# PrO-Analytical

a division of



# Dual centrifuge and rotor

Package centrifuges with rotor included



# Welcome to our latest Centrifuge range

# Centrifuges focused on the future

Micro, small, medium, large & floor ambient with additional refrigerated versions.

Improved angled front panel for ease of use.

### Improved rotors for safer sample use

Additional rotors, fixed angles, high speed fixed angles, swing out and micro.

Fixed angle rotors are now supplied with sealed lids, for ultimate safety.

Swing out rotors also have new sealed lids to increase their capacity.

## Next generation components

- Inverter
- Efficient with added power, improved acceleration/decelleration
- Tachometer/Imbalance
- Third generation offering improved user flexibility
- Lid Lock system
- Superior lid locks for safety and reliability
- Control Board
- Easier rotor selection with additional display
- Bluetooth addition allowing latest software updates
- Timer now. 0-99mins, 2, 3, 4, 5, 6, 7, 8, 9, hours & constant

#### Ambient model



Refrigerated model



Centurion Scientific Ltd Centrifuges comply to all relevant EU standards of quality and medical devices IEC61010 and CE conformity test marks emission, immunity to EN/IEC 61326-1, Class B

# PrO-Analytical Centrifuge Features

Built to last, these Centrifuges have strong construction yet, offer a sleek modern design that will fit into any modern laboratory.

No compromises on quality, only the best components are used in the manufacturing process. By working with all our suppliers, our reliability has been retained and improved to give all our range a 2 year warranty as standard.





CE marked and ISO 9001 & 13485

User features to PrO-Analytical series	Advantages
Bright blue LED display	Clarity & ease of use
Rotor recognition	1 rotor only, selected by software
10 acceleration rates & 10 deceleration rates	Sample assistance
99 program memory	Multi department & Users
Timer 0-9 Hours & Hold in 30 second increments	Total flexibility
Pulse short run	Fast pelleting
Run in speed (rpm) or rcf (G) in 10 rpm increments	Accuracy
Orientation acceleration rate	Prevents initial sample side deposits
Sound <60db (rotor dependent)	Quiet
Standard features to PrO-Analytical series	Advantages
Extra thick stainless steel bowl	Easy clean & rust free
Port to lid	Tachometer speed certification
Alloy & steel frame (zinc coated)	Strong light & quiet
World leading industrial grade inverter	Reliability & strength
Best quality European brushless motor	Quiet, cool & reliable
High technology airflow (ambient mode)	Cooler running

All centrifuges have user accessible service sections to access all safety parameters

Saftey features to PrO-Analytical series	Advantages
Multi point lid locking	Lid safety
Emergency lid release	Power failure release
Lid Spring Strut	Lid dropping safety
Lid lock detection	To run, lid must be shut
Imbalance detection	Eradicates user loading errors
Overspeed sensor	Safe detection of speed
Set inverter values	Electronic safety of speed
Barrier ring	Safety protection of chamber
Motor overheat sensor	Safe motor protection

Centurion Scientific Ltd Centrifuges comply to all relevant EU standards of quality and medical devices IEC  $\,$ 

61010 and CE conformity test marks emission, immunity to EN/IEC 61326-1, Class B

# Refrigerated Centrifuges

### Dynamics rooted in innovation

Accuracy and control using less power.

### How?

Centurion Scientific Ltd keep the compressor running constantly, sounds odd but this method increases compressor life and reduces power dramatically.

Constantly turning a compressor on and off means a huge surge of power on each action, plus poor temperature control. See graph below, to control the accuracy to an unprecedented level we balance and control with a heater. This is controlled by a PID system offering top level control.

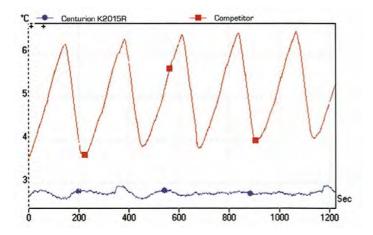
## Why?

Imagine using a shower, you turn on both hot water and cold to reach your desired temperature. You would not stand in cold water, then hot to regulate temperature. By using both cold and hot we "balance" the set temperature As we have been using this method for over 27 years it is a proven technology.

### Proof

See the graph below.

Centurion is set at 3C and a well known competitor at 4C to differentiate. As you can clearly see our system has control and repeatability beyond our competition.



# Contents

Mico Centrifuges to 0.2L	
C115 A.B.C.D Ambient & C115R. A.B.C.D Refrigerated  Micro package centrifuge with micro rotor included for either 2ml, 0.5ml	6
0.2ml and PCR strip.  C106 A. B. Ambient & C106R A. B. Refrigerated  Micro package centrifuge with rotor included for 8x15ml or 4x50ml reducers available for 25ml	8
15ml 10ml and 5.0ml.  C113 Ambient Haematocrit centrifuge	10
Micro package centrifuge with rotor included for 24 capillary and 12x2ml in one rotor. C104SO Ambient Centrifuge	11
Micro package centrifuge with mini swing rotor included for 8x5ml.  A compact unit offering swing capability at 5ml in a micro space saving unit for your lab.	•
Small Centrifuges to 0.5L	
C204A Ambient & C204RA. Refrigerated  Small package centrifuge with swing-out rotor included (400ml max) available with over 40 different adapters making this unit a diverse unit capable of different sample types.	12
types.  C206A Ambient & C206RA. Refrigerated  Small package centrifuge included with fixed angle rotor up to 6000rpm for 12x15ml & 6x50ml Reducers available for 25ml, 15ml, 10ml and 5.0ml.	16
Medium Centrifuges to 1L	
C404A Ambient & C404RA. Refrigerated  Medium package centrifuge with swing-out rotor included (1000ml max) available with over 40 different adapters making this unit a diverse unit capable of different sample types.  C406A Ambient & C406RA. Refrigerated	18
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C504A Ambient & C504RA. Refrigerated  2L package centrifuge with swing-out rotor included (2000ml max) available with over 40 different adapters making this unit a diverse unit capable of different sample types.	24
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C704A Ambient & C704RA. Refrigerated  3L package centrifuge with swing-out rotor included (3000ml max) available with over 40 different adapters making this unit a diverse unit capable of different sample types.	28
Floor Centrifuges to 4L	
<u>CFS4A Ambient &amp; CFS4RA. Refrigerated</u> 4L package floor standing centrifuge with swing-out rotor included (4000ml max) available with over 40 different adapters making this unit a diverse unit capable of different sample types.	31

