

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 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

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 ≤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

	CAT. NO.# (rotor material)	MAX SPEED (RPM)	MAX RCF (XG)	TUBE VOLUME (ML)	TUBE DESCRIPTION	TUBE DIMENSIONS (φ x L) MM	CAPACITY	ADAPTOR
Fixed Angle Rotors								
	FA18B (Aluminium)	18,000	24,990	1.5/2.0	Standard micro-tube	10.5 x 41	18 x 1.5/2.0 ml	N/A
	"	"	"	0.5	PCR single tube	8 x 32	18 x 0.5 ml	FA15.05
	"	"	"	0.2	PCR single tube	6 x 24	18 x 0.2 ml	FA15.02
	FA15A (Aluminium)	15,000	21,500	1.5 /2.0	Standard micro-tube	10.5 x 41	24 x 1.5/2.0 ml	N/A
	"	"	"	0.5	PCR single tube	8 x 32	24 x 0.5 ml	FA15.05
	"	"	"	0.2	PCR single tube	6 x 24	25 x 0.2ml	FA15.02
	FA15P# (Plastic)*	15,000	18,800	1.5 /2.0	Standard micro-tube	10.5 x 41	18 x 1.5/2.0 ml	N/A
	"	"	"	0.5	PCR single tube	8 x 32	18 x 0.5 ml	FA15.05
	"	"	"	0.2	PCR single tube	6 x 24	18 x 0.2ml	FA15.02
	FA12A (Aluminium)	12,000	14,100	0.2	PCR single or strip	6 x 24	48 x 0.2 ml	N/A
	FA18A (Aluminium)	18,000	27,070	10	Round Bottom	16 x 81	8 x 10 ml	N/A
	FA15B (Aluminium)	15,000	21,800	50	Round Bottom	29 x 106	4 x 50 ml	N/A
	"	"	"	15	Culture V Bottom	17 x 120	4 x 15 ml	FA15.15C
	"	"	"	15	Round Bottom	16.5 x 113	4 x 15 ml	FA15.15R
	FA15C (Aluminium)	15,000	23,300	50	Round Bottom	29 x 104	6 x 50 ml	N/A
	"	"	"	15	Culture V Bottom	17 x 120	6 x 15 ml	FA15.15C
	"	"	"	15	Round Bottom	16.5 x 113	6 x 15 ml	FA15.15R
	FA15D (Aluminium)	15,000	20,900	80	Round Bottom	38 x 106	4 x 80 ml	N/A
	FA10B (Aluminium)	10,000	11,400	50	Culture V Bottom	29 x 115	6 x 50 ml	N/A
	"	"	"	15	Culture V Bottom	17 x 120	6 x 15 ml	FA10.15C
Swing Bucket Rotors								
	SW5* (Aluminium Bucket)	4,800	4,170	250	Bottle	61.6 x 135	4 x 250ml	N/A
	"	4,800	4,170	5	Blood collection	12-13 x 75-78	28 x 5ml	SW5.5B
	"	4,800	4,170	7	Blood collection	12-13 x 100	28 x 7ml	SW5.7B
	"	4,800	4,170	10	Blood collection	16 x 100	28 x 10ml	SW5.10B
	"	3,000	1,630	10	Round Bottom	12 x 105	28 x 10ml	SW5.10G
	"	3,000	1,630	15	Round Bottom	17 x 110	28 x 15ml	SW5.15G
	"	4,800	4,170	15	Round Bottom	16.5 x 113	16 x 15ml	SW5.15P*
	"	4,800	4,170	15	Culture V Bottom	17 x 120	12 x 15ml	SW5.15CA
	"	4,800	4,170	15	Culture V Bottom	17 x 120	16x 15ml	SW5.15CB*
	"	4,800	4,170	50	Round Bottom	29 x 104	4 x 50ml	SW5.50P
	"	4,800	3,990	50	Round Bottom	35 x 100	4 x 50ml	SW5.50G
	"	4,800	4,170	50	Culture V Bottom	29 x 115	4x 50ml	SW5.50C
		SW5MP* (Aluminium)	4,800	3,120	96 Well Microplates	PCR / Culture	128W x 86L x 14H	2 x Plates
"		"	"	96 Deep Well Plates	PCR / Culture	128W x 86L x 55H	2 x Plates	N/A
"		"	"	1.5 /2.0	Standard micro-tube	10.8 x 40.5	48x 1.5/2.0 ml	SW5MP.15
	SW4A* (Aluminium)	4,000	2,900	15	Culture V Bottom	17 x 120	24 x 15ml	SW4A.15C
	"	4,000	2,860	50	Culture V Bottom	29 x 115	8 x 50ml	SW4A.50C

* Without rotor lid

* Plastic seal caps cannot be used with these adaptors

Rotor / buckets are autoclavable at 121°C except

VELOCITY 18R SPECIFICATIONS	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 18R Ordering Information

PRODUCT		CATALOG NUMBER#
Velocity 18R Refrigerated Centrifuge	(220V, 50Hz)	V18R-2
Velocity 18R Refrigerated Centrifuge	(220V, 60Hz)	V18R-2A
Velocity 18R Refrigerated Centrifuge	(110V, 60Hz)	V18R-1

Distributed and Supported in the UK by:



24 Norman Way Industrial Estate, Over, Cambridge, CB24 5WE
 Tel: +44(0)1954 233 100 Fax: +44(0)1954 233 101
 Email: sales@camlab.co.uk Web: www.camlab.co.uk