

EmpowerCTA®



Empower Your CT Scanner

 **ACIST**[®]
MEDICAL SYSTEMS
In pursuit of the perfect image.

An Injector Line for Today's Advanced CT Procedures

No matter what your goals are in CT imaging, an ACIST Medical Systems Empower contrast injector is the right tool for your practice.

Designed for the Radiologist

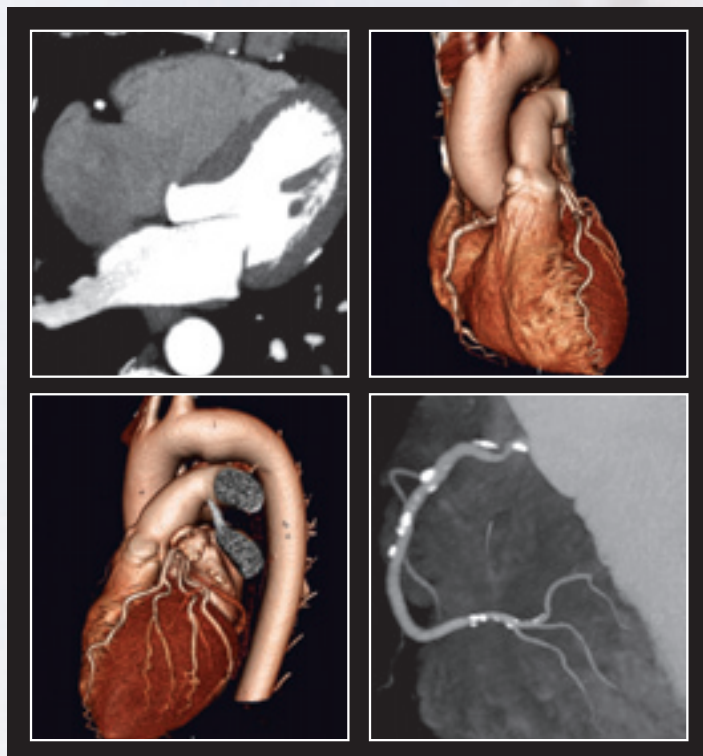
A 10 mL/sec maximum flow rate with “change on-the-fly control” and air embolism protection with the added safety of EDA™ technology to help detect extravasations.*

Designed for the Technologist

Intuitive graphic interfaces, simplified syringe loading, “at-the-injector” arming and a host of other features packed into a small, lightweight injector.

Designed for the Administrator

A modular design that helps improve serviceability and reduce downtime while making technology upgrades and integration with other systems easy to achieve.



EmpowerCTA®

In Cardiac CT

The combination of an EmpowerCTA dual syringe injector for contrast and saline chase with the right phasing protocol and your scanner can help maximize the benefits of a cardiac CT study and give you the results you need.

Ask your sales representative how results like these can be achieved with EmpowerCTA and your scanner.

*EDA is designed to aid in the detection of extravasations and is not intended as a substitute for proper patient monitoring and good clinical practice.

An Advanced Concept in Injector Design

Compact, Rotating Injector Head — The injector head and display swivel independently, allowing the head to rotate both left and right. The result? An injector that can be conveniently positioned at either side of the gantry.

Arming at the Injector — All system parameters may be reviewed, and the system armed, at the injector, with the head tilted in either direction.

Electroluminescent (EL) Display — Unlike the LEDs used by other systems, Empower injectors have a bright, high-contrast EL display that is easily viewable from oblique angles and shows up clearly, even in a fully lit CT suite.

Modular Flexibility — Major system components are modular and use versatile Windows®-based software. Operational capabilities, such as EDA, can be added at any time, and a modular design means maximum system uptime and easy upgrades as advanced features become available.

A Focus on Patient Safety

Convenient Pressure Gauge Displays — Pressure readings are displayed at the injector head and at the remote control, so the technologist can monitor as necessary.

EXCLUSIVE Tilt Lockout — The injector head may be tilted in either direction prior to injection (270° rotation) and is designed to prevent operation unless the injector is properly positioned to minimize the chance of an air embolism.

Manual Injector Advance — Rotating the knob at the rear of the injector head provides an easy means of manually advancing the syringe piston to provide a tactile feedback of proper contrast flow.

Voice Prompts and Fast Shutdown — Clearly spoken cues alert operators of certain system problems— no time is lost checking text messages. Injection may be paused at the injector head, or by touching any area on the remote control touch screen.

Easy-to-Use Digital Technology

Flow Rate Manipulation “On-The-Fly” — Flow rates ranging from 0.1 to 10 mL/sec may be manipulated while the procedure is in progress, at either the remote control or the injector head.

Flexible Control Options — Control syringe filling, removal and monitoring; system arming; flow rate manipulation, and more — at the injector head.

Easy System Monitoring — A graphic interface provides an easy-to-read indication of syringe volume. EDA system status is readily available, as well.