# C115 & C115R

# Micro Centrifuges to 0.2Litre max Dual Centrifuges Complete with rotor

#### Display indicative only



#### PART NUMBERS (230V50/60HZ)

C115A with BRK5424 rotor C115B with BRK5436 rotor C115C with BRK5448 rotor C115D with BRK5494 rotor

#### Display indicative only



### Ambient Centrifuge

15,000 Rpm max (10 Rpm steps) Speed Rcf Max 10 - 22,000G Timer 0-9hours & Hold (30 sec steps) Dims HWD 280 x 240 x 360mm 12.8 Kg (without rotor) Weight Power 125 Watts Memory 99 programs Accel rates 10 programs Decel rates 10 programs

#### PART NUMBERS (110V 60HZ)

1.C115A with BRK5424 rotor 1.C115B with BRK5436 rotor 1.C115C with BRK5448 rotor 1.C115D with BRK5494 rotor

## Refrigerated Centrifuge

Speed 15,000 Rpm max (10Rpm steps) Rcf Max 10 - 22,000G Timer 0-9hours & Hold (30 sec steps) Dims HWD 320 x 280 x 575mm Weight 41.8 Kg (without rotor) Power 575 Watts Memory 99 programs Accel rates 10 programs Decel rates 10 programs -20C to 40C PID controlled to +/-1C Temp range

#### PART NUMBERS (230V 50**/60**HZ)

C115RA with BRK5424 rotor C115RB with BRK5436 rotor C115RC with BRK5448 rotor C115RD with BRK5494 rotor

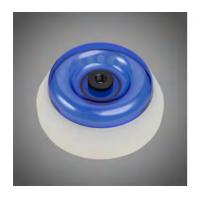
### PART NUMBERS (110V 60HZ)

1. C115RA with BRK5424 rotor 1. C115RB with BRK5436 rotor

1. C115RC with BRK5448 rotor

1. C115RD with BRK5494 rotor

# Micro rotors to 22,000 Rcf (G)



Sealed lid included

Rotor	BRK5424	BRK5436	BRK5448	BRK5494
Rotor type	24 x 2.2ml	36 x 0.5ml	48 x 0.2 to 0.4ml	4 x Pcr Strips
Tube size max	11 x 50mm	8 x 30mm	6 x 40mm	6 x 40mm
Minimum Rcf (G)	10	10	10	10
Maximum Rcf (G)	22,000	22,000	22,000	22,000
Maximum Rpm	15,000	15,000	15,000	15,000
Radius max cms	8.75cms	8.75cms	8.75cms	8.75cms
Sample tube angle °	45	45	45	45
Acceleration time (secs)	15	15	15	15
Deceleration time (secs)	15	15	15	15
Autoclavable (frequency)	121°C (10)	121°C (10)	121°C (10)	121°C (10)
Minimum Temperature @ 23°C	4°C	4°C	4°C	4°C

## Reducers pack of 4

Rotor	BRK5424
Part number	RS04 (0.2- 0.4ml)
Tube size max	6 x 30mm
Part number	RS05 (0.5ml)
Tube size max	8 x 30mm

# Micro Centrifuges to 0.2Litre max Dual Centrifuges Complete with rotor



Display indicative only

#### PART NUMBERS (230V 50/60HZ)

C106A withBRK5408 rotor C106B with BRK5404 rotor

Ambient Centrifuge

Speed	6,000 Rpm max (10 Rpm steps)	
Rcf Max	10 - 3,500 G	
Timer	0-9hours & Hold (30 sec steps)	
Dims HWD	280 x 240 x 360mm	
Weight	12.8 Kg (without rotor)	
Power	125 Watts	
Memory	99 programs	
Accel rates	10 programs	
Decel rates	10 programs	

### PART NUMBERS (110V 60HZ) 1. C106A with BRK5408 rotor 1. C106B with BRK5404 rotor

### Refrigerated Centrifuge

Speed	6,000 Rpm (10 Rpm steps)
Rcf Max	10 - 3,500 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	320 x 280 x 575mm
Weight	41.8 Kg (without rotor)
Power	575 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs
Temp range	-20C to 40C PID controlled to +/- 10



