GENERAL

This X-ray diagnostic table is designed with the concept of multi-purpose, patient care, exceptional image quality and workflow optimization. The following various applications are easily performed:

- Digital fluoroscopy
- Digital spot/serial imaging
- Digital Subtraction Angiography
- Vascular/Non-vascular Interventional procedures
- Endoscopy procedures
- Orthopedics
- Tomography (IP/Film Cassette)
- Chest radiography
FEATURES

EASY AND EFFICIENT TABLE FUNCTIONS

(1) An integrated system console;
   The highest operability is achieved by integrating Table and Digital imaging system controls into one system console with a LCD. It enables the operator pay more attention to patient or procedure than to the system itself.

(2) Tabletop elevation feature contributes to provide comfortable working height for various applications and lower height for elder patients;
   Optimum height of the tabletop can be obtained for endoscopy and interventional procedures. Moreover the tabletop elevation helps elder patient in stepping on and off the table. Image intensifier is retracted and accommodated in accordance with the height of the tabletop (Only for model 100IR).

(3) The compact design provides larger working space;
   Sonialvision useless space than regular R/F table. The rear side of the table is extremely simple and small. It is very easy to approach to the patient around the table. And only 10 cm is required between the table and the rear wall, so it will give more space in the room after replacing with the existing table.

(4) Wide coverage without moving the patient;
   The wide longitudinal sliding range of the imaging system with large tabletop provides head to toe coverage without moving the patient.

(5) The iris collimator achieves high image quality and dose reduction;
   A precision, iris collimator is adopted to achieve exposure field to match the selected I.I. input size automatically. The accurate beam collimation suppresses image deterioration due to scattered X-ray and effectively cuts out non-required X-rays to reduce the dose to the patient. Collimation smaller than selected I.I. size can be manually set at any time.

(6) The simple construction extends coverage for fluoroscopy & radiography;
   The simple construction without a spot-film device, extends the fluoroscopic and radiographic area to the both ends of the tabletop for endoscopic procedures.

(7) The high-precision photo-timers with four fields* provide stable, high quality radiographic images;
   The table incorporates high-precision photo-timers with four fields for IP/cassette radiography. There is no compromise for chest and abdominal radiographies with same height detection for both A-P and lateral chest (lung) and separately in the middle for abdomen. (*Option)

(8) The tabletop can be easily maintained clean;
   The tabletop is a complete flat design without any projection or depression, and prevents blood or bodily fluid from penetrating into it.

(9) Tomography capability;
   Tomography is possible with either cassette radiography or IP (imaging plate for CR). The table permits tomographic imaging at any tilting angles. Thoracic imaging can be accomplished not only in horizontal positioning but also in vertical form for chest pleural effusion diagnosis.

(10) Pelvic radiography;
    Steep X-ray incidence angles greatly help the imaging of pelvic examinations at the max. ± 40° angles required to view the pelvic inlet or outlet.

(11) Chest radiography capability;
    Chest IP/cassette radiography is possible with the table vertical and X-ray tube unit extended to 1.5 m FFD.

(13) Stretcher and wall bucky applications;
    The tube head can rotate 90/180 degree at vertical position for each stretcher and wall bucky applications with height adjusting switch provided at the tube head.
FEATURES (cont.)

DEDICATED SYSTEM FOR DIGITAL IMAGING

(1) In combination with DAR-8000i, the state-of-the-art digital imaging unit, the system provides high quality digital images of 1024 × 1024 matrix, 12 bit density resolution, and 15 fps.

(2) User-friendly GUI (Graphical User Interface) operation protocol is adopted to DAR-8000i. The following functions can be executed at the system console;
   • Window & Center Control
   • Horizontal (Right/Left), vertical (Up/Down) Image flip
   • 4x4 Multi-frame display with study/series overview
   • Cine display : A series of radiographic images can be displayed at variable replay speed.
   • Print-select/start
   • MAP fluoroscopy selection
   • Fluoroscopy image storage
   • Stacking
   • Reference image registration
   (* Available specifications are dependent on the configured digital imaging system.)

CONVENTIONAL CASSETTE RADIOGRAPHY

(1) The cassette can be loaded/unloaded very easily with cassette tray.

(2) The cassette tray provides wide longitudinal travel along the tabletop to the both end.

