ACIST | CVi®

Official Partner MEDITRANS


# ACIST | CVi® Contrast Delivery System

## Standardizing contrast injection.

Bracco Group

ACIST®
the power to

# Standardizing contrast injection

The ACIST | CVi® System standardizes cardiovascular angiographic imaging across all procedures, from small injections in the coronaries to large volumes in the ventricles and peripheral vasculature. It's the advanced technology that physicians and staff can rely on for consistency and safety.

## Improving safety for physicians and staff

ACIST | CVi® is a sophisticated system providing precise control of contrast injections for all your interventional and diagnostic angiographic procedures. Physicians and patients benefit from fast, safe procedures:

- Compared to hand injections, the AngioTouch® hand controller results in fewer images needed, using less fluoroscopy, and reducing radiation exposure for physicians and staff. It also enables the physician to take a step back from the radiation source, further reducing exposure.[4]
- Innovative system design makes ACIST | CVi® easy to use and simple to operate, eliminating hand injections and reducing wrist and back strain associated with manual injections.

## Protecting your patients

As interventional procedures become more complex, it's important to take steps to reduce the incidence of contrast-induced nephropathy; also called acute kidney injury (AKI). Lowering the contrast dose administered to the patient is one option to help reduce AKI.

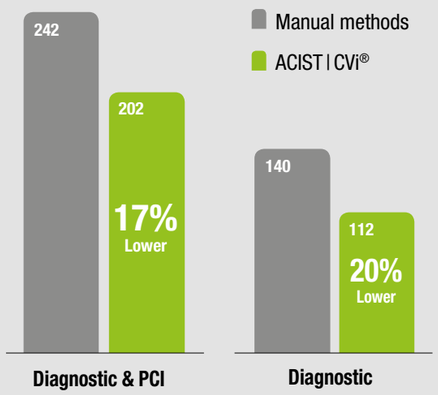
When compared to manual injection, automated contrast injection can:

- Decrease contrast dosage[1]
- Reduce CIN incidence by 15%, based on meta-analysis[2]

Use of ACIST | CVi® has been shown to achieve a median contrast volume of 17.9 mL per procedure using an ultra low dose protocol.[3] Designed with safety in mind, its built-in features provide continuous automated monitoring of all critical systems functions, including an air detect sensor that protects patients from air injection.

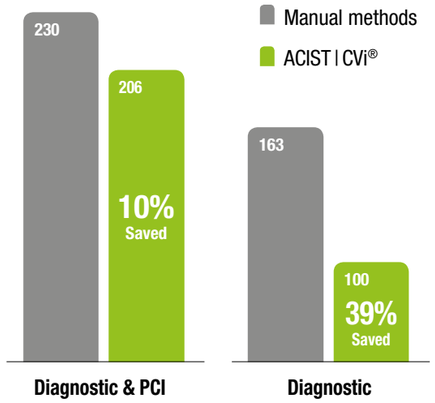
## Lower contrast dosage by 20%[1]

