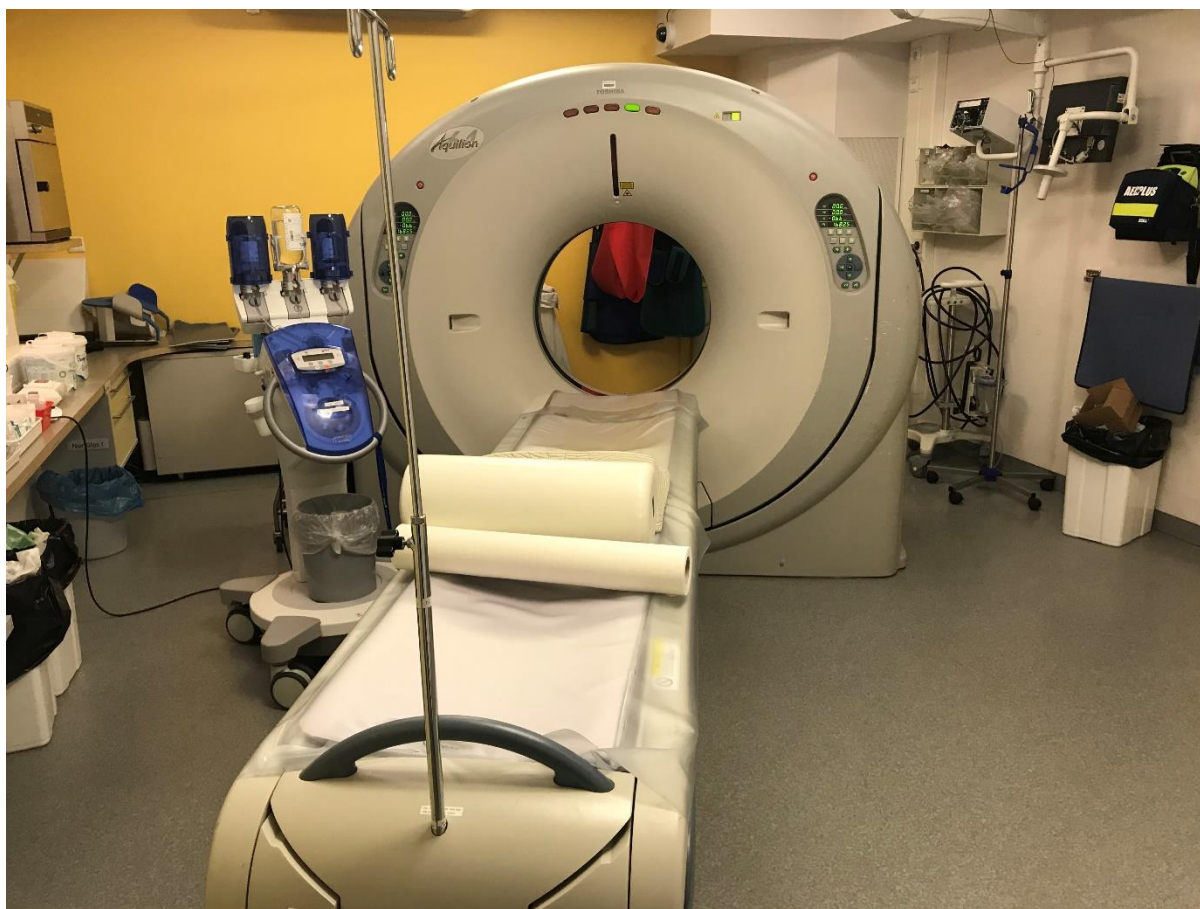




System Inspection and Quality Assurance of a Toshiba Aquilion 64 Slice CT scanner



The inspection was performed on 21st November 2019

@ DRK Kliniken Berlin Mitte - Germany.



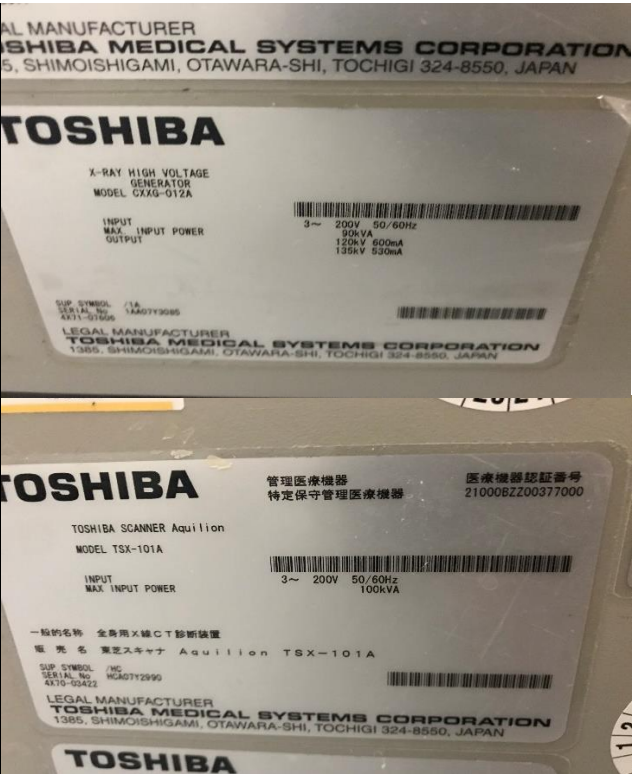
System Inspected by OEM trained engineer at Goring Medical Projects Ltd

System Specifications

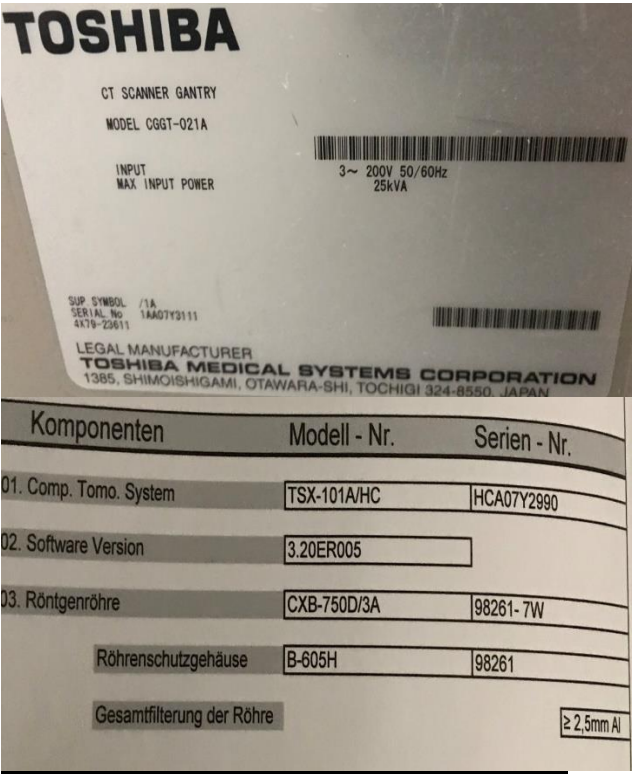
- Aquilion 64
- Software Version V4.62GR018
- Xray Tube CXB-750D/3A or MCS-750
- Last Tube change: 23. November 2017
- System Serial Number: HCA07Y2990
- System Model Number:TSX-101A/HC
- Year of Manufacturing: 2008

System Components/Config

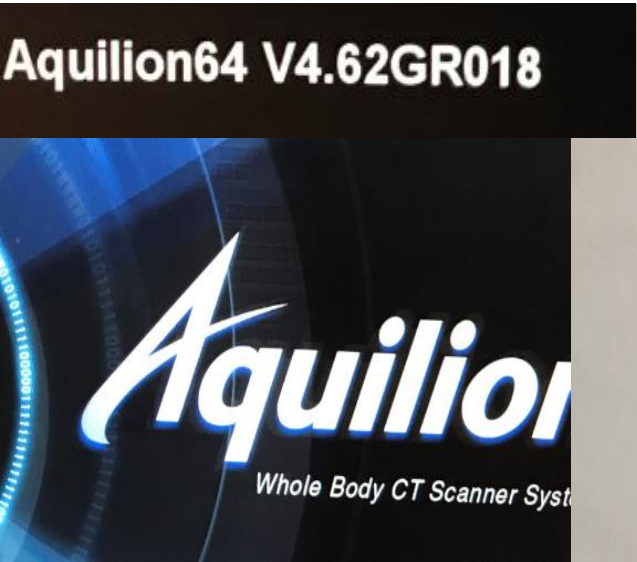
Component	Model Number	Serial Number
Gantry	CGGT-021A/1A	1AA07Y3111
Detector	CDAS-041/1A	1AA07Y3574
Patient Couch	CBTB-019A/1A	1AA07Y3482
Console/Reconstruction Box	CKCN-12B/2A	2AC07Y3557
Generator	CXXG-012A/1A	1AA07Y3085
Wesemann Transformer	P2020/E	A23566
Scan Monitor	RADIFORCE R12	54579107
Display Monitor	RADIFORCE R12	54604107
In room suspended monitor	RADIFORCE S1910	41558037
ECG Monitor	LIFEPULS 10/G	745CX0100232-07
ECG Gated Recon Software	CHEG-004B/1B	1BA07X3901
ECG Gated Acquisition Software	CHEG-004C/1B	1BA07Y3943
DICOM MWM SCU	COT-32D/1B	1BA07Z4874
DICOM PPS SCU	COT-33D/1B	1BA07Y3274
DICOM Q/R SCP	COT-34D/1B	1BA07Y2943
DICOM Q/R SCU	COT-35D/1B	1BA07Z3205
DICOM Storage commitment	COT-41D/2B	2BA0822153
Bone Mineral study	CBM-14A/1B	1BA07Y2265
Video splitter	EMI-MODELL	V730171100409
Router Firewall	SG720	2240438470708
Can Injector interface	CKIS-004A/1B	1BA0742009
Foot rest	CAEX	N5W64512
CAFM	CAFM	071030-08



System and Generator



Graduation Year



Installed Software Licenses – Scan Console

License List	
License Name	Status
ALATO_3DVIEWER	ON
ALATO_COLORPRINTER	OFF
ALATO_DENTAL	OFF
ALATO_FLYTHROUGH	OFF
ALATO_MULTISLICECT	ON
ALATO_STANDARD	ON
ALATO_VIDEOFLASH	OFF
BMS	ON
BODYPERFUSION	OFF
CARDIAC	OFF
CARDIACMPR	OFF
CARDIACPATCH	OFF
CARDIACRECON	OFF
CARDIAC_PROSPECTIVE	OFF
CA_SCORE	OFF
CBP	OFF
COLON_VIEW	OFF