CONFIGURATION

STANDARD CONFIGURATION

(1) Table body assembly 1 set
This unit consists mainly of a body frame, an X-ray tube supporting tower, an image intensifier supporting base, and a tabletop. Fluoroscopy/radiography can be performed at an optimum position, with adjusting elevation, tilting, and lateral movement of the tabletop, longitudinal movement of the imaging unit, and oblique projection of X-ray beam.

(2) X-ray beam collimator
The X-ray beam collimator controls an exposure field automatically to suit fluoroscopy/radiography.

(3) Compression cone unit
The compression cone is a cylindrical part to press a region of a patient in fluoroscopy/radiography. Two types of different shaped head portion “flat type” and “protrusive type” are available as standard.

(4) Cassette radiography device
This device consists mainly of X-ray grid and cassette tray. Cassette radiography can be performed with up to 35cm × 43cm (14” × 17”).

(5) System control console
This console operates the table system.
Local and/or remote types are selectable.

(6) Control cabinet
This box controls the table system by communication. The cabinet includes cables to connect each component such as the table main body, the control console, and X-ray high voltage generator.

OPTIONAL ITEM

(7) Accessories
• Foot rest
• Shoulder rest
• Hand grips
• Upper part hand grips
• Barium cup holder
• Soft mattress

• Compression band
• Lateral cassette holder
• Power transformer, XAT-2H
• Phototimer
• Photo pick up
• Cystographic chair
• Knee clutches
• Drain bag
• Endoscope holder
• 500 lb weight option
<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>76.5 × 235 cm (flat type)</td>
</tr>
<tr>
<td>Lateral movement</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>25 cm</td>
</tr>
<tr>
<td>Speed</td>
<td>5.0 cm/sec max.</td>
</tr>
<tr>
<td>Table tilting</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>+89° to -89°</td>
</tr>
<tr>
<td>Speed</td>
<td>15 sec/90°, soft start and soft stop *1</td>
</tr>
<tr>
<td></td>
<td>17 sec/90°</td>
</tr>
<tr>
<td>Table height</td>
<td></td>
</tr>
<tr>
<td>85 - 110 cm [when 40cm (16&quot;) I.I. is mounted]</td>
<td>74 - 110cm [when 40cm (16&quot;) I.I. is mounted]²</td>
</tr>
<tr>
<td>78 - 110cm [when 30cm (12&quot;) I.I. is mounted]</td>
<td>63 - 110cm [when 30cm (12&quot;) I.I. is mounted]³</td>
</tr>
<tr>
<td>Allowance load weight</td>
<td>227 kg (500 lb) (in all operations, the system combined 500 lb weight option.)</td>
</tr>
<tr>
<td></td>
<td>318 kg (700 lb) (patient is stationary and lying horizontal.)</td>
</tr>
<tr>
<td>X-ray beam absorption ratio</td>
<td>0.61 mm Al eq. at 80kV / 0.67 mm Al eq. at 100kV</td>
</tr>
<tr>
<td>Longitudinal movement</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>155 cm</td>
</tr>
<tr>
<td>Speed</td>
<td>142 cm</td>
</tr>
<tr>
<td>Distance between X-ray focus and film (FFD)</td>
<td>110, 120, 150 cm</td>
</tr>
<tr>
<td>Distance between X-ray beam axis and floor surface at vertical position</td>
<td>57 - 212 cm</td>
</tr>
<tr>
<td></td>
<td>68 – 210 cm</td>
</tr>
<tr>
<td>Oblique angle of X-ray beam projection</td>
<td>Max. 40 degrees (caudal-cranial)</td>
</tr>
<tr>
<td></td>
<td>Max. 40 degrees (cranial-caudal)</td>
</tr>
<tr>
<td>Field collimation</td>
<td>Automatic field collimation (possible to select manual mode)</td>
</tr>
<tr>
<td>Fluoroscopic maximum field</td>
<td>Polygonal field corresponding to the circular input surface on I.I. (Iris collimator)</td>
</tr>
<tr>
<td>Radiographic maximum field</td>
<td>For digital spot polygonal field corresponding to the selected I.I. size or smaller rectangular by manually set</td>
</tr>
<tr>
<td></td>
<td>For cassette radiography: Corresponding with selected film format</td>
</tr>
<tr>
<td>Rotary mechanism of exposure field(option)</td>
<td>The automatic X-ray collimator itself can be manually rotated by ± 45°.</td>
</tr>
</tbody>
</table>
### SPECIFICATIONS (cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Movement</strong></td>
<td>Linear</td>
</tr>
<tr>
<td><strong>Exposure range</strong></td>
<td>FFD: 110 cm, Possible at any tilting angle from + 89° to - 89°</td>
</tr>
<tr>
<td><strong>Exposure angle</strong></td>
<td>8°, 20°, 30°, 40°</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>Max. 40°/1.5 sec</td>
</tr>
<tr>
<td><strong>Layer height</strong></td>
<td>0 mm – 250 mm on the tabletop</td>
</tr>
<tr>
<td><strong>Layer height automatic shift</strong></td>
<td>0 mm, 5 mm, 10 mm, 15 mm, 20 mm</td>
</tr>
</tbody>
</table>