Lower average contrast dose[1]
per patient in milliliters



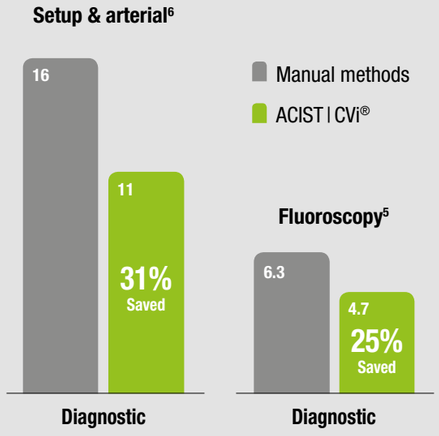

## Reduce contrast volume by 40%[5]

Total mean contrast volume[5]
per patient in milliliters



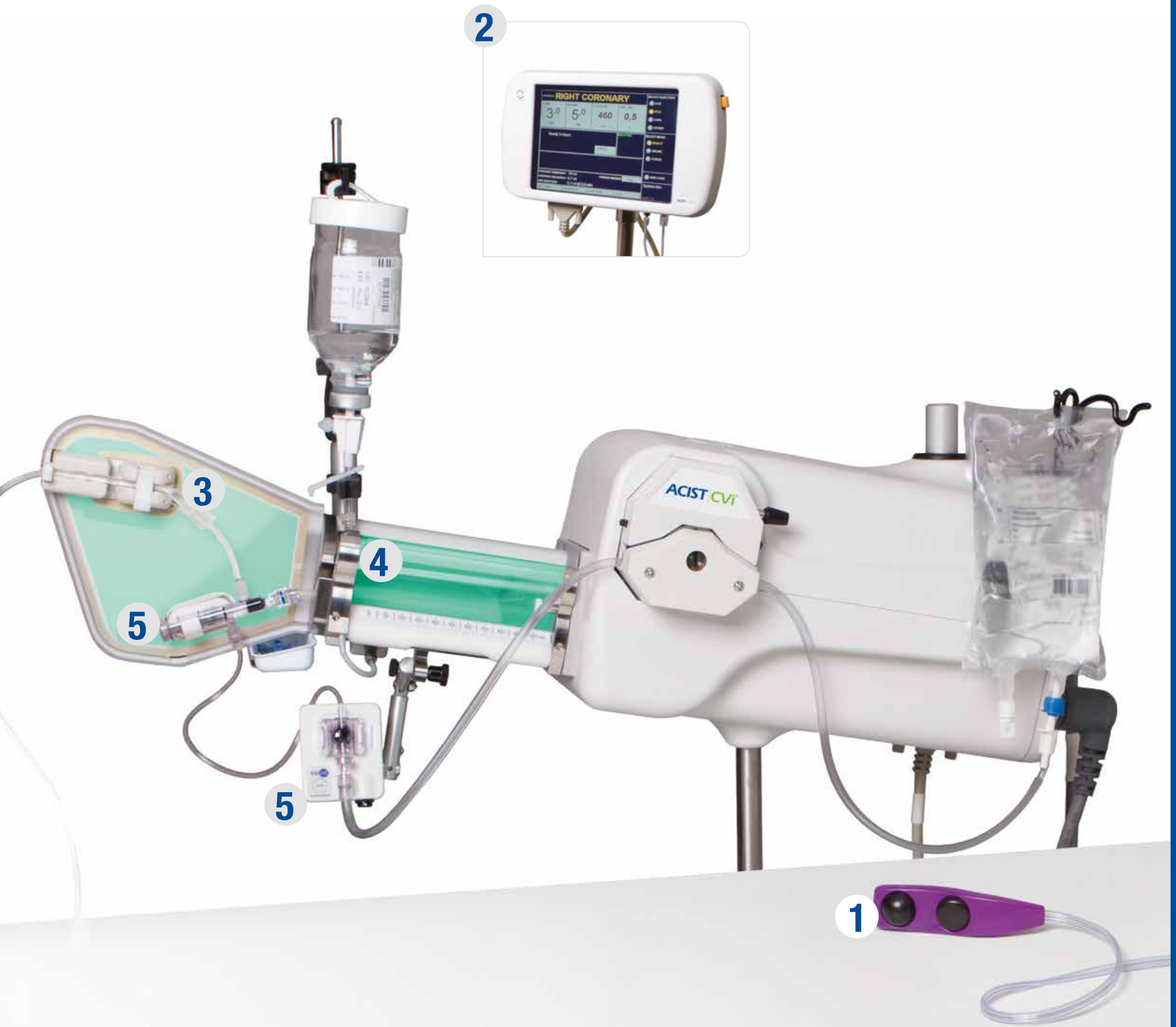

## Reduce procedure time by 31%[5,6]

Procedural time
per patient in minutes




## Lab efficiencies

ACIST | CVi® shortens the procedure time (and turnaround time between patients) and decreases total contrast used per procedure, simplifying complex procedures and allowing for efficient workflow and operations.