Display indicative only

### PART NUMBERS (230V 50/60HZ)

C106RA with BRK5408 rotor C106RB with BRK5404 rotor

#### PART NUMBERS (110V 60HZ)

1. C106RA with BRK5408 rotor 1. C106RB with BRK5404 rotor

# Small Fixed angle rotors. 3,500 Rcf (G)



Sealed lid included

Rotor	BRK5408	BRK5404
Rotor type	8 x 15ml tube	4 x 50ml tube
Tube size max	17 x 120mm	30 x 115mm
Minimum Rcf (G)	10	10
Maximum Rcf (G)	3,500	3,500
Maximum Speed	6,000	6,000
Radius max cms	8.5	8.5
Sample tube angle °	30	30
Acceleration time (secs)	25	25
Deceleration time (secs)	25	25
Autoclavable (frequency)	121°C (10)	121°C (10)
Minimum Temperature @ 23°C	4°C	4°C

Rotor	BRK5408/5404
Part number	RM05 (5ml)
Tube size max	13 x 80mm
Part number	RM10 (10ml)
Tube size max	16 x 100mm

Rotor	BRK5404
Part number	RM25 (25ml)
Tube size max	24 x 100mm
Part number	RM15 (15ml)
Tube size max	17 x 100mm

Reducers pack of 4

# Micro Centrifuge with Haematocrit rotor 10 Dual Rotor Centrifuge Complete with rotor



Display indicative only

C113 (230V50/60Hz)

## Ambient Centrifuge

Speed	13,000 Rpm max (10 Rpm steps)
Rcf Max	10 - 15,800 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	280 x 240 x 360mm
Weight	12.8 Kg (without rotor)
Power	125 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs

### PART NUMBERS

1.C113 (110V 60Hz)

Rotor	BRK5401
Rotor type	24 x capillary & 12 x 2ml
Tube size max	2 x 75mm & 11 x 40mm
Minimum Rcf (G)	10
Maximum Rcf (G)	15,800
Maximum Speed	13,000
Radius max cms	8.4
Sample tube angle °	0 & 60
Acceleration time (secs)	25
Deceleration time (secs)	25
Autoclavable (frequency)	121°C (10)
Minimum Temperature @ 23°C	4°C



See Page 9 for consumables

# Micro Centrifuge with Swing out rotor Dual Rotor Centrifuge complete with rotor

#### Display indicative only



### PART NUMBERS

C104SO (230V50/60Hz)

# Ambient Centrifuge

Speed	4,000 Rpm max (10 Rpm steps)
Rcf Max	10 - 1500 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	280 x 240 x 360mm
Weight	12.8 Kg (without rotor)
Power	125 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs

#### PART NUMBERS

1.C104SO (110V 60Hz)

BRK5508S Swing out rotor	
Capacity	8 x 5ml
Tube size	13 x 82mm max
Minimum Rcf (G)	10
Maximum Rcf (G)	1,500
Maximum Speed	4,000
Radius max cms	9.0
Sample tube angle °	0
Acceleration time (secs)	15
Deceleration time (secs)	15
Autoclavable (frequency)	121°C (10)
Minimum Temperature @ 23°C	4°C



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# Small Centrifuges to 0.5Litre max Dual Centrifuge Complete with rotor

#### Display indicative only



#### PART NUMBERS

C204A (230V50/60Hz) 1.C204A (110V 60Hz)

#### Display indicative only



PART NUMBERS

C204RA (230V 50/60Hz) 1.C204RA (110V 60 Hz)

### Ambient Centrifuge

Speed	4,000 Rpm max (10 Rpm steps)
Rcf Max	10 - 2,200 G
Timer	0 -9hours & Hold (30 sec steps)
Dims HWD	320 x 350 x 470mm
Weight	22.8 Kg (without rotor)
Power	175 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs

## Refrigerated Centrifuge

Speed	4,000 Rpm max (10 Rpm steps)
Rcf Max	10 - 2,200 G
Timer	0 -9hours & Hold (30 sec steps)
Dims HWD	325 x 360 x 610mm
Weight	45.8 Kg (without rotor)
Power	575 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs
Temp range	-20C to 40C PID controlled to +/- 10

# Swing out Rotor 4 x 125ml Max. 2,200 Rcf (G)

# BRK5506

500ml max capacity



Optional B5519 sealed lids available

### Adaptors required see following page

Rotor	BRK5506 & Adaptors (set 4) Shown REQUIRED see chart
Tube size max	45 x 100mm
Minimum Rcf (G)	10
Maximum Rcf (G)	2,200
Maximum Speed	4,000Rpm
Radius max cms	12.3cm
Sample tube angle °	0
Acceleration time (secs)	30
Deceleration time (secs)	30
Autoclavable (frequency)	121°C (20)
Minimum Temperature @ 23°C	4°C

