

AGFA CR Plates and Cassettes

CR MD1.0 GENERAL SET

CR HD5.0S General

CR MD1.0F General

CR DD1.0 Vet

User Manual

Contents

Legal Notice	4
Introduction to this Manual	5
Scope	6
About the safety notices in this document	7
Disclaimer	8
Introduction to Agfa CR Plates and Cassettes	9
Intended Use	10
Intended User	11
System Documentation	12
Product Complaints	13
Compliance	14
Design	15
Labeling	15
Environmental Protection	16
CR Plate	17
CR Cassette	18
Safety Directions	19
General Safety Instructions	19
Using the Agfa CR Plates and Cassettes	20
CR MD1.0 Cassettes	21
Large format CR General cassette	22
Small format CR General cassette	24
Image Plate	26
CR HD5.0S General Detector	27
Orientation of large format CR General cassette	29
Orientation of small format CR General cassette	30
CR Full Leg Full Spine (FLFS) cassette	31
CR MD1.0F General Image Plate and Cassette	32
Exposure outside the cassette	33
Performing an examination	34
Compatibility	35
Cleaning the image plate adapter	36
CR DD1.0 Vet Image Plate and Cassette	37
Exposure outside the cassette	39
Performing an examination	40
Black border and cropping on NX	42
Cleaning the image plate adapter	43
Precautionary Measures	44
First Use and Normal Operation	45
Transport	45
Storage	45
Maximum Cassette Load	45
Handling the Image Plate	46
Cleaning	46
Quality Control	52

Specifications	53
----------------------	----

Legal Notice



0413



Agfa NV, Septestraat 27, B-2640 Mortsels - Belgium

For more information on Agfa products, please visit www.agfa.com.

Agfa and the Agfa rhombus are trademarks of Agfa-Gevaert N.V., Belgium or its affiliates. CR MD1.0 General, CR MD1.0F, CR DD1.0 Vet, CR HD5.0S and NX are trademarks of Agfa NV, Belgium or one of its affiliates. All other trademarks are held by their respective owners and are used in an editorial fashion with no intention of infringement.

Agfa NV makes no warranties or representation, expressed or implied, with respect to the accuracy, completeness or usefulness of the information contained in this document and specifically disclaims warranties of suitability for any particular purpose. Products and services may not be available for your local area. Please contact your local sales representative for availability information. Agfa NV diligently strives to provide as accurate information as possible, but shall not be responsible for any typographical error. Agfa NV shall under no circumstances be liable for any damage arising from the use or inability to use any information, apparatus, method or process disclosed in this document. Agfa NV reserves the right to make changes to this document without prior notice. The original version of this document is in English.

Copyright 2018 Agfa NV

All rights reserved.

Published by Agfa NV

B-2640 Mortsels - Belgium.

No part of this document may be reproduced, copied, adapted or transmitted in any form or by any means without the written permission of Agfa NV

Introduction to this Manual

Topics:

- *Scope*
- *About the safety notices in this document*
- *Disclaimer*

Scope

This manual contains information for safe and effective operation of the CR MD1.0 General, CR HD5.0S General, CR MD1.0F General and CR DD1.0 Vet Plates and Cassettes.

About the safety notices in this document

The following samples show how warnings, cautions, instructions and notes appear in this document. The text explains their intended use.

**DANGER:**

A danger safety notice indicates a hazardous situation of direct, immediate danger for a potential serious injury to a user, engineer, patient or any other person.

**WARNING:**

A warning safety notice indicates a hazardous situation which can lead to a potential serious injury to a user, engineer, patient or any other person.

**CAUTION:**

A caution safety notice indicates a hazardous situation which can lead to a potential minor injury to a user, engineer, patient or any other person.



An instruction is a direction which, if it is not followed, can cause damage to the equipment described in this manual or any other equipment or goods and can cause environmental pollution.



A prohibition is a direction which, if it is not followed, can cause damage to the equipment described in this manual or any other equipment or goods and can cause environmental pollution.



Note: Notes provide advice and highlight unusual points. A note is not intended as an instruction.

Disclaimer

Agfa assumes no liability for use of this document if any unauthorized changes to the content or format have been made.

Every care has been taken to ensure the accuracy of the information in this document. However, Agfa assumes no responsibility or liability for errors, inaccuracies or omissions that may appear in this document. To improve reliability, function or design Agfa reserves the right to change the product without further notice. This manual is provided without warranty of any kind, implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.



Note: In the United States, Federal law restricts this device to sale by or on the order of a physician.

Introduction to Agfa CR Plates and Cassettes

Topics:

- *Intended Use*
- *Intended User*
- *System Documentation*
- *Product Complaints*
- *Compliance*
- *Environmental Protection*
- *Safety Directions*

Intended Use

The CR MD1.0 General and CR HD5.0S General image plates and cassettes are part of a CR system, further containing a digitizer and modality workstation. The CR system is used in a radiological environment by qualified staff to read-out, process and route static X-ray radiographic images.

