

# RADspeed Pro **style edition**

Automatic



# High-Performance General Radiographic System Improves Workflow and Achieves Dose Reduction

## RADspeed Pro **style edition** Automatic

This state-of-the-art automatic general radiographic system is based on the extensive experience and expertise Shimadzu cultivated as a pioneer in medical diagnostic imaging systems. It minimizes X-ray dose and improves examination workflow.

Available only from Shimadzu, this system utilizes the latest technologies that are gentler to humans and provide a more comfortable examination environment for the patient and operator alike.



Sophisticated Synchronization Functions  
Make System Operation Even Easier

Next-Generation Collimator Reduces X-ray Dose to The Patients Our  
Caring Subtle Improvements Make Your Operation Even Easier

Easy-to-Operate, Fully Featured, Intelligent  
X-Ray High Voltage Generator

Upgradable to DR System

The DR system significantly improves diagnostic accuracy and workflow.

# Sophisticated Synchronization Functions Make System Operation Even Easier

## Advanced X-Ray Tube Support Allows Efficient System Operation

### Revolutionary Auto-Positioning Feature Allows the Operator to Focus On Patient Care

The auto-positioning feature is interlocked with the APRs. This function moves the ceiling-mounted X-ray tube support to any desired position at the press of a single button and can automatically set the X-ray tube angle. Effortless tube positioning allows the operator to focus on patient care.

Naturally, manual operation is also possible to make fine positioning corrections extremely simple.



Optional automatic rotation around the X-ray tube support axis is also available.

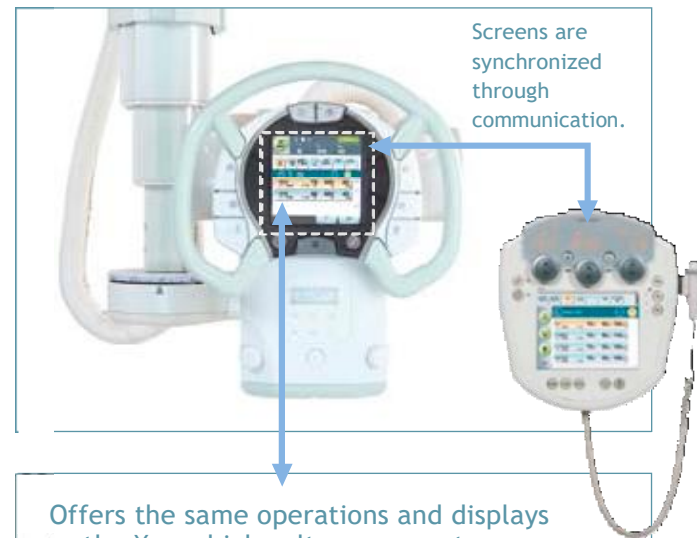
Pressing a single button on the remote control smoothly moves the ceiling-mounted X-ray tube support to pre-registered positions. Movement stops immediately after the remote control button is released. Up to two remote control units can be used.



### APRs Synchronized with the X-Ray High Voltage Generator

Radiography parameters and techniques can be changed beside the patient as well as on the wall-mounted console in the control room. The operator can prepare for radiography without leaving the patient.

This sophisticated synchronization of the X-ray tube support and X-ray high voltage generator effectively exploits the convenience of dual consoles.



Offers the same operations and displays as the X-ray high voltage generator.

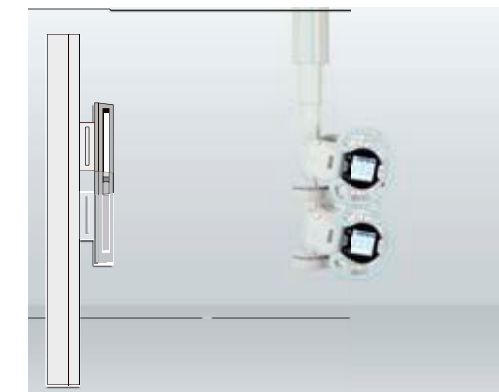


Examination Regions: max 10 regions  
 Radiography Methods: max 20 methods  
 Exposure Directions: 7 directions

### Synchronized Vertical Movements of X-Ray Tube Unit and Bucky Unit

The focal point of the X-ray tube unit moves up and down in conjunction with the vertical positioning of the X-ray Bucky stand and X-ray Bucky table. This allows the operator to attend the patient in a standing position while positioning the equipment.

For a table study, the X-ray tube automatically moves to a preset SID, enabling accurate and fast positioning.



