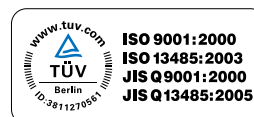
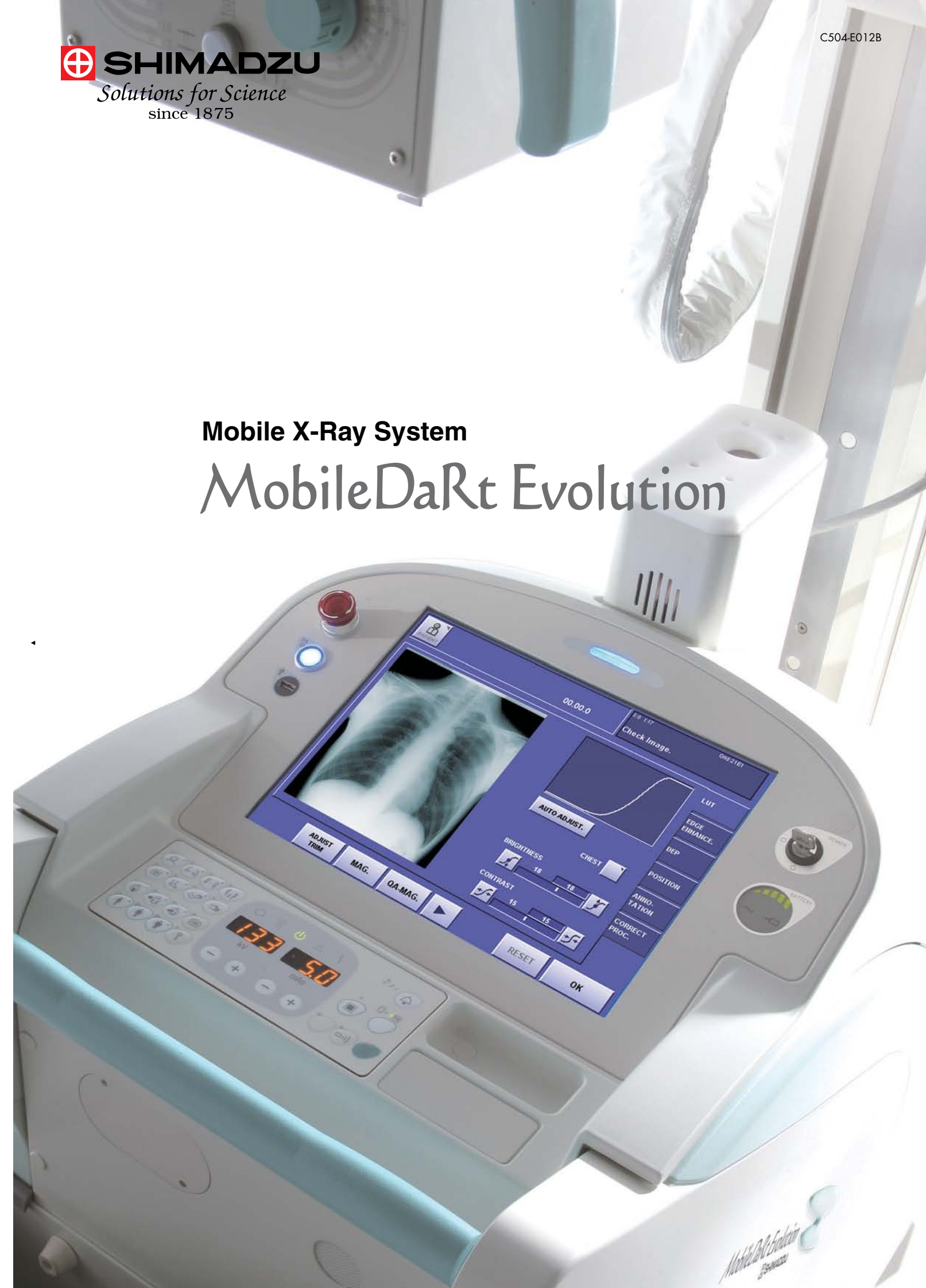




## Mobile X-Ray System

# MobileDaRt Evolution



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Shimadzu Corporation Medical Systems Group has been certified by TÜV Rheinland as a manufacturer of medical equipment and systems in compliance with ISO9001:2000 Quality Management Systems and ISO13485:2003 Medical Equipment Quality Management Systems.

