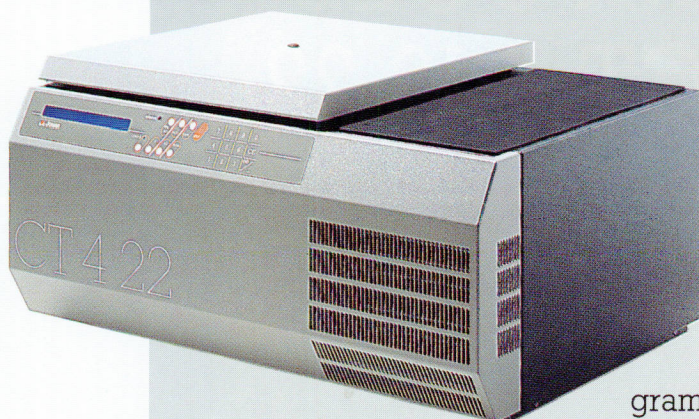


POWERFUL BENCH TOP CENTRIFUGES C/CR/CT 4.12-22



 **Jouan**

MAXIMUM PERFORMANCE IN THE MINIMUM SPACE.



Jouan now offers the widest range of bench top centrifuges to meet your needs. Each of the 5 bench-top models is dedicated to specific applications.

The range includes a choice of classical or programmable electronic control and 3 types of temperature control.

The same wide choice is offered as in the G series of compact floor-standing models.

Precise response to specific needs. From the wide range of Jouan models you can choose the centrifuge which is specific to your needs and budget. Choose from: classical electronics or microprocessor control; ventilated, refrigerated or thermostated variants; bench-top (C series) or floor (G series) models. The C series offers both classical electronics for routine use with the 4.12 models and microprocessor control with the 4.22 models: the 4.22 units give you the advantage of programmed centrifugation parameters for very accurate control and reproducibility of centrifuge runs.



Compliance with the EN 61010-1 standard and CE marking ensure operator safety



Ventilated (C) and refrigerated (CR) versions are available in both 4.12 and 4.22 units with thermostated (CT) versions only in 4.22 format.

Total control of temperature. The range of temperature control is very wide on the refrigerated models: - 8°C to + 40°C and easily achieving 4°C at maximum speed.

An exceptionally wide temperature range of - 8°C to + 60°C is offered on the thermostated version (CT 4.22). The unique combination of heating and refrigeration ensures very precise control of temperatures above ambient - especially important when it is necessary to centrifuge samples at physiological temperatures.

The CR/CT 4.22 models also offer temperature compensation to ensure that samples (not just the centrifuge bowl) reach the required protocol temperatures.



Unequalled choice of accessories.

The C series centrifuges allow a wide range of sample tubes, vials, bottles, plates and microscope slides to be centrifuged. Blood collection tubes, blood bags, microtitre plates, culture tubes and bottles - even the 250 ml conical base tissue culture bottle - can all be centrifuged in the C series centrifuges using one rotor simply by changing buckets, carriers and inserts. M4 Swing-out rotor: 4 x 750 ml (3,400 to 4,300 x g). T4 Swing-out rotor: 4 x 250 ml (2,690 g). 6 angle rotors for 40 x 15 ml, 10 x 50 ml and 8 x 100 ml tubes are available for applications requiring high RCF (max 9,320 x g), plus EPPENDORF tubes (30 x 1,5/2 ml).

Absolute priority to biological safety. M4 and T4 sealed buckets with their transparent caps and "O" rings provide absolute containment of pathogenic or hazardous samples in the case of tube breakage. (Certified by the Centre for Applied Microbiological Research, Porton Down, UK). The sealed bucket system can be easily removed from the rotor and opened under a hood or autoclaved. User safety is completed with dual lid interlock, guard barrier ring and JOUAN patented imbalance detector with shutdown. A bowl drain is fitted to enable hazardous spillages to be removed safely.