Automatic synchronization even at oblique positions

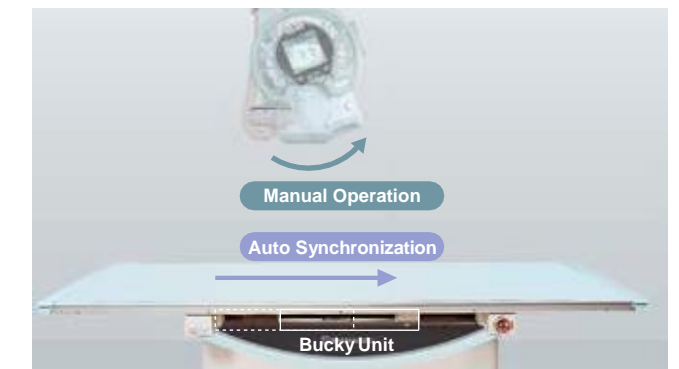


Automatically follows changes in table height

### BK-200 Bucky Unit Automatically Follows Irradiation

Easily synchronize the longitudinal travel of the table's Bucky unit with the X-ray tube support position. In addition, for oblique radiography, the X-ray field can be controlled according to the APR.

Synchronization between the X-ray field and Bucky unit provides fast positioning even for complex orthopedic positioning.



### Orderly Cable Management

Shimadzu provides a tractable cable management system along the ceiling rails that supports smooth positioning.





# Next-Generation Collimator Reduces X-Ray Dose to the Patients

## Auto-Filtering Feature Automatically Switches to the Optimal Filter for Each Selected APR

When the APR is selected for the region being imaged, the collimator filter also switches.

Using the filter preset for each APR, such as the extremities or abdomen, minimizes unnecessary exposure to obtain high-quality radiographic images at the optimal X-ray dose.



## Rubber-Cushioned Collimator

The perimeter of the collimator emission port is covered with rubber to cushion the impact if a patient bumps into the collimator.



## Confirm The Irradiation Field Clearly with LED Light

Newly accommodated LED light indicates the irradiation field more clearly. The long-life LED reduces replacement frequency.

When controlling radiography operations from the control room, the irradiation field lamp automatically turns on before exposure to allow confirmation of the region to be imaged.

## Easily Attach Line Marker to Collimator OPTION

Red laser mark clearly indicates center of the radiation field.

## Click-Stop Collimator Rotation OPTION

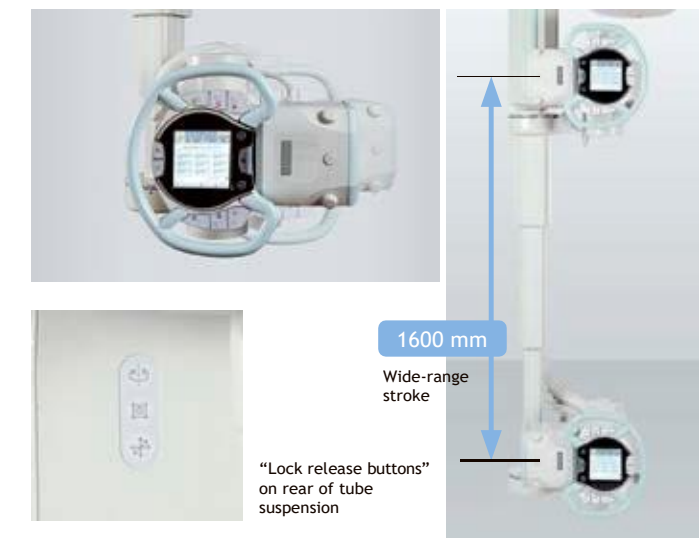
When rotating the collimator relative to the X-ray tube, the collimator can be click-stopped in 3 positions, 0 degrees and  $\pm 45$  degrees, allowing quick adjustment of collimation. (The collimator can also be quickly returned to the original (0°) position.)

# Our Caring Subtle Improvements Make Your Operation Even Easier

Extensive Functionality Matched to the Needs of Various Clinical Applications

## Ceiling-Mounted X-Ray Tube Support for Versatile Positioning

X-ray tube support vertical range of 1,600 mm ensures sufficient SID when examining supine patients and low focal point radiography of standing patients. This support also rotates on the vertical and horizontal axis in addition to fixed positioning at any desired angle, enabling fast positioning at complex angles for orthopedic applications.



## Cushioning Gently Protects Patients

If a patient suddenly sits up after an examination, they could potentially hit their head on the instrument. Therefore, the bottom of the X-ray tube support is covered with rubber cushioning material to carefully protect patient.



## Bucky Stand and Table Grids Are Removable

Removing the grid during radiography allows reducing the exposure dose level in pediatric and orthopedic applications. Radiography is also possible using a phototimer.

## Tilting Bucky Stand

These novel Bucky stands have been launched to synchronize vertical movement with the X-ray tube support and synchronize the irradiation field with the collimator. A tilting stand is also available that allows switching of the Bucky table angle.

