



# Avanti High Performance Centrifuges JXN Series & JE Series

Versatility. Performance. Reliability.



**BRILLIANCE**  
*at every turn.*



# ADDRESS EVERY POINT OF YOUR WORKFLOW, OPTIMIZATION AND PREPARATION

## SPECIALTY LABWARE

Disposable Harvest Liners simplify the processing of large samples

- Convenient sample recovery and long term sample storage
- Enhances operator safety and efficiency.
- Easy-to-use, low-cost sample containment

1 liter wide mouth polypropylene bottle features that maximize your workflow

- Achieve 9,000 rpm in the **JLA-9.1000** rotor
- AutoVent plug and polyphenylene sulfide cap provide greater chemical resistance



JLA-9.1000 rotor support 4 x 1 Liter polypropylene bottle fit with the harvest liners system

*Eliminate steps, maximize time and minimize cross contamination with less hands-on sample handling.*

## WORKFLOW OPTIMIZATION FROM BEGINNING TO END OF SAMPLE PREPARATION

### Cell Harvesting/ Pelleting



#### CELL HARVESTING

Maximize cell harvest volume. Large-volume processing rotor gives you efficiency and high throughput by processing up to 6 liters.



### Supernatant Retention



#### EXOSOME PREPARATION (COMBINATION)

Isolate microparticles with the gold standard of exosome preparation. Efficient and fast sample preparation solutions customized for each step in your specific exosome research workflow, including small volume rotors **JS-24.38** and **JA-25.50**.



### Cell Lysis

### Debris Clearing



#### CELL HARVESTING

Exceptional high-throughput performance for scaling up protein production workflow. Save time and increase efficiency of cell pelleting with the **JCF-Z** continuous. Our rotor system processes large sample volumes capable of reaching up to 800 mL pellet size.



### Product Processing



#### VIRAL VECTOR PREPARATION

Achieve greater than 100,000 x g and purify your exosome by density gradient centrifugation using our **Avanti JXN 30** in combination with the **JS-24.15** or **JA-14.50** rotors.



# INCREASE PERFORMANCE AND RELIABILITY



## BROAD FUNCTIONALITY AND APPLICATIONS

- Beckman Counter rotor range adds versatility and complements ultra speed range
- We offer three titanium rotors (JA-30.50Ti, JS-24.38, JS-24.15) that are capable of reaching speeds greater than 100,000 x g
- Easy loading with lower height and ergonomic rotor design

## SAMPLE PROTECTIONS WITH EXCEPTIONAL TEMPERATURE CONTROL

- Extensive profile of rotors that are made of a single piece of aluminum, which is better conductive of temperature.
- Our JXN-30 runs all rotors at the ideal 4° C
- Sample loading and unloading while rotor is integrated to the centrifuge system makes for a more efficient and less cumbersome and labor intensive process

## PROTECT YOUR SAMPLE AND STANDARDIZE METHODS

- We have been manufacturing High Performance centrifuges for nearly 50 years with a consistent rotor library to fit retrocompatibility

## MAXIMIZE LAB SAFETY

- Our centrifuges are equipped with pharmaceutical-grade sterilizing filters and easy toolless replacement
- Rotor biocontainment protects lab personnel from labware failure



# INCREASE PERFORMANCE AND RELIABILITY, FASTEST HIGH PERFORMANCE IN THE MARKET



## Avanti JXN Series

### BUILT FOR VERSATILITY AND PERFORMANCE

To overcome the everyday challenges of a shared laboratory facility, choose one of the two Avanti high performance centrifuges.

- Widespread use in biologics production.
- Compatible with an extensive rotor library – Choose from a wide variety of high performance rotors to cover application from large-volume pelleting to high speed subcellular fractionation to cell separation.
- Large touchscreen interface and additional multi user support enhances control and usability.

|                         | Avanti JXN 30         | Avanti JXN 26        |
|-------------------------|-----------------------|----------------------|
| <b>Working Capacity</b> | 4.0 Liter             | 6.0 Liter            |
| <b>Speed</b>            | Up to 110,500 x g RCF | Up to 81,200 x g RCF |

## Avanti JE

### HIGH VALUE IN A TRUE HYBRID

Make the most out of your workspace and workflow.

- Achieve high performance and up to 4.0 Liter processing capacity in a compact foot print
- Speeds up to 53,300 xg RCF with efficient acceleration and deceleration profiles
- The Avanti JE offers an intuitive, user-friendly interface, as well as lower energy costs.



