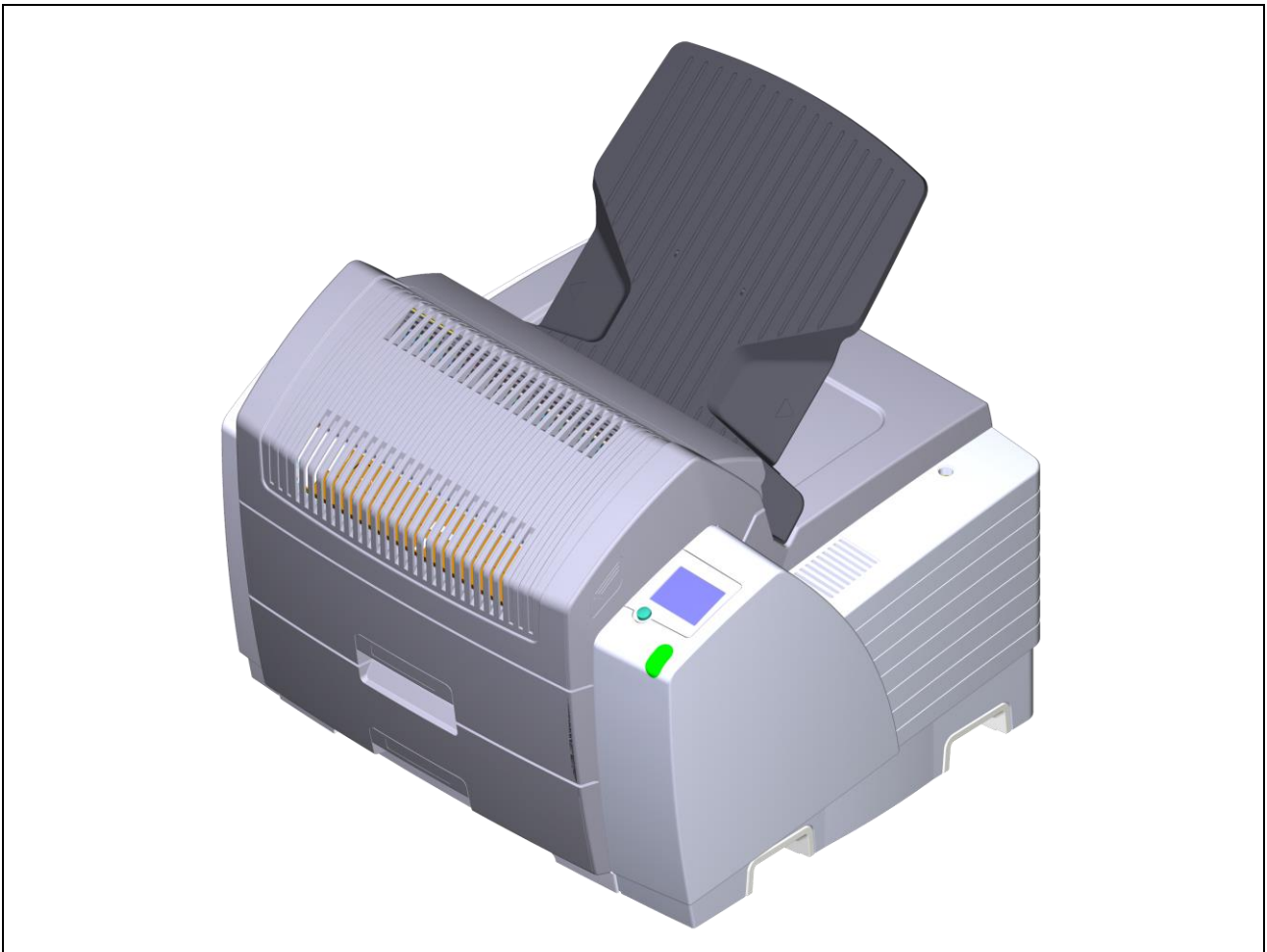


**DRYSTAR 5302, DRYSTAR 5301, DRY IMAGER,  
CRYSTAL IMAGER, DRYSTAR 5302 XL,  
DRYSTAR 5301 XL, DRY 2.4, DRY 1.4,  
DRYSTAR AXYS, CRYSTAL-M IMAGER,  
DRYSTAR AXYS XL, DRY 2.4M**

Type 5366/100/101/110/300/400/410/500/510 and 5367/100/300/400/500

**Includes the Maintenance Checklist, attached in chapter 9.5.3.**



DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Meding Library. Any printed copy of this document is uncontrolled.

