

Service Bulletin

Revised Information: Announcement of DX-D 100, version 3.0

Task		
Timing	Category	Scope
Next service as agreed with customer	<input type="radio"/> Apply at all sites	PowerHelp complaint / HQ issue: HQ_1109270006, HQ_1110240002, HQ_1112050001, HQ_1206290001, HQ_1207130003, HQ_1208170001, HQ_1109270003, HQ_1101270006, HQ_1109270007, HQ_1201040004, HQ_1201310009, HQ_1110110001 HQ_1211160004
	<input checked="" type="radio"/> Apply at affected sites as listed below	
	<input type="radio"/> Optional to improve functionality of product	

Task Tracking

After completion of your task the following entry in your Service Report is required:

DD+DIS227.12E

*

* Insert the document number into the field "Comment" (SMS form).

Purpose of this document:

- This document announces the release of the DX-D 100 (Varian) solution version 3.0.
- It supports WINDOWS 7 and includes several other software updates.
- It lists the HQ cases which have been solved with DX-D 100 version 3.0.
- It also lists the new software components.
- It describes the solution for battery discharging issues.
- It contains a description of how the generator firmware EEPROM is replaced



NOTE:

It is strongly recommended to install version 3.0 because it solves a number of battery issues which occurred with Softconsole version 2.0!



IMPORTANT:

The upgrade to DX-D100 system version 3 is **only** possible when the spare part (EEPROM) introduced with this bulletin has been ordered before replacement and is available on site!

The signatures on the approval page indicate the solutions described in this Service Bulletin have been reviewed and are NOT reportable because no actions are taken to reduce a "Risk to Health" according to our risk assessment process.

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List of contents

1	Introduction/purpose	2
2	Announcement of the Introduction of DX-D 100 System Version 3.0	6
2.1	Hardware and Software Components of DX-D 100 Version 3.0	6
2.2	New Features and Components of the DX-D 100 Version 3.0	8
2.2.1	NX Workstation Software 8700 SU1	8
2.2.2	Regional settings on Softconsole 5.1	8
2.3	Avoiding Battery Issues	11
2.4	Replacement of Generator Firmware EEPROM	12
3	Upgrading to DX-D 100 version 3.0	17
4	Keywords	18
5	Version history	18

1 Introduction/purpose

The DX-D 100 solution includes a built-in PC on which the NX Workstation software is running.

All software versions announced in this bulletin have been updated to be compatible with Windows 7.

With this upgrade step, the DX-D 100 and DX-D 100 Wireless solutions have been brought to the same level as they now contain identical software components.



NOTE:

- Most of the issues listed above are battery-related issues which occurred with the Softconsole version 2.0. To avoid these, a workaround solution was implemented in the meantime.
- These issues have been solved with the ex-factory installation of Softconsole version 5.1 which is introduced with DX-D 100 version 3.0.

Symptom The following issues have been reported for DX-D 100:

HQ Case Number	Description
HQ_1109270006	<p>Symptom: The whole system shuts down after restarting the PC.</p> <p>Cause: When the Windows 'restart' option is selected, the complete system may shut down during the next startup all of a sudden.</p>
HQ_1110240002	<p>Symptom: Message <Wrong Exposure Parameters> has been appearing for several days. User needs to restart the system to be able to continue working.</p> <p>Cause: Because of a software issue with the serial port some generator messages can be lost. The error message <ERROR 33> appears.</p>
HQ_1112050001	<p>Symptom: Internal finding: When quickly pushing the exposure button twice (IR remote control), an unwanted exposure is made with a consequence of no post exposure parameters. Instead of post-exposure parameters, the following message is received on the Softconsole: <(G)E50 Interrupted exposure>. When the <cont> button is clicked, then the SC is ready for use again, and it is also possible to make exposures.</p> <p>Cause: (Error could not be reproduced)</p>
HQ_1206290001	<p>Symptom: After Sedecal Console 2.07.003 upgrade Softconsole is very slow if you use the Finnish language. With English language settings, the Softconsole is working normally. The Softconsole had to be downgraded to the previous version.</p> <p>Cause: Softconsole software bug.</p>

