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Teleflex is a global provider of medical technologies designed to improve the health and quality of people's lives. We apply purpose-driven innovation – a relentless pursuit of identifying unmet clinical needs – to benefit patients and healthcare providers. Our portfolio is diverse, with solutions in the fields of vascular and interventional access, surgical, anaesthesia, cardiac care, urology, emergency medicine and respiratory care. Teleflex employees worldwide are united in the understanding that what we do every day makes a difference. For more information, please visit teleflex.com.

Teleflex is the home of Arrow, Deknatel, Hudson RCI, LMA, Pilling, Rüsch, UroLift, and Weck – trusted brands united by a common sense of purpose.

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Arrow
AC3 Optimus Intra-Aortic Balloon Pump
IABP performance evolved

Simplicity, right from the start

The AC3 Optimus Intra-Aortic Balloon Pump is up and running with the push of a button. Set up is fast and easy, guided by visual prompts on the large, high-definition touchscreen — including confirmation that therapy can be initiated. Delivering advanced IABP support to even the most compromised patient has never been so simple.

Enhanced value

Beyond its clinical value, the AC3 IABP offers low cost of ownership. Its 12-month service-cycle interval simplifies the ongoing care and service of the pump. There are no scheduled replacement parts in the annual preventative maintenance cycle, parts are replaced as and when required. This helps to contain the cost of ownership over the lifetime of the AC3.

Exceptional service life

Teleflex is committed to providing innovative product solutions to meet clinical and user demands. The AC3 is designed with both the user and clinical needs in mind. Arrow IABPs have a proven record of long-service life. The Arrow AutoCAT2 IABP was launched in 2003, 17 years on, it is still being used by clinicians worldwide. The next generation AC3 IABP system is now available with improved performance and ease of use, combined with its upgradeable platform, the AC3 will continue to provide IABP therapy for many years to come.

Third-generation AutoPilot Mode

More than advanced, approachable

A user-friendly design, intuitive interface, and state-of-the-art AutoPilot Mode makes the AC3 Optimus IABP simple to use. With this powerful combination, Teleflex counterpulsation therapy is more accessible than ever.

Built for ease-of-use

- Simple, clean design, large display and fewer keys.
- Getting started checklist provides real-time feedback on the requirements to commence therapy.
- Touchscreen designed for fast and easy interaction. Action bar combines assessment and action in a single location.
- Colour coded graphics and parameters allows for ease of identification and assessment

Uncompromised portability

- Unit is designed to be transported as is.
- Built in AC and DC power options allow for ease-of-mind during transport.
- Transports with replaceable Helium supply allows for greater range and contingency during transport conditions.

Built for Safety

- Printable therapy status report allows quick and easy access for documentation of therapy status.
- Printable and downloadable alarm status report, allows for troubleshooting and documentation of alarms and other critical events.
- Active pneumatic alarms at all physiological heart rates ensures that the user is alerted to any critical pneumatic event.
- Calibrated balloon pressure waveform enables the clinical assessment of the balloons' fit relative to the patients changing conditions.

Key actions and assessments made easy and accessible:

Alarm History

Date:	Time:	Alarm:
1. 12/03/2020	20:15	ECG LEAD FAULT RL
2. 12/03/2020	20:18	PURGE FAILURE
3. 13/03/2020	02:09	Possible HE Loss 3
4. 13/03/2020	10:38	ECG LEAD FAULT RA
5. 13/03/2020	10:41	TRIGGER LOSS
6. 13/03/2020	11:15	AP BELOW SET ALARM LIMITS
7. 13/03/2020	18:25	HIGH PRESSURE ALARM
8. 13/03/2020	19:45	HELIUM TANK LOW OR EMPTY
9. 14/03/2020	06:35	Possible HE Loss 2

▲ ▼ Done

Access to alarm history allows for quick review of past alarms and the ability to assess repeated alarms.

Getting Started

1) Check Helium Supply ✓
Helium Verified
2) Connect ECG and AP ✓
Trigger Verified
3) Connect IAB ✓
IAB Volume: 40cc

Start Pump

FOS (Optional)

1) FOS CAL Data Read (Loaded) ✓
2) FOS Sensor Connected ✓
3) Auto Zero in Progress ✓
4) Auto Zero is Complete, Insert IAB ✓

AP Waveform Present

An interactive review of the three step startup and confirmation when the pump is ready to start.