## ▶ Manufacturer

Agfa NV

### Published by

Agfa-Gevaert HealthCare GmbH  
Tegernseer Landstraße 161  
D - 81539 München  
Germany

Copyright © 2021 Agfa NV

All rights reserved.

Technical modifications reserved.

Agfa and the Agfa rhombus are trademarks of Agfa-Gevaert N.V., Belgium, or its affiliates.

All other trademarks mentioned in this document are held by Agfa NV or the respective owners and are used in an editorial fashion with no intention of infringement.

Nothing contained in this legal notice nor in any text in this document shall be construed as granting by implication, estoppel or otherwise, any license or right to use any of the trademarks, service marks, trade names or logos appearing in this document without the express prior written consent of their respective owner.



### 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 NV or one of its affiliates or who are otherwise authorized by Agfa NV or one of its affiliates to provide such services.

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## LIST OF CONTENTS

|       |   |    |
|-------|---|----|
| 0     | ABOUT THIS MANUAL .....   | 13 |
| 0.1   | Purpose of this document .....                                    | 13 |
| 0.2   | Changes compared to previous revision .....                       | 13 |
| 0.3   | Referenced documents.....   | 13 |
| 0.4   | Explanation of notes .....  | 14 |
| 0.5   | Conventions .....   | 14 |
| 1     | PRODUCT DESCRIPTION .....   | 15 |
| 1.1   | Intended use .....  | 15 |
| 1.2   | Type overview .....   | 15 |
| 1.3   | Main printer characteristics.....                                 | 16 |
| 1.4   | Printer components.....   | 17 |
| 1.4.1 | Components Location.....  | 17 |
| 1.4.2 | List of Components.....   | 21 |
| 1.4.3 | Tray detection sensors in Printers with SN > 151.001/751.001..... | 24 |
| 1.5   | Overview of control boards .....                                  | 25 |
| 1.6   | Overview of major hardware changes .....                          | 26 |
| 1.7   | Film run .....  | 28 |
| 1.8   | Backside Printing Recognition .....                               | 34 |
| 1.9   | Left / Right Shift Print Algorithm.....                           | 35 |
| 1.10  | Mammo Printing Functionality (type 5367 only).....                | 37 |
| 1.11  | Printer calibrations overview .....                               | 39 |
| 1.12  | Printer Modules .....   | 40 |
| 1.13  | Hardware.....   | 42 |
| 1.14  | Modules and E-Labels .....  | 44 |
| 1.15  | Printer online diagnosis software.....                            | 46 |
| 1.16  | Thermal model .....   | 48 |
| 2     | SAFETY DIRECTIONS.....  | 49 |
| 2.1   | Safety Notes for Installation Planning and Installation .....     | 49 |

## DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|       |  |    |
|-------|--|----|
| 2.2   | Safety Notes for preventive and corrective Maintenance Work..... | 49 |
| 2.3   | General Safety Note for all Service Activities .....             | 50 |
| 2.3.1 | Safety switch .....  | 50 |
| 2.3.2 | Electrical Check after Power Supply Replacements.....            | 51 |
| 3     | PRE-INSTALLATION.....  | 53 |
| 3.1   | Items to be organized before installation .....                  | 53 |
| 3.1.1 | Power cables.....  | 53 |
| 3.1.2 | Tools .....  | 53 |
| 3.1.3 | Documents .....  | 53 |
| 3.2   | Scope of delivery .....  | 55 |
| 3.3   | Accessories.....   | 56 |
| 3.4   | Remote service .....   | 56 |
| 3.5   | Required data for printer setup on site .....                    | 57 |
| 3.6   | Specifications .....   | 57 |
| 3.6.1 | Printer dimensions .....   | 57 |
| 3.6.2 | Printer Interfaces.....  | 58 |
| 3.6.3 | Electrical connection .....                                      | 59 |
| 3.6.4 | Resolution .....   | 60 |
| 3.6.5 | Pixel Matrices.....  | 60 |
| 3.6.6 | Interface Data.....  | 61 |
| 3.6.7 | User access to the printer .....                                 | 62 |
| 3.6.8 | Other technical data.....  | 62 |
| 4     | INSTALLATION AND CONFIGURATION .....                             | 63 |
| 4.1   | Installation overview.....                                       | 64 |
| 4.1.1 | Installation steps .....   | 64 |
| 4.2   | Installation wizard .....  | 66 |
| 4.3   | Printer configuration.....                                       | 66 |
| 4.3.1 | Setting film calibration parameters .....                        | 67 |
| 4.3.2 | Setting the Default Densitometer .....                           | 68 |
| 4.3.3 | Setting the Film View .....                                      | 69 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|        |  |     |
|--------|--|-----|
| 4.3.4  | Setting Beeps on empty Tray.....   | 70  |
| 4.3.5  | Activating the Mammo License (type 5367 only).....   | 71  |
| 4.3.6  | Entering Site data .....   | 72  |
| 4.4    | Film calibration .....   | 73  |
| 4.5    | Printer - Modality connection .....  | 73  |
| 4.5.1  | Modality set-up.....   | 73  |
| 4.6    | Logical printers Set-up .....  | 74  |
| 4.7    | Printing of diagnostic and / or test images.....   | 78  |
| 4.8    | Image adjustments.....   | 78  |
| 4.8.1  | For type 5367 only: Mammography specific Image Adjustments (optional).....   | 79  |
| 4.8.2  | Image Adjustments as described in the Connectivity Release Document .....  | 81  |
| 4.8.3  | Image Adjustments at the Modality.....   | 81  |
| 4.8.4  | Basic Image Adjustment at the Printer via Key-Operator Menu .....  | 83  |
| 4.9    | Performing the Acceptance Test.....  | 87  |
| 4.10   | Completing installation.....   | 87  |
| 4.10.1 | Customer training.....   | 87  |
| 4.10.2 | Backup of Printer Settings .....   | 88  |
| 4.10.3 | Preparing the printer for remote service .....   | 88  |
| 5      | CALIBRATION.....   | 89  |
| 5.1    | Film Calibration .....   | 90  |
| 5.2    | CDM (Internal Densitometer) Calibration.....   | 92  |
| 5.3    | Print Head (TH) Calibration.....   | 94  |
| 5.4    | Smart Profile Calibration .....  | 96  |
| 5.5    | Compliance Film Calibration as part of Afssaps / EUREF Calibration Procedure.....  | 101 |
| 5.5.1  | Checking the Densitometer Calibration .....  | 104 |
| 5.5.2  | Checking the Densitometer Configuration in the Printer .....   | 104 |
| 5.5.3  | Resetting the Compliance Film Calibration, Internal Densitometer Calibration<br>and Thermal Print Head Calibration ..... | 105 |
| 5.5.4  | Performing Internal Densitometer Calibration, Film Calibrations and Thermal Print<br>Head Calibration .....              | 106 |
| 5.5.5  | Performing a Density Reproduction Check.....   | 110 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|        |  |     |
|--------|--|-----|
| 5.5.6  | Performing the Afssaps / EUREF Calibration Check.....                              | 111 |
| 5.5.7  | Performing a Compliance Film Calibration .....                                     | 112 |
| 6      | ACCEPTANCE TEST .....  | 116 |
| 7      | TROUBLESHOOTING.....   | 117 |
| 7.1    | Film density, sharpness or contrast not OK.....                                    | 117 |
| 7.1.1  | Dmin (minimum Density) too high.....   | 117 |
| 7.1.2  | Dmax too high or too low .....   | 118 |
| 7.1.3  | Density Reproduction not okay .....  | 119 |
| 7.1.4  | Optimal perceivable Levels not okay .....  | 120 |
| 7.1.5  | Contouring visible; 'Landscaping'.....   | 121 |
| 7.1.6  | Contrast and/or Sharpness not okay .....   | 122 |
| 7.2    | Line Artifacts in Transport Direction.....   | 123 |
| 7.2.1  | Dust Stripes on the Film.....  | 123 |
| 7.2.2  | Dark Line(s) < 1mm in Transport direction .....                                    | 124 |
| 7.2.3  | White or bright Line(s) < 1mm in Transport direction .....                         | 125 |
| 7.2.4  | Bright vertical Lines over the whole Film Length .....                             | 126 |
| 7.2.5  | Narrow (between 1 and 5 mm) to wide (> 5 mm) Lines in Transport direction.....     | 127 |
| 7.2.6  | Persistent dark line in transport direction.....                                   | 128 |
| 7.2.7  | Persistent blank line in transport direction. ....                                 | 129 |
| 7.2.8  | Intermittent blank line in transport direction. ....                               | 130 |
| 7.2.9  | Wide Bands with lower Density at the left and/or right Hand Side of the Film ..... | 131 |
| 7.2.10 | Regular Line Structure vertical to Transport direction: Banding .....              | 132 |
| 7.3    | Point Artifacts .....  | 133 |
| 7.3.1  | Point Artifacts - Pinholes.....  | 133 |
| 7.3.2  | Point Artifacts - Bubbles.....   | 134 |
| 7.3.3  | Dust Particles on the Print Drum.....  | 135 |
| 7.3.4  | Dust Particles in the Film .....   | 136 |
| 7.4    | Surface Artifacts.....   | 137 |
| 7.4.1  | Blemish: The Artifact looks like Dirt spread out on the Surface of the Film.....   | 137 |
| 7.4.2  | Scratches: One or more bright Line over the whole Length of the Film .....         | 138 |

## DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|       |  |     |
|-------|--|-----|
| 7.4.3 | Film Curl if Film is hanging at the Lightbox.....  | 139 |
| 7.4.4 | Ghost image visible on films of printers which mainly print small film formats .....                             | 139 |
| 7.5   | Display Problems .....   | 140 |
| 7.5.1 | Blank LCD Display .....  | 140 |
| 7.5.2 | Keys at LCD Display do not work .....  | 140 |
| 7.6   | Error and Warning Messages .....   | 141 |
| 7.6.1 | Display Message: MODXX: Please replace Module.....   | 141 |
| 7.6.2 | Display message: New Error EXXXXX.....   | 142 |
| 7.6.3 | Display Message: New Error E312000.....  | 143 |
| 7.6.4 | Display Message: New Maintenance.....  | 143 |
| 7.6.5 | Error message: "Film Jam: Open upper input tray and clear film path".<br>Error HC314003 in the infocounter. .... | 145 |
| 7.6.6 | Message "Error System Failure" .....   | 146 |
| 7.6.7 | Keypad shows "Please wait - Selftest Proceeding" for more than 5 Minutes.....                                    | 148 |
| 7.7   | Image Transfer Problems .....  | 149 |
| 7.7.1 | Images are not shown in the Printer Queue .....  | 149 |
| 7.8   | Film Jam.....  | 150 |
| 7.8.1 | Message: Remove Film Jam .....   | 150 |
| 7.9   | Printer error codes .....  | 151 |
| 7.9.1 | Error Codes of printers with serial number < 100.000 .....   | 151 |
| 7.9.2 | Error Codes of printers with serial number > 100.000 .....   | 190 |
| 8     | REPAIR .....   | 227 |
| 8.1   | Required tools.....  | 227 |
| 8.2   | Connection of the Service PC to the Printer .....  | 228 |
| 8.2.1 | Connection of the Service PC to the Printer.....   | 229 |
| 8.2.2 | Adaptation of the Service PC IP Address .....  | 229 |
| 8.3   | Software tools reference .....   | 231 |
| 8.3.1 | Key-Operator Menu on the local Keypad.....   | 232 |
| 8.3.2 | Infocounter .....  | 235 |
| 8.3.3 | Test images.....   | 236 |
| 8.3.4 | Show Error Codes.....  | 244 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|        |   |     |
|--------|---|-----|
| 8.3.5  | Printer Browser Pages .....                                       | 245 |
| 8.3.6  | Key-Operator Tools.....   | 247 |
| 8.3.7  | Service Engineer Tools.....                                       | 252 |
| 8.3.8  | Printer Logging.....  | 277 |
| 8.3.9  | Printer Bootup-Message .....                                      | 278 |
| 8.3.10 | ADVP .....  | 280 |
| 8.4    | Fuses, LEDs and jumpers.....                                      | 286 |
| 8.4.1  | Fuses .....   | 286 |
| 8.4.2  | LEDs .....  | 286 |
| 8.4.3  | Hard disk jumper settings .....                                   | 293 |
| 8.5    | Replacements .....  | 296 |
| 8.6    | Adjustments .....   | 296 |
| 8.6.1  | Horizontal Film Alignment Procedure .....                         | 296 |
| 8.7    | Checks .....  | 299 |
| 8.7.1  | Density reproduction check.....                                   | 299 |
| 8.7.2  | Check for dust stripes / TPH Cleaning Procedure .....             | 302 |
| 8.7.3  | Resistor Check.....   | 305 |
| 9      | MAINTENANCE.....  | 307 |
| 9.1    | Introduction: Maintenance frequency, required tools and time..... | 307 |
| 9.2    | Diagnostics.....  | 309 |
| 9.2.1  | Questioning of the Customer .....                                 | 309 |
| 9.2.2  | Infocounter Analysis.....   | 309 |
| 9.2.3  | Image Quality Check.....  | 313 |
| 9.3    | Maintenance Points - Power off.....                               | 314 |
| 9.3.1  | Check of general Condition.....                                   | 314 |
| 9.3.2  | Check of Condition of Belts and Gears.....                        | 314 |
| 9.3.3  | Visual Check of the Cables.....                                   | 315 |
| 9.3.4  | Cleaning of the Suction Cups .....                                | 315 |
| 9.3.5  | Cleaning of Electronics Compartment .....                         | 316 |
| 9.3.6  | Cleaning of Power Supply Air Inlet .....                          | 316 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|        |  |     |