HQ Case Number	Description
HQ_1207130003	<p>Symptom: After upgrade to Softconsole version 2.0 SU1 - the customer reported that the system could not expose 3 times (Detector flashing - Softconsole tube icon not changing to green).</p> <p>Cause: Softconsole software bug.</p>
HQ_1208170001	<p>Symptom: Buttons in Softconsole become sluggish. So far it has been possible to downgrade the Softconsole to version 2.07.000 but the inactivity timeout feature is lost then.</p> <p>Cause: Software issue related to the Softconsole software.</p>
HQ_1109270003	<p>Symptom: Problems with manual collimation on DX-D 100 Images at Intensive Care Unit, esp. in critical situations.</p> <p>Cause: Very poor performance of manual collimation tools if used on touch screens (sensitivity area of collimation edges is too small for proper handling on touch screens), especially as touch-optimized tool is available on NX on DX-D 100 (no mouse available).</p>
HQ_1101270006	<p>Symptom: When bringing down the tube into the parking position but with the tube not completely pushed back, the handles of the collimator pressed onto the locking bar which caused the machine to start moving uncontrolled.</p> <p>Cause: Design issue</p>

HQ Case Number	Description
HQ_1109270007	<p>Symptom: When using the DX-D 30C detector, 6 out of 8 images exhibit gridline artifacts. Two different anti-scatter grids were used, both N70, r6, no focus.</p> <p>Cause: Incorrect grid was used in one occasion.</p>
HQ_1201040004	<p>Symptom: Message: <The licensing component cannot be initiated>.</p> <p>Cause: An "incomplete" start of the Agfa Licensing Service:</p> <ul style="list-style-type: none">• The service is started, but the TCP/IP remoting channel for communicating with the licensing clients, such as the NX Workstation service and the NX Viewer process, is not created.• The Windows event log shows an error <The requested name is valid, but no data of the requested type was found>• <No connection could be made because the target machine actively refused it 127.0.0.1:8000> when trying to connect to the Agfa Licensing Service.
HQ_1201310009	<p>Symptom: Grid holder damages grid. The grid holder can not be correctly inserted in the guides.</p> <p>Cause: The guides are fixed over the mobile cover. The side of the guides which leans against the mobile cover is flat, but the mobile cover is not completely flat, so when the bolts of the guides are tightened, the guides sometimes are not perfectly in parallel.</p>

HQ Case Number	Description
HQ_1110110001	<p>Symptom: Motor batteries and X-ray batteries have to be replaced very frequently (every few weeks) because of defects. This issue has been reported for several countries.</p> <p>Cause: Incorrect battery replacement. The batteries in the DX-D100 are of the lead-sealed type. Discharging the batteries below a certain threshold damages the batteries.</p>
HQ_1211160004	<p>Symptom: Slow performance after upgrade to v. 3. Calibration not possible / calibration can't be finished.</p> <p>Cause: Old firmware generator.</p>

Solution: DX-D 100 v. 3.0 solves the HQs mentioned above.

2 Announcement of the Introduction of DX-D 100 System Version 3.0

The Agfa DX-D 100 Mobile X-ray Unit is a universal, flexible and affordable mobile modality.

The software items which have been changed with the release of DX-D version 3.0 will be included ex factory from DX-D 100 version 3.0 onwards:

2.1 Hardware and Software Components of DX-D 100 Version 3.0

DX-D 100 System:

- DX-D 100 Mobile DR X-Ray unit 20 KW
- DX-D 100 Mobile DR X-Ray unit 32 KW
- DX-D 100 Mobile DR X-Ray unit 40 KW (300 KHU)
- DX-D 100 Mobile DR X-Ray unit 50 KW (300 KHU)

NX 8700 Workstation:

- NX 8700 SU1
- NX Workstation runs on built-in PC (with integrated Softconsole located on the right-hand side of the monitor).