# AVANTI JXN USER-FRIENDLY SOFTWARE



## INTUITIVE INTERFACE

- **Personalized user profile** with user login and admin control
- **Experiment Diagnostics** shows real-time run display of time, speed, and chamber temperature in graph
- **Visual color status** gives early warning of any protocol variations
- **Run History** records all run details, error messages, and it can be exported in Excel format

## REMOTE MONITORING

- Network the Avanti JXN to set up, monitor and control your centrifuge remotely
- Receive alerts and diagnostics remotely via email or SMS



## LARGE INTUITIVE TOUCHSCREEN

- Very clear and visible for users
- Makes setting and viewing parameters very easy
- Rotor code identification gives the option of setting rcf or rpm
- Independent overspeed control (windage & inertia check) ensures safe rotor operation
- 10 levels of acceleration and deceleration control








## MOBILE CONTROL

- **Mobilefuge mobile application** controls, schedules and monitors runs remotely

## BUILT-IN SAFETY AND EFFICIENCY WITH ROTOR INNOVATIONS

- **DRIC Dynamic Rotor Inertia Check** makes sure that rotors are not run beyond their maximum speed.
- **Lightweight 6 x 1 L JLA-8.1000 rotor** offers the most efficient pelleting for large volumes and easy handling and cleaning because of its modular design.
- **Foot pedal for hands-free door opening** and an integrated surface work space optimize everyday use.
- **Proven reliability** with robust design for consistent results and maximum uptime, year after year.
- **Exceptional performance** meeting evolving application needs, from academic research to production facilities, with up to 110,500 x g with the JXN 30 and up to 6 liters capacity with the JXN 26.
- **Versatile, high-throughput sample processing** from 6 x 1 L bottles, to 28 x 50 mL conical tubes, to 24 microplates per run. Save time and ensure sample integrity with fast acceleration and deceleration rates, combined with smooth runs at all speeds.

# ROTOR SPECIFICATIONS

| Rotor  | Capacity                  | Speed<br>(RPM/RCF) | Application |    |    |    |    |   |   |   |   |
|--|---------------------------|--------------------|-------------|----|----|----|----|---|---|---|---|
|  |                           |                    | P           | SF | LH | CM | NA | C | V | B |   |
|  JA-30.50 Ti  | 400 mL<br>(8 x 50 mL)     | 30,000<br>108,860  | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  JA-25.50     | 400 mL<br>(8 x 50 mL)     | 25,000<br>75,600   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  JA-25.15     | 360 mL<br>(24 x 15 mL)    | 25,000<br>74,200   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-21        | 180 mL<br>(18 x 10 mL)    | 21,000<br>50,400   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-20.1      | 480 mL<br>(32 x 15 mL)    | 20,000<br>51,500   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-20        | 400 mL<br>(8 x 50 mL)     | 20,000<br>48,400   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-18.1    | 43.2 mL<br>(24 x 18 mL)   | 18,000<br>42,100   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-18      | 1,000 mL<br>(10 x 100 mL) | 18,000<br>47,900   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JA-17      | 700 mL<br>(14 x 50 mL)    | 17,000<br>39,800   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JLA-16.250 | 1,500 mL<br>(6 x 250 mL)  | 16,000<br>38,400   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ |   | ✓ |
|  JA-14.50   | 800 mL<br>(16 x 50 mL)    | 14,000<br>35,000   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  JA-14      | 1,500 mL<br>(6 x 250 mL)  | 14,000<br>30,100   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  JA-12      | 600 mL<br>(12 x 50 mL)    | 12,000<br>23,200   | ✓           |    | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  JLA-10.500 | 3,000 mL<br>(6 x 500 mL)  | 10,000<br>18,500   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ |   | ✓ |
|  JA-10      | 3,000 mL<br>(6 x 500 mL)  | 10,000<br>17,700   | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ |   | ✓ |

Application






| Rotor   | Capacity                  | Speed<br>(RPM/RCF) | Application |    |    |    |    |   |   |   |   |
|---|---------------------------|--------------------|-------------|----|----|----|----|---|---|---|---|
|   |                           |                    | P           | SF | LH | CM | NA | C | V | B |   |
|  <b>JLA-9.1000</b> | 4,000 mL<br>(4 x 1000 mL) | 9,000<br>16 800    | ✓           |    | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  <b>JLA-8.1000</b> | 6,000 mL<br>(6 x 1000 mL) | 8,000<br>15 970    | ✓           |    | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  <b>JS-24.38</b>   | 231 mL<br>(6 x 38.5 mL)   | 24,000<br>103 900  | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  <b>JS-13.1</b>    | 300 mL<br>(6 x 50 mL)     | 13,000<br>26 500   | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |
|  <b>JS-5.3</b>     | 2,000 mL<br>(4 x 500 mL)  | 5,300<br>6130      | ✓           | ✓  | ✓  | ✓  | ✓  | ✓ | ✓ | ✓ | ✓ |
|  <b>JS-4.0</b>    | 4,000 mL<br>(4 x 1000 mL) | 4,000<br>4,050     | ✓           | ✓  | ✓  |    |    | ✓ | ✓ | ✓ | ✓ |

