



Refrigerated high capacity microprocessor controlled centrifuge suitable for tubes, flasks and blood bags “Macrofriger-BL-Blood”

CONTROLLABLE TEMPERATURES FROM 4 TO 40 °C.

CAPACITY FOR FLASKS UP TO 1000 ml AND ESPECIALLY FOR TRIPLE AND QUAD BLOOD BAGS FROM 500-800 ml.

MAXIMUM CAPACITY 12 BAGS.

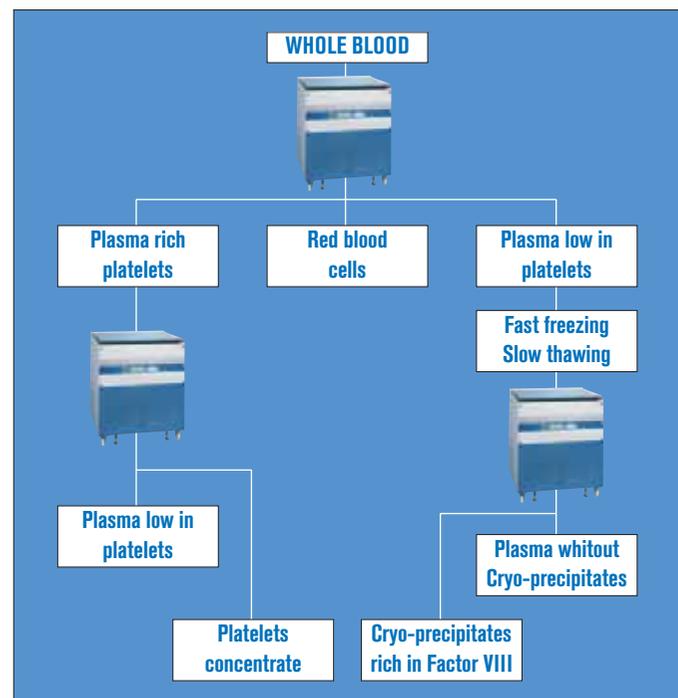


Original J.P. Selecta design. With maintenance free induction drive motor

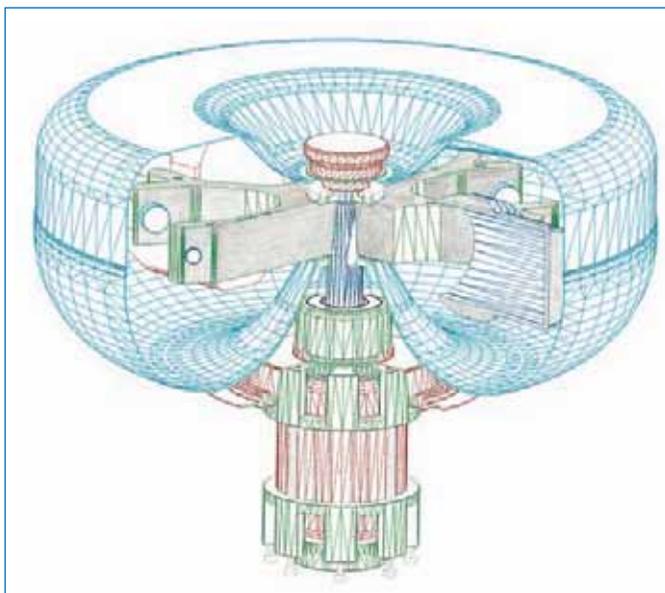


APPLICATIONS

Specially designed for blood bank applications, where repeatability, precision and reliability of: speed, time, temperature, acceleration and deceleration are significant factors in obtaining perfect separations of the distinct blood fractions.



Serology investigations.
Molecular biology.
Serum separation, pharmaceutical applications.



Cross-section of the motor, rotor drive mechanism, showing the windshield protector with lid that reduces the air resistance and maintains a regulated temperature.

FEATURES

- Case: internal structure of tubular steel with lateral Dur-al supports.
- Internal Stainless steel bowl .
- Aluminium windshield protector.
- Safety shield: 8 mm thick steel.
- Swing-out rotor, buckets and adapters made of high-density material, engraved identification unalterable.
- Suspended motor with silent-block and shock absorbers that guarantee smooth, quiet operation without vibrations.
- Drive force: equipped with an induction drive maintenance free and highly efficient pollution free motor.
- Semi-hermetically sealed, compressor pollution free with no hydrocarbons or fluorocarbons.
- Mounted on an anti vibration adjustable rubber feet.
- Microprocessor digital control of all functions: speed, acceleration, brake, R.C.F., temperature, time, 20 program memory, rotor identification, operation fault alarm.

