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**DX-D 100 / DX-D 100 Wireless**

Type 5410/5411

**► Purpose of this Document**

This document:

- Describes the electrical test according to IEC 62353:2007 for a DX-D 100 system.
- Can be used to record the results.

**► Document History**

Edition. Revision	Release Date	Changes
1.2	09-2017	Corrected PE measurement test points [PRB0054996]. Refer to Figure 4 and related table.

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## WARNING:

**Improper operation or service activities may cause damage or injuries.**

- (1) Read the "Generic Safety Directions" prior to attempting any operation, repair or maintenance task on the equipment.  
Refer to Document ID [11849633](#).
- (2) Strictly observe all safety directions within the "Generic Safety Directions" and on the product.



## IMPORTANT:

The installation and service of the product(s) described herein is to be performed by qualified personnel who are employed by Agfa HealthCare N.V or one of its affiliates or who are otherwise authorized by Agfa HealthCare N.V. or one of its affiliates to provide such services.

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## 1 Required tools

Following tools are required to perform the test:

Device to measure:

- Protective conductor resistance
- Equivalent device leakage current

Example: Secutest S2N+



Figure 1

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## 2 Test details

Testing organization:	Reason for test:	
	Testing before putting into service (ref. value)	<input type="checkbox"/>
Name of testing person:	Recurrent test after            months*	<input type="checkbox"/>
	Test after repair	<input type="checkbox"/>
Test measurement equipment:		

\*Recurrent test intervals for this type of equipment according to IEC 62353: Max. 36 months

## 3 Equipment details

Manufacturer: AGFA HealthCare N.V.	Operator of the equipment:
Equipment Name: DX-D 100	Equipment Type Number:
System Serial Number:	Class of protection: I or battery operated (according to IEC 60601-1: 2005, definition 3.13) Applied part type: B
Mains connection:	Detachable power supply cord <input checked="" type="checkbox"/>

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## 4 Test instructions and results

### 4.1 Visual inspection

Test Description	Complies:	
	YES	NO
<ul style="list-style-type: none"> <li>Safety related marking, labels and labeling is legible and complete. See Figure 2.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>All covers are in good condition.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>No damage or contamination is visible.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>All cables not covered by cable ducts are in good condition.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>User manual is available and reflects the current revision of the equipment.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

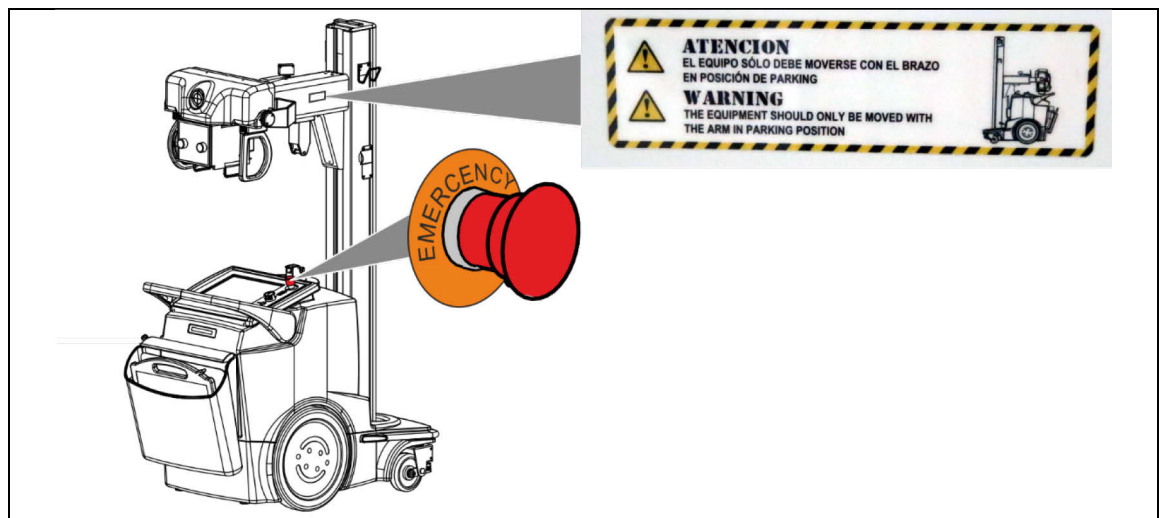


Figure 2: Example of safety labels

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## 4.2 Protective earth resistance

### 4.2.1 Introduction

For measurement of the protective earth resistance the DX-D 100 is connected to the standard outlet socket (test socket) of the test equipment. In order to measure the protective conductor resistance, contact a conductive part of the housing with the probe. Refer to Figure 3.