### Remarks;

- ※Every value in this catalogue is a standard value, and it may vary a little from the actual at each site.
- ※The appearances and specifications are subject to change for reasons of improvement without notice.
- ※Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
- ※Before operating this system, you should first thoroughly review the Instruction Manual.

Advanced Digital Mobile System  
Switch Between FPDs to Suit the Application  
Time-Saving, Life-Saving Equipment  
That Performs Effectively in a Variety of Situations

Mobile X-Ray System

# MobileDaRt Evolution

2-Panel Type / Large Field-of-View Type / Compact FPD Type

**State-of-the-Art Digital Mobile System Provides the Immediacy and Mobility You Can Count On**

In medical facilities requiring quick action, this digital mobile X-ray system allows verification of images just 3 seconds after they are obtained, eliminating the need to replace cassettes and read CR barcodes. Our expanded product line now includes a model that lets you choose either a compact Flat Panel Detector (FPD) or a large field-of-view FPD, providing images for everything from newborns and infants to the chest area of adults. Furthermore, the large FPD is lighter and thinner than previous models, making it even easier to use. Output of up to 32 kW provides rapid radiography that ensures blur-free images, even with children and patients who are difficult to keep still. MobileDaRt Evolution provides excellent operability, allowing users to move the system freely for easy positioning in confined locations. This reliable, state-of-the-art system lends powerful support to medical facilities faced with numerous restrictions and a high proportion of urgent cases.

**Superior Performance Supports Stress-Free Mobile Examinations**

Image verification 3 seconds after exposure ensures a smooth workflow

User can switch between FPD depending on the application (models with two panels)

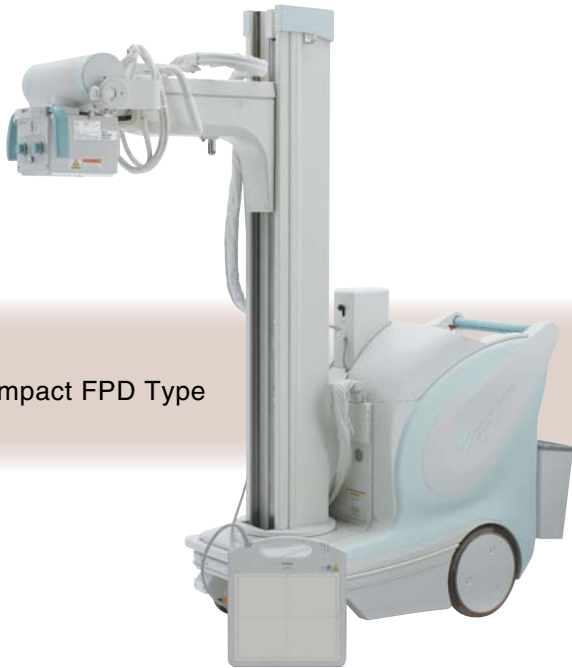
High power minimizes the impact of patients' movements

User-friendly design ensures quick positioning and smooth, responsive mobility

Measures to reduce radiation dose



2-Panel Type  
Option



Compact FPD Type



Large Field-of-View Type

Note 1: Models with two panels include one large FPD and one compact FPD, either of which can be used for examinations by connecting it to the cable from the cart.  
Note 2: Models with either a single large FPD or compact FPD can be upgraded to the 2-panel configuration.



FPD-Equipped Mobile System Proves Its Worth in a Variety of Medical Settings

The large field-of-view provides extensive coverage, and images can be viewed 3 seconds after exposure (both 2-panel and large FPD models)



Large field-of-view, light weight, and thin FPD

**Field-of-view** 35 cm × 43 cm (14"×17")

**Thickness** 15 mm (0.6")

**Weight** 3.4 kg (7.5 lbs)(without cable)



(Large Field-of-View FPD)

Display images in just 3 seconds which is especially useful in emergency rooms (ER) where time to treat is critical for saving lives or reducing paralysis. The ER staff can see diagnostic images on the on-board review display for preliminary diagnosis allowing treatment to continue without delay. No need to replace or read CR and similar types of cassettes allowing examination of a large number of patients in a relatively short time. Time to make a diagnosis and treat patients is dramatically reduced by allow the Doctor to see images quickly.