Softconsole:

(NX Workstation runs on built-in PC (with integrated Softconsole located on the right-hand side of the monitor)

- Softconsole version 5.1

XRDI:

- XRDI Software version 13 SU1

Hardware Components:

- DX-D 20G DR Detector, part number 7358 (GOS)
- DX-D 20C DR Detector, part number 20665 (CSI)
- DX-D 10G DR Detector, part number 7358 (GOS)
- DX-D 10C DR Detector, part number 20665 (CSI)
- X-ray tube with manual LED collimator
- Motorized wheels
- Battery for wheeling motor
- Battery for X-ray Generator
- 17" touch screen monitor
- Full or reduced column height

Solution Options:

- DAP meter (mounted below collimator)
- Anti scatter grids
- NX Musica2 Platinum
- NX 3.0 feature license

2.2 New Features and Components of the DX-D 100 Version 3.0

With the DX-D 100 system version 3.0 the following new software features are introduced:

- NX 8700 SU1
- Softconsole v. 5.1
- Varian software, version 7.0
- XREDI 13 SU1

For upgrade information, see section 3.

2.2.1 NX Workstation Software 8700 SU1

With the release of the DX-D 100 system version 3.0 the NX 8700 SU1 workstation software is introduced.

For more information refer to the NX 8700 SU1 Service Documentation; see Agfa HealthCare Library: <Computed Radiography → CR Workstation Software>

2.2.2 Regional settings on Softconsole 5.1

The following issue has been solved with DX-D 100 version 3.0:

Symptom When the language and regional settings on the Softconsole are set to Dutch (Belgium) in Windows 7, and the user tries to change the mAs value, strange 'jumps' are seen in the values.

Cause: There is no way of correcting this issue when sticking to the Dutch (Belgium) regional settings.

Solution: Possible Workaround:
Setting the regional settings to English (US) as illustrated in the workflow below:

- (1) Make sure the NX viewer is not running.
- (2) In the <Start> menu, select <Control Panel>
- (3) In the <Control Panel>, select <Region and Language>
- (4) Select the <Formats> tab in the <Region and Language> option.

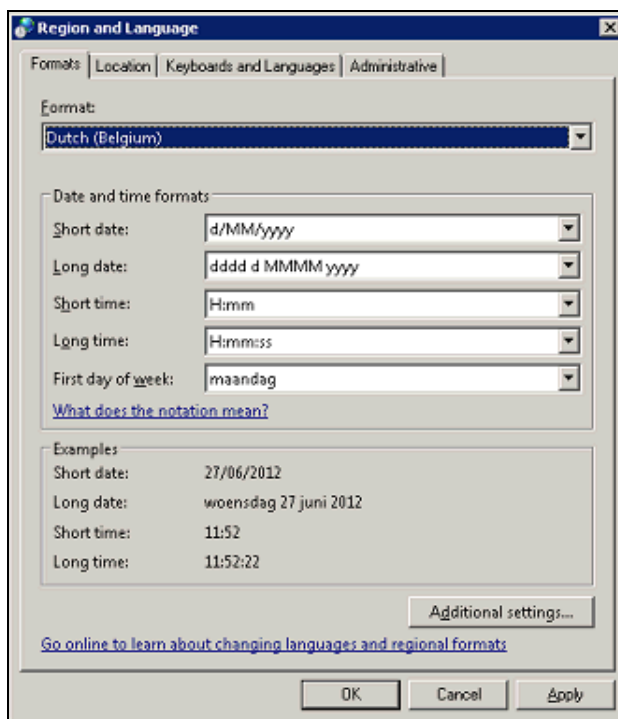


Figure 1

- (5) Open the NX Configuration tool and load the active configuration.
- (6) Go to: **General Configuration** > **General Settings** → **Regional Settings**
- (7) Click **<Take Over Regional Settings>**



Figure 2

- (8) Return to the **<Region and Language>** window.
- (9) Click the **<Additional Settings>** button, see Figure 1.
- (10) In the **<Numbers>** tab of the **<Customize Format>** window, change the decimal symbol if required: type a comma (",") or period ("."), depending on the language you are working in.