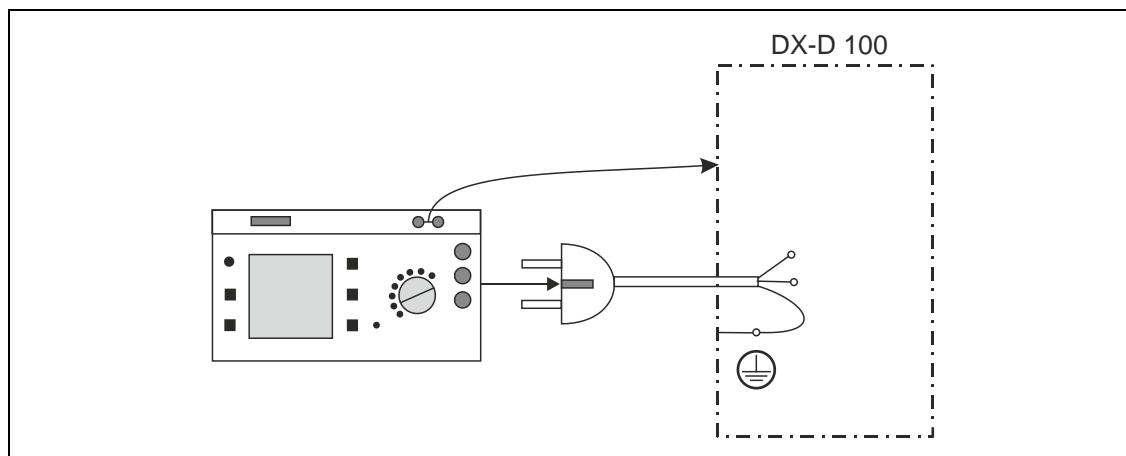


Figure 3

### 4.2.2 Measuring the protective earth resistance

- (1) Stop the NX: **Start > Agfa > NX > Service > Stop NX.**
- (2) Shut down Windows.
- (3) Turn the main switch to off position.
- (4) Connect the DX-D 100 mains connector to the standard outlet socket (test socket) of the test equipment.
- (5) Set the measurement tool to **PE measurement** (Protective Earth / Conductor Resistance).

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- (6) Using the probe, measure the PE resistance at several locations. See Figure 4.
- (7) Enter the values in the table next page.