The cassette is used to protect the image plate from light and damages during X-ray exposure, transport and handling.

The image plate is used to capture the static X-ray radiographic images; the image plate is scanned by the digitizer.

The digitizer is used to scan an X-ray exposed image plate; it results into a digital image which is sent to the dedicated workstation.

The modality workstation is used to process and route the digital images from the digitizer.

The CR DD1.0 Vet image plate and cassette is used for intra oral dental radiography. The CR DD1.0 Vet image plate and cassette must be used for veterinary applications only.

The flexible CR MD1.0F General image plate and and the CR DD1.0 Vet image plates are exposed outside of the cassette.

Intended User

This manual has been written for trained users of Agfa products and trained diagnostic X-Ray clinical personnel who have received proper training.

Users are those persons who actually handle the equipment and those who have authority over the equipment.

Before attempting to work with this equipment, the user must read, understand, note and strictly observe all warnings, cautions and safety markings on the equipment.

System Documentation

The documentation shall be kept with the system for easy reference.

For information and safety notes on the digitizer systems, refer to the user manual of the digitizer.

Product Complaints

Any health care professional (for example a customer or a user) who has any complaints or has experienced any dissatisfaction with the quality, durability, reliability, safety, effectiveness, or performance of this product must notify Agfa.

If the device malfunctions and may have caused or contributed to a serious injury, Agfa must be notified immediately by telephone, fax or written correspondence to the following address:

Agfa Service Support - local support addresses and phone numbers are listed on www.agfa.com

Agfa - Septestraat 27, 2640 Mortsel, Belgium

Agfa - Fax +32 3 444 7094

Compliance

The CR MD1.0, CR HD5.0S and CR MD 1.0F plate and cassette complies with the following safety requirements.

The CR DD1.0 Vet image plate and cassette must be used for veterinary applications only. The cassette does not carry the CE mark and is not compliant with Directive 93/42/EEC. (For European Union)

Topics:

- *Design*
- *Labeling*

Design

- ISO4090:2001 Photography - Medical radiographic cassettes/screens/films and hard-copy imaging films - Dimensions and specifications
- IEC 62366:2007 Medical devices - Application of usability engineering to medical devices
- RoHS Directive 2002/95/EC

Labeling

- ISO 15223:2000 incl. amdt 1:2002 Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied
- EN 1041:2008, Information supplied by the manufacturer with medical devices

Environmental Protection

Topics:

- *CR Plate*
- *CR Cassette*

CR Plate

Regulations about waste disposal may differ from one country to another. Please consult local regulations on the subject matter.

At the end of its life cycle, the CR Plate is considered as industrial waste in most countries.

Consequently it is not allowed to dispose of it as household waste. We recommend to have it hauled away by a licensed company.

When the CR Plate is disposed of through incineration, the nature of the combustion products is dependent on the physical characteristics of the burning process and on the degree of combustion, whereby different gases can be generated, such as e.g. water vapor, carbon dioxide, carbon monoxide and small concentrations of organic and inorganic degradation products.

Disposal

Waste codes applicable for European Union:

	Plates containing storage phosphor
Product	09 01 99 Waste not otherwise specified
Packaging	15 01 06 Mixed packaging

Information applicable for USA:

	Plates containing barium
Product	These plates, when discarded, are a hazardous waste (EPA waste code D005) under the Resource Conservation and Recovery Act (RCRA) due to the leachability of barium. Hazardous waste must be managed and transported in accordance with federal, state, and local regulations. Please contact your local authorities for more information.

CR Cassette

The cassette shall not be treated as household waste.

For more detailed information about take-back and proper recycling of this product, please contact your local sales representative.

This information applies to the cassette only, excluding the plate or screen.

Disposal

Waste codes applicable for European Union:

	Cassettes
Product	16 02 14 Discarded equipment other than those mentioned in 16 02 09 to 16 02 13
Packaging	15 01 06 Mixed packaging

Information applicable for USA:

	Cassettes
Product	Hazardous waste must be managed and transported in accordance with federal, state, and local regulations. Please contact your local authorities for more information.

Safety Directions

General Safety Instructions

CR plates and cassettes will not cause any special health or safety hazard, if they are used as intended.

When working with the automatic exposure control device, take into account the following two warnings and read the instruction:

- Overexposure (for the MD1.0 General)



CAUTION:

Automatic Exposure Control devices may cause overexposure if they are positioned underneath the cassette.

The image plate retains a certain amount of X-rays. The dose measured by the cell will then be lower than the dose actually given to the patient.

Make sure that the automatic exposure control device is placed above the cassette.

- Wrong response



CAUTION:

Automatic Exposure Control device may give a wrong response.

The image plate causes a specific X-ray scattering. This influences the response of the exposure control device.

Recalibrate the X-Ray device for use with MD1.0 cassettes to compensate for this effect.

