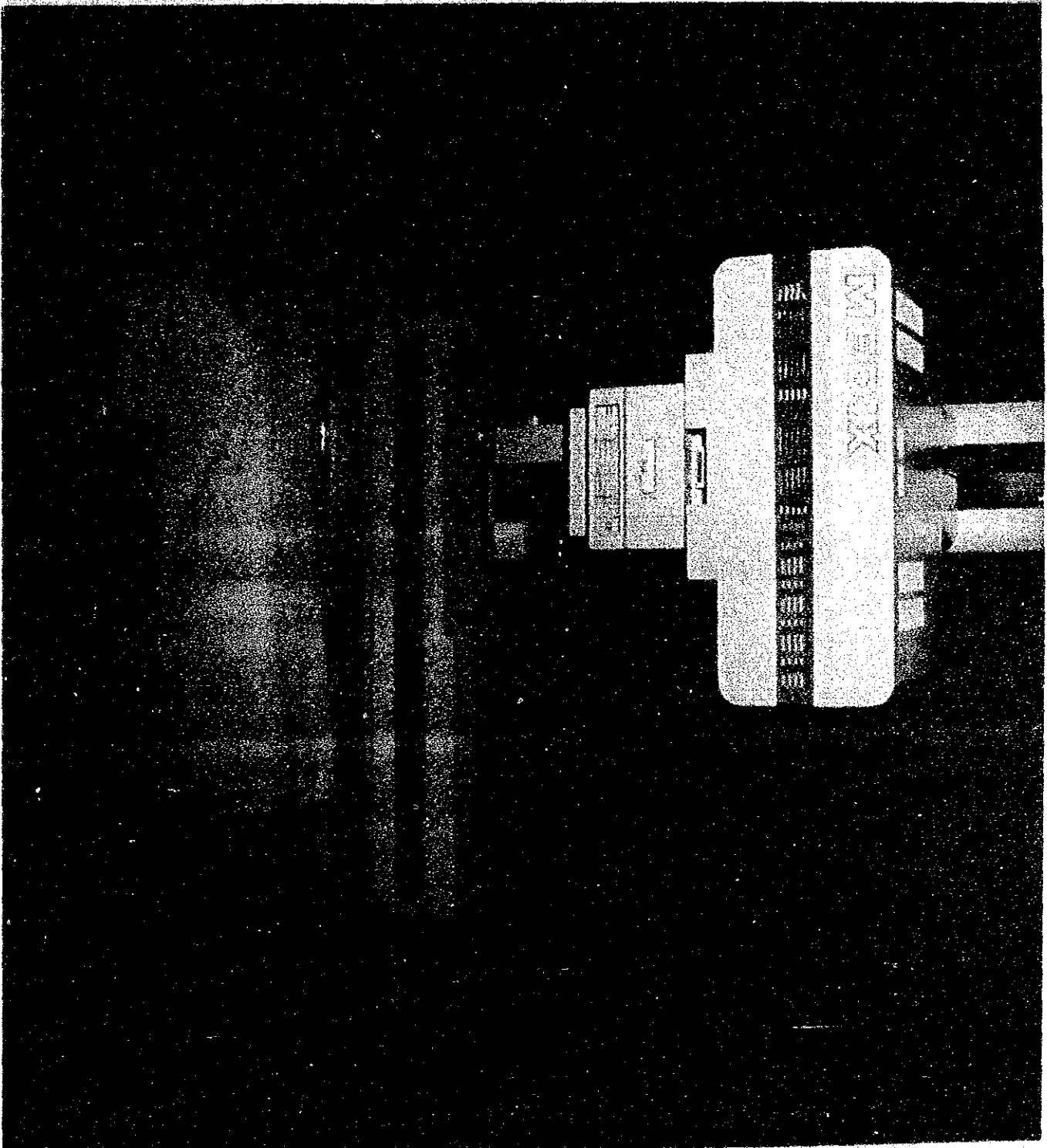


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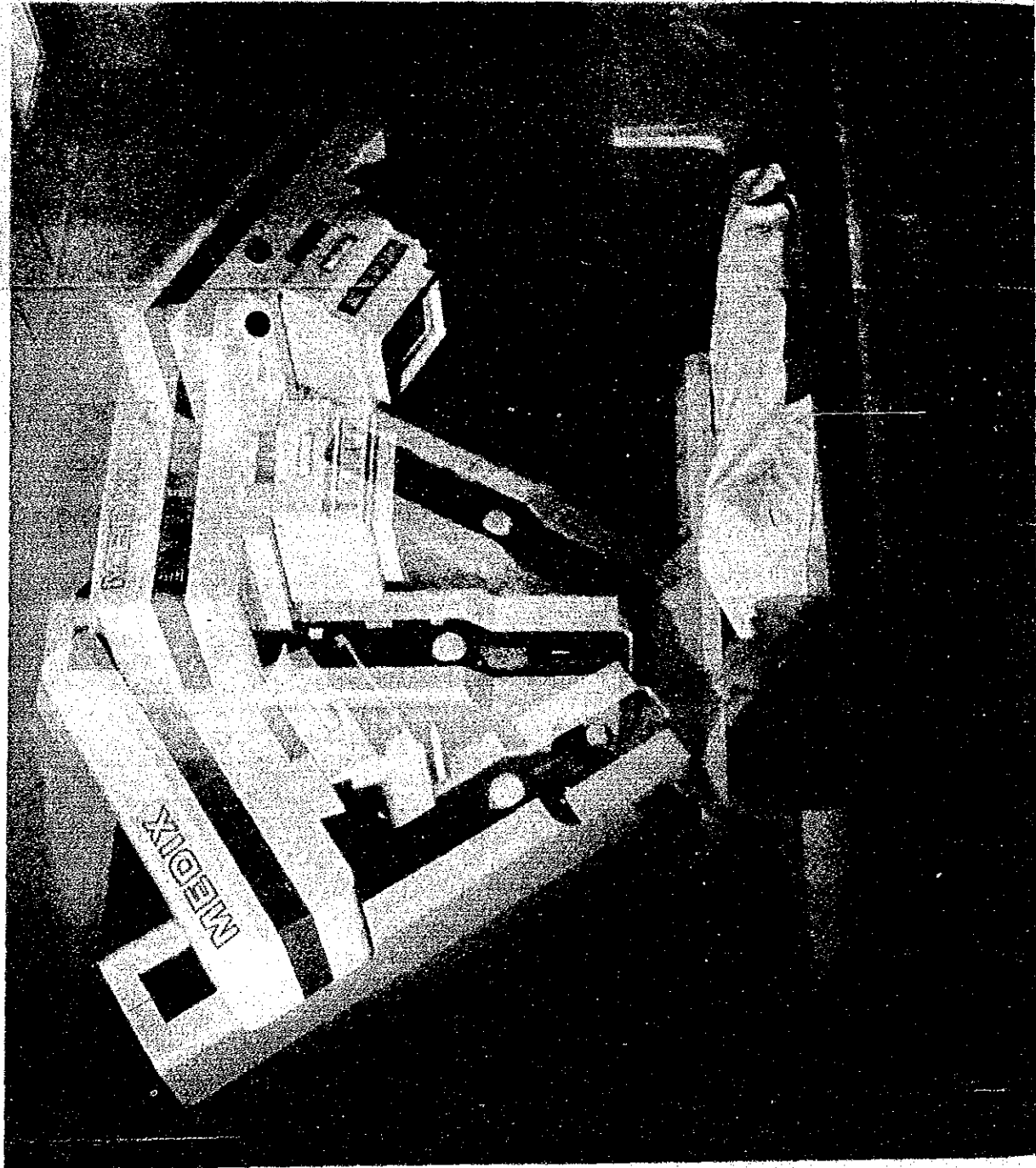


HITACHI two-channel, 3 film-size
and cassetteless X-ray television system.

TU-210L & TU-210



Cassetteless radiographic/fluoroscopic system incorporated with a feature of tomography. TU-210L/TU-210



Model TU-210 L & TU-210 are multi-purpose radiographic/fluoroscopic system, in which the advantages of the over-table tube system are fully utilized.

Model TU-210 L can effect tomography in addition to x-ray examination of gastrointestinal tract, angiography of head and abdominal regions, examination of bones, and endoscopic examination. It is also effectively usable in emergency examination by tomography following an ordinary radiography.

- Two-channel, 3 film-size and cassetteless type. Both models are equipped with a cassetteless mechanism of front-loading type by which film magazines can be loaded into the tube from the front side.
- The cassetteless feature provides a good soft-film image. Film change takes only about 6 sec. and film can be inserted into place in about 0.8 sec. Furthermore, in horizontal 2-in-1 exposure format, radiography can be done at a speed of about 0.5 sec/frame.
- The specimen device is so designed as to be slideable. Owing to this design, the radiographic center is movable in a range from a piston of 45 cm from the head end of the radiographic/fluoroscopic table (R/F table) to a position of 81 cm from the same end. Combined with the move of the table of the R/F table, this feature makes it possible to fluoroscope and radiograph a wide region of the patient's body. Also this feature is effectively applicable in endoscopic examination.
- Tomography can be done if radiative function for model TU-210L. The capability of tomography using no cassette permits a wide variety of x-ray examinations.
- Fluoroscopy and radiography with X-rays obliquely projected. Fluoroscopy and radiography can be done with x-rays projected through an arbitrary angle within a range of 45 degrees. Parallel is automatically corrected (in case 9-inch I.I. is used in combination). Also the x-ray tube assembly can be rotated independently, which permits a radiography using a film changer.
- Quality image. Features such as small magnification factor, and elimination of scattered x-rays due to the combination of divisional exposure mask and zero-driven beam limiting device assure sharpness of the radiographs. FTD can be changed at 2 steps either of which is selectable for an x-ray technique selected.
- Soft start of table top.
- The R/F table adopts a soft starting drive mechanism. It is suitable to a maximum of 90° Trendelenburg position.