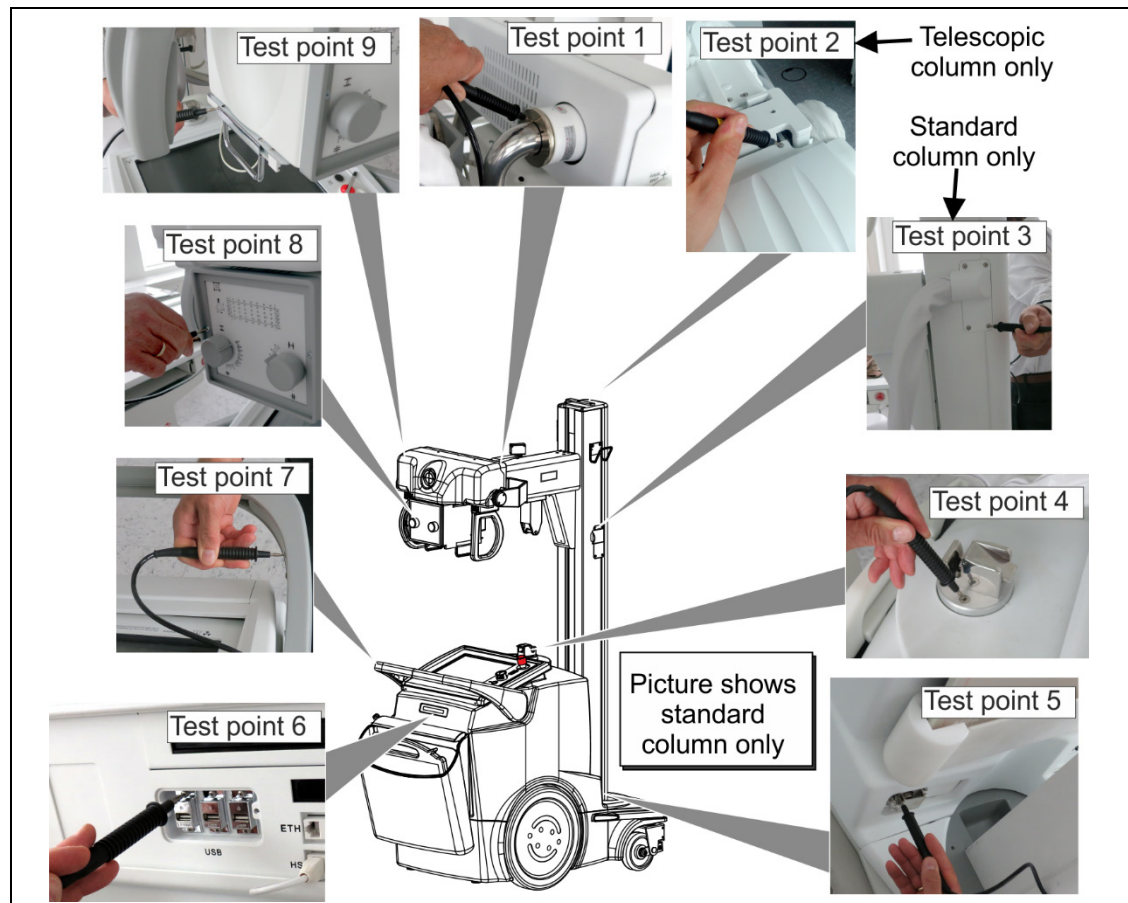


Figure 4: PE measurements

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PE resistance (see Figure 4)			Complies:		
Test point	Measured value	Limit value*	YES	NO	n.a.**
Test point 1 – X-Ray tube fitting	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 2 – Telescopic column	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 3 – Standard Column	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 4 - Lower parking detent	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 5 – Rear cover	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 6 – Front cover	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 7 - Handle	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 8 - Collimator	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test point 9 – Collimator handle	$\Omega$	0,3 $\Omega$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* When performing a “zero-balancing” for the power cord before the PE resistance measurements, the limit value is 0,1  $\Omega$ .

\*\* n.a. = not applicable

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### 4.3 Leakage current

#### 4.3.1 Introduction

For measurement of the leakage current the "equivalent device leakage current measurement method" is used:

A high-impedance power supply is connected between the short-circuited mains terminals and the device PE.

The current which flows via device isolation is measured.

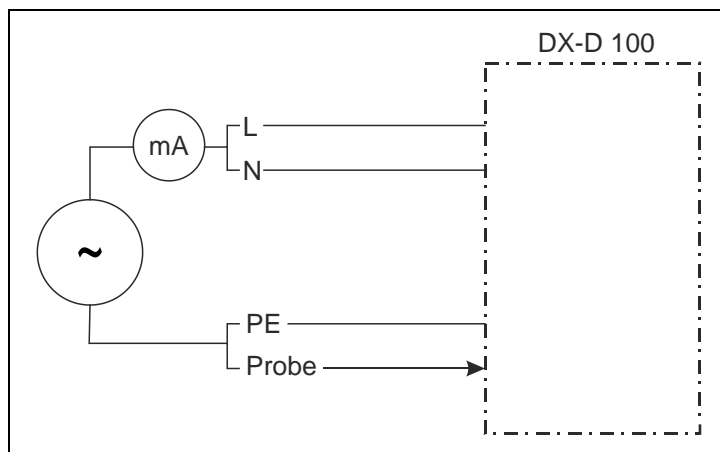


Figure 5

#### 4.3.2 Measuring the leakage current

- (1) Keep the DX-D 100 mains connector connected to the standard outlet socket (test socket) of the test equipment. Do not switch on the DX-D 100.
- (2) Set the measurement tool to **Equivalent Device Leakage Current**.
- (3) Put the probe at an isolated part of the device cover.
- (4) Measure the leakage current and enter it in the table below.

Equivalent Device Leakage Current		Complies:	
Measured value	Limit value	YES	NO
mA	1 mA	<input type="checkbox"/>	<input type="checkbox"/>

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## 5 Insulation resistance

The insulation resistance measurement is not required. Reason:

- 1) The DX-D 100 has overvoltage devices built in which prevent proper measurements.
- 2) To avoid reverse discharging of the DC high voltage.

## 6 Functional test

The purpose of the functional test is to check the function of the emergency switch.

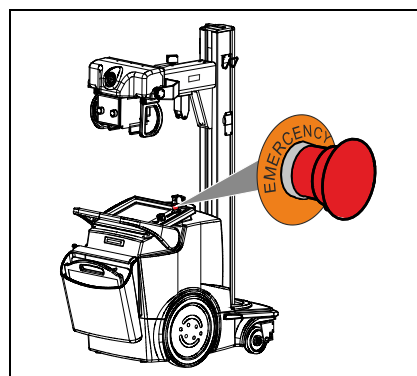


Figure 6: Emergency switch

Recommended procedure for the functional test:

- (1) With mains disconnected, put the system into operation (battery powered).
- (2) Stop the NX: **Start > Agfa > NX > Service > Stop NX.**
- (3) Press the emergency switch.
- (4) Try to move the DX-D 100 by pressing the handle bar:  
The DX-D 100 may not move.
- (5) Connect the DX-D 100 to the mains.
- (6) Try to switch on the DX-D 100 by the key-switch:  
The DX-D 100 may not start the boot-up.
- (7) Release the emergency switch.
- (8) Put the system into operation again.

Functional Test	Complies:	
	YES	NO
Emergency switch	<input type="checkbox"/>	<input type="checkbox"/>

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## 7 Test evaluation

<b>Deficiency / Note:</b>	
<b>Overall assessment:</b>	
Equipment is OK. No safety or functional deficiencies were detected.	<input type="checkbox"/>
Equipment shows deficiencies. No direct risk: Deficiencies detected have to be corrected on short term.	<input type="checkbox"/>
Equipment shows deficiencies and shall be taken out of operation until deficiencies are corrected.	<input type="checkbox"/>
Equipment does not comply. One of following three actions is recommended: Modification <input type="checkbox"/> <b>or</b> exchange of components <input type="checkbox"/> <b>or</b> taking out of service <input type="checkbox"/> .	<input type="checkbox"/>

<b>Evaluated by:</b>	
Name:	Date
Signature: _____	

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