

MAMMOGRAPHIC VERTICAL VIEWER

MV800

MOTORIZED VIEWERS

PROGRAMMABLE SHADES WITH INDIVIDUAL PANEL SPECIFIC MEMORY

Here is our top of the line mammography motorized viewer, which features intuitive use, no obstructing strings, and exceeds all ACR requirements for mammography! **Four independent curtains** can easily be individually positioned by the technologist when the films are placed on the viewer (using the manual curtain controls or one of four programmable curtain presets), and their position stored into the frame-specific memory with the push of a button. When the particular "frame" is accessed by the radiologist, the shades will **automatically** go to the position previously set, providing optimal **frame-specific shading** for all films on the viewer. The unit is designed with the comfort of the radiologist in mind, with extra leg room, a large work desk and easily accessible utility outlets.

Variable intensity illumination is standard, ranging from 100% down to 60% in increments of 10%. This allows the radiologist to select the proper level of illumination for a specific type of film, change the intensity for other films, and easily and precisely return to this original level. **High frequency energy efficient electronic ballasts** provide for flicker-free, reduced eyestrain viewing.

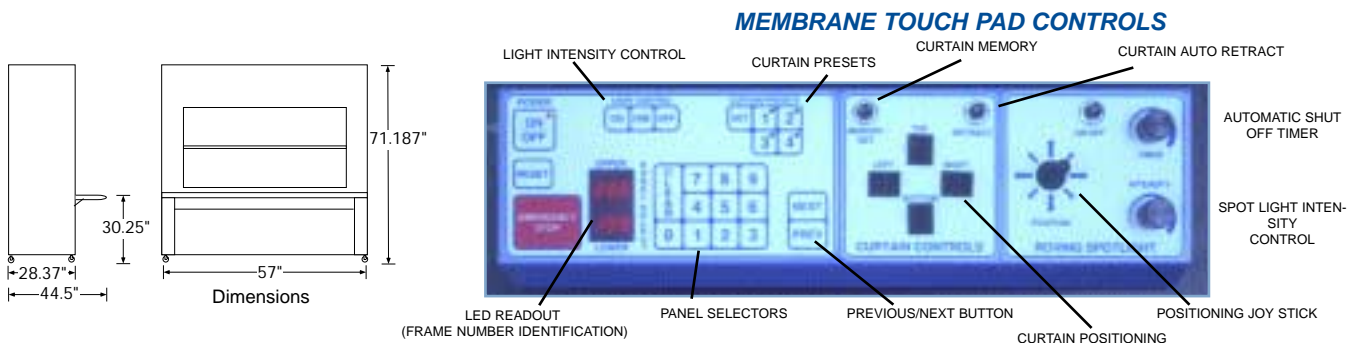
An optional **variable intensity bright spot** permits highlighting and focusing in on extra dense areas of the film. It can be moved to any location on the lower tier. The spotlight has been programmed to automatically find the non-shaded area when turned on. The positioning joystick can be used to move the spotlight to the precise location desired.



The **vertical transport belt features** exceptionally quiet and smooth operation. The MV800 has **200** frames and can hold **800** 20x30cm films (or 1200 18x24cm films). There are *no strings* to distract or obscure the viewing of films.

This viewer is ideal for **sequential interpretation** of film, and automatically centers the next set of films. The **standard auto-indexing** feature rapidly accesses a selected film (moving at a speed greater than one frame per second). Any film can be viewed in the upper or lower tier position. Previous/Next buttons or the **standard dual foot switch** can be used to move the transport belt and quickly center the adjacent films. **Angulated viewing of 5°** cuts glare.

To conserve energy, the units feature **auto-shutoff** when there is inactivity for 30 minutes. There is also the ability to program security codes into the machine to limit access to films loaded into the viewer.



Base: 2.5" Casters

Finish: Attractive durable baked on polyester, in light grey with blue sides. Shelf is finished in matching blue laminate with Oak bullnose trim.

