

KODAK EC-L LIGHTWEIGHT FILM SYSTEM

Enhanced Contrast for Portal Localization

- Three times more contrast than traditional portal localization radiographs
- Improved treatment field verification
- Confident beam positioning



Kodak EX-L LW cassettes, used for localization with Kodak EC film, weigh just 4.6 pounds. This dramatic weight reduction is made possible by a design change that replaces a copper plate with a thin lead foil. The new lightweight cassettes preserve tight contact with curved front and back panels and are built with a durable hinge and impact-resistant edges and corners.

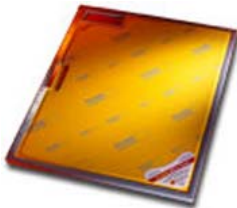
A technique chart for portal localization images taken using 4 to 18 MV energies is available. Initial images may be taken using the same techniques currently employed, making adjustments as needed. It is critical that consistent source-to-film distances be used.



Item #	Description	Size	Weight
113-232	Kodak EC-L, LW, Regular Cassette	14" x 17" (35 x 43 cm)	4.6 lb (2.1 kg)
113-233	Kodak EC-L, LW, Fast Cassette	14" x 17" (35 x 43 cm)	4.6 lb (2.1 kg)
113-234	Kodak EC Film, Quantity 100	14" x 17" (35 x 43 cm)	

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KODAK X-OMAT CASSETTES FOR RADIOTHERAPY



Kodak X-OMAT L Cassette - Portal Localization

- 1.0 mm copper front screen film
- 0.25 mm lead back screen
- Use Kodak Portal Pack for Localization Film

The Kodak X-Omat L radiation therapy cassette is designed for portal localization where a few monitor units are used for the single or double exposure technique. The lead back screen allows the number of monitor units to be reduced by approximately a factor of two over that required when the lead back screen is not used.

Specifications

Item 113-125 Kodak X-OMAT L Cassette

Film Size: 35 x 43 cm

Cassette Thickness: 0.55" (1.4 cm)

Weight: 4.6 lb (2.1 kg)

Item 113-255 KODAK Portal Pack Film

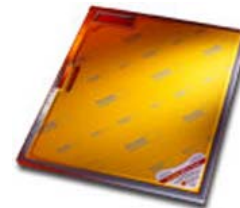
Cassette Size: 13" x 16" (33 x 41 cm)

Quantity: 100 Sheets/Box



Item	Description
113-125	Kodak X-OMAT L Cassette
113-255	KODAK Portal Pack for Localization Film (PPL)

Items are Special Order and Nonreturnable



Kodak X-OMAT V Cassette - Portal Verification

- 1.0 mm copper front screen film
- 0.4 mm thermoplastic polyester back screen

The Kodak X-Omat V radiation therapy cassette is designed for portal verification where the cassette-screen-film system remains beneath the patient for the complete radiation treatment. The plastic back screen produces no additional intensification. Therefore, portal verification radiographs representing a greater range of exit doses can be obtained.

Specifications

Cassette Size: 14" x 17" (35 x 43 cm)

Cassette Thickness: 0.55" (1.4 cm)

Weight: 4.6 lb (2.1 kg)



Item	Description
113-231	Kodak X-OMAT V Cassette

Items are Special Order and Nonreturnable

IMAGING & GRATICULES

AGFA RADIATION THERAPY CASSETTES



CRC Radiation Therapy Cassettes use all brands of film, including ready pack films. They are designed especially for radiotherapy and feature high-quality lead intensifying screens similar to those used in high-energy industrial radiography.

Note: These cassettes are not returnable.

Item #	Film Size	Front Screen	Rear Screen	Window	Energy	Weight
869406	10" x 12"	1.00 mm T	0.50 mm T	No	10 MeV - Up	5.4 lbs.
869430	10" x 12"	1.00 mm T	0.50 mm T	Yes	10 MeV - Up	5.4 lbs.
811467	14" x 17"	0.25 mm T	0.25 mm T	Yes	Cobalt 60	6.4 lbs.

HEAVY DUTY 4 SQUARE CASSETTES

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The Four Square Cassette uses all brands of film. It features a closed channel stainless steel frame. The front panel consists of a phenolic plastic face and felt backing which is laminated to a magnesium alloy plate. This construction presents a flat surface that will not warp and gives excellent film/screen contact. The door is made of aluminum, lead foil (0.005" thick) and thick wool felt with two floating stainless steel hinges.

The locking bars are made of stainless steel and are designed to give excellent closure to prevent light leakage and provide the necessary pressure at all points to give complete contact. The "D" Ring provides easy opening of the cassette door.

Lead Intensifying Screens are ordered separately.

Item #	Film Size	Thickness	Weight
112-036	14" x 36" (35 x 91 cm)	0.665" (1.689 cm)	12.4 lb (5.6 kg)

ALUMINUM FRAME X-RAY CASSETTES

Without Windows



- Solid aluminum construction and proven design of these cassettes provide ultimate quality.
- Durable push button latches and spring loaded door assure effortless opening. No more fumbling with sticking latches!
- Resilient polymer corners reduce dents and damage if dropped.

Lead Intensifying Screens must be ordered separately.

Item #	Cassette	Film Size
112-113	Aluminum	10" x 12" (25.4 x 30.5 cm)
112-118	Aluminum	14" x 17" (35.6 x 43.2 cm)

CARDBOARD FILM HOLDERS



109-017



109-027

The Cardboard Film Holder can be used with the Lead Intensifying Screens (114-705 to 114-740). The use of lead intensifying screens reduces scatter and secondary radiation which improves the film contrast. It is recommended to use a set or combination of lead screens based on beam energy for port films. Only the front screen is usually installed.

Item	Description	Size
109-017	Cardboard Film Holder	14" x 17" (35.6 x 43.2 cm)
109-027	Cardboard Film Holder with Plastic Coating	14" x 17" (35.6 x 43.2 cm)
110-050	Installation of Front Screen	

IMAGING & GRATIQUES

LEAD INTENSIFYING SCREENS FOR RADIOTHERAPY

Lead Intensifying Screens are primarily used to intensify the radiographic image. They are generally used in pairs by placing the x-ray film between the bare lead surfaces of the screens. Each screen surface is protected with a semitransparent coating, which must be peeled off prior to use. For maintaining long-lasting screens it is highly recommended that a cassette be used.