|--------|--|-----|
| 9.3.7  | Check and Cleaning of Drum.....  | 317 |
| 9.3.8  | Cleaning of Thermal Print Head.....  | 318 |
| 9.3.9  | Electrical Check .....   | 319 |
| 9.4    | Maintenance Points - Power on.....   | 321 |
| 9.4.1  | Smart Profile Calibration .....  | 321 |
| 9.4.2  | Check of Safety Switch .....   | 323 |
| 9.4.3  | SW Patch Installation.....   | 323 |
| 9.4.4  | Film Calibration .....   | 323 |
| 9.4.5  | Density Reproduction Check .....   | 324 |
| 9.4.6  | Test Image Evaluation .....  | 326 |
| 9.4.7  | Host System Image Quality Check .....  | 327 |
| 9.5    | Completion of the maintenance .....  | 327 |
| 9.5.1  | Backup printer settings .....  | 327 |
| 9.5.2  | Reset of Maintenance Action counters and relative Counters in the Infocounter..... | 328 |
| 9.5.3  | Customer Conversation .....  | 329 |
| 10     | RELEASE INFORMATION .....  | 330 |
| 10.1   | Software release 1.6.0_C1 (DRYSTAR AXYS only) .....                                | 330 |
| 10.1.1 | Supported Features .....   | 330 |
| 10.1.2 | Limitations.....   | 330 |
| 10.1.3 | Known Software Issues .....  | 330 |
| 10.2   | Software update 1.6.1_C1 (DRYSTAR AXYS only) .....                                 | 331 |
| 10.2.1 | Solved Software Issues .....   | 331 |
| 10.3   | Software update 1.6.1_C1 (DRYSTAR AXYS only) .....                                 | 332 |
| 10.3.1 | Solved Software Issues .....   | 332 |
| 10.3.2 | New Features.....  | 333 |
| 10.4   | Software update 1.6.3_C1 (DRYSTAR AXYS only) .....                                 | 336 |
| 10.4.1 | Solved Issue.....  | 336 |
| 10.5   | Software Release 1.8.0_C1 (DRYSTAR 5302 only).....                                 | 337 |
| 10.5.1 | Supported Features .....   | 337 |
| 10.5.2 | Limitations.....   | 337 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|         |  |     |
|---------|--|-----|
| 10.5.3  | Known Issues.....                                  | 337 |
| 10.6    | Software Release 1.8.0_C2 (DRYSTAR 5302 only)..... | 338 |
| 10.6.1  | Solved Software Issue .....                        | 338 |
| 10.6.2  | New Feature.....                                   | 338 |
| 10.7    | Software Release 1.8.1_C1 (DRYSTAR 5302 only)..... | 339 |
| 10.7.1  | Solved Software Issues .....                       | 339 |
| 10.8    | Software Release 1.9.0_C2 (DRYSTAR 5302 only)..... | 340 |
| 10.8.1  | New Features.....                                  | 340 |
| 10.9    | Software Release 1.9.0_C3 (DRYSTAR 5302 only)..... | 340 |
| 10.9.1  | Solved Software Issue .....                        | 340 |
| 10.10   | Software Release 1.9.0_C4 (DRYSTAR 5302 only)..... | 341 |
| 10.10.1 | Solved Software Issues .....                       | 341 |
| 10.11   | Software Release 1.9.1_C1 (DRYSTAR 5302 only)..... | 342 |
| 10.11.1 | Solved Software Issues .....                       | 342 |
| 10.12   | Software Release 1.9.2_C1 (DRYSTAR 5302 only)..... | 344 |
| 10.12.1 | Solved Software Issues .....                       | 344 |
| 10.13   | New Feature.....                                   | 345 |
| 10.14   | Software update 2.0.0_C2 .....                     | 345 |
| 10.14.1 | New Features of Software 2.0.0_C2.....             | 345 |
| 10.14.2 | Solved Issue in Software 2.0.0_C2.....             | 346 |
| 10.14.3 | Known Software Issue .....                         | 347 |
| 10.15   | Software update 2.0.0_C3 .....                     | 347 |
| 10.15.1 | New Feature of Software 2.0.0_C3 .....             | 347 |
| 10.16   | Software update 2.1.0_C2 (DRYSTAR AXYS only) ..... | 347 |
| 10.16.1 | New Feature of Software 2.1.0_C2 .....             | 348 |
| 10.17   | Software update 2.1.0_C3 .....                     | 348 |
| 10.17.1 | Solved Issues in Software 2.1.0_C3.....            | 348 |
| 10.18   | Software update 2.2.0_C1 .....                     | 349 |
| 10.18.1 | Solved Issues in Software 2.2.0_C1 .....           | 349 |
| 10.19   | Software update 2.3.0_C2 .....                     | 350 |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

