

The ACAT[®]1 PLUS Intra-Aortic Balloon Pump



An easy-to-use
pump with proven,
sophisticated
technology.

Powered
by
innovation[™]

The ACAT®1 PLUS

Intra-Aortic

Balloon Pump

Arrow's compact, easy-to-use Intra-Aortic Balloon Pump is backed by 35 years of proven technology.

The ACAT®1 PLUS combines cutting edge cardiac-assist technology with proven reliability and performance, strong clinical support and easy operation. Plus, the pump's intuitive "smart" functions make its operation more convenient than ever thought possible.

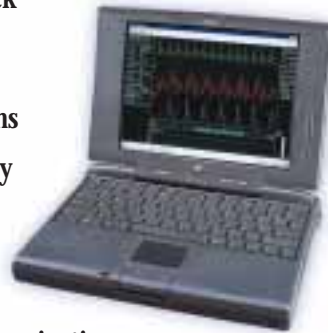
Delivers High Performance and Flexibility in a User-Friendly Way

- Fast inflate/deflate speeds for improved patient support
- Afib trigger: The only real-time (beat-to-beat) tracking of irregular rhythms to optimize patient support during arrhythmias
- Condensate removal system automatically removes condensate without interrupting pumping
- Delivers consistent helium volume without pump interruption and is capable of fast inflate/deflate speeds

Real-time modem capabilities enable efficient remote monitoring

Now you can modem the pump's information to another practitioner in a remote location for immediate consultation.

- Full-color, real-time viewing of balloon pump display enables more accurate feedback to the end user
- Ideal for late night troubleshooting sessions
- Laptop's screen display organization matches the ACAT®1 PLUS display – helps prevent confusion and potential miscommunication



Easy to Troubleshoot

- Alarm messages with troubleshooting assistance
- Help screen for on-screen assistance
- New alarm for arterial pressure (MAP or PDP)
- Automatic resumption of pumping when alarm condition corrected
- Virtual real-time modem for remote screen viewing
- Alarms available at all heart rates

Custom pre-programming of start-up settings

Arrow's flash card technology helps expedite start-up while providing custom pre-programming of those start-up settings and parameters that meet your particular needs.

Easy to Use

- Automatic selection of volume and timing
- Preset assist ratio and trigger
- Three-step start up: Power On, Patient Cables, Pump On
- Trigger selection without having to readjust timing
- Helium tank replacement as easy as changing a light bulb
- Color-coded connectors on Arrow IAB catheters interface with the pump to automatically set consistent balloon helium volumes
- Volume can be changed while pumping
- Assisted and unassisted pressure display in a keystroke

Easy to Service

- Low cost and no scheduled replacement parts

Easy to Transport

- Lighter and more compact – just 91 pounds (A lighter, transport version, the AeroCAT, is also available)
- No disassembly required; simply unplug and go
- Easy rolling casters

Automatic Weaning Protocols offer added flexibility

Four assist ratios help you gradually wean patients off IAB support. Precise volume control (0.5cc increments) lets you accurately wean by volume and/or ratio. Weaning parameters can be selected by pre-programmed or manual settings.

Large screen with full-color display enhances readability

- Clear, sharp, easy viewing
- The pump's high-resolution color LCD screen optimizes your viewing—even in brightly lit areas
- Can be visualized across the room

Cursor, trigger and timing highlights

AP/BPW cursor allows simultaneous readings for added assurance. Trigger and timing highlights facilitate timing adjustments and trigger confirmation.

Most flexible triggers

Seven triggers offer the greatest range of timing memory available for each mode; triggers can be altered during pumping without interruption. A-fib trigger to handle difficult arrhythmias.

Comprehensive hemodynamic data display

Three simultaneous, color, real-time waveforms—ECG, arterial pressure and calibrated balloon pressure—updated on a beat-to-beat basis.

Automatic hemodynamic calculations

Assisted vs. unassisted hemodynamic pressure differences are just a keystroke away.

Movable, detachable control module

Tilts, lifts and swivels for maximum flexibility.

On-screen HELP

Allows you to get information for most functions without pump interruption.



ACAT[®]1 PLUS Product Specifications

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
- Pumping volume:
0.5cc-50cc, adjustable in 0.5cc
increments
- Counterpulsation rate:
40-200 pulsations/minute



Trigger Modes

- ECG (PATTERN, PEAK, AFIB)
- Pacer (APACE, VPACE)
- Arterial pressure (AP)
- Internal (INT): Default to 80
bpm; adjustable 40-120 bpm

Inflation/Deflation Timing

- ECG: 20% to 120%
- Arterial pressure: 0% to 75%
- Atrial fibrillation: 80 msec to
430 msec; deflates on R-wave

Strip Chart Recorder

- 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

Special Features

- Customized parameter using
flashcard technology
- Weaning program

IABP Support provides expert clinical consultation and technical service.

In addition to delivering advanced IABP technology, we are dedicated to providing high quality clinical education, service and support that allow you to keep pace with emerging technology and changing clinical requirements.

Clinical Support

- Educational programs tailored to your specific needs
- Basic introduction to intra-aortic balloon pumping including hands-on sessions as well as programs on advanced concepts and troubleshooting

Field Service

- Comprehensive service programs and equipment maintenance training to keep your pump running smoothly

For tomorrow's technology in cardiac assist, think Arrow today.

Arrow International combines a long tradition of innovation and excellence in cardiac assist technology to meet the needs of today's healthcare environment.

Arrow also offers a comprehensive line of high-performance intra-aortic balloon catheters and accessories.



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ACAT® 1 PLUS IAB Pump Ordering Information

Product No.	Description	Language*
IAP-0100	ACAT® 1 PLUS	-D, -E, -F, -I, -J
IAU-0110	ACAT® 1 PLUS Upgrade Kit	

*The ACAT® 1 PLUS IABP is available in the following languages: (-D) German, (-E) Spanish, (-F) French, (-I) Italian and (-J) Japanese. Add the letter of the language to the Product No. for ordering. The ACAT® 1 PLUS IABP is shipped in English, unless ordered in a specific language.

For more information about the ACAT® 1 PLUS, call your Arrow sales representative. Or contact us directly by calling 610-378-0131 or toll-free in the U.S./Canada at 800-523-8446.

24 Hour Intra-Aortic Balloon Product Support Hotline

United States & Canada: 800-447-IABP (4227)

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Directions for use: An operator's manual accompanies each IABP at the time of purchase.

Caution: For use by trained personnel only. Only medical personnel trained in the use of IABP therapy devices and acting under a physician's orders should operate this system.

Caution: Federal law (USA) restricts the sale, distribution, or use of this device to, by, or on the lawful order of a health professional.

U.S. Patent No. RE 34,993.

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