Screen Recommendation		
Energy	Front	Rear
Cobalt 60	0.25 mm (.010")	0.13 mm (.005")
4 MeV - 6 MeV	0.50 mm (.020")	0.25 mm (.010")
10 MeV - Up	1.00 mm (.040")	0.50 mm (.020")

Item #	Description	Screen Size	Screen Thickness	Weight
114-205	Lead Screen	10" x 12"	0.13 mm (.005")	4 oz (0.1 kg)
114-705	Lead Screen	14" x 17"	0.13 mm (.005")	7 oz (0.2 kg)
114-710	Lead Screen	14" x 17"	0.25 mm (.010")	1 lb (0.5 kg)
114-720	Lead Screen	14" x 17"	0.50 mm (.020")	2 lb (1.0 kg)
114-740	Lead Screen	14" x 17"	1.00 mm (.040")	4 lb (1.8 kg)
114-836	Lead Screen	14" x 36"	0.25 mm (.010")	2 lb (1.0 kg)
112-050	Screen Installation			
114-930	Screen Cutting			
123-110	Double-Coated Screen Tape	3/4" x 36 yards		

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SIMULATOR RADIOGRAPHIC CASSETTE

With Grid



The Radiographic Cassette with grid (14" x 17" or 35.7 x 43.3 cm) has an aluminum inter-spaced grid, 103 line, 8:1 Ratio and 48" to 72" focus range. The use of Kodak Lanex Fast Green Screens give a faster film speed than regular screens.

Note:
Order lead screens separately.

Customer must verify the thickness of a cassette that will fit into cassette holder.

Item #	Size	Thickness	Window
118-117-02	14" x 17"	0.545" (1.4 cm)	No

Non-Returnable Item

SIMULATOR CASSETTES AND SCREENS

Screens Only

Item #	Screen Only	Size	Window	Film = Relative Speed	Film = Relative Speed
118-040-02	Kodak Lanex Fast Green Screens	14" x 17"	No	TML or TMG = 400	TMH = 1200
118-040-03	Kodak Lanex Regular Green Screens	14" x 17"	No	TML or TMG = 600	TMH = 800

Cassettes with Screens

Item #	Cassette with Screens	Film Size
118-052	Kodak X-OMAT Cassette with Lanex Fast Green Screens	14" x 17"
118-053	Kodak X-OMAT Cassette with Lanex Regular Green Screens	14" x 17"

Other Cassettes and Screens Are Available Upon Request

CASSETTE AND FILM CART



- Non-marring plastic surface on all shelves
- Back-sloped shelves prevent cassettes or envelopes from falling off of the cart
- Full perimeter bumper to protect walls and other equipment from damage
- Contoured padded handles on both sides to make pushing and pulling easier
- Locking swivel casters for easy movement

Specifications

Size: 25" W x 18.5" D x 42.5" H (63.7 x 47.2 x 108.3 cm)

Material: Cold roll steel construction

Finish: Light grey backed enamel finish

Casters: 5" polyurethane locking swivel

Item	Description
122-001	Cassette and Film Cart

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STACKABLE VERTIFILE



The open shelf Vertifile can be stacked one upon the other, side by side, and back to back. Each section is shipped complete and set up. No assembly is required. When stacking, the cabinets are secured together with 4 screws through matching holes in top and bottom of each cabinet.

Specifications

Inside Dimensions of Each Shelf: 19.5" D and 16" H (49.7 x 41 cm)

Exterior Dimensions: 29" W x 19.75" D x 17.25" H (73.9 x 50.3 x 43.9 cm)

Approximate Distance Between Partitions: 7.25" (18.5 cm)

Finish: Light gray baked enamel (on cold rolled steel).

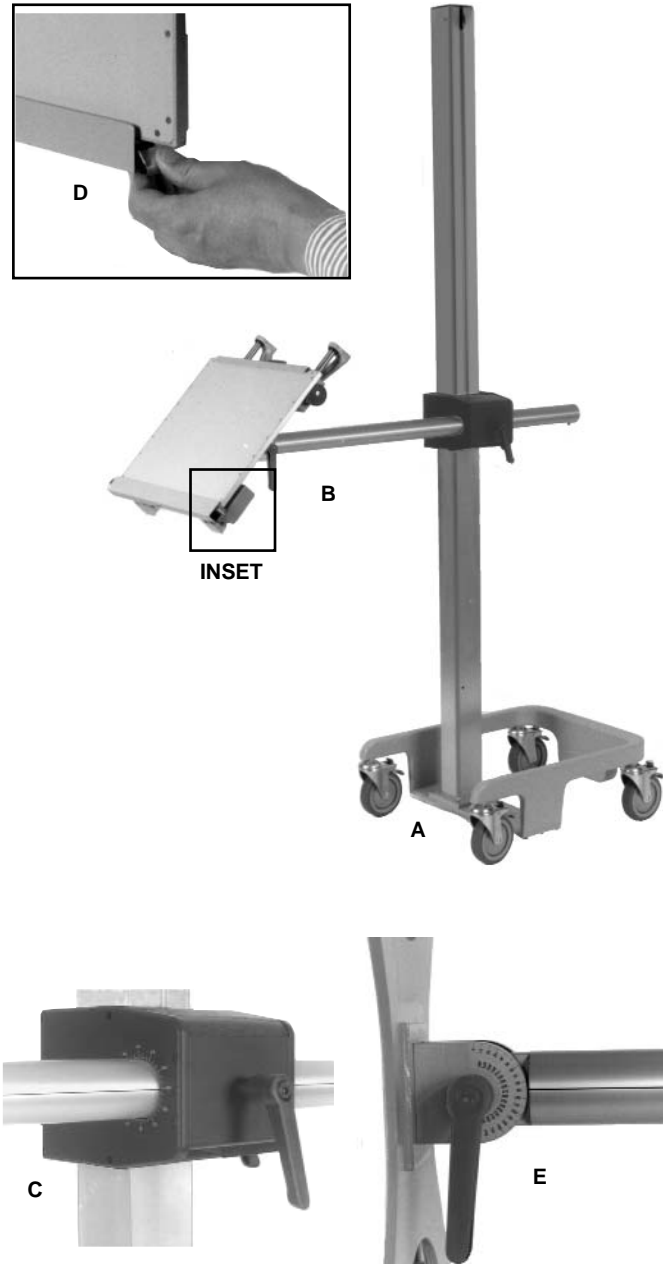
Weight: 48 lb (22 kg)

Item	Description
122-841	Stackable Vertifile

IMAGING & GRATICULES

MOBILE CASSETTE HOLDER

RPD's design allows the cassette holder to extend 6" further over the couch than other units on the market. Option of custom post height for extended range couches.



- Smooth gliding motion on roller bearings
- High range of motion
- Counter-balanced cassette holder
- Counter-balanced base
- Cassette safety latch
- Easy loading from either side
- Automatic angle indicators
- Holds most DR plates

The Mobile Cassette Holder has been engineered around the needs of the radiation therapist with unmatched ease of motion obtained through the use of precision components.

Needle roller bearings enable smooth travel both vertically and horizontally eliminating the frustrating binding action found on other cassette holders when repositioning. The Cassette Holder glides freely even while a heavy cassette is loaded. A counter-weight offsets the weight of the cassette, allowing for almost effortless motion. The Cassette Holder is able to position close to tables and objects due to the unique base counter-weight system and the offset square post (Figure A). These 2 features prevent rotation and the possibility of the unit tipping over.

