KESTREL

User Manual

Please read this before use

CE IVD

MSE

Thank you for buying an **MSE Kestrel**. Please read this operating manual before using your centrifuge; it will provide you and your colleagues with useful information on all aspects of the equipment. As our customer, we would like to ensure that you are totally satisfied with your purchase. Please do not hesitate to contact us with feedback concerning our products.

Your views are very important to us

MSE CENTRIFUGES Ltd
Health and Safety at Work

MSE CENTRIFUGES Ltd is required under the Health and Safety at Work Act, 1974 and other UK legislation as designers, manufacturers, suppliers and importers of articles for use at work to ensure that, as far as is reasonably practicable, articles which we design, produce, supply or import are safe and without risk to health. We are required to provide information on the safety and handling precautions to be observed when installing, operating, maintaining and servicing our products. Such advice is contained in this manual. We are also obliged to update this information should circumstances change and to operate a system to this end.

We should also like to point out, however that you as users have an important responsibility in the provision and maintenance of safe working practices and conditions.

Accordingly, we draw the following matters to your attention:

1. This apparatus should only be used as intended and within its design parameters and by suitably qualified and trained personnel who have read and understood the relevant sections of this manual.
2. This manual should be readily available to such personnel at all times.
3. In addition to that which is written in the manual, normal common-sense safety precautions must be taken at all times to avoid the possibility of accidents. Particular care is required when working with apparatus at high temperature or pressure.
4. This centrifuge has been supplied with a rotor already fitted and rotor nut tightened to secure it. This rotor nut must be checked, periodically, by the user to ensure that it remains sufficiently tight for safe operation. Damage caused to the centrifuge by running it with an insufficiently tight rotor nut is not covered by the manufacturer's warranty.
5. Installation, maintenance, repairs and servicing should only be carried out by an MSE CENTRIFUGES Ltd approved engineer, and connection to electrical supplies should only be carried out by suitably trained personnel.

TECHNICAL SUPPORT, WARRANTY SERVICE AND MAINTENANCE

UK customers; if you are in any doubt whatsoever regarding the correct use of this apparatus, or if you require any technical data or assistance, please contact the MSE CENTRIFUGES Ltd Technical Support Department at:

MSE CENTRIFUGES Ltd
11 Browning Road,
Heathfield,
East Sussex.
TN21 8DB
United Kingdom

Tel: +44 (0)1435 517 000
E-Mail: sales@msecentrifuges.com

www.msecentrifuges.com

OVERSEAS CUSTOMERS: Should contact their local MSE CENTRIFUGES Ltd distributor, details can be found on our website.

ELECTRICITY SUPPLIES: Voltage and frequency MSE CENTRIFUGES Ltd electrical apparatus is offered and labelled for one, or for a choice of two voltage ranges and, where necessary, different frequencies of mains supply. MSE CENTRIFUGES Ltd does not accept any responsibility for the operation of any such apparatus should it be connected to electricity supplies which are normally outside, or vary outside, the stated voltage and frequency values for which it is designed, nor for any consequential loss, damage or injury, howsoever caused.

Warranty

This model is supplied with a 12 month warranty.
The details of the warranty supplied with this unit are available at www.msecentrifuges.com. A copy is available upon request.

ELECTRICITY SUPPLY

Before connecting this apparatus to the electricity supply, check the information given on the apparatus rating plate and ensure that;

Your supply is single phase A.C. (alternating current) of the stated frequency with neutral nominally at earth potential.

Your supply voltage is within the stated range.

The current rating is within the capacity of your outlet.

Your plug or electricity supply circuit is fitted with a suitable fuse.

	220v - 240v	**110v - 120v**
Fuse rating	5 amp	see note for 110V - 120V

WARNING! This apparatus must be earthed.

This Centrifuge is supplied with an IEC Socket and an IEC Mains Lead

IMPORTANT Consult an electrician if in any doubt or if your supply system has any of the following:

No earth.
Reversible plugs.
Supply and return leads that are both above earth potential.

NOTE: Do not touch plug pins within two seconds of plug removal from socket.

Please dispose of centrifuge carefully!