Using the Agfa CR Plates and Cassettes

Topics:

- *CR MD1.0 Cassettes*
- *CR HD5.0S General Detector*
- *Orientation of large format CR General cassette*
- *Orientation of small format CR General cassette*
- *CR Full Leg Full Spine (FLFS) cassette*
- *CR MD1.0F General Image Plate and Cassette*
- *CR DD1.0 Vet Image Plate and Cassette*
- *Precautionary Measures*
- *Specifications*

CR MD1.0 Cassettes

The labeling and layout of the CR MD1.0 cassettes are illustrated below. The tube side is black.



CAUTION:

The CR MD1.0 General cassette can only be used with the dedicated CR MD1.0 image plate.

Topics:

- *Large format CR General cassette*
- *Small format CR General cassette*
- *Image Plate*

Large format CR General cassette

Format:

- 35 cm x 43 cm

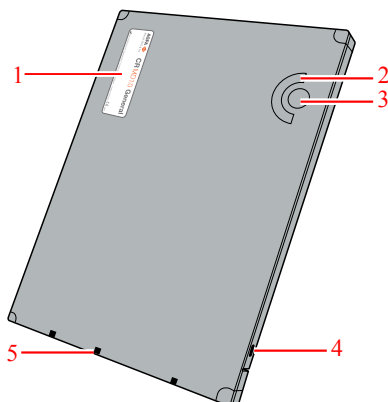
Label:



Note: The label on the cassettes illustrated below serves as an example. The name of the label “CR MD1.0 General” is subject to change.

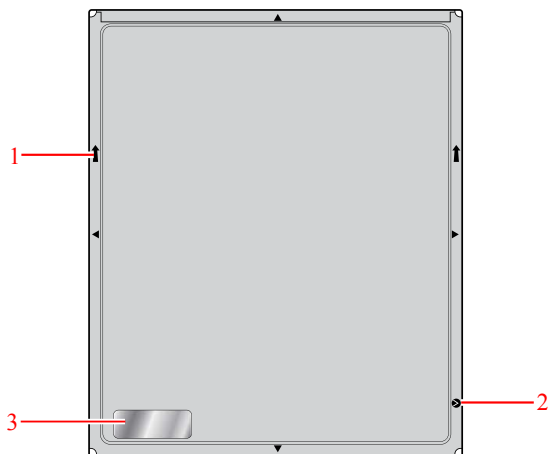


Layout:



1. Label
2. Clip
3. Cassette format
4. Lock to open and close the cassette
5. Shutter

Tube side



1. Cassette insertion marker, pointing towards the digitizer
2. Label indicating tube side of the cassette
3. Cassette orientation marker, indicates image orientation at image processing software.

Small format CR General cassette

Format:

- 35 cm x 35 cm
- 24 cm x 30 cm
- 18 cm x 24 cm
- 15 cm x 30 cm

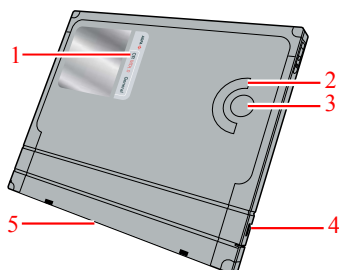
Label:



Note: The label on the cassettes illustrated below serves as an example. The name of the label “CR MD1.0 General” is subject to change.

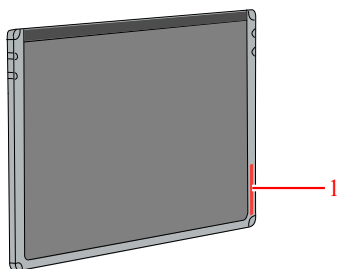


Layout:



1. Label
2. Clip
3. Cassette format
4. Lock to open and close the cassette
5. Shutter

Tube side



1. Cassette orientation marker, indicates image orientation at image processing software.

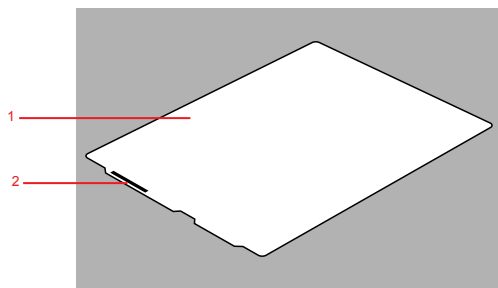
Related Links

[*Orientation of large format CR General cassette*](#) on page 29

Image Plate

On the image plate, a barcode is placed which ensures that plate specific data can be transferred to the digitizer.

Layout of the CR MD1.0 image plate:



1. Image plate
2. Barcode (containing the expiry date)

The digitizer informs you by a message in the Error Viewer application about upcoming and reached image plate expiry. For details, refer to chapter Troubleshooting in the user manual of the digitizer.