The Cassette Holder can tilt 180° (Figure B), rotate 360° (Figure C) and is spring loaded to provide tension on the cassette to ensure that it is secured. A spring loaded latching system (Figure D) enables up to a 14" x 17" (35.5 x 43 cm) cassette to be inserted from either side and once latched, secures the cassette from sliding out during rotation. The cassette carrier will also accept 14" x 36" and 17" x 28" (35.5 x 91.5 cm and 43 x 71 cm) cassettes by bypassing the latching mechanism.

Easy to read angle indicators (Figures C & E) allow for accurate angulation of the cassette carrier. Indicator scales coincide with the degree rotation of the treatment machine gantry, eliminating the need for calculating the correct cassette carrier angle. Simply rotate the cassette carrier so the degree indicator reading is the same as the machine gantry reading, and the correct corresponding angle is automatically established.

Motion locking systems are equipped with large comfortable ratchet type handles which enable the operator to easily secure positions with minimal effort. Easy mobility is accomplished with four high quality ball bearing wheels. The wheels have a toe tap positive locking mechanism which doesn't allow swivel or movement of the wheel, providing excellent safety and stability.

The Mobile Cassette Holder will hold any DR plate that has the same dimensions as an analog film cassette.

Specifications

- Maximum Cassette Height:** 70" (177 cm)
- Minimum Cassette Height:** 15" (38 cm)
- Maximum Cassette Extension:** 26" (66 cm) from front edge of base to center of cassette
- Arm Length:** 36" (91.5 cm)
- Base:** 19" x 24" (48.3 x 61 cm)
- Height:** 82.75" (210 cm)
- Finish:** Textured tan polyurethane, clear and black anodizing
- Weight:** 145 lb (66 kg)
- Shipped UPS (3 cartons)**

Item #	Description
130-001	Mobile Cassette Holder

HUESTIS FLEXI-HOLDER®



Flexible Arm Movement

- Rotates cassette 360° clockwise or counterclockwise
- Arm rotates 360° on vertical column
- Arm assembly is counter-weighted for easy raising or lowering
- 36" (91 cm) arm

Convenient Ratchet Handles

Ratchet handles can be repositioned easily to help eliminate interference problems when positioning cassettes.

One Hand Operation

A lip on the cassette holder enables the cassette to be inserted with one hand, if necessary.

Accurate Calibration Scales

Column and arm calibration scales provide exact, repeatable angulation.

Easy Operation

Drop cassette against stop and tighten grips. Adjust visually or by calibration scales. Roll into place and lock casters.

Diagnostic

- Three-way studies of acute abdomens
- Myelograms
- Fractures where patient is immobilized
- Lateral decubitus fluid level studies of abdomen and chest
- Operating room radiography

Therapeutic

- Radiation therapy verification films (portal films)
- Localization for tangential breast, isocentric or oblique fields
- Simulation without fluoroscopy
- Implant source localization by orthogonal films

Specifications

Base: 19" x 22" (48.4 x 56.1 cm)

Overall Height: 75" (191.2 cm)

Weight: 110 lb (50 kg)

Ships by truck

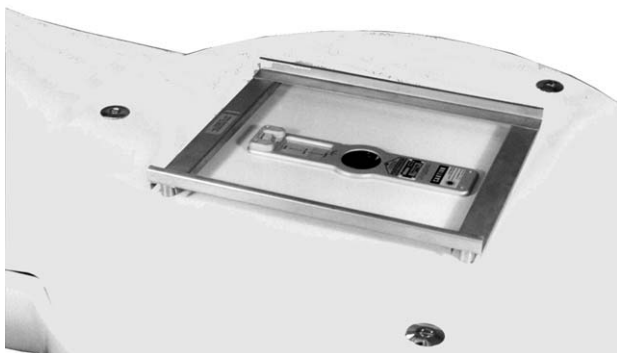
Item #	Description	Horizontal Arm
130-303-1	Mobile Flexi-Holder	36" (91.8 cm)

Huestis Flex-Holder® significantly reduces retakes caused by improper cassette positioning. It permits smoother scheduling and superior radiographs saving film, time and labor for cost effective radiographic procedures.

The free-standing model features an extra wide base for maximum stability. It allows accurate radiographs to be taken from virtually any angle from floor level to 71" + (180 cm) high. It rolls into position on large, locking casters and tilts the cassette 180° facing straight up, down, or anywhere in between. This free-standing model accepts virtually all cassettes.

Accurate calibration scales on the column and arm provide exact repeatable angulation.

CASSETTE HOLDER FOR STATIONARY BEAM STOPPER



The stainless steel Cassette Holder for a Stationary Beam Stopper will hold standard size cassettes or a 36" (91.8 cm) long cassette. When used on an 80 cm machine the distance from the target to the film is approximately 135 cm.

The cassette holder attaches with four screws to the beam stopper cover. The installation can be accomplished in about an hour by qualified personnel.

When ordering, please state the machine manufacturer and indicate if there is a cover over the beam stopper or if a laser light is projecting.

Specifications

Size: 15 3/16" x 18 1/4" x 0.675" (38.7 x 46.5 x 1.7 cm)

Raised: 7/8" (2.23 cm) off beam stopper

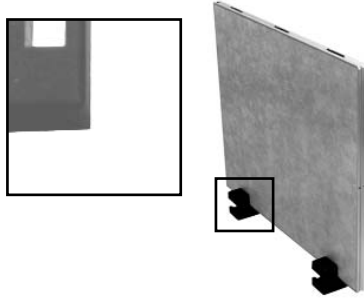
Film Size: 14" x 17" (35.7 x 43.3 cm) or 14" x 36" (35.7 x 91.8 cm)

Max. Cassette Size: 15 1/8" x 18" x 5/8" (38.5 x 45.9 x 1.6 cm) or 15 1/8" x 36" x 5/8" (38.5 x 91.8 x 1.6 cm)

Item	Description
129-100	Cassette Holder for Stationary Beam Stopper

IMAGING & GRATICULES

RAIL CASSETTE HOLDERS



The Rail Cassette Holders (set of two) easily slide onto the couch rails from either side. They are securely held in place and can not be jarred off.

