

APPLICATION

CLEAR Motion Reconstruction system is intended to reduce motion artifacts. This system is designed using deep learning.

The applicable CT systems are shown below.

SYSTEM MODEL		MANDATORY OPTION
Aquilion ONE	TSX-308A/1-3	CCRS-003A*
	TSX-308A/4-6	CCRS-003C*
	TSX-306A/I-N	

*: Reconstruction processing unit (CCRS-003A or CCRS-003C)

Note: System software version must be V1.5 or later.

Some systems may not be available in your country or region.
Please check with your sales representative.

FEATURES

- CLEAR Motion is a Deep Learning Reconstruction (DLR) method designed to reduce motion artifacts.
- A Deep Convolutional Neural Network (DCNN) is used to estimate the patient's motion. This information is used in the reconstruction process to obtain images with less motion artifacts.

COMPOSITION

- Media..... 1 set
- Manuals..... 1 set

PERFORMANCE SPECIFICATIONS

Scan parameters

<For the lung>

- Scan region

– Chest

- Scan type
 - Helical scan
- Rotation time

TSX-308A:	0.24* ¹ , 0.275* ¹ , 0.30* ¹ , 0.32* ¹ , 0.35, 0.375* ² , 0.4, 0.45* ² , 0.5, 0.6, 0.75, 1, 1.5 s
TSX-306A:	0.275* ³ , 0.30* ³ , 0.32* ³ , 0.35, 0.375* ² , 0.4, 0.45* ² , 0.5, 0.6, 0.75, 1, 1.5 s

- Slice thickness: 0.5 mm
- Acquisition
 - Helical scan
 - 0.5 mm slice: 160, 128, 100, 80 rows
- ^{SURE}Exposure 3D: The X-ray tube current is continuously varied to ensure the optimal X-ray dose during helical scanning.

<For the cardiac>

Note: System software version must be V1.7 or later

- Scan region
 - Cardiac
- Scan types
 - Volume scan
 - Dynamic volume scan

Note: Applicable when the ECG-gated scan system (CHEG-005A) is used. In addition, ECG-gated scanning must be performed.

Applicable to tilt volume scan.

- Rotation time
 - TSX-308A: 0.24*¹, 0.275*¹, 0.30*¹, 0.32*¹,
0.35, 0.375*², 0.4, 0.45*² s
 - TSX-306A: 0.275*³, 0.30*³, 0.32*³,
0.35, 0.375*², 0.4, 0.45*² s
 - Slice thickness: 0.5 mm
 - Acquisition
 - Volume scan, Dynamic volume scan
- () indicates the scan range
- 0.5 mm slice: 320 (160 mm)*⁴, 280 (140 mm)*⁴,
260 (130 mm)*⁴, 256 (128 mm)*⁴,
240 (120 mm)*⁴, 200 (100 mm)*⁴
rows

*1: Fast scan and X-ray power up kit is required for TSX-308A/2, /3, /5, /6.

*2: Not applicable when Fast scan and X-ray power up kit is installed.

*3: Fast scan and X-ray power up kit is required for TSX-306A/J, /K, /M, /N.

*4: Dynamic volume CT upgrade kit is required for TSX-308A/3, /6,
TSX-306A/K, /N.

Reconstruction

- Algorithm: CLEAR Motion
- Applicable anatomical regions
 - LUNG (For chest)
 - CARDIAC (For cardiac)*1
- Reconstruction matrix: 512 × 512,
1024 × 1024*2
- Image thickness: 0.5, 1, 2, 3, 4, 5 mm
- Reconstruction interval: Min. 0.25 mm
Max. 5 mm

Note: Reconstruction interval can be selected equal to the image thickness or the value calculated by dividing the image thickness by 2.

- Image processing:
 - Adaptive Iterative Dose Reduction 3D (AIDR 3D)
 - Advanced intelligent Clear-IQ Engine (AiCE)*3
 - Precise IQ Engine (PIQE)*3

MASS

- Mass: 0.2 kg (0.4 lb)

POWER REQUIREMENTS

The ratings of the CT system have not been changed.

AMBIENT CONDITIONS

Same as those for the CT system.

*1: System software version must be V1.7 or later
*2: Only when used in combination with PIQE
*3: Option

Manufacturer:

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