

# INSTRUCTIONS FOR USE



## SERVOspin *NEXT* BENCHTOP CENTRIFUGE 6 x 15 ml

REF H7 820

## FOREWORD

Thank you for purchasing the SERVOSpinNEXT centrifuge. This instructions contains function and operation of the instrument. In order to use the instrument properly, please read this manual carefully before using the instrument.

## OPENING CHECK

Please check the instrument with the packing list when you first open the instrument packing case. If you find there is something wrong with the instrument, contact the vendor or the producer.

## CONTENTS

- 1 Introduction
- 1.1 Delivery package
- 1.2 Structure description
- 1.3 Installing the device
- 2 Technical data
- 3 Safety precautions
- 3.1 Place the tubes
- 3.2 Maintain of rotor
- 4 Operation guide
- 4.1 Control elements
- 4.2 Rotor insertion and removal
- 4.3 Loading the rotor
- 4.4 Centrifugation with a preset time
- 4.5 Short-spin centrifugation
- 4.6 Switching to the rcf display
- 4.7 Open the centrifuge in the event of a power failure
- 4.8 Program fast selecting
- 5 Troubleshooting
- 6 Maintenance and cleaning
- 7 Packing list
- 8 Wiring diagram for centrifuge

## 1 INTRODUCTION

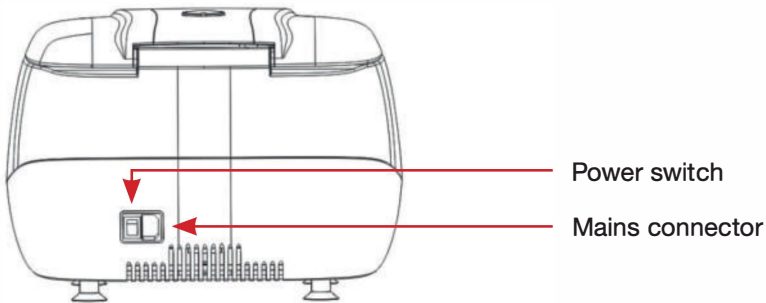
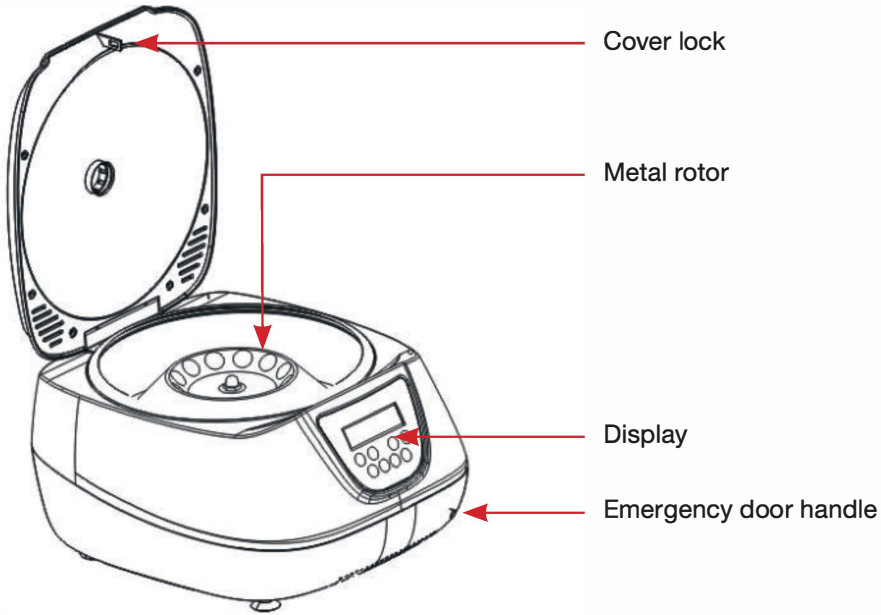
This centrifuge is suitable for 50 ml, 15 ml, 5 ml centrifuge tubes, vacuum blood collection tubes 10 ml, 7 ml, 5 ml, 3 ml and 100 mm glass tube for centrifuging.

Before starting up this centrifuge for the first time, please read the rest of this operations manual.

### 1.1 DELIVERY PACKAGE

Low speed benchtop centrifuge	1 unit
Rotor	1 unit
Centrifuge tube adapter	1 unit
Operations manual	1 unit

## 1.2 STRUCTURE DESCRIPTION



## 1.3 INSTALLING THE DEVICE

- 1.3.1 Place the centrifuge onto a level, horizontal surface. Make sure that the ventilation slits are not blocked.
- 1.3.2 Insert the column connector of the adapter to power connector of the device, and insert another connector of the adapter to mains power supply.
- 1.3.3 A safety distance of 30 cm should be observed around the centrifuge during operation. No objects which could cause additional damage in the event of a centrifuge crash should be positioned in this space.
- 1.3.4 Power on the main switch. The centrifuge is ready to operate when the display becomes visible. Place the rotor onto the rotor axle and tighten using the rotor nut. Before starting up the centrifuge for the first time, make sure the rotor nut is securely fastened.

