

# Dynamica



## The VELOCITY Range

BENCH TOP CENTRIFUGES

Designed in Australia.

**B U I L T**  
**LAB TOUGH**

# B U I L T LAB TOUGH

Dynamica is the new benchmark for laboratory instrumentation. Utilizing Dynamica's extensive experience in marketing and manufacturing, the range of precision laboratory instrumentation is Built Lab Tough to withstand the demands of the modern laboratory environment, day after day, year after year without compromise.

Furthermore, Dynamica instrumentation is designed for versatility and flexibility to maximize performance efficiency in the contemporary and multifaceted laboratory environment.

The Dynamica range of bench-top centrifuges are characterized by quality and safety and are complemented by a wide array of convenience features, from the user friendly control pad with clear, bright LED display to the dual interlocking door mechanism to name a few. An extensive model range with accompanying accessories extend suitability to many laboratory applications.

We test our electrical products against the CE and safety standard. Dynamica products are independently tested by accredited test house and this is reinforced by comprehensive technical and manufacturing data.

*Dynamica supplies the innovation,  
you supply the inspiration.*



# VELOCITY 18R

## Refrigerated Benchtop Centrifuge

The Velocity 18R delivers high capacity, refrigerated centrifugation with an impressive maximum speed of 18,000 RPM (27,070 x g) (with the fixed angle FA18 rotor) and all from the convenience of the bench

### Quick Set and forget Rotor System

Screwing or bolting rotors to the drive shaft is a thing of the past. Likewise lost spanners and rotor over tightening. With the Velocity 18R simply place the rotor on the drive shaft and that's all. The auto lock and secure mechanism performs the rest. Once centrifugation is complete simply lift the rotor off the drive shaft. Quicker, easier, more efficient and safer.

### Auto rotor recognition

Automatic rotor recognition and confirmation once centrifugation has commenced, including rotational speed calculation and optimum temperature control.

Furthermore new rotors can be easily loaded onto the on-board database as they are introduced.

### Fast Acceleration and Deceleration

The innovative high torque, drive technology effortlessly accelerates even the heaviest rotors to terminal velocity quickly and efficiently. Even the heaviest rotors with a full load will achieve maximum velocity within a few minutes. Furthermore, 9 pre-set acceleration and 9 pre-set deceleration profiles ensure the best separation even for the most delicate density gradients

### High imbalance tolerances

Innovative motor engineering and mounting including a flexible drive shaft allow for greater imbalance tolerances, so much so that samples can be balanced

simply with the naked eye. No more weighing just fill tubes or bottles to within 5mm of each other.

### Powerful Refrigeration

A powerful non -CFC compressor cools the chamber quickly whilst maintaining the rotor at set temperature during centrifugation.

Furthermore, twin cooling fans - one each for the compressor and motor respectively - dissipate heat quickly to improve cooling efficiency and extend motor life.

### Actual sample (rotor) temperature Measurement and Display

The temperature displayed on the LCD panel during centrifugation is that of the rotor (and hence samples) and not the temperature of the chamber nor the temperature at the sensor to allow for more precise, reproducible and efficient experimentation.

### Safety is Paramount

The Velocity 18R offers many safety features in the unlikely event of an emergency such as:

Non-contact imbalance detection and shutdown based on the run profile for each rotor across its entire speed range rather than the inferior and conventional micro-switch detector.

- > Guard barrier
- > Dual lid electronic interlock
- > Auto-hinge for improved sealing and door opening
- > Over speed detection and shutdown
- > Motor overheat detection and shutdown

### User friendly operation and information rich display

Parameters are quickly and effortlessly inputted through the uncomplicated touch pad interface and displayed on the brightly backlit and easy to read LCD panel.

The LCD panel concurrently displays all experimentation parameters including diagnostic information as it occurs. Furthermore, once centrifugation has commenced, a real time graphic profile of the centrifugation status is displayed.

### Quiet Operation

Noise abating insulation in the console including lower noise fans combine to reduce the audible operating noise to  $\leq 58$  dB.

### Liquid Seeping Prevention

A single continuous rubber cap with strong gasket, firmly seals the motor chamber opening and drive shaft to prevent liquid from seeping into the motor and electronic components. As additional back-up, a highly absorbent sponge positioned beneath the rubber cap soaks up any liquid or condensation which then evaporates during operation.

