

# LID Display. Instruction Manual & Details

**PrO-Vet** a division of **CENTURION**  
SCIENTIFIC LIMITED

PrO-Vet.Equine.FA8  
PrO-Vet.Equine.FA4  
PrO-Vet.Equine.S

It is imperative to read the  
full manual before use.  
Information  
is also available from our  
website.

# PrO-Vet

## Before setting up

- Check the Centrifuge and the Packaging for any shipping damage. Inform the shipping company and Centurion Scientific immediately
- Check the order for completeness, if not contact Centurion Scientific

## Location

The Centrifuge should only be operated indoors.

The set up location must fulfil the following requirements

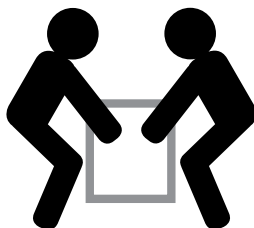
- A safety zone of at least 30Cm must be maintained around the Centrifuge
- People and hazardous substances must be kept out of this zone during centrifugation

## Warning

- The bench or supporting structure must be stable and free from resonance
- The Bench or supporting structure must be suitable for horizontal use of the centrifuge
- The Centrifuge should Not be exposed to heat or strong sunlight
- Ultra violet rays can damage the stability of plastics and coatings
- Do not subject the Polypropylene, Delrin rotors or accessories to direct sunlight
- The Zone location must be well ventilated at all times

## Transporting the Centrifuge

- Always remove the Rotor before transportation
- Due to its weight the Centrifuge should be carried by several people
- Transport the Centrifuge upright and if possible in its packaging
- Always lift the centrifuge at both sides (see below). NOT front to rear.



## Notice

- Store the original packaging, Keep this for future service to base , if required.

## Alignment after moving

The Horizontal alignment of the Centrifuge must be checked if the unit has been moved. Further the Bench used must be suitable (see Transport and set up page)

## Caution

If the Centrifuge is not level, Imbalances can occur and damage caused.  
Do not place objects under the feet to level, this is not safe or good practice.

## Mains connection



- Make sure the Voltage and Frequency correspond to the rating plate on the rear
- Check if the power cable supplied complies with the safety standards of your country
- If so connect the cable to the rear socket
- Plug the other end to your power source (Grounded Electrical socket only)
- Turn on the unit with the switch marked 0/1

## Storage

When removing the Centrifuge, rotors and accessories from use you must clean and if necessary decontaminate or disinfect all parts. Please contact us our Service department for assistance.  
Store each in supplied separate cartons.  
Avoid storing in direct sunlight and always in a dust free environment.  
Be sure the centrifuge is vertical and on its feet

## Shipping the Centrifuge and parts

- Always remove the rotor and its components
- The Centrifuge, rotor and accessories must be clean and decontaminated
- Certificate of Decontamination must be sent (Environmental & Health/Safety rules)
- Use the original packaging and pack safely with confidence.  
If not, the liability of damage will be your responsibility.

# Rotor fitment

BRK5407. BRK5404



- 1. M6 Washer
- 2. Rotor Screw M6 x 20 mm
- 3. Torque Key



- 1 Place the rotor on the shaft of the motor.



- 3 Place the rotor fixing screw (Item 2) into the central hole of the rotor.



- 2 Place the M6 washer (Item 1) over the centre hole on the rotor.



- 4 Hand tighten with Torque Key (Item 3).

**PLEASE ENSURE THAT THE FIXING IS CHECKED AND HAND TIGHTENED  
ON A REGULAR BASIS**

**Failure to follow these instructions could cause serious damage to the centrifuge and possible injury to persons nearby and would make the warranty invalid**

# Rotor Details



Rotor	BRK5407	BRK5404
Rotor type	4 x 15ml & 4 x 10ml	4 x 50ml tube
Tube size max	17 x 120mm & 13 x 110mm	30 x 110mm
Minimum speed Rpm	500	500
Maximum speed Rpm	8,000	6,000
Maximum Rcf (G)	6,100	3,500
Radius max cms	8.6	8.5
Sample tube angle °	25	20
Acceleration time (secs)	25	20
Deceleration time (secs)	30	30
Autoclavable (frequency)	121°C (10)	121°C (10)

## Reducers

Rotor	BRK5407 / BRK5408
Part number	RM05 (5ml)
Tube size max	13 x 80mm
Part number	RM10 (10ml)
Tube size max	16 x 100mm



**PLEASE ENSURE THE ROTOR IS CHECKED REGULARLY FOR CRACKS OR DEFECTS**

## Small fixed angle Rotors



**ALWAYS** load your tubes opposite to each other  
**ALWAYS** weigh samples to within 1.0 Grams. For best separations  
**CHECK** The rotor screw fixing tightness regularly

## Large fixed angle Rotors



**ALWAYS** load your tubes opposite to each other  
**ALWAYS** weigh samples to within 1.0 Grams. For best separations  
**CHECK** The rotor screw fixing tightness regularly

## Balancing of the Rotor

It is imperative that samples are weighed in matched pairs and placed opposite each other (see previous page).

Do not measure by volume alone 5 ml of water does not weigh the same as 5ml of blood due to Specific Gravity.

If you use a tube opposite with water only then weigh it to match the Blood tube.

Good results depend upon good matching.

After separation be careful to not shake the sample.

The Programs have been laid out to show for Serum another program.

This is to assist you.

In some cases Frightened animals can add natural chemicals to the Blood sample that may not separate as per normal.

If so use the longer time method Program.

# How to use & Program



The PrO-Vet range is designed with simplicity in mind. The LID display is inclusive of four pre-set runs with details of which can be found in this manual.

To change between the four pre-set runs press the **MODE** button. This will cycle between the four options.