CR HD5.0S General Detector

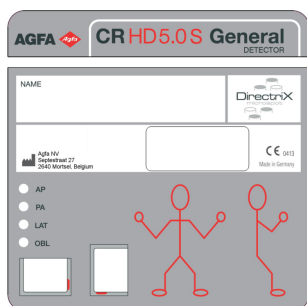
The CR HD5.0S General detector is used for general radiography.

The labeling and layout of the CR HD5.0S detectors are illustrated below. The tube side is black.

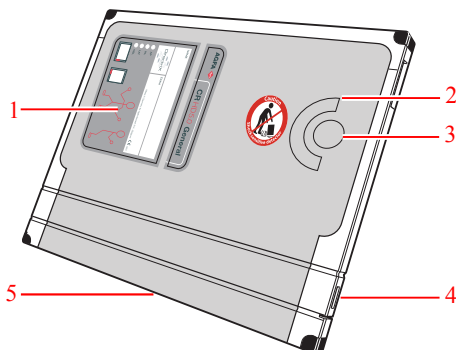
Label:



Note: The label on the cassettes illustrated below serves as an example. The name of the label “CR HD5.0S General” is subject to change.

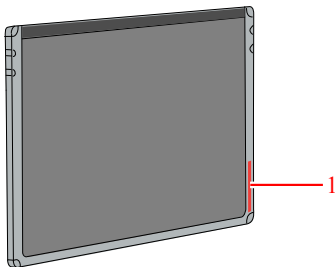


Layout:



1. Label
2. Clip
3. Cassette format
4. Lock to open and close the cassette
5. Shutter

Tube side



1. Cassette orientation marker, indicates image orientation at image processing software.

Cassette and plate must not be dropped as this might damage the cassette and plate. It is good practice to check the integrity of the cassette and plate after a cassette drop.



CAUTION:

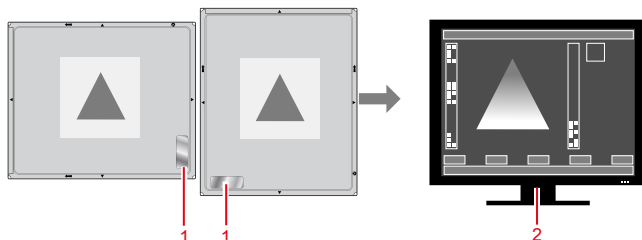
Dropping the cassette may damage the cassette and the detector inside. Do not use the detector again. A damaged detector can damage the digitizer.



CAUTION:

The CR HD5.0S General detector can only be used with the dedicated CR HD5.0S image plate.

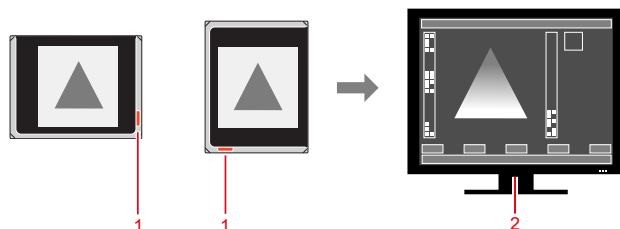
Orientation of large format CR General cassette



1. The cassette orientation marker indicates the lower end of the region of interest
2. The orientation of the image on the monitor

Figure 1: Orientation of large format CR General cassette

Orientation of small format CR General cassette



1. The cassette orientation marker indicates the lower end of the region of interest
2. The orientation of the image on the monitor

Figure 2: Orientation of small format CR General cassette

CR Full Leg Full Spine (FLFS) cassette

The CR MD1.0 and CR HD5.0S cassettes 35 cm x 43 cm are mixed use cassettes: used for both GenRad and Full Leg Full Spine.

For more specific information and instructions on the FLFS application consult the CR Full Leg Full Spine User Manual.

Related Links

[*Orientation of large format CR General cassette*](#) on page 29

CR MD1.0F General Image Plate and Cassette

The CR MD1.0F General cassette is identical to the CR MD1.0 General large format cassette, except for the label.



Figure 3: Label

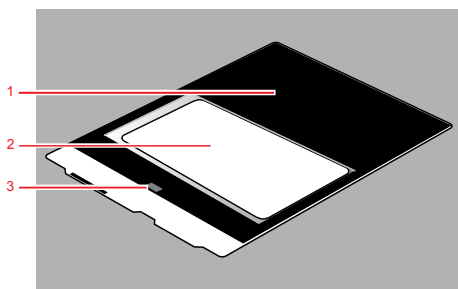
Format:

- 35 cm x 43 cm

The CR MD1.0F General cassette contains a flexible image plate that can be used for exposing the image plate outside of the cassette.

Image plate format:

- 15 cm x 30 cm



1. Image plate adapter
2. Image plate
3. Image plate batch number printed on the adapter

Figure 4: Layout of the CR MD1.0F image plate adapter

Topics:

- *Exposure outside the cassette*
- *Performing an examination*
- *Compatibility*
- *Cleaning the image plate adapter*

Exposure outside the cassette

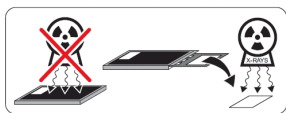


Figure 5: Exposure outside the cassette



CAUTION:

The digitizer can only capture the image from the removable image plates.

