

Thermo Electron's Jouan KR4i delivers outstanding performance in a floor-standing centrifuge for blood-banking and the most demanding research applications

Jouan KR4i

The dependable choice for large volume processing with complete traceability



Features and Benefits

Ultimate in versatility

- High-capacity rotors available for blood-banking, research, proteomics/genomics, pathology, RIA and biochemistry
- Offers four swing-out rotors and more than 110 accessories

Accurate and dependable

- Provides lifetime reproducibility with guaranteed run-to-run feature
- Patented software delivers superior sample temperature control
- Available CQCS™ offers ISO 9000 and GLP/GMP traceability

Unparalleled safety

- Features include imbalance detection and shutdown
- Certified to IEC 1010-2-020 for biocontainment by CAMR Porton Down
- Automatic rotor recognition prevents overspeed

Thermo's Jouan KR4i is a process production workhorse for large volumes and large sample numbers










The compact Jouan KR4i is the most versatile floor-standing centrifuge available, with more than 110 accessories for blood-banking, genomics/proteomics, biochemistry, research, pathology, RIA and large volume processing. It features guaranteed run-to-run reproducibility with absolute sample temperature control so you can always depend on quality results.















Combined with the CQCS™ Network Quality Control System, the Jouan KR4i provides the ultimate in traceability according to GLP, GMP, and ISO9000 standards. Full monitoring and search is provided on samples, runs, machines and operators. Up to 32 centrifuges can be integrated in a single network for the

most demanding applications. Data is captured easily for automatic storage and processing by laboratory information management systems.

The Jouan KR4i is easy to use and performs with precision. It features microprocessor-based parameter control and an advanced VIDEOset™ graphic control system that makes it easy to monitor operations. Heat labile sample protection is provided through advanced Thin Film Technology, assuring dependable results at full load, regardless of rotor or speed. The Jouan KR4i is also available with a water-cooled condenser for environments subjected to higher ambient temperatures.

Accessories and Performance

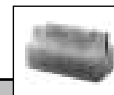
| | Biochemistry | | | | | | | | | RIA | | | |
|--|--------------|-------|-----|---|-------|-----|--|-------|-----|-------|---|-----|--|
| | RPM | RCF | RAD | RPM | RCF | RAD | RPM | RCF | RAD | RPM | RCF | RAD | |
| 11178138 Set of 6  | | | | 11178136 Set of 6  | | | 11178140 Set of 6  | | | | RIA bucket (11174023 Set of 2)  + Trays (See detailed table) | | |
| 11178216 1 piece  | | | | 11178135 Set of 6  | | | Complete with transparent cap & stainless steel tray also accepts two rectangular plastic inserts | | | | | | |
| 11178190 1 piece  | | | | See detailed table  | | | | | | | | | |
| See detailed table  | | | | | | | | | | | | | |
| Rotor RP6 without rotor lid | 3 800 | 4 310 | 267 | 3 800 | 4 585 | 284 | 3 800 | 4 310 | 267 | — | — | — | |
| with rotor lid | 4 250 | 5 392 | 267 | 4 250 | 5 735 | 284 | 4 250 | 5 392 | 267 | — | — | — | |
| Rotor RC6 without rotor lid | — | — | — | 4 300 | 5 623 | 272 | — | — | — | — | — | — | |
| with rotor lid | — | — | — | 4 900 | 7 301 | 272 | — | — | — | — | — | — | |
| Rotor RHK 4 B | — | — | — | — | — | — | — | — | — | 3 300 | 2 300 | 189 | |