Axial fluoroscopy and radiography.

Oblique X-ray projection (in a range of $\pm 35^\circ$)

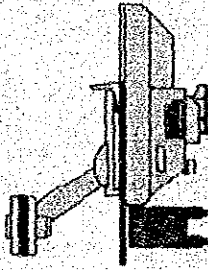
The center of x-ray beam can be tilted through a maximum of 35 degrees toward each of the head- and foot-ends of the R/F table. This feature is advantageously usable in radiography of gastrointestinal tract and bones such as head spine, etc.

Retractable compression device

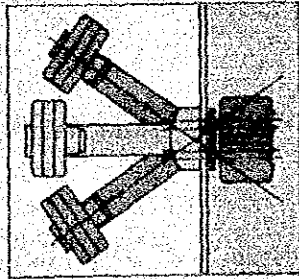
Thanks to this feature, the compression device will not interfere with the operation for radiography with x-rays obliquely projected or tomography.

Radiography using film changer is also possible

For changing the angle of x-ray irradiation, the x-ray tube arm is tiltable and the x-ray tube assembly can be independently rotated at motor-driven through ± 35 degrees in the axial direction. Using a film changer (optionally available), radiography can be done (with FFD - distance between focal spot and tabletop of about 100 cm).



Parallax is automatically corrected.
The errorfilm device and image intensifier (8-inch L1, above) are automatically slid into place, respectively according to an angle of x-ray irradiation selected.



Wide region of examination.

Wide range of tabletop move

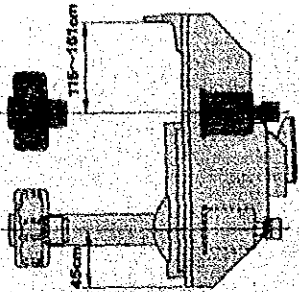
The tabletop can be moved over a long distance (+120 to -30 cm with the table in horizontal position). This feature in conjunction with the travel of the spotfilm device provides a wide range of examination.

Table tilting between 90° and 80° Transöbstrahlung

Soft start mechanism is adopted for tilting the table, and the tilting speed can be steplessly adjusted. The table can be tilted in an angular range of 80° to 90° Transöbstrahlung position.

Mount of spotfilm device

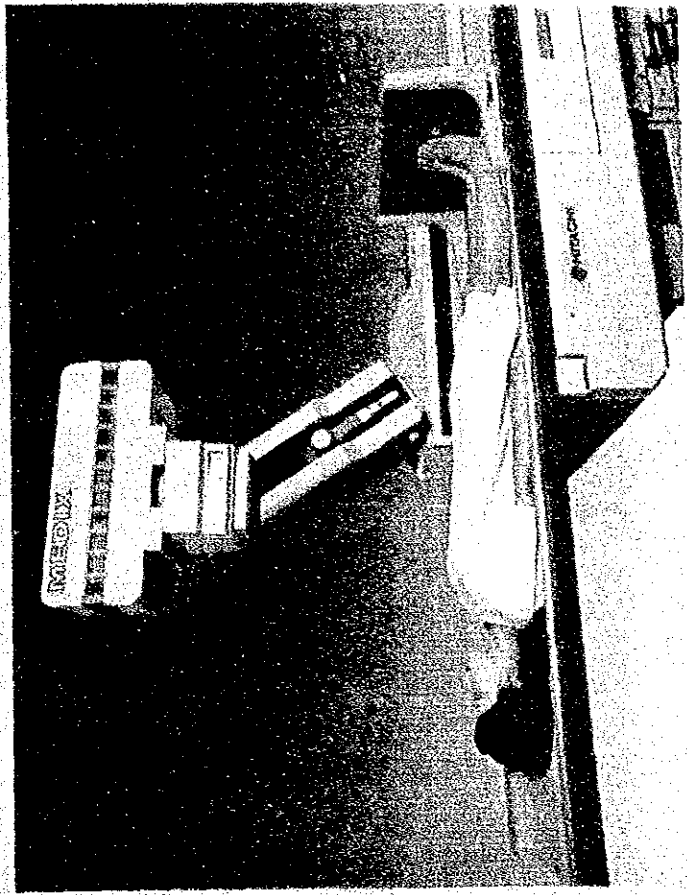
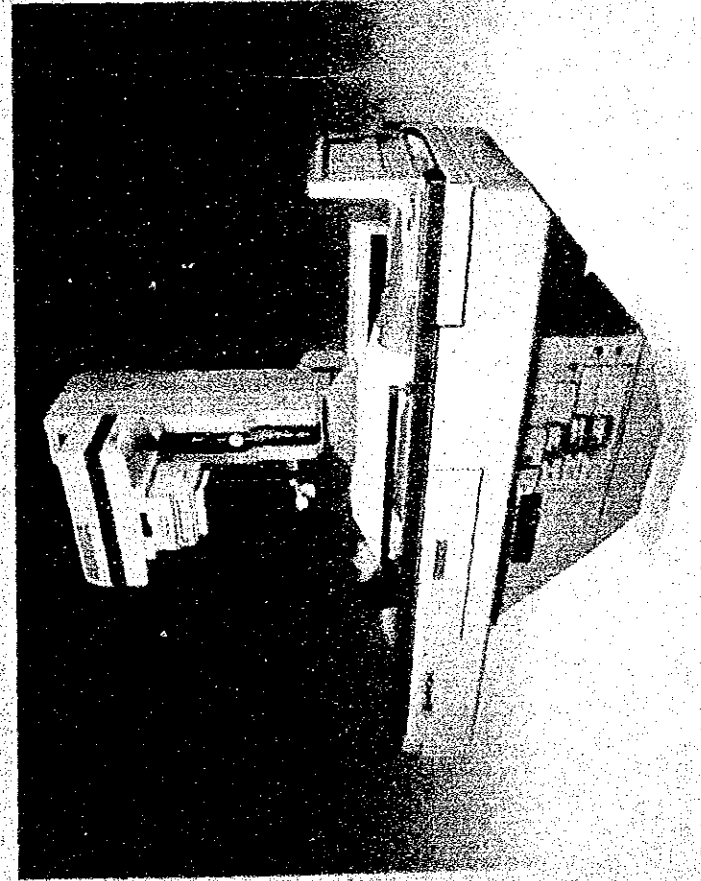
The center of fluoroscopy/radiography slides table-loygitudinally between about 115 cm and 163 cm from the surface of the footrest. Thus, the gastrointestinal tract can be examined without the necessity of moving the tabletop. The foot-rest can be set selectively at three steps.



Fluoroscopy/radiography can be started with the center of radiography/fluoroscopy moved to the table end

The center of radiography/fluoroscopy can be moved to a position of 45 cm from the table end (head-end side). The table stand is newly designed.

Owing to these features, endoscopic examination can also be done easily with this R/F table.



Optimal timing for spotfilming.

Two-channel, 3 film-size and cassette.

A combination of a hundred 10x12" sheet films and fifty 11x14" or 14x14" sheet films can be preset as put in the respective magazines into the R/F table. A take-up magazine can be commonly used for exposed films of both the sizes.

Slide printer equipped

The data such as patient's name, seriality date of examination and also ID No. (patient ID No. in 2 digits and order of exposures in 2 digits) filed in the ID card are automatically printed on an exposed film.

Spotfilming format



Front loading of film magazines

The film magazines can be loaded into and removed from the R/F table at the front side while the table is at any tilt angle.

Spotfilming can be done in well-timed

Film change takes only about 6 seconds from end of an exposure until the equipment gets ready for a next exposure. Also, a film can be shifted in only 0.8 sec to radiographic position from the ready position.

Optional angiography

A rich choice of spotfilming formats is available: serialography can be done in horizontal 2-in-1 and 3-in-1 for 14x14" mode at a rate of 0.5 sec/frame.

Small magnification factor

There is a long distance between the tube focal spot and film, while the distance between the anode and film is small. Thus, images of small magnification factor can be obtained.