Electrical: 118 volts, 60HZ AC, 1 phase, total amperage draw with all lights on and motor running-10 amps. For 220 volts, 50 HZ or other voltages, consult factory for details.

Approx. Weight: 840 Lbs.



VERTICAL VIEWER MV220 / MV400

IDEAL FOR THE FULL SPECTRUM OF GENERAL RADIOLOGY



MOTORIZED VIEWERS

- MV220 or MV400 - VERTICAL VIEWER
- MV220C or MV400C - VIEWER W/ MOTORIZED CURTAINS
- MV220S or MV400S - VIEWER W/ ROVING SPOTLIGHT
- MV220CS or MV400CS - VIEWER W/CURTAINS AND SPOTLIGHT

This **versatile vertical belt automatic viewer** is ideal for *sequential interpretation of films*. The viewers feature advanced microprocessor control technology, smooth and quiet operation, and film viewing without obstructing strings! The standard **auto-indexing** feature rapidly accesses a selected frame (moving at a speed greater than one frame per second) and automatically centers the film in the proper viewing position.



Variable intensity illumination, ranging from 100% down to 60% in increments of 10%, allows the radiologist to select the proper level of illumination for a specific type of film, change the intensity for other films, and easily and precisely return to the original level. High frequency energy efficient electronic ballasts provide flicker free reduced eyestrain viewing.



The combination of a **microprocessor** and a coffee resistant **membrane touch pad control** insures years of trouble free use. The **vertical transport belt** features exceptionally quiet operation, and is designed to prevent film loss or damage while in the viewer. **Angulated viewing of 5°** cuts glare. The belt can accommodate any size film up to 14"x17". **Mix or match your film sizes with equal security of film retention.** Films slide easily and securely into narrow plastic grips on each frame. There are *no strings* to distract or obscure the viewing of films. The durable plastic film grips minimize the space between the top and bottom tier for ease of comparison.

Eight 14"x17" films can be viewed simultaneously. The units hold **220** or **400** 14"x17" films (greater quantity with smaller films). The C and CS models have **full manual and programmable shutter capability** allowing for proper collimation to any film format. When films are loaded into the viewer, the shade locations can be easily set manually (or through the use of one of four programmable presets) and programmed into the **frame-specific memory** with the touch of a button. The curtain memory can be easily individually set for each frame on the machine, so that when the radiologist calls up a specific frame, the curtains move automatically to their preset location for that particular set of films (Manual movement of the curtains can easily be used to fine tune the curtain locations). Optional

customized belts are available and recommended (for C and CS models only) for mixing film formats, and in particular for mammographic films. **The customized belt enables the simultaneous display and full shading of 3 years of screening 18x24cm mammographic studies!**

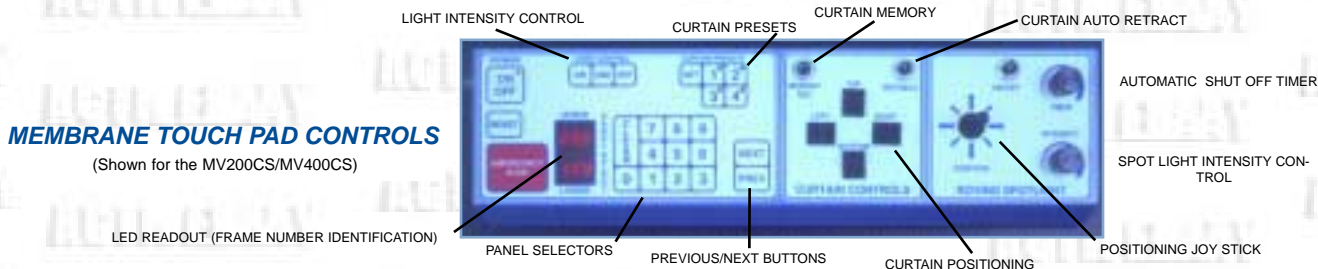
A joystick-controlled **variable intensity moving bright spot** can be quickly positioned anywhere on the lower tier to add the extra brightness needed to read dense film. When the bright spot is activated it rapidly locates the non-shaded region on the viewing surface, then turns on. Care was taken in the design of the control pad and in the programming of the unit so that all functions are intuitive to the user, and easily and quickly learned and assimilated. To conserve energy, the units feature **auto-shutoff** when there is inactivity for 30 minutes. There is also the ability to program security codes into the machine to limit access to films loaded into the viewer.