MSE adheres to the WEEE (Waste Electrical and Electronic Equipment) directive, which ensures that all electrical equipment is disposed of carefully with consideration to the environment. As a responsible manufacturer of quality laboratory equipment, MSE will recycle your equipment once its life expires and therefore reduce the amount of waste electrical equipment that is sent to landfill.

When you would like to dispose of your equipment, please contact us on **+44 (0)20 8663 4610** to arrange a collection.

MSE CENTRIFUGES Ltd
11 Browning Road, Heathfield, East Sussex. TN21 8DB
Tel: +44 (0) 1435 517 000
Email: sales@msecentrifuges.com
Web: www.msecentrifuges.com

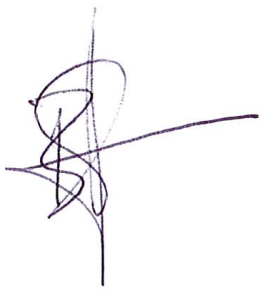
CE

STATEMENT OF CONFORMITY

In accordance with EU Directive 98/79/EC
***in vitro* diagnostic medical devices**

Type of device:	**Laboratory Centrifuge**
Product name:	**MSE Kestrel**
Model number:	**MSB015.CX1.5**
Product Classification On the basis of the Directive 98/79/EC Annex III p.2-5	**Non classified to list A or B and not for self-testing**
Applied harmonised standards	EN61010-1:2001 + AC:2002 EN61010-2-020:2006 EN61010-2-101:2002 EN61326-1:2006 EN ISO 14971:2009 EN13612:2002 EN980:2008 EN591:2001

We, MSE CENTRIFUGES Ltd, declare that the machine listed above is in accordance with the regulations of the EU Directive 98/79/EC – *in vitro* diagnostic medical devices.



Authorised Signatory

CONTENTS

CONTENTS

1. DESCRIPTION OF THE CENTRIFUGE

The MSE Kestrel is a laboratory micro centrifuge intended for *in vitro diagnostics* (IVD). Its construction ensures easy and safe operation, for a wide range of applications in laboratories engaged in routine medical analysis and biochemical research works. It is intended for separation of mixtures, suspensions and systemic fluids into constituents of different densities under influence of centrifugal force. This centrifuge is an air-cooled, brush-less drive instrument. This centrifuge is not intended to be used to centrifuge caustic, inflammable and explosive preparations.

The MSE Kestrel centrifuge is a micro-processor controlled laboratory centrifuge which uses a brushless induction drive motor to power a fixed angle rotor at speeds of up to 6,000rpm.

2. TECHNICAL DATA

Manufacturer	MSE CENTRIFUGES Ltd
Type	MSB015.CX1.5 (240 V) MSB015.CX1.1 (110 V)
Mains L1+N+PE V/Hz ±10%	230 V 50/60 Hz 110 V 50/60 Hz
Maximum power consumption	70 W
Maximum capacity	90 ml
Maximum rotational speed	6000 rpm
Maximum acceleration	3340 x g
Maximum kinetic energy	Nm
Timer	1 - 60 min 15 second increments
Interference level	PN-EN-55011
Noise level	56 dB

Physical data:

Depth	270 mm
Width	220 mm
Height	180 mm
Weight	5 kg

Environmental conditions:	PN-EN-61010-1 (point 1.4.1.)
Ambiant temperature	+5° to +36° C
Relative humidity at ambient temperature	< 80 %
Installation category	II PN-EN 61010 - 1
Degree of pollution	2 PN-EN 61010 - 1
Protection zone	300 mm

2.1 Statement of Conformity

The following machine is in accordance with the regulations of the EU Directive 98/79/EC and with the harmonized standards PN-EN 61010-1 and PN-EN 61010-2-020.

2.2 BASIC ACCESSORIES

The following accessories are included with every centrifuge:

Catalogue No.	Description	Quantity
32600.063	Fuse (3.15A)	2
78500.001	Hexagonal rotor key	1
38020.151	IEC lead	1
71100.1223	Instruction manual	1
76600.020	Emergency lid opening key	1
87900.001	Complete clamp	1
43117-602	6 place rotor	1
34411-9041	15ml stainless steel buckets (set of 6)	1

2.3 OPTIONAL ACCESSORIES

Depending on the user's needs, the following accessories can be supplied:

Catalogue No.	Description
34141-1140	Cushions for 3ml tubes (set of 6)

3 INSTALLATION

3.1 Unpacking the centrifuge

Open the package carefully taking care not to damage the machine inside. Take the centrifuge out of the box and ensure that all accessories are checked and identified. Keep packaging materials at hand for possible transport in the future.