NEW
sealed microtitre
plate carrier
Available
Now

4.22: DIALOGUE RESPONSE



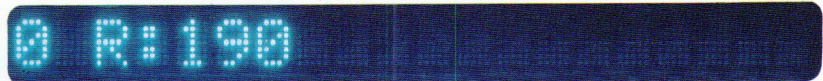
0 4500rpm 2:10 4°C

When the unit is switched on, the screen automatically shows the parameters of the program last used in a sequence of 3 displays... program number, speed, time (counts down during the run), rotor chamber temperature...



0 Acc:9 Br:9 TD: 0°C

... acceleration and braking rates, sample temperature compensation...



0 R:190

... radius of centrifugation. The performance can be displayed in RPM or RCF at any time.



Prog:012 45 78 Exist

Easy to program. C, CR and CT 4.22 indicate existing programs and program numbers available. Just choose a blank program number...



PASSWORD : 421

... and enter your password. If you forget your password, it is always possible to use a test program memory which does not require a password...



TEST NO. 6 OK

... the software includes a sophisticated autotest procedure for the main components... so you can quickly ensure that all systems are in order. Centrifugation becomes child's play.

C. CR and CT 4.22 guide you through the programming process... just enter your desired values in sequence as the microprocessor requests them. Your programs are stored in one of the 50 permanent memories and are clearly displayed when recalled. Performance can even be programmed in RPM or RCF.

Stringent control

JOUAN C 4.22 series centrifuges refuse input of any value out of the normal range. Acceleration, braking and temperature are continuously checked and controlled by the microprocessor and can be displayed at any time. The integrator provides the ultimate control of reproducibility even when changing rotors, speed or RCF.

Simplified use

The new generation centrifuges also offers many ergonomic and aesthetic features which simplify use...

The control panel is angled for improved visibility with a flat, easy-to-clean screen displaying clear messages. With a single key press the lid opens to its fullest extent. No knobs for manual adjustment and no complex control board to master.

Simple to create new programs and simple to recall and use existing programs : these features result in perfect run reliability and more efficient use of your time.



Jouan

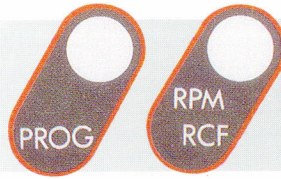


COVER



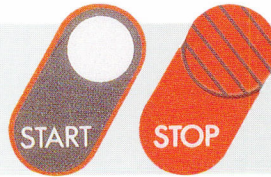
alar

Provides access to the programming mode.



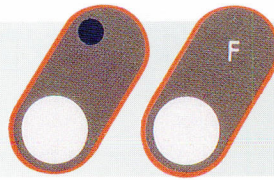
Shows RCF when RPM was programmed and RPM when RCF was programmed.

Starts the run.



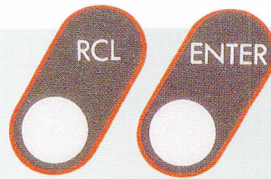
Stops the run.

Permits lid opening only when LED is illuminated.



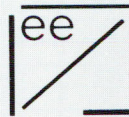
Multifunction key. Allows the display of the set values during the run. Enables English, French, German or Spanish to be displayed.

Recalls a program from the memory.



Used to validate and enter values.

Integral programming key and recall of actual duration and integral values.



alarm



Red light signifying a fault, the nature of which is clearly indicated on the display.