Specifications

Width of Cassette: 5/8" (1.6 cm)

Item #	Description	Size
128-403	Varian Clinac 4 Set	3/8" x 1 1/8" (0.95 x 2.87 cm)
128-403	Varian PSA Spine Set	3/8" x 1 1/8" (0.95 x 2.87 cm)
128-404	Varian ETR Set	3/8" x 1 1/8" (0.95 x 2.87 cm)
128-403	Varian Ximatron Set	3/8" x 1 1/8" (0.95 x 2.87 cm)
128-420	Siemens Z-II, Z-IV or Z-XT Set	3/8" x 1" (0.95 x 2.55 cm)
128-420	Siemens Mevasim Set	3/8" x 1" (0.95 x 2.55 cm)
128-427	Siemens TEM Set	3/8" x 1" (0.95 x 2.55 cm)
128-430	Philips SL25 or SL75 Set	State Rail Size
128-460	Oldelft Simulator Set	State Rail Size
128-470	Mitsubishi Set	.2" x 1" (0.5 x 2.5 cm)

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21 STEP WEDGE SENSITIVITY GUIDE



The 21 Step Wedge Sensitivity Guide is a transparent step wedge with 21 steps that get progressively denser by increments of 0.15. Each step is numbered and has accurate and uniform increments. The 21 Step Wedge Sensitivity Guide meets the needs for critical densitometry with traceability. Densities compare with those of a NIST Standard Reference Material No. 1008 Step Tablet by means of a densitometer that conforms to conditions specified in American National Standards Diffuse Transmission Density A.N.S.I. PH2.19-1986. NIST traceable.

Specifications

Size: 1.25" W x 9.75" L (3.2 x 24.9 cm)

Item	Description
370-005	21 Step Wedge

ALUMINUM STEPWEDGE



The Aluminum Stepwedge is the standard tool for evaluating the dynamic range (latitude) of a digital or film-screen imaging system. This wedge provides 11 steps in 3.2 mm increments. The number of distinguishable steps represents the dynamic range of the system. Images may be evaluated visually or by using a densitometer. The Aluminum Stepwedge provides a useful means of comparing the characteristic curve of various film/screen combinations, mAs reciprocity, and if done very carefully, sensitometry.

Note: To increase accuracy when evaluating filmscreen systems, a sensitometric pattern should be placed on the film immediately before processing.

Specifications

Construction: 6061 Aluminum Alloy

Steps: 11 Steps, 3.2 mm high and 12.7 mm deep

Dimensions: 5.5" x 2.4" (14 x 6.1 cm)

Weight: 15.87 oz (450 g)

Item #	Description
370-006	Aluminum Stepwedge

IMAGING & GRATICULES

396 DUAL COLOR SENSITOMETER



The 396 Dual Color Process Control Sensitometer offers the latest technology with greatly improved green and blue film performance. It also features an exposure time control to adapt performance to various film types.

A Imagine the convenience of a sensitometer this small that exposes a 21-step wedge on green or blue sensitive x-ray film. It is simple to use, just set the instrument to the proper exposure for the film being used. Place the film inside, then close and firmly press down on the cover. When you hear the beep, the exposure is complete.

Specifications

Unit-to-Unit Repeatability: ± 0.02 Log Exposure
Exposure Stability: ± 0.02 Log Exposure per year
Temperature Sensitivity: ± 0.02 Log Exposure from 59° - 86° F
Power: 9 Volt alkaline battery (included)
Light Modulation: 21 Step Wedge, 0.15D per step
Blue Color Peak Wavelength: 460nm \pm 10nm
Green Color Peak Wavelength: 510nm \pm 10nm
Warm-Up Time: none
Recycle Time: 2 seconds
Dimensions: 7" W x 3.75" D x 2.3" H (17.8 x 9.6 x 5.9 cm)
Weight: 0.9 lb (0.4 kg)

Item	Description	Exposure
370-052	396 Dual Color Sensitometer	Single Sided

Specifications and Design Subject to Change Without Notice

FILM DUPLICATOR



Constructed of stainless steel finished in durable baked enamel, this duplicator can be used with any available duplicating film.

To operate the duplicator, simply place the film to be duplicated on the plexiglass screen with a sheet of duplicating film on top, close the cover and set the exposure time. The red light will signal you when exposure is complete. Turn off the built-in safelight and develop your duplicating film.

Specifications

Screen Size: 14" x 17" (35.68 x 43.33 cm)
Unit Size: 16" W x 23.25" L x 9" H (40.8 x 59.3 x 22.9 cm)
Weight: 41 lb (18.7 kg)

Item	Description
370-250	Film Duplicator

TBX TRANSMISSION BLACK AND WHITE DENSITOMETER



- X-Ray film processor control
- Transmission density
- Auto zero
- Density difference
- Serial RS-232 port
- Lighted platen
- Apertures 1, 2, 3 mm
- Calibration standard

The TBX Transmission Black and White Densitometer is a universal basic densitometer system for all black and white transmission density and density difference measurements.

Standard Accessories

Calibration Standard - Traceable to NIST
 Instruction Manual - Universal Power Supply
 Tool Kit

Specifications

Optics: ANSI PH 2.19
Display: 7 segment, 1/2" (1.3 cm) LED
Apertures: 3 mm, 2 mm, and 1 mm (0.3 mm optional)
Filters: Visual
Data Output Port: Serial, RS-232
Baud Rate: 300-9600 bps
Output Connector: DB25S
Power: 120/240 VAC, 50/60 Hz, 25 watts
IR Elimination: Built-in

Performance

Measuring Range: 0 to 6.00D
Accuracy: ± 0.02D
Precision: ± 0.01D
Zero Stability: ± 0.01D per 8 hrs.
Warm-Up Time: <5 seconds

Case Dimensions

Overall Console: 9.5" W x 14.6" L x 7" H (24.2 x 37.2 x 17.8 cm)
Film Platform: 9" W x 10.8" D (22.9 x 27.5 cm)
Arm Length: 9" (22.9 cm)
Weight: 8.5 lb (3.9 Kg)

Item	Description
370-000	TBX Transmission Black and White Densitometer
370-000-3	Replacement 0.3 mm Aperture
370-005	21 Step Wedge

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X-RITE® DENSITOMETER



- Easy-to read display - large 1/2" LED numeric display for easy reading and fewer errors
- Lighted table - simplifies location of image areas to measure
- Rugged construction - proven field use
- Convenient service - modular construction allows rapid replacement of lamps and easy access to electronic circuits
- Apertures 1, 2, 3mm
- One year limited warranty (bulb excluded)

The X-Rite® Densitometer will detect variations in film density far more subtle than can be seen by the naked eye. Its wide measurement range allows you to determine densities up to 5.0 D.

An optional RS-232 output allows you to connect the X-Rite® to a digital printer or computer.

The densitometer is easy to use. Measurements are made on a push and read basis. Internal memory and the null button allow the operator to make comparative density measurements across a piece of film. The X-Rite® Densitometer is U.L. listed, CE marked and C.S.A. certified, and shipped calibrated to standards traceable by the NIST. This is a widely accepted and used densitometer for medical requirements.