3.2 Location

Almost all the energy supplied to the centrifuge is transformed into heat and then emitted to the environment. Therefore, proper ventilation is essential, and ventilation ducts must be kept clear at all times. Moreover, the centrifuge should not be located near any heat source such as radiators and should be kept away from direct sunlight. The bench that the centrifuge sits on should be stable and flat. Around the centrifuge, a 300mm radius safety zone must be established. The normal laboratory operating conditions are from 15° C to 35° C. In the case of changing machine location from extreme cold to warmer conditions, please allow the centrifuge to stand with the lid open for a minimum of 4 hours. This will reduce any chance of condensation taking place inside the centrifuge.

3.3 Connection to the power supply

Supply voltage has to be consistent with that given on the rating plate. MSE centrifuges come with a 2-metre long IEC lead fitted with plugs resistant to the dynamic loadings.

MSE recommends that an emergency cut-out should be installed away from the centrifuge, near the exit door from the room or outside the room. Supply voltage should be either 230 V 50/60 Hz, or 110/220 V 50/60 Hz.

3.4 Fuses

The centrifuge has standard protection with the WTA-T 3.15 Amp 250 V fuse, which is situated in the IEC socket at the back of the centrifuge. The fuse fitted in the plug of the IEC lead is 5A.

4 SAFE WORKING CONDITIONS

4.1 General information about your centrifuge

The centrifuge has a rigid self-supporting structure. The case is made of Acrylonitrile Butadiene Styrene (ABS) plastic, the front and back is made of aluminium sheet. The rear of the lid is fixed in place by steel hinges and the front of the lid is locked with an electromagnetic lock, which stops the possibility of opening during centrifugation. The centrifuge is an air-cooled machine.

4.2 Operating personnel

The Kestrel centrifuge should only be operated by trained laboratory technicians who have read this user manual. The instruction manual should be kept near the centrifuge at all times.

4.3 Safety devices

Safety devices described below are incorporated in the design of the Kestrel:

4.4 Lid lock

The centrifuge will only run when the lid is properly closed. In turn, the lid will only open after the rotor has stopped. In the case of emergency opening of the lid during the operation, the centrifuge is immediately switched-off and the brake is automatically applied until the rotor has completely stopped. When the lid is open, the drive is completely disconnected from the power that makes it impossible to start the centrifuge.

4.5 Checking the rotor has stopped

Opening of the centrifuge lid is only possible when the rotor has stopped. This stopped condition is verified by the microprocessor, which sends a signal to the display where the letter "**S .**" appears to show that the rotor has stopped and the lid can be opened.

4.6 Opening the lid manually

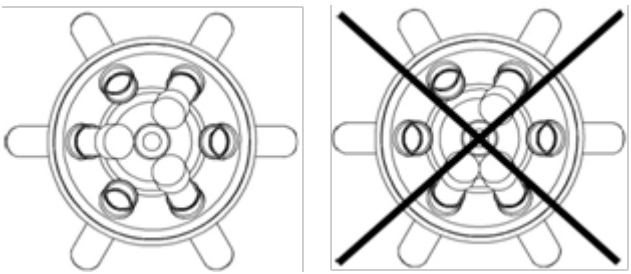
It is possible to open the lid manually if there is a power failure or the centrifuge develops a fault. Please use the key provided with your centrifuge to press into the hole on the right hand side. The lid should now open.

CAUTION: Do not attempt to open the lid whilst the centrifuge is running.

4.7 Good operator practice

Below is a list of important points that users should follow in order to get the most out of their centrifuge.

