

## ACAT™1 PLUS PRODUCT SPECIFICATIONS

### Design

- Microprocessor-based system architecture
- Modular system consisting of display/control module and pneumatic drive unit

### Electrical

- AC requirements: 90-264 VAC 47-63 Hz.
- Average power consumption: 225 watts
- Maximum power consumption: 420 watts
- Battery operating time: Two-hour minimum with full charge (optional four-hour minimum)
- Battery recharging time: 80% in four hours from full discharge (additional two hours with second battery)

### Mechanical Dimensions

- Control module with monitor: 9-1/4" high (23.5cm) x 13-3/4" wide (35cm) x 2" deep (5cm)
- Pneumatic drive unit: 28" high (71cm) x 12" wide (30.5cm) x 20" deep (51cm)

### Mechanical Weight

- Control module: 5 lbs. (2.27 kg)
- Pneumatic drive unit: 86 lbs. (39.09 kg)
- Total Weight: 91 lbs. (41.36 kg)

### Pneumatics

- Drive system: Stepper motor-driven bellows
- Drive gas: USP-grade helium
- Helium tank:
  - Disposable canister (500 psi)
  - or refillable (2000 psi) Cylinder – U.S. Approval
  - (2900 psi) Cylinder – European Approval
- Pumping volume: 0.5cc.-50cc., adjustable in 0.5cc. increments
- Counterpulsation rate: 40-200 pulsations/minute

### Condensation Removal

- Thermoelectric system removes moisture continuously from pneumatic system without interrupting counterpulsation

### Trigger Modes

- ECG (PATTERN, PEAK, AFIB): Microprocessor-based waveform trigger detection algorithms
- Pacer (APACE, VPACE):
  - Pulse width 0.1-0.5 ms and pulse amplitude => +5 mV
  - Pulse width => 0.5 ms and pulse amplitude => +2 mV
- Arterial pressure (AP): Microprocessor-based waveform trigger detection algorithms
- Internal (INT): Default to 80 bpm; adjustable 40-120 bpm
- Filtering: Diathermy, 50/60 Hz notch, 25 Hz low pass

### Display

- Type: High resolution color LCD flat screen
- Channels: Three-channel multicolor waveforms
  - ECG: Green trace with highlighted white on assisted portion
  - Arterial pressure: Red trace calibrated for direct reading of arterial pressure, highlighted white on assisted portions
  - Balloon pressure: Blue trace calibrated in mmHg
- Timing reference display: Bar graph displays inflate/deflate events as well as numerical timing settings
- Cursor: Measurement of arterial pressure and balloon pressure waveforms

### Alphanumeric Data

- Patient hemodynamics: Heart rate, arterial pressure, peak systolic pressure, peak diastolic pressure, end diastolic pressure, mean arterial pressure, optional BPW
- Operations status: Helium tank pressure, alarm/battery charge status
- Diagnostic alarm/help messages: Preprogrammed troubleshooting prompts/help

### Inflation/Deflation Timing

- ECG:
  - Inflation, 20-80% of R-R interval
  - Deflation, 30-120% of R-R interval
- Arterial pressure:
  - Inflation, 0-35% of R-R interval
  - Deflation, 35-75% of R-R interval
- Atrial fibrillation:
  - Inflation 80-430 ms after previous deflation on R-wave

### Strip Chart Recorder

- Recorder: Dual-channel dot matrix; dot density 400 dots/inch, 25mm/sec.
- Waveforms: ECG, arterial pressure, or balloon pressure (one or two recorded)
- Alphanumeric: Date, time, patient hemodynamics, trigger mode, assist ratio, balloon volume, ECG lead, alarm condition

### Display Freeze

- Freezes approximately seven seconds of patient data on screen

Additional system specifications available from Arrow upon request. Specifications subject to change without notice.