| | Blood Banking | | | | | | Large Volumes | | | | | | | | |
|--|---------------|-------|--------|--|--------|-----|--|-------|-----|--|-------|-----|--|-------|-----|
| | 12 Bags | | 8 Bags | | 6 Bags | | | | | | | | | | |
| | RPM | RCF | RAD | RPM | RCF | RAD | RPM | RCF | RAD | RPM | RCF | RAD | | | |
| 11178155 Set of 6  | | | | 11178088 Set of 4  | | | 11178136 Set of 6  | | | 11178143 11178149 Set of 4  | | | 1178136 1178152 Set of 6  | | |
| 11178156 with partition (2 quin or quad bags)  | | | | 11178158 with partition (2 quin bags)  | | | 11178135 Set of 6  | | | 41193596 PC 1600 mL  41193600 PP 1600 mL | | | 11178135 Set of 6  | | |
| 11178157 without partition (2 quad bags)  | | | | 11178159 without partition (2 quad bags)  | | | 11178203 (1 triple or quad bag)  | | | 11178102 1000 mL NALGENE  | | | 11178203 1000 mL | | |
| 11178145 Set of 6 for one bag with rectangular filter*  | | | | 11178170 2 bags with filter in line*  | | | 11178108 (1 double bag)  | | | 11178101-1000 mL-MSE 11178100 1000 mL - KONTRON 11178314 for C60 inserts | | | 57310605 beaker 1000 mL Set of 6 | | |
| Rotor RP6 without rotor lid | 3 800 | 4 536 | 281 | — | — | — | 3 800 | 4 585 | 284 | — | — | — | 3 800 | 4 585 | 284 |
| with rotor lid | 4 250 | 5 674 | 281 | — | — | — | 4 250 | 5 735 | 284 | — | — | — | 4 250 | 5 735 | 284 |
| Rotor RP4 without rotor lid | — | — | — | 4 000 | 4 758 | 266 | — | — | — | 4 000 | 4 883 | 273 | — | — | — |
| with rotor lid | — | — | — | 4 250 | 5 372 | 266 | — | — | — | 4 250 | 5 513 | 273 | — | — | — |
| Rotor RC6 without rotor lid | — | — | — | — | — | — | 4 300 | 5 623 | 272 | — | — | — | 4 300 | 5 623 | 272 |
| with rotor lid | — | — | — | — | — | — | 4 900 | 7 301 | 272 | — | — | — | 4 900 | 7 301 | 272 |

* fits rectangular filters 70 x 70 mm

RHK4B Accessories in 11174023 Buckets


| Catalog No. (Set of 2 Trays with Spacers) | Capacity | |
|---|----------|-----------------------|
| 11178801 | 2 x 15 | LKB |
| 11178804 | 2 x 3 | NUCLEAR racks |
| 11178805 | 2 x 4 | PACKARD racks |
| 11178806 | 2 x 3 | BECKMAN racks |
| 11178807 | 2 x 5 | SMAC-TECHNICON racks |
| 11178814 | 2 x 7 | MICROMEDICS racks |
| 11178808 | 2 x 6 | Microtitration plates |
| 11178820 | 2 x 8 | OLYMPUS racks |

RHK4B Accessories in 11174023 Buckets and 11178801 Trays


| Catalog No. (Set of 2 Inserts) | Capacity (3 sets of 2 inserts) | | | | Ø x HEIGHT min / max (mm) |
|-----------------------------------|--------------------------------|---------------------|----------------|----------------|------------------------------|
| | No. inserts | Tubes per insert | Volume (mL) | Total tubes | |
| 11179470 | 6 | 60 | 1.5 microtube | 360 | 11.5 - / 35 |
| 11179476 | 6 | 72 | 3 | 432 | 11.5 - 55 / 100 |
| 11179467 | 6 | 50 | 6 | 300 | 13.5 - 55 / 100 |
| 11179468 | 6 | 45 | 5 | 270 | 13.5 - 65 / 110 |
| 11179469 | 6 | 38 | 10 | 228 | 16.5 - 65 / 110 |
| 11179471 | 6 | 30 | 15 | 180 | 18 - 65 / 110 |
| 11179472 | 6 | 11 | 50 | 66 | 31 - 65 / 110 |

RP6 and RC6 Common Accessories in 11178135 and 11178136 Buckets


Set of 6 standard buckets
(11178136)