Compact FPD-equipped type proves its worth in pediatric care (both 2-panel and compact FPD models)



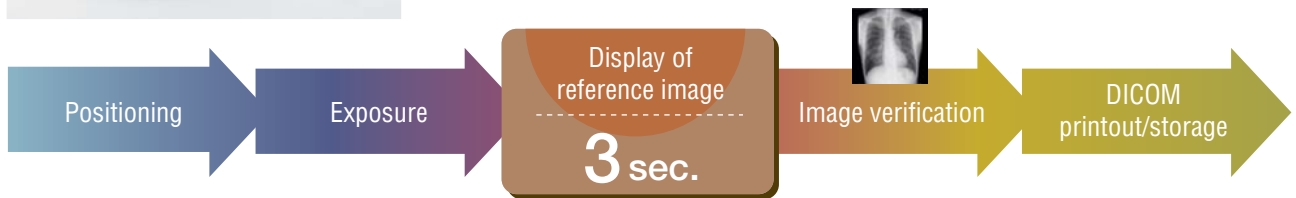
Compact FPD Is Optimal for Pediatric Care

**Field-of-view** 23 cm × 28 cm (9"×11")

**Thickness** 22.5 mm (0.9")

**Weight** 2.5 kg (5.5 lbs)(without cable)

Especially useful in pediatric medicine, Shimadzu's compact FPD quickly obtains exposures and displays a reference image just 3 seconds after exposure. A high-sensitivity FPD is now available that offers even lower exposure levels for pediatric imaging.