1. Set the centrifuge in horizontal position on a rigid bench.
2. Ensure a safe position for the centrifuge.
3. Ensure free space around the centrifuge (at least 30 cm).
4. Firmly fix the rotor on the motor shaft.
5. Avoid unbalanced loads.
6. Load the rotor holes with the same tubes as recommended.
7. Do not centrifuge the test tubes of different dimensions.
   The possibility to centrifuge test tubes of different dimensions should be avoided at all times. However, if it is absolutely necessary then opposite loads should be the same weight. Care should be taken to load the rotor holes asymmetrically.
8. Ensure that all holes are being used in the rotor. If centrifuging fewer than six tubes, ensure the tubes are loaded symmetrically as shown in the diagram below:



9. Only use tubes made from a plastic material. Never use glass test tubes.
10. If centrifuging 15ml BD Falcon® tubes (with the conical base), ensure that you do not fully load the rotor and only spin three tubes at a time. A fully loaded rotor using 15ml BD Falcon® tubes will catch on the lid.
11. Fill in all test tubes equally in order to protect the centrifuge against imbalance.
12. Always use tubes that are in good condition and discard any that show signs of wear.
13. Infectious materials should be processed in closed test tubes only.
14. It is prohibited to centrifuge explosive and inflammable materials.
15. It is prohibited to centrifuge substances prone to reaction in result of delivery of high energy during centrifugation.

4.8 Hazards and precautions

1. In order to avoid damaging the centrifuge in any way, the user should read and understand the instruction manual before operating the Kestrel.
2. Un-trained personnel should never operate the centrifuge.
3. The centrifuge must not be transported with the rotor mounted on the motor shaft.
4. The centrifuge should only be used in conjunction with original rotors and spare parts.
5. If the user discovers a fault with the centrifuge, a qualified service engineer should be contacted through MSE CENTRIFUGES Ltd.
6. Do not switch the centrifuge on if it is not installed properly or if the rotor is not fitted correctly.
7. The centrifuge must not be operated in places where there is a risk of extreme hot or cold temperatures.
8. Do not use flammable or highly volatile materials in the centrifuge.
9. Users are advised to take extreme care when centrifuging toxic or contaminated substances.
10. The appropriate decontamination procedures should be adhered to when cleaning any parts of the centrifuge that has been in contact with any toxic or hazardous material.
11. Do not open the lid manually when the rotor is still turning.
12. Do not exceed the load limit set by the manufacturer.
13. Rotors are intended for fluids of average homogeneous density equal to 1.2 g/cm^3 or smaller when centrifugation is carried out at maximum speed. When fluids of higher density are used, then it may be necessary to reduce the speed.
14. Do not use the rotors that have signs of corrosion or other mechanical defects.
15. Do not use highly corrosive substances, which could cause material impairment and damage the mechanical properties of rotor.
16. Do not use plastic rotors and accessories that have not been recommended by MSE CENTRIFUGES Ltd.
17. Only commercial plastic test tubes should be used.
18. Ensure that the test tubes are in good condition and show no signs of damage or wear.
19. Do not run the centrifuge without the rotor.
20. Do not run the centrifuge without the lid on the rotor unless using the 6 x 15ml angle rotor.
21. Do not move the centrifuge whilst in use.
22. Do not place objects on the centrifuge.

4.9 Maximum load

In order to avoid overloading of the rotor the operator shall observe the maximum permitted load, which is specified on every rotor. Maximum permissible load is reached when all test-tubes are filled with the fluid with 1.2 g/cm^3 density or less.
If density of the centrifuged liquid is higher than 1.2 g/cm^3, then test tubes can only be filled partially. Alternatively the operator can adjust the speed of the centrifuge by using the following formula.

n perm = n max * $\sqrt{\frac{1{,}2}{\gamma}}$; γ = specific gravity $\left[\frac{G}{cm^3}\right]$; n max [maximum rotational speed – r.p.m.]

4.10 Storage

If your Kestrel is stored away for more than 12 months, we recommend that the centrifuge be inspected by an authorised engineer before use.

5 OPERATING THE CENTRIFUGE

5.1 Getting started

1. Connect the centrifuge to the mains socket.
2. Switch the power supply on by using the on/off switch, situated on the right hand side of centrifuge.
3. Open the centrifuge lid by pressing the LID key. Prior to fitting the rotor, the user should check that the bowl is free from foreign objects and impurities such as dust and residues of fluid.
4. Mount the rotor on the motor shaft and tighten in a clockwise direction (using the supplied hexagon key).
5. Rotor lids must be fully tightened on the rotor in order to ensure a good seal.
6. Once in use, only use sample containers intended for the rotor.

