

# NEUATION



## iFUGE L400 NXT

### PRODUCT USER MANUAL



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## 1. INTRODUCTION




This centrifuge is equipped with a maintenance free drive, a large display & simple interface for efficient operation for daily lab usage. The programmable centrifuge can deliver up to 4500 RPM and can accommodate different types of rotors. It features various programmable mode to save time & add convenience.

## 2. INTENDED USE

This is a large capacity centrifuge designed to separate, sediment, spin down aqueous solutions & solvent suspensions of differing densities in compatible sample containers.

**NOTE:** Before using the centrifuge, please read this user manual carefully. This user manual is intended to assist with the operation and care of the unit & is not a document which aids in repair. For repair please contact the supplier.

## 3. SYMBOL

 Warning	 Waste electrical
 Fuse	

## 4. FEATURES

**Centrifuge has following features:**

- Delivers up to 4500 RPM for all compatible rotors
- BLDC maintenance free motor drive
- Imbalance detection safety with auto cutoff feature
- Lid lock safety feature : Lid does not open during operation
- Program mode for customized operation
- Speed setting by RPM/RCF mode
- Countdown timer range from 1 to 99 minutes
- Last run memory feature
- Convenient and easy user interface
- Emergency lid release during power cutoff
- Automatic internal diagnosis & error display

## 5. STANDARD ACCESSORIES

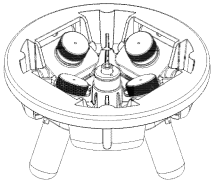
- Power Cord
- T - Allen key
- Grease Tube
- User manual & Warranty card

## 6. TECHNICAL SPECIFICATIONS

Motor Type	Brushless DC Motor	
Max capacity	360ml (24 x 15ml)	
Max. Speed	4500 RPM	
Speed Accuracy & Speed Step	± 100 RPM	
Run Time	1 min to 99:59 mins & infinite mode	
Min. Acceleration Time	≤ 35 seconds	Acc 9/dcc 9 mode, 32x6 ml swing out rotor (without load)
Min. Deceleration Time	≤ 35 seconds	
Noise Level	<68 dB(A)	
Ambient Temperature	5 - 40°C	
Permissible Relative Humidity	≤80%	
Size (L x B x H)	553 x 427 x 247 mm	
Weight	16.2 kg (without rotor)	
Power Supply	230 VAC, 50 Hz	
Power Consumption	391 W	
Safety Fuse Rating	250VAC, 3A	
Altitude	Use upto an altitude of 2000 m above MSL	
Pollution Degree	2	
Environment	For indoor use only	

Rotor Type	Fixed Angle	Swing Angle
Bucket Type	04 x 50 ml 24 x 15 ml 32 x 6 ml 16 x 15 ml	04 x 50 ml 24 x 15 ml 32 x 6 ml 16 x 15 ml
Max. RCF	2766xg	3364xg
Max. Volume	360 ml (24 x 15 ml)	
Imbalance Cut-off	Automatic	
Display Type	4 Digit, 7 Segment	

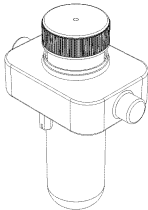
### Swing out Rotor (PLASTIC)



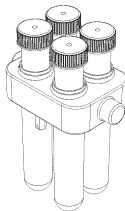
SR. NO.	ROTOR TYPE	RCF VALUE (xg)
1	04x50ml	3315
2	16x15ml	3334
3	24x15ml	3220
4	32x6ml	3152

### Adaptor

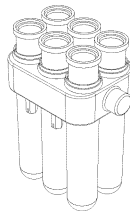
50ml. Adaptor  
(Aluminium)



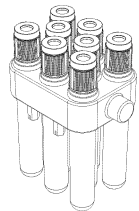
15ml. Adaptor  
(Aluminium)



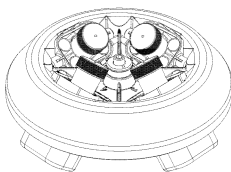
15ml. Glass Tube  
Adaptor (Aluminium)