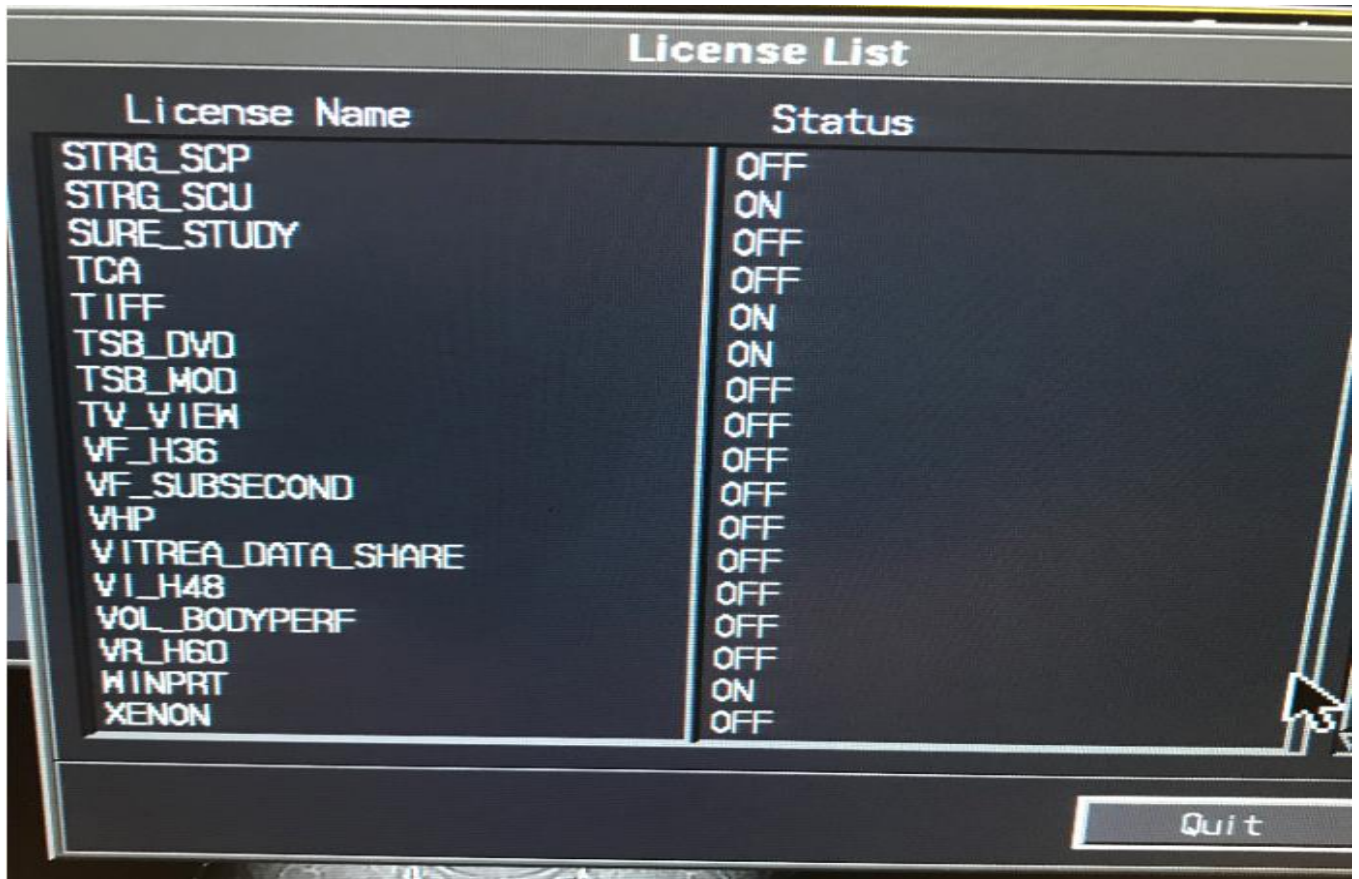
License List	
License Name	Status
COLON_VIEW	OFF
COMMIT_SCU	ON
CTPORT	OFF
DCM_CDR	ON
DCM_RAW	OFF
DE_MEAS_TOOL	OFF
DE_SCAN	OFF
DIM_EXP	OFF
DOUBLESLICE	OFF
DYN_HEL	OFF
D_PRT_BW	ON
D_PRT_COLOR	ON
EHCT2_SCP	OFF
EHCT_SCP	OFF
EHCT_SCU	OFF
FAT_MEASURE	OFF
FLUOROSCOPE	OFF

Quit

License List	
License Name	Status
FLUOROSCOPE	OFF
HANDSWITCH	OFF
IMG500K	OFF
INJECTORSYNC	OFF
KIDNEY_PERF	OFF
MPR_VESSEL	OFF
MULTIVIEW	ON
MMW_SCU	OFF
MYO_PERF	OFF
NEUROPACK	OFF
ORBITSYNC	OFF
OVER64HEL	OFF
PGP	OFF
PLAQUEVIEW	OFF
POSTSCRIPT	ON
PPS_SCU	OFF
PREM320	OFF
Quit	

License List	
License Name	Status
PREM32U	OFF
PRINT_SCU	ON
PT_3DREC	OFF
PT_DYN	OFF
PT_RESP I_REC N	OFF
QDSCAN	ON
QR_SCP	ON
QR_SCU	ON
REALEC	OFF
REAL_PREP	OFF
REAL_VIEW	OFF
REGISTTOOL	OFF
REMOTE_DISPLAY	OFF
RESPIRATION	OFF
RESPRECON	OFF
SCAN320ROW	OFF
SCAN64ROW	ON
SCANTIME04SEC	OFF
Quit	

License List	
License Name	Status
SCAN320ROW	OFF
SCAN64ROW	ON
SCANTIME04SEC	OFF
SPDUP_BREC	OFF
SPDUP_EGR	OFF
SP_H72	OFF
SP_HSF	OFF
ST035SEC	OFF
STEREO	OFF
STRAGE_SCP	OFF
STRG_SCP	OFF
STRG_SCU	ON
SURE_STUDY	OFF
TCA	OFF
TIFF	ON
TSB_DVD	ON
TSB_MOD	OFF
TV_VIEW	OFF
Quit	



License Name	Status
STRG_SCP	OFF
STRG_SCU	ON
SURE_STUDY	OFF
TCA	OFF
TIFF	ON
TSB_DVD	ON
TSB_MOD	OFF
TV_VIEW	OFF
VF_H36	OFF
VF_SUBSECOND	OFF
VHP	OFF
VITREA_DATA_SHARE	OFF
VI_H48	OFF
VOL_BODYPERF	OFF
VR_H60	OFF
WINPRT	ON
XENON	OFF

Quit

System Condition Overview

The overall condition of the system is very good, it is in good functional and cosmetic condition and has been maintained by the OEM from installation until present.

The system successfully passed all functional, operational and QA tests without any problems.

X-Ray Tube overview (Current Installed Tube)

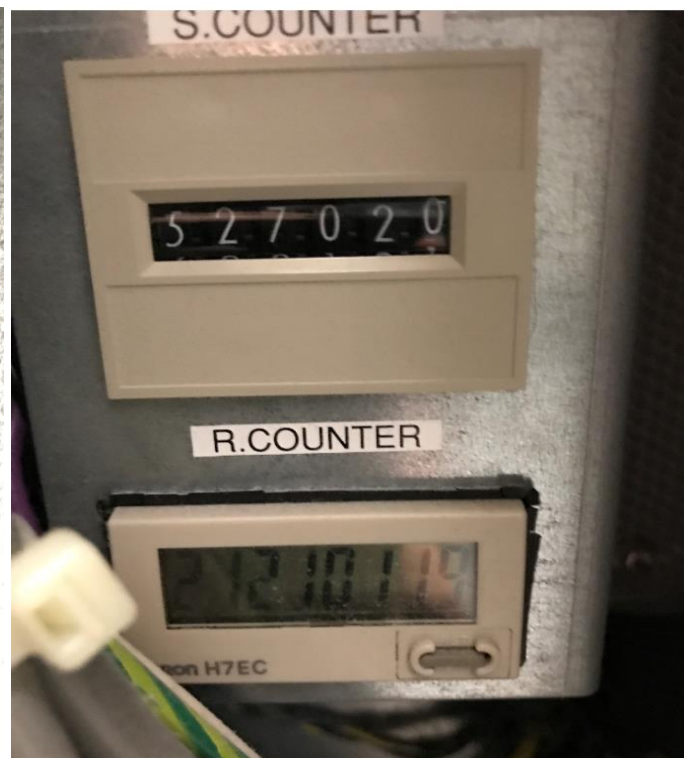
Slice Counter
File(F) View(V) Setup Unit Price(S)

from installation		from this tube	
Date	2007/11/19	Tube SERNO	95942-U7
SliceTime :	1282274.1 sec	Date	2017/11/23
Exp Count :	1707699	SliceTime :	214072.3 sec
Edit		Edit	

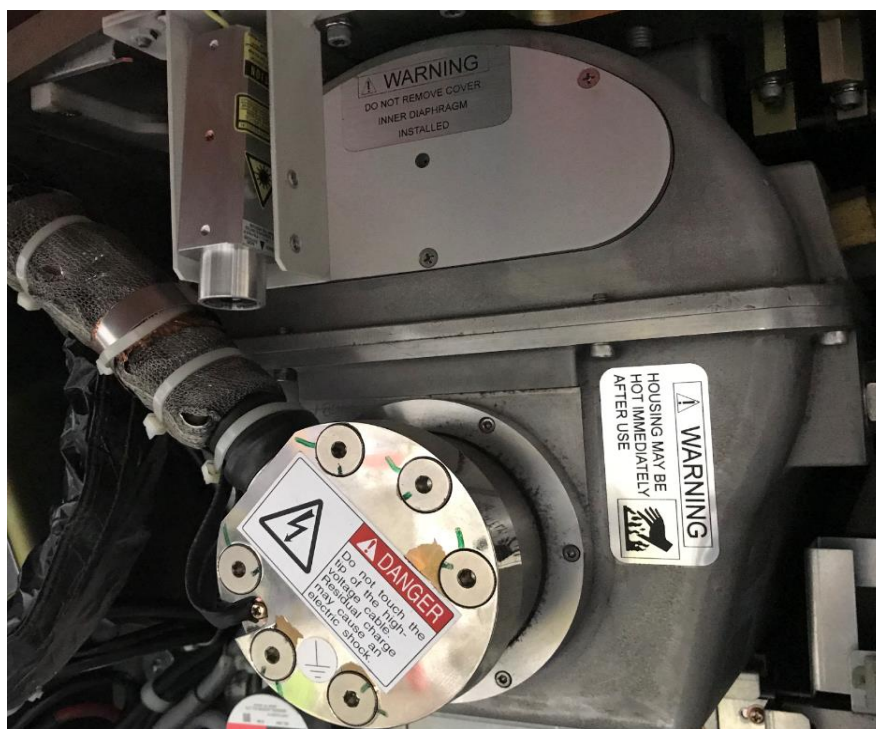
Date	Time(start - end)	Study No.
2018.06	*****	***
2018.07	*****	***
2018.08	*****	***
2018.09	*****	***
2018.10	*****	***
2018.11	*****	***
2018.12	*****	***
2019.01	*****	***
2019.02	*****	***
2019.03	*****	***
2019.04	*****	***
2019.05	*****	***
2019.06	*****	***
2019.07	*****	***
2019.08	*****	***
2019.09	*****	***

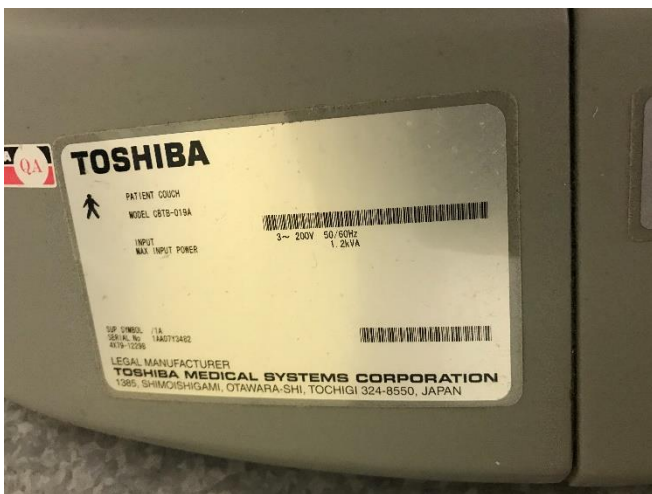
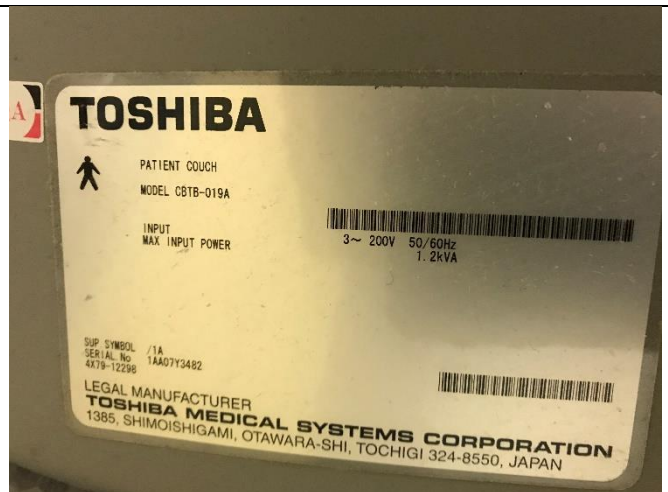
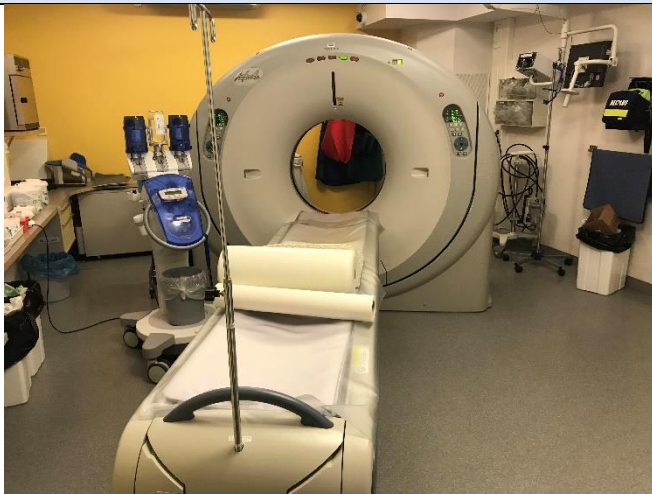
Number of case[Sec Billing.]	Total Scan Time(s)	Total Billing
18	7809.97	39049

The tube has been replaced on 23. November 2017 and had 214072 Slices on the date of inspection.