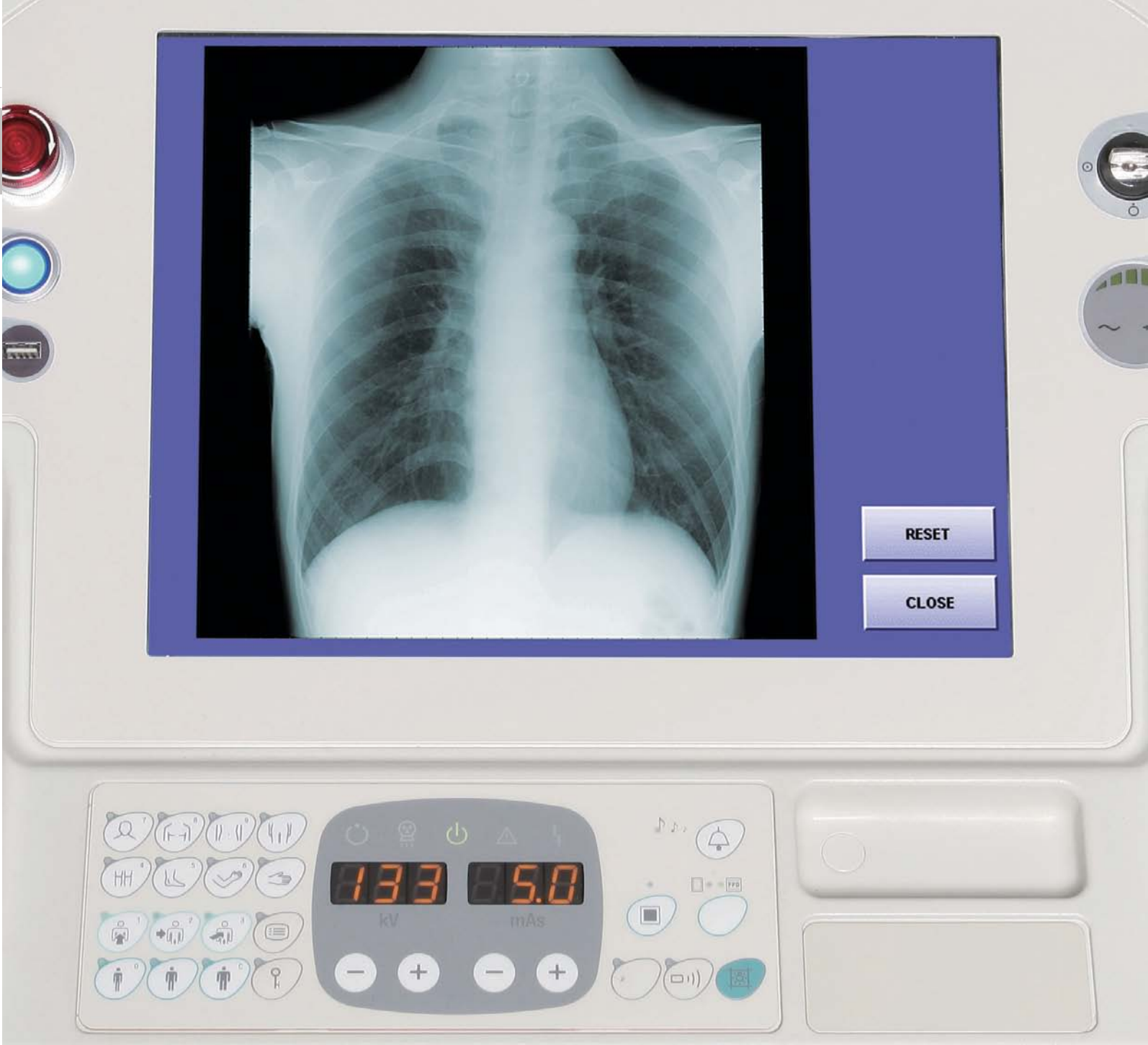


**Large main unit storage** **Safety function**  
of up to 3500 images ensures peace of mind

When performing repeated radiography, a large capacity storage system provides peace of mind. Store up to 3500 images in the main unit and easily refer to previous images, to make quick comparisons between preoperative and postoperative states. Technologists no longer need to carry and re-stock films or CR cassettes.

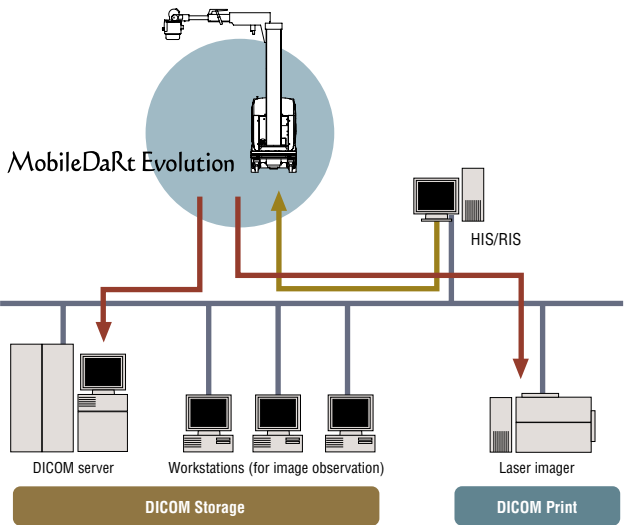
**Image verification and quality assessment**

Technologist can quickly review images for alignment, artifacts and patient motion while the detector is still in its position. Retakes can be made without replacing cassettes reducing inconvenience to patients avoiding long walks to a CR reader. Annotation can be added to images immediately after exposure.



**Easy output of DICOM data to network**

Standard MobileDaRt Evolution features include support of DICOM print and storage. Output data in DICOM format to a laser printer, image server, or viewer using the provided LAN connection. An optional wireless network connection is available that provides even greater freedom for communication to RIS or PACS while moving the unit. With wireless, images can be sent to PACS when the study is closed shortening the time diagnosis time and new patients can be downloaded from RIS while the mobile cart is in the patient area.



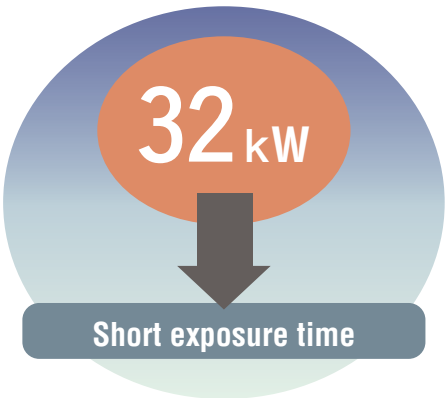
# High Image Quality for Children and Emergency Cases

## Blurring suppressed by short exposure time

Perform radiography quickly, thanks to a maximum output capacity of 32 kW. This ensures sharp images with minimal blurring, even if the patient moves.



With radiography of children and emergency cases where it is difficult to maintain a stable posture, there is a tendency for images to be blurred due to patient movement. With MobileDaRt Evolution, a maximum output of 32 kW allows for shorter exposure times, eliminating blurring issues.