| **Ceiling height needed for installation** | Minimum: 255 cm                                                        |
| **Operation/maintenance weight**          | Recommended: 285 cm or more                                            |
| **Power supply**                          | Three-phase: 200 V, 3.0 kVA, 50/60 Hz                                  |
|                                           | Single-phase: 100 V, 0.5 kVA, 50/60 Hz                                 |
| **Type/degree of protection against electric shock** | Class I, B-type equipment                                             |

| **Environmental condition**               | **Atmosphere**                                                         |
| **Temperature**                           | +10°C to + 35°C                                                        |
| **Relative humidity**                     | 30% to 65% (no dew condensation)                                       |
| **Atmospheric pressure**                  | 700 hPa to 1060 hPa (700 to 1060 mbar)                                 |
| **Atmosphere**                            | Atmosphere without explosive gases or corrosive gases                 |
CONTROL PANEL

(1) Table return switch (in horizontal/vertical position)
(2) Table elevation switch
(3) Low dose switch
(4) Pulsed fluoro select switch
(5) Pulsed fluoro rate indicator
(6) Road-MAP switch
(7) Super CINE display switch
(8) Fluoro image store switch
(9) Print start switch
(10) Print store switch
(11) Image inversion switch (up & down)
(12) Print select switch
(13) Image inversion switch (right & left)
(14) Reference image addition switch
(15) Emergency switch
(16) Previous frame switch
(17) Next frame switch
(18) Spare
(19) Spare
(20) Spare
(21) IVR MASTER Joystick
(22) Shot save switch
(23) Image level control jog dial
(24) Multi image display switch
(25) Image width control jog dial
(26) Oblique projection/return switch
(27) Tabletop/imaging unit operation handle and exposure switch
(28) Fluoro preparation switch
(29) Fluoro timer reset switch
(30) Pulsed fluoro rate control switch
(31) Table tilting handle
(32) Tilt bypass switch
(33) Collimation open/close handle
(34) Iris collimator open switch
(35) Iris collimator close switch
(36) Compression cone operation handle
(37) Exposure field lamp switch
(38) Compression cone fix switch
(39) Control panel remote/local select switch
(40) FFD select switch

DIMENSIONS

Local system control console

Remote system control console
DIMENSIONS (cont.)

ZS-100I/100IR

Control box

ZS-100I

ZS-100IR

Unit: mm
## RECOMMENDED SYSTEM CONFIGURATIONS

<table>
<thead>
<tr>
<th>Digital Imaging System</th>
<th>DAR-8000i</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ray high voltage generator</td>
<td>UD150B-40/V-40/L-40 (80kW/65kW/50kW)</td>
</tr>
<tr>
<td>X-ray tube assembly</td>
<td>0.6/1.2P324DK-85SF or 0.3/0.8P324DK-85SF (400kHU)</td>
</tr>
<tr>
<td>X-ray tube starter</td>
<td>SA-41UD</td>
</tr>
<tr>
<td>Image intensifier</td>
<td>IA-12LD/HG12 (30cm FOV)</td>
</tr>
<tr>
<td></td>
<td>IA-12LT/HG12 (30cm FOV)</td>
</tr>
<tr>
<td></td>
<td>IA-16LT/HS12 (40cm FOV)</td>
</tr>
</tbody>
</table>

**Remarks**
* Every value in this Product Data Sheet 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.


URL http://www.shimadzu.com