

Phoenix Power|scan HE

Industrial 9 MeV High-Energy CT Scanner
for Large or Dense Samples



The very first of its kind, our 9 MeV Linear acceleration (LINAC) CT scanner Phoenix Power|scan HE leverages cutting-edge technological advancements.

The combination of penetration power and Waygate Technologies advanced CT features such as Scatter|correct technology makes this CT system predestined to scan extremely large, heavy and high absorbing complex parts and assemblies with unmatched speed, precision, and ease of use – enabling faster, more precise inspections than ever before. When it comes to fast and powerful, but precise and reliable high quality CT with maximum flexibility, Power|scan HE is the ultimate solution.



An integrated crane makes loading and unloading of parts that weigh up to 1000 kg simple

Typical Power|scan HE Applications

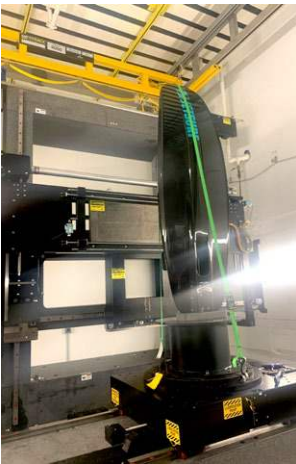
The Phoenix Power|scan HE system has been designed to meet the fast-growing demand for applications requiring much more than traditional CT machines can offer. Driving the requirements is the need for high quality CT scans of

- Complex castings and assemblies
- High-density metal alloy additive parts
- Large composites components with complex internal structures

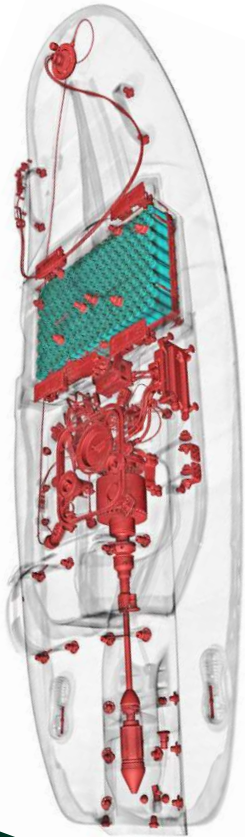
This system is capable of analyzing these types of components with a significant scan time reduction at highest image quality.

Key features & benefits

- 9 MeV LINAC source, 20 times more powerful than the optional 450 kV Minifocus X-ray tube
- Part weight up to 1000 kg and part size up to 1920 mm in diameter x 2000 mm tall
- Flat panel detector with up to 4x detector shift, combined with advanced scatter correction technology ensure high throughput at premium image quality
- Flexibility to add additional features such as 3D metrology

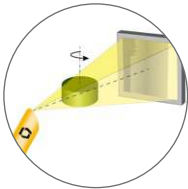


Jetsurf board scanned with Power|scan HE, CT visualization by CEITEC



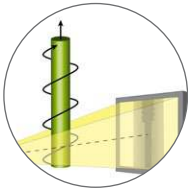
Scatter|correct technology

Get unprecedented low artifact precision up to 100 times faster than with a comparable quality fan beam CT.



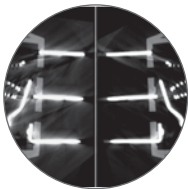
Offset|CT

Scan even larger parts with up to 100% larger scanning volume.



Helix|CT

Scan longer samples with improved image quality to increase probability of detection (POD) with efficiency and ease.



Multi|bhc

The Multi|bhc tool corrects streaking artifacts which typically occur as multiple dark streaking bands positioned between dense areas in multi-material samples.



Dual X-ray source 450 kV Minifocus / 9 MeV LINAC



Flat panel detector with 4x virtual enlargement

Key Specifications & Features

	Phoenix Power scan HE
Application	Large composite or high absorbing castings, weld assemblies, batteries or AM parts
Advantages	20 times more penetration energy for extraordinary large and heavy samples
Primary X-ray source	9 MeV Linear accelerator
Optional additional X-ray source for higher resolution	450 kV / 1500 W Minifocus
Max. CT scanning volume (Ø x height) *	1920 mm Ø x 2000 mm
Max. sample weight *	1000 kg / 2205 lbs.
Min. focal spot (F)	F <1.5mm @ 20 Gy/min/m, optional 1 mm @ 1500 W with Minifocus tube
Max. detail detectability (D)	Minimal Voxel size Linear accelerator 70 µm, Minifocus 60 µm
Geometric magnification	4.5x
Granite based Manipulation	11 axes
Focus detector distance (FDD)	1500 – 5000 mm
Cabinet dimensions (W x H x D in mm)	Manipulator 8000 x 4300 x 3800 mm (without bunker, console & switch cabinet)
Weight approx. without / with cabinet *	~48 t / bunker required
Flat panel detector (DDA)	High radiation proof detector XRD 1621 (41 x 41 cm², 40 fps (1x1) or 75 fps (2x2), 200 µm pixel pitch) or XRD 4343 (42.7 x 42.7 cm², 4 fps (1x1) or 15 fps (2x2), 139 µm pixel pitch)
Flat panel detector shift	4x
Offset CT	Scan bigger parts or the same size parts with higher resolution
Helix CT	Scan long samples with improved image quality
Multi BHC	Beam-hardening correction in multi-material scans
Scatter correct	Patented scatter radiation artifact reduction

* Values in table represent the standard configuration. Additional values are available on request.

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