6ml. Adaptor  
(Aluminium)



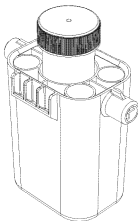
### Fixed Angle Rotor (PLASTIC)



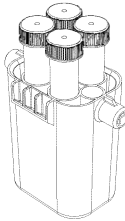
SR. NO.	ROTOR TYPE	RCF VALUE (xg)
1	4x50ml	2562
2	16x15ml	2744
3	24x15ml	2744
4	32x6ml	2766

### Adaptor

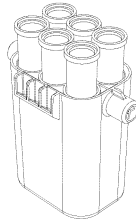
50ml. Adaptor  
(Plastic)



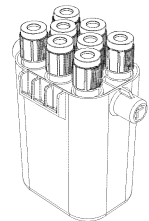
15ml. Adaptor  
(Plastic)



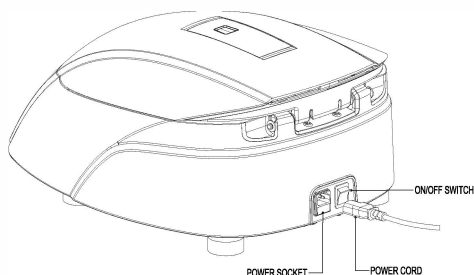
15ml. Glass Tube  
Adaptor (Plastic)



6ml. Adaptor  
(Plastic)



## 7. STANDARD PARTS LISTING



## 8. INSTALLATION

The Laboratory centrifuge is supplied in packaging box. Open the box, remove the packaging and gently place the centrifuge out of the box. Before 1st time usage, open the centrifuge & ensure to remove all packaging from the rotor chamber. Please keep all packaging in safe storage for at least 2 years for warranty purpose.

### LOCATION & MOUNTING

Place the centrifuge on a flat, solid and leveled surface and ensure that all the four feet of this centrifuge stand on the surface firmly. Avoid installing on slippery or surface prone to vibration.

- Ideal ambient temperature is  $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ , avoid placing the centrifuge in direct sunlight.
- Keep clearance of at least 30 cm from all side for ease of usage.
- Keep away from heat or water to avoid sample temperature issues or centrifuge failures.
- Do not place the centrifuge such that it becomes difficult to operate the disconnecting device

### ROTOR INSTALLATION

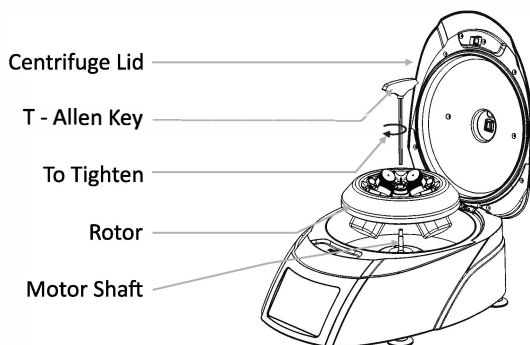
#### ROTOR REMOVAL AND REPLACEMENT PROCESS

If you want to remove or replace the rotor, follow the instructions below.

#### REMOVING THE ROTOR

1. Using the T - Allen Key, loosen the rotor nut by turning it counter clockwise. Do not try to pull the rotor, the rotor will come up automatically.
2. Once the rotor nut is loosen completely, pull up the rotor vertically.

#### REPLACING THE ROTOR

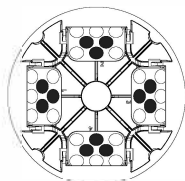


1. To replace or install the rotor, take the rotor and load vertically onto the motor shaft.
2. Place the rotor nut in the center hole of the rotor onto the motor shaft.
3. Put T -Allen Key into the rotor nut and turn clockwise to tighten and counter clockwise to loosen the rotor.

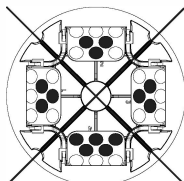
**NOTE: 1)** Check the rotor is firmly tightened before running the next program.