SAFETY:

**SAFETY, CONFORMS TO UNE-EN 61010-2-020.
PROTECTIVE INTERNAL CYLINDER BETWEEN THE CASE AND BOWL.
THE LID CANNOT BE OPENED WHILE THE ROTOR IS SPINNING.
THE MOTOR CANNOT SPIN WHILE THE LID IS OPEN.**

**IMBALANCE DETECTOR, AUTOMATICALLY STOPS IF THERE IS ANY IMBALANCE.
DOUBLE ELECTROMAGNETIC LID LOCK.
IF THERE IS A POWER FAILURE, A FAIL SAFE SYSTEM CAN BE USED TO
OPEN THE LID.
EMERGENCY STOP BUTTON.**

CONTROL PANEL INFORMATION

LCD display of 2 x 20 characters that permanently show the running conditions of the machine in the form of machine/operator communication.
Message and display:

- STATUS** Machine state,
- STOP** Not running.
- START** Running.
- STANDBY** Waiting for command.
- STORED** Stores the last set of data input into the machine.
- CONFIG** Change the parameter of the machine.
- PROGRAM** Select a pre-stored programme.
- RAMP** The machine is accelerating to its set value.
- SET SPEED** The machine is running at the set speed.
- BRAKE** The machine has finished its run and is now braking.
- ALARM** There is an error:
 - POWER FAIL:** The power was disconnected while in operation.
 - ROTOR FAIL:** The rotor was not identified.
 - DOOR OPEN:** The lid has not been closed properly.
 - UNBALANCED:** The buckets are not well balanced or the tubes are not evenly distributed
 - EEPROM FAIL:** The data or parts of the data have not been programmed.
 - CONTROL FAIL:** The speed detector has failed to read the machine speed.
 - OVER TEMP:** The cooling system is in excess of the set temperature
 - PROGRAM TIME:** The length of time for the run has not been inserted.



Image showing the rotor and double buckets for quad and triple blood bags of 500 and 800 ml.

1. R.C.F.
2. Acceleration ramp.
3. Deceleration ramp.
4. Speed.
5. Time.
6. Temperature.
7. Memory.

8. Configure.
9. Cursor.
10. Increase decrease value.
11. Validate / Confirm settings.
12. Open lid.
13. Program / Stored.
14. Stop.

15. Run / Start.
16. LCD display.
17. Mains switch.
18. Emergency stop.
19. Red Light indicator showing emergency stop.



TECHNICAL SPECIFICATION

Maximum volume:	9600 ml
Maximum bucket volume:	1600 ml
Speed:	from 300 to 4070 r.p.m.
Accuracy:	± 5 r.p.m.
Resolution r.p.m.:	10 r.p.m.
R.C.F.:	from 29 to 5370
Imbalance:	± 5 g
Accuracy:	4 g
Temperature range:	from 0 °C to 40 °C
Temperature stability:	±4 °C
Resolution:	1 °C
Temperature range:	.59 min. 59 sec.
Centrifuge radius:	290 mm
Acceleration profile:	.5
Brake profile:	.9 linear 6 quadratic
Voltage:	.230/400 three phase.
Power:	.4500 VA

MODEL

Part No.	Max. Volume ml	Max. Capacity	Height / Width / Depth (exterior) cm	Power W	Weight Kg
7001390	9600	6 x 1600 ml	105 90 100	5500	420

ACCESSORIES

Swing out rotor 6 place, treated steel.



Part No. **7001391**

Buckets and adapters with engraved identification. Autoclavable.



Buckets with two compartments for blood bags of 500 to 800 ml. For triple and quad bags
Part No. **7001392**

Single bucket. Capacity: 1 blood bag of 500 to 800 ml or 1 flask of 1 litre or with tube adapters.
Part No. **7001393**



Adapters for single bucket Part No. 7001393.