Pressure Limiting — Operator has the ability to preset a specific pressure that the injector is not to exceed—the flow rate is automatically reduced to compensate, pausing the injection, if necessary, while providing a real-time display of psi pressure.

Syringe Fill Options — Syringes may be filled manually or automatically. They fit easily into place, with no flanges to align. A snap-on syringe warmer maintains contrast at the proper temperature.

Intuitive Control

Touch Screen Display — The all-digital Empower design supports a versatile, full-color, touch screen display that allows the operator to control all system functions rapidly and efficiently with just the touch of a finger.

Simple Graphic Monitoring — Easy-to-understand graphics simplify the status monitoring of EDA system and syringe, including syringe pressure.

Anatomical Protocol Selection — A simple graphic interface allows grouping of similar protocols to provide instantaneous retrieval of up to 50 anatomically referenced, programmable procedures.

On-line “Help” — A “Help” button, similar to those found in other Windows®-based programs, provides immediate assistance in answering operational questions or for troubleshooting the system.



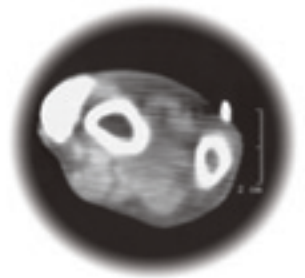
Advanced capabilities make ... patient care with patented extravasation detection



Available with both Empower CT and CTA

ACIST Medical Systems' patented EDA (Extravasation Detection Accessory) is an aid in the detection of extravasations which helps radiologists realize the full potential of high scanning speeds, confident that their good technique is backed by leading-edge technology.*

Empower injectors with EDA monitor skin impedance, alerting the operator and pausing the procedure when it detects variations indicative of a clinically significant contrast extravasation (20 mL) under the EDA patch.



How important is extravasation detection when high injection flow rates are being used?

Consider this:

After 10 seconds:

20 mL bolus

at 2.0 mL/sec

A 10-second injection at 2.0 mL/sec can cause a 20 mL extravasation: clinically significant, but not yet serious.

40 mL bolus

at 4.0 mL/sec

At 4.0 mL/sec, a 40 mL bolus, one larger than a golf ball, would be injected into a patient's arm during the same 10-second injection.

100 mL bolus

at 10 mL/sec

At the maximum rate of 10 mL/sec a dangerously large 100 mL of contrast — as large as a billiard ball — would be extravasated.

In fact, at 10 mL/sec it takes just two seconds for an extravasation to become clinically significant. And when ionic compounds are injected, the outcome can be even worse.

Why accept the risk? ACIST Medical System offers EDA technology, and because Empower injectors are modular, you can choose to have it now or add it on later.

* EDA is designed to aid in the detection of extravasations and is not intended as a substitute for proper patient monitoring and good clinical practice.

a critical difference

... and powerful data management

IRiSCT®

A software package that helps turn your Empower injector systems into an integrated data management network.

IRiSCT Injector Reporting Information System is a patent-pending, innovative networking solution for the CT suite. With IRiSCT installed on your Empower injectors, you can:

- Capture & Consolidate Injection Data
- Network Your CT Suites
- Analyze Your Operations
- Manage Your Department

...all from the convenience of your desktop!

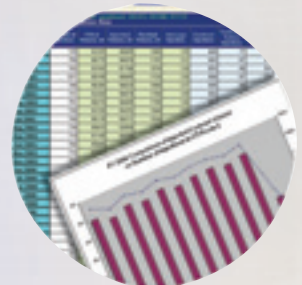
IRiSCT is designed to readily display and easily export the data you need to the Microsoft Office® Suite for analysis and review. Productivity bottlenecks and other sources of inefficiency can be identified by comparing departments and shifts and analyzing operations room-to-room in the 12-month view.



