X MIND trium

PREVENTIVE MAINTENANCE CHECK LIST

X MIND trium data

SN _____ UDI _____

Facility name _____

Facility address _____

State/province _____ City _____

Nation _____ Zip code _____

Facility phone number _____ E-mail _____

PLEASE NOTE

Carry out these verifications and maintenance operations every twelve months.

After the completion of the maintenance and verification of the X-MIND trium, the installer technician MUST fill the form contained in this document to certify that the device has been correctly verified.

The maintenance Checklist Form must be completely filled in all the details, signed and stamped by the installer technician and must be uploaded in the section "REGISTER YOUR PRODUCT" on

https://www.acteongroup.com

Upload PM Checklist, *scan or photo acceptable - must be legible*

Make a copy of the filled form and leave it to the customer (keep it with the device documentation)

PLEASE NOTE

If you encounter problems that don't allow to correctly pass the tests, or you have any doubt for the correct maintenance of the equipment, contact immediately your referring technician or the manufacturer: ***imaging.italysupport@acteongroup.com***

Test	*Description*	*Check box*
X-MIND TRIUM		
Labels integrity	Verify that the labels are not damaged and are still visible.	☐
Manuals	Verify the manuals contained in the specific folder on the workstation (3D versions) or in the USB key (PAN, CEPH versions) are still valid. Please find the last version of the manuals on the web-site www.acteongroup.com	☐
U-ARM Lubrication	Check the U-Arm motions (X, Y, S) and rotation (R). Verify they are smooth, and no faults are presents.	☐
	Lube the motors axis with DS-ES lubricant.	☐
	Lube retaining ring and ball bearing seat of the kinematic group with OKS475 lubricant.	☐
Tubehead visual check	Verify if oil leakage or defects present.	☐
Mainboard fan visual check	Verify possible dust accumulation on fan of the mainboard.	☐
COLUMN	Ensure that the bolts of wall plate are correctly tightened. Tighten if needed.	☐
	Ensure regular column motion without jams and noises. Lube motor axis with the DS-ES lubricant.	☐
	Check activation of mechanical limit switches of the COLUMN.	☐
Covers visual inspection	Ensure that all the covers are intact, cover the X-MIND Trium and verify that all screws are present and fixed. Once done verify again all movements of the X-MIND Trium.	☐
Power line values	Check power line values, measure the voltage and check that the line is dedicated to the Trium.	☐

Test	*Description*	*Check box*
WORKSTATION		
Fans check	Verify the fans inside the workstation: if accumulated dust is present clean with compressed air if needed.	☐
SOFTWARE	Check that no unauthorized software was installed by customer.	☐
	Check free space on HDD (if space is limited, proceed by deleting older projections if authorized by the customer)	☐
	Perform and save on external memory devices the backup of Trium settings and configuration with AIS Backup Manager after quality checks are passed.	☐
Test	*Description*	*Check box*
GENERIC MAINTENANCE OPERATIONS		
LED	Ensure proper operation of the yellow LED on the control panel during x-ray emission.	☐

EXTERNAL LAMP LIGHTS	Ensure that the external lamp lights up when the Equipment is in emission status (if lamp is present).	☐
BUZZER	Ensure that the buzzer properly works during x-rays emission.	☐
REMOTE EXPOSURE	Ensure that the remote exposure and emergency buttons work properly: try to release the exposure button before the acquisition is complete and ensure that the system stops, and an error message is displayed on the monitor.	☐
LASERS	Verify patient positioning laser operation and calibration. Adjust lasers if needed.	☐

QUALITY ASSESSMENT CHECKS		
Perform the next operations with XMIND Trium completely covered with the plastics. *See Quality assessment manual*		
PAN Quality Check → Absence of artifacts	Verify that the exposed area is smooth and without artifacts	☐
PAN Quality Check → High Contrast Resolution	Verify that the High Contrast resolution is at least 3.1 Lp/mm	☐
PAN Quality Check → Low Contrast Resolution	Verify the Low Contrast resolution, checking that all the four holes are visible.	☐
CEPH Quality Check → Absence of artifacts	Verify that the exposed area is smooth and without artifacts	☐
CEPH Quality Check → High Contrast Resolution	Verify that the High Contrast resolution is at least 3.1 Lp/mm	☐
CEPH Quality Check → Low Contrast Resolution	Verify the Low Contrast resolution, checking that all the four holes are visible.	☐
CBCT 80x80 Quality Check → Homogeneity	Verify that the Homogeneity of the 80x80 FOV Test is in the acceptance range 15.0 ± 5 Measured value (SW output) _____	☐
CBCT 80x80 Quality Check → CNR	Verify that the CNR of the 80x80 FOV Test is > 5.0 Measured value (SW output) _____	☐
CBCT 80x80 Quality Check → $V_{10\%}$	Verify that the $V_{10\%}$ of the 80x80 FOV Test is > 1.6 LP/mm Measured value (SW output) _____	☐
CBCT 80x80 Quality Check → $V_{50\%}$	Verify that the $V_{50\%}$ of the 80x80 FOV Test is > 0.5 LP/mm Measured value (SW output) _____	☐
CBCT 110x80 Quality Check → Homogeneity	Verify that the Homogeneity of the 110x80 FOV Test is in the acceptance range 12.0 ± 5 Measured value (SW output) _____	☐
CBCT 110x80 Quality Check → CNR	Verify that the CNR of the 110x80 FOV Test is > 4.0 Measured value (SW output) _____	☐

CBCT 110x80 Quality Check → $V_{10\%}$	Verify that the $V_{10\%}$ of the 110x80 FOV Test is in the acceptance range is > 1.5 LP/mm Measured value (SW output) _____	☐
CBCT 110x80 Quality Check → $V_{50\%}$	Verify that the $V_{50\%}$ of the 110x80 FOV Test is in the acceptance range is > 0.4 LP/mm Measured value (SW output) _____	☐
CLEANING THE DEVICE		
Clean the external surface using a damp cloth and non-corrosive and non-oil-based detergent and disinfect it using a non-aggressive medical detergent. Do not spray detergent or disinfectant directly on the device.		☐
ADDITIONAL NOTES		
Commissioning performed in accordance with installation & maintenance manuals and any specific safety controls implemented in the country without detection of defects. ***The unit including all accessories and documents, in accordance with the manuals, were given in the correct state.*** ***The undersigned confirms to have the technical knowledge required for the installation & maintenance.***		
DATE_____ **INSTALLATION TECHNICIAN SIGNATURE**_____ NAME AND SURNAME: _____		