Sharp images

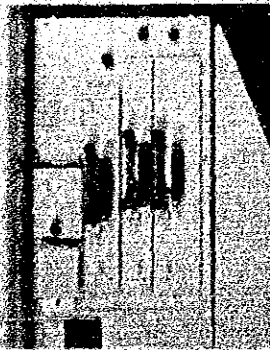
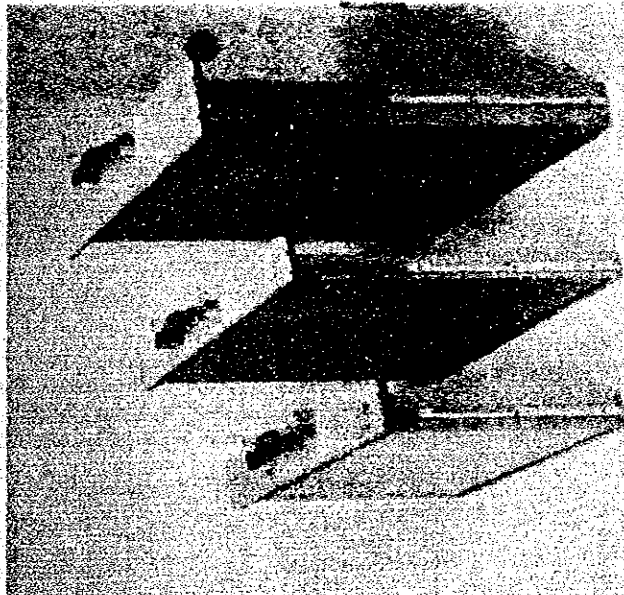
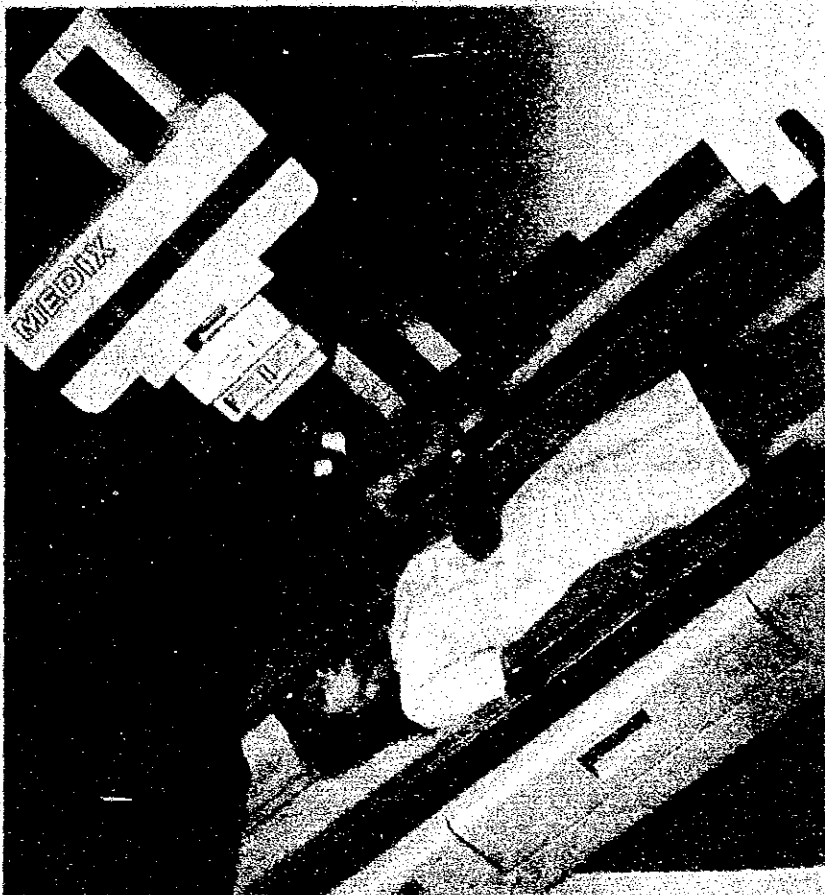
A servo-controlled beam limiting device is used which permits an exposure of a size limited to less than the spot-size. Also, a servo-controlled diaphragm exposure mask and grid are provided to effectively eliminate scatter rays.

High resolution I.I.

A high resolution image intensifier is used, which has the input screen phosphor made of cesium iodide (CsI). The x-ray television imaging system used assures a high quality of TV fluoroscopic images, and the spot camera (optional) equipped enables I.I. photography with a low radiation dose.

Two sizes of FFD, selectable

FFDs of 100 cm and 120 cm can be selectively used by pushbutton operation according to an x-ray technique selected.



Tomographic mechanism (Exclusive function for model TU-210L).

Angles of x-ray irradiation

40°, 20° and 0° selectable by push-button operation; the tomographic speed is set as interlocked with the section of any one of the three angles.

Positioning

The patient positioning can be easily done watching the fluoroscopic image on the TV monitor.

Setting of sectional plane

A sectional plane can be set by motor drive in a range of about 25 mm to 245 mm. The sectional plane level thus set is digitally indicated; also, the sectional plane level can be automatically changed with preset readings (at 4 steps).

Easy to operate

The relocatable radiologic control stand permits to effect preliminary operation. This operation can also be done at the controller in the control room.

Radiography with large mA for short time.

Model TU-210L and TU-210 use an X-ray generator of 2-peak or 12-peak rectification system, which is controlled by a co-man type R/F table and X-ray controller.

Elaborated panel arrangement for ease of operation. Meristopping sections and display sections are distinctively divided. On the display panel black coated material is used so that eye-fatigue is alleviated, while soft plastic film is used on the manipulating panel to which an operator touches frequently. It is not necessary to adjust a control circuit voltage.

TV monitor incorporated

A TV monitor is incorporated in the controller and its location is at the center position taking into consideration of operator's eyes.

Five kinds of X-ray factors setting

In order to control automatically X-ray factor for fluoroscopy and radiography, an AEC (automatic exposure control) which has various compensating circuits is provided.

Mode 1:

Full-automatic setting for fluoroscopy and radiography

Mode 2:

Automatic setting
Radiography Phototimer control

Mode 3:
Fluoroscopy Automatic setting
Radiography Manual setting

Mode 4:
Manual setting both for fluoroscopy and radiography

Digital display
X-ray factors for fluoroscopy and radiography are digitally displayed. An mA value is also digitally displayed just after an exposure is performed. KV value and mA's value can be printed on an exposed film.

Monitoring X-ray tube load
As the load to the X-ray tube is monitored, it is easy to set radiographic factors.

Selectable versatile technique
Besides fluoroscopy and spooling, various kinds of radiographic techniques can be selected.

In addition the DH-150V is compatible with our digital subtraction system, DFA-1-10 and DFA-2-20.

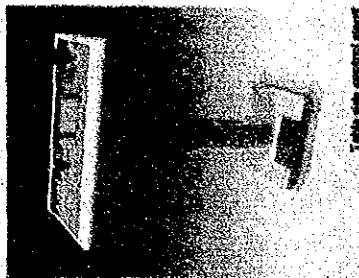
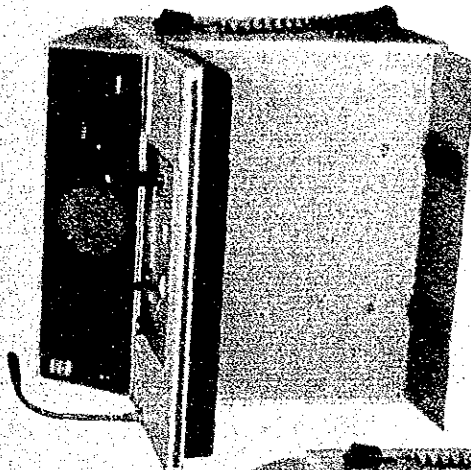
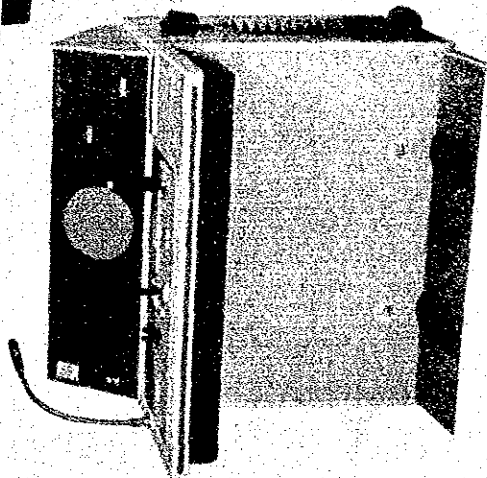