Set of 6 sealed buckets
(11178135) with cap

Spare lid for 11178135, 25144058

| Cat No. Set of 6 Inserts | Color | Capacity | | | | Ø x height min / max (mm) | Max Radius RP6 / RC6 (mm) |
|--------------------------------|------------|----------------|---------------------|-------------------|----------------|------------------------------|---------------------------------|
| | | No. inserts | Tubes per insert | Volume (mL) | Total tubes | | |
| 11178208 | Grey | 6 | 37 | 3-5 | 222 | 12.7 - 50 / 107 | 266 / 254 |
| 11178209 | Grey | 6 | 37 | 3-5 | 222 | Decanting | 266 / 254 |
| 11178210 | Light blue | 6 | 30 | 6 | 180 | 13.5 - 50 / 107 | 266 / 254 |
| 11178211 | Yellow | 6 | 20 | 5 - 7 vac. | 120 | 13.5 - 70 / 150 | 266 / 254 |
| 11178212 | Red | 6 | 19 | 10 - 15 vac. | 114 | 17 - 70 / 150 | 266 / 254 |
| 11178304 | White | 6 | 12 | 15 conical | 72 | 17 - 122 / - | 266 / 254 |
| 11178305 | White | 6 | 12 | 15 | 72 | 16 - 75 / 125 | 266 / 254 |
| 11178306 | Coral | 6 | 12 | 20 | 72 | 22.2 - 75 / 148 | 271 / 259 |
| 11178307 | Dark red | 6 | 7 | 50 | 42 | 30 - 75 / 150 | 273 / 261 |
| 11178308 | Blue | 6 | 5 | 50 conical | 30 | 30 - 115 / - | 280 / 268 |
| 11178309 | Blue | 6 | 4 | 50 | 24 | 35 - 75 / 153 | 283 / 271 |
| 11178310 | Dark Green | 6 | 2 | 100 | 12 | 45 - 75 / 150 | 281 / 268 |
| 11178311 | Turquoise | 6 | 1 | 250 flat bottom | 6 | 63 - 75 / 160 | 266 / 254 |
| 11178313 | Black | 6 | 1 | 250 conical | 6 | 61 - 127 / - | 281 / 269 |
| 85240076 | Black | 6 | 1 | 375 | 6 | 77 - 125 / 146 | 281 / 269 |
| 11178312 | Black | 6 | 1 | 500 flat bottom | 6 | 70 - 127 / 171 | 281 / 269 |
| 11178063 | Black | 6 | 1 | 500 blood bottle | 6 | 76 - 177 | 281 / 269 |
| 11178064 | Black | 6 | 1 | 500 blood bottle | 6 | 83 - 177 | 283 / 271 |
| 85240075 | Black | 6 | 1 | 900 | 6 | 94 - 177 | 282 / 270 |
| 11178203 | White | 6 | 1 | 1000 or quad. bag | 6 | | 282 / 270 |
| 11178108 | White | 6 | 1 | Double bag | 6 | | 271 / 259 |

RP6 Rotor Accessories in 11178138 and 11178140 Buckets


Set of 6 buckets (11178138)
for 2 inserts
1 sealing cap (11178216)



Set of 6 sealed buckets
(11178140) for 2 inserts and for
microtitre plates

| Catalog No. (Set of 4 Inserts) | Color | Capacity (3 sets of 4 inserts) | | | | Ø x Height min / max (mm) | Max Radius (mm) |
|--------------------------------------|---|--------------------------------|---------------------|--|----------------|------------------------------|--------------------|
| | | No. inserts | Tubes per insert | Volume (mL) | Total tubes | | |
| 11175340 | Black | 12 | 42 | 0.8 | 504 | 8.5 - 35 / - | 257 |
| 11175341 | Salmon | 12 | 20 | 1.5 microtube | 240 | 11 - 35 / - | 257 |
| 11175342 | Grey | 12 | 30 | 3-5 | 360 | 11 - 65 / 107 | 257 |
| 11175343 | Beige | 12 | 26 | 5 | 312 | 12.7 - 67 / 107 | 257 |
| 11175357 | White | 12 | 7 | 5 flat bottom | 84 | 18 - 35 / - | 257 |
| 11175344 | Light blue | 12 | 20 | 6 | 240 | 13.5 - 65 / 107 | 257 |
| 11175345 | Yellow | 12 | 18 | 5-7 | 216 | 13.5 - 65 / 108 | 257 |
| 11175347 | Cream | 12 | 12 | 5 - 10 flat bottom | 144 | 17.5 - 65 / 112 | 257 |
| 11175346 | Red | 12 | 12 | 10 vac. | 144 | 16.5 - 65 / 112 | 257 |
| 11175358 | White | 12 | 7 | 12 flat bottom | 84 | 18 - 65 / 122 | 257 |
| 11175348 | White | 12 | 7 | 15 conical | 84 | 18 - 90 / 122 | 259 |
| 11175349 | Orange | 12 | 7 | 15 vac. | 84 | 16.5 - 90 / 127 | 259 |
| 11175350 | Brown | 12 | 4 | 15 vac. | 48 | 16.5 - 90 / 133 | 259 |
| 11175351 | Coral | 12 | 8 | 20 | 96 | 22.2 - 90 / 116 | 259 |
| 11175352 | Light yellow | 12 | 5 | 25 | 60 | 25 - 90 / 120 | 259 |
| 11175375 | Light yellow | 12 | 5 | 25 flat bottom | 60 | 25 - 90 / 120 | 259 |
| 11175376 | Light blue | 12 | 3 | 50 flat bottom | 36 | 30 - 90 / 117 | 259 |
| 11175353 | Dark red | 12 | 4 | 50 | 48 | 30.5 - 90 / 122 | 259 |
| 11175354 | Light blue | 12 | 3 | 50 conical | 36 | 30 - 90 / 117 | 259 |
| 11175361 | Dark blue | 12 | 2 | 50 | 24 | 35 - 90 / 122 | 259 |
| 11175355 | Green | 12 | 1 | 100 | 12 | 45 - 90 / 132 | 255 |
| 11175356 | Turquoise | 12 | 1 | 250 flat bottom | 12 | 63 - 65 / 125 | 264 |
| 11175359* | Black | 12 | 1 | Cytology carrier (11174197 : set of 2 buckets) | | | |
| 11175360 | 4 sets of 5 decanting rubber pads (Ø 10.5 - 12.1 mm) for 11175343 inserts | | | | | | |