Bottle



1001394



7001395



7001396



7001397



7001398



7001399



7001400



7001401

Double Bucket	Single Bucket	Part No. adapter	Total max. Volume (6 adapters)	Capacity: bags, tubes by adapter	Ø x Length mm	R.p.m. Min./Max.	R.c.f. (xg) Min./Max.
7001392	-	-	9600 ml	2 bags 500 or 800 ml	-	300/4070	29/5370
-	-	Bottle 1000 ml 1001394	6000 ml	1 bottle 1000 ml or 1 bag	98 x 175	300/4070	29/5370
-	7001393	7001395	3000 ml	1 bottle 500 ml	70 x 165	300/4070	29/5370
-	Capacity	7001396	1200 ml	1 bottle 200 ml	56.6 x 104	300/4070	29/5370
-	without adapter:	7001397	1200 ml	2 tubes 100 ml	44 x 104	300/4070	29/5370
-	1 bag of	7001398	1200 ml	4 tubes 50 ml	34 x 100	300/4070	29/5370
-	500 to 800 ml	7001399	1350 ml	9 tubes 25 ml	24 x 100	300/4070	29/5370
-	or 1x bottle	7001400	1530 ml	17 tubes 15 ml	16.5 x 100	300/4070	29/5370
-	1000 ml	7001401	1008 ml	24 tubes 7 ml	12 x 100	300/4070	29/5370

Note: All buckets and adapters come without tubes unless stated, see page 127 for tubes and accessories. Other adapters can be manufactured to the customers specification.

COMMON ACCESSORIES. Tubes of glass and plastic.

Plastic tubes and flasks with screw cap lids.

Volume ml	Dimensions mm	Type	Part No.	Material	Max. (xg) range	Temperature °C
10	16 Ø x 80	Comecta	5752399	Polypropylene	50000	4 ... 121
		Herolab	5752421	Polypropylene	57000	-180 ... 145
		Herolab	5752401	Polycarbonate	57000	-150 ... 121
30	25 Ø x 92	Comecta	5752398	Polypropylene	50000	4 ... 121
		Herolab	5752955	Polypropylene	64000	-180 ... 145
		Herolab	5752951	Polycarbonate	64000	-150 ... 121
50	29 Ø x 103	Comecta	5752397	Polypropylene	50000	4 ... 121
		Herolab	5753205	Polypropylene	69000	-180 ... 145
		Herolab	5753201	Polycarbonate	69000	-150 ... 121
80	38 Ø x 105	Comecta	5752396	Polypropylene	40000	4 ... 121
		Herolab	5753243	Polypropylene	50000	-180 ... 145
		Herolab	5753241	Polycarbonate	50000	-150 ... 121
200	56.6 Ø x 104	Herolab	5715202	Polypropylene	10000	-180 ... 145
		Herolab	5715203	Polycarbonate	10000	-150 ... 121
250	62 Ø x 122	Comecta	5752395	Polypropylene	13200	4 ... 121
		Herolab	5753411	Polypropylene	33000	-180 ... 145
		Herolab	5753401	Polycarbonate	33000	-150 ... 121
500	70 Ø x 165	Herolab	5753512	Polypropylene	14000	-180 ... 145
		Herolab	5753501	Polycarbonate	14000	-150 ... 121
1000	98 Ø x 175	Herolab	5752571	Polypropylene	4936	-180 ... 145
		Herolab	5752561	Polycarbonate	4936	-150 ... 121



Type HEROLAB polycarbonate tubes transparent Polypropylene tubes translucent. Autoclavable.

Type COMECTA polypropylene translucent. Autoclavable.



Glass Tubes.

Volume	Dimensions mm	Part No.
Micro-haematocrit*	1.4 Ø x 75	7000910
7 ml	12 Ø x 100	7000773
15 ml	16.5 Ø x 100	7000772
25 ml	24 Ø x 100	7000771
50 ml	34 Ø x 100	7000770
100 ml	44 Ø x 104	7000769
250 ml	56 Ø x 147	7000768
ASTM	Conical	7001088
ASTM	Pear shape	7000767

*Box of 100 tubes.

SPARE

Buckets for angle rotors.

Suitable for model	Part No. 7001403 15 ml plastic	Part No. 7001500 15 ml metal	Part No. 7005000 50 ml metal	Part No. 7001000 100 ml metal
Cencom II	Yes			
Part No. 7002240				
Centro-8		Yes		
Part No. 7002356				
Centromix II-BL			Rotor	
Part No. 7002555			7000550	
Meditronic BL-S			Rotor	Rotor
Part No. 7001376			7000743	7000742 7000741
Medifriger BL-S			Rotor	Rotor
Part No. 7001377			7000743	7000742 7000741
Macrotronic BL			Rotor	Rotor
Part No. 7001385			7000560	7000561
Macrofriger BL			Rotor	Rotor
Part No. 7001386			7000560	7000561

ALL THE ROTORS, BUCKETS AND ADAPTERS COME WITH LASER ETCHED IDENTIFICATION.