Do not expose the image plate with the image plate adapter inside the cassette. Remove the image plate from the cassette to make the exposure.

Performing an examination

To perform an examination:

1. Open the cassette.



CAUTION:

To ensure image quality, do not expose the plate to excess light.



The plate is reusable. Handle with care.



Do not use powdered gloves when handling or cleaning the cassette, adapter or plates.

- a) Open the cassette with the cassette key or a pen.
 - b) Move out the tray with the image plate adapter and place the cassette on a table.
2. Remove the image plate from the adapter.

The image plate is magnetically attached to the adapter.

3. Perform the examination on the modality using the image plate.
4. Return the image plate to the adapter.

The position of the image plate is indicated on the adapter.

It is recommended to align the image plate to one edge of the position fields of the adapter.

5. Scan the image plate.
 - a) Close the cassette with the cassette key or a pen.
 - b) Insert the cassette in the digitizer.

Compatibility

The batch number of the image plate is printed on the back side of the image plate and on the image plate adapter. The adapter must only be used with image plates that have a corresponding batch number.



1. Image plate batch number printed on the adapter

Figure 6: Batch number



1. Image plate batch number printed on the back side of the image plate

Figure 7: Batch number

Cleaning the image plate adapter

The image plate adapter is cleaned following the instructions of cleaning the image plate.

Related Links

[*How to clean the image plate?*](#) on page 47

CR DD1.0 Vet Image Plate and Cassette

The CR DD1.0 Vet cassettes are identical to the CR MD1.0 General cassettes, except for the label.



Figure 8: Label

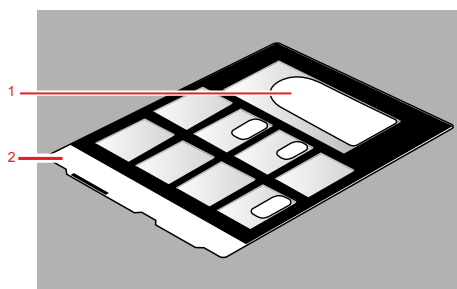
Format:

- 35 cm x 43 cm
- 15 cm x 30 cm

The CR DD1.0 Vet cassette is used with a set of flexible image plates that can be used for intra oral dental radiography examinations.

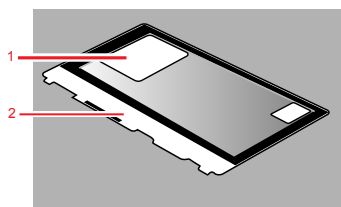
Image plate format:

- S0, S1, S2, S3, S4 (default set)
- 23 cm x 9 cm
- 21 cm x 6.3 cm
- 18 cm x 6.3 cm



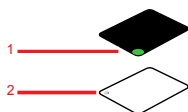
1. Image plate
2. Image plate adapter

Figure 9: Layout of the CR DD1.0 Vet image plate adapter (35 cm x 43 cm)



1. Image plate
2. Image plate adapter

Figure 10: Layout of the CR DD1.0 Vet image plate adapter (15 cm x 30 cm)



1. Magnetic rear side with green orientation marker
2. X-ray tube side with silver orientation marker

Figure 11: Layout of the CR DD1.0 Vet image plates

Topics:

- *Exposure outside the cassette*
- *Performing an examination*
- *Black border and cropping on NX*
- *Cleaning the image plate adapter*

Exposure outside the cassette

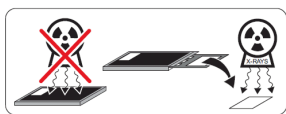


Figure 12: Exposure outside the cassette



CAUTION:

The digitizer can only capture the image from the removable image plates.

Do not expose the image plate with the image plate adapter inside the cassette. Remove the image plate from the cassette to make the exposure.

Performing an examination



Note: The CR DD1.0 Vet image plate and cassette must be used for veterinary applications only.

To perform an examination:



CAUTION:

Do not use other intraoral image plate types than provided with the adapter.

1. Open the cassette.



To ensure image quality, do not expose the plate to excess light.



The plate is reusable. Handle with care.



Do not use powdered gloves when handling or cleaning the cassette, adapter, barrier envelopes or plates.

- a) Open the cassette with the cassette key or a pen.
- b) Move out the tray with the image plate adapter and place the cassette on a table.

2. Remove the image plate from the adapter.

The image plate is magnetically attached to the adapter.

- a) Remove an image plate.
- b) Put it in a barrier envelope of the appropriate size.

The barrier envelope is available at cawo@cawo.com

Make sure that the black side of the plate faces the transparent side of the barrier envelope.

- c) Remove the protective tape from the sticky edge of the barrier envelope and seal it shut.

If you are making multiple exposures, put all required image plates in barrier envelopes before continuing with the next step.