	Bucket or carrier (set of 4)	Rack or insert (set of 4)	Rack or insert colour	Rack or insert capacity	Max. tube Ø (mm)	Min./max. tube ht. (mm)	Tube volume (ml)	Max. radius (mm)	C		CR		CT		
									Max. r.p.m.	Max. r.c.f. (g)	Max. r.p.m.	Max. r.c.f. (g)	Max. r.p.m.	Max. r.c.f. (g)	
T4 SWING-OUT ROTOR : 11175366	Standard buckets 11175367	11175340	Black	42	8.5	35/-	0.5-0.8	174	3500	2380	3700	2660	3600	2520	
		11175341	Salmon	20	11	35/-	1.5-2.2	174	3500	2380	3700	2660	3600	2520	
		11175342	Beige	30	11	65/107	3/5	174	3500	2380	3700	2660	3600	2520	
		11175343	Grey	26	12.7	67/107	5	174	3500	2380	3700	2660	3600	2520	
		11175357	White	7	18	35/-	5 flat bottom	174	3500	2380	3700	2660	3600	2520	
		11175344	Light blue	20	13.5	65/107	6	174	3500	2380	3700	2660	3600	2520	
	Transparent sealed lid 11175368	11175345	Yellow	18	13.5	65/108	7 vac.	174	3500	2380	3700	2660	3600	2520	
		11175346	Red	12	16.5	65/112	10 vac.	174	3500	2380	3700	2660	3600	2520	
		11175347	Cream	12	17.5	65/112	10 flat bottom	174	3500	2380	3700	2660	3600	2520	
		11175358	White	7	18	90/122	12 flat bottom	174	3500	2380	3700	2660	3600	2520	
		11175348	White	7	18	90/122	15 conical	176	3500	2410	3700	2690	3600	2550	
		11175349	Orange	7	16.5	90/127	15 vac.	174	3500	2380	3700	2660	3600	2520	
	Spare seal 25439074	11175350	Brown	4	16.5	90/133	15 vac.	176	3500	2410	3700	2690	3600	2550	
		11175351	Coral	8	22.2	90/116	20	176	3500	2410	3700	2690	3600	2550	
		11175352	Light yellow	5	25	90/120	25	176	3500	2410	3700	2690	3600	2550	
		11175375	Light yellow	5	25	90/120	25 flat bottom	176	3500	2410	3700	2690	3600	2550	
		11175353	Dark red	4	30.5	90/122	50	176	3500	2410	3700	2690	3600	2550	
		11175354	Light blue	3	30	90/117	50 conical	176	3500	2410	3700	2690	3600	2550	
		11175376	Light blue	3	30	90/117	50 flat bottom	176	3500	2410	3700	2690	3600	2550	
		11175361	Dark blue	2	35	90/122	50	176	3500	2410	3700	2690	3600	2550	
11175355		Green	1	45	90/132	100	176	3500	2410	3700	2690	3600	2550		
11175356		Turquoise	1	63	65/125	250 flat bottom	172	3500	2350	3700	2630	3600	2490		
11175359 (set of 2)	Black	1 cytobucket (11172499 : set of 2 buckets)					181	1570	500	1570	500	1570	500		
11175360	5 sets of 4 decanting rubber pads (Ø 10.5 - 11 - 11.5 - 11.9 - 12.1 mm) for 11175343														
4 buckets for STAGO/HITACHI racks 11175381			3 racks/bucket					180	3350	2258	3900	3060	3900	3060	
Microtitration 11175377			3 plates				96 wells	158	3300	1923	3500	2164	3400	2045	
M4 SWING-OUT ROTOR : 11175338	Standard buckets 11174154	11174204	Black/light blue	30	8.5	40	0.8	165	4000	2950	4500	3740	4300	3410	
		11174201	Black/light blue	30	11.5	40	1.5-2	160	4000	2860	4500	3600	4300	3310	
		11174206	Black/coral	12	16.5	40	4 flat bottom	184	4000	3290	4500	4160	4300	3800	
		11174205	Black/beige	9	18	40	4 flat bottom	184	4000	3290	4500	4160	4300	3800	