## BALANCING THE ROTOR

### Swing Angle Rotor

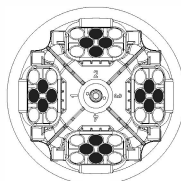


When the rotor is balanced

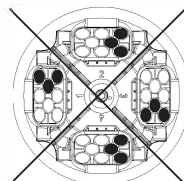


when the rotor is Imbalanced

### Fixed Angle Rotor



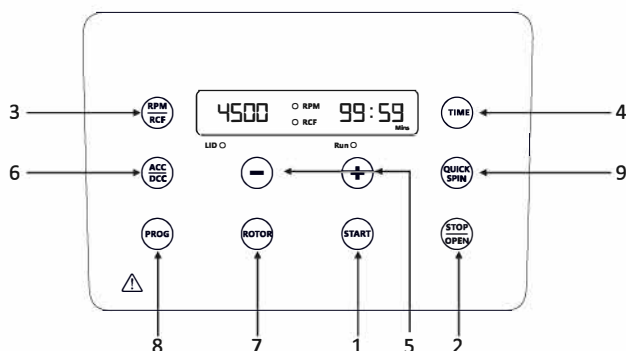
When the rotor is balanced



when the rotor is Imbalanced

1. Always balance the rotor before centrifugation. Above are examples of balancing the rotors.
2. The samples in the tubes should be of equal volume.
3. If the tubes are not loaded correctly - vibration or imbalance can occur which can cause serious damage to the centrifuge.
4. If the tubes are not loaded symmetrically then the imbalance detector will cut off the running centrifuge for device & user safety. This will stop the centrifuge and Err 55 will be seen indicating tubes are not loaded symmetrically. To resume operation, load tubes symmetrically & restart the centrifuge.

## 9. USER INTERFACE & DISPLAY



Item	Button Name	Function
1	<b>Start</b>	Single press, motor will start as per selected rpm and time if lid closed. Start button works only if lid closed.
2	<b>Stop/open</b>	Single press Stop/Open button, will stop motor. After stop motor lid open automatically. Open button will also works when unit is at stop.
3	<b>RPM/RCF</b>	Single press, speed display will blink 5 times to set RPM. Select the RPM value to be set for centrifugation Long press RPM/RCF will toggle between RPM to RCF. Select the RCF value to be set for centrifugation RPM , RCF mode also indicate via LED on panel.
4	<b>Time</b>	Single press, minute can be set. Timer can be set from 1 min to 99 min 59 second infinite mode and Roll over mode. display will blink 5 times to set time.
5	<b>Increment / Decrements</b>	Single press Plus (+) and minus (-) for increase, decrease speed, time, Programme value, Programme number.
6	<b>Acceleration / Deceleration</b>	Single Press once to set Acceleration & similarly single press once again to set Deceleration.
7	<b>Rotor</b>	Single press for selection of rotor number, press multiple times for changing rotor number.
8	<b>PRG</b>	Long press to enter into program mode. Display will blink 5 times to set program number, to change program number use Plus (+) and minus (-) keys. After 5 blink specific programme values can be set by Plus (+) and minus (-) keys, for confirmation each value will blink 5 times.

Item	Button Name	Function
9	Quick Spin	Press and Hold the button to run the last set RPM program.

LED s for LID open close indication, Run indication, RPM & RCF functions.

**Display Element:** 4 digit 7 segment

## 10. OPERATING THE CENTRIFUGE

### SWITCH ON THE CENTRIFUGE

After connecting the power cord. Switch ON the main power supply & then Switch on the power switch located on the Rear side of the instrument. Make sure to check the rotor fitment before use. Centrifuge will not operate with open lid.