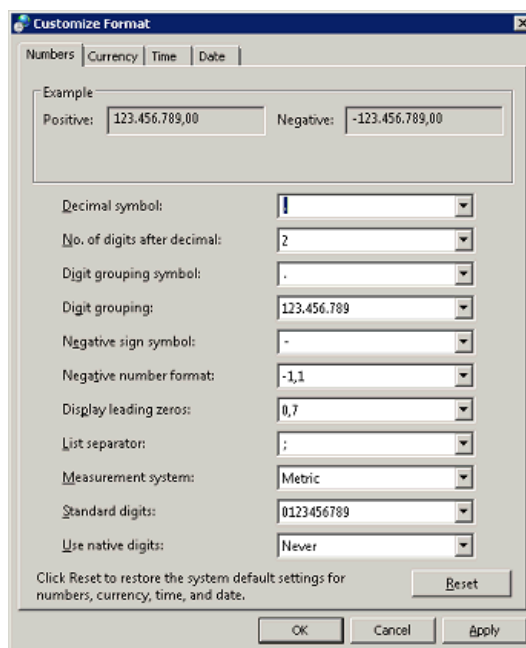


Figure 3

- (11) Click the <Apply> button.
- (12) Close the <Control Panel> windows.
- (13) Restart the NX workstation.

2.3 Avoiding Battery Issues

Symptom Battery can't be charged to full capacity anymore.

Cause The batteries in the DX-D100 are of the lead-sealed type.
Discharging the batteries below a certain threshold damages the batteries.

Solution (1) Inform the customer about the following general rules for operation:

The customer should always plug the DX-D 100 to the power line when it is not in use so the batteries are charged.

Also inform the customer that in case the following warning is displayed:

VERY LOW BATTERY LEVEL!

Operation is allowed, but connect immediately to mains if not connected yet when a critical battery level is reached.

The DX-D 100 should be plugged to the power line immediately.

(2) Install software Softconsole 5.1 according to the Clean Install Procedure, for DX-D 100:

Agfa HealthCare Library → Direct Radiography → DR Equipment → DX-D 100 → Service Manual

(3) Adapt the **<Mobile Options>**:

- a) Open the file **ExtConsoleConfig.xml** in the **C:\Agfa\Healthcare\Sedecal** directory on the NX workstation.
- b) Configure the energy saving behavior in **<AvoidInactivity>1</>**:
Set the parameter to **0**.

The system will display the following message after 30 minutes of inactivity:

The X-Ray unit has not been used for 30 min and will shutdown in 15 min unless you connect it to the power source or you [click here](#)

The system will additionally initiate the shutdown procedure after another 15 minutes.



IMPORTANT:

Locking the system manually will prevent the automatic shutdown.

- (4) Be aware that also a new procedure for changing batteries is described in the Troubleshooting - Mobile X-Ray Unit document. For details refer to:

Agfa HealthCare Library → Direct Radiography → DR Equipment → DX-D 100 → Service Manual

2.4 Replacement of Generator Firmware EEPROM

Follow the description below for the correct replacement procedure of the generator firmware EEPROM.

- (1) Download the software **TechService v. 6.14.zip** from the Agfa HealthCare Library (File size approximately 3 MB) to a portable storage medium (checked to be virus-free, e.g. USB Memory Stick):
Direct Radiography → DR Equipment → DX-D 100 → Software

The Sedecal TechServ software is used to configure and calibrate the X-ray generator settings of the DX-D 100 Wireless system.

- (2) Stop the NX application before installing the TechServ Software v. 6.14.
(3) Go to: **start → Agfa → NX → Stop NX**
(4) Click Software TechServ 6.14.exe and follow the instructions on the screen.
(5) Configure the X-ray generator settings.
(6) Refer to the X-ray Service Manual - Configuration.
(7) Power down the DX-D100 unit.
(8) Remove the front cover.