The current tube information as installed

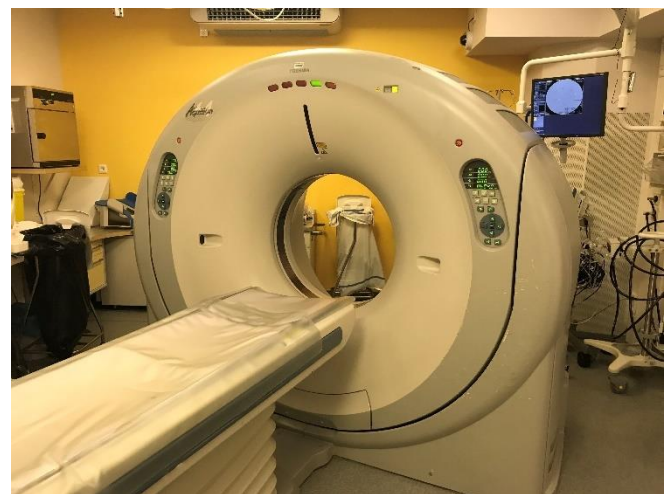
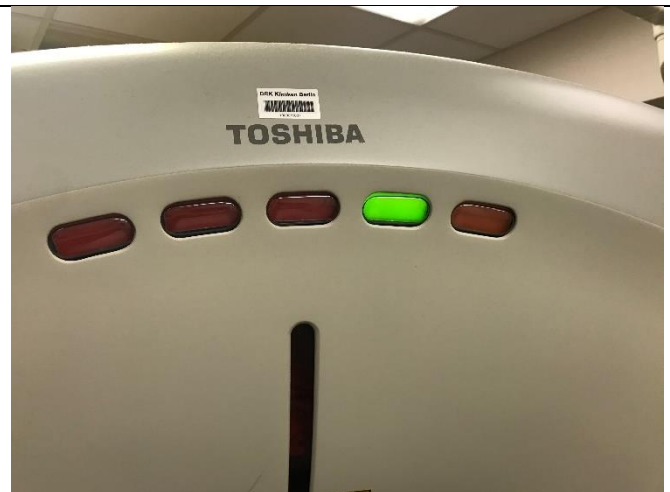
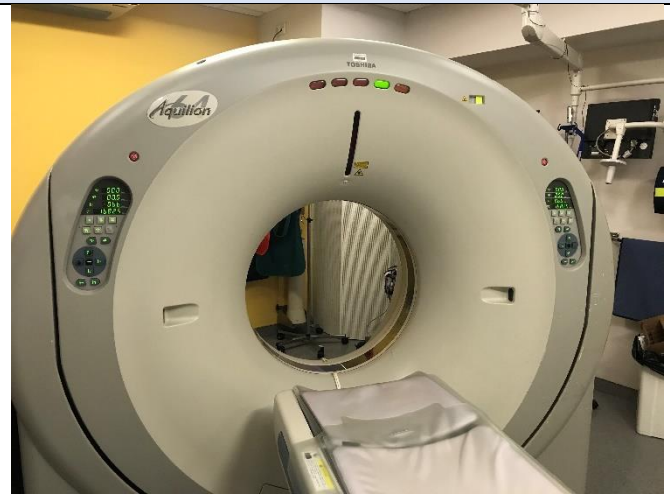


Gantry and Couch

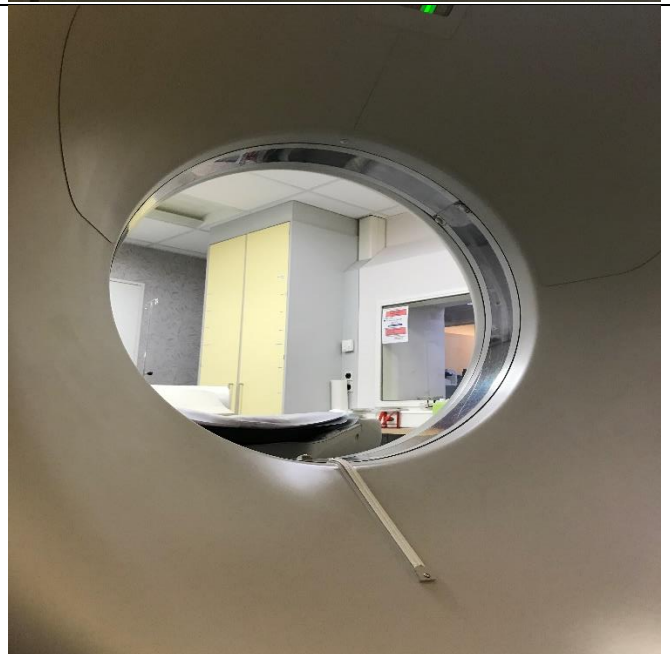
Gantry and Couch



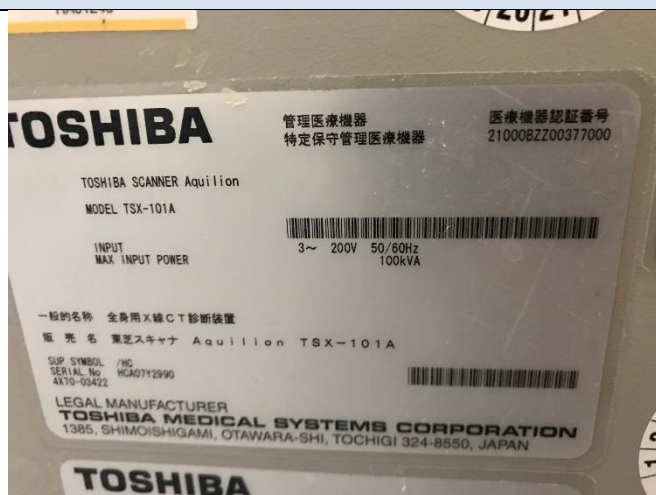
Gantry and Couch



Gantry and Couch



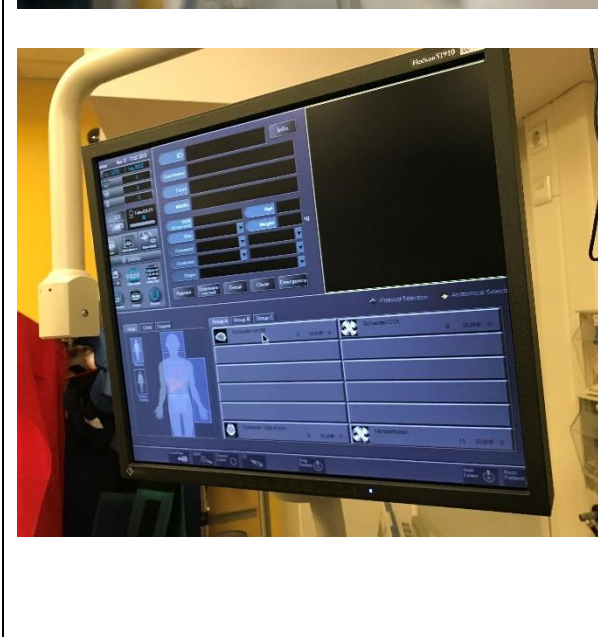
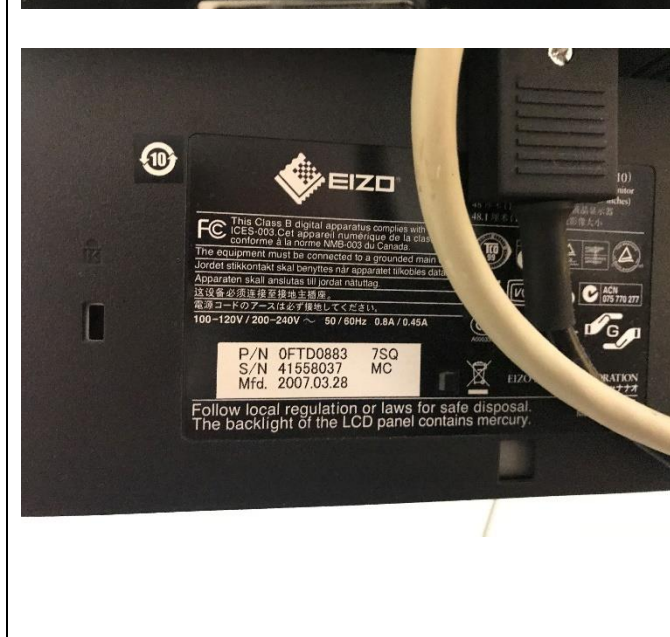
Gantry and Couch



Ceiling Suspension ECG and In Room Level 1



Level 1 Fluoroscopy



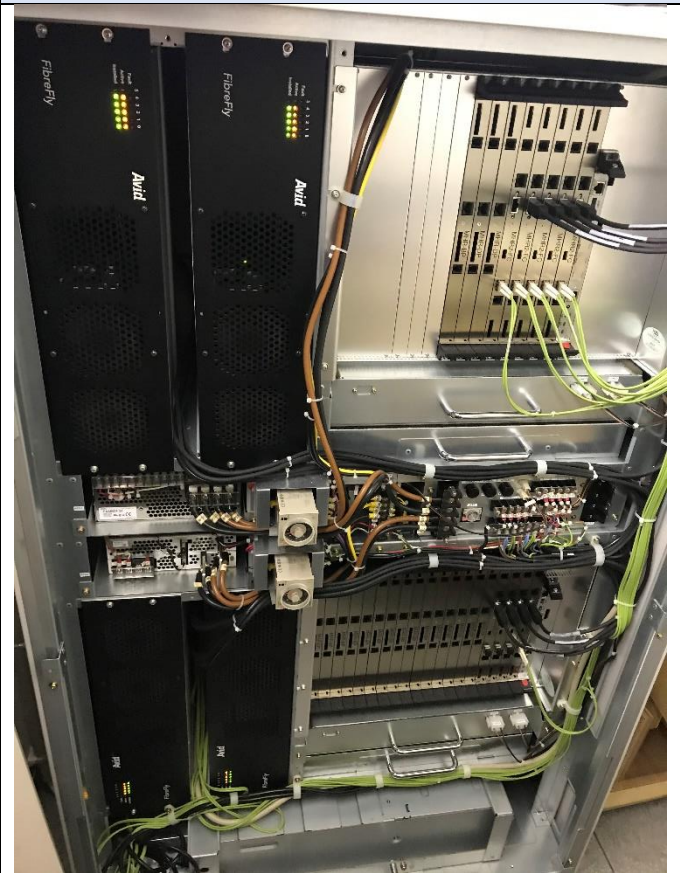
Ceiling Suspension ECG and In Room Level 1