If you are making multiple exposures, it is important to link the images to the exposures. The images are identified by the location of the image

plates on the adapter. To avoid confusion, the barrier envelopes and the slots of the image plate adapter can be numbered using a marker. The images on NX can be identified using annotations.

Image plates that are not used can be left in the adapter.

3. Perform the examination on the modality using the image plate.



Note: Be sure to wear gloves.

- a) Position the plate in the patient's mouth.

The blue side of the plate must face the x-ray aperture.

- b) Perform the X-ray exposure.
- c) Remove any residue from the barrier envelope.

If you are making multiple exposures, make all exposures before continuing with the next step.

4. Tear open the barrier envelope and put the plate on a clean and dry surface, with the black side on top.

Do not touch the plate with your gloved hands.

5. Remove your gloves.
6. Position the plate back in the adapter.

The correct position may have been marked when removing the image plate from the adapter.

It is recommended to align the image plate to one edge of the position fields of the adapter.

7. Scan the image plate.
 - a) Close the cassette with the cassette key or a pen.
 - b) Insert the cassette in the digitizer.

8. Digital image at NX.

Check the image at the NX image processing software.



Note: Multiple exposures on the adapter are treated as one image on NX. This means that image manipulations affect each of the single images. Image manipulations must be done for each image separately if the exposure conditions of the single images were different.

Limitations:

- The black border and cropping on NX can fail on the multiple exposures.
- The displayed Exposure Index or LgM value is not correct as there are multiple exposures on the image.

Black border and cropping on NX

The black border and cropping on NX can fail on the multiple exposures.

- No, not all or only partial diagnostic images are visible.
- The area between the single intra oral images and the unexposed image area appears white.

To view the images:

1. Turn off the **Black border** functionality at NX.
2. Draw a manual collimation area for each intra oral image on the scan.
3. Apply the **Collimation** functionality at NX.

Cleaning the image plate adapter

The image plate adapter is cleaned following the instructions of cleaning the image plate.

Related Links

[*How to clean the image plate?*](#) on page 47

Precautionary Measures

Topics:

- *First Use and Normal Operation*
- *Transport*
- *Storage*
- *Maximum Cassette Load*
- *Handling the Image Plate*
- *Cleaning*
- *Quality Control*

First Use and Normal Operation

CR plates and cassettes should only be used with CR equipment.



CAUTION:

When using new CR plates, you need to manually erase them twice before use.



CAUTION:

When CR MD1.0 or CR HD5.0S plates and cassettes have not been used for 48 hours, you equally need to erase them manually.



CAUTION:

An image plate should be scanned shortly after exposure. A time of more than 2 hours between exposure and scanning should be avoided.

Transport

- Protect the plates from high temperatures during transport - max. 40°C (104°F).
- Take the precautions necessary to ensure that the plates remain protected from impact.

Storage

- Temperature and humidity levels:
Packaged : -25°C to 55°C (-13°F to 131°F)
Not packaged Temperature : 15°C to 35°C (59°F to 95°F)
Relative humidity : 10 to 75% (recommended 30 to 60%)
- To avoid any deformation, always store the image plates horizontally on a flat surface.
- Do not place any excessive loads on the image plate and/or cassette.
- Avoid UV-radiation or direct sunlight on the image plate and/or cassettes.

Maximum Cassette Load



CAUTION:

The maximum allowed weight load on the cassette is 110 kg.

The cassette must be laying on a flat and stable floor.

For foot exams the patient should always stand in the center of the cassette.

Handling the Image Plate

The necessary precautions must be taken when handling the image plate to avoid scratches or damage. Any damage to the image plate, of whatever nature, will be visible in the image.

Cleaning

Topics:

- *Cleaning the Image Plate*
- *Cleaning the Cassette*
- *Disinfecting the Cassettes*

Cleaning the Image Plate



CAUTION:

Do not use disinfectants or any other solution on the image plate.



Be aware that the image plate of the CR HD5.x S detector is a very expensive part and therefore needs extra care.



To avoid any deformation always store the image plate horizontally on a flat surface.



Do not put the image plate with the phosphor side facing down.

Topics:

- *When to clean the image plate?*
- *Permitted cleaning products?*
- *How to clean the image plate?*

When to clean the image plate?

The inner lining of the cassette is made of fleece. This ensures a high degree of protection against electrostatic charging and dust collection on the image plates. Nonetheless it is recommended to clean the image plates at least once every month or whenever there is doubt about particles visible on the X-ray

images. More frequent cleaning is required in case of excessive dust or under very dry conditions.

Permitted cleaning products?

For the image plates only use AGFA CR Phosphor Plate Cleaner and a soft lint-free cellulose cloth or Polynit wipes to clean the image plate.

