1. When you are not going to use this machine in the near future or are ready to maintain it, make sure you have cut off the electricity and pulled the plug from the socket.
2. The power for this centrifuge is single-phase 220V, 50Hz, 15A. The power should have protective earth wire. Do not use zero line to instead of protective earth wire.
3. Strictly prohibit the imbalance of the rotor when you operate the centrifuge.
4. Strictly prohibit the speed of the rotor exceed the max speed which has been preset when you operate the centrifuge, otherwise accident may occur.
5. If there is any crack on the rotor, stop to use it, otherwise blast accident may occur.

1. Application

DD-6000 floor standing low speed large capacity centrifuge is a necessary instrument in biochemistry, agricultural science, radio-immunity, environmental protection and other research areas. This centrifuge has many different capacities of accessories to satisfying the small batch preparation in the experiment. Its Max speed reach 4000r/min, Max RCF reach 3580Xg, Max capacity is 4x1000ml. This centrifuge adopts variable frequency motor, micro-computer control, touch panel button, LCD and LED display, stainless steel shell and stainless steel centrifugal chamber. The operation is easy, convenient, and reliable.

2. Technical Parameters

Centrifuge parameters

Max Speed	6000 r/min
Max RCF	5200 Xg
Max Capacity	4 x 800 ml (4000 rpm)
Timer Range	1min~99H59min/inching
Speed Accuracy	±10 r/min
Noise	≤60dB
Power	AC 220V 50Hz 15A
Dimension	650×55X840(L x W x H)mm
Weight	Approx. 135 kg (not including the rotor)

3. Available accessories

Several kinds of rotors are available for your different requirement.

Rotors parameters

Rotor		Capacity	Max Speed	Max RCF
NO. 1 Swing-out Rotor		4x100ml	5000rpm	4650xg
		4x50ml		
NO. 2 Swing-out Rotor		32x15ml	4000rpm	2980xg
		8x50ml		
		8x100ml		
NO. 3 Swing-out	Adaptor	4x250ml	5000rpm	5200xg
		8x50ml		
		4x100ml		

Rotor		36x10ml	4000rpm	3100xg
		40x7ml vacuum Vacuum blood collection tube		
		20x15ml		
	48x2-7ml vacuum Vacuum blood collection tube			
64x2-7ml Vacuum Vacuum blood collection tube				
NO.4 Swing-out Microplate Rotor		2x3x96 holes	4000rpm	1970xg
NO. 5 Swin g-out Roto r	Round hang cup	4x500ml	4000rpm	3400xg
	Adaptor	12x50ml		
		36x15ml		
		76x2-7ml Vacuum Vacuum blood collection tube		
		20x50ml		
	Swing bucket rotor	40x15ml		
		80x10ml Vacuum Vacuum blood collection tube		
		112x2-7ml Vacuum Vacuum blood collection tube		
		100x1.5ml		
		Hang cup		148x5ml RIA tube
	96x2-7ml vacuum Vacuum blood collection tube			
	Microplate rack	4x2x96 holes		
NO. 6 Swing-out Rotor		4x750ml	4000rpm	3500xg
Adaptor	12x100ml			
	20x50ml			
	48x15ml			
	96x2-7ml Vacuum Vacuum blood collection tube			
NO. 7 Swing-out Rotor		6x250ml	4000rpm	3580xg

Adaptor	60x2-7ml vacuum Vacuum blood collection tube		
	30x15ml		
No.8 Swing-out Rotor	4x800ml square hang cup	4000rpm	3580xg
adaptor	56x15ml		
	140x2-7ml Vacuum Vacuum blood collection tube		
	16x100ml		
NO. 9 Fixed-angle Rotor (Suitable for DD-6000)	12x15ml	6000rpm	5120xg
	6x50ml		

4. Remove the package (by users)

Users should check the package appearance when receiving the product. Severe impact, accumbency and upend etc. should not happen during transportation. The package appearance should be well. If the situation presented happens, please contact with the cargo agent and inform our company in time.

First, remove the top cover of the package; get out of the rotor and accessories. Second, get out of the centrifuge from the package. Last, properly deal with the package and packing, not to pollute the environment.

5. Installation

5.1. Installing environment demand:

The installing place of this centrifuge is indoors, should be place on a hard ground. No conductive dust, corrosive or damaging insulating air,

and no powerful vibration source nearby, avoid direct sunlight.

5.2. Installing space demand

The distance between the back side of this centrifuge and wall should be no less than 30 cm, make sure there is no other things are placed in this place when the machine is running.

5.3. Installing power demand

The power for this centrifuge is single-phase 220V, 50Hz, 15A. The power should have protective earth wire. Do not use zero line to instead of protective earth wire. The protective earth wire is longer than other two wires, make sure you have connected it correctly.

5.4. Emergency switch

Please installing emergency switch at the entrance of the door or outdoors, so that the operator can cut off the power when there is any out of control accident occur during the centrifugal process.

6. Operation

6.1. Open the lid

- Press Stop & Open key, after you hear a sound of unlock, lift up the lid.
- Emergency lid release, there is a line below the right front of the machine, which is used when power failure or something wrong with the lock. It should not be used at ordinary time.