Inverter frequency

60 kHz<sup>max.</sup>

Maximum tube voltage

133 kV

Tube current-time product

320 mAs<sup>max.</sup>



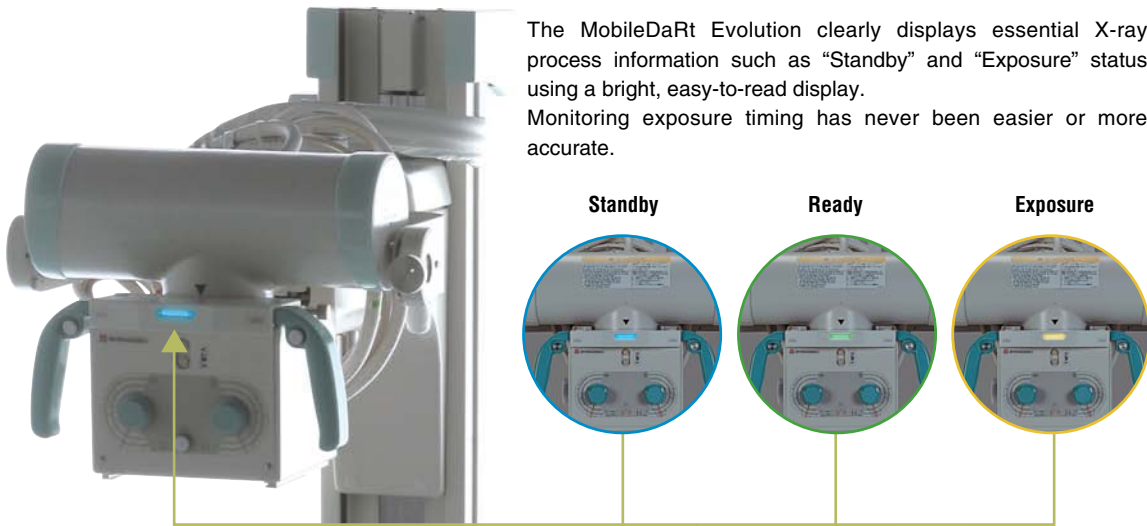
## Perform radiography even with a low battery

This system is equipped with a function that allows radiography in an emergency, even if the battery runs low. This enables emergency radiography even before recharging the battery.

# Features to Ensure Optimal Exposure Timing

## Exposure status indicated by illumination

The MobileDaRt Evolution clearly displays essential X-ray process information such as "Standby" and "Exposure" status using a bright, easy-to-read display. Monitoring exposure timing has never been easier or more accurate.



## Extra hand switch can be installed on the front panel

To enhance the technologist's ability to take care of the patient while performing radiography, an extra hand switch (option) can be installed on the front panel of the main unit (column side). This extra hand switch is also illuminated.



## Illuminating hand switch

To make exposure timing even easier to follow, an optional illuminating hand switch can also be used to give color-coded indications that the system is ready or is performing X-ray radiography.





Superb, Highly Acclaimed Mobile with Smooth Operability, Responsiveness and Mobility



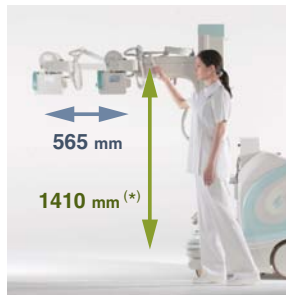
Outstanding operability

Light-touch, natural maneuvering

A light pressure applied to the drive handle moves the mobile system in a natural manner as if it were an extension of one's hand, allowing the MobileDaRt Evolution to be controlled easily and effortlessly.

Counterbalance system

Accurate and smooth positioning is available through a counterbalance system, allowing for easy positioning and exposing.



(\*) Short-column type, 1260 mm.

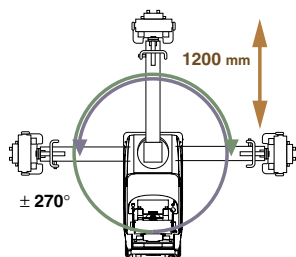
"Inch-mover" buttons

The MobileDaRt Evolution can be moved forward or backward by using the bedside drive controls located on the front of the collimator. Safety is a major consideration and any sudden force applied to the handle during "Inch-mover" operation stops the MobileDaRt Evolution automatically. In addition, X-ray irradiation is also automatically disabled during any movement of the MobileDaRt Evolution.