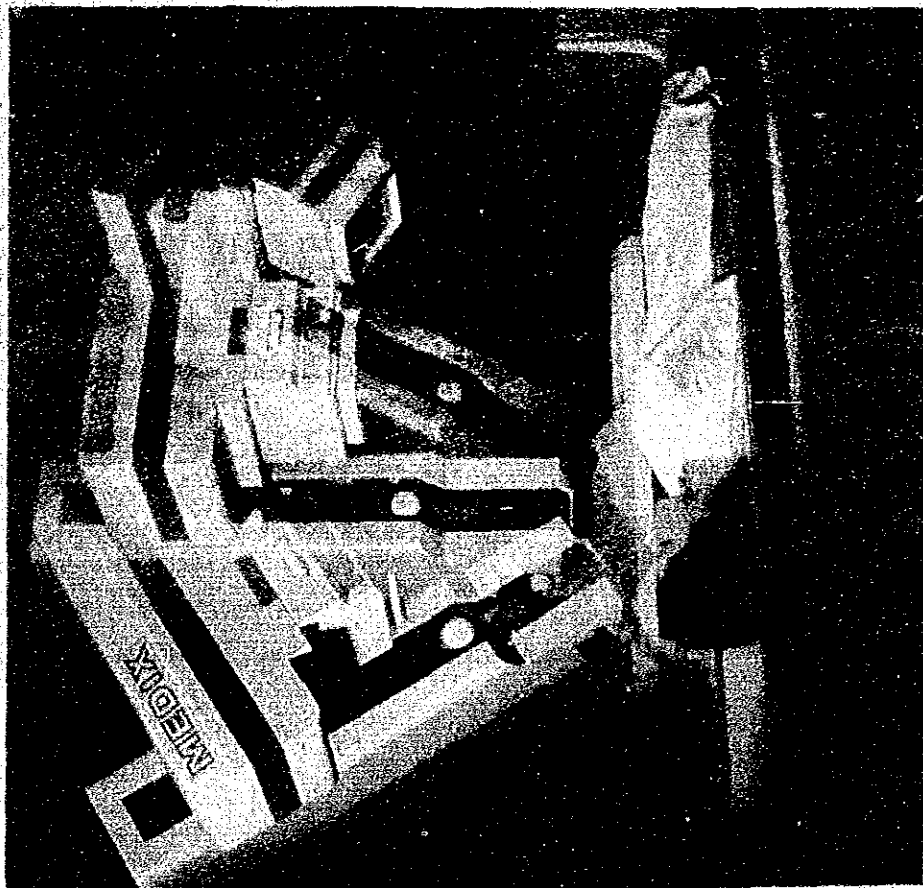
Table side control console



Reverse control console for model TU-210



Reverse control console for model TU-210L



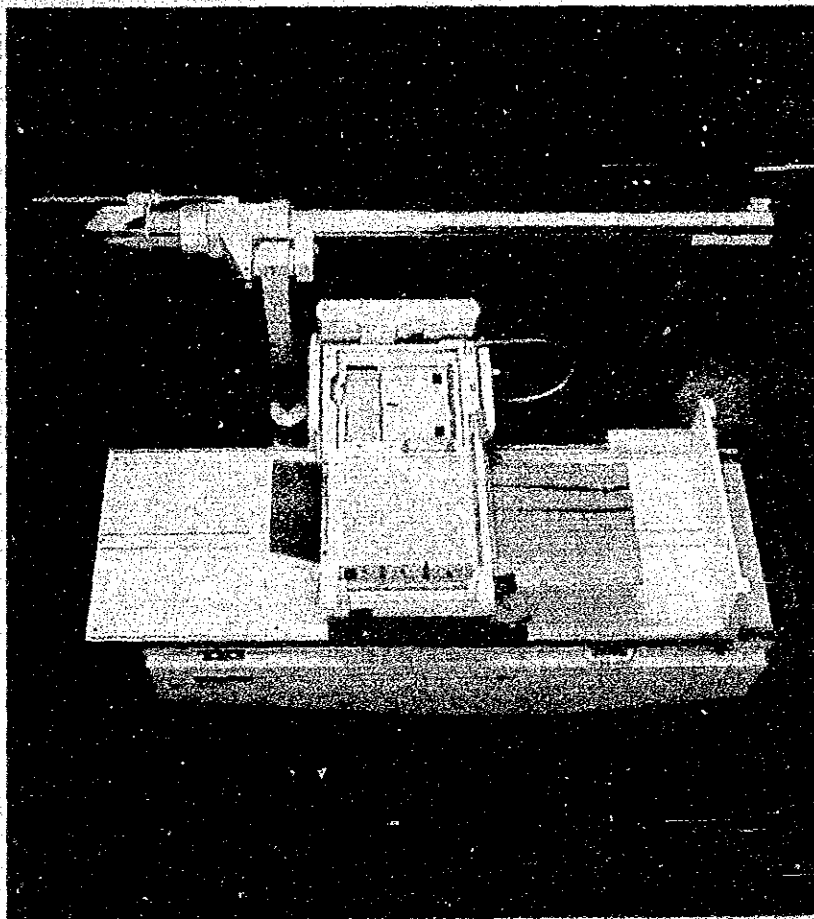
 HITACHI

Radiographic/Fluoroscopic Equipment SYSTEM 5



Hitachi Medical Corporation

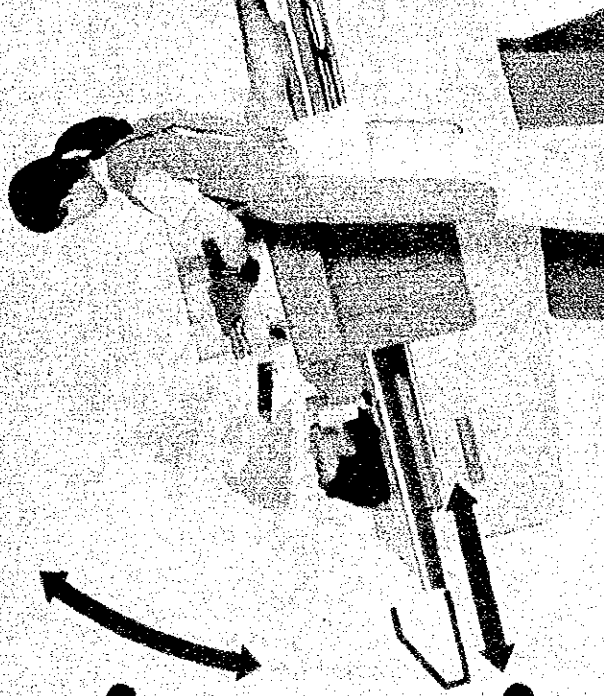
A versatile radiographic/fluoroscopic system designed for general x-ray diagnoses such as fluoroscopy, gastrointestines, ordinary radiography, Bucky radiography, tomography (this feature is optionally incorporated), etc. The table is constructed so sturdy that no ceiling submount is required even if it is provided with an x-ray TV equipment with 9-inch image intensifier.



Radiographic/fluoroscopic table Model TD-85: Table tilt and tabletop travel are controlled from the control panel on the sportfilm device. The tabletop has provided on either side a rail for attachment of accessories such as foot rest, hand grip (bar type grip, optional), shoulder pad (optional), compression belt (optional), etc. Since the tabletop height is low, the equipment can be easily controlled for fluoroscopy and radiography. Easy patient accessibility to the table simplifies positioning for Bucky

radiography with the tube over the table.
 • Table size: 2000 x 700 mm
 • Tabletop height with table in horizontal position: 850 mm
 Table tilting
 The table can be tilted and stopped by operating the control on the control panel of the sportfilm device or on the side of the table. Tilting from the upright position is automatically stopped when the table reaches the horizontal position. The tilt angle can be read on a meter provided on the side of the table.
 • Tilting range: Upright to 15° Trend-

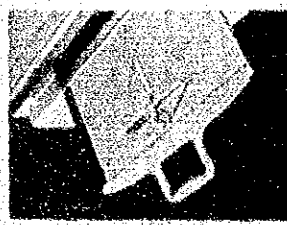
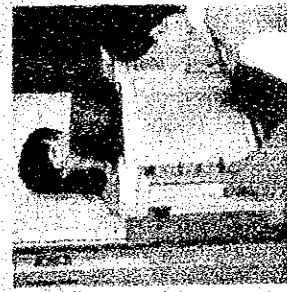
elenburg position
 • Tilting speed: 90°/25 sec (at 60 Hz)
 • Tabletop travel
 A control unit is located on the panel of the sportfilm device and of the table side. The tabletop travel permits, in combination with the smooth vertical movement of the sportfilm device, to effect an x-ray examination of maximum range.
 • Traveling range: Max. 500 mm up-ward from the stand end (the travel range may be limited corresponding to the space of installation)
 • Traveling speed: 35 mm/sec (at 60 Hz)



Bucky devices:
 Located below the tabletop, use of the table in combination with a tubestand permits Bucky radiography with the x-ray tube over the table and chest radiography. A version of the table with no Bucky device incorporated is available if specified.
 • Exposure size: 14x17" (vertical) or 14x17" (in version in which a cassette of 14x17" can be set vertically and horizontally as desired is also available as optional)
 • Grids: Ratio, 8:1; Density, 28 (less) cm; Focusing distance, 1000 mm;

Motion, reciprocal, motion and speed of grid are set automatically.
 • Exposure time: 0.02 to 7 sec.
 • Loading of cassette: A cassette holder is used to center the cassette by fixing it from the front and rear sides.
 • Range of Bucky radiography: 655 to 1535 mm (distance foot end of the tubestand to cassette holder center with the table); the device can be locked at a desired position.
 Foot rest:
 Can be installed at one of three levels as desired.

Features:
 • Table tilt and tabletop travel are motor driven.
 • The sportfilm device is slidable for parking.
 • Bucky radiography with x-ray tube over the table is possible.
 • Sharp images.
 • Can be optionally equipped with an x-ray television unit with a 9-inch or 6-inch I.L., tomographic attachment, photo timer, etc.



Spotfilm device

- Spotfilm sizes:
- 14x14" or 35x35 cm: Full size
 - 10x12" or 24x30 cm: Full size
 - 8x10" or 18x24 cm: Half size
- Full size Half size Quarter size

going to use the cassette is a lightweight recessed one (Philips type).