## VELOCITY 18R ROTORS

ROTOR TYPE	CAT. NO.#		MATERIAL	MAX SPEED (RPM)	MAX RCF (XG)	TUBE VOLUME (ML)
Fixed Angle	FA18B		Aluminium	18,000	24,990	1.5/2.0
				"	"	0.5
				"	"	0.2
Fixed Angle	FA15A		Aluminium	15,000	21,500	1.5 /2.0
				"	"	0.5
				"	"	0.2
Fixed Angle	FA15P		Plastic	15,000	18,800	1.5 /2.0
				"	"	0.5
				"	"	0.2
Fixed Angle	FA12A		Aluminium	12,000	14,100	0.2
Fixed Angle	FA18A		Aluminium	18,000	27,070	10
Fixed Angle	FA15B		Aluminium	15,000	21,800	50
				"	"	15
				"	"	15
Fixed Angle	FA15C		Aluminium	15,000	23,300	50
				"	"	15
				"	"	15
Fixed Angle	FA15D		Aluminium	15,000	20,900	80
Fixed Angle	FA10B		Aluminium	10,000	11,400	50
				"	"	15
Swing Bucket	SW5		Aluminium Bucket	4,800	4,170	250
				4,800	4,170	5
				4,800	4,170	7
				4,800	4,170	10
				3,000	1,630	10
				3,000	1,630	15
				4,800	4,170	15
				4,800	4,170	15
				4,800	4,170	15
				4,800	4,170	50
				4,800	3,990	50
				4,800	4,170	50
				Swing Bucket	SW5MP	
"	"	96 Deep Well Plates				
"	"	1.5 /2.0				
"	"	0.2				
Swing Bucket	SW4A		Aluminium	4,000	2,900	15
				4,000	2,860	50

TUBE DESCRIPTION	TUBE DIMENSIONS( O X MM)	TUBE MATERIAL	CAPACITY	ADAPTOR	ROTOR AUTOCLAVABLE	ROTOR LID	
Standard micro-tube	10.5 x 41	PP	18 x 1.5/2.0 ml	N/A	121°C	Aluminium	
PCR single tube	8 x 32	PP	18 x 0.5 ml	FA15.05			
PCR single tube	6 x 24	PP	18 x 0.2 ml	FA15.02			
Standard micro-tube	10.5 x 41	PP	24 x 1.5/2.0 ml	N/A	121°C	Aluminium	
PCR single tube	8 x 32	PP	24 x 0.5 ml	FA15.05			
PCR single tube	6 x 24	PP	25 x 0.2ml	FA15.02			
Standard micro-tube	10.5 x 41	PP	18 x 1.5/2.0 ml	N/A	No	N/A	
PCR single tube	8 x 32	PP	18 x 0.5 ml	FA15.05			
PCR single tube	6 x 24	PP	18 x 0.2ml	FA15.02			
PCR single or strip	6 x 24	PP	48 x 0.2 ml	N/A	121°C	Aluminium	
Round Bottom	16 x 81	PP	8 x 10 ml	N/A	121°C	Aluminium	
Round Bottom	29 x 106	PP/PC	4 x 50 ml	N/A	121°C	Aluminium	
Culture V Bottom	17 x 120	PP	4 x 15 ml	FA15.15C			
Round Bottom	16.5 x 113	PP	4 x 15 ml	FA15.15R			
Round Bottom	29 x 104	PC	6 x 50 ml	N/A	121°C	Aluminium	
Culture V Bottom	17 x 120	PP	6 x 15 ml	FA15.15C			
Round Bottom	16.5 x 113	PP	6 x 15 ml	FA15.15R			
Round Bottom	38 x 106	PC	4 x 80 ml	N/A	121°C	Aluminium	
Culture V Bottom	29 x 115	PP	6 x 50 ml	N/A	121°C	Aluminium	
Culture V Bottom	17 x 120	PP	6 x 15 ml	FA10.15C			
Bottle	61.6 x 135	PP/PC	4 x 250ml	N/A			
Blood collection	12-13 x 75-78		28 x 5ml	SW5.5B	121°C	Plastic Caps with o-ring (Order Separately)	
Blood collection	12-13 x 100		28 x 7ml	SW5.7B	(buckets)		
Blood collection	16 x 100		28 x 10ml	SW5.10B			
Round Bottom	12 x 105	Glass	28 x 10ml	SW5.10G			
Round Bottom	17 x 110	Glass	28 x 15ml	SW5.15G			
Round Bottom	16.5 x 113	PP	16 x 15ml	SW5.15P*			
Culture V Bottom	17 x 120	PP	12 x 15ml	SW5.15CA			
Culture V Bottom	17 x 120	PP	16x 15ml	SW5.15CB*			
Round Bottom	29 x 104	PP	4 x 50ml	SW5.50P			
Round Bottom	35 x 100	Glass	4 x 50ml	SW5.50G			
Culture V Bottom	29 x 115	PP	4x 50ml	SW5.50C			
PCR / Culture	128W x 86L x 14H	PP/PC	2 x Plates	N/A	121°C		N/A
PCR / Culture	128W x 86L x 55H	PP/PC	2 x Plates	N/A	(buckets)		
Standard micro-tube	10.8 x 40.5	PP	48x 1.5/2.0 ml	SW5MP.15			
PCR single or strip		PP	192x 0.2 ml	SW5MP.02			
Culture V Bottom	17 x 120	PP	24 x 15ml	SW4A.15C	121°C	N/A	
Culture V Bottom	29 x 115	PP	8 x 50ml	SW4A.50C	(buckets)		

