

X-Ray Accessories/Products

2017

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General Purpose Film

General purpose X-ray films are designed for a variety of applications in all standard and special radiographic diagnostics. The films are based on a blue tinted polyester base with a double sided coating.

Suitable for manual and automatic processing.

Standard sizes according to ISO 4090:

13 x 18 cm	35 x 35 cm	18 x 43 cm	12 x 15 inch
18 x 24 cm	15 x 40 cm	35 x 43 cm	11 x 14 inch
15 x 30 cm	20 x 40 cm	8 x 10 inch	
24 x 30 cm	30 x 40 cm	10 x 12 inch	

0110xx **X-Ray B**
Blue sensitive X-ray film to be used
with blue emitting intensifying screens.

0111xx **X-Ray G**
Green sensitive X-ray film to be used
with green emitting intensifying screens.

Mammography Film

This Film is a medium speed, double coated, orthochromatic sensitized medical x-ray film for mammographic use with single green-emitting intensifying screens.

Suitable for manual and automatic processing.

Boxes of 100 sheets NIF (non-interleaved) in shipping units of 5 boxes each.

Standard sizes according to ISO

4090: 18 x 24 cm

24 x 30 cm

0112xx **X-Ray M**
Mammography film

Dental Film

This is a double-sided coated high speed non-screen X-ray film with high contrast and fine grain (ISO Class E). The film provides high image quality and outstanding detail definition. It is intended for direct-exposure routine intraoral radiographs.

Each sheet of film is enclosed in a light-tight plastic envelope. This soft and hygienic packing protects the patient, facilitates the handling of the film and enables disinfecting the cover with common disinfectants.

Boxes of 150 sheets (3 x 4 cm) or 100 sheets (2 x 3 cm).

012010 **Dent XE Size 2** (3 x 4 cm)
012011 **Dent XE Size 0** (2 x 3 cm)

Other film types such as imaging films, laser imaging films, infra red, laser and duplicating films are available on request. Please as



DiSURGE
Medical

X-Ray Film Cassettes, Intensifying Screens, Grids

X-Ray Cassettes

Medical Cassettes with outstanding durability due to use of aircraft grade aluminium. Perfect film-screen-contact for highest image quality with use of open cell polyurethane foam system in the cassette. Compatible with all film-types.

Cassettes can be ordered separately or with inserted Intensifying screens without additional costs.

Standard sizes:

13 x 18 cm	30 x 35 cm	18 x 43 cm
18 x 24 cm	35 x 35 cm	35 x 43 cm
24 x 24 cm	15 x 40 cm	30 x 60 cm
15 x 30 cm	20 x 40 cm	30 x 90 cm
24 x 30 cm	30 x 40 cm	30 x 120 cm
30 x 30 cm	40 x 40 cm	

Other sizes available on request. Minimum order: 15 pcs., 5 pcs. per size

0210xx **Cassette**

0220xx **Cassette with window**

This is a Cassette, but with ID-window (US-type C1) for daylight ID-cameras. Data field of 26 x 76 mm.



Intensifying Screens

Screens are designed for outstanding contrast and detail perception. High speed classes enable reduction of radiation dosage. The screens are suitable for the use with X-ray films of all well-known brands.

Standard sizes: same as Cassettes

Other sizes available on request.

0201xx **Screen Blue 200**

Type: rare earth blue, speed class 200, suitable for radiography of Joints, Chest, Skull

0202xx **Screen Green 100**

Type: rare earth green, speed class 100, suitable for radiography of Extremities

0203xx **Screen Green 200**

Type: rare earth green, speed class 200, suitable for radiography of Joints, Chest, Skull

0204xx **Screen Green 400**

Type: rare earth green, speed class 400, suitable for radiography of Joints, Chest, Skull, Stomach/Intestines



Mammography Cassette

Mammography Cassette made from solid plastics. Carbon front side for lowest absorption. Excellent film-screen-contact for highest image quality.

Cassette includes single intensifying screen.