1 The AngioTouch hand controller allows real-time, variable-flow control of the contrast injection rate for precise and consistent contrast administration, and has been shown to reduce per-patient contrast dosage by up to 20%1

2 The touch screen monitor provides intuitive on-screen prompts for setup, adjustable injection volume and flow rate limits, contrast tracking information, and real-time readout for continuous system and procedure monitoring

3 The built-in air column detection sensor alerts the clinician and stops the injection if air is detected in the single-use patient tubing connected to the catheter*

4 The five-patient, isolated contrast syringe with rapid automatic refill can reduce contrast waste and save time between cases

5 In-line, hemodynamic monitoring provides a real-time pressure reading, and the automated isolation manifold provides a barrier to the contrast syringe

* The air column detection sensor is designed to aid the user in the detection of air columns in the injection line, but it is not designed to replace the vigilance and care required of the operator in visually inspecting for air and clearing air

## Product and Technical Specifications

| | CVi system |
|---|---|
| **Flow Rates** | |
| Contrast: | User-Responsive, pre-set Variable and Fixed rates from 0.8 to 40 ml/sec, in 0.1 ml/sec increments |
| Saline: | Fixed rate: 1.6 ml/sec |
| Volume | User-Responsive, pre-set limits with variable range of 0.8 to 99.9 ml, in 0.1 ml increments |
| Pressure Limits | User defined from 200 to 1200 psi |
| Fill Rate | Manual or automatic refill of 3 ml/sec |
| Rise Time | User-defined 0 to 1 sec, in 0.1 sec increments |
| Program Routine Injection Modes | Cardiac: LCA, RCA, LV/Ao and User Defined<br>Peripheral Vascular: Pigtail, Selective, Microcatheter and User Defined |
| Monitoring Sensors | Air Column Detect*, Isolation Manifold, Contrast Source Empty, Contrast Syringe Refill and Contrast Source Isolation |
| Imaging Interface Synchronization** | Able to synchronize with most brands of X-ray imaging equipment |
| Injection Delay** or X-ray Delay** | 0–99.9 sec |
| KVO Feature*** | Range of 0.1 to 10 ml/min with 20 min timeout; maximum of 200 ml of saline dispensed |
| Control Panel | 27 cm (10.5 inches) Color Touch Screen |
| Flexible Mounting Configurations | Table Mount with adjustable arm or stationary stem<br>Pedestal Cart |
| Pedestal Cart Dimensions | Wheelbase footprint 53.3 × 63.5 cm (21 × 25 inches), height 91.4 cm (36 inches) |
| Contrast Syringe | 100 ml |
| **Consumable Kit Configurations** | |
| Contrast Syringe (5 patient): | Contrast Syringe with contrast tubing spike and clamp (for use in up to 5 patient cases) |
| AngioTouch Hand Controller & Tubing: | AngioTouch hand controller, injection line tubing and 3-way stopcock |
| Automated Isolation Manifold: | Integrated system with automated isolation-manifold, low-pressure tubing and saline spike, and supplied pressure transducer cartridge |
| Component Weights | Power supply 5.5 kg (12 lb), control panel and stem 3.2 kg (7 lb), pedestal cart 10 kg (22 lb), injector head 20.4 kg (45 lb), adjustable arm 0.66 kg (1.45 lb) |
| Power Requirements | Factory selectable: 100 to 120 VAC, 50–60 Hz, 10 A maximum or 200 to 240 VAC, 50–60 Hz, 5 A maximum |

* The air column detection sensor is designed to aid the user in the detection of air columns in the injection line, but it is not designed to replace the vigilance and care required of the operator in visually inspecting for air and clearing air

** Available in synchronized peripheral mode

*** Available in peripheral mode

### References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4. 2011 ACIST Medical Systems Inc. interview with Joseph Tuma, MD, Rapid City Regional Hospital (Rapid City, SD).
5. Brosh D, Assali A, Vaknin-Assa H, et al. *Int J Cardiovasc Int.* 2005;7(4):183-187.
6. Lehmann C, Hotaling M. *J Inv Cardiol.* 2005;17(2):118-121.


The power to streamline your most complex interventional procedures.


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