# Adaptors for Swing out rotor BRK5506 Pack of 4

Capacity	Size. mm	Part Number	Tubes per rotor
Tube type: Micro v	with cap. <b>Shape:</b> F	Point	
0.5ml 1.5ml 2.0ml 0.2ml 0.4ml	8 x 20 11 x 38 11 x 38 6 x 20 6 x 30	AM405-5 AM420-5 AM420-5 AM402-5 AM404-5	52 36 36 96 96
Tube type: Plain no	o cap. <b>Shape:</b> Rou	ınd	
1ml 3ml 5ml 6ml 7ml 9/10ml 15ml 25ml 50ml 100ml 125ml	6 x 45 10 x 60 12 x 75 12 x 82 12 x 100 14 x 100 17 x 100 24 x 100 34 x 100 45 x 100 52 x 100	AR401-5 AR403-5 AR405-5 AR405-5 AR407-5 AR409-5 AR415-5 AR425-5 AR450-5 AR4100-5 AR4125-5	36 28 20 20 20 20 16 12 4 4
Tube type: Falcon	with cap. <b>Shape</b>	: Point	
15ml 50ml	17 x 120 29 x 115	AF415-5 AF450-5	4 4
Tube type: Falcon	with cap. <b>Shape</b>	: Square	
12ml 15ml 25ml 30ml 50ml	17 x 100 17 x 120 25 x 90 25 x 110 29 x 115	AFS412-5 AFS415-5 AFS425-5 AFS430-5 AFS450-5	8 4 4 4 4
Tube type: Nalgen	e. Oakridge with	cap. <b>Shape:</b> Round	
10ml 30ml 50ml 100ml	15 x 80 26 x 95 29 x 107 38 x 106	ANO410-5 ANO430-5 ANO450-5 ANO4100-5	12 4 4 R
Tube type: Monov	ette. <b>Shape</b> Squ	are	
1.1-1.4ml 2.7-3ml 2.6-2.9ml 4.5-5ml 7.5-8.2ml 4.5-5ml 9-10ml	8 x 82 11 x 82 13 x 81 11 x 108 13 x 106 15 x 92 16 X 108	AM4014-5 AM403-5 AM429-5 AM403-5 AM479-5 AM450-5 AM490-5	40 40 28 32 24 20
Tube type: Vacuta	iner. <b>Shape:</b> Rou	nd	
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 × 82 13 × 106 15 × 92 16 × 108	AV416-5 AV450-5 AV470-5 AV480-5	24 24 20 16
Tube type: Vacuet			
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV416-5 AV450-5 AV470-5 AV480-5	24 24 20 16



# Notes

# C206 & C206R

# Small Centrifuges to 0.5Litre max Dual Centrifuge Complete with rotor



### Ambient Centrifuge

Speed	6,000 Rpm max (10 Rpm steps)
Rcf Max	10 - 3,800 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	320 x 350 x 470mm
Weight	22.8 Kg (without rotor)
Power	175 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs

#### PART NUMBERS (230V 50/60HZ)

C206A with BRK5412rotor C206B with BRK5406 rotor

# PART NUMBERS (110V 60HZ)

1.C206A with BRK5412 rotor 1.C206B with BRK5406 rotor

#### Display indicative only



## Refrigerated Centrifuge

Speed	6,000 Rpm (10 Rpm steps)
Rcf Max	10 - 3,800 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	325 x 360 x 610mm
Weight	45.8 Kg (without rotor)
Power	575 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs
Temp range	-20C to 40C PID controlled to +/-1C

#### **PART NUMBERS (230V 50/60HZ**

C206RA with BRK5412 rotor

### PART NUMBERS (110V 60HZ)

1. C206RA with BRK5412 rotor

1, C206RB with BRK5406 rotor

# Medium fixed angle rotors to 3,800 Rcf (G)



Sealed lid included

Rotor	BRK5412	BRK5406
Rotor type	12 x 15ml	6 x 50m
Tube size max	17 x 120mm	30 x 120mm
Minimum Rcf (G)	10	10
Maximum Rcf (G)	3,800	3,800
Maximum Speed	4,000	4,000
Radius max cms	9.5	9.5
Sample tube angle °	30	30
Acceleration time (secs)	25	25
Deceleration time (secs)	25	25
Autoclavable (frequency)	121°C (10)	121°C (10)
Minimum Temperature @ 23°C	4°C	4°C

#### **Reducers** pack of 4

Rotor	BRK5412
Part number	RM05 (5ml)
Tube size max	13 x 80mm
Part number	RM10 (10ml)
Tube size max	16 x 100mm

### Reducers pack of 4

Rotor	BRK5406
Part number	RM15 (15ml)
Tube size max	17 x 120mm
Part number	RM25 (25ml)
Tube size max	25 x 100mm

# C404A & C404RA

# Medium Centrifuges to 1.0Litre max Dual Centrifuges Complete with rotor

Speed

#### Display indicative only



## Ambient Centrifuge

4,000 Rpm max (10 Rpm steps) Rcf Max 10 - 2,600 G Timer 0 -9hours & Hold (30 sec steps) **Dims HWD** 340 x 400 x 520mm Weight 25.8 Kg (without rotor) Power 275 Watts

99 programs Memory Accel rates 10 programs Decel rates 10 programs

C404A (230V50/60Hz) 1.C404A (110V 60Hz)

#### Display indicative only



## Refrigerated Centrifuge

Speed 4,000 Rpm max (10 Rpm steps) Rcf Max 10 - 2,600 G Timer 0 -9hours & Hold (30 sec steps) Dims HWD 330 x 435 x 650mm Weight 57.8 Kg (without rotor) Power 625 Watts 99 programs Memory Accel rates 10 programs Decel rates 10 programs -20C to 40C PID controlled to +/- 1C Temp range

#### PART NUMBERS

C404RA (230V 50/60Hz) 1.C404RA (110V 60 Hz)

# Swing out Rotor 4 x 250ml Max. 2,600 Rcf (G)

## **BRK1001**

1 Litre max capacity



B5251 Bucket (set 4) REQUIRED. 250ml max per Bucket I



Shown with optional B5519 sealed lids

### Adaptors required see the following page

Rotor/Buckets	BRK1001. B5251 Buckets
Tube size max	62 x 100mm
Minimum Rcf (G)	10
Maximum Rcf (G)	2,600
Maximum Speed Rpm	4,000
Radius max cms	14.6cm
Sample tube angle °	0
Acceleration time (secs)	35
Deceleration time (secs)	35
Autoclavable (frequency)	121°C (20)
Minimum Temperature @ 23°C	4°C