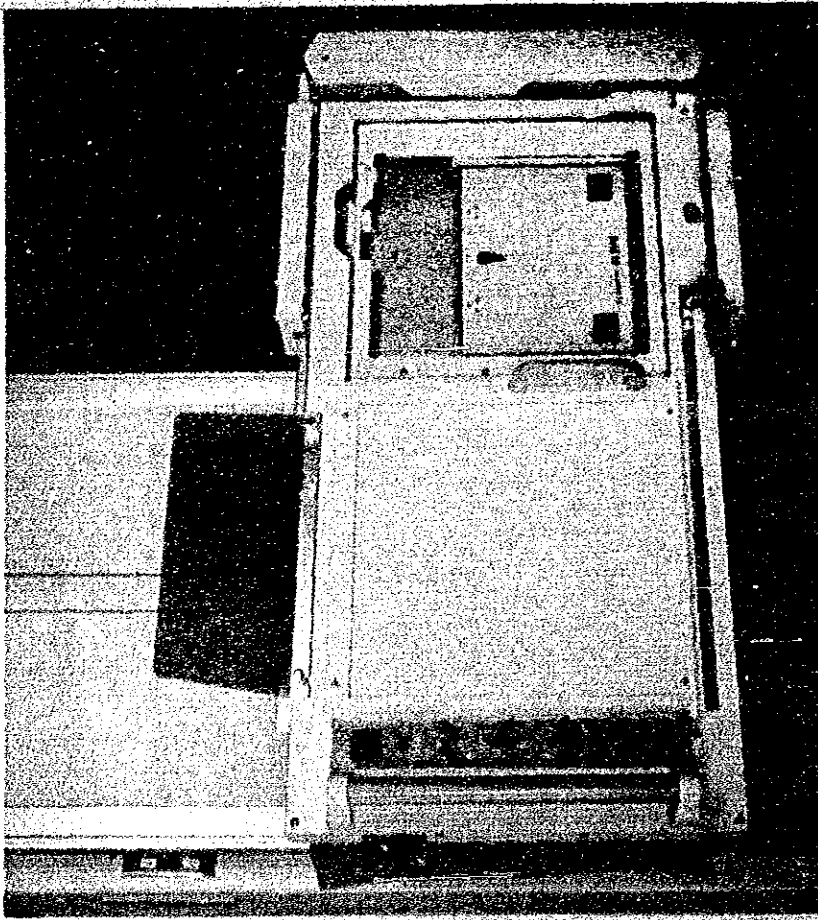
Loading of cassettes:

Top-loading type: the cassettes can be easily loaded and unloaded while wearing a pair of protective gloves.

Spotfilming operation:

The cassette is manually slidable; the instant the cassette shifting lever leaves the parking position, fluoroscopic x-ray emission is interrupted, the spotfilming circuit is closed and at the same time, the spotfilm device is automatically locked. When the cassette is stopped in the exposure position, x-ray exposure is

It is requested to specify the size (metric or inch) of the cassettes you are



Spotfilm device

- Easy to operate.
- For ease of self-hand operation, three sets of hand operation, three sets of the left-side handle, a spot-film handle, and directional structure with sliding track, are easily operated with the table in the upright position of the table.
- Fully adjustable (very mobility).
- The spotfilm device is well balanced by a counterweight system with the table in any tilt angle, and can be moved one or twice range with only a little force (initial effort).

Locking can be applied separately

- against compression, move as well as against longitudinal and transverse moves; it is automatically applied in the course of table tilt and spotfilming.
- Longitudinal move: 320 to 1020 mm (from floor level to fluorescent screen center) with the table in upright position.
- Transverse move: 110 mm in each of opposite directions (distance from tabletop center to fluorescent screen center).
- Compression move: 150 to 450 mm (from tabletop to spotfilm device rear side).

Parking of spotfilm device

- The spotfilm device can be parked by sliding it. This feature is very convenient for the patient to get on and off the table and for busy radiography with the x-ray tube over the table.

made under the set exposure conditions. A motor-driven type spotfilm device is also available as option.

Selection of exposure size:

The half-size and quarter-size exposure masks are provided on the rear of the spotfilm device. Simply sliding to EXP. position, the exposure mask setting knob on the front of the spotfilm device, a corresponding exposure mask is automatically selected and cassette stop position is set. In the quarter-size exposure, the cassette is automatically shifted up to the position for the third exposure by a spring mechanism. The maximum number of possible exposures is indicated.

Collimator:

Either a motor-driven type collimator Model ZU-LAT or a release wire manual control type Model ZU-LMT is to be used; however, in case an x-ray tube unit Model UG-SME-33T or UG-4LF-33T is used, a release wire manual control type collimator with x-ray shut-off must be fitted to it.

Fluorescent screen:

- Size: 35 x 30 cm (4 flexible size)
 - Lead glass: 2.5 mm-th equivalent
- Grid:
- Ratio: 6:1
 - Density: 23 lines/cm
 - Focusing distance: 850 mm
- Protective drapes:**

This drape is set to the rail on the rear of the spotfilm device and is pulled to the position where it is to be used; it consists of five sections, which is convenient for adjusting the patient's region to be examined.

- Size: 400 x 150 mm
 - Lead equivalent: 0.5 mm-pb
- Compression coils:**
- Made of acrylic resin, it can be easily attached to and removed from the quarter-size loading mask.

Fluoroscopic x-ray ON/OFF connection:

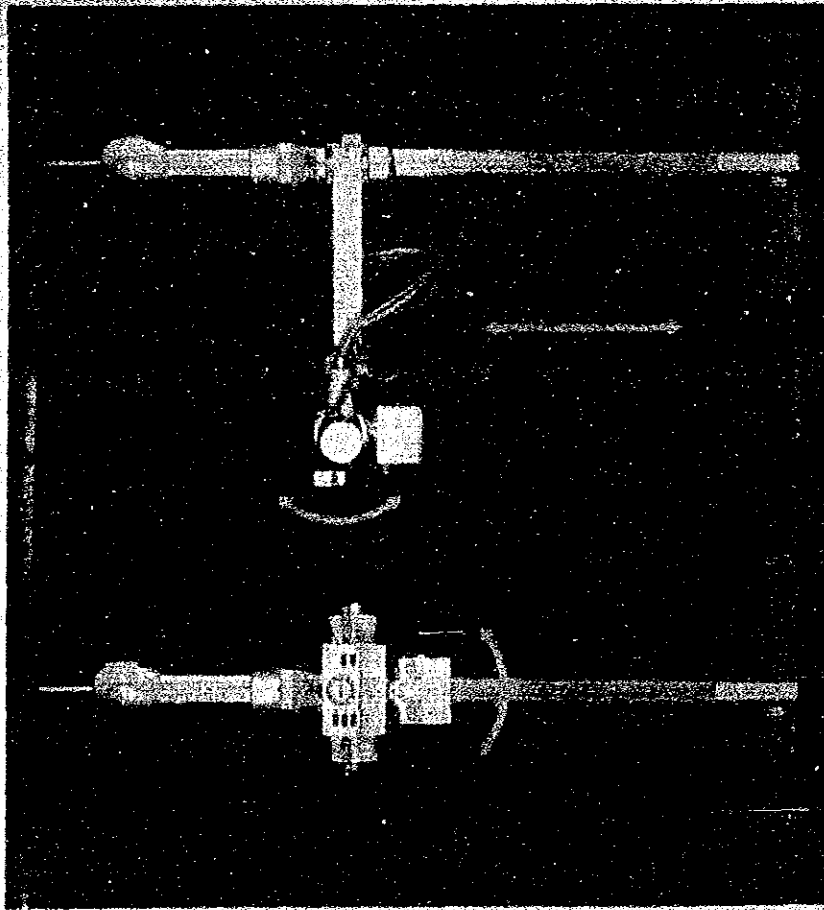
This operation is controlled by a switch on the spotfilm device.

Connection of x-ray tube unit with R/F table:

- One of the following two connecting systems can be selected as specified:
 - (1) Direct connection with the moving frame of the spotfilm device located below the table.
 - (2) Connector to move frame of the spotfilm device located below the table by means of a support arm which is rotatable through 90°.
- In case of the standing system (2), other radiographic table or upright other radiographic table or upright radiographic stand by decoupling the x-ray tube from the table which is in the upright position. In this case, the table can be tilted down to 8°. Tilted radiographic stand is included. The x-ray tube unit inside in this system is Type P or T.



X-ray tube unit support



Tubestand Model SY-C2:

The System 5, comprises a twin-track type tubestand Model SY-C2, with an electromagnetic lock, for exclusive use in radiography which may be done using the "Bucky device" incorporated in the radiograph/fluoroscopic table.

• It is possible to effect Bucky radiography with the table in the horizontal position and direct radiography with the table in the upright position.

With the table in the horizontal position, a distance of about 1030 mm is obtainable between the tube focal spot and tabletop. Further, travel of the

tubestand mast, rotation of the support arm and independent rotation of the x-ray tube unit in combination position.

• In desired direction of X-ray projection. Thus, the Bucky device incorporated in the R/F table can be used to effect radiography of various regions of the patient's body.

• Vertical move and stop of the support arm is smooth owing to the Hitachi's unique counterbalancing system adopted.

• If the wire rope used for suspending and moving the support arm vertically should be broken, the tube unit can be

prevented from crashing down by means of a safety which is provided for the purpose.

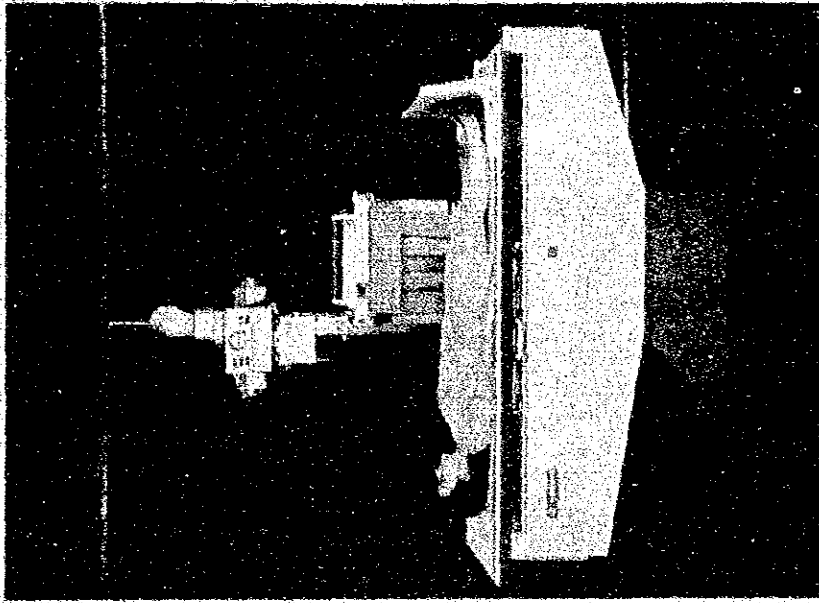
• The travel and move of the tubestand are manually operated and electrically locked.