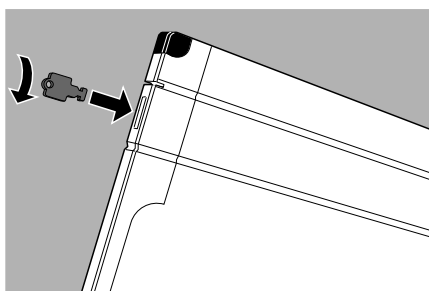


Note: It is advised to wear gloves while cleaning the image plates and cassettes.

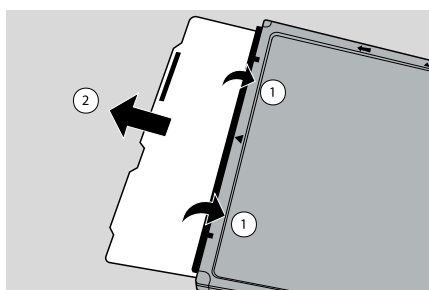
How to clean the image plate?

To clean the image plate:

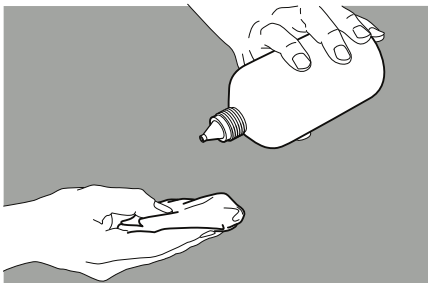
1. Insert the Agfa cassette key into the cassette lock to open the shutter. Push the key firmly and turn it 90 degrees clockwise.



2. Turn the cassette around, so that the black tube side is above.
3. Hold back the shutter with both thumbs (1) and let the image plate slide out carefully (2) onto the table.



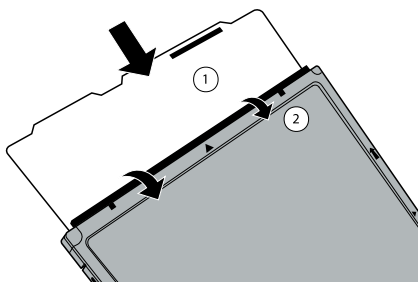
4. Put the image plate onto the cassette.
5. Clean the image plate as follows:
 - a) Take an appropriate wipe or moisten the cloth with cleaner and wipe the **image plate surface** softly and evenly.

**CAUTION:**

Do not pour AGFA CR Phosphor Plate Cleaner directly on the image plate.

- b) Leave the **image plate surface** to dry for about 10 minutes to allow the solvents to evaporate.
 - c) Once the image plate surface is dry (after about 10 minutes), check once again for particles of material and other impurities before placing the image plate into the cassette.
6. Put the image plate back into the cassette.

Verify that the white phosphor side (1) is oriented to the tube side of the cassette (2) and that the shutter does not scratch the image plate.



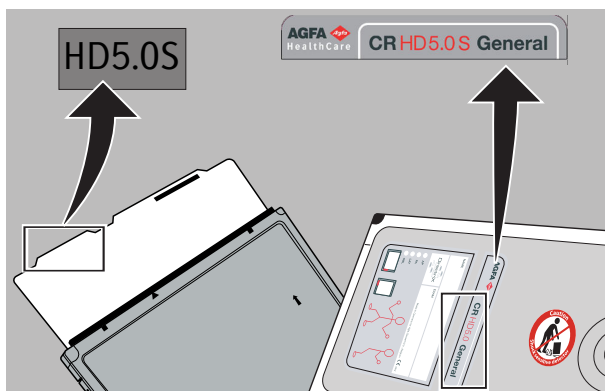
- 1. White phosphor side
- 2. Tube side of the cassette



Make sure to slide in the image plate carefully. Do not let the plate fall down vertically into the cassette! This causes delaminations and damages of the phosphor.



Note: Make certain you put the correct image plate into the correct cassette. The label on the image plate must correspond to the label on the cassette.



7. When the image plate is completely inside the cassette, close the shutter and remove the Agfa cassette key.



Note: As an alternative to the Agfa cassette key, a pen can be used to unlock the cassette. Insert the pen into the cassette lock firmly while opening or closing the shutter.



Note: After cleaning it is necessary to erase the image plate before use.

Cleaning the Cassette

Clean the cassette thoroughly. Use only a dry cloth or blow away possible dust with compressed air.

When necessary, you can clean the outside of the cassettes, preferably only with a damp cloth (water, soap).



CAUTION:

Before doing a damp cleaning of the cassette, remove the image plate.



CAUTION:

Do not use AGFA CR Phosphor Plate Cleaner, PROSAT wipes, AGFA CURIX screen cleaner or any other screen cleaners or alcohol containing liquid on the cassette surface, as this can cause damage to the cassette.



Do not pour liquid directly on the cassette. Always use a low-linting cloth dampened (not dripping) with the solution.

**CAUTION:**

Be sure that all surfaces are thoroughly dry before returning the equipment to use.



Note: If a cassette may get into contact with body fluids, protect the cassette with a plastic envelop.