**Note:** Maintain a gap of 3 seconds between switch OFF and switch ON again. DO NOT switch OFF and ON again instantly.

### RPM/RCF Setting:

- After closing the centrifuge lid, press “RPM/RCF” button to select speed setting in RPM/RCF mode. Now press (+) button to increase the “RPM/RCF” value and press (-) button to decrease the “RPM/RCF” value.
- Minimum and Maximum RPM of the centrifuge is 500 rpm to 4500 rpm respectively. No roll over mode.
- The flashing of RPM value will stop and the RPM value will be stored automatically if no button is pressed after 5 blinks of the adjustment.
- “RPM/RCF” can also be changed while the centrifuge is under operation. Press the “RPM/RCF” button & use setting (+) and (-) to change value. Changing the “RPM/RCF” value between the ongoing centrifugation will run the centrifuge at updated speed for the rest of time as indicates by the timer.
- To set RCF value, long Press “RPM/RCF” button to change the RCF setting. Press the (+) & (-) button to increase or decrease the value. The flashing of RCF value will stop and the RCF value will be stored automatically if no button is pressed after 5 blinks of the adjustment.
- The value will blink 5 time to indicate acceptance.

### Timer Setting:

- Operating time can be selected from 1 min to 99:59 min or “continuous”.
- Press TIME button to change the time setting.
- Press the (+) and (-) button to increase or decrease the value. and after 5 time blink of the set value.
- The centrifuge time set for run between 1min to 99:59 minutes or operated in infinite time mode or roll over mode.
- Infinite timer will be indicated by ][ in display.

- The timer in the centrifuge's countdown timer in the display will be in "Min/Sec" mode.
- Time will showed on after 5 sec.
- Time indicate on Time LED light.
- The input will be accepted if we leave the setting for display to blink 5 time. The value will blink 5 time to indicate acceptance.

#### **Acc/Dcc:**

This button will set the parameters of acceleration or deceleration of the rotor ramp. Press acc/dcc button once to set the acceleration from 1-9 by using +/- button for increment/decrement respectively. Similarly press once again the acc/dcc button to set deceleration from 1-9 by using +/- button for increment/decrement respectively. The values of acceleration & deceleration timings are listed below.

<b>Acceleration &amp; Deceleration Time</b>				
Rotor Type : Swing Out		Max. RPM :- 4500		
Tube Capacity	4x50ml	16x15ml	24x15ml	32x6ml
Mode Acc/ Dcc	Time (S)	Time (S)	Time (S)	Time (S)
DL	478	478	481	478
D0	293	293	297	293
A1/D1	181/178	184/177	181/183	188/180
A2/D2	172/164	174/164	172/170	173/168
A3/D3	152/143	155/145	151/158	152/146
A4/D4	131/125	133/126	131/139	131/128
A5/D5	110/103	112/107	111/109	113/108
A6/D6	90/86	93/87	91/90	91/89
A7/D7	71/65	73/68	72/71	74/69
A8/D8	51/47	52/46	52/49	52/46
A9/D9	34/30	38/30	33/32	35/30

Acceleration & Deceleration Time				
Rotor Type : Fixed Angle		Max. RPM :- 4500		
Tube Capacity	4x50ml	16x15ml	24x15ml	32x6ml
Mode Acc/ Dcc	Time (S)	Time (S)	Time (S)	Time (S)
DL	483	484	484	484
D0	301	302	301	301
A1/D1	182/187	181/188	182/188	181/188
A2/D2	173/174	172/176	172/174	172/176
A3/D3	152/153	150/153	151/152	151/153
A4/D4	131/133	129/134	130/133	130/134
A5/D5	111/112	110/113	111/113	110/113
A6/D6	91/93	89/94	90/93	90/94
A7/D7	71/73	68/74	71/72	70/73
A8/D8	51/48	50/49	51/49	51/49
A9/D9	33/34	32/34	33/34	32/34

**Note:** The readings were taken under No Load conditions, so the results may vary when the equipment is loaded.

#### PRG:

- Press PRG button to select program from P01-P99.
- Each stored program used for direct operation.
- Different parameters of RPM/RCF, TIME, ACC/DCC can be set in each program.
- All the parameters saves automatically after blink of 5 times.
- RPM/RCF, TIME, ACC/DCC parameters value entered respectively.
- After entering each values it will blink for 5 times to indicate acceptance.

#### Quick Spin:

Press hold the quick spin button for immediate centrifugation of the samples up to previous run RPM. Releasing the hold will stop of the rotor gradually.