Specifications

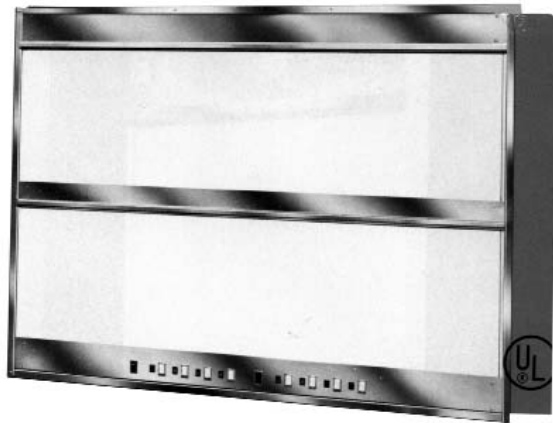
Design Conformance: ANSI PH2.19
Measuring range: 0 - 5.0 D with 2 and 3 mm apertures, 0 - 4.0D with 1 mm aperture
Accuracy: ± 0.02D
Repeatability: ± 0.01D
Operating Temperature Range: 50° - 104° F (10 - 40 C°)
Power: 100 - 130 VAC, 60 Hz, 200 - 240 VAC, 50 Hz
Warm-Up Time: 60 seconds
Scale Factor Stability: ± 1% per 6 months
Null Drift: ± 0.03D max. and ± 0.01D typical
Dimensions: 10.25" W x 15.0" L x 5.25" H (26 x 38 x 13.3 cm)
Arm Length: 7 1/2" (19.12 cm)
Weight: 8.5 lb (3.9 kg)
Film Types: Designed to measure all silver-based films

Item	Description
370-010	X-Rite® Densitometer
370-011	X-Rite® Densitometer with RS-232 Output
370-012	Replacement Aperture Kit

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IMAGING & GRATICULES

4X HI-LO ILLUMINATORS



Low leakage instant on ballasts, internal dividers (to prevent light "spill over"), centered cluster switches, one piece plexiglass fronts and continuous stainless steel gravity film grips are supplied as standard. A master on/off switch is also supplied for each tier of three or more banks. Each tier of the illuminator is of one piece heavy duty steel construction.

Recessed models come complete with recessing flanges (in white baked enamel) permanently welded to the case. Holes are provided in the flange for ease of mounting.

Finish

White Baked Enamel, Stainless Steel Trim (recessing flanges are white baked enamel).

Electrical

Viewers operated on 120 volt, 60 Hz, 1.6 Amps AC per viewing area. Surface mounting models are supplied with a 6' three conductor line cord. Recessed models come with BX connectors.

Options

1 to 6 banks wide
1 or 2 tiers
Automatic or standard switches
Hospital grade plug

Dimensional Information

Viewing Areas	Two	Three	Four
Case Width	28.75" (73.3 cm)	42.75" (109 cm)	56.75" (144.7 cm)
Wall Opening	29" (73.9 cm)	43" (109.6 cm)	57" (145.3 cm)
Case Depth	3.75" (9.6 cm)	3.75" (9.6 cm)	3.75" (9.6 cm)

Height Dimensions

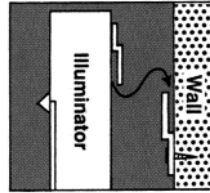
Tiers	Single	Double
Case Height	21.5" (54.8 cm)	43" (109.6 cm)
Wall Opening	21.75" (55.4 cm)	43.25" (110.2 cm)

- Dual Brightness System
- Four 15W Fluorescent Tubes Per Viewing Section
- Superior Light Distribution
- Surface and Recessed Models
- Positive Gravity Grip Film Holder

The 4X Hi-Lo Illuminators have a unique four tube dual brightness system which provides two levels of light intensity. Each 14" x 17" (35.68 x 43.33 cm) viewing area has four F15T8/D fluorescent tubes, two low leakage thermally protected ballasts and specially designed reflectors. On the low setting light distribution is far superior to conventional two tube viewers. When additional illumination is required a touch of a switch increases the light output of the four lamps to their maximum brightness. Each viewing section is controlled by an on/off rocker switch and a Hi-Lo brightness selector switch. A master on/off switch is also supplied for each tier of three or more banks. All switches are grouped together and mounted in the center of the front panel on the bottom tier.

Automatic Switches Item #	Standard Switches Item #	4X Hi-Lo Illuminators	Viewing Areas
1020-502	1020-542	Desk/ Surface Mount	2
1020-503	1020-543	Desk/ Surface Mount	3
1020-504	1020-544	Desk/ Surface Mount	4
1020-512	1020-552	Desk/ Surface Mount	2 Over 2
1020-513	1020-553	Desk/ Surface Mount	3 Over 3
1020-522	1020-562	Recessed Wall Mount	2
1020-523	1020-563	Recessed Wall Mount	3
1020-532	1020-572	Recessed Wall Mount	2 Over 2
1020-533	1020-573	Recessed Wall Mount	3 Over 3

TRIMLINE PLUS HI-LO™ ILLUMINATORS



- Variable light intensities per viewing area
- Film activated auto switches
- Cluster switches and a master switch on 2 over 2 units and up
- Gravity roller grip film retainer
- "E-Z"™ Bar for easy surface wall mounting
- Power: 120VAC, 60Hz, 1.10 Amp

The Trimline Plus Hi-Lo™ provides two light intensities per each 14" x 17" (35.7 x 43.3 cm) viewing area. Uniquely at the lower light intensity, all 4 bulbs remain lit to maintain the even light distribution. The Trimline Plus Hi-Lo™ is available in 12 sizes.

It features a sleek 3.25" (8.3 cm) deep cabinet with a baked on white finish, a roller grip film retainer, film activated auto switches. Cluster switches on 2 over 2 units and up. Recessed wall mounting is available and includes a frame.

Item	Trimline Plus Hi-Lo™ Illuminators	Wall Mounting Size	Weight
1020-602	2 Bank Unit with 28" x 17" (71.4 x 43.3 cm) view	28" W x 3.25" D x 22" H (71.4 x 8.3 x 56.1 cm)	45 lb (21 kg)
1020-603	3 Bank Unit with 42" x 17" (107.1 x 43.3 cm) view	42" W x 3.25" D x 22" H (107.1 x 8.3 x 56.1 cm)	68 lb (31 kg)
1020-604	4 Bank Unit with 56" x 17" (142.7 x 43.3 cm) view	56" W x 3.25" D x 22" H (142.7 x 8.3 x 56.1 cm)	93 lb (43 kg)
1020-622	2 Over 2 with 28" x 34" (71.4 x 86.7 cm) view	28" W x 3.25" D x 44" H (71.4 x 8.3 x 112.2 cm)	94 lb (43 kg)
1020-633	3 Over 3 with 42" x 34" (107.1 x 86.7 cm) view	42" W x 3.25" D x 44" H (107.1 x 8.3 x 112.2 cm)	131 lb (60 kg)