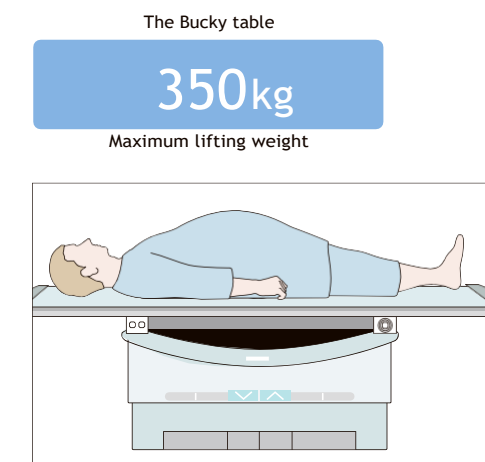
This provides even smoother positioning for the many positions required for general radiography.



## Design Concept Pursues Durability

The Bucky table can support 350 kg. The ceiling-traversing overhead X-ray tube crane coupled with the Bucky device ensures easy operation and features a highly rigid construction and a durable shock-absorption mechanism.

RADspeed Pro is a high-reliability radiography system that offers extreme carefree longevity for the X-ray department.



# Easy-to-Operate, Fully Featured, Intelligent X-Ray High Voltage Generator

## Color LCD and Touch Panel Allow Intuitive Operation

### Patient Care Concept

#### Color-Coded Status Indicator

The console panel indicates the status of the X-ray generator using color perimeter display with audible sound. The hand switch also lights up to indicate 'Ready Status'.

- This advanced feature allows the operator to concentrate on patient care:
- Infant and frail elderly patients who need constant attention.
  - Split-second timing is required for patients who have difficulty holding their breath.
  - Quick positioning and image capture when required



Illumination switch

### Illumination Color and Alarm Sound When Preparation for Exposure Is Complete

The LCD screen and illumination color can change according to the Bucky table or X-ray tube settings selected. Different alarm sounds can also be specified for various events, such as when preparation for exposure is complete.



Using Bucky stand



Using Bucky table

### Advanced APR Allows 800 Different Radiography Parameter Configurations

#### Examination Regions

Maximum **10** regions

#### Radiography Techniques

Maximum **20** techniques

### Seven Exposure Directions

#### Advanced APR (Anatomical Program)

Up to 800 Anatomical Programs can be registered on the system. Registering the conditions as programs associated with examination area and technique allows conditions to be set up smoothly.

Each technique selection has 10 anatomical regions that can be selected. Each anatomical region has 15 user-definable techniques associated with it. (This setting can be changed to 20 if required.)

Furthermore, up to 7 different directions can be stored in each technique key; each time one direction is taken, the exposure conditions can be automatically changed according to the next direction. This feature is particularly effective for inspections of areas requiring exposure from several different directions, such as for orthopedic surgery.



### Communication Functions for CR/DR Units Included As Standard

It is possible to communicate with CR/DR units and receive up to 800 radiography programs or send exposure results.

To improve ease of use, offline settings are available if confirmation of receipt or communication is not required.

Received radiography parameters can be freely changed or adjusted manually.

### X-Ray Tube Unit Quick Ready Function

If the [Quick Ready] button on the console is pressed, the X-ray tube anode starts rotating before the exposure operation. (Only with high-speed-rotation X-ray tubes.)

This permits rapid radiography by halving the time required to prepare for exposures in comparison with previous models.

(This function can also be operated from the X-ray tube support unit.)

### Low Exposure Levels and High Image Quality

#### Maximum Inverter Frequency: 50 kHz

Stable X-ray output and superior response are the key to obtaining high image quality at low exposure levels.

Shimadzu achieves high image quality by using superior high-frequency inverter technology to reduce unwanted exposure from low-energy X-rays and by inhibiting voltage ripple in the X-ray tube to provide quick start-up characteristics.

#### Dose Area Product

For dose monitoring, a Calculated Dose Area Product is available. After the exposure, the calculated dose area product, based on the actual exposure parameters, is displayed. The optional Calculated Dosimeter displays the expected dose, in advance of the exposure, based on the radiography parameters and the distance to the patient. The resulting exposure parameters and calculated dose are displayed and can be sent to the RIS/PACS system.

Note) The optional calculated dosimeter is not available if the DAP meter is optioned.

#### Phototimer with Four Photo Pickup Fields

Dedicated photo pickup fields are provided for abdomen and chest regions to achieve appropriate dosage control for each region. This acquires good images appropriate for each type of examination, while reducing the exposure levels.