* Set of 2 inserts

Jouan KR4i Centrifuge Specifications

Specifications

| | |
|---------------------------------|--|
| Max Samples | 12 x Quint blood bags, 6 x 1600 mL, 348 x 5 mL, 240 x 6 mL, 216 x 5 - 7 mL Vacutainer, 84 x 15 mL con., 42 x 50 mL con., 12 x 250 mL, 36 - 42 x microplates, 12 - 18 x deepwell blocks, 360 x 1.5 / 2 mL |
| Max Capacity | |
| Swing-out (RC6) | 6000 mL = 6 x 1000 mL |
| Swing-out (RP6) | 6000 mL = 6 x 1000 mL |
| Swing-out (RP4) | 6400 mL = 6 x 1600 mL |
| Swing-out (RHK4B) | 3300 mL = 66 x 50 mL |
| Max RCF | |
| Swing-out (RC6) | 7300 xg |
| Swing-out (RP6) | 5735 xg |
| Swing-out (RP4) | 5513 xg |
| Swing-out (RHK4B) | 2301 xg |
| Max Speed | |
| Swing-out (RC6) | 4900 xg |
| Swing-out (RP6) | 4250 xg |
| Swing-out (RP4) | 4250 xg |
| Temperature range | -20°C to +40°C in 1°C steps with TFT™ system |
| Temperature condensation | -9°C to +9°C |
| RF range | 80 to 7300 xg |
| Speed range | 500 to 4900 rpm |
| Timer | 1 sec to 99 min 59 sec / 1 min to 99 hr 59 min + Hold |
| HRF (integral) | 100 to 998 x 10E11 |
| Acceleration Rates | 10 rates |
| Braking Rates | 10 rates |
| Control System | Microprocessor; self-diagnostics for servicing |
| Display | VIDEOset™ graphics (incl. run graph); info/Error messages in two languages |
| Number of Memories | 32, individual password |
| Drive | Direct |
| Motor | Brushless, induction |
| Dimensions (H x L x D) | 94.5 x 78 x 90 cm (37.2 x 30.7 x 35.4") |

Ordering Information

| Cat. No. | Description | Max Capacity (mL) |
|----------|--|--|
| 11178162 | 6L Jouan KR4i refrigerated centrifuge 208V/60Hz | |
| 11178252 | RP6 swinging bucket rotor w/o rect buckets or lid | 240 x 1.5/2 Microgard, 216 x 5/7 Vacutainer, 144 x 10/ 84 x 15 Vacutainer, 84 x 15/ 36 x 50 Falcon Corning, 48 x 50 round, 12 x 100, 12 x 250 plastic bottle, 54 x 96-well, 18 x deepwell |
| 11178254 | RC6 swinging bucket rotor w/o round buckets or lid | 120 x 5/7 Vacutainer, 114 x 10/15 Vacutainer, 72 x 15/ 30 x 50 Falcon Corning 42 x 50 round, 12 x 100, 6 x 250 Falcon Corning con, 6 x 250 plastic bottle, 6 x 500 Falcon Corning con, 6 x 1,000 |
| 11178250 | RP4 swinging bucket rotor w/o buckets or lid | 4 x 1,000 |

© 2005 Thermo Electron Corporation. All rights reserved. This data sheet is for informational purposes only and is subject to change without notice. Thermo makes no warranties, expressed or implied, in this product summary. Thermo Electron Corporation, and Analyze, Detect, Measure, Control are trademarks of Thermo Electron Corporation. All product and brand names are trademarks or registered trademarks of their respective owners.