The C and CS models with fully **programmable motorized shades (with frame specific memory in addition to programmable memory presets)** easily **exceed the proposed ACR requirements for mammography.**

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Lighting: MV220, MV220S, MV400, MV400S: 4 - 15 Watt Daylight fluorescent vertical bulbs per section. MV220C, MV220CS, MV400C, MV400CS 14 - 60 Watt Daylight fluorescent horizontal bulbs per viewer.

OPTIONS: **MV220-2 FOOT SWITCH** - Hands free selection of frames (scan frames either forward or back).

MOTORIZED CURTAINS: FULL SHUTTER CAPABILITY Four curtains adjust independently for any opening size or location. Curtain memory can be set individually for automatic collimation of each frame.

CUSTOMIZED BELTS: (C & CS models only) Design your belt to fit your needs - consult factory.

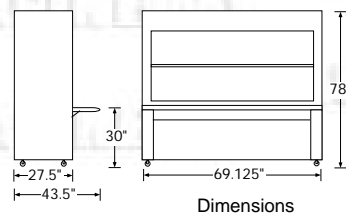
ROVING SPOTLIGHT: (Bottom Tier Only) Spotlight can be positioned anywhere on the lower tier with the touch of the joystick. Roving spotlight is programmed to coordinate with automatic collimation of shutters and will automatically move to the open area when activated. To allow the bright spot to move, the standard internal dividers are removed.

Base: 2.5" Swiveling Casters

Finish: Attractive durable baked on polyester, in light grey with blue sides. Shelf is finished in blue laminate with Oak bullnose trim.

Electrical: 118 volts, 60HZ AC, 1 phase, total amperage draw with all lights on and motor running-10 amps.

Approx. Weight: MV220 - 1140 Lbs., MV400 - 1190 Lbs.



Models MS614A MS614B-HL

Best system for multi-year evaluations.

The MS614 Series provides a unique independent belt system that allows one belt to move while the other remains stationary. Thus, the radiologist can scroll through an unlimited number of the patient's earlier films while this year's mammograms remain constantly in view. The viewer also supports motorized vertical shades that can be programmed for pre-defined positions for efficiency in viewing a specific film.

Don't be fooled by the compact size of

this viewer. The MS614 series can be upgraded to an 800-film capacity, thus ensuring that busy and high-volume radiologists won't spend their time waiting for the next set of films to be loaded.

Film density is not a problem. Many recent mammography film types have increased in density. To support this difference, the MS614B-HL supports a wider range of luminance output. Thus, radiologists can view any type of film, from dense to light, simply by increasing or decreasing the viewer's luminance.

It's more than serviceable. The MS614 series is small and lightweight for ease of movement. Even better, it's easy to install and service.



Shown with Optional AutoSelect and CoolBrite on Pivot Arm

Specifications

	MS614A	MS614B-HL
Product Number	08-00941	08-00942
Peak Luminance	>3000 Nit	>9000 Nit
Color Temperature	6300 K	6300 K
Maximum Heat Output	4000	4800
Flourescent Dimming	5 Positions	5 Positions
Film Capacity (Standard)	480 24x30 cm	480 24x30 cm
Film Capacity (Optional)	600 or 800 24x30cm	600 or 800 24x30cm
Vertical Masking	4 Motorized Shades	4 Motorized Shades
Horizontal Masking	4 Manual Shutters	4 Manual Shutters
Operating Dimensions	52"W x 62.5"H x 42"D	52"W x 62.5"H x 42"D
Shipping Dimensions	52"W x 62.5"H x 30"D	52"W x 62.5"H x 30"D
Certifications/Listings	UL and Canadian UL	UL and Canadian UL

See page 2.4 for additional specifications, available options, and model comparisons.