	PTFE coated 62813600	11174157	Black/grey	37	12.5	100	5	172	4000	3070	4500	3900	4300	3560	
		11174193	Black/grey	For decanting : Ø 11.7 to 12.5					172	4000	3070	4500	3900	4300	3560
	Sealed buckets 11174218	11174158	Black/light blue	30	13.5	100	6	172	4000	3070	4500	3900	4300	3560	
		11174159	Black/yellow	20	13.5	107	7 vac.	172	4000	3070	4500	3900	4300	3560	
		11174160	Black/red	19	16.5	107	10 vac.	172	4000	3070	4500	3900	4300	3560	
		11174216	White	16	17	60	5 flat	180	4000	3220	4500	4075	4300	3720	
	PTFE coated 62814801	11174219	White	16	17	60/120	5/10 flat	180	4000	3220	4500	4075	4300	3720	
		11174208	Black/orange	12	16.5	125	10 flat bottom	184	4000	3290	4500	4160	4300	3800	
		11174188	Beige	9	18	120	10 flat bottom	172	4000	3070	4500	3900	4300	3560	
		11174161	Brown	7	17.7	134	15 vac.	185	4000	3310	4500	4190	4300	3820	
	Lid 25144058	11174162	Beige	9	18	122	15 conical	184	4000	3290	4500	4160	4300	3800	
		11174190	Orange	12	16.5	125	15	184	4000	3290	4500	4160	4300	3800	
	Spare seal 85241381 10 spare seals 89000814	11174163	Coral	12	22.2	108	20	177	4000	3170	4500	4010	4300	3660	
		11174186	Dark red	7	30	115	25 flat bottom	172	4000	3070	4500	3900	4300	3560	
		11174164	Dark red	7	30	115	50	182	4000	3260	4500	4120	4300	3760	
		11174529	Black	7*	30	116	50 conical	185	4000	3310	4500	4190	4300	3820	
	6 bottles 750 ml 41193190	11174191	Light blue	4	30	120	50 conical	185	4000	3310	4500	4190	4300	3820	
		11174199	Light blue	4	30	120	50 flat bottom	172	4000	3070	4500	3900	4300	3560	
		11174165	Dark blue	4	35	120	50	185	4000	3310	4500	4190	4300	3820	
		11174166	Dark green	2	45	118	100	185	4000	3310	4500	4190	4300	3820	
	OC 2.5 ROTOR 11175382	11174167	Turquoise	1	63	134	250 flat bottom	185	4000	3310	4500	4190	4300	3820	
		11174192	Navy blue	1	80.5	125	450	185	4000	3310	4500	4190	4300	3820	
		11174226 (set of 2)	Black	1 cytobucket (11172499 : set of 2 buckets)					180	1570	500	1570	500	1570	500
11174203	600 ml stainless steel flat bottom bottle								190	4000	3400	4500	4300	4300	3930
11174169	Adaptor for blood bag (pediatric)								190	4000	3400	4500	4300	4300	3930
Microtitration 11174168			3 plates				96 wells	158	3600	2290	4000	2830	3800	2550	
Sealed µT 11174223			3 plates				96 wells	167	3500	2314	3900	2839	3700	2556	
11175370	11174207	Rubber pad for flexible microtitration plate													
			1				500	208	3500	2850	4200	4100	4000	3720	
11175372	250 ml conical bottle liner														
11175378	Buckets for 250 ml conical bottle								213	2000	1000	2000	1000	2000	1000
11175385	Sealed buckets for 250 ml conical bottle								213	2000	1000	2000	1000	2000	1000
11175385	Sealed buckets + liner for plasma/red cell separation								190	4000	3400	4500	4300	4300	3930
Supplied with 2 buckets for deepwell blocks			1 block/bucket					127	please contact us						