## VELOCITY 18R SPECIFICATIONS

MODEL	V18R
Maximum Speed	18,000 RPM (FA18A rotor)
Maximum RCF	27,070 x g (FA18A rotor)
Maximum Capacity	1,000 ml (4 x 250 ml)
Drive Mechanism	Brushless Induction
Control	Microprocessor based
Speed Range	300-18,000 RPM (100 RPM increments)
Speed Accuracy	±20 RPM
Speed / RCF Conversion	Yes
Timer	1 min - 99 Hrs 59 mins plus HOLD function
Display	Backlit LCD
Operating Noise	<58dB (A)
Temperature Range	-20°C to +40°C
Temperature Accuracy	±2°C
Memory	9 Programs
Acceleration/Deceleration	9 stages / 9 stages
Automatic Rotor Identification	Yes
Imbalance Detection	Yes
Dimensions (L x D x H)	730 x 610 x 380 mm
Weight (Net)	100 Kg
Power Supply	Single Phase AC 220V - 240V, 50/60Hz, 10A



# VELOCITY 14 / 14R

## Benchtop Centrifuges

The Velocity 14 / 14R centrifuges set a new benchmark in versatility and compactness. The clever design results in a compact footprint yet generous capacity which not only frees up precious bench space but also provides the flexibility to alternate from micro-volume centrifugation to medium-volume centrifugation and all at an impressive maximum speed of 14,000 RPM / 20,290xg (with the FA15C rotor). Furthermore the V14R incorporates powerful and efficient refrigeration whilst the absence of refrigeration in the Velocity 14 further reduces its footprint by at least 50% compared to that of the Velocity 14R.

### Smart, Compact, 2-in-1 Design

The versatile design of the Velocity 14 / 14R centrifuges offers the best of both worlds from the perspective of micro-volume and medium-volume centrifugation. The FA15A rotor is sufficiently fast and yet accommodating for up to 24 x 1.5/2 ml tubes with a terminal velocity of 14,000 RPM (18,726 x g) whilst the FA15C rotor has sufficient capacity for up to 6 x 50 ml tubes reaching an impressive terminal velocity of 14,000 RPM (20,290 x g) in V14R. The new SW4C Swing Bucket Rotor further expands the flexibility of the Velocity 14/14R centrifuges to incorporate a wide range of new applications.

### Quick Set and forget Rotor System

Screwing or bolting rotors to the drive shaft is a thing of the past. Likewise lost spanners and rotor over tightening. With the Velocity 14 / 14R simply place the rotor on the drive shaft and that's all. The auto lock and secure mechanism performs the rest. Once centrifugation is complete simply lift the rotor off the drive shaft. Quicker, easier, more efficient and safer.

### Auto rotor recognition.

Microchip technology allows for automatic recognition of rotor and confirmation once centrifugation has commenced, including rotational speed calculation and optimum

temperature control.

Furthermore new rotors can be easily loaded onto the on-board database as they are introduced.

### Fast Acceleration and Deceleration.

The innovative high torque, drive technology effortlessly accelerates even the heaviest rotors to terminal velocity quickly and efficiently. Even the heaviest rotors with a full load will achieve maximum velocity within a few minutes. Furthermore, 9 pre-set acceleration and 9 pre-set deceleration profiles ensure the right conditions are set for the most precious of samples including density gradients.

### High imbalance tolerances

Innovative motor engineering and mounting including a flexible drive shaft allow for greater imbalance tolerances, so much so that samples can be balanced simply with the naked eye. No more weighing, just fill tubes or bottles to within 5mm of each other.

### Powerful Refrigeration (Velocity 14R model only)

A powerful non -CFC compressor cools the chamber quickly whilst maintaining the rotor at set temperature during centrifugation.

Furthermore, twin cooling fans - one each for the compressor and motor respectively - dissipate heat quickly to improve cooling efficiency and extend motor life.

### Actual sample (rotor) temperature Measurement and Display (Velocity 14R only)

The temperature displayed on the LCD panel during centrifugation is that of the rotor (and hence samples) and not the temperature of the chamber nor the temperature at the sensor to allow for more precise, reproducible and efficient experimentation.

### Safety is Paramount

The Velocity 14 / 14R offers many safety features in the unlikely event of an emergency such as:

Non-contact imbalance detection and shutdown based on the run profile for each rotor across its entire speed range rather than the inferior and conventional micro-switch detector.

Guard barrier

Dual lid electronic interlock

Auto-hinge for improved sealing and door opening

Over speed detection and shutdown

Motor overheat detection and shutdown

### User friendly operation and information rich display

Parameters are quickly and effortlessly inputted through the uncomplicated touch pad interface and displayed on the brightly backlit and easy to read LCD panel.

The LCD panel concurrently displays all experimentation parameters including diagnostic information as it occurs. Furthermore, once centrifugation has commenced, a real time graphic profile of the centrifugation status is displayed.

### Quiet Operation

Noise abating insulation in the console including lower noise fans combine to reduce the audible operating noise to  $\leq 53$  dB ( $\leq 58$  dB for V14R).