Model MS780A

Three years of films at once. The MS780 single-belt system is wide enough to present 12 24 x 30 cm mammography films concurrently. Thus, the radiologist can comfortably view three years of film without ever changing belt frames.

At your fingertips. The control panel includes Next and Prior buttons to ensure the radiologist can quickly and efficiently screen films.

Specifications

Product Number
Peak Luminance
Color Temperature
Maximum Heat Output
Film Capacity (Standard)
Flourescent Dimming
Vertical Masking
Horizontal Masking
Operating Dimensions
Shipping Dimensions
Certifications/Listings

MS780A

08-00921
>3000 Nit
6300 K
3600
780 24 x 30 cm
5 Positions
2 Motorized Shades
2 Manual Shutters
69"W x 62.5"H x 42"D
69"W x 62.5"H x 30"D
UL and Canadian UL



See page 2.4 for additional specifications, available options, and model comparisons.

Model MS804A

MS804A-HL

Perfect for high-volume screening

centers. The MS804A provides a cost-effective solution for high-volume centers. The single-belt system supports an 800-film capacity in a 4-over-4 format, thus ensuring that radiologists won't spend extra time waiting for film to be loaded/unloaded.

At your fingertips. The control panel includes Next and Prior buttons to ensure the radiologist can efficiently screen films. Four motorized vertical and two manual horizontal shades provide quick film masking.



Specifications

Product Number	MS804A 08-00722	MS804A-HL 08-00931
Peak Luminance	>3000 Nit	>8000 Nit
Color Temperature	6300 K	6300 K
Maximum Heat Output	2800	3600
Flourescent Dimming	5 Positions	10 Positions
Film Capacity (Standard)	800 24x30 cm	800 24x30 cm
Vertical Masking	4 Motorized Shades	4 Motorized Shades
Horizontal Masking	2 Manual Shutters	2 Manual Shutters
Operating Dimensions	52"W x 62.5"H x 40"D	52"W x 62.5"H x 40"D
Shipping Dimensions	52"W x 62.5"H x 30"D	52"W x 62.5"H x 30"D
Certifications/Listings	UL and Canadian UL	UL and Canadian UL

See page 2.4 for additional specifications, available options, and model comparisons.

Mammoscope Model and Feature Comparison

Models	MS614A	MS614B-HL	MS780A	MS804A	MS804A-HL
Product Number	08-00941	08-00942	08-00921	08-00722	08-00931
Max. Film Size	24cm x 30cm	24cm x 30cm	24cm x 30cm	24cmx30cm	24cmx30cm
Std. Film Capacity	480	480	780	800	800
Optional Capacity	600 or 800	600 or 800	N/A	N/A	N/A
Peak Luminance (Nit)	>3000	>9000	>3000	>3000	>8000
LampSaver System	Standard	Standard	Standard	Standard	Standard
Vertical Shades	4 Automatic	4 Automatic	2 Motorized	4 Motorized	4 Motorized
Horizontal Shutters	4 Manual	4 Manual	2 Manual	2 Manual	2 Manual
Viewing Format	4 over 4	4 over 4	6 over 6	4 over 4	4 over 4
Film Belts	2 Single-Tier	2 Single-Tier	1 Double-Tier	1 Double-Tier	1 Double-Tier
Frame Advance	N/A	N/A	Standard	Standard	Standard
Ergonomic Desk (with relief cut)	Standard	Standard	Optional	Optional	Optional
Foot Switch	Optional (2)	Optional (2)	Optional (1)	Optional (1)	Optional (1)
AutoSelect System	Optional	Optional	Optional	Optional	Optional
Film Jacket File	Optional	Optional	Optional	Optional	Optional
Instrument Mounting Arm-Fixed	Optional	Optional	Optional	Optional	Optional
Instrument Mounting Arm-Pivot	Optional	Optional	Optional	Optional	Optional
Operating Dimensions: W"XD"XH"	52 x 62.5 x 42	52 x 62.5 x 42	69 x 62.5 x 42	52 x 62.5 x 40	52 x 62.5 x 40
Shipping Dimensions: W"XD"XH"	52 x 62.5 x 30	52 x 62.5 x 30	69 x 62.5 x 30	52 x 62.5 x 30	52 x 62.5 x 30
Shipping Weight (lbs.)	660	660	750	600	600
Maximum Current (Amps)	8.6	9.7	8.1	6.9	8.1
Maximum Heat Output (BTU/Hr)	4000	4800	3600	2800	3600