## 2 TECHNICAL DATA

Model	SERVOspinNEXT
Power supply	110/220 V, 50 - 60 Hz
Power	200 Watt/2 Ampere
Max. speed	100 - 4000 rpm
Max. rcf	2510 g
rpm/rcf switch	available
Time setting	20 sec - 99 min
Max. load	15 ml x 6
Max. permitted density	1,2 g/ml
Acceleration time to max speed	20 - 90 Sekunden
Breaking time from max speed	20 - 90 Sekunden
Ambient temperature	5° - 35°C
Dimensions (W x D x H)	520 x 420 x 330 mm
Weight with rotor	12 kg

## 3 SAFETY PRECAUTIONS

- ⚠ The rotor and the rotor lid must always be securely fastened. If the centrifuge makes unusual noises when started, the rotor or rotor lid is not fastened correctly. Switch the device off immediately by pressing "START/STOP" key.
- ⚠ Do not use damaged rotors!
- ⚠ Do not move the centrifuge when it is running!

### 3.1 PLACE THE TUBES

- 3.1.1 A liquid density of 1.2 g/ml must not be exceeded at the max. speed.
- 3.1.2 Damaged tubes can not be centrifuged. This is because broken tubes can, in addition to sample leak, result in further damage to the centrifuge.
- 3.1.3 Close the test tube lids before centrifuging. Open lids can be ripped off during centrifuging and damage the centrifuge.
- 12 3.1.4 Must load the test tubes symmetrically.

## 3.2 MAINTAIN OF ROTOR

- 3.2.1 Even slight scratches and tears of the rotor can lead to serious internal material damage.
- 3.2.2 Avoid damage caused by aggressive chemicals, including among others: strong and weak alkali, strong acids.
- 3.2.3 In the event of contamination caused by aggressive agents, The rotor must be cleaned immediately using a neutral cleaning liquid.

## 4 OPERATION GUIDE

### 4.1 CONTROL ELEMENTS

START/STOP	for start or stop centrifugation
SHORT-SPIN	for reduced-time centrifugation
OPEN	to open the lid
▲ ▼	for setting the time and speed, keep pressing can be speed the setting process
P	normal mode or programmable mode selecting (only available for NextSpin programmable centrifuge)

### 4.2 ROTOR INSERTION AND REMOVAL

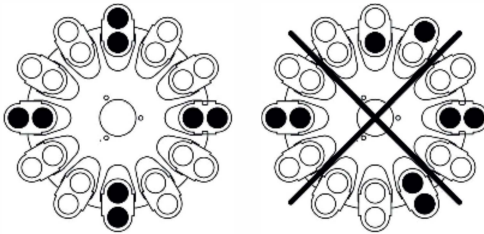
Fit the rotor onto the motor shaft, followed by the rotor nut. Tighten the rotor nut by turning clockwise. It can not any loose and relative slipping between the rotor and the motor.

To release the rotor, turn the rotor nut counterclockwise.

Before each start, check that the rotor is firmly tightened!

### 4.3 LOADING THE ROTOR

Rotor must always be loaded symmetrically. Minimize differences in weight between the filled sample tubes-taring with a scale is recommended. This will reduce wear on the drive and cut running noise.



### 4.4 CENTRIFUGATION WITH A PRESET TIME

- 4.4.1 Turn on the mains switch, pressing “OPEN” to open the lid, load the rotor symmetrically. Fasten the rotor lid and close the centrifuge lid.
- 4.4.2 Pressing Time’s ▲ ▼ change the run time, the time can be pre-selected between 20 seconds and 99 minutes, and pressing speed’s ▲ ▼ to change the run speed the max. speed is 5000 rpm.

4.4.3 Load the tubes symmetrically and cover the lid . Pressing the first “START/STOP” to start the run . Pressing the second “START/STOP” to end the run prematurely. The remaining run time appears in the display. It will be automatically stop and open the lid after timing is over.

#### 4.5 SHORT-SPIN CENTRIFUGATION

4.5.1 Turn on the mains switch, pressing “OPEN” to open the lid, load the rotor symmetrically. Fasten the rotor lid and close the centrifuge lid.

4.5.2 Load the tubes symmetrically and cover the lid .

4.5.3 Pressing “SHORT-SPIN”. Short-spin centrifugation is possible for as long as this key is held down. The maximum rpm is 5000.

