

Introducing the NEW...

Universal HD-300 Portable CT System

The compact, portable, efficient and affordable CT solution to your laboratory or well site scanning challenges. Operates on 110 volts or battery power.

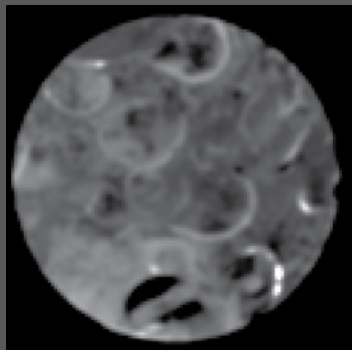


HD-300 system with a 4" core in a AL vessel

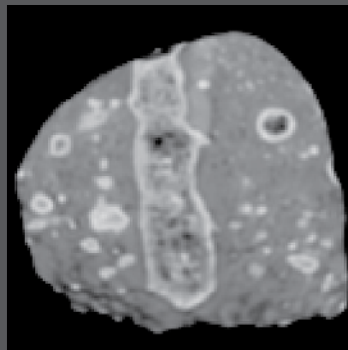


Rock samples

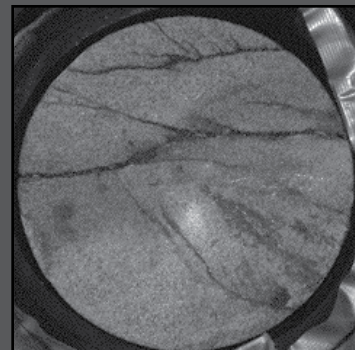
Sample diameters are 1.5 - 2.0 inches, scanned within a core holder with an aluminum wall thickness of about 0.4 inches.



Carbonate rock - mainly shells
2" diameter



Clast from the Caribbean
2" diameter



Fractured Shale Sample
4" diameter



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Universal HD-300 Portable 8 Slice CT Scanner



Geometry

Patient Opening: 32 cm
Image Field of View: 25 cm

X-ray Generation

X-Ray Beam Shape: Cone Beam
X-Ray Tube Voltage: 100, 120, 140 kV
X-Ray Tube Current: 1-7 mA
X-Ray Tube Cooling: 2 Minutes Max
Focal Spot Size: 1 mm x 1 mm
X-Ray Tube Type: Fixed Anode

X-Ray Detection

Detection System: Solid-state Detectors
Main Detectors: 8 rows

Connectivity

USB Memory Stick: 512 MB
DICOM 3.0: Gigabit Ethernet/wireless (G)

CTDI Dose

Scan Techniques for all CTDI Dose specifications are at 120KV, 14 mAs, 2 second scan time, 10 mm aperture. Dose is demonstrated with CTDI Methodology in compliance with Federal Regulation 21 CFR 1020.33©. Measurements were only made with the head phantom due to the small CereTom™ aperture.

CTDI Expressed in mGy

Center: 35.8*
Surface: 46.64*
*Average over 20 seconds

Non Contrast CT (Axial)

Rotation Time: 1s,2s,4s,6s
Scan Range: 25 cm
Translate Time: 1s
Slice Thickness: 8 x 1.25mm
Number of Slices per scan: 8
Image Reconstruction time: 1s/image

CT Angiography (Helical)

Rotation Time: 1s
Scan Range: 25cm
Scan Time: 25s
Scan Start Time Delay Range: 0 to 100s
Helical Scan Pitch: 1
Image Reconstruction Time: 1s/image
Slice Thickness: 8 x 1.25mm

CT Perfusion (Axial)

Scan Range: 1 cm
Scan Time: 30-45s
Slice Thickness: 10.0mm
Scan Results: MTT/CBF/CBV
Rotation Time: 1 second

Image Quality

Noise STD Less Than: 0.3%
Low contrast Detectability: 3mm at 0.3%
Measurement Basis: 140kv, 15mAs, 10mm slice thickness, 8in CATPHAN Phantom, 53mGy (5.3Rad). Dose is measured in the center of the phantom using a pencil probe with a 10cm chamber length ($\pm 15\%$ tolerance)
High Contrast Spatial Resolution

Standard Kernel (Hanning Window BW=0.5)
0.65mm limiting resolution
4.8 lp/cm @50% MTF
7.4 lp/cm @10% MTF
8.2 lp/cm @0% MTF

High Contrast Spatial Resolution

Standard Kernel (Hanning Window BW=1.0)
0.35mm limiting resolution
6.6 lp/cm @50% MTF
12.2 lp/cm @10% MTF
16.5 lp/cm @0% MTF

MTF calculated from a one-dimensional Fourier transform of the point spread function using pixel data around a 0.05mm tungsten wire at Isocenter.

Reconstruction Matrix: 512 x 512
Picture Element (pixel) size: .49 mm

INSTALLATION REQUIREMENTS

Power Requirements:

Phase: Single
Voltage: 90-264VAC/1300 watts peak

Frequency: 47-63Hz
Battery Capacity: Fully Charged- 2 Hours (typical)
Typical Usage: 110-120v; 60hz

Site Requirements

Operating Temperature: 15 Deg C to 35 Deg C
Storage Temperature: -25 Deg C to 70 Deg C
Operating Altitude: 0-3010m (0-10,000 ft)
Operating Humidity: 20 to 80% non-condensing
Floor Flatness: <+/- 0.120 inch (3mm) per ft



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