Other Sizes Available

DESK TOP VIEW BOXES



- Shatter-resistant acrylic top gives maximum light diffusion and minimum glare
- Rubber feet prevent sliding
- Screw-on acrylic top is easily replaced and all interior components are easily serviced
- No starters to burn out
- 6' (2 m), 3-wire electric cord with grounding plug
- Rust-resistant stainless steel frame
- Listed by Underwriters' Laboratories

Specifications

Item 1020-24 View Box, Small

Lamps: Four 20 watt fluorescent bulbs
Switches: Two (each switch controls two bulbs)
Power: 115 VAC, 60Hz
Size: 18" W x 24.5" L x 3" H (45.9 x 62.5 x 7.7 cm)
Weight: 16 lb (7.3 kg)

Item 1020-36 View Box, Large

Lights: Six 20 watt fluorescent bulbs
Switches: Three (each switch controls two bulbs)
Power: 115 VAC, 60 Hz
Size: 24.5" W x 36" L x 3" H (62.5 x 91.8 x 7.7 cm)
Weight: 29 lb (13.2 kg)

Item	Description
1020-24	View Box, Small
1020-36	View Box, Large

INTENSI-SPOT



Designed to provide a concentrated light source. The Intensi-Spot utilizes a 100-watt lamp, shielded by an octagon mask for light concentration.

The Intensi-Spot tilts to any angle and includes foot switch operation. The unit comes in a baked enamel finish, holes in the base for wall mounting, and a 6' (2 m) line cord with 3 prong plug.

Specifications

Power: 120VAC, 60Hz

Size: 9" H x 6" D (23 x 15.3 cm)

Weight: 5 lb (2.3 kg)

Item	Description
1021-295	Intensi-Spot

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COOL-LITE



This unique viewing device provides concentrated light like the Intensi-Spot, but eliminates the heat by the use of a fluorescent bulb. Energy efficient, the Cool-Lite can be left on all day.

The Cool-Lite tilts to any angle, has a baked enamel finish and includes holes in the base for easy wall mounting. Cool-Lite comes with a 6' (2 m) line cord with 3 prong plug.

Specifications

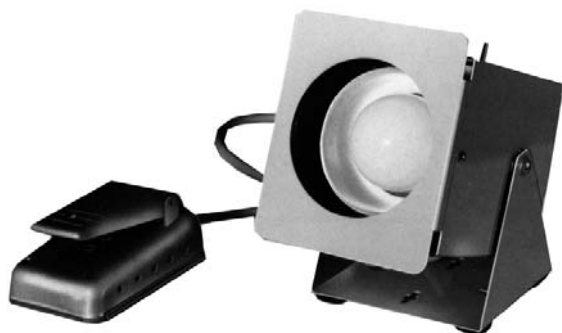
Power: 120VAC, 60Hz

Size: 10.5" H x 6" D (25.5 x 15.3 cm)

Weight: 5 lb (2.3 kg)

Item	Description
1021-695	Cool-Lite

BRIGHT-SPOT ILLUMINATOR



- Wall or Desk Mount
- Swivel Base
- Variable Intensity Foot Switch Control

A unique low cost bright spot illuminator for viewing dense films. The lamp housing swivels for easy viewing, base has key holes for wall mounting and plastic non-marring feet to stand on a desk. A rheostat foot switch is supplied to vary the brightness of the special high intensity bulb which is surrounded by a polished aluminum reflector.

Bright-Spot comes with a 6' (2 m) line cord with 3 prong plug.

Specifications

Finish: Light gray baked enamel

Power: Viewer operates on 120 VAC, 60Hz, 0.7 Amps AC

Size: 6" W x 7" D x 8" H (15.3 x 17.8 x 20.4 cm)

Item	Description
1021-188	Bright Spot Illuminator

ACCELERATOR LOCALIZING CROSS TRAY

With Divergent Tungsten Pins - Wedge Slot

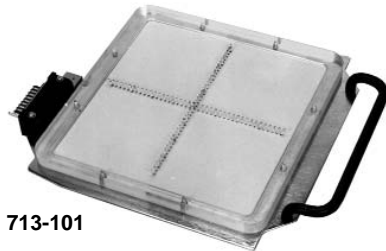
The Accelerator Localizing Cross Trays have divergent tungsten pins 1/16" and 3/32" in diameter x 1/2" long (0.16 and 0.24 x 1.27 cm). They are spaced 1 cm apart in four quadrants at isocenter. Every fifth pin is 3/32" (0.24 cm) diameter, which makes for easy counting. The small dots prevent any obscuring of the film viewing, yet allow easy measurements. The acrylic graticule fits into the metal tray so the graticule will not shift off center even if bumped. **Note: Localizing Cross Trays can be manufactured for any accelerator.**

Information Needed To Order

- Machine Manufacturer and Model
- Type of Coding
- Target to bottom of wedge tray slot in centimeters
- Contact Information

Specifications

Acrylic Tray Density: 1.185 g/cm³



713-101



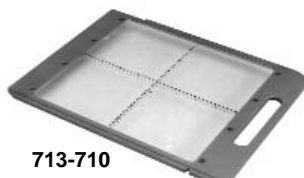
713-120



713-232



713-403



713-710

VARIAN GRATICULES

Item	Description	Field Size	Distance
713-101	Varian Type II Graticule Wedge Slot, Coding Plug (15 or 09) on Metal Tray		42.1, 49.2, 53.0 or 53.8 cm
713-103	Varian Type II Graticule Wedge Slot, Coding By-Pass on Metal Tray		
713-120	Varian Type III Graticule Wedge Slot, Optical Coded on Metal Tray		49.2 or 53.0 cm
713-121	Varian Type III with MLC Graticule Wedge Slot, Optical Coded MLC on Metal Tray	30 x 30 cm	57.6 cm
713-123	Varian Type III with MLC Graticule Wedge Slot, Optical Coded MLC on Metal Tray	40 x 40 cm	57.6 cm

**Graticules for Other Varian Machines Are Available
Please Provide Contact Information When Placing Order**

SIEMENS GRATICULES

Item	Description
713-221	Siemens Mevatron Graticule Wedge Slot with Screw Coding
713-232	Siemens Primus with MLC or Mevatron Graticule Wedge Slot with Digital Coding Plug (S2N01 or S2N18)
713-235	Siemens Mev 12 Graticule Wedge Slot
713-236	Siemens Mev 6 Graticule Wedge Slot

OTHER MANUFACTURERS GRATICULES

Item	Description
713-300	AECL Therac 6 Graticule
713-400	Elekta/Philips SL15, 18, 20, 25 Graticule Tray Slot
713-401	Elekta/Philips SL75-5 Graticule Tray Slot
713-403	Elekta/Philips SL-20, 75, L5 Graticule Mounted to Gantry Head
713-500	Mitsubishi Graticule
713-600	ATC/EMI Graticule
713-708	GE or CGR Saturne 20 Graticule
713-710	GE Saturne 40, 41, 42, 43 Graticule Metal Tray with Coding Studs
713-711	GE Saturne MLC Graticule
713-712	GE Saturne 3 Graticule

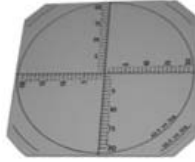
IMAGING & GRATICULES

SIEMENS REPLACEMENT GRATICULE

This replacement Siemens photon light field graticule can be mounted to a removable tray.