* In open buckets only

	Rotor	Catalogue number	Capacity	Holes (mm)		Min./max. tube height	Max. radius	Angle	C		CR		CT	
				Ø	Depth				Max. r.p.m.	Max. r.c.f. (g)	Max. r.p.m.	Max. r.c.f. (g)	Max. r.p.m.	Max. r.c.f. (g)
ANGLE ROTORS	CD1	11175181	8 x 100 ml	44.5	101	106/115	134	35°	7000	7340	7200	7765	7200	7765
	CD2	11175183	10 x 50 ml	35	92	97/115	130	35°	7250	7640	7450	8065	7450	8065
	CD3	11175186	40 x 15 ml	18.5	93	96/110	132 145	35°	6800	6825 7495	7000	7230 7945	7000	7230 7945
	CD4	11175180	40 x 15 ml	16.5	93	96/131	131 144	35°	6800	6770 7445	7000	7175 7890	7000	7175 7890
	CD5 Sealed	11175187	40 x 15 ml	16.5	110 107	115/130 112/127	136 151	33°	6500	6425 7130	6700	6825 7580	6700	6825 7580
	Eppendorf	11174217	30 x 1.5/2 ml	11	open	40	115	55°	7000	6300	7200	6665	7200	6665

M4 : 3,000 ml at 4,300 g or 800 ml at 9,320 g (angle)



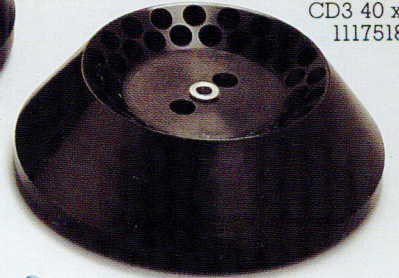
CD2 10 x 50 ml
11175183



CD1 8 x 100 ml
11175181



CD4 40 x 15 ml
11175180



CD3 40 x 15 ml
11175186

M4
11175338

9 x 15 ml
11174162



12 x 15 ml
11174190



20 x 7 ml
11174159



4 x 50 ml
11174165

600 ml
11174203



37 x 5 ml
11174193



Cytobucket
11174197

Insert
11174202



1 x 250 ml
11174167



37 x 5 ml
11174157

7 x 15 ml
11174161



Microtitration
11174168
Sealed carrier
11174223



1 x 450 ml
11174192



30 x 1,5 ml
11174201



19 x 7 / 10 ml
11174160

4 x 50 ml
11174191



11175370



11174169



12 x 4 ml
11174206

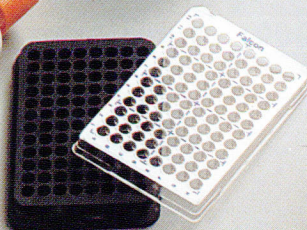


9 x 4 ml
11174205

2 x 100 ml
11174166



11175371



11174207
Rubber
cushion



7 x 50 ml
11174164



30 x 6 ml
11174158

12 x 20 ml
11174163



SPECIFICATIONS

	C4.12	C4.22	CR4.12	CR4.22	CT4.22
• Maximum speed (rpm):					
- Swing-out:	4 000	4 000	4 500	4 500	4 500
- Angle:	7 800	7 800	8 000	8 000	8 000
• Maximum RCF (x g):					
- Swing-out:	3 400	3 400	4 300	4 300	4 300
- Angle:	8 840	8 840	9 320	9 320	9 320
• Maximum capacity:					
- Swing-out:	4 x 750 ml	4 x 750 ml	4 x 750 ml	4 x 750 ml	4 x 750 ml
- Angle:	8 x 100 ml	8 x 100 ml	8 x 100 ml	8 x 100 ml	8 x 100 ml
• Electronics:	Regular	µP	Regular	µP	µP
• Timer:	30 min	1 sec. to 99 min 59 s.	30 min	1 sec. to 99 min 59 s.	1 sec. to 99 min 59 s.
• Timer hold position:	yes	yes	yes	yes	yes
• Integrator (m.rd ² /s):	-	100 to 998 x 10 ⁹	-	100 to 998 x 10 ⁹	100 to 998 x 10 ⁹
• Braking:	2 rates	10 rates	2 rates	10 rates	10 rates
• Acceleration:	Fixed	10 rates	Fixed	10 rates	10 rates
• Temperature range:	-	-	-8 to 40°C 4°C at max. speed	-8 to 40°C 4°C at max. speed	-8 to 60°C 4°C at max. speed
• Memory:	-	50 prog.	-	50 prog.	50 prog.
• Max. power (VA):	900	1 000	1 300	1 500	1 700
• Dimensions HxWxD (mm):	420 x 530 x 600	420 x 530 x 600	420 x 820 x 600	420 x 820 x 600	420 x 820 x 600
- packed:	650 x 720 x 670	650 x 720 x 670	660 x 950 x 720	660 x 950 x 720	660 x 950 x 720
• Weight uncrated/crated (kg):	80/90	80/90	100/120	100/120	100/120

CATALOGUE NUMBERS

• 220-240 V / 50 Hz :	1117534	11175318	11175336	11175330	11175332
• 120 V / 60 Hz :	1117535	11175319	11175337	11175331	11175333
• 230 V / 60 Hz :	-	-	11175339	-	-



The quality of the product
The quality of customer service
The quality of the maintenance

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