### Liquid Seeping Prevention

A single continuous rubber cap with strong gasket, firmly seals the motor chamber opening and drive shaft to prevent liquid from seeping into the motor and electronic components. As additional back-up, a highly absorbent sponge positioned beneath the rubber cap soaks up any liquid or condensation which then evaporates during operation.

## VELOCITY 14R & 14 ROTORS

ROTOR TYPE	CAT. NO.#	MATERIAL	V14R (V14) MAX SPEED (RPM)	V14R (V14) MAX RCF (XG)	TUBE VOLUME (ML)
Fixed Angle	FA15A	Aluminium	14,000 (14,000) " "	18,728 (18,728) " "	1.5 /2.0 0.5 0.2
Fixed Angle	FA12A	Aluminium	12,000 (12,000)	12,290 (12,290)	0.2
Fixed Angle	FA18A	Aluminium	14,000 (14,000)	16,200 (16,200)	10
Fixed Angle	FA15B	Aluminium	14,000 (12,000) " "	18,990 (13,950) " "	50 15 15
Fixed Angle	FA15C	Aluminium	14,000 (12,000) " "	20,290 (14,900) " "	50 15 15
Fixed Angle <b>NEW</b>	FA10E	Aluminium	10,000 (10,000) " "	10,600 (10,600) " "	50 15 15
Swing Bucket <b>NEW</b>	SW4C	Aluminium	4,000 (4,000)	1,780 (1,780)	3 or 5 ml

PP Polypropylene  
 PA Polyallomer  
 PC Polycarbonate

TUBE DESCRIPTION	TUBE DIMENSIONS( O X MM)	TUBE MATERIAL	CAPACITY	ADAPTOR	ROTOR AUTOCLAVABLE	ROTOR LID
Standard micro-tube	10.5 x 41	PP	24 x 1.5/2.0 ml	N/A	121°C	Aluminium
PCR single tube	8 x 32	PP	24 x 0.5 ml	FA15A.05		
PCR single tube	6 x 24	PP	25 x 0.2ml	FA15A.02		
PCR single or strip	6 x 24	PP	48 x 0.2 ml	N/A	121°C	Aluminium
Round Bottom	16 x 81	PP	8 x 10 ml	N/A	121°C	Aluminium
Round Bottom	29 x 106	PP	4 x 50 ml	N/A	121°C	Aluminium
Culture V Bottom	17 x 120	PP	4 x 15 ml	FA15.15C		
Round Bottom	16.5 x 113	PP	4 x 15 ml	FA15.15R		
Round Bottom	29 x 106	PP	6 x 50 ml	N/A	121°C	Aluminium
Culture V Bottom	17 x 120	PP	6 x 15 ml	FA15.15C		
Round Bottom	16.5 x 113	PP	6 x 15 ml	FA15.15R		
Culture V Bottom	29 x 115	PP	4 x 50 ml	N/A	121°C	Aluminium
Culture V Bottom	17 x 120	PP	4 x 15 ml	FA10.15C		
Round Bottom	16.5 x 113	PP	4 x 15 ml	N/A		
Blood collection	12-13 x 81		4 x 3 or 5 ml	Included	121°C	Aluminium

## VELOCITY 14R & 14 SPECIFICATIONS

MODEL	V14R	V14
Maximum Speed	14,000 RPM (FA15C rotor)	14,000 RPM (FA15A rotor)
Maximum RCF	20,290 x g (FA15C rotor)	18,728 x g (FA15A rotor)
Maximum Capacity	300 ml (6 x 50 ml)	
Drive Mechanism	Brushless Induction	
Control	Microprocessor based	
Speed Range	300-14,000 RPM (100 RPM increments)	
Speed Accuracy	±20 RPM	
Speed / RCF Conversion	Yes	
Timer	1 min - 99 Hrs 59 mins plus HOLD function	
Display	Backlit LCD	
Operating Noise	<58dB (A)	<53dB (A)
Temperature Range	-20°C to +40°C	-
Temperature Accuracy	±2°C	-
Acceleration/Deceleration	9 stages / 9 stages	
Automatic Rotor Identification	Yes	
Imbalance Detection	Yes	
Dimensions (L x D x H)	560 x 500 x 380 mm	340 x 490 x 380 mm
Weight (Net)	60 Kg	40 Kg
Power Supply	Single Phase AC 220V ±2V, 50Hz, 10A	Single Phase AC 220V ±2V, 50Hz, 8A



# VELOCITY 10R

## Refrigerated Benchtop Centrifuge

The Velocity 10R takes the helm as Dynamica's highest capacity centrifuge – up to 3 litres with the SW3A rotor. Powerful refrigeration combined with an exceptional maximum speed of 10,000 RPM (12,740 x g with the FA10D rotor) offer the versatility and convenience to manage a wide range of larger scale applications and all in a footprint sufficiently compact to fit on a bench.

### Auto rotor recognition

Microchip technology allows for automatic rotor recognition and confirmation once centrifugation has commenced, including rotational speed calculation and optimum temperature control.