#### Rotor:

Press rotor button to select rotors as listed below. The rotor numbers can be changed by using +/- for increment or decrement of the rotor number.

Swing Out Rotors					
CAT. CODE	Rotor No.	Max. Volume	Max. RPM	Max. RCF	Radius (cm)
L400-NXT-31	31	32 x 6 ml	4500	3152	10.2
L400-NXT-32	32	24 x 15 ml	4500	3220	11.4
L400-NXT-33	33	16 x 15 ml	4500	3334	11.5
L400-NXT-34	34	4 x 50 ml	4500	3315	10.3

Fix Angle Rotors					
CAT. CODE	Rotor No.	Max. Volume	Max. RPM	Max. RCF	Radius (cm)
L400-NXT-51	51	32 x 6 ml	4500	2766	12.2
L400-NXT-52	52	24 x 15 ml	4500	2744	12.0
L400-NXT-53	53	16 x 15 ml	4500	2744	12.3
L400-NXT-54	54	4 x 50 ml	4500	2562	11.5

Swing out Bucket		Fix Angle Bucket	
CAT. CODE	Max. Volume	CAT. CODE	Max. Volume
L400-NXT-Swing-BB	Backbone	L400-NXT-Fix-BB	Backbone
Bucket-31-Swing	32 x 6 ml	Bucket-51-Fixed	32 x 6 ml
Bucket-32-Swing	24 x 15 ml	Bucket-52-Fixed	24 x 15 ml
Bucket-33-Swing	16 x 15 ml	Bucket-53-Fixed	16 x 15 ml
Bucket-34-Swing	4 x 50 ml	Bucket-54-Fixed	4 x 50 ml

## START & STOP

Press “Start” button to start operation and press “Stop” button to stop the ongoing operation. When the centrifuge is running will indicated the RUN LED light. Pressing the “Stop/Open” button will stop the operation .Once operation is stopped automatically lid opens.

If the set time gets over, centrifuge will stop automatically and lid opens automatically.

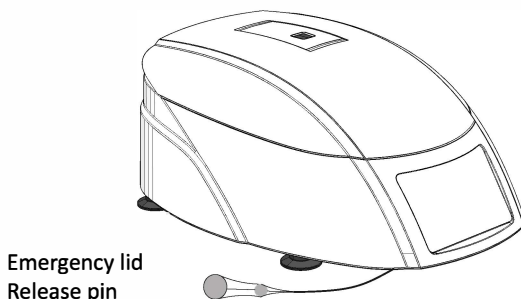
## IMBALANCE DETECTION

The centrifuge is equipped with an imbalance detection safety feature. When the rotor is not loaded symmetrically, the imbalance detector gets activated and will cut off the centrifugation. The error "Err 55" will be shown on the display. First correct the imbalance load then switch OFF & switch it ON again. The values will be same as set before imbalance. The imbalance detection feature cannot be

deactivated, as it is factory fitted.

## OPENING CENTRIFUGE LID IN POWER FAILURE

Disconnect the centrifuge from the main power supply. Wait until the rotor has come to a standstill (this may take longer time). Once the rotor has stopped, then pull the lid release thread located at the bottom left (to your right) of the machine. This will open the centrifuge lid.



**NOTE:** This method of opening the lid should be used only in case of Emergency or power failure.

## 11. SAFETY PRECAUTIONS

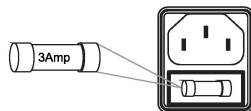


Read all safety & usage information provided in this manual carefully before using the device.

- Never use the centrifuge in any manner not specified in this manual.
- Always use recommended original rotors and spare parts for best result & product safety.
- The rotors must be loaded symmetrically. Each tube should be counter balanced by another tube of same weight.
- Do not use centrifuge or rotor that have not been correctly installed or shows any sign of damage .
- The rotor must always be securely fastened. If the centrifuge makes unusual noise during operation, the rotor fitment needs to be checked. Switch OFF the device immediately by pressing STOP, check fitment & fasten it well.
- Never move the centrifuge during its operation.
- Prior to centrifugation, the tubes should be visually inspected for material damage. Damaged tubes must not be centrifuged. This is because broken tubes can result in sample loss and can create imbalance which can result in
- further damage to the centrifuge and accessories.
- Do not fill tubes while they are in the rotor. Liquids spillage may harm the device. If liquids are spilled on the rotor or rotor chamber, the centrifuge must

be cleaned carefully and properly before being used again.