6.2. Installing the rotor

- Examine the rotor before every use, and make sure there is no any crack or corrosion spot on rotor, especially the hanger and the bottom of the carriers. Strictly prohibited use the rotor which has crack or corrosion pit on it, strictly prohibited use the rotor which is out of guarantee period (guarantee period are showed in table 3).
- Put the rotor on the spindle, screw the nut tightly by use the spanner equipped.
- Put the test solution in the test tube(for the angle rotor, the test solution is around 75% of the nominal), then weight it by mount pan balance, the weight error of each filled test tube should be $\leq 1\text{g}$, (when the solution is below 7ml, you just need to make sure it in balance by visual inspection will be ok).
- The test tube must be loaded on the rotor in even number, for swing-out rotor, all of the carriers and test tubes must be loaded in. Strictly prohibited imbalance running. There is serious accident may occur for imbalance running or not weigh the weight carefully, because these carelessness make the rotor stressed asymmetric.

6.3. Closed the lid

Press the lid down, the lid was locked after you hear a sound.

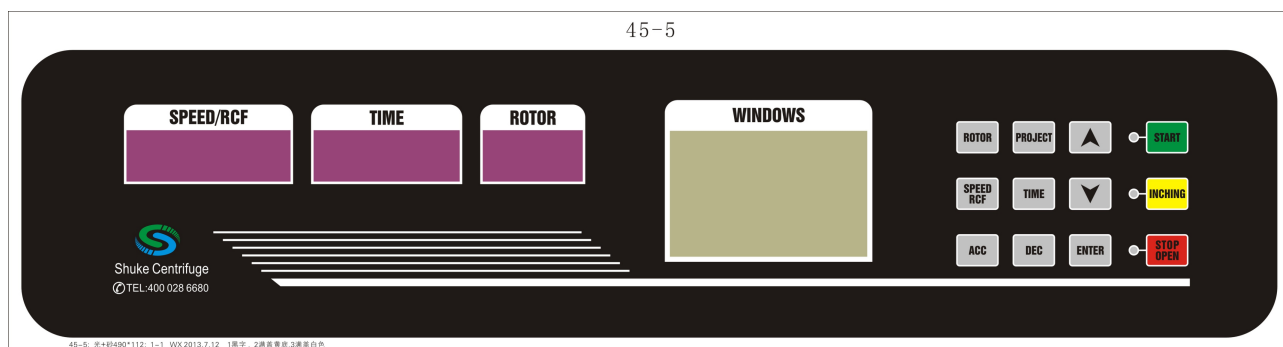
6.4 Connect the power

Make sure the power with an earth wire before you start connect the

power, then switch on the power button.

6.5. Parameters setting

There are 12 buttons on the control panel (as showed below).



grease for protection.

8.4. Make sure the rotor No. displayed on the control panel is accord with the rotor which you loaded on the spindle. If the rotor No. was set wrong, you may overspeed the rotor or make the rotate speed can't reach the RPM you required, especially the overspeed of the rotor is dangerous because explode accident may occur.

8.5. Strictly prohibit run the centrifuge without the rotor.

8.6. The centrifuge tube should be replaced regularly, strictly prohibit to use the tube which is about to burst.

8.7. Polypropylene (PP) tube (bottle) can not come with concentrated nitric acid (95%), aqua regia, toluene, benzene, gasoline, kerosene. Polycarbonate (PC) centrifuge tube (bottle) can not come with hydrofluoric acid, hydrochloric acid (30%, 50%), sulfuric acid (10%), nitric acid nitric acid (95%), aqua regia, potassium hydroxide, magnesium hydroxide, ammonium hydroxide, aluminum fluoride, ammonium

sulfide, ammonium acetate, ammonium carbonate, sodium nitrate, chromic acid (50%), toluene, benzene, gasoline, acetaldehyde, acetone, ethanol, isobutanol, ethyl ether, cresol, and others to use together. Polyethylene (PE) centrifuge tube (bottle) can not come with sulfuric acid (50%, 75%), benzene, gasoline, kerosene.

8.8. Clear the centrifugal chamber every time after you use it.

8.9. The operator can't lean on the centrifuge.

9. Warranty

9.1. The warranty period of the centrifuge mainframe is 18 months from the date of buying day.

9.2. In condition of using correctly, the guarantee period and the service life of the rotor is as showed in the table below (table 3).

Rotor style	Guarantee period	Usage Counter	accumulated use time
Angle rotor	5 years	1000 times	2000 hours
Swing-out rotor	3 years	1000 times	2000 hours

In order to run the rotor safely, the user should record the running status of the rotor carefully, including the solution, rotate speed, time, temperature, and the inspection record, any of that reach the service life above table mentioned, the rotor should be scrap.

9.3 If any rotor accident is caused by the below reason, the user will take its responsibility.

- Use the rotor which has any crack or corrosion spot on it.
- Use the rotor which beyond the warranty period or exceed the service life.
- Overspeed the rotor or running the rotor imbalance.

**DD-6000 Floor Standing Low Speed Large Capacity
Centrifuge
Packing List**

Serial number	Name	Quantity	Remarks
1	DD-6000 centrifuge	1 set	
2	4 x 750 ml swing-out rotor	12 set	
3	Operation instruction	1 pcs	
4	Certificate of Compliance	1 pcs	
5	Special spanner	1 set	
6	Power line	1 pcs	
7	Product warranty card	1 pcs	

Sichuan Shuke Instrument Co.,Ltd

Certificate of Compliance

Product Name: Floor Standing Low Speed
Large Capacity Centrifuge

Product Model: DD-6000

Factory Number: XXXXX

This product is permitted to leave the factory after inspection.

Inspector:

Date:

Product warranty card

(Maintained this card within the warranty period.)

Product Name	Floor Standing Low Speed Large Capacity Centrifuge		
Model	DD-6000	Product number	XXXXXX
Date of production	XXXX	Purchase date	
Name of user and Department(stamped)			
Address:		Contact:	
Tel:	Fax:	E-mail:	
Comments and Suggestions to our products:			