Therapy Status

HR	81 bpm
SYS (A/U)	109 / -- mmHG
AUG	126 mmHG
DIA (A/U)	51 / -- mmHG
MAP (A/U)	96 / -- mmHG
Assist Ratio	1:1
BVOL	40.0 cc
Trigger Mode	Afib
Mode	Autopilot
Timing Method (I/D)	Wave / RWave
Timing Settings	30 msec - Rwave
Alarms	On

Done

One-button summary of patient haemodynamics (response to IABP therapy) and therapy settings. Allows for one key stroke charting, with ability to print reports.

Innovative features from the third-generation AutoPilot Mode

Deflation timing management
Automated to provide real-time and comprehensive deflation timing.

Cardiac support up to 200bpm
Provides precise and accurate support for patients with severe arrhythmias and heart rates as high as 200 bpm.[1]

Best signal analysis
Continuously analyses all leads and trigger modes to identify the optimal trigger.[2]

IntraBeat Timing:
An advanced solution for a persistent complication

Atrial fibrillation is a persistent complication in patients undergoing cardiac surgery. It affects approximately a third of patients undergoing cardiac surgery.[3] Providing IABP therapy to these patients is made even more challenging due to the arrhythmia.

The AC3 Optimus IABP features IntraBeat Timing. It determines individual AV closure points to provide remarkable accuracy during IABP support, even in patients with severe arrhythmias.[1,4,5]

The AC3 Optimus IABP can help your facility be better equipped for your current and future patient populations.

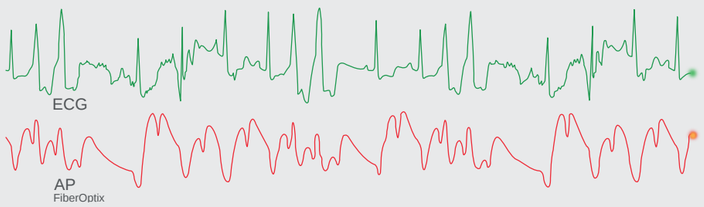
Accurate timing is critical to IABP performance. Early inflation timing errors can have negative effects on IABP therapy, including a decrease in stroke volume by as much as 20% (+/- -6% to -55%).[6] Late deflation is also associated with less-than-desirable haemodynamic responses.[5,6]

The solution? IntraBeat Timing for accurate inflation and AutoPilot Mode for controlled deflation timing management. The AC3 Optimus IABP makes it easy to track, sense, and adapt to changing conditions without routine clinician intervention, allowing the clinician to focus on what matters most — the patient.

The problem: The arrhythmic patient

The challenge: In published literature, conventional timing only showed 4 out of 16 beats were accurately timed.[5]

The solution: IntraBeat Timing has shown 98.1% accurately timed beats in severe arrhythmia.[1]

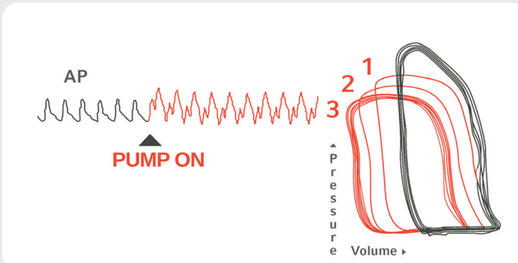


Representative of study. Individual results may vary.

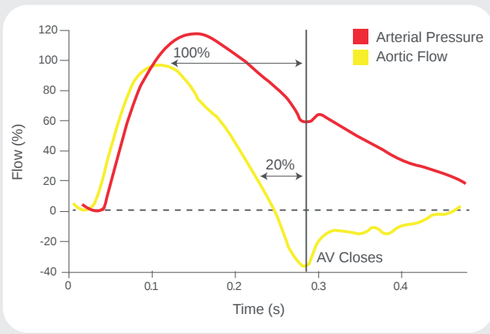
Immediate support with patented technology

The AC3 Optimus IABP is designed to deliver support from the very first beat, improving cardiac output and perfusion pressures whilst decreasing cardiac workload through the deflation of the balloon. Accurate inflation timing is enabled through the use of the WAVE Algorithm in conjunction with the Arrow Fiberoptix Intra-aortic balloon catheters.[6,10] Accurate aortic flow and pressure is maintained by two proprietary solutions — Flow Conversion and WAVE Algorithm.