#### 4.6 SWITCHING TO THE RCF DISPLAY

Pressing speed’s ▲ ▼ simultaneously, the display switches from rpm to rcf. Also pressing speed’s ▲ ▼ simultaneously again, the display switches from rcf to rpm.

RCF can calculate with the following formula.

$$rcf = 1118 * 10^{-5} * n^2 * r_{max}$$

n: rotational speed in 1/min

$$r_{max} = 6 \text{ cm}$$

#### 4.7 OPEN THE CENTRIFUGE IN THE EVENT OF A POWER FAILURE

Disconnect the centrifuge from the mains supply. Wait until the rotor has come to a stand still, Then left up the device, remove the lock pole to right , the lid lock will be opened.

#### 4.8 PROGRAM FAST SELECTING

(only available for SERVOspinNEXT programmable centrifuge)

Press the “P” button , the “P1 “LED will be lighting.

Press the Time button ▲ ▼ to modify centrifuging time.

Press the Speed button ▲ ▼ to modify speed then keep pressing the “P” button till heard the buzzer. Means the current program was stocked . Using the same principle to set other P2 – P5 program.

Press the “P” button to select the normal and P2 – P5 program model,

Press the “START” button to start operation.

## 5 TROUBLESHOOTING

Error	Cause	Solution
No display showing	No main power connection. Power failure.	Re-connect the power or contact manufacturer service.
Lid can't be opened.	Power failure. Rotor is still spinning. Lid lock failure.	Emergency lid release. Stop centrifuge run. Contact manufacturer service.
Centrifuge shakes during acceleration	Rotor or centrifuge tube not loaded symmetrically.	Re-load the rotor or re-load centrifuge tube
Er = 01	Open lock failure	Contact manufacturer service.
Er = 02	Close lock failure	Contact manufacturer service.
Er = 08	Motor failure	Contact manufacturer service.
Er = 09	Imbalance failure, or centrifuge tube/weight not loaded symmetrically.	Re-load centrifuge tube symmetrically, keep the loading weight symmetrically or contact manufacturer service.
Er = 10	Motor failure or hall sensor failure	Re-connect hall sensor line or contact manufacturer service
Er = 11	Motor driving board failure	Re-connect driving board or contact manufacturer service

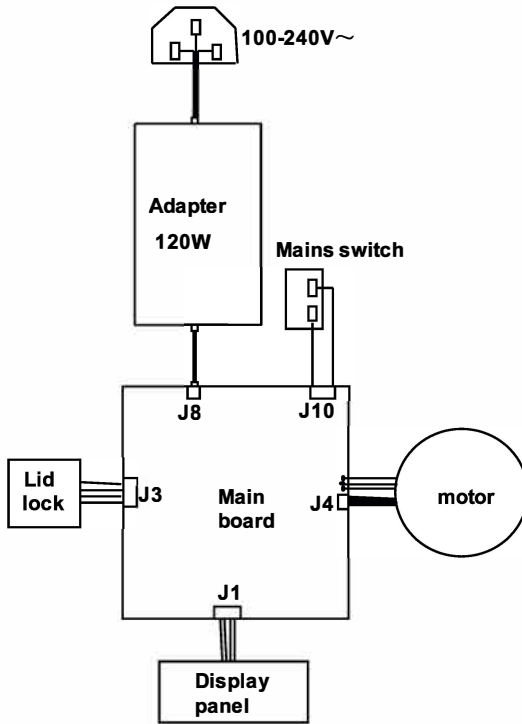
## 6 MAINTENANCE AND CLEANING

- ⚠ The rotor and the outside of centrifuge should be cleaned regularly with a moist cloth. Disconnect the centrifuge from the mains supply, remove the rotor and clean it separately. Only neutral agents may be used for cleaning.
- ⚠ Please check the rotor and especially the rotor bores regularly for deposits or damage, then reinsert the rotor and tighten the rotor nut.

## 7 PACKING LIST

No.	Item	Type	QTY
1	Low speed benchtop centrifuge	NextSpin	1unit
2	Rotor		1unit
3	Centrifuge tube adapter		1set
4	Power cable		1unit
5	Operations manual		1unit

## 8 WIRING DIAGRAM FOR CENTRIFUGE



REF H7 820

Erstellt am/Created on: 2021-02-04

**Ningbo Topscien Instrument Co.,**  
 LTD, No. 8 Donggong One Road,  
 Dongguang industrial park,  
 Jiangshan, Ningbo, China

**COMECTA S.A.,** Carreter Nacional 2KM 585\*1,  
 08630 Abrera (Barcelona), Spain

**IMPORTER**

**servoprax GmbH,** Am Marienbusch 9, 46485 Wesel, Germany  
[www.servoprax.de](http://www.servoprax.de), [info@servoprax.de](mailto:info@servoprax.de)

1-H7 820-239-2-0004-2102