Disinfecting the Cassettes

To disinfect the cassettes of the CR Plates and Cassettes, use only disinfectants approved by Agfa (see list of approved disinfectants). If you plan to use other disinfectants, approval of AGFA is needed before use, as most disinfectants can damage the cassette. UV disinfection is also not allowed.

For detailed information on how to apply disinfection, refer to the instructions for use that are delivered with the disinfectant.

Refer to the Agfa website for specifications on the disinfectants that have been found compatible with the cassette material and can be used on the outer surface of the cassette.

<http://www.agfahealthcare.com/global/en/library/overview.jsp?ID=37134794>

<http://www.agfahealthcare.com/global/en/library/overview.jsp?ID=45445721>

Topics:

- *Use of protective plastic envelope*
- *Safety directions for disinfection*

Use of protective plastic envelope

If the cassette is used in an environment where disinfection is required or where it may get into contact with blood or other body fluids, use plastic envelopes to protect the cassette from direct patient contact. Make sure that the plastic envelope is not wrinkled to avoid the creases showing in the image.

Safety directions for disinfection

**CAUTION:**

All appropriate policies and procedures should be followed to avoid contamination of the staff, patients and equipment.

**CAUTION:**

Make sure that the equipment is properly decontaminated and disinfected before shipment or servicing.

**CAUTION:**

The selection and description of the appropriate disinfection procedure and policy is the responsibility of the user.

**WARNING:**

Do follow the instructions of use as provided with the cleaning or disinfection product.

**CAUTION:**

Before disinfecting the cassette, remove the image plate and assure that the cassette is clean.



Do not pour liquid directly on the cassette. Always use a low-linting cloth dampened (not dripping) with the solution.

**CAUTION:**

Be sure that all surfaces are thoroughly dry before returning the equipment to use. Disinfecting solution may cause skin irritation to the patient.

**CAUTION:**

Disinfecting solution or wipes may cause eye and skin irritation. Wear gloves and wash hands with soap and water following use. Consult the manufacturer's Material Safety Data Sheets (MSDS) and recommendations on the product label for additional information prior to use.

Quality Control

As is the case for all technical devices, the CR detectors, plates and cassettes must be operated, cared for and maintained correctly.

A regular quality control of the plates and cassettes inventory has to be applied in accordance with the local regulations. If no specific regulations are valid, a regular quality control of the complete plates and cassettes inventory applied at least quarterly with the Agfa Auto QC tools (Auto QC², Auto QC Mammo) or with an equivalent tool is required.

Specifications

Available Sizes (CR MD1.0 General)	35 cm x 43 cm 35 cm x 35 cm 24 cm x 30 cm 18 cm x 24 cm 15 cm x 30 cm
Available Sizes (CR HD5.0S General)	35 cm x 43 cm 24 cm x 30 cm 18 cm x 24 cm
Available Sizes (CR MD1.0F General)	35 cm x 43 cm
Available Sizes (CR DD1.0 Vet)	35 cm x 43 cm 15 cm x 30 cm
Compliance	Outer cassette dimensions are compliant with ISO 4090 - 2001
Identification	Barcode embedded in the image plate.
Environmental storage and transport conditions	Allowed temperature and humidity levels in packed condition: Temperature: allowed -25 to 55°C (-13°F to 131°F) Relative humidity: allowed: 15-80%
Environmental operation conditions	Allowed temperature and humidity levels for operation: Temperature: recommended 20-25°C (68-77°F) / allowed: 15-35°C (59-95°F) Relative humidity: recommended 30-60% / allowed: 10-75%
Characteristics	The Agfa phosphor has excellent dark decay characteristics. Two hours after exposure, approximately 80% of the energy stored upon exposure is still available. The image retention is better than 50% up to 24 hours after irradiation.

Expected Lifetime	After 5 years there is a risk that the CR MD1.0 plate may perform suboptimal. Therefore the user will be informed of the status of this plate as of 3 months before the expected lifetime.	
	CR MD1.0 General CR MD1.0F General CR DD1.0 Vet	CR HD5.0S General
Weight (Cassette + Image Plate)		
35 cm x 43 cm	1.9 kg	2.1 kg
35 cm x 35 cm	1.5 kg	-
24 cm x 30 cm	1.0 kg	1.1 kg
18 cm x 24 cm	0.7 kg	0.7 kg
15 cm x 30 cm	0.7 kg	-
Cassette Material		
Body and Tray	Acrylonitryl Butadiene Styrene (ABS)	Acrylonitryl Butadiene Styrene (ABS)
Corners	Estane	Estane
Shutter	Polypropylene (PP)	Polypropylene (PP)
Inner Lining	Fleece	Fleece
Image plate material	Phosphor layer: BaSrFBrl:Eu	Phosphor layer: CsBr:Eu
Substrate	Steel substrate	Steel substrate
Compatible AGFA digitizer		
For detailed compatibility data, refer to the user manual of the digitizer.	CR 10-X CR 12-X CR 15-X	CR 15-X