# Adaptors for Swing out rotor BRK1001. With B5251 buckets Pack of 4

Capacity	Size. mm	Part Number	Tubes per rotor
Tube type: Micro	with cap. <b>Shape:</b> F	Point	
0.5ml 1.5ml 2.0ml 0.2ml 0.4ml	8 x 20 11 x 38 11 x 38 6 x 20 6 x 30	AM605-1 AM620-1 AM620-1 AM602-1 AM604-1	104 72 72 144 144
Tube type: Plain r	ιο cap. <b>Shape:</b> Rοι	ınd	
1ml 3ml 5ml 6ml 7ml 9/10ml 15ml 25ml 50ml 100ml	6 x 45 10 x 60 12 x 75 12 x 82 12 x 100 14 x 100 17 x 100 24 x 100 34 x 100 45 x 100 52 x 100	AR601-1 AR603-1 AR605-1 AR605-1 AR607-1 AR609-1 AR615-1 AR625-1 AR650-1 AR6100-1 AR6150-1	36 28 20 20 20 20 16 12 4 4
Tube type: Falcor			
15ml 50ml	17 x 120 29 x 115	AF615-1 AF650-1	16 4
	with cap. Shape	· ·	<u>-</u>
12ml 15ml 25ml 30ml 50ml	17 x 100 17 x 120 25 x 90 25 x 110 29 x 115	AFS612-1 AFS615-1 AFS625-1 AFS630-1 AFS6100-1	12 12 4 4 4
Tube type: Nalge	ne. Oakridge with	cap. <b>Shape:</b> Round	
10ml 30ml 50ml 100ml	15 x 80 26 x 95 29 x 107 38 x 106	ANO610-1 ANO630-1 ANO650-1 ANO685-1	20 4 4 4
Tube type: Nalge	ne. Oakridge with	cap. <b>Shape:</b> Flat	
250ml	62 x 125	AC62130	4
Tube type: Mono			
1.1-1.4ml 2.7-3ml 2.6-2.9ml 4.5-5ml 7.5-8.2ml 4.5-5ml 9-10ml	8 x 82 11 x 82 13 x 81 11 x 108 13 x 106 15 x 92 16 X 108	AM6014-1 AM603-1 AM629-1 AM603-1 AM679-1 AM650-1 AM690-1	52 52 28 52 28 20 20
Tube type: Vacuta	iner. <b>Shape:</b> Rou	ınd	
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV616-1 AV650-1 AV670-1 AV680-1	28 28 16 16
Tube type: Vacue	13 x 82	d AV616-1	28
1.6-5mi 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV650-1 AV670-1 AV680-1	28 28 16 16





# Notes

# Medium Centrifuges to 1.0Litre max Dual Centrifuges Complete with rotor



### Ambient Centrifuge

Speed 6,000 Rpm max (10 Rpm steps)

Rcf Max 10 - 4.800 G

Timer 0-9hours & Hold (30 sec steps)

Dims HWD 340 x 400 x 520mm

Weight 25.8 Kg (without rotor)

Power 275 Watts

Memory 99 programs

Accel rates 10 programs

Decel rates 10 programs

### PART NUMBERS (230V 50/60HZ)

C406A with BRK5324 rotor C406B with BRK5308 rotor C406C with BRK5100 rotor

#### PART NUMBERS (110V 60HZ)

1. C406A with BRK5324 rotor

1. C406B with BRK5308 rotor

1. C406C with BRK5100 rotor



### Refrigerated Centrifuge

Speed 6,000 Rpm max (10 Rpm steps)

Rcf Max 10 - 4,800 G

Timer 0-9hours & Hold (30 sec steps)

Dims HWD 330 x 435 x 650mm

Weight 57.8 Kg (without rotor)

Power 625 Watts

Memory 99 programs

Accel rates 10 programs

Decel rates 10 programs

-20C to 40C PID controlled to +/-1C Temp range

#### PART NUMBERS (230V 50/60HZ)

C406RA with BRK5324 rotor C406RB with BRK5308 rotor C406RC with BRK5100 rotor

#### PART NUMBERS (110V 60HZ)

- 1. LC406RA with BRK5324 rotor
- 1. C406RB with BRK5308 rotor.
- 1, C406RC with BRK5100 rotor

# Large fixed angle rotors to 4,800 Rcf (G)



Sealed lid included

Rotor	BRK5324	BRK5308	BRK5100
Rotor type	24 x 15ml	8 x 50ml	6 x 100ml
Tube size max	17 x 120mm	30 x 120mm	38 x 125mm
Minimum Rcf (G)	10	10	10
Maximum Rcf (G)	4,800	4,800	4,800
Maximum Speed	6,000	6,000	6,000
Radius max cms	12	12	12
Sample tube angle °	30	30	30
Acceleration time (secs)	30	30	30
Deceleration time (secs)	35	35	35
Autoclavable (frequency)	121°C (10)	121°C (10)	121°C (10)
Refrigerated Centrifuges Only	/		
Minimum Temperature	4°C	4°C	4°C

At maximum speed (relative to room temperature at 23°C)

Reducers <sub>i</sub>	pack of 4			
Rotor	BRK5324	BRK5308	BRK5100	
Part number	RM05 (5ml)	RM15 (15ml)	RL10 (10ml)	
Tube size max	13 x 80mm	17 x 120mm	16 x 100mm	
Part number	RM10 (10ml)	RM25 (25ml)	RL 15 (15ml)	
Tube size max	16 x 100mm	25 x 100mm	17 x 120mm	
			RL25 (25ml)	
			25 x 100mm	
			RL50 (50ml)	RL85 (
			35 x 110mm	39 x 11