Options Available on Mammoscope Models

Options	MS614A	MS614B-HL	MS780A	MS804A	MS804A-HL
Foot Switch	✓	✓	✓	✓	✓
AutoSelect	✓	✓	✓	✓	✓
Film Jacket File (top mount)	✓	✓	✓	✓	✓
Instrument Arm-Fixed	✓	✓	✓	✓	✓
Instrument Arm-Pivot	✓	✓	✓	✓	✓
Increased Capacity (600 films)	✓	✓	—	—	—
Increased Capacity (800 films)	✓	✓	—	—	—

Model MV4000AM

When you want to screen mammography, too.

The belts on the MV4000AM have attachment mechanisms to support a wide variety of films, from 14 x 17-inch to 24 x 30-cm; thus, the radiologist can review mammograms as well as general radiographs. Also, the middle four panels meet ACR's mammography recommendations with increased luminance and motorized shades for efficient masking. The curved desk allows the radiologist to comfortably move in for close-range viewing.

Best system for multi-year evaluations. The viewer provides a uniquely independent belt system that allows one belt to move while the other remains stationary. Thus, the radiologist can scroll through an unlimited number of the patient's earlier films while current films remain constantly in view. The belts support up to 400 14x17-inch films.



Shown with Optional AutoSelect

Improving radiologist efficiency. The optional AutoSelect System adds the ability to quickly move to a different frame, while the optional foot switch provides "hands-free" belt movement.

Specifications

Product Number	08-00965
Peak Luminance	>3500 Nit
Color Temperature	6300 K
Flourescent Dimming	5 Positions
Film Capacity (Standard)	400 14" x 17"
Vertical Masking	4 Motorized Shades
Horizontal Masking	4 Manual Shutters
Operating Dimensions	52"W x 62.5"H x 41.5"D
Shipping Dimensions	52"W x 62.5"H x 30"D
Certifications/Listings	UL and Canadian UL

MV4000AM

See page 3.2 for additional specifications, available options, and model comparisons.

Cross-Format Model Features

Model	MV4000AM
Product Number	08-00965
Max. Film Size	14" x 17"
Std. Film Capacity	400
Peak Luminance (Nit)	> 3500
LampSaver System	Standard
Vertical Shades	4 Motorized
Horizontal Shutters	4 Manual
Viewing Format	4-Over-4
Film Belts	2 Single-Tier
Ergonomic Desk (with relief cut)	Standard
Foot Switch	Optional (2)
AutoSelect System	Optional
Film Jacket File	Optional
Instrument Mounting Arm-Fixed	Optional
Instrument Mounting Arm-Pivot	Optional
Operating Dimensions: W"xH"xD"	69 x 74 x 41.5
Shipping Dimensions: W"xH"xD"	69 x 74 x 30
Shipping Weight (lbs.)	950
Max. Current (Amps)	10
Maximum Heat Output (BTU/Hr)	4400

