

OTHER DEVICES

CONTRAST DELIVERY SYSTEMS

Company Name	Product Name	Applications	Flow Range (mL/sec)	Volume Range (mL)	Delivery Pressure Range, Bar (psi)
Acist Medical Systems, Inc.	CVi Contrast Delivery System	Angiography for coronary arteries, ventriculography, aortography, peripheral angiography	0.8–40 responsive variable rate in 0.1-mL increments	User-responsive variable range 0.8–99.9 in 0.1-mL increments	System limits of 200–1,200; user-defined program limits dependent on procedure parameter of choice
	EmpowerCTA	CT	0.1–10	10–200	40–300
Covidien, Liebel-Flarsheim	Angiomat Illumena	Angiography, CT	Angiography, 0.1–40; CT, 0.1–10	0.1–200	75–1,200; CT mode, 75–300
	Optistar Elite	MRI	Side A: 60 mL syringe, 0.1–10 mL/s 1-0, 15-, 20-, 30-mL syringe, 0.1–8 mL/s; side B: 0.1–10 mLs in 0.1-mL increments	0.1–60	10, 15, 20, 30, 50 mL prefilled syringes at 200; 60 mL empty syringes at 150
	OptiVantage DH	CT	0.1–10	1–125 or 1–200, depending on syringe size	25–325
LeMaitre Vascular, Inc.	LeverEdge Contrast Injector	Angiography	Variable	0.1–32	70–600

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Adjustable Rise Time	Syringes	Syringe Capacity (mL)	Disposable	Prefilled	Other Specifications/Comments
Yes, 0–1 sec in 0.1-sec increments	Up to 5-times use, disposable	100	Disposable multi-use syringe, patient kits with integrated pressure transducer, and hand controller	N/A	Designed for coronary injections as well as large-volume injections (left ventriculogram, aortogram, etc.) and all peripheral procedures; air column detector distal to patient tubing connection, auto contrast refill, and air purge; tracks contrast delivered and used per injection and case; multiple sensors
N/A	PET	200	Yes	No	New automated syringe initialization, syringe fill, and air purge features; arming at the injector; IRiS Viewer; extravasation detection technology; built-in Bracco protocols, open architecture; simple user interface; upgradeable; tilt sensor/lock-out; voice prompts; fast shutdown; modular flexibility
Yes, 1–10 sec	Prefilled and disposable	150, 200	150, 200	50, 75, 100, 125	Versatile exam modes; with just the touch of a button, you can switch between cardio, angio, and CT modes
No		60 on A and B (contrast and saline)	60 mL on A and B (contrast and saline)	Contrast: 10, 15, 20, 30 mL; saline: 50 mL	Battery-free power source patency check; status line indicator; color-coded push rods; auto retract powerhead; recessed start button battery-free power source
		200	200 mL front loading	Contrast: 50, 75, 100, 125 mL; saline: 125 mL	Optional Optibolus bolus shaping software improves CTA images and contrast agent utilization; RFID technology, an automatic identification technology that captures, stores, and transmits data between the Ultraject syringe and the Optivantage DH power injector using devices called RFID transponders, or tags; prevents use of previously used syringe
N/A	Disposable single-use	35	Yes	N/A	Provides manual operator with complete control; patented design injects contrast at pressures six times greater than standard manual syringe

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Company Name	Product Name	Applications	Flow Range (mL/sec)	Volume Range (mL)	Delivery Pressure Range, Bar (psi)
Medrad Interventional	Mark V ProVis	Angiography	60-mL syringe: mL/sec flow-rate range, 0.3–20; 150/200-mL syringe: mL/sec flow-rate range, 0.3–50; mL/min/h flow-rate range, 0.3–59	0.5–200	100–1,200
	Avanta		Variable flow: 1–10 in 0.1-mL/sec increments; fixed flow: 1–45 in 1-mL increments	Volume 1–150 in 1-mL increments; refillable from attached bulk source	300–1,200
Medrad, Inc.	Stellant D	CT	0.1–10	Integral auto load allows user-defined contrast and saline volumes, based on procedure, to load automatically; 200 maximum per syringe	50–325 maximum
	Stellant SX				
	Spectris Solaris EP	MRI	0.01–1 in 0.01 increments from 0.01–3.1; 0.1 increments from 3.1–10	0.5–65 mL in 0.1-mL increments up to 31 mL; 1 mL increments for ≥ 31 mL or 1–115 mL in 1-mL increments (saline)	Factory set not to exceed 325

CTA, computed tomographic angiography; MRI, magnetic resonance imaging; OEM, original equipment manufacturer.

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Adjustable Rise Time	Syringes	Syringe Capacity (mL)	Disposable	Prefilled	Other Specifications/Comments
Yes, 0.0–9.9 sec in 0.1-sec increments	Single-use, disposable	60, 150, 200	60, 150, 200	No	Exclusive Mechanical Stop, patented FluidDots, Sentinel Air Check Reminder, 100% OEM compatibility, multiple configurations (table, pedestal, overhead mounts), 99.9% average up-time
Rise time 0.0–9.9 sec in 0.1-sec increments	Disposable, multiuse	150	150		Dual infrared fluid level sensors for saline and contrast line, saline flush capability, multipatient use disposables, gross air detectors, FluidDots, 100% OEM compatibility, multiple configurations (table, pedestal mounts)
N/A	Disposable	Saline, 200; contrast, 200	200-mL syringes	Yes, exclusive compatibility with more than one contrast manufacturer	Patented P3T products offer personalized patient injection protocols; enables consistent vascular attenuation for C transducer and hand controller
		200			
		Saline, 115; contrast, 65	Yes	N/A	