Furthermore new rotors can be easily loaded onto the on-board database as they are introduced.

### Fast Acceleration and Deceleration

The innovative, heavy duty, frequency conversion motor is purposely designed to handle the heaviest of rotors with abundant power output for smooth, quick and efficient acceleration to terminal velocity under fully laden conditions. Furthermore, 9 pre-set acceleration and 9 pre-set deceleration profiles ensure the right conditions are met for the most precious and vibration sensitive samples.

### Powerful Refrigeration

A powerful non -CFC compressor cools the chamber quickly whilst maintaining the rotor at set temperature during centrifugation.

Furthermore, twin cooling fans - one each for the compressor and motor respectively - dissipate heat quickly to improve cooling efficiency and extend motor life.

### Actual sample (rotor) temperature Measurement and Display

The temperature displayed on the LCD panel during centrifugation is that of the

rotor (and hence samples) and neither the temperature of the chamber nor the temperature at the sensor. This allows for more precise, reproducible and efficient experimentation.

### Safety is Paramount

The Velocity 10R offers many safety features in the unlikely event of an emergency such as:

Non-contact imbalance detection and shutdown based on the run profile for each rotor across its entire speed range rather than the inferior and conventional micro-switch detector.

Guard barrier

Dual lid electronic interlock

Auto-hinge for improved sealing and door opening

Over speed detection and shutdown

Motor overheat detection and shutdown

### User friendly operation and information rich display

Parameters are quickly and effortlessly inputted through the ergonomic touch pad interface and displayed on the brightly backlit and easy to read LCD panel.

The LCD panel concurrently displays all experimentation parameters including diagnostic information as it occurs. Furthermore, once centrifugation has commenced, a real time graphic profile of the centrifugation status is displayed.

### Quiet Operation

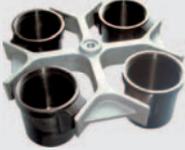
Noise abating insulation in the console including lower noise fans combine to reduce the audible operating noise to  $\leq 62$  dB - quite impressive for a large capacity, refrigerated centrifuge such as the Velocity 10R.

### Liquid Seeping Prevention

A single continuous rubber cap with

strong gasket, firmly seals the motor chamber opening and drive shaft to prevent liquid from seeping into the motor and electronic components. As additional back-up, a highly absorbent sponge positioned beneath the rubber cap soaks up any liquid or condensation which then evaporates during operation.

## VELOCITY 10R ROTORS

ROTOR TYPE	CAT. NO.#		MATERIAL	MAX SPEED (RPM)	MAX RCF (XG)	TUBE VOLUME (ML)
Fixed Angle	FA8B		Aluminium	8,000	9,180	50
				8,000	9,000	15
				8,000	8,900	15
Fixed Angle	FA8C		Aluminium	8,000	9,560	50
				8,000	9,200	15
				8,000	9,350	15
Fixed Angle	FA10D		Aluminium	10,000	12,740	80
				10,000	11,840	50
				10,000	12,070	50
Swing Bucket	SW3A		Aluminium	3,200	2,500	750
Swing Bucket	SW4B		Aluminium	4,000	3,500	250 + 50
				4,000	3,500	3
				4,000	3,500	5
				4,000	3,500	7
				4,000	3,450	10
				4,000	3,510	15
				4,000	3,500	50
				4,000	3,500	50

PP Polypropylene

PA Polyallomer

PC Polycarbonate

\* Plastic seal caps cannot be used with these adaptors

TUBE DESCRIPTION	TUBE DIMENSIONS( O X MM)	TUBE MATERIAL	CAPACITY	ADAPTOR	ROTOR AUTOCLAVABLE	ROTOR LID
Culture V Bottom	29 x 115	PP	10 x 50 ml	N/A	121°C	Aluminum
Culture V Bottom	17 x 120	PP	10 x 15 ml	FA8B.15C		
Round Bottom	16.5 x 113	PP	10 x 15ml	FA8B.15P		
Round Bottom	29 x 106	PP	12 x 50 ml	-	121°C	Aluminum
Culture V Bottom	17 x 120	PP	12 x 15 ml	FA8C.15C		
Round Bottom	16.5 x 113	PP	12 x 15 ml	FA8C.15P		
Round Bottom	38 x 106	PP	6 x 80 ml	-	121°C	Aluminum
Culture V Bottom	29 x 115	PP	6 x 50 ml	FA10D.50C		
Round Bottom	29 x 106	PP	6 x 50 ml	FA10D.50P		
Bottle	97 x 157	PP/PC	4 x 750 ml	N/A	121°C (buckets)	N/A
Bottle + Culture V Bottom	61.6 x 135 & 30 x 116	PP/PC	2 x 250 ml + 2 x 50 ml	SW4B.250P	121°C (buckets)	Plastic Caps with o-ring (Order Separately)
Blood Collection	12 x 81		120 x 3 ml	SW4B.3B		
Blood Collection	12.5 x 106		120 x 5 ml	SW4B.5B		
Blood Collection	12.5 x 106		120 x 7 ml	SW4B.5B		
Blood Collection	12.5 x 106		120 x 10 ml	SW4B.10B		
Culture V Bottom	17 x 120	PP	64 x 15 ml	SW4B.15C		
Culture V Bottom	29 x 115	PP	20 x 50 ml	SW4B.50CB		
Culture V Bottom	29 x 115	PP	32 x 50 ml	SW4B.50CA*		