Level 1 Fluoroscopy



Reconstruction Box



Reconstruction Box



CPU Box



System Transformer

Phantoms

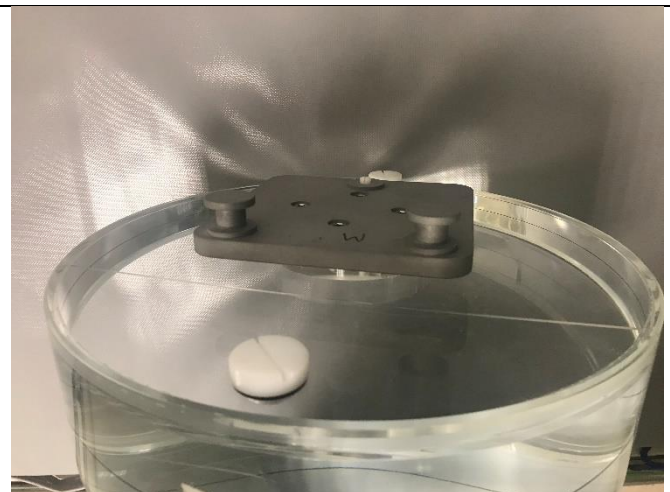
Small/Small Small Phantom



Small/Small Small Phantom



Medium Phantom



Medium Phantom

Phantoms



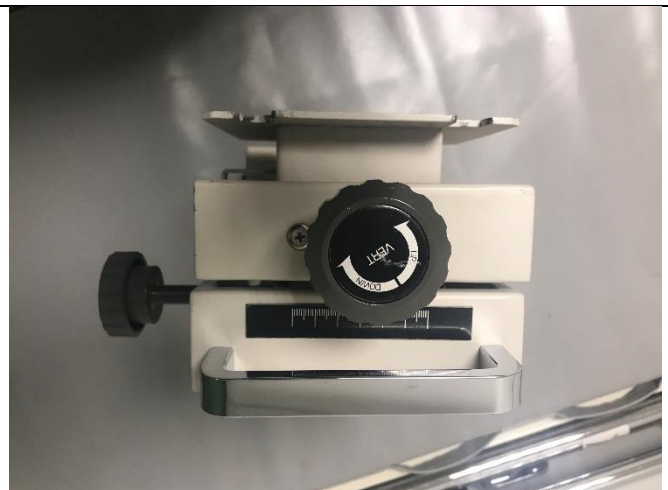
Tos Phantom



Tos Phantom



Phantom Holder



Phantom Holder



Large phantom



Large phantom

Phantoms

Large Large Phantom



Large Large Phantom



Phantom Cupboard



Phantom Cupboard

Innervision and service processor



Service Tools



Detector jig



Tube change jig

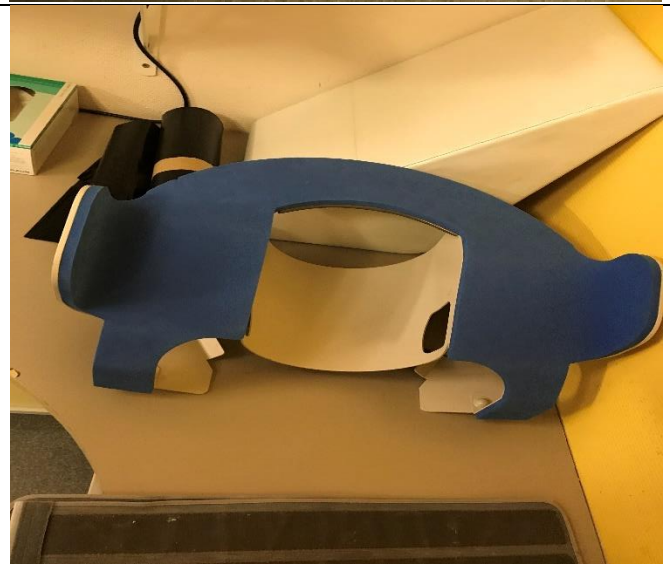
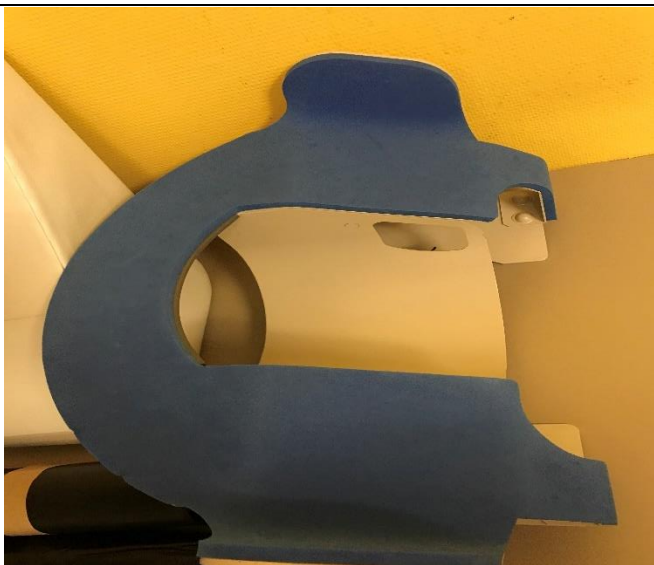


Tube service kit

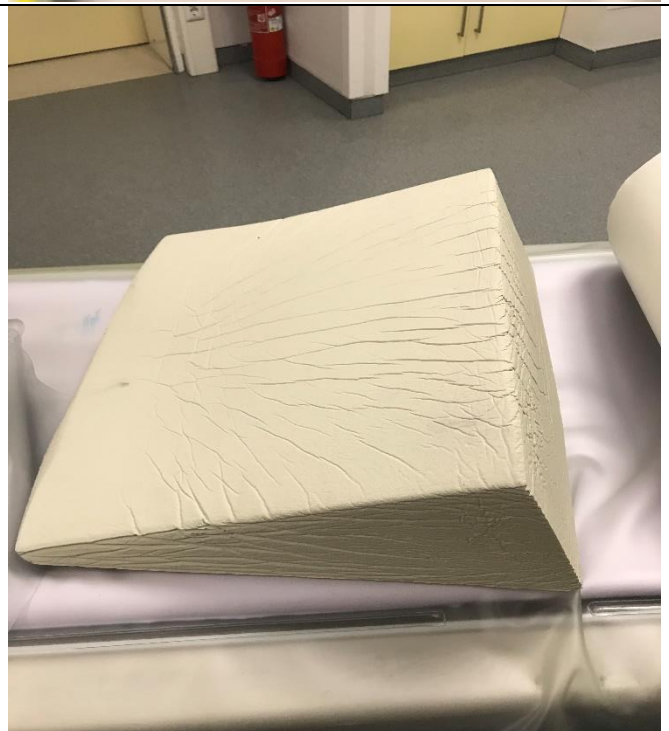
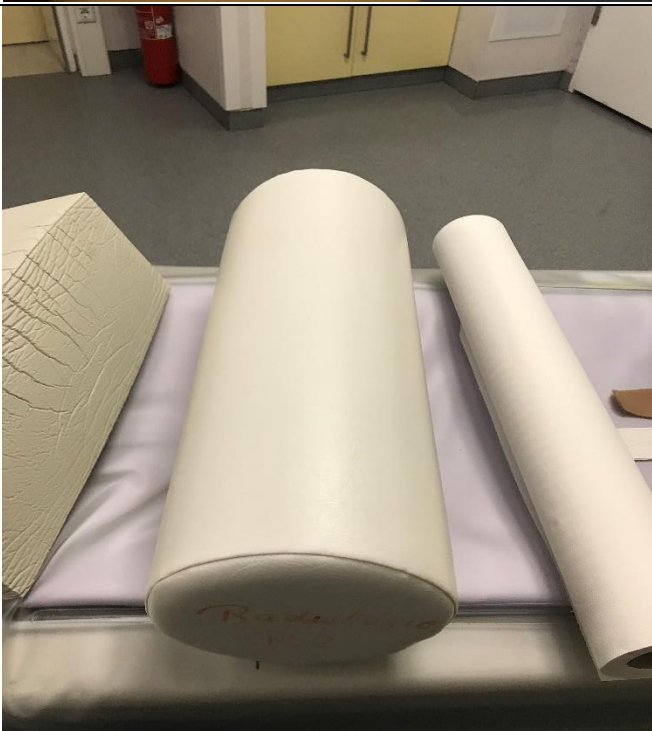


Tube alignment dial gauge

Patient Positioning aids



Patient positioning aids



Patient positioning aids



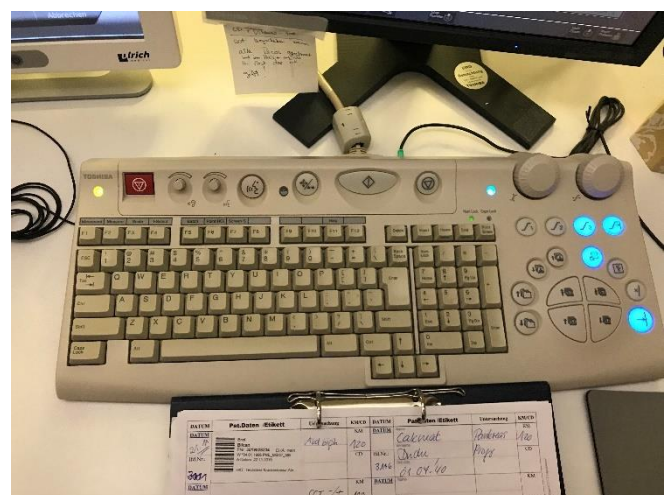
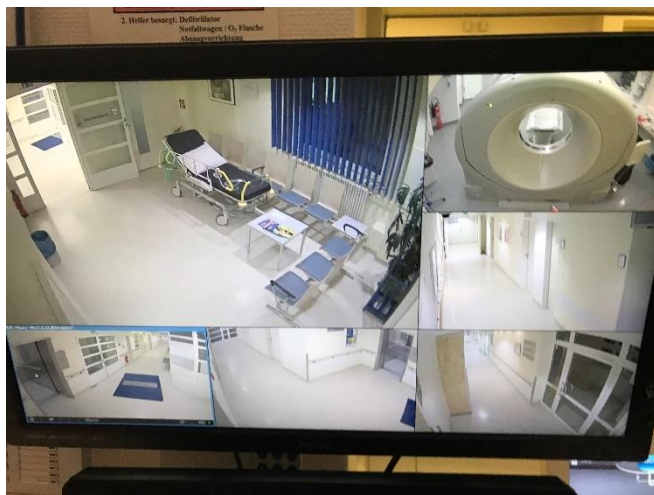
Resolution Video Splitter