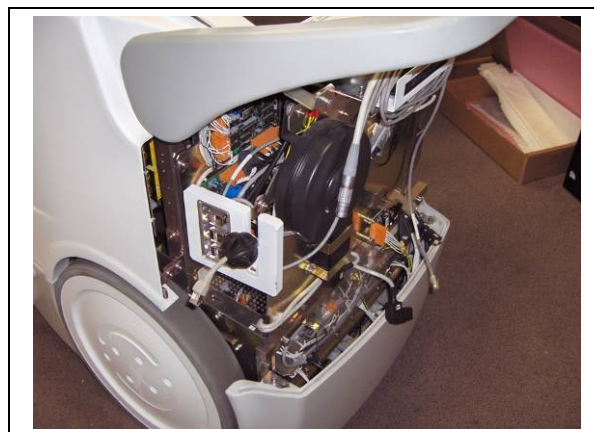


Figure 4

- (9) Remove the rear cover.



Figure 5

Pay attention to the infrared communication cable.



Figure 6

Pay attention to the power cable.



Figure 7

- (10) Set the calibration switch to <ON>.
The switch is located on the right hand side of the unit.

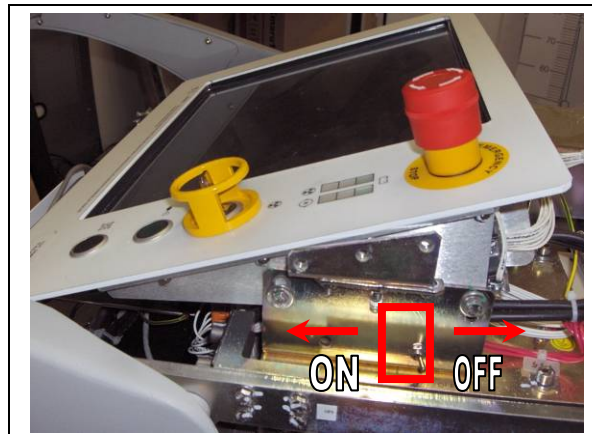


Figure 8

- (11) Loosen/unscrew the screen assembly.

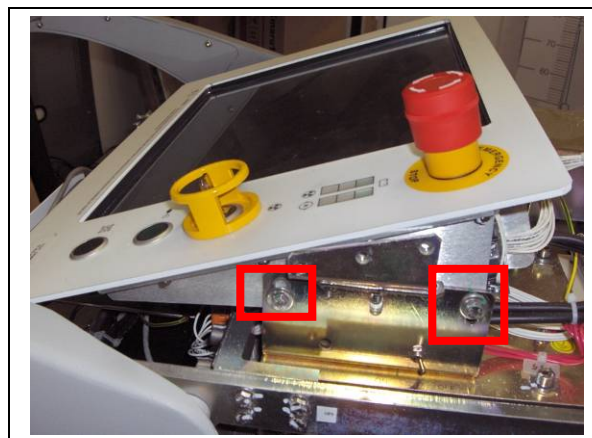


Figure 9



NOTE:

This step is necessary to open the frame in front to replace the EEPROM.

(12) Loosen the screw(s) of the frame.

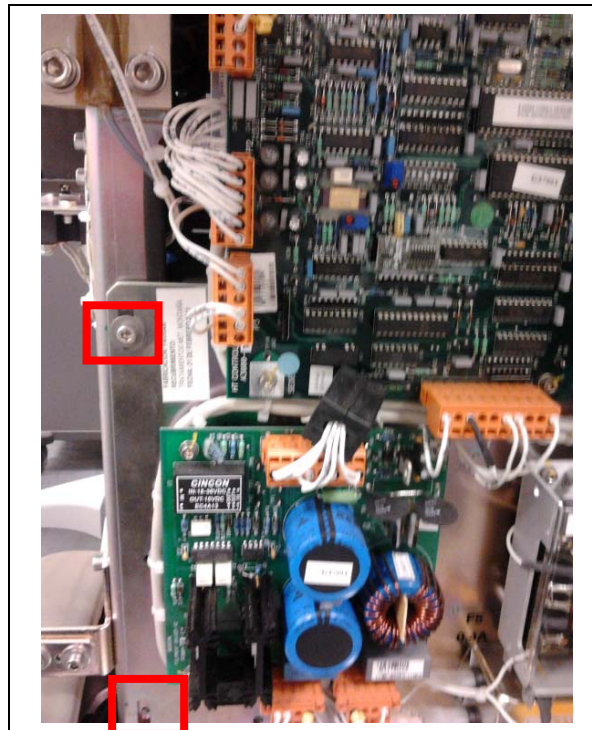


Figure 10

(13) Lift the screen and open the frame.