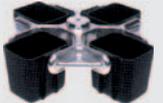
## VELOCITY 10R SPECIFICATIONS

MODEL	V10R
Maximum speed	10,000 RPM (FA10D)
Maximum RCF	12,740 x g (FA10D rotor)
Maximum capacity	3,000 ml (4 x 750ml)
Drive Mechanism	Frequency conversion motor
Control	Microprocessor based
Speed Range	300- 10,000 RPM (100 RPM increments)
Speed Accuracy	±20 RPM
Speed/ RCF conversion	Yes
Timer	1 min- 99 Hrs 59 mins plus HOLD function
Display	Backlit LCD
Operating Noise	≤62 dB (A)
Temperature range	-20°C to 40°C
Temperature accuracy	±2°C
Memory	9 programs
Acceleration	9 stages / 9 stages
Automatic Rotor Identification	Yes
Imbalance Detection	Yes
Dimensions (L x D x H)	876 x 695 x 460 mm
Weight (Net)	160 Kg
Power requirements	Single phase 200v – 240V, 50Hz / 60Hz, 15A

## ORDERING INFORMATION

PRODUCT	Cat. No.#	Components	
Velocity 18R Refrigerated Centrifuge	V18R-2	Main Unit Spanner set and nuts Spare Fuses Spirit Level Silicon Grease Rotor rest pad Instruction Manual	
Velocity 14R Refrigerated Centrifuge	V14R-2	Main Unit Spanner set and nuts Spare Fuses Spirit Level Silicon Grease Rotor rest pad Instruction Manual	
Velocity 14 Centrifuge	V14-2	Main Unit Spanner set and nuts Spare Fuses Spirit Level Silicon Grease Rotor rest pad Instruction Manual	
Velocity 10R Refrigerated Centrifuge	V10R-2	Main Unit Spanner set and nuts Spare Fuses Spirit Level Silicon Grease Rotor rest pad Instruction Manual	
 FA18A Fixed angle aluminium rotor	FA18A	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual	<b>V18R</b> <b>V14R</b> <b>V14</b> V10R
 FA18B Fixed angle aluminium rotor	FA18B	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual	<b>V18R</b> V14R V14 V10R
adaptors for 0.2 ml PCR tubes / strips	FA15.02	24 x adaptors	
adaptors for 0.5 ml PCR tubes	FA15.02	24 x adaptors	
 FA15A Fixed angle aluminium rotor	FA15A	Velocity Rotor Aluminium Biosafety lid Spare rubber o-rings Lubricant Manual	<b>V18R</b> <b>V14R</b> <b>V14</b> V10R
Adaptors for 0.2 ml PCR tubes / strips	FA15.02	24 x adaptors	
Adaptors for 0.5 ml PCR tubes	FA15.05	24 x adaptors	
 FA15P Fixed angle aluminium rotor	FA15P	Rotor Lubricant Manual	<b>V18R</b> V14R V14 V10R
Adaptors for 0.2 ml PCR tubes / strips	FA15.02	24 x adaptors	
Adaptors for 0.5 ml PCR tubes	FA15.05	24 x adaptors	

PRODUCT	Cat. No.#	Components			
 FA15B Fixed Angle Aluminium Rotor Adaptors for 15 ml round bottom tubes Adaptors for 15 ml Culture tubes	FA15B FA15.15R FA15.15C	Rotor Lubricant Aluminium Biosafety lid Spare rubber o-rings Manual 4 x adaptors 4 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b>	V10R	
 FA15C Fixed Angle Aluminium Rotor Adaptors for 15 ml round bottom tubes Adaptors for 15 ml Culture tubes	FA15C FA15.15R FA15.15C	Rotor Lubricant Aluminium Biosafety lid Spare rubber o-rings 4 x adaptors 4 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b>	V10R	
 FA15D Fixed Angle Aluminium Rotor FA12A Fixed Angle Aluminium Rotor	FA15D FA12A	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual Rotor Lubricant Aluminium lid Spare rubber o-rings Manual	<b>V18R</b> <b>V14R</b> <b>V14</b>	V10R	
 FA10B Fixed Angle Aluminium Rotor Adaptors for 15 ml Culture tubes	FA10B FA10.15C	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual 6 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b>	V10R	
 FA10D Fixed Angle Aluminium Rotor Adaptors for 50 ml Culture tubes Adaptors for 50 ml round bottom tubes	FA10D FA10D.50C FA10D.50P	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual 6 x adaptors 6 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b> <b>V10R</b>		
 FA10E Fixed Angle Aluminium Rotor Adaptors for 15 ml Culture tubes	FA10E FA10.15C	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual 4 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b>	V10R	
 FA8B Fixed Angle Aluminium Rotor Adaptors for 15 ml Culture tubes Adaptors for 15 ml round bottom tubes	FA8B FA8B.15C FA8B.15P	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual 10 x adaptors 10 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b> <b>V10R</b>		
 FA8C Fixed Angle Aluminium Rotor adaptors for 15 ml Culture tubes Adaptors for 15 ml round bottom tubes	FA8C FA8C.15C FA8C.15P	Rotor Lubricant Aluminium lid Spare rubber o-rings Manual 12 x adaptors 12 x adaptors	<b>V18R</b> <b>V14R</b> <b>V14</b> <b>V10R</b>		