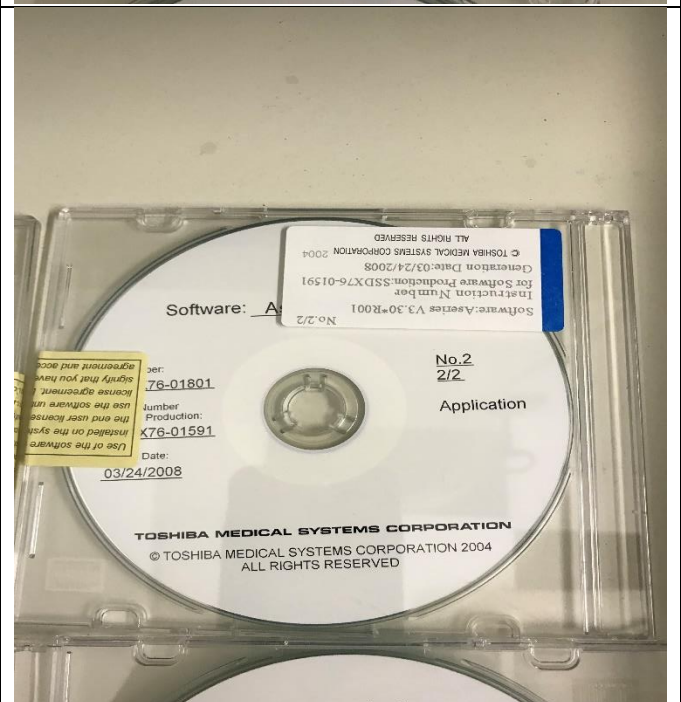
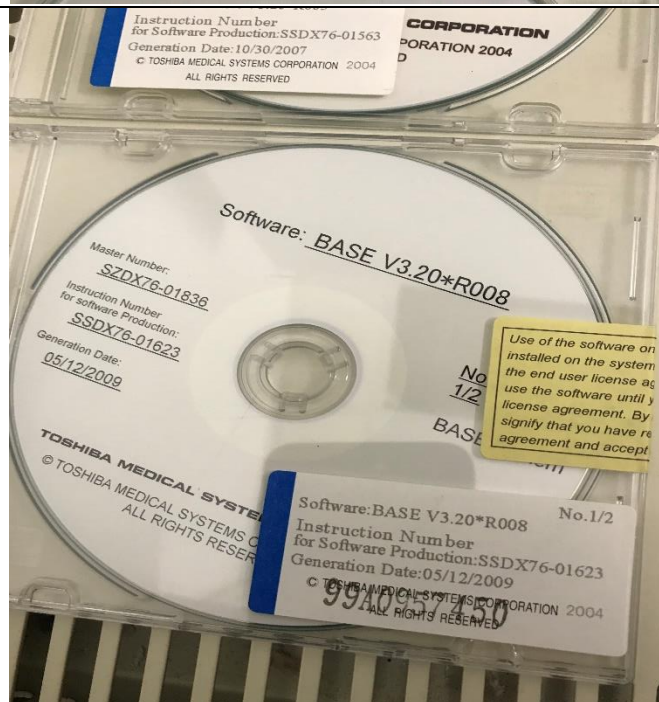
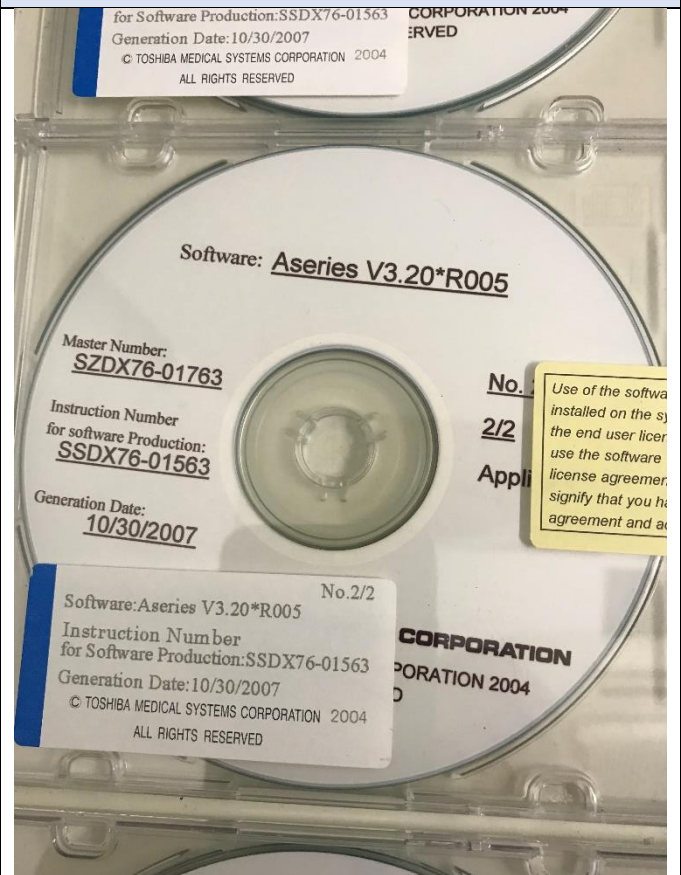
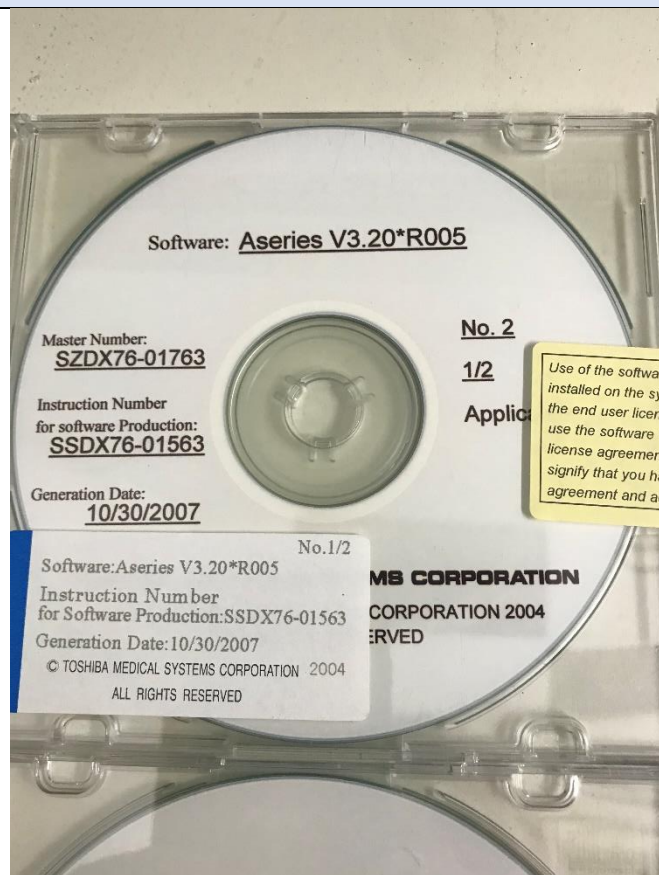
Small UPS not wired in



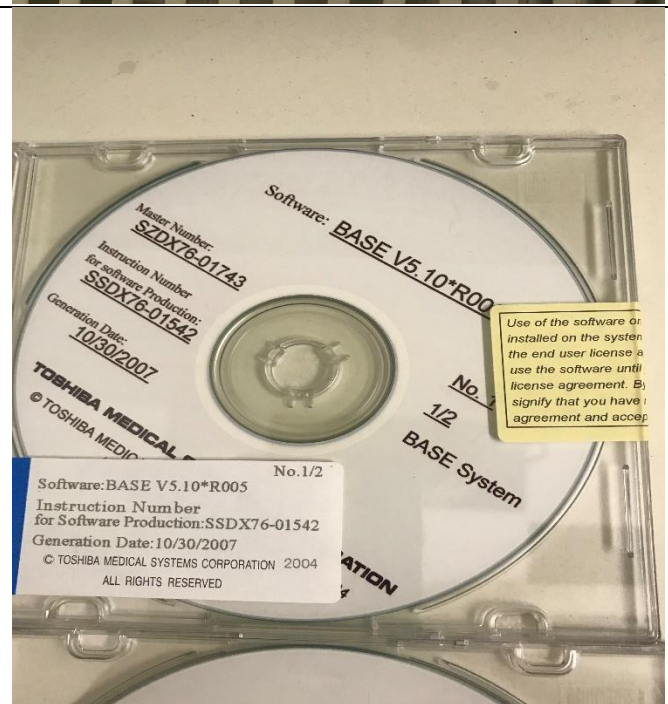
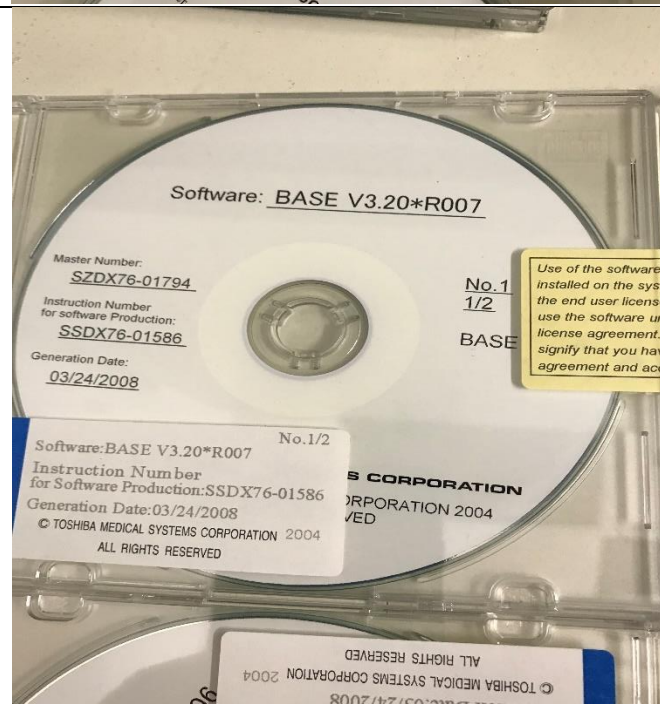
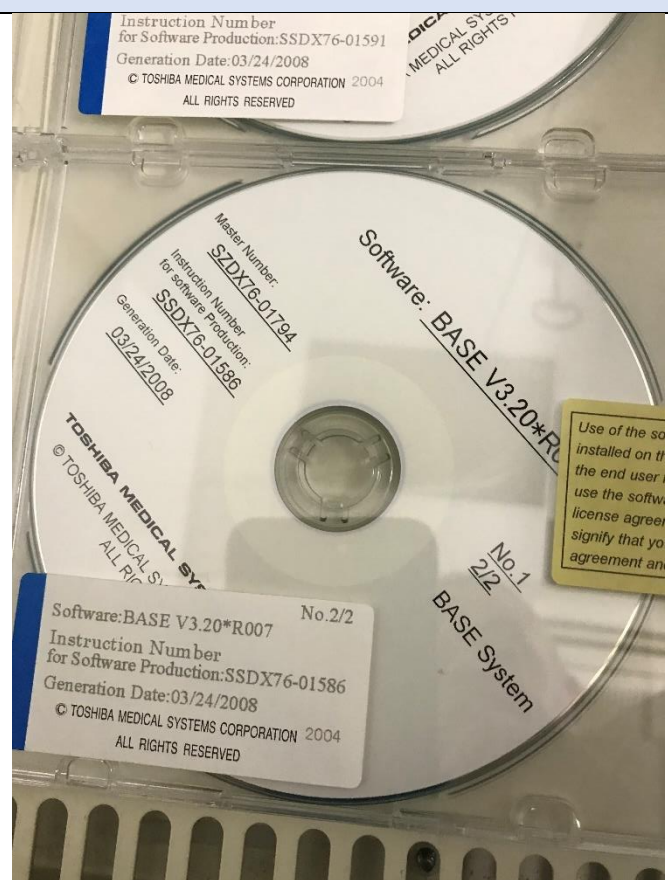
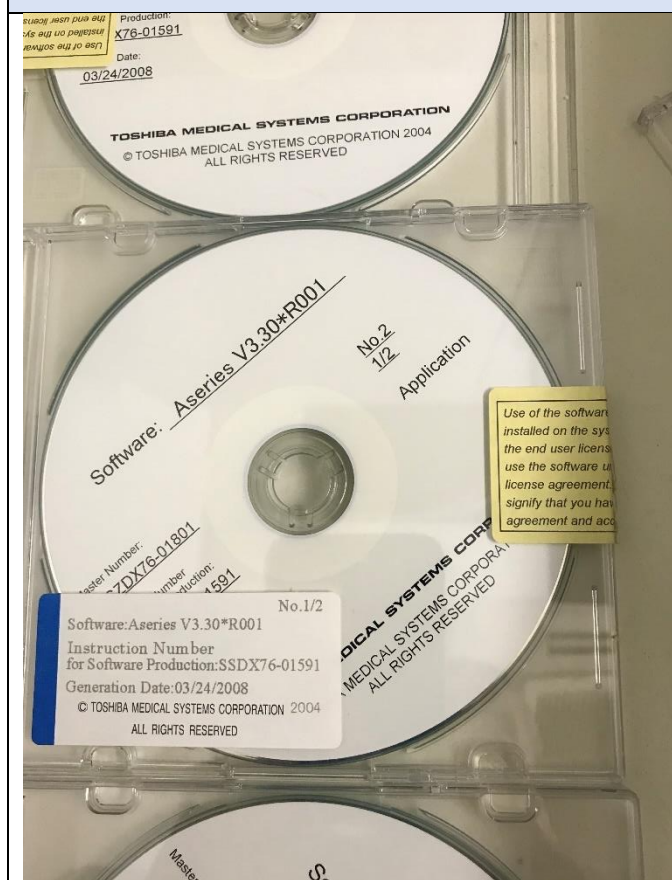
Scan and Display Console