793-000 and 793-001



793-002

Item	Siemens Replacement Graticule
793-000	Screw Coding, Siemens P/N 19-41-959 Rev. D Revision D: The central axis starts at 4.283" (109mm)
793-001	Screw Coding, Siemens P/N 19-45-463 Rev. A Revision A: The central axis starts at 4.187" (106mm)
793-002	Digital Coding, Siemens P/N 8497752

SIEMENS SIMULATOR GRATICULES

Item	Description	Distance
790-080	Siemens Simulator Graticule	80 cm
790-100	Siemens Simulator Graticule	100 cm
790-120	Siemens Simulator Graticule	120 cm
790-140	Siemens Simulator Graticule	140 cm

Please Provide Contact Information When Placing Order

SIEMENS MEVASIM S SIMULATOR GRATICULES With Aluminum Frame

Item	Description	Distance
790-208	Siemens Mevasim S Simulator Graticule with Frame	80 cm
790-210	Siemens Mevasim S Simulator Graticule with Frame	100 cm
790-220	Siemens Mevasim S Simulator Graticule with Frame	120 cm
790-240	Siemens Mevasim S Simulator Graticule with Frame	140 cm

Please Provide Contact Information When Placing Order

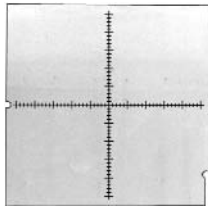
VARIAN XIMATRON SIMULATOR GRATICULES With Aluminum Frame

Item	Description	Distance
791-108	Varian II Ximatron Simulator Graticule with Frame	80 cm
791-100	Varian II Ximatron Simulator Graticule with Frame	100 cm
791-120	Varian II Ximatron Simulator Graticule with Frame	120 cm
791-130	Varian II Ximatron Simulator Graticule with Frame	130 cm
791-140	Varian II Ximatron Simulator Graticule with Frame	140 cm
791-101	Graticule Frame ONLY	

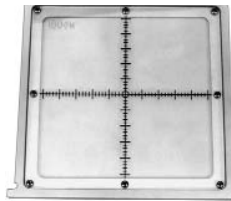
Please Provide Contact Information When Placing Order

Item	Description	Distance
791-160	Varian III Ximatron Simulator Graticule with Frame	80 cm
791-162	Varian III Ximatron Simulator Graticule with Frame	90 cm
791-164	Varian III Ximatron Simulator Graticule with Frame	100 cm
791-166	Varian III Ximatron Simulator Graticule with Frame	110 cm
791-168	Varian III Ximatron Simulator Graticule with Frame	120 cm
791-170	Varian III Ximatron Simulator Graticule with Frame	130 cm
791-172	Varian III Ximatron Simulator Graticule with Frame	140 cm
791-160-4	Graticule Handle ONLY	
791-160-11	Graticule Frame ONLY, Optical Coded	

Please Provide Contact Information When Placing Order



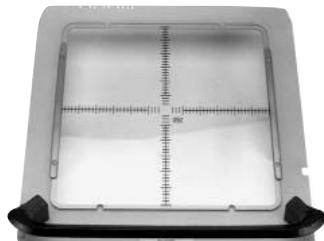
790-100



790-210



791-108



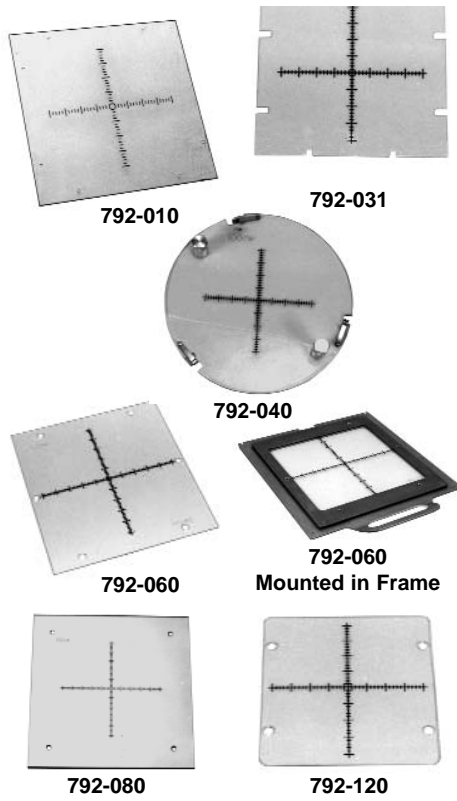
791-168

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IMAGING & GRATICULES

SIMULATOR GRATICULES (80 cm, 100 cm, 120 cm or 140 cm)

The Graticule is custom made for any simulator and can be furnished with a holder for mounting to the simulator. Line spacing at isocenter is 1 cm with every 5th cm line longer, as pictured. The high density line is 0.020" (0.050 cm) wide. Please specify distance needed for graticule and contact information.



Item	Description	Distance
792-010	AECL Simulator Line Graticule	All
792-011	AECL Therasim Line Graticule	All
792-020	TEM Simulator Line Graticule	All
792-030	Philips Simulator Line Graticule	All
792-031	Philips 1976 Simulator Line Graticule	All
792-032	Philips Super M80 Simulator Line Graticule	All
792-033	Philips SLS-9 Simulator Line Graticule	All
792-040	Oldelft Simulator Line Graticule	All
792-041	Replacement Oldelft Simulator Graticule	All
792-050	CGR Simulator Line Graticule	All
792-060	Kermath Simulator Line Graticule	All
792-070	Mitsubishi Simulator Line Graticule	All
792-080	Picker Simulator Line Graticule	All
792-090	Toshiba LX-8 Simulator Line Graticule	All
792-092-1	Toshiba LX-30A Simulator Line Graticule, Tray ONLY	
792-092-2	Toshiba LX-30A Simulator Line Graticule	80 cm
792-092-3	Toshiba LX-30A Simulator Line Graticule	100 cm
792-100	TEM (Sold by Siemens) Simulator Line Graticule	All
792-102	Replacement Varian Simulator Line Graticule	80 cm
792-120	Haynes Simulator Line Line Graticule	All

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SIMULATOR GRATICULE HOLDERS

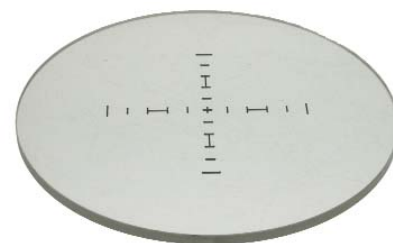


The holder will allow different graticules (80 cm, 100 cm, 120 cm or 140 cm) to be used.