Options Available on Cross-Format Viewer Model

Options	MV4000AM
Foot Switch	✓
AutoSelect	✓
Film Jacket File (Bottom Mount)	✓
Film Jacket File (Top Mount)	✓
Instrument Arm-Fixed	✓
Instrument Arm-Pivot	✓
Movable BrightLight (Internal)	—
Film-Activated Lamp Switches	—

Foot Switch

Model Number 20-0007

The Foot Switch module enables hands-free operation of the film transport system on RADX Motorized Viewers. The momentary action of the switch drives the film belt at low speed (like the manual travel switch), allowing the film belt to be stopped in any position for optimal viewing flexibility.



AutoSelect

Model Number 08-00059

The AutoSelect is an optional handheld control system for any RADX Motorized Viewer. Its numeric keypad and display system allow quick, easy access to patient films. The AutoSelect provides an added level of efficiency and productivity to motorized film viewing, whether the radiologist prefers numeric entry, single-frame indexing keys (Next and Prior), momentary jog keys, or a Store/Recall feature.



Instrument Mounting Arms

When mounted to the frame of a motorized viewer, the Instrument Mounting Arm reduces workspace clutter and positions the needed device at a convenient, adjustable location. Standard versions of these arms support such ancillary devices as the RADX CoolBrite Illuminator or a dictaphone.

Pivot Arm

Model Number 08-00718

In addition to height, tilt, and rotation adjustments, a joint at the base of the Pivot Arm allows it to pivot at the point of attachment to the viewer, giving the user maximum control of the viewing position and distance.

Fixed Arm

Model Number 08-00717

The Fixed Arm provides adjustments for height, tilt, and rotation of the attached device.



Shown with CoolBrite
(see page 5.3)

Belt Changer

Model Number 08-00904

By supporting the weight of the film belt and providing the necessary "spooling" action, the Belt Changer greatly simplifies the process of installing a new film belt on a motorized viewer. The risk of belt damage during installation is practically eliminated and the detachable hand crank makes quick work of removing the old belt in a neat and orderly manner.



Panoscope

Image Magnifier

2+ Diopter 08-00907

3.5+ Diopter 08-00936

Especially valuable for mammography viewing, the *Panoscope* magnifies image detail while eliminating extraneous light. Available with 2+ or 3.5+ Diopter lenses.



NitMeter

Illuminance Meter

Model Number 08-00908

The RADX NitMeter provides a method of measuring both viewer luminance (nit) and room ambient illuminance (lux) in a single instrument. The calibrated scale provides simple operation and assures radiologists that their viewing systems are in conformance with these 1999 American College of Radiology (A.C.R.) recommendations*:

1. "Viewboxes used for interpreting mammograms and clinical quality review by the technologist should be capable of at least 3,000 candela per square meter (cd/m²)."
2. "The illumination levels should be 50 lux, or preferably less."

* 1999 A.C.R. mammography quality control manual



Film Jacket File

Lower Mount File (MV-3 and MV-4 models only)



**Model Number 08-00719 Field Installed
08-00719 Factory Installed**

RADX MV-Series motorized viewers (except the MV200DT) are available with the internally-mounted lower film jacket file that has 25 slots for film jackets. Due to the height of the MV-Series viewers, many users find the height of the lower file more convenient and accessible than top-mounted files. To maximize leg room and close-proximity film viewing, lower film jacket files are not available on Mammoscope models.

Top Mount File (MV and MS models)



Model Number 08-00934

**Model Number 08-00713 Field Installed
08-00713 Factory Installed**

**Model Number 08-00726 Field Installed
08-00726 Factory Installed**

Excellent as an addition or alternative to the lower file, the top-mounted film jacket file, which has 25 slots for film jackets, can be utilized for increased storage of film jackets, reports, films, documentation, etc. The upper file is more visible than the lower file and is accessible without bending or reaching below the desktop of the viewer.