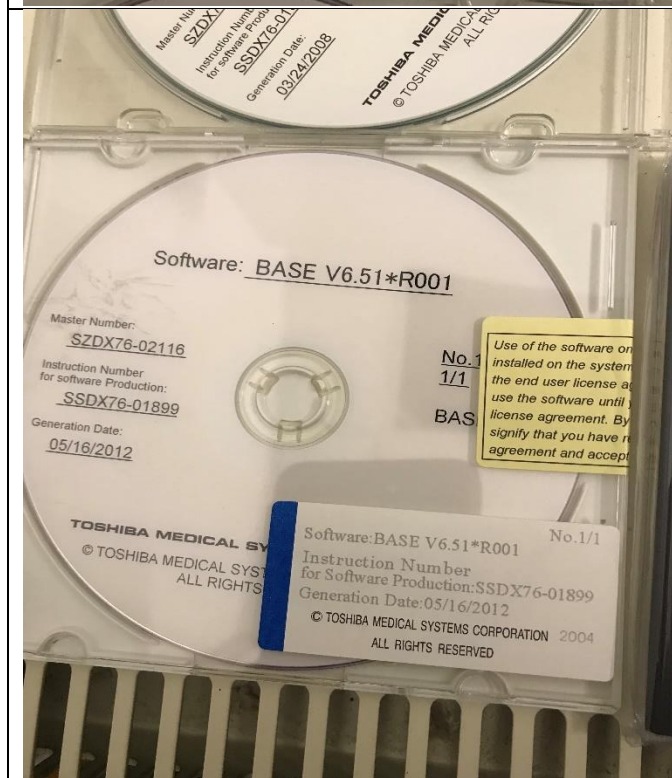
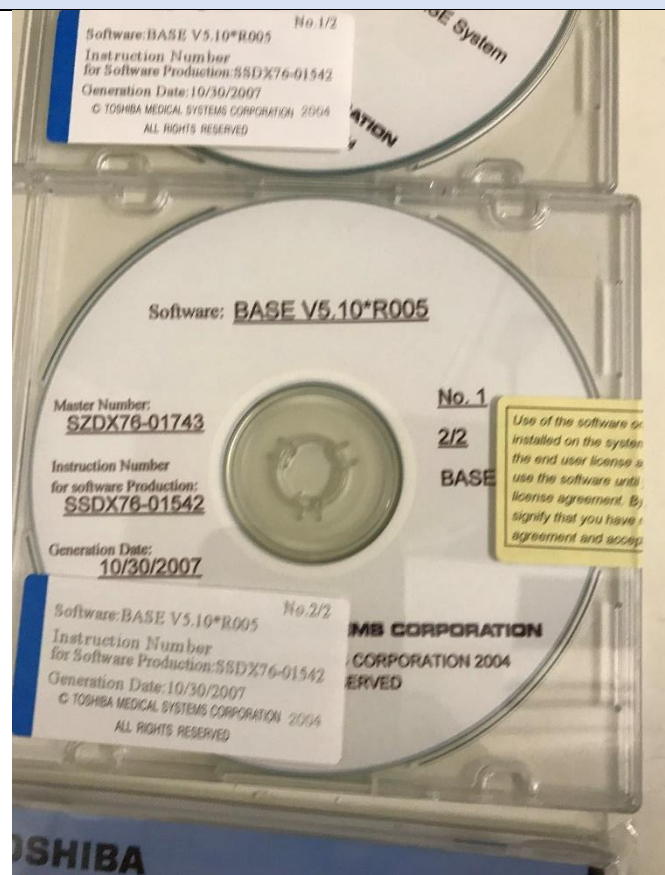
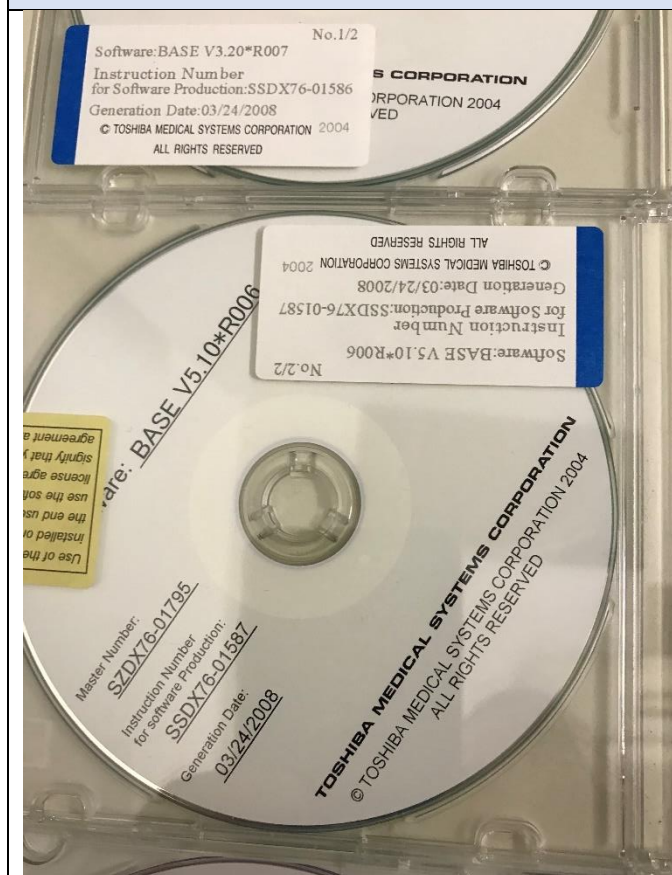
Software and Manuals



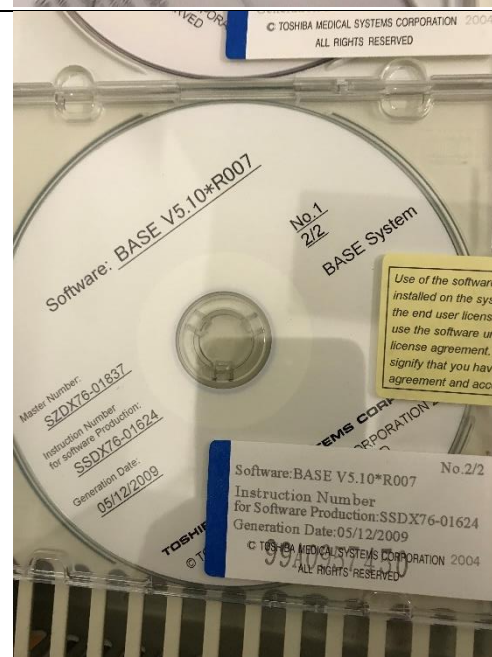
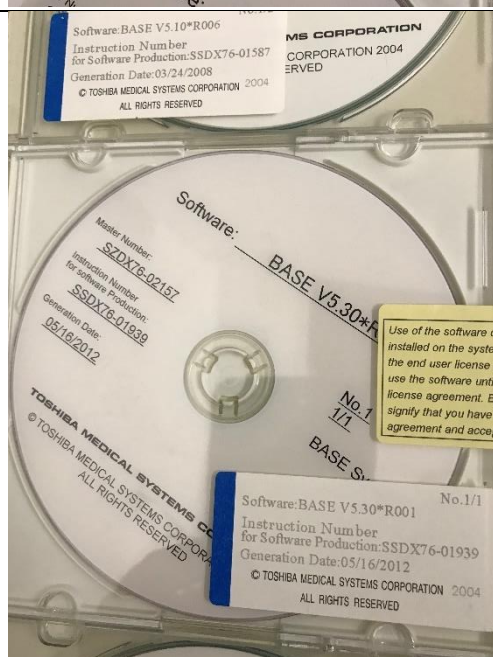
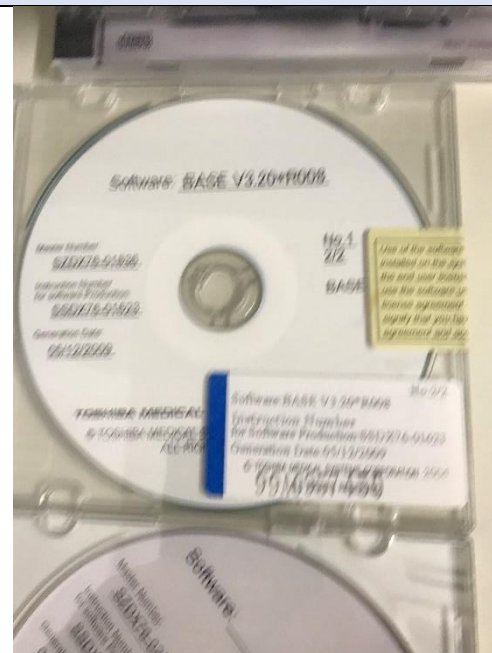
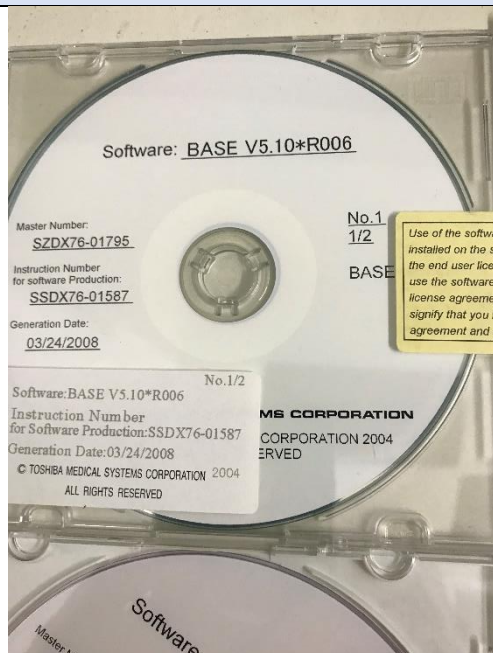
Software and Manuals



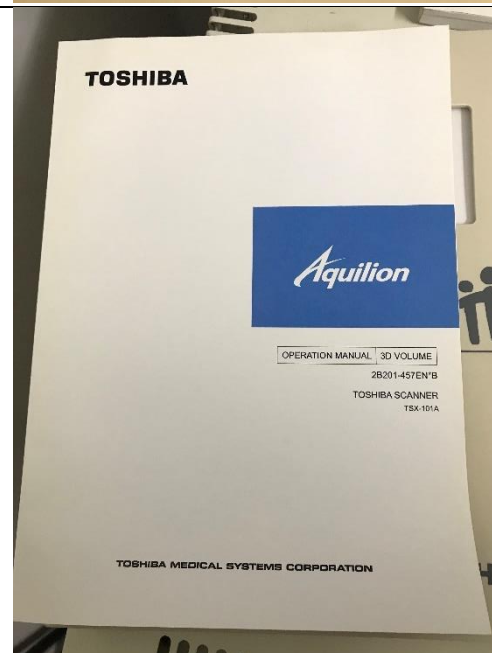
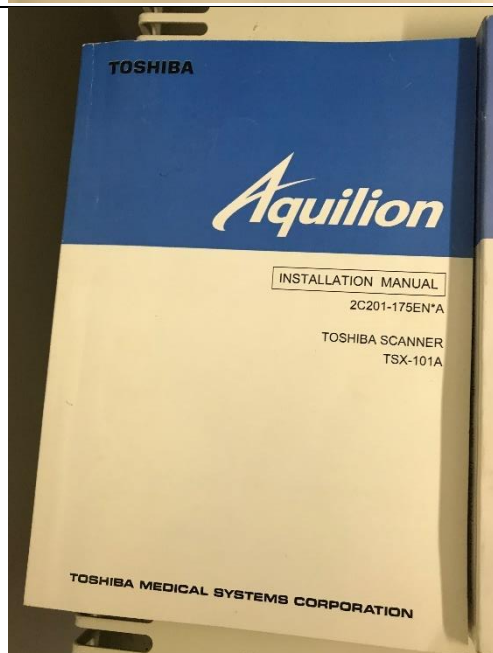
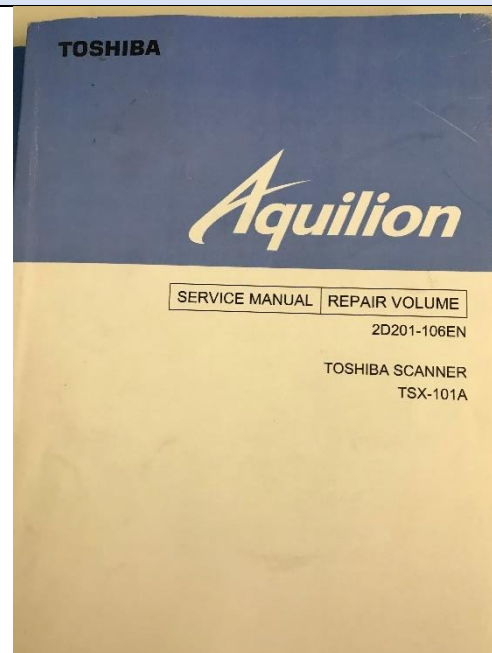
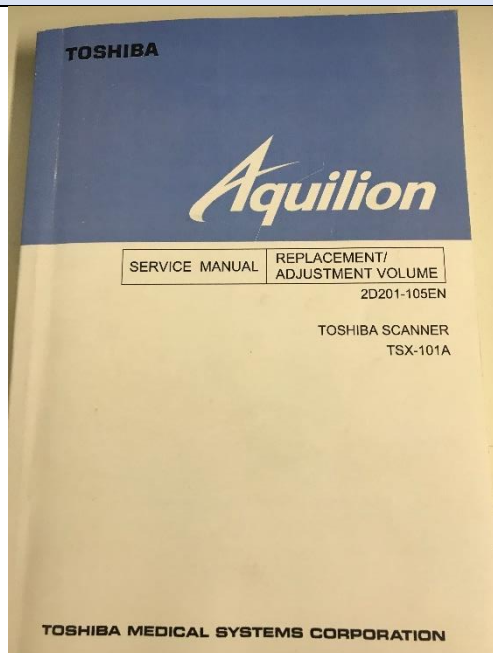
Software and Manuals



