

## VELOCITY 18R SPECIFICATIONS

MODEL	V18R
Maximum Speed	18,000 RPM (FA18A rotor)
Maximum RCF	28,978 x g (FA18C 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 / 10 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 AC220V, 50Hz, 10A AC220V, 60Hz AC110V, 60Hz



# VELOCITY 18R

## Refrigerated Benchtop Centrifuge

The Velocity 18R delivers high capacity, refrigerated centrifugation with an impressive maximum speed of 18,000 RPM (28,978 x g) (with the fixed angle FA18C 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 10 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 ≤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)	TUBE DESCRIPTION	TUBE DIMENSIONS( O X MM)	TUBE MATERIAL	CAPACITY	ADAPTOR	ROTOR AUTOCLAVABLE	ROTOR LID
Fixed Angle	FA12A	Aluminium	12,000	14,100	0.2	PCR single or strip	6 x 24	PP	48 x 0.2 ml	N/A	121°C	Aluminium
Fixed Angle	FA18B	Aluminium	18,000	24,990	1.5/2.0	Standard micro-tube	10.5 x 41	PP	18 x 1.5/2.0 ml	N/A	121°C	Aluminium
			"	"	0.5	PCR single tube	8 x 32	PP	18 x 0.5 ml	FA15.05		
			"	"	0.2	PCR single tube	6 x 24	PP	18 x 0.2 ml	FA15.02		
Fixed Angle	FA15A	Aluminium	15,000	21,500	1.5 /2.0	Standard micro-tube	10.5 x 41	PP	24 x 1.5/2.0 ml	N/A	121°C	Aluminium
			"	"	0.5	PCR single tube	8 x 32	PP	24 x 0.5 ml	FA15.05		
			"	"	0.2	PCR single tube	6 x 24	PP	24 x 0.2ml	FA15.02		
Fixed Angle	FA15P	Plastic	15,000	18,800	1.5 /2.0	Standard micro-tube	10.5 x 41	PP	18 x 1.5/2.0 ml	N/A	No	N/A
			"	"	0.5	PCR single tube	8 x 32	PP	18 x 0.5 ml	FA15.05		
			"	"	0.2	PCR single tube	6 x 24	PP	18 x 0.2ml	FA15.02		
Fixed Angle <b>NEW</b>	FA11A	Aluminum	11,000	12,000	1.5/ 2.0	Standard micro-tube	10.5 x 41	PP	48 x 2 ml	N/A	121°C	Aluminum
Fixed Angle <b>NEW</b>	FA14A	Aluminum	14,000	20,000	5	V Bottom		PP	12 x 5 ml	N/A	121°C	Aluminum
Fixed Angle <b>NEW</b>	FA14B	Aluminum	14,000	20,000	5	Round Bottom		PP	12 x 5 ml	N/A	121°C	Aluminium
Fixed Angle	FA18A	Aluminium	18,000	27,070	10	Round Bottom	16 x 81	PP	8 x 10 ml	N/A	121°C	Aluminium
Fixed Angle <b>NEW</b>	FA18C	Aluminium	18,000	28,978	10	Round Bottom	16 x 81	PP	10 x 10 ml	N/A	121°C	Aluminium
Fixed Angle <b>NEW</b>	FA5A	Aluminium	5,500	5,000	15	Culture V Bottom	17 x 120	PP	12 x 15 ml	N/A	121°C	Aluminium
Fixed Angle	FA15C	Aluminium	15,000	23,300	50	Round Bottom	29 x 106	PP/PC	6 x 50 ml	N/A	121°C	Aluminium
			"	"	15	Culture V Bottom	17 x 120	PP	6 x 15 ml	FA15.15C		
			"	"	15	Round Bottom	16.5 x 113	PP	6 x 15 ml	FA15.15R		
Fixed Angle	FA10B	Aluminium	10,000	11,400	50	Culture V Bottom	29 x 115	PP	6 x 50 ml	N/A	121°C	Aluminium
			"	"	15	Culture V Bottom	17 x 120	PP	6 x 15 ml	FA10.15C		