# C504A & C504RA

# 2/1

# Large Centrifuges to 2Litre max Dual Centrifuges

Complete with Swing out rotor BRK3000, B2001 Buckets (adaptors required)



### Ambient Centrifuge

**Speed** 4,000 Rpm max (10 Rpm steps)

**Rcf Max** 10 - 3,600 G

Timer 0 -9hours & Hold (30 sec steps)

**Dims HWD** 375 x 540 x 620mm

Weight 54.5 Kg (without rotor)

Power750 WattsMemory99 programsAccel rates10 programs

Decel rates

C504A C504A. (230V 50/60Hz)

10 programs

1.C504A. (110V 60Hz)





### Refrigerated Centrifuge

**Speed** 4,000 Rpm max (10 Rpm steps)

Rcf Max 10 - 3,600 G

Timer 0 -9hours & Hold (30 sec steps)

 Dims HWD
 410 x 825 x 650mm

 Weight
 87 Kg (without rotor)

Power 1200 Watts
Memory 99 programs
Accel rates 10 programs
Decel rates 10 programs

Temp range -9C to 40C PID controlled to +/-1C

**C504RA.** C504RA.(230V50/60Hz) 1.C504RA. (110V 60Hz)

# Swing out Rotor 4 x 500ml Max. 3,600 Rcf (G)

## **BRK3000**

2 Litre max capacity



B52001 Bucket (set 4) REQUIRED. 500ml max per Bucket



Shown with optional B5319 sealed lids

### Adaptors required see following page

Rotor/Buckets	BRK3000. B2001 Buckets
Tube size max	98 x 160mm
Minimum Rcf (G)	10
Maximum speed	4000Rpm
Maximum Rcf (G)	3600
Radius max cms	20.5
Sample tube angle °	0
Acceleration time (secs)	40
Deceleration time (secs)	40
Autoclavable (frequency)	121°C (20)
Minimum Temperature @ 23°C	4°C

## Adaptors for Buckets. B2001 Pack of 4

Capacity	Size. mm	Part Number	Tubes per rotor
<b>Tube type:</b> Micro	with cap. <b>Shape:</b>	Point	
0.5ml 1.5ml 2.0ml 0.2ml 0.4ml	8 x 20 11 x 38 11 x 38 6 x 20 6 x 30	AM805-2 AM820-2 AM820-2 AM802-2 AM804-2	144 92 92 168 168
Tube type: Plain n	o cap. <b>Shape:</b> Ro	und	
1ml 3ml 5ml 6ml 7ml 9/10ml 15ml 25ml 50ml 100ml 150ml 250ml	6 x 45 10 x 60 12 x 75 12 x 82 12 x 100 14 x 100 24 x 100 34 x 100 45 x 100 52 x 100 62 x 100	AR801-2 AR803-2 AR805-2 AR805-2 AR807-2 AR807-2 AR815-2 AR825-2 AR850-2 AR8100-2 AR8150-2 AR8250-2	168 96 96 96 96 84 48 28 16 8
Tube type: Falcon	with cap. Shape	: Point	
15ml 50ml 175ml	17 x 120 29 x 115 61 x 118	AF815-2 AF850-2 AF8175-2	28 16 4
Tube type: Falcon	with cap. Shape	:: Square	
12ml 15ml 25ml 30ml 50ml	17 x 100 17 x 120 25 x 90 25 x 110 29 x 115	AFS812-2 AFS815-2 AFS825-2 AFS830-2 AFS850-2	48 28 20 16 12
Tube type: Cornir	ig with cap. Shap	pe: point	
250ml 500ml	60 x 172 98 x 148	AF8250-2 AF8500-2	4 4
Tube type: Nalger		· · · · · ·	
10ml 30ml 50ml 100ml 250ml	15 x 80 26 x 95 29 x 107 38 x 106 62 x 133	ANO810-2 ANO830-2 ANO850-2 ANO8100-2 ANO8250-2	64 20 12 12 4
Tube type: Nalger	ne. Oakridge with	cap. <b>Shape:</b> Square	
250ml 500ml	62 x 130 98 x 148	ANO8251-2 AH2695R	4 4 No lid
Tube type: Monov			
1.1-1.4ml 2.7-3ml 2.6-2.9ml 4.5-5ml 7.5-8.2ml 4.5-5ml 9-10ml	8 x 82 11 x 82 13 x 81 11 x 108 13 x 106 15 x 92 16 X 108	AM8014-2 AM803-2 AM829-2 AM804-2 AM879-2 AM850-2 AM890-2	96 76 68 76 68 64
		und also Vacuette	
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV816-2 AV850-2 AV870-2 AV880-2	76 76 64 64





# Refrigerated Centrifuges

## Dynamics rooted in innovation

Accuracy and control using less power.

### How?

Centurion Scientific Ltd keep the compressor running constantly, Sounds odd, but this method increases compressor life and reduces power dramatically. Constantly turning a compressor on and off means a huge surge of power on each action, plus poor temperature control. See graph below to control the accuracy to an unprecedented level we balance and control with a heater. This is controlled by a PID system offering top level control.

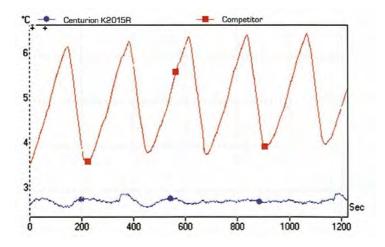
## Why?

