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.

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

OPTIONAL ITEM

- 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
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>76.5 × 235 cm (flat type)</td>
</tr>
<tr>
<td><strong>Lateral movement</strong></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><strong>Table tilting</strong></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 17 sec/90°</td>
</tr>
<tr>
<td><strong>Table top</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Elevation (at horizontal position)</strong></td>
<td></td>
</tr>
<tr>
<td>Table height</td>
<td>85 - 110 cm [when 40 cm (16&quot;) I.I. is mounted] 78 - 110 cm [when 30 cm (12&quot;) I.I. is mounted] 74 - 110 cm [when 40 cm (16&quot;) I.I. is mounted] 63 - 110 cm [when 30 cm (12&quot;) I.I. is mounted]</td>
</tr>
<tr>
<td>Allowance load weight</td>
<td>227 kg (500 lb) (in all operations, the system combined 500 lb weight option.) 318 kg (700 lb) (patient is stationary and lying horizontal.)</td>
</tr>
<tr>
<td><strong>Table tilting</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Longitudinal movement</strong></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>155 cm 142 cm</td>
</tr>
<tr>
<td>Speed</td>
<td>15 cm/sec max. (continuously variable), 20 cm/sec (in stepping movement)</td>
</tr>
<tr>
<td><strong>X-ray beam absorption ratio</strong></td>
<td>0.61 mm Al eq. at 80kV / 0.67 mm Al eq. at 100kV</td>
</tr>
<tr>
<td><strong>Imaging unit</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Distance between X-ray focus and film (FFD)</strong></td>
<td>110, 120, 150 cm</td>
</tr>
<tr>
<td><strong>Distance between X-ray beam axis and floor surface at vertical position</strong></td>
<td>57 - 212 cm 68 – 210 cm</td>
</tr>
<tr>
<td><strong>Oblique angle of X-ray beam projection</strong></td>
<td>Max. 40 degrees (caudal-cranial) Max. 40 degrees (cranial-caudal)</td>
</tr>
<tr>
<td><strong>Field collimation</strong></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 For cassette radiography: Corresponding with selected film format</td>
</tr>
<tr>
<td>X-ray exposure field</td>
<td>The automatic X-ray collimator itself can be manually rotated by ± 45°.</td>
</tr>
<tr>
<td><strong>Radiography</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Automatic detection of cassette size (full size only)</strong></td>
<td>Cassette size: JC type or IEC standard products (cm) 18 cm × 24 cm, 24 cm × 30 cm, 30 cm × 40 cm, 35 cm × 35 cm, 35 cm × 43 cm JL type (inch) 8” × 10”, 10” × 12”, 11” × 14”, 14” × 14”, 14” × 17”</td>
</tr>
<tr>
<td>Grid</td>
<td>Type 464 mm × 464 mm (fixed), Ratio: 12, Density: N 60 cm⁻¹, Focusing distance: 120 cm, Intermediate material: Al</td>
</tr>
</tbody>
</table>

Notes *1: In case of the system combined 500 lb weight option, the speed of tilting is 17 sec/90 degrees. *2: At 86 cm the I.I. moves to lower the table. *3: At 79 cm the I.I. moves to lower the table.
### SPECIFICATIONS (cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>tomography</strong></td>
<td></td>
</tr>
<tr>
<td>Movement</td>
<td>Linear</td>
</tr>
<tr>
<td>Exposure range</td>
<td>FFD: 110 cm, Possible at any tilting angle from + 89° to - 89°</td>
</tr>
<tr>
<td>Exposure angle</td>
<td>8°, 20°, 30°, 40°</td>
</tr>
<tr>
<td>Speed</td>
<td>Max. 40°/1.5 sec</td>
</tr>
<tr>
<td>Layer height</td>
<td>0 mm – 250 mm on the tabletop</td>
</tr>
<tr>
<td>Layer height automatic shift</td>
<td>0 mm, 5 mm, 10 mm, 15 mm, 20 mm</td>
</tr>
<tr>
<td><strong>items related to installation</strong></td>
<td></td>
</tr>
<tr>
<td>Ceiling height needed for installation</td>
<td>Minimum: 255 cm</td>
</tr>
<tr>
<td>Operation/maintenance weight</td>
<td>Recommended: 285 cm or more</td>
</tr>
<tr>
<td>Power supply</td>
<td>Three-phase: 200 V, 3.0 kVA, 50/60 Hz</td>
</tr>
<tr>
<td></td>
<td>Single-phase: 100 V, 0.5 kVA, 50/60 Hz</td>
</tr>
<tr>
<td>Type/degree of protection against electric shock</td>
<td>Class I, B-type equipment</td>
</tr>
<tr>
<td><strong>Environmental condition</strong></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>+10°C to + 35°C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>30% to 65% (no dew condensation)</td>
</tr>
<tr>
<td>Atmospheric pressure</td>
<td>700 hPa to 1060 hPa (700 to 1060 mbar)</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>Atmosphere without explosive gases or corrosive gases</td>
</tr>
</tbody>
</table>
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. I/R 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

Scale 1: 20
Unit : mm

Scale 1: 40
Unit : mm
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.

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