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Fixed Angle	FA14C*		Aluminium	14,000	21,000	50	himac 50 TC tube <sup>Δ</sup>	30 x 115	PP	4 x 50 ml	N/A	121°C	Aluminium
				10,000	10,600	50	Culture V Bottom	29 x 115	PP	4 x 50 ml	N/A		
				10,000	10,600	15	Culture V Bottom	17 x 120	PP	4 x 15 ml	FA10.15C		
				14,000	21,000	15	Round Bottom	16.5 x 113	PP	4 x 15 ml	N/A		
Fixed Angle	FA15D		Aluminium	15,000	20,900	100	Round Bottom		PC	4 x 100 ml	N/A	121°C	Aluminium
				"	20,900	50	Round Bottom	29 x 106	PP	4 x 50 ml	FA15D.50R		
				"	20,900	15	Culture V Bottom	17 x 120	PP	4 x 15 ml	FA15D.15C		
				"	20,900	15	Round Bottom	16.5 x 113	PP	4 x 15 ml	FA15D.15R		
Swing Bucket	SW5MP		Aluminium	4,800	3,120	96 Well Microplates	PCR / Culture	128W x 86L x 14H	PP/PC	2 x Plates	N/A	121°C	N/A
				"	"	96 Deep Well Plates	PCR / Culture	128W x 86L x 55H	PP/PC	2 x Plates	N/A	(buckets)	
				"	"	1.5 /2.0	Standard micro-tube	10.8 x 40.5	PP	48x 1.5/2.0 ml	SW5MP.15		
				"	"	0.2	PCR single or strip		PP	192x 0.2 ml	SW5MP.02		
Swing Bucket	SW4A		Aluminium	4,000	2,900	15	Culture V Bottom	17 x 120	PP	24 x 15ml	SW4A.15C	121°C	N/A
				4,000	2,860	50	Culture V Bottom	29 x 115	PP	8 x 50ml	SW4A.50C	(buckets)	
Swing Bucket	SW5		Aluminium Bucket	4,800	4,170	250	Bottle	61.6 x 135	PP/PC	4 x 250ml	N/A		
				4,800	4,170	5	Blood collection	12-13 x 75-78		28 x 5ml	SW5.5B	121°C	Plastic Caps with o-ring (Order Separately)
				4,800	4,170	7	Blood collection	12-13 x 100		28 x 7ml	SW5.7B	(buckets)	
				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	Glass	28 x 10ml	SW5.10G		
				3,000	1,630	15	Round Bottom	17 x 110	Glass	28 x 15ml	SW5.15G		
				4,800	4,170	15	Round Bottom	16.5 x 113	PP	16 x 15ml	SW5.15P <sup>#</sup>		
				4,800	4,170	15	Culture V Bottom	17 x 120	PP	12 x 15ml	SW5.15CA		
				4,800	4,170	15	Culture V Bottom	17 x 120	PP	16x 15ml	SW5.15CB <sup>#</sup>		
				4,800	4,170	50	Round Bottom	29 x 104	PP	4 x 50ml	SW5.50P		
				4,800	3,990	50	Round Bottom	35 x 100	Glass	4 x 50ml	SW5.50G		
				4,800	4,170	50	Culture V Bottom	29 x 115	PP	4x 50ml	SW5.50C		
				4,800	4,170	50	Skirted bottom	29 x 115	PP	4x 50ml	SW5.50CB		

PP- Polypropylene PA - Polyallomer PC - Polycarbonate \* Plastic seal caps cannot be used with these adaptors

\* 50ml TC tubes and 15ml round bottom tubes can be used in FA14C without adaptors. Different volume of tubes cannot be centrifuged together in the same run.

Δ himac 50TC tubes are purchased separately. The tubes are specially designed for higher speed at maximum 14,000 rpm.

# Plastic seal caps cannot be used with these adaptors.



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