Imagine using a shower, you turn on both Hot water and cold to reach your desired temperature. You would not stand in cold water, then hot to regulate temperature. By using both cold and hot we "balance" the set temperature As we have been using this method for over 27 years it is a proven technology.

### Proof

See the graph below.

Centurion is set at 3C and a well known competitor at 4C to differentiate. As you can clearly see our system has control and repeatability beyond our competition



# C704A & C404RA

# Large Centrifuges to 3Litre max **Dual Centrifuges**

Complete with Swing out rotor BRK3000, B3001 Buckets (adaptors required)

Display's indicative only



### Ambient Centrifuge

4,000 Rpm max(10 Rpm steps) Speed

Rcf Max 10 - 4.000 G

Timer 0-9hours & Hold (30 sec steps)

Dims HWD 375 x 575 x 660mm Weight 59 Ka (without rotor)

Power 750 Watts Memory 99 programs

Accel rates 10 programs Decel rates 10 programs

C704A

C704A. (230V 50/60Hz), 1.C704A. (110V 60Hz)



### Refrigerated Centrifuge

Speed 4,000 Rpm max(10 Rpm steps)

Rcf Max 10 - 4,000 G

Timer 0-9hours & Hold (30 sec steps)

**Dims HWD** 410 x 845 x 660mm

Weight 105 Kg (without rotor)

1200 Watts 99 programs Memory Accel rates 10 programs Decel rates 10 programs

Temp range -9C to 40C PID controlled to +/-1C

### C704RA

Power

C704RA.(230V50/60Hz). 1.C704RA. (110V 60Hz)

# Swing out Rotor 4 x 750ml Max. 4,000 Rcf (G)

## BRK3000

3 Litre max capacity



B3001 Bucket (set 4) REQUIRED. 750ml max per Bucketl



Shown with optional B5319 sealed lids

### Adaptors required see following page

Rotor/Buckets	BRK3000. B3001 Buckets
Tube size max	98 x 170mm
Minimum Rcf (G)	10
Maximum Rcf (G)	4000
Maximum Speed	4000Rpm
Radius max cms	22.5
Sample tube angle °	0
Acceleration time (secs)	45
Deceleration time (secs)	45
Autoclavable (frequency)	121°C (20)
Minimum Temperature @ 23°C	4°C

# Adaptors for Buckets. B3001 Pack of 4

Capacity	Size. mm	Part Number	Tubes per rotor
Tube type: Micro	with cap. <b>Shape:</b> F	Point	
0.5ml 1.5ml 2.0ml 0.2ml 0.4ml	8 x 20 11 x 38 11 x 38 6 x 20 6 x 30	AM805-3 AM820-3 AM820-3 AM802-3 AM804-3	288 184 184 336 336
Tube type: Plain no	o cap. <b>Shape:</b> Rou	und	
1ml 3ml 5ml 6ml 7ml 9/10ml 15ml 25ml 50ml 100ml 150ml 250ml	6 x 45 10 x 60 12 x 75 12 x 82 12 x 100 14 x 100 17 x 100 24 x 100 34 x 100 45 x 100 52 x 100 62 x 100	AR801-3 AR803-3 AR805-3 AR805-3 AR807-3 AR809-3 AR815-3 AR825-3 AR850-3 AR8100-3 AR8150-3 AR8250-3	168 96 96 96 96 84 48 28 16 8 4
Tube type: Falcon		: Point	
15ml 50ml 125ml	17 x 120 29 x 115 61 x 118	AF815-3 AF850-3 AF8175-3	36 20 4
Tube type: Falcon			
12ml 15ml 25ml 30ml 50ml	17 x 100 17 x 120 25 x 90 25 x 110 29 x 115	AFS812-3 AFS815-3 AFS825-3 AFS830-3 AFS850-3	48 36 24 24 20
Tube type: Cornin		·	
250ml 500ml	60 x 172 98 x 148	AF8250-3 AF8500-3	4 4
Tube type: Nalgen	e. Oakridge with	cap. <b>Shape:</b> Round	
10ml 30ml 50ml 100ml 250ml	15 x 80 26 x 95 29 x 107 38 x 106 62 x 133	ANO810-3 ANO830-3 ANO850-3 ANO8100-3 ANO8250-3	64 24 20 12 4
		cap. <b>Shape:</b> Square	
250ml 500ml 750ml	60 x 172 98 x 148 60 x 160	ANO8252-3 ANO8500-3 ANO8750-3	4 4 4 No lid
<b>Tube type:</b> Monov		are	
1.1-1.4ml 2.7-3ml 2.6-2.9ml 4.5-5ml 7.5-8.2ml 4.5-5ml 9-10ml	8 x 82 11 x 82 13 x 81 11 x 108 13 x 106 15 x 92 16 X 108	AM8014-3 AM803-3 AM829-3 AM804-3 AM879-3 AM850-3 AM890-3	112 76 76 76 76 64 64
Tube type: Vacuta			
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV816-3 AV850-3 AV870-3 AV880-3	76 76 64 64





# CFS4A & CFS4RA

# Floor Centrifuge to 4Litre max Dual rotor Centrifuges

Complete with rotor BRK3000, B4000 buckets (adaptors required)

31

# CFS4A/R Floor Standing Centrifuge (4L Max)



Display indicative only

### CFS4A Ambient

CFS4A.(230V 50/60Hz). 1.CFS4A.(110V 60Hz)

Speed	4,000 Rpm max(10 Rpm steps)
Rcf Max	10 - 4,500 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	1000 x 575 x 660mm
Weight	80 Kg (without rotor)
Power	750 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs

The following pages show available rotors.