CAUTION: This Centrifuge compensates for a small weight difference. However, it is recommended that users load the rotor with tubes of equal weight to ensure minimal vibration during operation.

In order to prolong the life of your rotor, silicone grease should be used on threaded parts of the rotor.

To take the 6 x 15ml rotor off, unload the buckets first, loosen the rotor nut by turning in an anti-clockwise direction and take the rotor off by gently pulling in an upward direction.

5.2 The control panel

The control panel and display is a completely sealed unit that shows key data in a digital format and allows the user to adjust speed, time, acceleration and braking rates. Figure 1.1 shows the layout of the control panel:

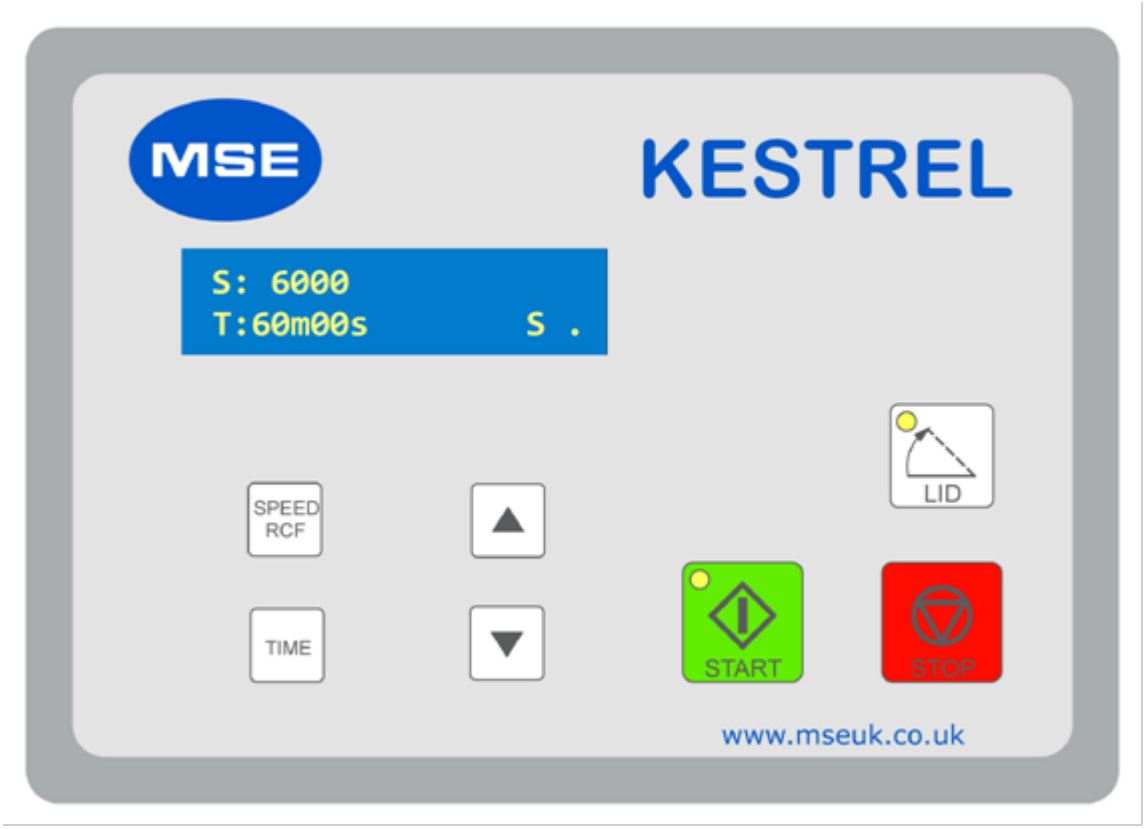


Figure 1.1

The START key is used to start the centrifuge program with the parameters displayed on display. The START key can only be activated when the lid is closed.

The STOP key is used for aborting the operation at any time. When the rotor has come to a complete standstill, the letter “S **.**” will appear on the display signalling that the rotor has stopped.