- Centrifuge may be used for the specified applications only. It must not be operated in a hazardous or flammable environment and must not be used to centrifuge explosive or highly reactive substances. Also do not place the potential hazardous material within the clearance area/envelope.
- Equipment if used in any manner not specified in this manual or by the manufacturer can result in the lapse of the product warranty.
- Repairs must only be performed by authorized service technician.
- Do not lean on the equipment. It may damage the equipment or even harm the operator.
- In the event of contamination caused by aggressive agents, the rotor must be cleaned immediately using a natural cleaning liquid. This is particularly important for the bores of the tubes. If any damage is seen, contact the service technician.
- Before using cleaning or decontamination methods other than those mentioned by the manufacturer, contact the manufacturer to ensure that the intended method will not damage the centrifuge.
- For safety we have provided protective earthing with power supply. Make sure power supply is earthened.
- Be sure to close the tubes lid tightly prior to centrifugation. Open tubes lid can be torn off during centrifugation and can damage the rotor or centrifuge.
- Rotor and adapters are high graded components which are subject to extreme mechanical strain. Scratches and tears can lead to serious internal material damage. Ensure to check rotor for any signs of corrosion or mechanical damage should not be used.
- This centrifuges capacity must not be exceeded as it is the maximum capacity.
- **For safety and air-tight sealing to minimize the air noise, the higher force needs to be applied on the lid to close the latch properly**
- Safety Fuse is provided of 3Amp configuration which can be replace by the operator. The same will protect the machine circuit during an electrical fault or overload.



## 12. MAINTENANCE AND CLEANING

- The rotor and the outside of the centrifuge should be cleaned regularly with a mild wet (with water) cloth.
- Ensure that while cleaning the unit is not plugging in.
- Wear protective glove & safety glass while operating & cleaning the device.

- The brushless motor in the centrifuge requires no routine maintenance. Any required service should be performed by authorized, qualified personnel only. Repairs performed by unauthorized personnel may void the warranty.
- Always keep the centrifuge housing, rotor chamber and rotor clean. All parts should be wiped down periodically with a soft cloth.

**Note:** *Liquid should not come into contact with the motor.*

- After cleaning, ensure that all parts are dry before re-use.
- Regularly cleaning of the rotor is important.
- If the rotor chamber needs cleaning, clean with cloth or sponge moistened with a neutral detergent solution.
- Do not place the rotor into the cleaning solution.
- If corrosive, toxic or pathogenic bacteria are accidentally spilled in the rotor or rotor chamber the centrifuge must be decontaminated thoroughly.
- Grease tube has been provided as part of standard accessory. Minor Grease has to be applied on the Motor shaft (Threaded Parts, Grooves) at every 2 weeks interval to prevent rotor & shaft jam. This also would ease installation process in case of regular rotor change.

### **13. TRANSPORTATION & STORAGE**

- Use only original packaging during transportation
- For longer distance, utilize transportation assistance such as robust trucks.
- Avoid knocking, harsh shaking or jolting the device
- Always retain the packaging material & transportation protections for longer storage or transportation

#### **TRANSPORT**



- Before transporting the device, the transport securing device must be installed.
- When the device and accessories are transported, the following ambient conditions must be complied with:
- Ambient temperature: 5°C to 40°C
- Relative humidity: ≤80%, non-condensing

#### **STORAGE**

- The device and the accessories may only be stored in closed and dry rooms.
- When the device and accessories are stored, the following ambient conditions must be complied with:
- Ambient temperature: 5°C to 40°C
- Relative humidity: ≤80%, non-condensing

## 14. TROUBLESHOOTING

This centrifuge has a self – diagnostic function. If a problem occurs, an error/warning code will be displayed on the display screen and the operator can determine the malfunction with the warning code below.