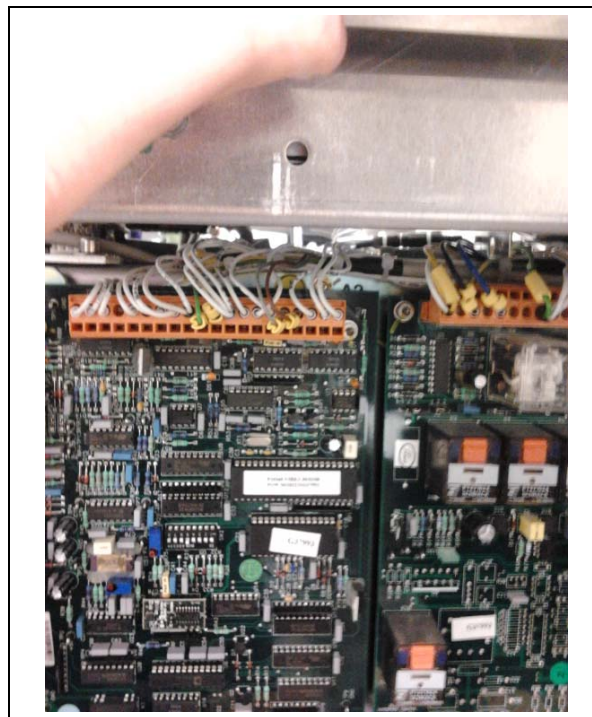


Figure 11

- (14) Remove EEPROM v42 (U24) carefully.

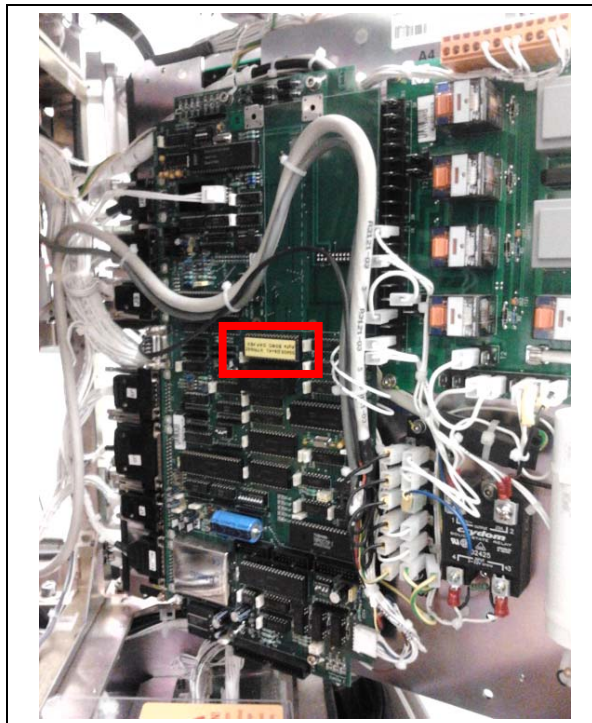


Figure 12



NOTE:

Make sure to lift the EEPROM together at both sides because the pins are fragile!

- (15) Replace with EEPROM v. 62.

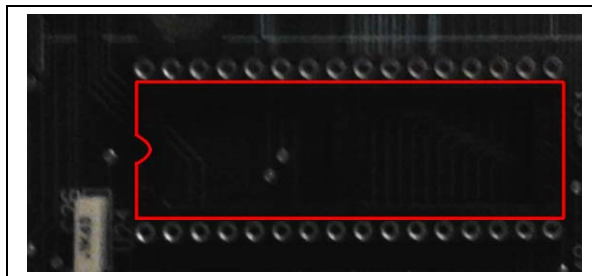


Figure 13



NOTE:

Make sure to correctly position the EEPROM (opening to the left).