CAPTURE



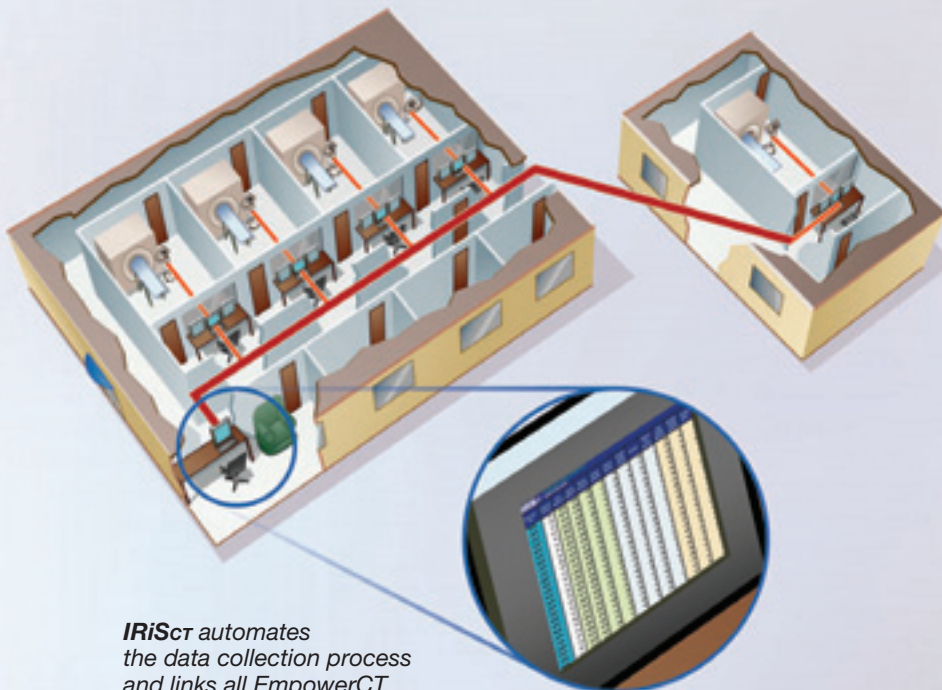
NETWORK



ANALYZE



MANAGE



IRiSCT automates the data collection process and links all EmpowerCT (single-syringe) and EmpowerCTA (double-syringe) injectors in a department, even those in remote locations, creating an integrated data management system that radiology administrators can access from their offices.

EmpowerCTA[®]

Specifications



EmpowerCTA Injector (dual-syringe)

Weight/Size: 18 lbs: 13" long, 7" high, 28" deep.
Syringe Volume: 1 to 200 mL in user-specified increments of 1 mL.
Pressure: 40 to 300 psi in user-specified increments of 1 psi.
Flow Rate: 0.1 to 10.0 mL/sec in user-specified increments of 0.1 mL/sec.
Power: 150 watts (max.); 100 to 240 VAC, with external switching power supply that auto-seeks to applied voltage; 45 to 66 Hz includes $\pm 10\%$ tolerance. Regulated 28 VDC at the injector.



EmpowerCT Injector (single-syringe)

Weight/Size: 12 lbs: 13" long, 7" high, 12" deep.
Syringe Volume: 1 to 200 mL in user-specified increments of 1 mL.
Pressure: 20 to 300 psi in user-specified increments of 1 psi.
Flow Rate: 0.1 to 10.0 mL/sec in user-specified increments of 0.1 mL/sec.
Power: 150 watts (max.); 100 to 240 VAC, with external switching power supply that auto-seeks to applied voltage; 45 to 66 Hz includes $\pm 10\%$ tolerance. Regulated 28 VDC at the injector.

Empower Remote

Weight/Size: 10 lbs: 13" wide, 11" high, 4" deep.
Power: 65 watts (max.); 100 to 240 VAC, with internal switching power supply that auto-seeks to applied voltage; 45 to 66 Hz includes $\pm 10\%$ tolerance.

EDA (Extravasation Detection Accessory)

Patient Current Leakage: Less than 10 microamperes, type CF.
Extravasation Detection: Less than 20 milliliters.



Flexible Mounting Options

Empower injectors may be mounted on a convenient, roll away floor stand or on a custom-designed, articulated wall/ceiling mount. Desktop and wall mounts are also available for the Empower injector remote control.

Ordering Information

Basic System Description

EmpowerCTA Dual-Syringe Injector Systems include:
Injector Head, Remote Control (Windows® Based), Remote Control
Desktop Mount, Power Supply, All Cables and Pendant Switch.

To order with:	Cat. No.
Pedestal Mount - Basic System with Rolling Floor Stand.	102372
Ceiling Mount - Basic System with Overhead Ceiling Mount.	102369
Pedestal Mount with EDA - Basic System with Rolling Floor Stand, EDA Module, EDA Cable.	102365
Ceiling Mount with EDA - Basic System with Overhead Ceiling Mount, EDA Module, EDA Cable.	102362

Basic System Description

EmpowerCT Single-Syringe Injector Systems include:
Injector Head, Remote Control (Windows® Based), Remote Control
Desktop Mount, Power Supply, All Cables and Pendant Switch.

To order with:	Cat. No.
Pedestal Mount – Basic System with Rolling Floor Stand.	102327
Ceiling Mount – Basic System with Overhead Ceiling Mount.	102325
Pedestal Mount with EDA – Basic System with Rolling Floor Stand, EDA Module, EDA Cable.	102323
Ceiling Mount with EDA – Basic System with Overhead Ceiling Mount, EDA Module, EDA Cable.	102322



Every EmpowerCTA System arrives EmpowerSync “ready”

- EmpowerSync provides CAN connectivity.
- EmpowerSync is configured for select CAN CIA DSP 425 Scanner Interfaces. Check with your ACIST Sales or Service Representative for available Scanner Interfaces and Option activation.
- EmpowerSync keeps your EmpowerCTA platform current with available MDCT interface offerings through software activation and upgrade as required.

Contact your local representative
to find out more about our advanced line
of contrast injector technologies.



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In pursuit of the perfect image.