### CFS4RA Refrigerated

CFS4RA.(230V 50/60Hz). 1.CFS4RA.(110V 60Hz).

Speed	4,000 Rpm (10 Rpm steps)
Rcf Max	10 - 4,500 G
Timer	0-9hours & Hold (30 sec steps)
Dims HWD	1000 x 575 x 660mm
Weight	125 Kg (without rotor)
Power	1200 Watts
Memory	99 programs
Accel rates	10 programs
Decel rates	10 programs
Temp	$-9^{\circ}$ C to + 40 $^{\circ}$ C PID Controlled to + / - 1 $^{\circ}$ C

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# Swing out Rotor 4 x 1000ml Max. 32 4,500 Rcf (G)

## BRK3000

4 Litre max capacity



B4001 Bucket (set 4) REQUIRED. 1000ml max per Bucket



Shown with optional B5319 sealed lids

### Adaptors required see following page

Rotor/Buckets	BRK3000. B4001 Buckets
Tube size max	98 x 180mm
Minimum Rcf (G)	10
Maximum Speed	4000Rpm
Maximum Rcf (G)	4500
Radius max cms	25.5
Sample tube angle °	0
Acceleration time (secs)	60
Deceleration time (secs)	60
Autoclavable (frequency)	121°C (20)
Minimum Temperature @ 23°C	4°C

### Adaptors for Buckets. B4001 Pack of 4

Capacity	Size. mm	Part Number	Tubes per rotor
Tube type: Micro	with cap. <b>Shape:</b>	Point	
0.5ml 1.5ml 2.0ml 0.2ml 0.4ml	8 x 20 11 x 38 11 x 38 6 x 20 6 x 30	AM805-4 AM820-4 AM820-4 AM802-4 AM804-4	288 184 184 336 336
Tube type: Plain n		und	
1ml 3ml 5ml 6ml 7ml 15ml 15ml 25ml 100ml 125ml 125ml 125ml	6 x 45 10 x 60 12 x 75 12 x 82 12 x 100 14 x 100 24 x 100 24 x 100 45 x 100 52 x 100 62 x 100	AR801-4 AR803-4 AR805-4 AR805-4 AR807-4 AR809-4 AR815-4 AR825-4 AR825-4 AR8100-4 AR8150-4 AR8150-4	168 96 96 96 96 84 48 28 16 8
Tube type: Falcon			
15ml 50ml 175ml	17 x 120 29 x 115 61 x 118	AF815-4 AF850-4 AF8175-4	36 24 4
Tube type: Falcon	with cap. Shape	: Square	
12ml 15ml 25ml 30ml 50ml	17 × 100 17 × 120 25 × 90 25 × 110 29 × 115	AFS812-4 AFS815-4 AFS825-4 AFS830-4 AFS850-4	48 36 28 28 24
Tube type: Cornin	ng with cap. <b>Sha</b> r	<b>pe:</b> point	
250ml 500ml	60 x 172 98 x 148	AF8250-4 AF8500-4	4 4
		cap. <b>Shape:</b> Round	
10ml 30ml 50ml 100ml 250ml	15 x 80 26 x 95 29 x 107 38 x 106 62 x 133	ANO810-4 ANO830-4 ANO850-4 ANO8100-4 ANO8250-4	64 28 24 12 4
		cap. <b>Shape:</b> Square	
250ml 500ml 750ml 1000ml	60 x 172 98 x 148 60 x 160 98 x 170	ANO8252-4 ANO8500-4 ANO8750-4 AS98148S	4 4 4 4
Tube type: Monov	vette. <b>Shape</b> Squ	are	
1.1-1.4ml 2.7-3ml 2.6-2.9ml 4.5-5ml 7.5-8.2ml 4.5-5ml 9-10ml	8 x 82 11 x 82 13 x 81 11 x 108 13 x 106 15 x 92 16 X 108	AM801-4 AM803-4 AM829-4 AM804-4 AM879-4 AM850-4 AM890-4	112 76 76 76 76 64 64
•		und also Vacuette	
1.6-5ml 4-7ml 7-9ml 8.5-10ml	13 x 82 13 x 106 15 x 92 16 x 108	AV816-4 AV850-4 AV870-4 AV880-4	76 76 64 64





# Notes

# Pro-Care Service Parts

### Why Does my Centrifuge and accessories need servicing?

A yearly service validates your warranty. As with every appliance you purchase servicing extends the lifetime of the product and negates the need for constant replacement. Which in turn equals money saving.

We appreciate how hard your Centrifuge is used and how it is an imperative tool for your laboratory.

Downtime is therefore not acceptable

However if it is regularly maintained you improve its reliability and extend its life Our Pro-Care parts offer you all that is needed to service our Centrifuges correctly. Full instructions on replacement and any necessary adjustments are included

Using a third party service company without training and the correct parts is not acceptable. All our distributors, for products sold outside of the UK have received training and authority to service our centrifuges.

### **NOTE**

Centrifuges can be dangerous.

Although Centurion Scientific Ltd has an exceptional reputation, if a rotor lid or poor seals are not replaced regularly, breakage, can result in severe damage further.

Servicing of our Centrifuges are also a requirement to validate your warranty, authorised distributors and Centurion Scientific Ltd parts are to be used.

Please be sure to contact the sales team for full parts pricing and further information .

Call us on: Tel +44(0)2392 631225 Email: sales@centurionscientific.co.uk

WWW.Servicepro-care.com



Call us on: Tel +44(0)2392 631225 or email

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