The LID key is used to open the lid of the centrifuge once it has come to a complete standstill.
The LID key can only be used when the display reads “S **.**” This key cannot be used whilst the rotor is in motion.
Once the rotor has stopped the lid can be opened by pressing the lid key, the display will show **S O** and the LED in lid key will be lit up. This denoted that the rotor has stopped and that the lid is open.

The SPEED RCF key is used to switch between viewing the speed or the RCF. This key is also functional whilst the centrifuge is in motion.

The TIME key is used to adjust the length of time the user wishes to centrifuge their samples for. The selectable time is 1 to 60 minutes. By pressing this key whilst the centrifuge is in motion, the user can see at what value was set at the beginning of centrifugation.

Increase parameter value.

Decrease parameter value.

5.3 Description of sounds

The Kestrel will make different 'beep' sounds depending on the information being displayed. Below is a description for each type of beep:

Sound	Description
One short beep	Confirmation that the command has been accepted.
Two short beeps	The command has not been accepted. (e.g. setting the speed above 6 000 rpm)
One long beep	Signals the start of braking after pressing the STOP key.
Five short beeps	The rotor has stopped and the lid can be opened
Five short beeps and one long beep	Signals that the centrifuge is ready after switching the power on.

5.4 LCD display

The centrifuge has an LCD display, which shows information regarding the time, speed and RCF, as well as the acceleration and deceleration rates.

When the centrifuge is first switched on, the digital display shows the model name and our web address for three seconds before reverting to the main display.

The main display shows information about the centrifuge cycle. An example is shown in Figure 1.4.

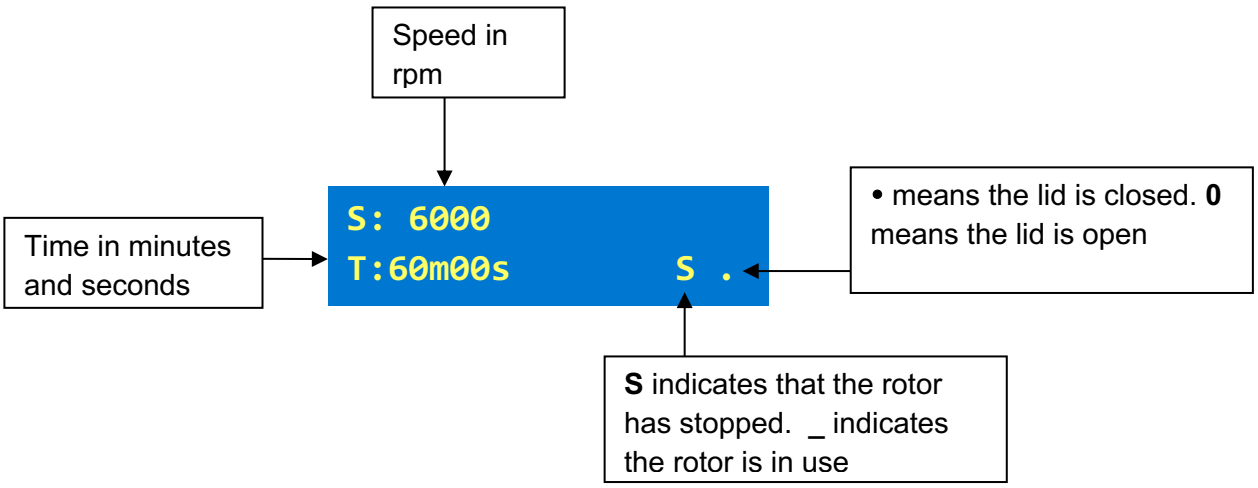


Figure 1.4

Users can switch between displaying the speed and RCF during the run by pressing the SPEED RCF key twice (see Figure 1.5)

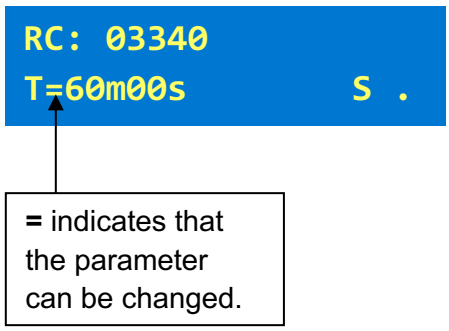


Figure 1.5

Note: The operator cannot change the parameters once the centrifuge is in motion.