PRODUCT	Cat. No.#	Components	
 SW5 Swing Bucket Aluminium Rotor Adaptors for 5 ml blood collection tubes Adaptors for 7 ml blood collection tubes Adaptors for 10 ml blood collection tubes Adaptors for 10 ml round bottom glass tubes Adaptors for 15 ml round bottom glass tubes Adaptors for 15 ml round bottom PP tubes Adaptors for 15 ml culture tubes Adaptors for 15 ml culture tubes Adaptors for 50 ml round bottom glass tubes Adaptors for 50 ml round bottom PP tubes Adaptors for 50 ml culture tubes Plastic Seal Caps * not suitable with plastic caps	SW5  SW5.5B SW5.7B SW5.10B SW5.10G SW5.15G SW5.15P* SW5.15CA SW5.15CB* SW5.50G SW5.50P SW5.50C SW5.SC	Rotor 4 x Aluminium Round Buckets Lubricant Manual  4 x adaptors 4 x clear caps with rubber o-rings	V18R V14R V14 V10R
 SW5MP Swing Bucket Aluminium Rotor  Adaptors for 1.5 ml micro tubes Adaptors for 0.2 ml PCR tubes	SW5MP  SW5MP.15 SW5MP.02	Rotor 2 x Aluminium Rectangular Buckets Lubricant Manual 2 x adaptors 2 x adaptors	V18R V14R V14 V10R
 SW4A Swing Bucket Aluminium Rotor  Adaptors for 15 ml culture tubes Adaptors for 50 ml culture tubes	SW4A  SW4A.15C SW4A.50C	Rotor Lubricant 4 x Aluminium Rectangular Buckets Manual 4 x adaptors 4 x adaptors	V18R V14R V14 V10R
 SW4B Swing Bucket Aluminium Rotor  Adaptors for 250 ml bottles plus 50 ml culture tubes Adaptors for 3 ml blood collection tubes Adaptors for 5 ml blood collection tubes Adaptors for 7 ml blood collection tubes Adaptors for 10 ml blood collection tubes Adaptors for 15 ml culture tubes Adaptors for 50 ml culture tubes Adaptors for 50 ml culture tubes *not suitable with plastic caps	SW4B  SW4B.250P SW4B.3B SW4B.5B SW4B.5B SW4B.10B SW4B.15C SW4B.50CB SW4B.50CA*	Rotor Lubricant 4 x Aluminium Rectangular Buckets Spare rubber o-rings Manual Rotor lock screw 4 x Shield caps 4 x adaptors 4 x adaptors	V18R V14R V14 V10R
 SW4C Swing Bucket Aluminium Rotor	SW4C	Rotor 4 x Aluminium Rectangular Buckets Lubricant Manual 4 x adaptors	V18R V14R V14 V10R
 SW3A Swing Bucket Aluminium Rotor	SW3A	Rotor 4 x Aluminium Round Buckets Lubricant Manual	V18R V14R V14 V10R

# 6 $\mu$ Micro Fuge

- Microtubes Rotor and Tube-strips Rotor Exchangeable
- Spins 8 Microtubes 1.5 - 2.2 ml and 2 x 8 well Tube-strips
- Rotors can be installed in a single motion without tools
- Compact personal centrifuge fits comfortably in the workspace
- User-friendly advanced design
- Long lasting and high quality