• Required ceiling height: 2450 to 3000 mm.

• Vertical move: 180 to 1380 mm (from floor to tube focal spot).

• Travel of mast on rail: 3000 mm.

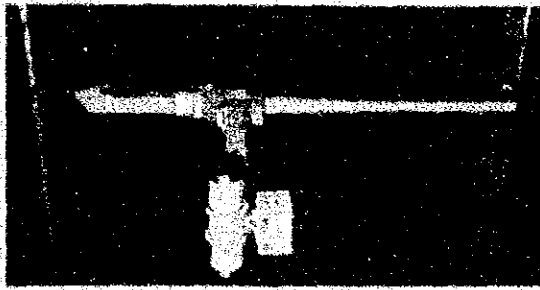
• Horizontal rotation of support arm: ±90° (click-stop at every 30°)



• Rotation of support arm about axis: ±130° electromagnetically locked.

• Horizontal move of support arm: ±120 mm from tubestop center, electromagnetically locked.

• Independent rotation of x-ray tube unit: +110° to -20°



General tube support Models: SX-A5 and SY-C1:

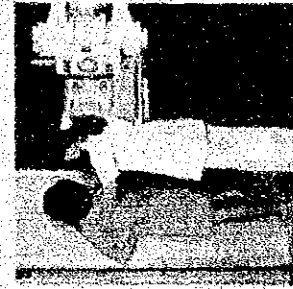
System 5, may optionally comprise a twin-track and mechanical-locking type tubestand Model SY-C1 in addition to Model SY-C2.

A version of Model SY-C2, in which a mechanical locking system is adopted instead of electromagnetic locking.

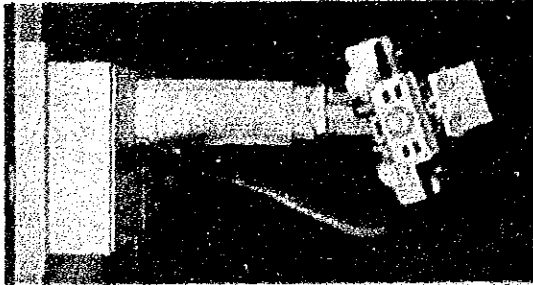
Major specifications:

- Required ceiling height: 2450 to 3000 mm.

- Operating system: Manual moving and mechanical locking.
- Traveling of mast on rail: 2940 mm.
- Vertical move: 180 to 1800 mm (from floor level to tube focal spot).
- Horizontal rotation of support arm: ±90° (click-stop at every 30°).
- Rotation of support arm about axis: ±130°.
- Horizontal move of support arm: 1130 mm from tubestop center.
- Independent rotation of x-ray tube unit: +100 to -20°.



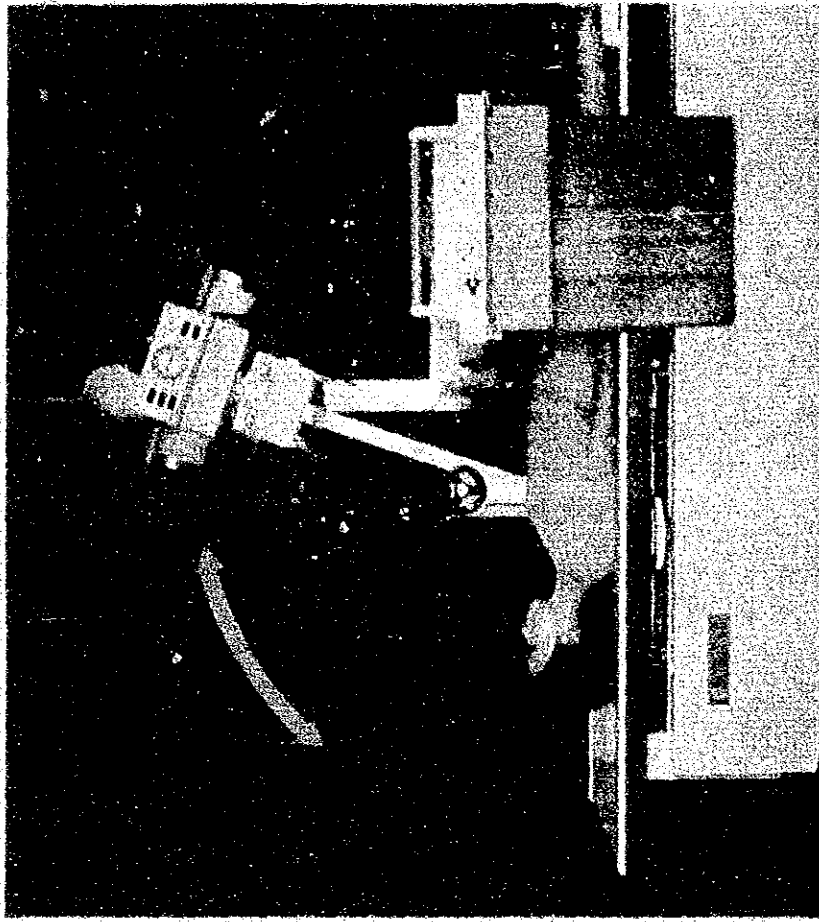
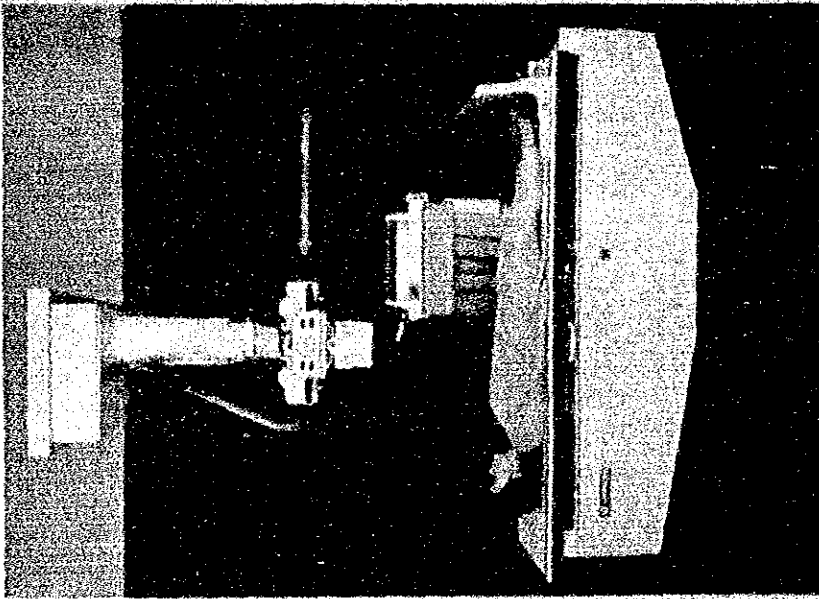
Options



Model SX-AE:

The main track on the rails installed on the ceiling, which provides a wider effective space and facilitates coupling with the RUT table.

- Major specifications:**
- Vertical travel: 1500 mm (normally electromechanically locked; unbraked wheel attached)
 - Longitudinal travel: 3000 mm, electromechanically locked
 - Transverse travel: 1250 mm, electromechanically locked
 - Rotation of X-ray tube unit: ±180° about pivot (lock-step at every 90°), ±130° about support arm (normally electromechanically locked; unbraked wheel attached)
 - Independent rotation of X-ray tube unit: +105° to -20° (mechanically locked)



Tomographic attachment Model ZL-A (options):

This is optionally available, and permits to couple the tubehead (Model SY-C2 or SY-C1) with the Bucky device in a radiographic/fluoroscopic table for permitting tomography. With this attachment used, the tube focal spot and film move in parallel planes during tomography. The layer height can be easily adjusted in a range of 20 to 250 mm and is readable on a scale. The attachment is easily retrievable.