5.5 Switching the centrifuge on

Having familiarised yourself with the instruction manual, you can set the programmers that you require load the rotor, shut the lid and press the START key.

5.6 Switching the centrifuge off

When you have completed your centrifugation, please remember to switch the machine off at the mains switch located on the side of the centrifuge.

6 MAINTENANCE

6.1 General cleaning of the centrifuge

Before cleaning the centrifuge, users are advised to wear safety gloves to minimise the risk of irritation. For general cleaning, water mixed with a mild detergent is sufficient. Do not use any corrosive substances or abrasive cloths to clean the centrifuge. Do not use alkaline solutions, flammable solvents or agents containing abrasive particles.

MSE recommends either Terminex 2 or Virkon for optimum disinfection of the centrifuge.

6.2 Cleaning of the accessories

It is recommended that rotors are regularly cleaned to ensure optimum performance and prolong their life. This should be done with a non-corrosive cleaning agent (between 6 and 8pH). When cleaning the rotor please pay particular attention to the holes of the rotor.

If cracks appear in the rotor, the rotor should be replaced immediately. Rotors have to withstand high stresses of centrifugal force and therefore any slight damage would be made worse during operation and inadvertently cause damage to the machine.

All accessories used in the centrifuge, such as sample containers, should be clean and free of debris. The sample containers should also be dry before use in the centrifuge.

6.3 Sterilisation and disinfection of the bowl and accessories

When sterilising the bowl and rotors, users should take into account the material of these items and be sure that the chemicals in the cleaning agents will not react with them. Furthermore, when autoclaving the rotors, users should consider the temperature resistance of the material used in construction. The optimum temperature for autoclaving rotors used in this centrifuge is between 121ºC and 124º C. When autoclaving users should also make sure not to exceed 215 kPa (2.15 bar) of pressure. The recommended time for autoclaving is 15 minutes.

The user is responsible for proper disinfections of the centrifuge, particularly if some harmful material is spilled inside or outside of the centrifuge. During above mentioned works you must always wear safety gloves.

MSE appointed engineers or workshop personnel should not touch the centrifuge unless it has been de-contaminated and a certificate is signed by someone in authority to that effect.

6.4 Tube cracking

It is recommended that users operate in a clean environment to reduce the risk of any debris entering your centrifuge system. Debris can crack tubes and rotors and also damage the centrifuge itself.

7 SERVICING YOUR CENTRIFUGE

7.1 Fault finding

Below is a list of faults and their possible solutions:

Fault	Solution
The centrifuge has no display	1. Check that the power cable is properly plugged in and the mains is turned on 2. Check that the fuse hasn't blown in the plug or at the back of the unit 3. Ensure that the power switch is on
The centrifuge does not start	1. Check that the lid is closed properly 2. Ensure that the display is not flashing. The centrifuge could be waiting for you to input some parameters
The centrifuge starts, but it is not accelerating properly	Make sure that the rotor is not overloaded (the letter E will signify this on the display). Turn centrifuge off and on again to clear the error message.
Lid is not opening	Either the rotor is still running or there is a failure in the lid lock. In the case of the latter, contact MSE for repair.

If any problems persist, please contact your local MSE service agent

7.2 Opening the lid manually

It is possible to open the lid manually if there is a power failure or a fault develops with the centrifuge. Please use the key provided with your centrifuge to press into the hole on the right hand side. The lid should now open.
CAUTION: Do not attempt to open the lid whilst the centrifuge is running

7.3 Safety inspections

From the point of view of operational safety the centrifuge has to be subjected to inspection carried out by authorised service engineer or especially trained experts at least once every year in the state of operational readiness. More frequent inspections could be required if the centrifuge or rotors have been subjected to a corrosion inducing environment. Results of inspections, repairs and tests have to be recorded and kept on file. This instruction manual should be stored near the centrifuge for reference.

7.4 Notes for engineers

The Engineer will pay special attention to the most important parts of the machine and check that they are not damaged in any way. These include:

1. Motor anti vibration ring.
2. The motor shaft.
3. All Centrifuge accessories and especially their structural components. Check they are all free from corrosion.
4. All metal parts. Check they are free from cracks and abrasions.
5. Screws. Check that all screws are tight.
6. Earth connections. Check they are all connected inside the equipment.
7. Rubber sealing rings between the rotor and lid. Check they are in a good condition.