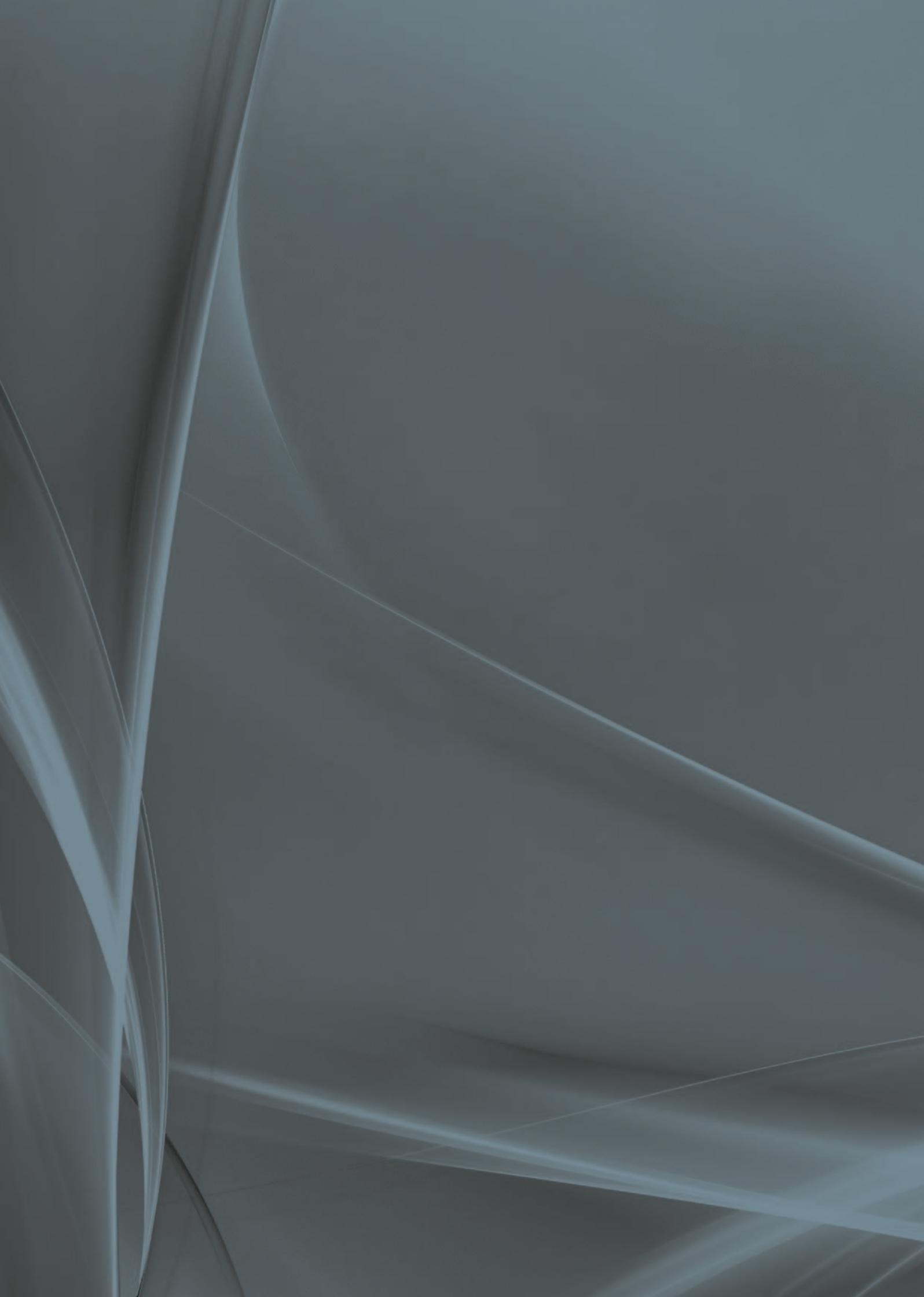
TECHNICAL SPECIFICATIONS	
Rotor	Microtubes Rotor MA-1 Tube-strips Rotor PA-1
Maximum Speed	6,000 RPM (+/-20%) 6,200 RPM (+/-20%)
Maximum RCF	2,910 x g 2,690 x g
Maximum Volume	1.5 (2.2) ml x 8 Tubes 0.2 ml x 8 tubes connected x 2 lines
Power Required	AC 230V, 1A, 50/60 Hz (CE Marked)
Fuse	250V, 0.5A
Dimensions (W x D x H) mm	155 x 175 x 125
Speed Control	Automatic / Constant Speed
Drive System	Direct Drive / Vibration Insulated
Brake	Dynamic Braking
Acceleration Time	Within 5 seconds up to 90% of rated speed
Deceleration Time	Within 15 seconds (Lid Closed) Within 3 seconds (Lid Open)

# 13 $\mu$ Mini Fuge

- Compact design to minimize bench space used
- Rapid acceleration (<12 sec) and deceleration (<16 sec)
- Simple display with mono LCD
- Safe operation with lid-lock function
- Autoclavable rotor
- Corrosion resistant rotor
- Two rotors available 12 x 1.5 / 2 ml Tubes (Standard) & 32 x 0.2 ml Tubes or Strips (option)

TECHNICAL SPECIFICATIONS	
Maximum RPM	13,500 RPM
Maximum RCF	12,300 x g
Maximum Capacity	1.5 ml / 2.0 ml x 12
Run Time	≤ 30 min
Noise Level	≤ 60 dB
Acceleration Time	≤ 12 seconds
Deceleration Time	≤ 16 seconds
Safety	Lid-lock
Available Rotors	1.5 ml x 12 0.2 ml x 32 PCR Strips
Power & Frequency	220V, 50/60 Hz
Dimensions (W x D x H) mm	208 x 245 x 145
Weight	4.4 kg







## The VELOCITY Range

BENCH TOP CENTRIFUGES

### **Precisa Gravimetrics AG**

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