ERROR	PROBLEM	SOLUTION
No display	No main power connection.	Power check & proper plug-in of mains cable at both ends.
	Power failure	Check the mains fuse of the lab.
	Improper connection.	Connect adaptor properly.
 	Lid not closed correctly.	Close lid correctly.
	Error with lid closing and opening mechanism.	Contact service.
Err 55	Rotor not loaded symmetrically with equal weights	Load rotor symmetrically & restart centrifuge.
Centrifuge lid cannot be opened	Rotor is still spinning.	Wait for the rotor to come to a stop.
	Power failure	Emergency lid release after rotor stop
Centrifuge shakes during acceleration & exceptional running noise	Rotor not loaded symmetrically.	Load rotor symmetrically & restart operation
	Either a broken tube, damage to the rotor or motor is cause for run noise.	Replace broken tube. For damaged rotor/motor contact service representative.
	Rotor damaged.	Remove & change rotor
Display error	Loose connection of display.	Contact service representative.
Err 1	Latch damaged, Latch jammed	Contact service representative.
	Lid not closed/locked	Close/lock the lid
Err 52	Rotor stuck or incorrect operating voltage	Turn OFF the centrifuge, Check rotor fitment or apply correct 230VAC $\pm$ 10VAC operating voltage
Power tripping	Cable not fit properly.	Remove cable and connect properly.

### IMPORTANT NOTE:

- If system get hangs or gets heated due to over current, switch OFF & switch ON (restart) the centrifuge and check it again.
- Maintain 3 seconds gap between switch OFF and switch ON. Instant ON-OFF

can lead to a reset, erasing last run memory.

- If motor gets hot due to which there will be fluctuation in speed value then allow centrifuge to get cool for atleast 30 minutes. Do not do any operation for 30 minutes.

## **15. WARRANTY STATEMENT**

This product is warranted to be free from defects in material and workmanship for a period of Two (2) year from date of purchase. Your product will be duly repaired upon prompt notification in compliance with the following conditions :

This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover any incidental or consequential damages, commercial loss or any other damages from the use of this product.

The warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities on us for the products or damages caused by its use. The buyer and its customer shall be responsible for the product or use of products as well as any supervision required for safety. If requested the products must be returned to the distributor in well packed and insured manner and all shipping charges must be paid.

Some states do not allow limitation on the length of implied warranties or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights. This warranty is given expressly in lieu of all other warranties, expressed or implied.

The purchaser agrees that there is no warranty of merchantability or of fitness for any intended purpose and that there are no other remedies or warranties, expressed or implied, which extend beyond the description on the face of the agreement. This warranty is only applicable to the original purchaser.

Products received without proper authorization will not be entertained. All items returned for service should be sent postage prepaid in the original packaging or other suitable carton, padded to avoid damage. We will not be responsible for damage incurred by improper packaging.

All items returned for service should be set postage prepaid in the original packaging or other suitable carton, added to avoid damage.

This warranty is valid only if the warranty is registered with the supplier within 30 days from the date of purchase.

In case the product is to be disposed of, the relevant legal regulations are to be observed.

For your reference, make a note of the serial number, date of purchase and supplier here.	
Serial No.	Purchase Date
Supplier	














## 16. PRODUCT DISPOSAL










Information on the disposal of electrical and electronic devices in the European Community

The disposal of electrical devices is regulated within the European Community by national regulations based on EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to business sphere, to which this product is assigned, may no longer be disposed off in municipal or domestic waste. They are marked with the following symbol to indicate this.



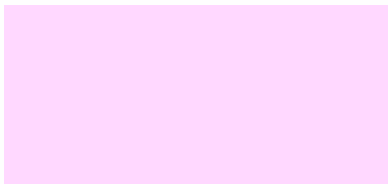
As disposal regulations within the EU may vary from country to country, please contact your supplier if necessary.