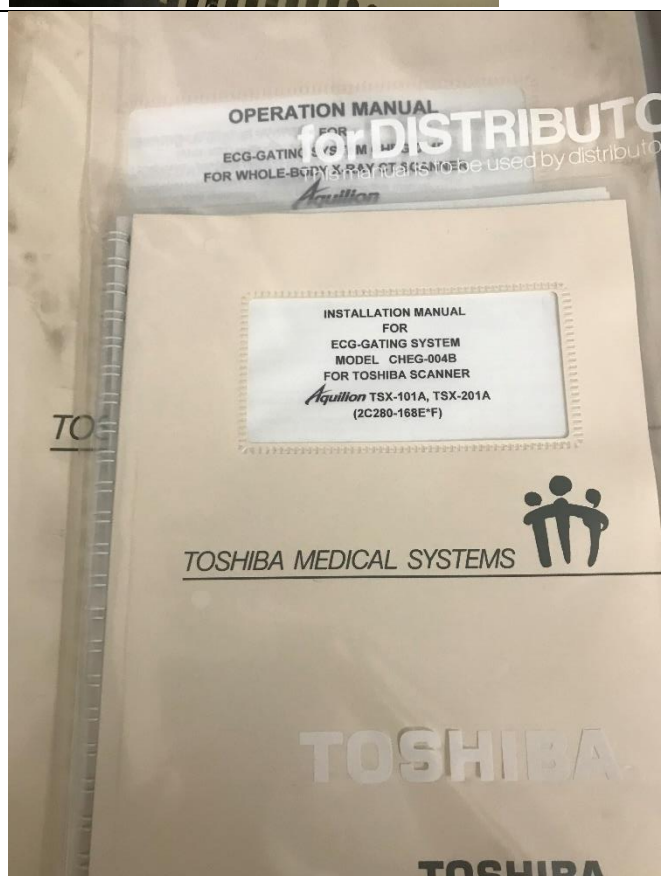
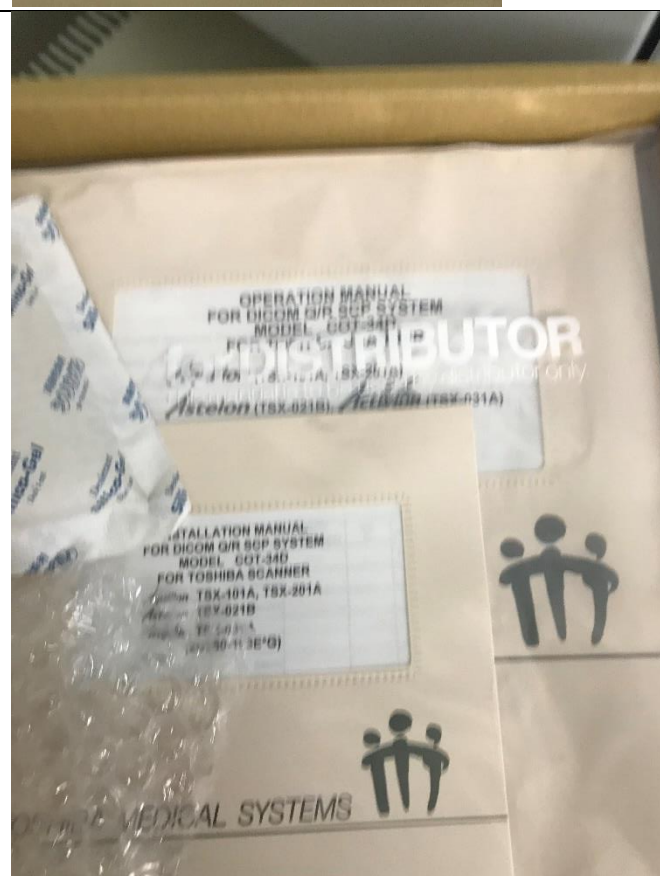
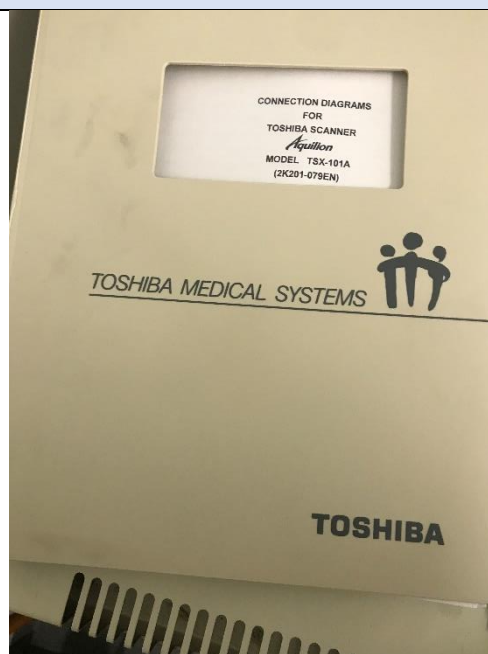
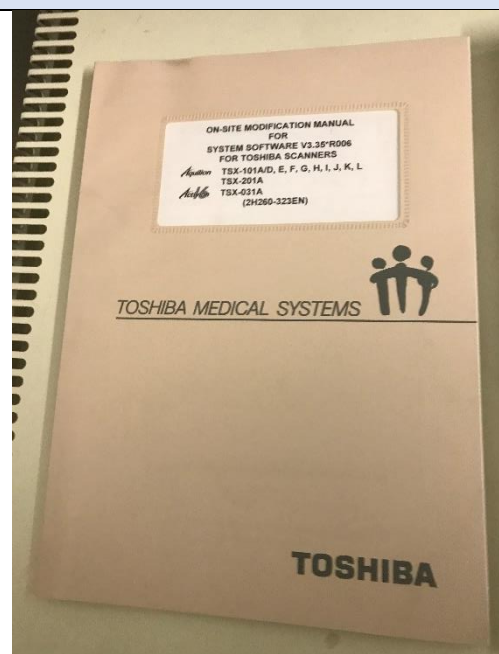
Software and Manuals



Software and Manuals

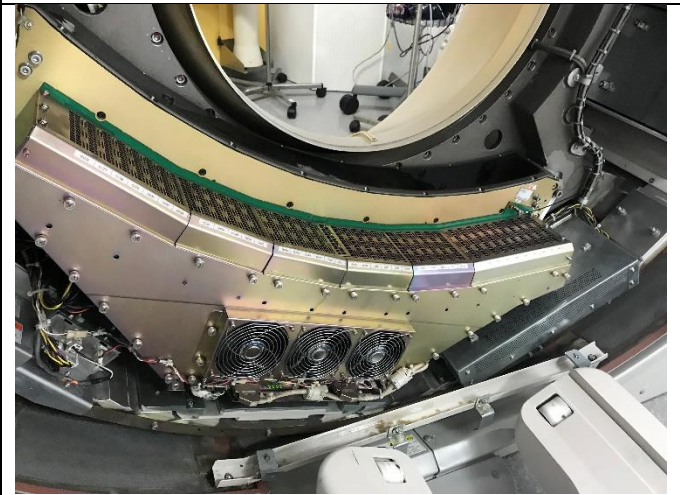
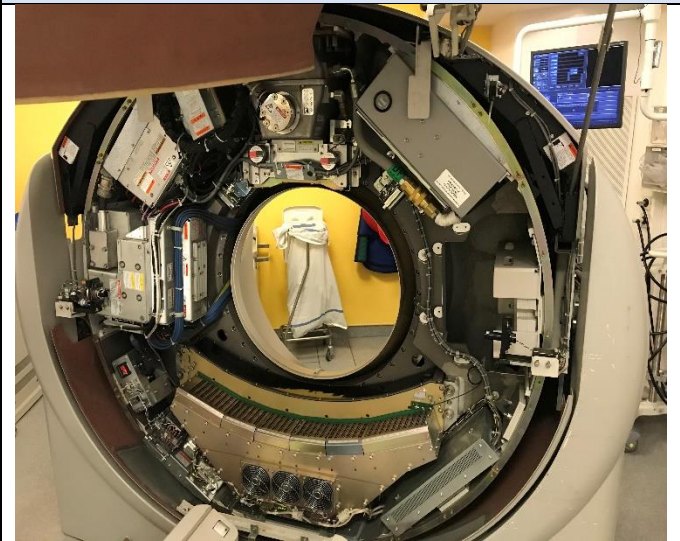


Software and Manuals

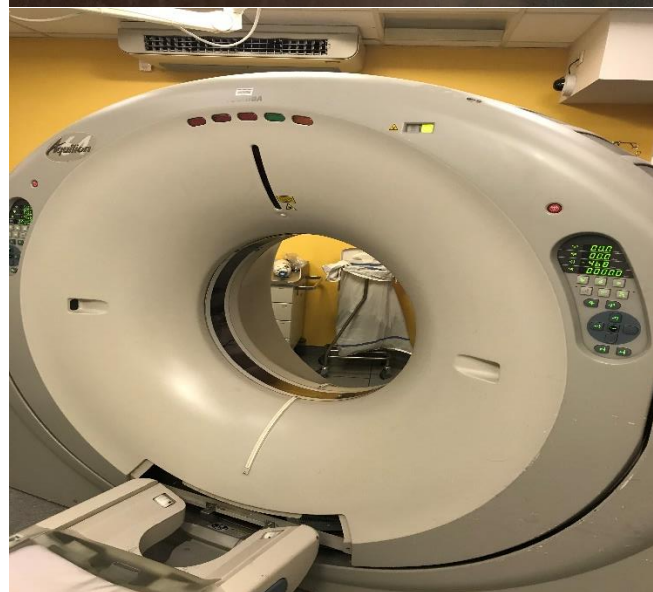
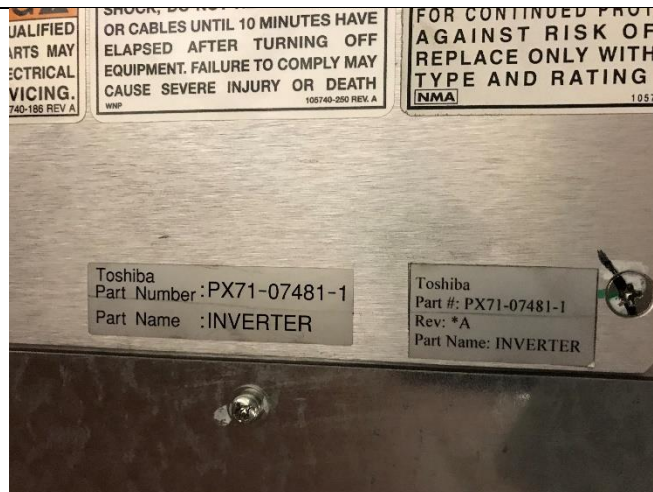


Spare In room Monitor Pedestal**Spare cables**

Gantry Open



Gantry Open

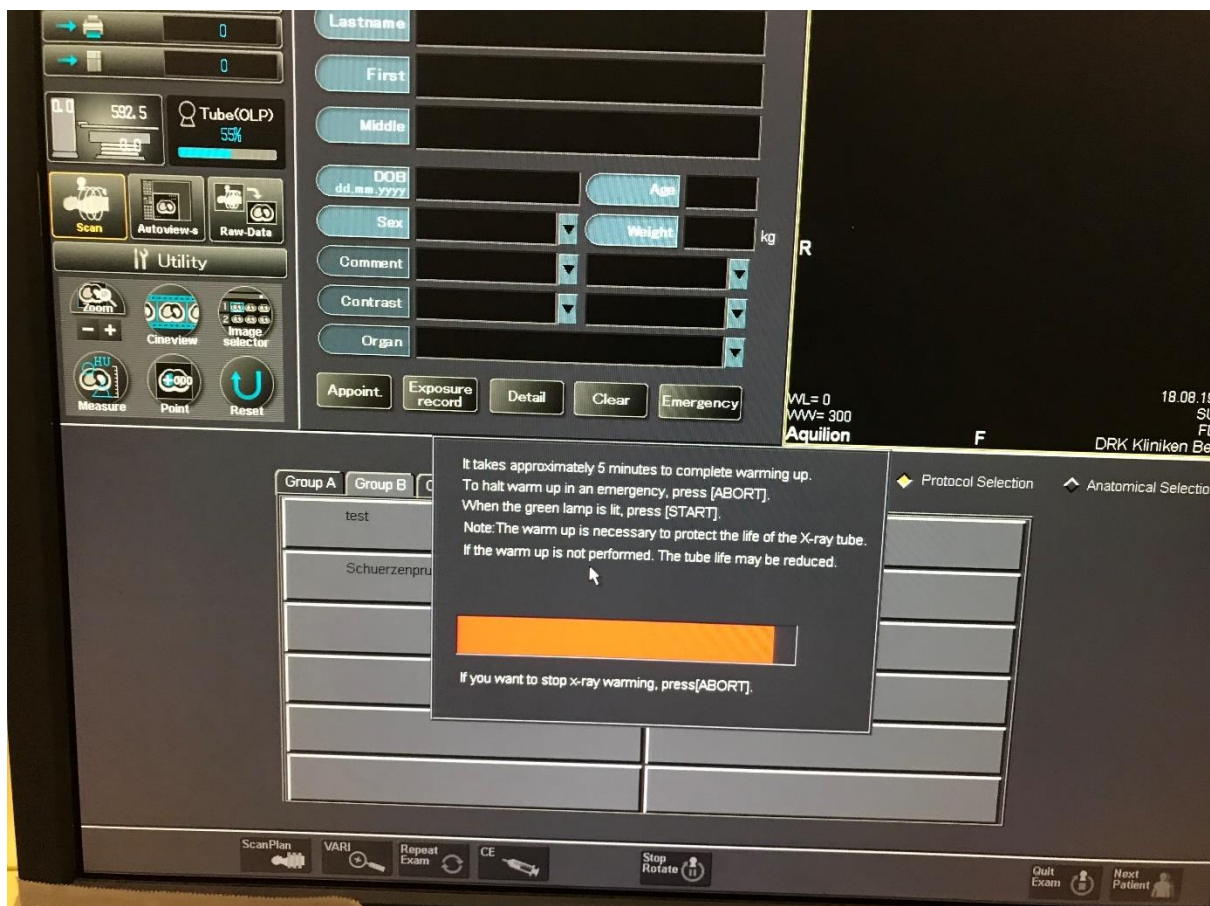


Quality Assurance

To verify the operation of the scanner I performed the following checks.