IABP: Immediate support[6,10]

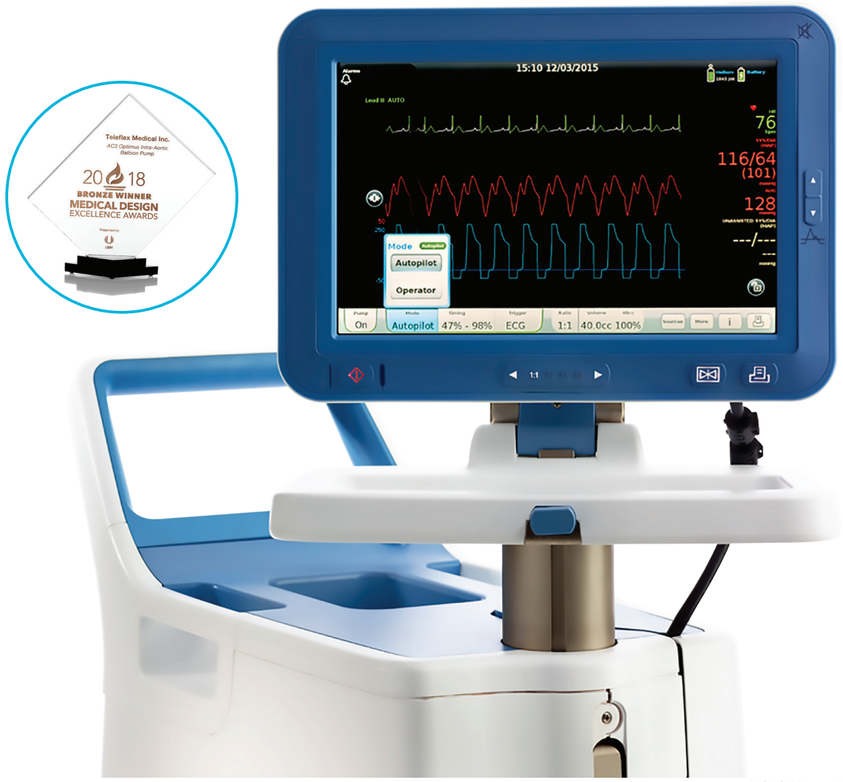


Two proprietary solutions: Flow Conversion, WAVE Algorithm[1,10]



2018 Medical Design Excellence winner

The AC3 Intra-Aortic Balloon Pump was named a Bronze winner in the Cardiovascular Device category of the 20th Annual Medical Design Excellence Awards competition — the industry's premier design competition.



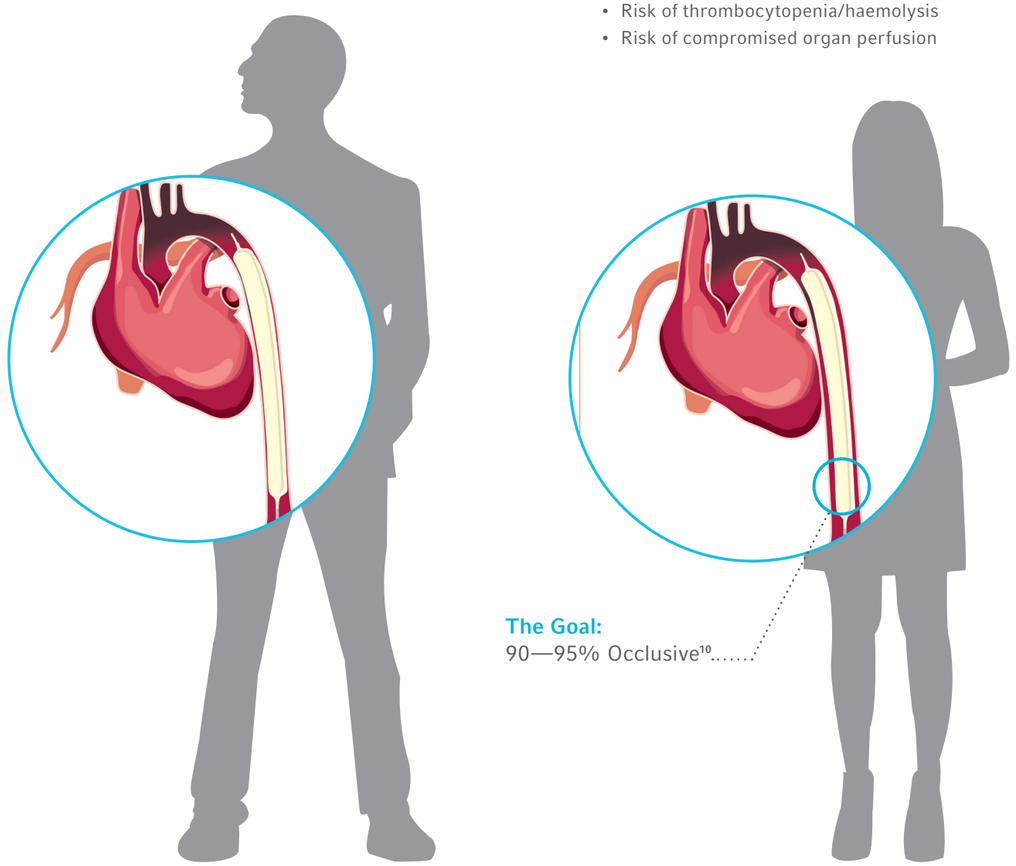
Managing risk with Protective Pumping Technology