Wide imaging range

The range of motion of the ultra long arm (up to 1200 mm) makes even the most difficult imaging situations accessible.



"All Free" buttons

Pressing any of the "All Free" buttons releases the electromagnetic locks for arm rotation, arm extension, and vertical movement of the X-ray tube, thus enabling simple one-step positioning. The counterbalance system enables accurate positioning with smooth operation.



Low level of movement noise is ideal for quiet environments

Incorporates a silent motor that significantly reduces driving noise.

Safe for use in crowded facilities

Safety function

To avoid accidents when moving the MobileDaRt Evolution through a crowded medical facility, an alarm can be used while driving to alert others to the presence of the unit.

Optimum working height for operator comfort

Option

Drive handle height can be optimized depending on the preference of your staff. (\*)

(\*) The handle height can be set at the time of installation by service personnel.



Shock-resistant main unit cover

A reinforced main cover reduces the possibility of damage from collisions with objects during movement.

Keyless password entry allows operation without a key switch

Option

No more looking for a misplaced key or worry about unauthorized visitors playing with your parked mobile. Entering a password will enable use of the mobile functions.



New Dose Reduction Concept

Supports display of X-ray exposure dose

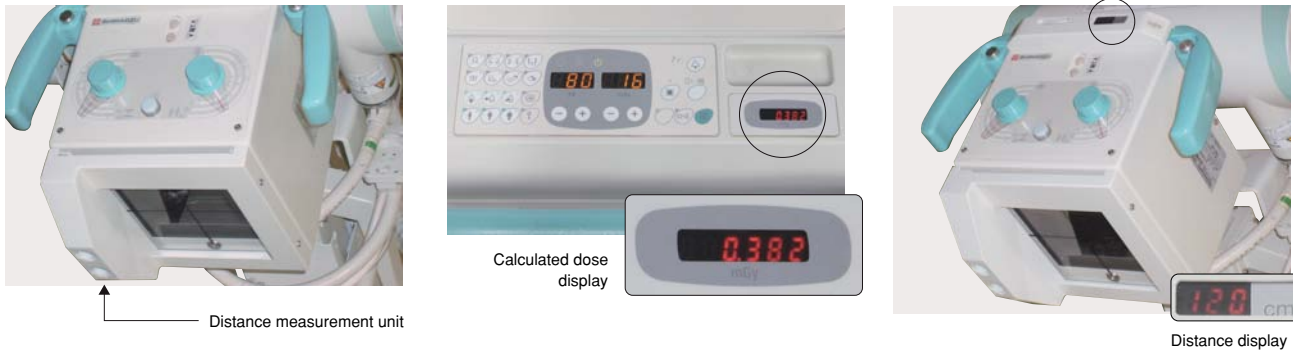
Option Safety function

Attach a dose area product meter to the front of the collimator to display dose measurements on the display panel. If a dose calculation function is incorporated in the system, the estimated dose is displayed on the main unit display panel prior to taking exposures. Dose data measured with a dose area product meter can also be output in DICOM format.

Displays distance from X-ray tube focal point to patient

Option

If a dose calculation function is incorporated in the system, the distance from the X-ray tube focal point to the patient can be displayed near the collimator with the distance display option, making it easier to maintain an appropriate exposure distance without using a tape measure. (Distance display requires the dose calculation option.)



External Dimensions



FPD	CXDI-55G / CXDI-55C / CXDI-60G / CXDI-60C (selectable) Note: Both FPDs cannot be used simultaneously.
Custom specification	High-focal-point (short-column) type Focal point is lifted up by 150 mm. These are custom specifications common to both the large field-of-view type and compact FPD type. Note: Custom specification cannot be changed after delivery.

Power for charging	Single-phase AC: 50/60 Hz, 1 kVA Voltage: 100, 110, 120, 200, 220, 230, 240 V Power plug: 3-pin plug (2-prong ground)
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Options

**Radiation Shield (folding type)**

**Infrared Remote Controller**

With the infrared remote controller, X-ray irradiation can be executed remotely to minimize the operator's exposure.

Related Items

**Grid Unit**

(for CXDI-55G/C) (for CXDI-60G/C)

**Dose Area Product Meter**