• F focus - film distance: 1800 mm

About 1.5 sec		640 mm	
20 mm	120 mm	250 mm	
36°	40°	40°	
About 0.7 sec		310 mm	
20 mm	120 mm	250 mm	
18°	20°	23°	

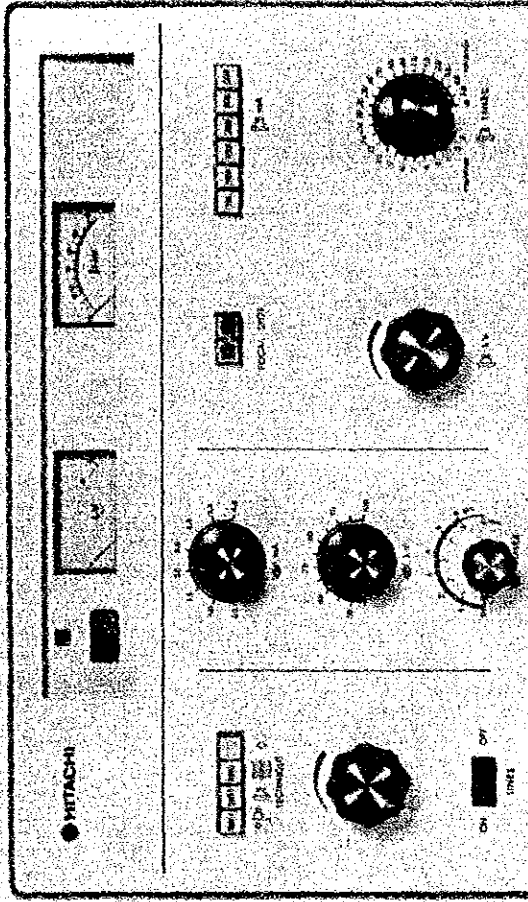


Generator, X-ray tube unit

X-ray high tension generator Model DR-125A-B
 Provides a tube output of 500ma by simple phase full-wave rectification system.

Short-circuit rating: 300 mA @ 125 kV, 500 mA @ 100 kV
 Cathode rating: 5 mA @ 100 kV

The actual x-ray penetration is limited by rating of x-ray tube combined.



Features:

- Solid-state input timer adopted.
- Silicon rectifier employed ensures a high percentage of RT penetration.
- X-ray exposure is controlled under the German hypervelocity wiring concept.
- Overload protection is incorporated.
- The control panel is detachably divided into four blocks for preliminary operation, storage, scope operation, radiographic operation and display.
- Improved electrical safety.

Major specifications:

- Fluoroscopic tube: 0.5 to 5 mA, adjustable
- RT: maximum tube: 0.5 mA
- Fluoroscopic kV: 45 to 100 kV, variable
- Radiographic kV: 50, 100, 150, 200, 300 and 500 mA
- Radiographic kV: 30 to 125 kV, adjustable

Options:

- Radiographic timer: 2, 3, 5, 10, 15, 20, 30, 45, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, 360, 390, 420, 450, 480, 510, 540, 570, 600, 630, 660, 690, 720, 750, 780, 810, 840, 870, 900, 930, 960, 990, 1020, 1050, 1080, 1110, 1140, 1170, 1200, 1230, 1260, 1290, 1320, 1350, 1380, 1410, 1440, 1470, 1500, 1530, 1560, 1590, 1620, 1650, 1680, 1710, 1740, 1770, 1800, 1830, 1860, 1890, 1920, 1950, 1980, 2010, 2040, 2070, 2100, 2130, 2160, 2190, 2220, 2250, 2280, 2310, 2340, 2370, 2400, 2430, 2460, 2490, 2520, 2550, 2580, 2610, 2640, 2670, 2700, 2730, 2760, 2790, 2820, 2850, 2880, 2910, 2940, 2970, 3000, 3030, 3060, 3090, 3120, 3150, 3180, 3210, 3240, 3270, 3300, 3330, 3360, 3390, 3420, 3450, 3480, 3510, 3540, 3570, 3600, 3630, 3660, 3690, 3720, 3750, 3780, 3810, 3840, 3870, 3900, 3930, 3960, 3990, 4020, 4050, 4080, 4110, 4140, 4170, 4200, 4230, 4260, 4290, 4320, 4350, 4380, 4410, 4440, 4470, 4500, 4530, 4560, 4590, 4620, 4650, 4680, 4710, 4740, 4770, 4800, 4830, 4860, 4890, 4920, 4950, 4980, 5010, 5040, 5070, 5100, 5130, 5160, 5190, 5220, 5250, 5280, 5310, 5340, 5370, 5400, 5430, 5460, 5490, 5520, 5550, 5580, 5610, 5640, 5670, 5700, 5730, 5760, 5790, 5820, 5850, 5880, 5910, 5940, 5970, 6000, 6030, 6060, 6090, 6120, 6150, 6180, 6210, 6240, 6270, 6300, 6330, 6360, 6390, 6420, 6450, 6480, 6510, 6540, 6570, 6600, 6630, 6660, 6690, 6720, 6750, 6780, 6810, 6840, 6870, 6900, 6930, 6960, 6990, 7020, 7050, 7080, 7110, 7140, 7170, 7200, 7230, 7260, 7290, 7320, 7350, 7380, 7410, 7440, 7470, 7500, 7530, 7560, 7590, 7620, 7650, 7680, 7710, 7740, 7770, 7800, 7830, 7860, 7890, 7920, 7950, 7980, 8010, 8040, 8070, 8100, 8130, 8160, 8190, 8220, 8250, 8280, 8310, 8340, 8370, 8400, 8430, 8460, 8490, 8520, 8550, 8580, 8610, 8640, 8670, 8700, 8730, 8760, 8790, 8820, 8850, 8880, 8910, 8940, 8970, 9000, 9030, 9060, 9090, 9120, 9150, 9180, 9210, 9240, 9270, 9300, 9330, 9360, 9390, 9420, 9450, 9480, 9510, 9540, 9570, 9600, 9630, 9660, 9690, 9720, 9750, 9780, 9810, 9840, 9870, 9900, 9930, 9960, 9990, 10020, 10050, 10080, 10110, 10140, 10170, 10200, 10230, 10260, 10290, 10320, 10350, 10380, 10410, 10440, 10470, 10500, 10530, 10560, 10590, 10620, 10650, 10680, 10710, 10740, 10770, 10800, 10830, 10860, 10890, 10920, 10950, 10980, 11010, 11040, 11070, 11100, 11130, 11160, 11190, 11220, 11250, 11280, 11310, 11340, 11370, 11400, 11430, 11460, 11490, 11520, 11550, 11580, 11610, 11640, 11670, 11700, 11730, 11760, 11790, 11820, 11850, 11880, 11910, 11940, 11970, 12000, 12030, 12060, 12090, 12120, 12150, 12180, 12210, 12240, 12270, 12300, 12330, 12360, 12390, 12420, 12450, 12480, 12510, 12540, 12570, 12600, 12630, 12660, 12690, 12720, 12750, 12780, 12810, 12840, 12870, 12900, 12930, 12960, 12990, 13020, 13050, 13080, 13110, 13140, 13170, 13200, 13230, 13260, 13290, 13320, 13350, 13380, 13410, 13440, 13470, 13500, 13530, 13560, 13590, 13620, 13650, 13680, 13710, 13740, 13770, 13800, 13830, 13860, 13890, 13920, 13950, 13980, 14010, 14040, 14070, 14100, 14130, 14160, 14190, 14220, 14250, 14280, 14310, 14340, 14370, 14400, 14430, 14460, 14490, 14520, 14550, 14580, 14610, 14640, 14670, 14700, 14730, 14760, 14790, 14820, 14850, 14880, 14910, 14940, 14970, 15000, 15030, 15060, 15090, 15120, 15150, 15180, 15210, 15240, 15270, 15300, 15330, 15360, 15390, 15420, 15450, 15480, 15510, 15540, 15570, 15600, 15630, 15660, 15690, 15720, 15750, 15780, 15810, 15840, 15870, 15900, 15930, 15960, 15990, 16020, 16050, 16080, 16110, 16140, 16170, 16200, 16230, 16260, 16290, 16320, 16350, 16380, 16410, 16440, 16470, 16500, 16530, 16560, 16590, 16620, 16650, 16680, 16710, 16740, 16770, 16800, 16830, 16860, 16890, 16920, 16950, 16980, 17010, 17040, 17070, 17100, 17130, 17160, 17190, 17220, 17250, 17280, 17310, 17340, 17370, 17400, 17430, 17460, 17490, 17520, 17550, 17580, 17610, 17640, 17670, 17700, 17730, 17760, 17790, 17820, 17850, 17880, 17910, 17940, 17970, 18000, 18030, 18060, 18090, 18120, 18150, 18180, 18210, 18240, 18270, 18300, 18330, 18360, 18390, 18420, 18450, 18480, 18510, 18540, 18570, 18600, 18630, 18660, 18690, 18720, 18750, 18780, 18810, 18840, 18870, 18900, 18930, 18960, 18990, 19020, 19050, 19080, 19110, 19140, 19170, 19200, 19230, 19260, 19290, 19320, 19350, 19380, 19410, 19440, 19470, 19500, 19530, 19560, 19590, 19620, 19650, 19680, 19710, 19740, 19770, 19800, 19830, 19860, 19890, 19920, 19950, 19980, 20010, 20040, 20070, 20100, 20130, 20160, 20190, 20220, 20250, 20280, 20310, 20340, 20370, 20400, 20430, 20460, 20490, 20520, 20550, 20580, 20610, 20640, 20670, 20700, 20730, 20760, 20790, 20820, 20850, 20880, 20910, 20940, 20970, 21000, 21030, 21060, 21090, 21120, 21150, 21180, 21210, 21240, 21270, 21300, 21330, 21360, 21390, 21420, 21450, 21480, 21510, 21540, 21570, 21600, 21630, 21660, 21690, 21720, 21750, 21780, 21810, 21840, 21870, 21900, 21930, 21960, 21990, 22020, 22050, 22080, 22110, 22140, 22170, 22200, 22230, 22260, 22290, 22320, 22350, 22380, 22410, 22440, 22470, 22500, 22530, 22560, 22590, 22620, 22650, 22680, 22710, 22740, 22770, 22800, 22830, 22860, 22890, 22920, 22950, 22980, 23010, 23040, 23070, 23100, 23130, 23160, 23190, 23220, 23250, 23280, 23310, 23340, 23370, 23400, 23430, 23460, 23490, 23520, 23550, 23580, 23610, 23640, 23670, 23700, 23730, 23760, 23790, 23820, 23850, 23880, 23910, 23940, 23970, 24000, 24030, 24060, 24090, 24120, 24150, 24180, 24210, 24240, 24270, 24300, 24330, 24360, 24390, 24420, 24450, 24480, 24510, 24540, 24570, 24600, 24630, 24660, 24690, 24720, 24750, 24780, 24810, 24840, 24870, 24900, 24930, 24960, 24990, 25020, 25050, 25080, 25110, 25140, 25170, 25200, 25230, 25260, 25290, 25320, 25350, 25380, 25410, 25440, 25470, 25500, 25530, 25560, 25590, 25620, 25650, 25680, 25710, 25740, 25770, 25800, 25830, 25860, 25890, 25920, 25950, 25980, 26010, 26040, 26070, 26100, 26130, 26160, 26190, 26220, 26250, 26280, 26310, 26340, 26370, 26400, 26430, 26460, 26490, 26520, 26550, 26580, 26610, 26640, 26670, 26700, 26730, 26760, 26790, 26820, 26850, 26880, 26910, 26940, 26970, 27000, 27030, 27060, 27090, 27120, 27150, 27180, 27210, 27240, 27270, 27300, 27330, 27360, 27390, 27420, 27450, 27480, 27510, 27540, 27570, 27600, 27630, 27660, 27690, 27720, 27750, 27780, 27810, 27840, 27870, 27900, 27930, 27960, 27990, 28020, 28050, 28080, 28110, 28140, 28170, 28200, 28230, 28260, 28290, 28320, 28350, 28380, 28410, 28440, 28470, 28500, 28530, 28560, 28590, 28620, 28650, 28680, 28710, 28740, 28770, 28800, 28830, 28860, 28890, 28920, 28950, 28980, 29010, 29040, 29070, 29100, 29130, 29160, 29190, 29220, 29250, 29280, 29310, 29340, 29370, 29400, 29430, 29460, 29490, 29520, 29550, 29580, 29610, 29640, 29670, 29700, 29730, 29760, 29790, 29820, 29850, 29880, 29910, 29940, 29970, 30000, 30030, 30060, 30090, 30120, 30150, 30180, 30210, 30240, 30270, 30300, 30330, 30360, 30390, 30420, 30450, 30480, 30510, 30540, 30570, 30600, 30630, 30660, 30690, 30720, 30750, 30780, 30810, 30840, 30870, 30900, 30930, 30960, 30990, 31020, 31050, 31080, 31110, 31140, 31170, 31200, 31230, 31260, 31290, 31320, 31350, 31380, 31410, 31440, 31470, 31500, 31530, 31560, 31590, 31620, 31650, 31680, 31710, 31740, 31770, 31800, 31830, 31860, 31890, 31920, 31950, 31980, 32010, 32040, 32070, 32100, 32130, 32160, 32190, 32220, 32250, 32280, 32310, 32340, 32370, 32400, 32430, 32460, 32490, 32520, 32550, 32580, 32610, 32640, 32670, 32700, 32730, 32760, 32790, 32820, 32850, 32880, 32910, 32940, 32970, 33000, 33030, 33060, 33090, 33120, 33150, 33180, 33210, 33240, 33270, 33300, 33330, 33360, 33390, 33420, 33450, 33480, 33510, 33540, 33570, 33600, 33630, 33660, 33690, 33720, 33750, 33780, 33810, 33840, 33870, 33900, 33930, 33960, 33990, 34020, 34050, 34080, 34110, 34140, 34170, 34200, 34230, 34260, 34290, 34320, 34350, 34380, 34410, 34440, 34470, 34500, 34530, 34560, 34590, 34620, 34650, 34680, 34710, 34740, 34770, 34800, 34830, 34860, 34890, 34920, 34950, 34980, 35010, 35040, 35070, 35100, 35130, 35160, 35190, 35220, 35250, 35280, 35310, 35340, 35370, 35400, 35430, 35460, 35490, 35520, 35550, 35580, 35610, 35640, 35670, 35700, 35730, 35760, 35790, 35820, 35850, 35880, 35910, 35940, 35970, 36000, 36030, 36060, 36090, 36120, 36150, 36180, 36210, 36240, 36270, 36300, 36330, 36360, 36390, 36420, 36450, 36480, 36510, 36540, 36570, 36600, 36630, 36660, 36690, 36720, 36750, 36780, 36810, 36840, 36870, 36900, 36930, 36960, 36990, 37020, 37050, 37080, 37110, 37140, 37170, 37200, 37230, 37260, 37290, 37320, 37350, 37380, 37410, 37440, 37470, 37500, 37530, 37560, 37590, 37620, 37650, 37680, 37710, 37740, 37770, 37800, 37830, 37860, 37890, 37920, 37950, 37980, 38010, 38040, 38070, 38100, 38130, 38160, 38190, 38220, 38250, 38280, 38310, 38340, 38370, 38400, 38430, 38460, 38490, 38520, 38550, 38580, 38610, 38640, 38670, 38700, 38730, 38760, 38790, 38820, 38850, 38880, 38910, 38940, 38970, 39000, 39030, 39060, 39090, 39120, 39150, 39180, 39210, 39240, 39270, 39300, 39330, 39360, 39390, 39420, 39450, 39480, 39510, 39540, 39570, 39600, 39630, 39660, 39690, 39720, 39750, 39780, 39810, 39840, 39870, 39900, 39930, 39960, 39990, 40020, 40050, 40080, 40110, 40140, 40170, 40200, 40230, 40260, 40290, 40320, 40350, 40380, 40410, 40440, 40470, 40500, 40530, 40560, 40590, 40620, 40650, 40680, 40710, 40740, 40770, 40800, 40830, 40860, 40890, 40920, 40950, 40980, 41010, 41040, 41070, 41100, 41130, 41160, 41190, 41220, 41250, 41280, 41310, 41340, 41370, 41400, 41430, 41460, 41490, 41520, 41550, 41580, 41610, 41640, 41670, 41700, 41730, 41760, 41790, 41820, 41850, 41880, 41910, 41940, 41970, 42000, 42030, 42060, 42090, 42120, 42150, 42180, 42210, 42240, 42270, 42300, 42330, 42360, 42390, 42420, 42450, 42480, 42510, 42540, 42570, 42600, 42630, 42660, 42690, 42720, 42750, 42780, 42810, 42840, 42870, 42900, 42930, 42960, 42990, 43020, 43050, 43080, 43110, 43140, 43170, 43200, 43230, 43260, 43290, 43320, 43350, 43380, 43410, 43440, 43470, 43500, 43530, 43560, 43590, 43620, 43650, 43680, 43710, 43740, 43770, 43800, 43830, 43860, 43890, 43920, 43950, 43980, 44010, 44040, 44070, 44100, 44130, 44160, 44190, 44220, 44250, 44280, 44310, 44340, 44370, 44400, 44430, 44460, 44490, 44520, 44550, 44580, 44610, 44640, 44670, 44700, 44730, 44760, 44790, 44820, 44850, 44880, 44910, 44940, 44970, 45000, 45030, 45060, 45090, 45120, 45150, 45180, 45210, 45240, 45270, 45300, 45330, 45360, 45390, 45420, 45450, 45480, 45510, 45540, 45570, 45600, 45630, 45660, 45690, 45720, 45750, 45780, 45810, 45840, 45870, 45900, 45930, 45960, 45990, 46020, 46050, 46080, 46110, 46140, 46170, 46200, 46230, 46260, 46290, 46320, 46350, 46380, 46410, 46440, 46470, 46500, 46530, 46560, 46590, 46620, 46650, 46680, 46710, 46740, 46770, 46800, 46830, 46860, 46890, 46920, 46950, 46980, 47010, 47040, 47070, 47100, 47130, 47160, 47190, 47220, 47250, 47280, 47310, 47340, 47370, 47400, 47430, 47460, 47490, 47520, 47550, 47580, 47610, 47640, 47670, 47700, 47730, 47760, 47790, 47820, 47850, 47880, 47910, 47940, 47970, 48000, 48030, 48060, 48090, 48120, 48150, 48180, 48210, 48240, 48270, 48300, 48330, 48360, 48390, 48420, 48450, 48480, 48510, 48540, 48570, 48600, 48630, 48660, 48690, 48720, 48750, 48780, 48810, 48840, 48870, 48900, 48930, 48960, 48990, 49020, 49050, 49080, 49110, 49140, 49170, 49200, 49230, 49260, 49290, 49320, 49350, 49380, 49410, 49440, 49470, 49500, 49530, 49560, 49590, 49620, 49650, 49680, 49710, 49740, 49770, 49800, 49830, 49860, 49890, 49920, 49950, 49980, 50010, 50040, 50070, 50100, 50130, 50160, 50190, 50220, 50250, 50280, 50310, 50340, 50370, 50400, 50430, 50460, 50490, 50520, 50550, 50580, 50610, 50640, 50670, 50700, 50730, 50760, 50790, 50820, 50850, 50880, 50910, 50940, 50970, 51000, 51030, 51060, 51090, 51120, 51150, 51180, 51210, 51240, 51270, 51300, 51330