While a larger balloon has been shown to improve augmentation, it does not come without potential risks.[7,8,9]

Patient height and BMI have long been the measuring tools for IABP sizing selection; however, recent studies have shown poor correlation of aortic length to height.[7,8,9]

There are a variety of risks associated with IABP therapy, including among others.[7,8,9]

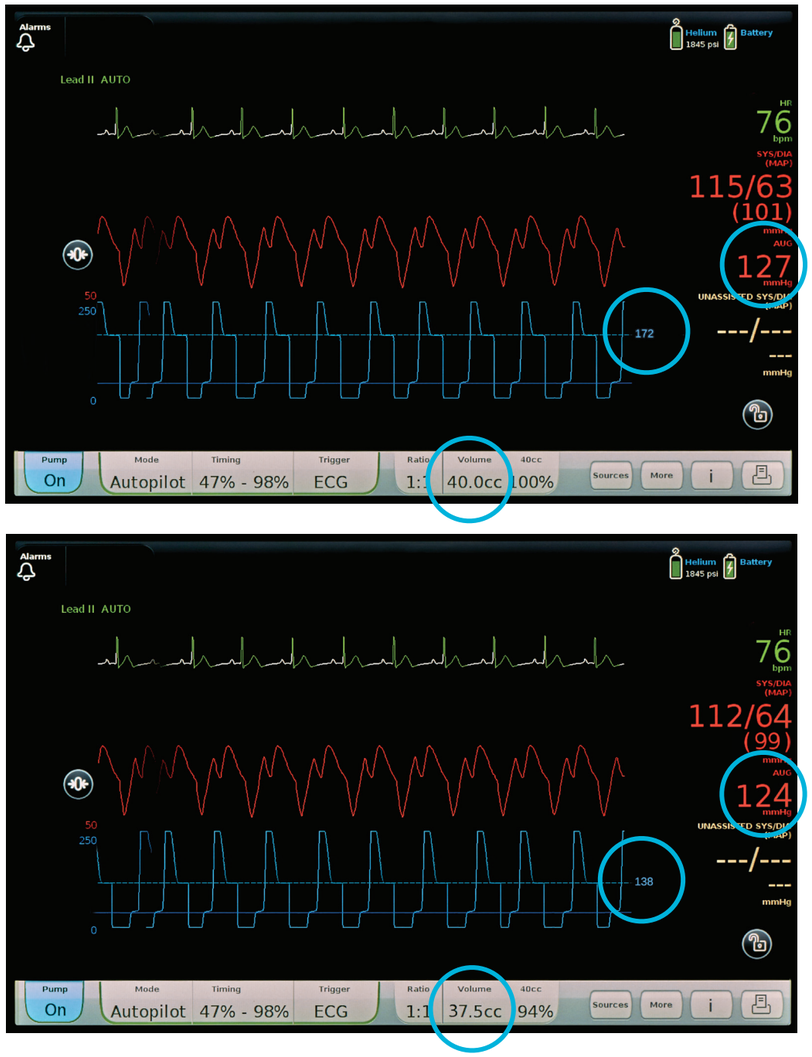
- Risk of balloon rupture
- Risk of thromboembolism
- Risk of thrombocytopenia/haemolysis
- Risk of compromised organ perfusion



The Goal:
90—95% Occlusive[10]

Monitoring pressure to optimise balloon sizing

Protective Pumping technology is made possible through the use of the calibrated balloon pressure waveform. This enables the measurement of the pressure within the inflated balloon. Comparison of this pressure against the Augmentation pressure provides valuable information to the clinician in assessing the fit of the balloon relative to the changing haemodynamic profile of the patient.



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