Swing Out Rotor								
				Max. g-force/RCF:			3334 x g	
				Max. Rotation Speed:			4500 RPM	
				Acceleration & Deceleration Time			≤35s	
				Max. Load (adapter, tube holder, tube & contents):			16 X 161.2 gm	
				Rotor Weight:			866.4 gm	
Sr. No.	Tube	Tube type	Adaptor	Adaptor type	Holder	Holder	Tubes / Holder	Max. g force / RCF
		Capacity		Diameter		Type		Max. Rotation Speed
		Diameter		Material		Material	Tubes / Rotor	Radius
		Length		Inner Depth		Dia		
		Weight		Weight		Weight		
1		Conical Centrifuge Tube w/Cap		Spherical		4 x 50 ml	1/1	3315
		50 ml		Ø 31.5 mm		Bucket Holder		4500 RPM
		Ø 29 mm		SS		Aluminium alloy	4/1	10.3 cm
		116.6 mm		98.3 mm		Ø 33 mm		
		12.8 gm		41.7 gm		152.7 gm		
2		Conical Centrifuge Tube w/Cap		Spherical		16 x 15 ml	4/1	3334
		15 ml		Ø 18 mm		Bucket Holder	4/1	4500 RPM
		Ø 15 mm		SS		Aluminium alloy		11.5 cm
		120.5 mm		98.3 mm		Ø 19.5 mm		
		6.6 gm		22.1 gm		131.4 gm		
3		Glass Tube		Spherical		24 x 15 ml	6/1	3220
		15 ml		Ø 18 mm		Bucket Holder	4/1	4500 RPM
		Ø 15 mm		SS		Aluminium alloy		11.4 cm
		120.5 mm		98.3 mm		Ø 19.5 mm		
		6.6 gm		22.1 gm		122.3 gm		
4		Conical Centrifuge Tube w/Cap		Spherical		32 x 6 ml	8/1	3152
		7 ml		Ø 14 mm		Bucket Holder	4/1	4500 RPM
		Ø 12.70 mm		SS		Aluminium alloy		10.2 cm
		107 mm		89.5 mm		Ø 16.5 mm		
		8 gm		15..7 gm		94.2 gm		

Fix Angle Rotor								
			Max. g-force/RCF:				2766 x g	
			Max. Rotation Speed:				4500 RPM	
			Acceleration & Deceleration Time				≤35s	
			Max. Load (adapter, tube holder, tube & contents):				32 X 154.2 gm	
			Rotor Weight:				1465.0 gm	
Sr. No.	Tube	Tube type	Adaptor	Adaptor type	Holder	Holder	Tubes / Holder	Max. g force / RCF
		Capacity		Diameter		Type		Max. Rotation Speed
		Diameter		Material		Material	Tubes / Rotor	Radius
		Length		Inner Depth		Dia		
		Weight		Weight		Inner Depth		
						Weight		
1		Conical Centrifuge Tube w/Cap	-	-		4 x 50 ml	1/1	2562
		50 ml				Bucket Holder		4500 RPM
		Ø 29 mm				Plastic	4/1	
		116.6 mm				Ø 32.47 mm		
		12.8 gm				84 mm		
						136.7 gm		
2		Conical Centrifuge Tube w/Cap	-	-		16 x 15 ml	1/1	2744
		15 ml				Bucket Holder		4500 RPM
		Ø 15 mm				Plastic	4/1	
		120.5 mm				Ø 17.97 mm		
		6.6 gm				84 mm		
						145.2 gm		
3		Glass Tube	-	-		24 x 15 ml	6/1	2744
		15 ml				Bucket Holder		4500 RPM
		Ø 15 mm				Plastic	4/1	
		120.5 mm				Ø 17.97 mm		
		6.6 gm				84 mm		
						151.8 gm		
4		Conical Centrifuge Tube w/Cap	-	-		32 x 6 ml	8/1	2766
		7 ml				Bucket Holder		4500 RPM
		Ø 12.70 mm				Plastic	4/1	
		107 mm				Ø 14.98 mm		
		8 gm				84 mm		
						145 gm		







## **Accumax Lab Devices Private Limited**

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