#### Displays Exposure Back-Log of 512 Cases

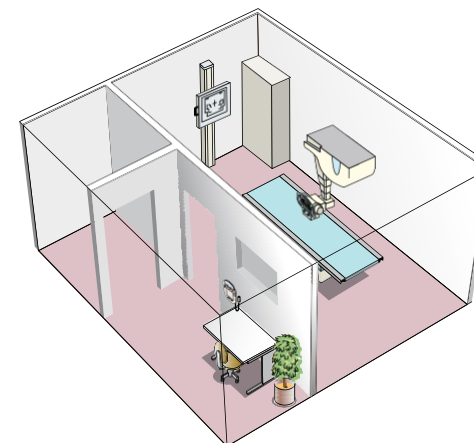
Up to 512 cases can be archived and displayed as the exposure back-log.

The radiography parameters used to obtain the results can be reset.

With Calculated Dosimeter option, the calculated dose information is also displayed.

### Space Saving Concept

The compact, space-saving high voltage generator provides more working space as well as a flexible layout. A ceiling-mounted X-ray tube further increases the spatial area around the patient on a Bucky table or trolley.





# Configuration and Options

## X-Ray Tube Support

### CH-200

- Color LCD Touch screen rotates automatically with tube rotation
- Individual programmable switches for locks
- Quick positioning with new-style operation handle
- Easy to clean surface
- All free button for full-way motion release
- One-hand operation for vertical tube movement
- Lock release buttons on rear of tube suspension
- Spring balanced for easy movement
- Reliable locking system allows any angulations to be held in position



## Bucky Table

### BK-200

- Elevating horizontal radiographic table
- Maximum lifting weight is 350 kg
- 4-way floating top and electromagnetic locks
- Size sensing cassette tray
- Table top collision protection sensor
- Convenient and safe foot controls by kick switch
- Selectable extensive options
- Flat CFRP-tabletop (option)
- Grid is removable



(Long bucky unit stroke type)

## X-Ray High-Voltage Generator

### UD150-40/V-40/L-40

- Newly designed large capacity and high frequency inverter
- Large readout LED
- Touch screen display
- Communication with CH-200 display
- Quick setup with jog dials and Up/Down buttons
- Micro processor controlled
- Automatic exposure control
- Self diagnostic function with display of error codes
- 80, 65 and 50 kW output selection



## Bucky Stand

### BR-120/BR-120T

- Vertical travel to accommodate all patient ranges and studies
- Size sensing cassette tray
- Remote collimation control (option)
- Compact design Bucky unit for easily examined sitting patients
- Selectable extensive options
- Equipped with a tilting Bucky unit (BR-120T)
- Grid is removable



BR-120

BR-120T

## Options



Grip switch



Lateral cassette holder



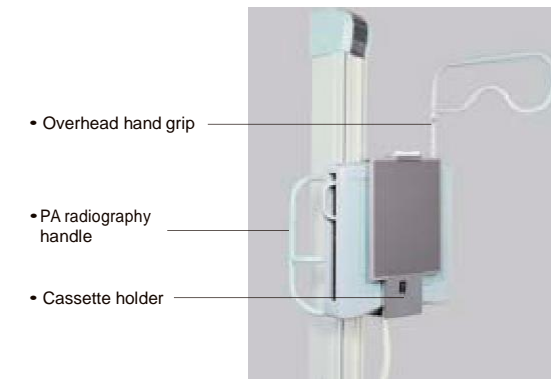
Remote collimation control



Bucky table handle



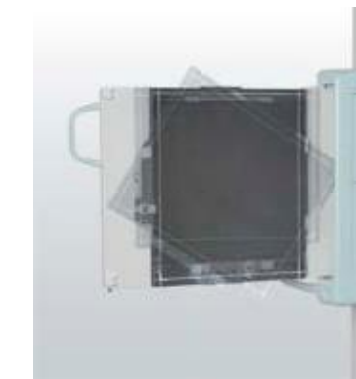
Bucky table compression belt



• Overhead hand grip

• PA radiography handle

• Cassette holder



FPD Rotation Tray

- Phototimer SPT-XD-A1A (1 field)
- Phototimer SPT-XD-A3B (3 fields)
- Phototimer SPT-XD-A4B (4 fields)
- Vertical tracking unit
- Bucky synchronization unit\*
- Bucky table handle
- Bucky table compression belt
- Bucky table drip holder
- Bucky table dual-side kick switch option
- Bucky stand compression belt
- Bucky stand PA radiography handle
- Bucky stand overhead hand support
- Line Marker to Collimator (R-300)
- Detent unit (available with R-300)
- Foot switch
- Area Dosimeter
- Orderly Cable Management

\* Auto positioning function and Bucky synchronization unit is not available with the CH-200 rear-mounting type.

Founded in 1875, Shimadzu Corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support and applications centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our website at [www.shimadzu.com](http://www.shimadzu.com)



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Shimadzu Corporation Medical Systems Division has been certified by TÜV Rheinland as a manufacturer of medical systems in compliance with ISO9001:2015 Quality Management Systems and ISO13485:2016 Medical Devices Quality Management Systems.

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