|         |  |     |
|---------|--|-----|
| 10.19.1 | Solved Issues and Improvements in Software 2.3.0_C2.....                               | 350 |
| 10.20   | Software update 3.0.0_C1 .....   | 351 |
| 10.20.1 | New Features in Software 3.0.0_C1.....   | 351 |
| 10.20.2 | Solved Issues and Improvements in Software 3.0.0_C1 .....                              | 351 |
| 10.21   | Software update 3.1.0_C1 .....   | 352 |
| 10.21.1 | Solved Issues and Improvements in Software 3.1.0_C1.....                               | 352 |
| 10.22   | Software Patch 3.1.1_C1 .....  | 353 |
| 10.23   | Software Release 4.0.0_C1 .....  | 354 |
| 10.24   | Software Release 5.0.0_C1 .....  | 355 |
| 10.25   | Software Release 5.1.0_C1 .....  | 356 |
| 10.26   | Software Release 6.0.0_C1 (Printer SN > 100.000 only).....                             | 357 |
| 10.27   | Software Release 6.1.0_C1 (Printer SN > 100.000 only).....                             | 357 |
| 10.28   | Software Release 6.1.1_C1 (Printer SN > 100.000 only).....                             | 358 |
| 10.29   | Software Release 6.1.2_C1 (Printer SN > 100.000 only).....                             | 359 |
| 10.30   | Software Release 6.1.3_C1 (Printer SN > 100.000 only).....                             | 360 |
| 10.31   | Software Release 6.1.4_C1 (Printer SN > 100.000 only).....                             | 361 |
| 10.32   | Software Release 6.2.0_C1 (Printer SN > 100.000 only).....                             | 362 |
| 10.33   | Software Release R6.2.1_C1 (Printer SN > 100.000 only) .....                           | 363 |
| 10.34   | Software Release R6.2.2_C1 (Printer SN > 100.000 only) .....                           | 364 |
| 11      | UPGRADE PROCEDURE .....  | 365 |
| 12      | SPARE PARTS.....   | 365 |
| 13      | WIRING DIAGRAM.....  | 366 |
| 13.1    | DRYSTAR 5302 Type 5366/100/300/400/500 SN < 100.000 with SCSI hard disk.....           | 367 |
| 13.2    | DRYSTAR 5302 Type 5366/100/300/400/500 SN < 100.000 with SATA hard disk.....           | 375 |
| 13.3    | DRYSTAR 5302 Type 5366/100/300/400/500 SN < 100.000 with Micro SATA flash module ..... | 383 |
| 13.4    | DRYSTAR Axys Type 5367/100/400/500 SN < 100.000 with SATA hard disk.....               | 391 |
| 13.5    | DRYSTAR Axys Type 5367/100/400/500 SN < 100.000 with Micro SATA flash module ....      | 399 |
| 13.6    | DRYSTAR 5302 Type 5366/100/300/400/400 SN > 100.000 .....                              | 407 |
| 13.7    | DRYSTAR 5301 Type 5366/110/410/510 SN > 100.000 .....                                  | 413 |
| 13.8    | DRYSTAR Axys Type 5367/100/300/400/500 SN > 100.000 .....                              | 417 |

## DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

13.9 DRYSTAR 5302 Type 5366/100/300/400/400 SN > 151.001/751.001 .....423

13.10 DRYSTAR 5301 Type 5366/110/410/510 SN > 151.001/751.001 .....427

13.11 DRYSTAR Axys Type 5367/100/300/400/500 SN > 151.001/751.001 .....430

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## 0 About this manual

### 0.1 Purpose of this document

This document contains all information that service engineers need for installation as well as for corrective and preventive maintenance of the DRYSTAR 5302, DRYSTAR 5301, DRY IMAGER, CRYSTAL IMAGER, DRYSTAR 5302 XL, DRYSTAR 5301 XL, DRY 2.4, DRY 1.4, DRYSTAR AXYS, CRYSTAL-M IMAGER, DRYSTAR AXYS XL, DRY 2.4M.

It does **not** contain:

- Specific service information for other target readers, for example Clinical Application Specialists or Service Managers
- Service Bulletins

### 0.2 Changes compared to previous revision

Revision 5:

- Updated chapter 1.4
- Added chapter 1.4.3: Tray detection sensors in printers with SN 151.001/751.001
- Adapted chapter 1.6: Overview of major hardware changes
- Added Release Information in chapters 10.32, 10.33, 10.34
- Added chapters 13.9, 13.10, 13.11: Wiring diagrams of printers with SN  $\geq$  151.001/751.001






### 0.3 Referenced documents



| Document   | Reference                            |
|--|--------------------------------------|
| List of Service Documents,   | Document ID <a href="#">62000370</a> |
| Generic Safety Directions  | Document ID <a href="#">11849633</a> |
| User Manuals   | Section 3.1.3                        |
| Additional documents are referenced in the corresponding sections. |                                      |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## 0.4 Explanation of notes

| Safety-relevant Notes   |                 |   |
|---|-----------------|---|
| Icon  | Signal Word     | Situation   |
|  | <b>CAUTION:</b> | Hazardous situation which, if not avoided, can lead to a minor injury to a user, engineer, patient or any other person.             |
|  | <b>WARNING:</b> | Hazardous situation which, if not avoided, can lead to a potential serious injury to a user, engineer, patient or any other person. |
|  | <b>DANGER:</b>  | Direct, immediate danger: If not avoided, it can lead to a serious injury to a user, engineer, patient or any other person          |
|  | -               | Instruction to avoid damage to equipment and/or environmental pollution.  |
|  | -               | Prohibition to avoid damage to equipment and/or environmental pollution.  |

| None-Safety-relevant Notes  |                   |  |
|---|-------------------|--|
| Icon  | Name              | Type of Information  |
|  | <b>IMPORTANT:</b> | Highlights very important actions which have to be carried out to prevent malfunction.   |
|  | <b>NOTE:</b>      | <ul style="list-style-type: none"> <li>Indicates advice to facilitate the following step or action without having a direct influence on the step or action.</li> <li>Highlights unusual points.</li> <li>Indicates background information.</li> <li>Can be used to explain or highlight displays of the graphical user interface.</li> </ul> |

## 0.5 Conventions

| Highlighting of tasks |                        |  |
|-----------------------|------------------------|--|
| Task number           | Task Description       | Remark   |
| (1)                   | Connect the cable.     | Examples for working steps to be performed in the listed sequence. |
| (2)                   | Switch the machine on. |  |

| Highlighting of buttons, functions and names within a task |  |   |
|--|--|---|
| (1)  | Press <b>F9</b> or double-click the <b>Refresh</b> button.                   | The <b>bold</b> typeface is used for menu topics, keyboard keys, icons, device buttons, commands etc. |
| (2)  | If the <b>Install client or server?</b> prompt appears, type <b>server</b> . | The <b>Courier New bold</b> typeface is used for system messages and prompts.                         |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## 1 Product description

### 1.1 Intended use

The intended use statement is listed in the User Manual of the printer.