Item	Description
792-600	Simulator Holder for Multiple Graticules
792-601	AECL Simulator Holder for Multiple Graticules
792-630	Philips Simulator Holder for Multiple Graticules

Other Manufacturers Available

LINE RETICULE "C" ARM



Item	Description
792-31793	GE Simulator Line Reticule OEC 9800 C Arm

IMAGING & GRATICULES

RADIOGRAPHY / FLUOROSCOPY QC KIT



This kit includes all of the test devices necessary to perform QC in radiographic and fluoroscopic suites

- Victoreen® RAD-CHECK® PLUS
- Wide-Range Digital kVp Meter
- Digital X-Ray Pulse-Counter / Timer
- Radiographic Ionization Chamber, 30 cm³
- Carrying Case

Specifications

Rad-Check™ Plus

Ranges: 0.001 to 2 R, 0.01 to 20 R/min

Internal Chamber: 30 cc volume, energy response $\pm 5\%$ from 15 to 65 keV (30-150 kVp filtered), 20.5 cm² (5.1 cm diameter) effective measurement area. Center of chamber 1.03 cm below top of chamber

Standard Calibration: At 75 kVp with 4 mm Al filtration at 22°C and one atmosphere.

Reproducibility: Within 2% short-term over 100 mR to 2 R range (1 to 20 mGy).

Electrometer Drift: 0.5 to 1 mR/min typical; 6mR/min maximum (5 to 10 μ Gy; 60 μ Gy/min maximum).

Maximum Exposure Rate: Minimum 90% collection efficiency at 20 R/sec

Automatic Reset: Resets display to zero; can also be reset manually.

Operating Temperature: 10-40°C,

Relative Humidity: 0 to 90%, non-condensing

Display: 3.5" x 0.5" (8.9 x 1.3 cm) LCD, low battery indicator

Controls: Auto or manual reset selector. Display zero reset button. Dose or dose rate output selector. Integral or remote ion chamber selector. On/off switch.

Power: 9 V alkaline battery, >100 hours operation (50 hours in manual reset mode)

Size: 6" W x 6.25" D x 2.75" H (15.29 x 15.93 x 7 cm)

Weight: 1.125 lb (0.5 kg)

CE Tested. Meets applicable standards.

Wide Range Digital kVp Meter

Ranges: Low: 50 to 90 kVp, 0.1 kVp resolution

High: 80 to 150 kVp, 0.1 kVp resolution

Accuracy: $\pm 3\%$ or 3 kVp (whichever is greater)

mAs requirements: (45.7 cm SDD) 18 mAs at 120 kVp; 50 mAs at 60 kVp, single phase. Minimum exposure time: 1/20 (0.05) sec

Controls: On/off, single/three-phase and range selection switch

Operating temperature: 50° to 104°F

Relative Humidity: 0 to 90%, non-condensing

Power Requirements: 9 V alkaline battery, 150 hours operation

Display: 3.5" x 0.5" (8.9 x 1.3 cm) LCD. Automatic indication of (a) low battery condition, (b) need to adjust exposure factors

Output Signal: BNC connector for waveform analysis

Dimensions: 8" W x 6" D x 2.5" H (20.4 x 15.3 x 6.4 cm)

Weight: 2 lb (0.9 kg)

CE Tested. Meets applicable standards.

Digital x-Ray Pulse / Counter / Timer

Accuracy

AC input: ± 1 count

DC Input: 2%, ± 1 count

X-Ray Detection: ± 1 count

Sensitivity

AC Input: 65 VAC minimum

X-Ray Input: 50 kVp, 5 mA at 5 cm from top surface of case, pointed to target on case

Range: 9999 pulses; 9999 milliseconds

Display: 0.4" (1 cm) liquid crystal

Power Requirements: 9 V battery, alkaline or equivalent, 24 hours continuous; typically 6 months of normal use

AC Input Jacks: 130 volts, AC maximum; 65 V AC minimum; input circuit not affected by reversed polarity

Output Signal: BNC connector for waveform analysis

Connections: None required for direct exposure measurement

Controls / Indicators

Three-position switch: Pulse, Off, Milliseconds

Four-digit LCD: 0.4" (1 cm) character

Low battery indicator

"Low Batt": Appears in display when battery voltage reaches 4.8 V \pm 0.5 V

Power-on: LED (green); oscilloscope output

Dimensions: 3.15" W x 5.8" D x 1.6" H (8 x 14.8 x 4.1 cm)

Weight: 0.5 lb (0.23 kg)

CE Tested. Meets applicable standards.

Radiographic Ionization Chamber

Volume: 30 cm³

Energy Response: Within 7% from 30 to 150 kVp (15-65 keV)

Cable: 15' (4.6 m)

Chamber Dimensions: 4" x 4" x 0.5" T (10.2 x 10.2 x 1.4 cm)

CE Tested. Meets applicable standards.

Item	Description
370-526	Radiography / Fluoroscopy QC Kit

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MOBILE VERTICAL COMPUTER WORKSTATION



- All components can be easily relocated along the vertical support post.

Item 750-000 Mobile Vertical Computer Workstation Includes

- 61.5" post with mobile base
- 5 Casters (3 locking)
- Cable management channel
- Swivel monitor support
- Keyboard with mousepad
- CPU holder
- Utility shelf
- Printer shelf

Item	Description
750-000	Mobile Vertical Computer Workstation

Components not compatible with "FUSION" series. Computer equipment not included.

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FUSION MOBILE COMPUTER WORKSTATIONS



Item 750-020 Monitor/Keyboard Combo Includes

- 60" post with mobile base
- 4 casters (2 locking)
- Monitor support /keyboard holder combo that flips down
- CPU holder

Item 750-022 Monitor Support & Keyboard Includes

- 60" post with mobile base
- 4 casters (2 locking)
- Monitor support
- Keyboard holder that flips down
- CPU holder

Item 750-024 Dual Monitor&Keyboard Holder Includes

- 60" post with mobile base
- 4 casters (2 locking)
- Dual monitor support
- Keyboard holder that flips down
- CPU holder

Item	FUSION Mobile Workstation
750-020	Monitor/Keyboard Combo
750-022	Monitor Support and Keyboard
750-024	Dual Monitor and Keyboard Holder

Components not compatible with other series. Computer equipment not included.

- Keyboard tray folds down and out of the way!
- 24" square base offers superior stability for any environment.
- Post is hard-chromed steel for years of wear-resistant service.
- All components can be easily relocated along the vertical support post.

Take it where you need it! The most flexible, adjustable and easy to use mobile workstation available.