- Gantry Tilt +/- 30 degrees
- Patient table up/down - max/min
- Patient table in/out - max/min
- Full speed rotation at 0.5s
- Reconstruction
- Verified images
- Ran QA with water phantom and evaluated CT numbers
- Ran QA with Tos Phantom and evaluated CT numbers
- Ran Warmup.

The following pictures show the scanned phantom results

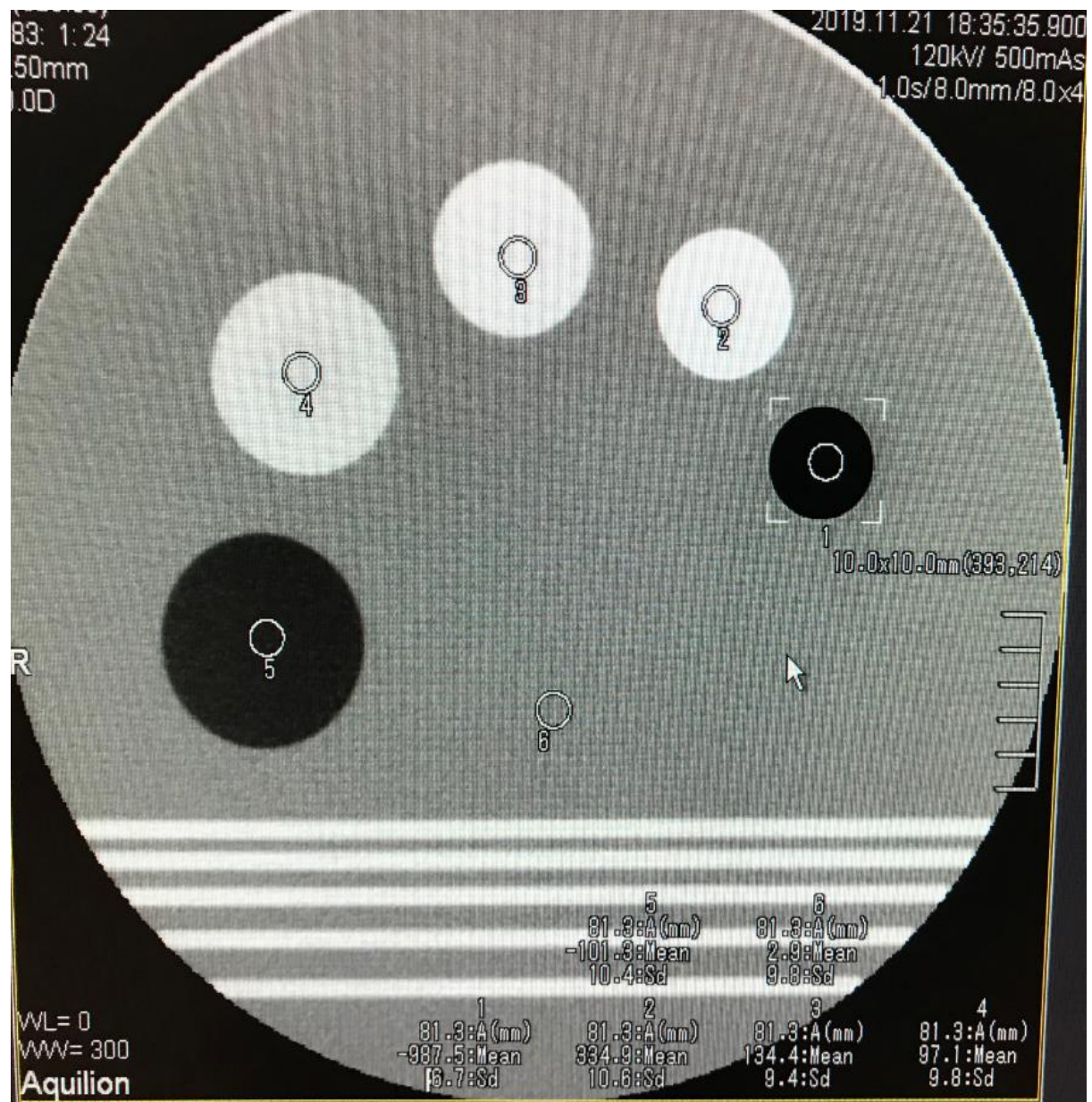


Tos Phantom QA

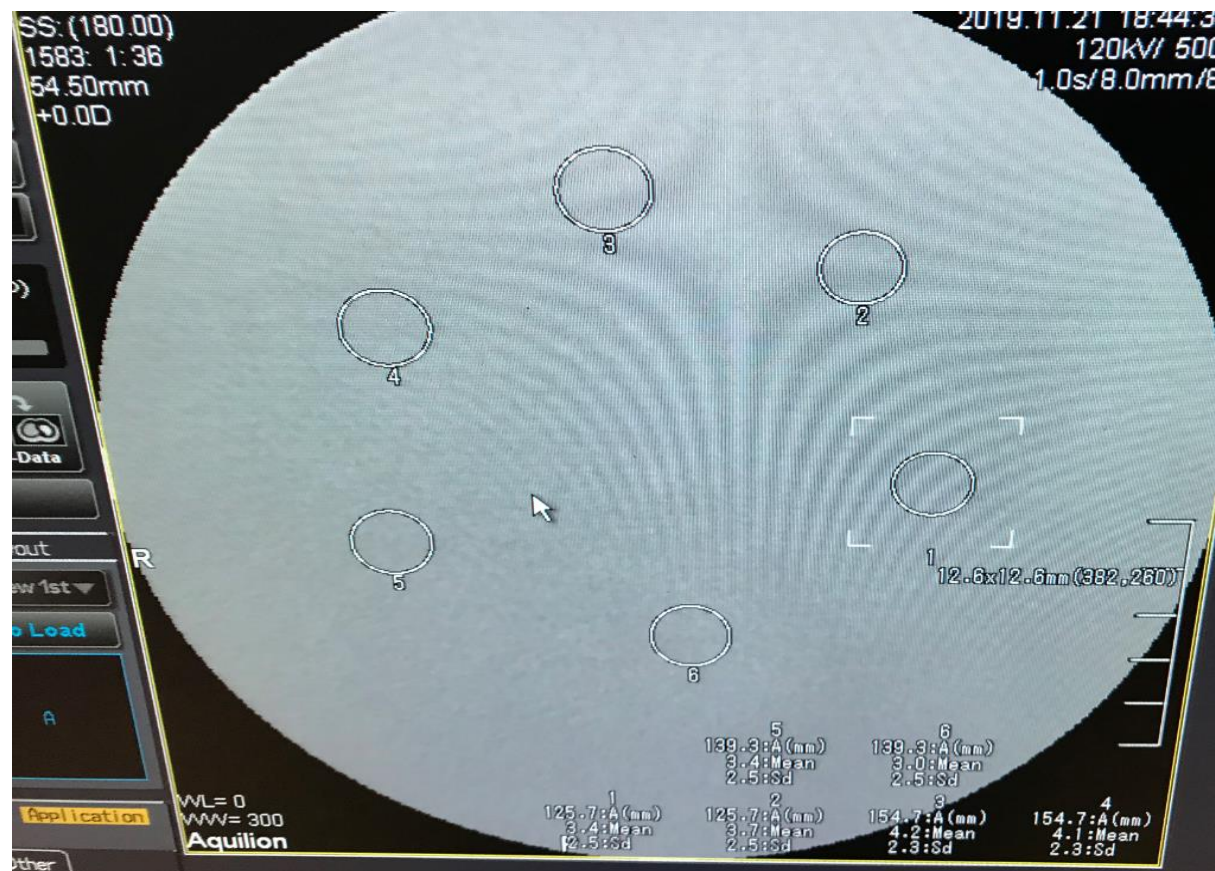


The CT numbers are within specification

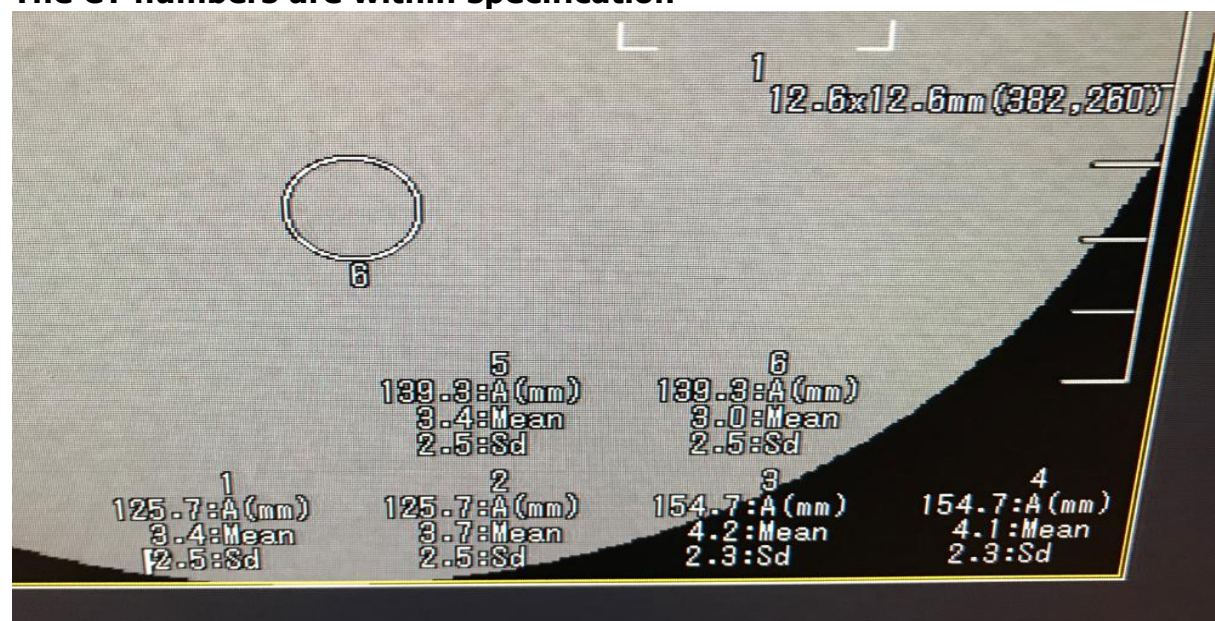
Tos Phantom QA



The CT numbers are within specification

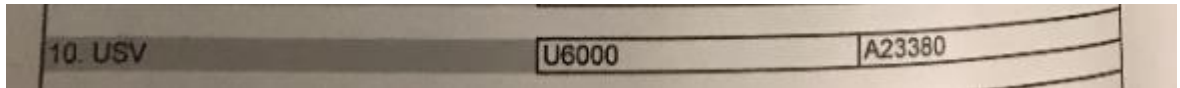
Water Phantom QA

The CT numbers are within specification



Points to note

- 1) The system was originally installed with a U6000 UPS. However, this UPS is not installed. The UPS was on the original sales config, so this should be observed.**



- 2) The software has been upgraded to version V4.62GR018**
- 3) The system is in good condition minus some slight wear and tear on the gantry position controllers and patient trolley bash marks on the couch.**
- 4) There are full-service logs and previous QA results, for very recent service reports, please request these from the client as Canon now email the service reports to the client via Service Cloud.**

End of report