### 1.2 Type overview

The printer is available in several variants.

Main difference is the print head resolution (320 or 508 dpi (dots per inch)) and number of film trays (1 or 2).

| Printer name     | Type          | DPI | Number of film trays |
|------------------|---------------|-----|----------------------|
| DRYSTAR 5302     | Type 5366/100 | 320 | 2                    |
| DRY IMAGER       | Type 5366/101 | 320 | 2                    |
| DRYSTAR 5301     | Type 5366/110 | 320 | 1                    |
| CRYSTAL IMAGER   | Type 5366/300 | 320 | 2                    |
| DRYSTAR 5302 XL  | Type 5366/400 | 320 | 2                    |
| DRYSTAR 5301 XL  | Type 5366/410 | 320 | 1                    |
| DRY 2.4          | Type 5366/500 | 320 | 2                    |
| DRY 1.4          | Type 5366/510 | 320 | 1                    |
| DRYSTAR AXYS     | Type 5367/100 | 508 | 2                    |
| CRYSTAL-M IMAGER | Type 5367/300 | 508 | 2                    |
| DRYSTAR AXYS XL  | Type 5367/400 | 508 | 2                    |
| DRY 2.4M         | Type 5367/500 | 508 | 2                    |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## 1.3 Main printer characteristics

### Purpose of the printer type 5366

- Medium resolution (320 dpi) DICOM network dry printer for 14x17", 14x14", 14x11", 10x12", 8x10" DT2 blue base or clear base films

### Purpose of the printer type 5367

- High resolution (508 dpi) DICOM network dry printer for:
  - 14x17", 14x14", 14x11", 10x12", 8x10" DT2 blue base or clear base films
  - 14x11", 10x12", 8x10" DT2 Mammo blue base films

### Printing principle

- Direct thermal on thermo-sensitive, dry films
- 1 or 2 input trays and 1 output tray

### Main application printer type 5365

- Well suited to all medical applications, especially CR and DR applications. Cannot be used for mammography.

### Main application printer type 5367

- Well suited to all medical applications, especially Mammo, CR and DR applications.

### Connections

- 1 Gb/s Network connection (Default: Automatic detection of 10Mb/s and 100Mb/s network is enabled, automatic detection of 1Gb/s network is disabled)

### Service Concept

- Customer installable
- No service PC needed for basic installation, maintenance and service, but is convenient for entering detailed host profile settings.
- Strict modular design: Production assemblies = service assemblies
- All switches, sensors and motors are monitored via current measurement on main engine board (Devil / Devius and Devnix PCB\*)
- If online diagnosis does not detect the exact reason for the error, an offline check of the modules can be performed via browser pages

\*see overview of boards

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.

## 9 Maintenance

### 9.1 Introduction: Maintenance frequency, required tools and time

The maintenance steps described in this document are based on the technically required measures to guarantee the proper operation of the printer.

The maintenance points have been arranged in a chronologically suitable order to make the work routines as efficient as possible. The sequence of the maintenance points in the checklist (see appendix) is identical with the maintenance instructions.

Additional maintenance steps can be required according to **national regulations**.

#### Maintenance Frequency

The maintenance has to be carried out:

- every 25.000 printed films, or
- every 12 months, whichever comes first.

#### Required time



Approximately 2 hours

#### Required Cleaning Material

| Cleaning material                   | Order Number           |
|-------------------------------------|------------------------|
| Isopropyl alcohol or Ethanol        | Commercially available |
| Lint free cloth                     | Commercially available |
| Ink eraser 'Pelikan'                | 10+9.9999.1176.0       |
| Vacuum cleaner; 220/240V, 50Hz      | CM+9.9999.0895.0       |
| Dirt bags for vacuum cleaner (10 x) | CM+9 9999 0896 0       |

DOCUMENT CONTROL NOTE:

The controlled version of this document is available from the Agfa Medimg Library. Any printed copy of this document is uncontrolled.