IMPORTANT! Please carry out a safety PAT test for earth bonding, insulation and earth leakage whilst carrying out the service.

7.5 Repairing your centrifuge

Your Kestrel should provide you with years of trouble free centrifugation. However, there are occasions when, for various reasons, you centrifuge may need to be repaired. Warranty repairs will be carried out by authorised service personnel (such as Henderson Biomedical Ltd in the UK) or in an authorised service work shop designated by MSE CENTRIFUGES Ltd.

The user will be responsible for the disinfection and decontamination of the unit prior to any service engineer visit or if unit is to be sent back to an MSE CENTRIFUGES Ltd authorised work shop.

The centrifuge will only be accepted if the disinfection / de-contamination certificate is forwarded to the repair shop and a copy of the certificate accompanies the Centrifuge.

Information about authorised service workshops can be obtained from the Manufacturer.

8 HOW TO OBTAIN SERVICE ON YOUR KESTREL

8.1 Warranty

The Kestrel comes with a 1 year warranty from the date of purchase. After the 1 year, an annual service of the centrifuge is recommended. This should be only be carried out by an authorised MSE service engineer.

If your centrifuge should require service at any time, please contact us at:

MSE CENTRIFUGES Ltd
11 Browning Road,
Heathfield,
East Sussex.
TN21 8DB
United Kingdom

Tel: +44 (0)1435 517 000

E-mail: sales@msecentrifuges.com

www.msecentrifuges.com

If you are located outside the UK, please contact your local distributor. If you do not know who your local distributor is, please contact our sales team via the details above.

9 DECONTAMINATION

If you require service, repair or maintenance for your Kestrel centrifuge, you must ensure that the unit is properly decontaminated before any work can be carried out. Please complete the Declaration of Decontamination Status form and present it to the service engineer **before** any work is undertaken.

If you are planning to send your centrifuge back to MSE CENTRIFUGES Ltd for service, repair or maintenance, you must ensure this form is clearly displayed on the outside of the box to which the equipment has been shipped.

DECONTAMINATION

9.1 Declaration of Decontamination Status

Make: MSE **Model:** Kestrel

Serial Number: ……..

You **MUST** complete either **Declaration A** or **Declaration B** providing further information as requested.

Declaration A

I declare that **no** part of the equipment listed above has been in contact with blood, other body fluids, pathological sample or any substance that is deemed hazardous to human health. It has been cleaned by us in preparation for inspection and service or repair by MSE CENTRIFUGES Ltd.

Signed: …… Name: …….

Capacity:……Date: ……..…….

Company/Hospital: ……..……

Declaration B

The equipment listed above has been exposed, internally and/or externally to hazardous material as indicated below:

Tick and provide details here

- ☐ Blood, body fluids, pathological samples……..…….……
- ☐ Other biohazards…….
- ☐ Chemicals or substances hazardous to health……..
- ☐ Other hazard……

Has the equipment, listed above, been fully cleaned and decontaminated?

YES Provide details: ……

NO Please state why:……..

Signed: …… Name: …….

Capacity:…….Date: ……..

Company/Hospital:…… ……

DECONTAMINATION

Information about your distributor:

YOUR DISTRIBUTOR

MSE CENTRIFUGES Ltd
11 Browning Road,
Heathfield,
East Sussex.
TN21 8DB
United Kingdom

Tel: +44 (0)1435 517 000

E-mail: sales@msecentrifuges.com

Meet the rest of the family

Brand new generation of centrifuges

MICROCENTAUR R

Refrigerated Micro Centrifuge

Maximum speed	**18000** rpm
Maximum RCF	**24270** xg
Maximum Volume	**24 x 2/1.5ml**

HARRIER

General Purpose Centrifuge

Ambient and Refrigerated

Swing Out / Fixed Angle / Microplate

Maximum speed	**18000** rpm
Maximum RCF	**30065** xg
Maximum Volume	**4 x 250ml**

Distributor

11 Browning Road, Heathfield, East Sussex. UK. TN21 8DB
Sales: +44 (0) 1435 517 000
Service : +44 (0) 1435 517 005
www.msecentrifuges.com