- (16) Close the frame and fasten the screw(s).
- (17) Fasten the screen assembly.
- (18) Power up the unit.
- (19) Stop NX Software.
- (20) Open the TechService application.
- (21) Confirm the error(s).
- (22) Check the FW version in the bottom corner, it should be version 62.
- (23) Close TechService application.
- (24) Power down the DX-D100 unit.
- (25) Set the calibration switch to <OFF>.

**SPARE PART:**

This EEPROM is ordered via the normal Agfa spare parts channel

Ordering information: SC+SOFT-ATP - software version V7R1b62. Add the serial number of the DX-D 100 as a reference.

It is mandatory to add the serial number of the DX-D 100 as a reference as the software version is serial number-specific.

**IMPORTANT:**

Please send a completely filled "Machine-Down" form to orderprocessing-europe@matrium.net

or

orderprocessing-overseas@matrium.net

3 Upgrading to DX-D 100 version 3.0

**IMPORTANT:**

For upgrading older versions of the DX-D100 to version 3.0. please refer to the Clean Install Procedure document for the DX-D 100 on the Agfa HealthCare Library:

Direct Radiography → DR Equipment → DX-D 100 → Service Manual →
Clean Install Procedure

4 Keywords

Version 3.0; Softconsole 5.1; Varian 7; Windows; XRDI 13 SU1; NX 8700 SU1; regional settings; Dutch; Belgium; mAs value; English (US), generator firmware EEPROM.

5 Version history

Version	Change	Date
1.0	Initial Version	10-2012
1.1	Republishing due to the following correction: Replacement of Generator Firmware EEPROM (pages 1; 12-17)	11-2012



Details as of PDF Creation Date

Document Metadata

Title:	DX-D 100 - Service Bulletin No. 18 - OBSOLETE - Announcement of DX-D 100 Version 3.0
Livelihood ID:	38197684
Version#:	22
Version Date:	2012/11/30 10:54 AM CET
Status:	Approved on 2012/12/03 09:20 AM CET
Owner:	Beate Richter (axnwp)
Created By:	Beate Richter (axnwp)
Created Date:	2012/09/12 05:36 PM CET
PDF Creation Date:	2012/12/03 04:29 PM CET

This document was approved by:

Signatures:

1. Josef Wagner (agwj) on 2012/11/30 01:51 PM CET
2. Paul Merckx (amdag) on 2012/11/30 04:21 PM CET
3. Bart Biesemans (amajm) on 2012/11/30 09:29 PM CET

Detailed Approver History:

- **Approval Workflow started on 2012/11/30 10:56 AM CET**
 - Approval task originally assigned to and completed by Bart Biesemans (amajm) on 2012/11/30 09:29 PM CET
 - Approval task originally assigned to and completed by Paul Merckx (amdag) on 2012/11/30 04:21 PM CET
 - Approval task originally assigned to and completed by Josef Wagner (agwj) on 2012/11/30 01:51 PM CET

Version & Status History

Version#	Date Created	Status
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22	2012/11/30 10:54 AM CET	Approved - 2012/12/03
21	2012/11/30 10:52 AM CET	
20	2012/11/30 10:49 AM CET	
19	2012/11/30 10:04 AM CET	Approval Cancelled - 2012/11/30
18	2012/11/30 10:03 AM CET	
17	2012/11/28 05:39 PM CET	
16	2012/11/23 03:35 PM CET	Reviewed - 2012/11/28
15	2012/11/22 02:56 PM CET	Approval Cancelled - 2012/11/23
14	2012/11/22 02:55 PM CET	
13	2012/11/22 02:46 PM CET	

Applied Categories and Attributes:

Agfa Healthcare Library (Obsolete)	
Document Type:	Service Bulletin
Category > SubCategory > Item:	Direct Radiography > DR Equipment > DX-D 100
Content Manager:	Josef Wagner (agwj)
Summary:	
Language:	English
Availability:	Extranet
Language Master Document:	
Obsolete Text:	The content of this Service Bulletin needs to be updated and will be published again on short term.