Once the centrifuge has been correctly loaded with the samples [see previous page] close the lid and press the **START/STOP** button once to start the run.

To interrupt the centrifuge during the programmed run for any reason press the **START/STOP** button once more.

Once the centrifuge has completed the pre-set run it will come to a complete stop and a buzzer will indicate that the run is complete.

To retrieve the samples press the **LID OPEN** button

## PrO-Vet.Serum.FA8



Display indicative only

### Programs

	Rpm	Time
1. Serum (fast)	8,000	180 secs
2. Serum 1	6,000	600 secs
3. Serum 2	5,000	300secs
4. Urine	3,500	300 secs

## PrO-Vet.Serum.FA4



Display indicative only

### Programs

	Rpm	Time
1. Serum(fast)	6,000	300 secs
2. Serum 2	5,000	400 secs
3. Serum 3	4,000	500 secs
4. Urine	3,500	300 secs

## PrO-Vet.Serum.S



Display indicative only

### Programs 5407

	Rpm	Time
1. Serum (fast)	8,000	180 secs
2. Serum 1	6,000	600 secs
4. Serum 2	5,000	300 secs
1. Urine	3,500	300 secs

### Programs 5404

	Rpm	Time
1. Serum 1 (fast)	6,000	300 secs
2. Serum 2	5,000	600 secs
3. Serum 3	4,000	300 secs
4. Urine	3,500	300 secs

## Mechanical Emergency Door release

During a power failure, you will not be able to open the Centrifuge lid via the Display  
A mechanical override is provided to allow sample recovery  
However this is for Emergency use only  
This should Not be used for normal use.

## Warning

The rotor can still be spinning at a high speed, if touched it can cause serious injuries.  
Always wait till the rotor has stopped.

Proceed as follows

- Make sure the Rotor has stopped [view via the port in the Lid]
  - Once stopped unplug the power line
  - Pull the Centrifuge slightly over the bench (as shown).
  - You will notice one or some models two plastic plugs
  - Pop open with a screwdriver (tool) and pull downwards The lid will pop open
- You can now retrieve your samples

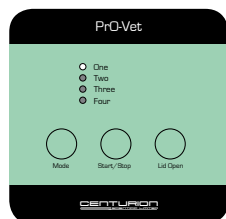


After replace the Plastic plugs back into their original position.  
Reconnect the centrifuge power line once the mains power has been restored.  
Check all is working correctly by closing the lid, wait 5 seconds then press lid open.

**If not working refit or Contact your Distributor**

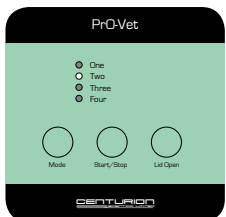
## Error Codes Shown on the LID display

Error codes are displayed through the four LED's on the display, if an error with the unit is detected then one of the four LED's will flash;



**One - Lid Lock Sensor**

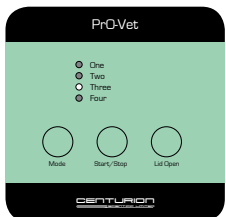
**Close the Lid**



**Two - Imbalance detector**

**Balance your tubes and oppose correctly  
(see rotor fitments section)**

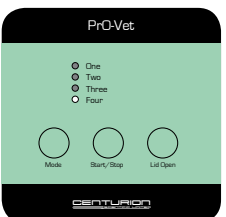
**If not contact Service**



**Three - Tacho sensor**

**Check no tubes are fouling and rotor turns freely**

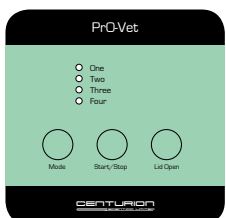
**If not contact Service**



**Four - Fault with the drive**

**Turn off wait 3 minutes, turn on again**

**If not contact Service**



**All four - Rotor recognition (selected machines only)**

**Turn off & try again**

**Check rotor under section**

**Make sure magnets on underside of rotor are clean**

**If not contact Service**



# EC Declaration of Conformity

Declares that product: PrO-ASTM, PrO-Analytical, PrO-Research, Pro-Hospital, PrO-Ed, PrO-Vet,  
PrO-Xtract, PrO-Road, PrO-PRP Centrifuge Series  
Product options: Rotor plus Accessories

This instrument is fully guaranteed against manufacturing defect for a period of three years from date of purchase.

Service and technical manual can be obtained via our website and address below.

**Conform to the following Product Specifications:**

IEC 1010-1, 1010-2 020, IEC 1010-2-0202 020, 7.2.101  
EN 61010, EN 61010-1, 7.5 expelled parts, BS 5724, BS 7687:2.20  
BS EN 61010-2-020 1195, 73/23/EEC Low voltage directive  
EMC EU 89 336 (INCLUSIVE 93/68/EEC)

**Supplementary Information CE Marking**

The product herewith complies with the requirements of the following Directives and carries the CE mark accordingly.

The Low voltage Directive 73.23/EEC

The EMC Directive 89/336/EEC (inclusive 93/68/EEC)

This product was tested in a typical configuration with Centurion Scientific Ltd and other test House Facilities.

**Quality Control. ISO 90001:2008**

internal systems for testing sub assemblies (5) and final product.

**IVD 98/79CE - European Directive.**

Self certified group C.

IVD 9879EC

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all the applicable essential requirements of directives.

Certified by: K. Cooper QA Manager

**CENTURION**  
SCIENTIFIC LIMITED

# Certificate of Origin

Centurion Scientific Ltd of The Old Stables, Church Farm,  
Stoughton, Chichester, West Sussex, PO18 9JL,  
UNITED KINGDOM, hereby confirm that all centrifuges and  
accessories supplied by us are of UNITED KINGDOM origin.

Signed for and on behalf of Centurion Scientific Ltd  
Granted 2018



Company Representative



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Chichester  
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