**WORKFLOW**

**P** (Protein) **SF** (Subcellular Fractions) **LH** (Lysate/Tissue Homogenates)

**APPLICATIONS KEY**

**CM** (Clearing Media) **NA** (Nucleic Acid) **C** (Cells) **V** (Viruses) **B** (Blood)

| JCF-Z  | Workflow application   | Capacity | Avanti<br>JXN-30 | Avanti<br>JXN-26 |
|--|--|----------|------------------|------------------|
|  <b>Std. Core</b>   | Debris cleaning,<br>large particle<br>separation and<br>cell pelleting | 400 mL   | 20,000<br>39,900 |                  |
|  <b>Large Core</b>  |  | 800 mL   | 20,000<br>39,900 |                  |
|  <b>Small Core</b>  |  | 200 mL   | 20,000<br>39,900 |                  |
|  <b>Regrad Core</b> |  | 1,500 mL | 20,000<br>39,900 |                  |
|  <b>Zonal Core</b>  |  | 1,650 mL | 20,000<br>39,900 |                  |

## COMPLIANCE AND TECHNICAL SUPPORT

- At Beckman Coulter, engineering, sales, support, training and service work together to offer comprehensive and extensive customer focused products.
- Expert service engineering team strives for “Fix It Right the First Time.”
- Certifications of Compliance.



| Specifications                 | Avanti JXN-26  | Avanti JXN-30  | Avanti J-E   |
|--------------------------------|--|--|--|
| <b>Max. Speed/g-Force</b>      | 26,000 rpm/81,770 x g  | 30,000 rpm/110,500 x g   | 21,000 rpm/53,300 x g                                  |
| <b>Max. Capacity</b>           | 6 Liters   | 4 Liters   | 4 Liters   |
| <b>Speed Control</b>           | 1,000 to 10,000:± 10 rpm<br>10,001 to max: ±0.1%                   | 1,000 to 10,000:± 10 rpm<br>10,001 to max: ±0.1%                   | ±50 rpm of set speed                                   |
| <b>Set Temperature</b>         | -10° C to 40° C in 1° increments                                   | -20° C to 40° C in 1° increments                                   | -10° C to 40° C in 1° increments                       |
| <b>Temperature Accuracy</b>    | ±2° C of chamber temperature<br>(after equilibration)              | ±2° C of chamber temperature<br>(after equilibration)              |  |
| <b>Ambient Operating Range</b> | 16° C to 38° C   | 16° C to 38° C   | 15° C to 35° C   |
| <b>Accel/Decel Profiles</b>    | 11/12  | 11/12  | 2/3  |
| <b>Heat Output</b>             | 5,120 BTU/hr (1.5 kW)  | 5,120 BTU/hr (1.5 kW)  | ≤6,900 BTU/hr (2.0 kW)                                 |
| <b>Drive Type/Cooling</b>      | SR* drive/Air-Cooled   | SR* drive/Air-Cooled   | SR* drive/Air-Cooled                                   |
| <b>Refrigeration</b>           | Non-CFC, non-ozone<br>depleting refrigerant                        | Non-CFC, non-ozone<br>depleting refrigerant                        | Non-CFC, non-ozone<br>depleting refrigerant            |
| <b>Sound Level</b>             | <62 dBa (1 m in front of the<br>instrument, 1.5 m above the floor) | <62 dBa (1 m in front of the<br>instrument, 1.5 m above the floor) | <64 dBa (0.91 m/3 ft from<br>instrument at max. speed) |
| <b>Dimensions</b>              | 71 W x 86 D x 86 H cm<br>(28 W x 34 D x 34 H in)                   | 71 W x 86 D x 86 H cm<br>(28 W x 34 D x 34 H in)                   | 63.5 W x 80 D x 91.4 H cm<br>(25 W x 31.5 D x 36 H in) |
| <b>Weight</b>                  | 290 kg (640 lb)  | 310 kg (680 lb)  | 267.4 kg (589 lb)                                      |

Providing 70 years of global leadership in centrifugation, Beckman Coulter Life Sciences designs, manufactures, sells, and services a complete line of centrifuge systems. By offering unique rotors and innovative bottles, tubes and accessories, coupled with advanced centrifugation software, Beckman Coulter delivers intelligent centrifugation solutions to laboratory science.