Standard sizes:

18 x 24 cm

24 x 30 cm

- | | |
|--------|--|
| 023001 | Mammography Cassette 18 x 24 cm |
| 023002 | Mammography Cassette 24 x 30 cm |



Curved Cassette

Bent cassette made from powder coated metal. Solid construction specially designed for joint radiographies of knee and elbow. Lid inserted with lead and foam pad. Fixed angle of 110°.

Curved Cassettes are sold without intensifying screens. Please order screens separately.

- | | |
|--------|-----------------------------------|
| 023011 | Curved Cassette 18 x 24 cm |
| 023012 | Curved Cassette 15 x 30 cm |
| 023013 | Curved Cassette 24 x 30 cm |



Flexible Cassette

Extremely flexible plastic cassette with zipper closure. Very low absorption. Specially designed for radiography of any curved parts of the body.

Flexible Cassettes are sold without intensifying screens. Please order screens separately.

- | | |
|--------|-------------------------------------|
| 023021 | Flexible Cassette 18 x 24 cm |
| 023022 | Flexible Cassette 24 x 30 cm |



Screen Cleaner

- | | |
|--------|--|
| 028050 | Screen Cleaner for Intensifying Screens, 500 ml |
|--------|--|

Conventional Radiology

X-Ray Grids

Grids are used for increasing the contrast and improving the diagnostic value of radiographic images by absorbing secondary or scattered radiation. The grids are used wherever a stationary bucky grid is not available. Made from highly radio lucent aluminium with integrated lead lamellas. Solid construction with lacquered metal surface protecting against physical impacts.



Standard sizes:

18 x 24 cm	35 x 35 cm	35 x 43 cm
24 x 30 cm	30 x 40 cm	

Other sizes available on request

0250xx	Grid Cassette Cassette with integrated grid, 34 lines/cm (85 lines/inch), ratio 8:1, parallel
0251xx	Grid Cassette Cassette with integrated grid, 40 lines/cm (103 lines/inch), ratio 8:1, parallel
0252xx	Stationary Grid to be placed temporarily into cassette 34 lines/cm (85 lines/inch), ratio 8:1, parallel
0253xx	Stationary Grid to be placed temporarily into cassette 40 lines/cm (103 lines/inch), ratio 8:1, parallel

Cassette Divider

Allowing part-exposure of X-ray cassettes in longitudinal or cross direction. Made from tear resistant lead rubber sheets allowing an easy cleaning and disinfection. Lead equivalent of 0,5 mm Pb.

Standard sizes:

18 x 24 cm	35 x 35 cm	35 x 43 cm
24 x 30 cm	30 x 40 cm	

Other sizes available on request

0260xx	Cassette divider longitudinal
0261xx	Cassette divider cross

Processing Chemicals

Automatic Processing Chemicals

Developer & Fixer for Roller Machines X - ray developer and fixer for all customary developing machines with roller transport and for spray-developing machines with a fixing time by 15 s or more. Good sensitometric results with low fog values in a wide range of temperatures. Because of the special oxidation stability the developer is especially suitable for machines with low and / or irregular utilization. Because of its excellent hardening properties and the fast working fixer components the product is suitable for use in fast going machines. Liquid concentrates.

031011	ProDev	Developer	to make	2x20 l
031015	ProFix	Fixer	to make	2x20 l
031002	Starter	Starter for Developers		1 l



Manual Processing Chemicals

Developer & Fixer for (manual) tank processing (Liquid)

Developer and fixer for manual processing with high contrast at good utilization of sensitivity. Use as tank solution and replenisher. To prepare a fresh tank solution no starter is needed. Liquid concentrates with high durability,

032011	ManuDev-L	Developer	to make	2 x 25 l
032015	ManuFix-L	Fixer	to make	2 x 25 l

Developer & Fixer for (manual) tank processing (Powder)

Powdery developer and fixer.

032021	ManuDev-P	Developer	to make	10 x 10 l
032022	ManuDev-P	Developer	to make	5 x 22,5 l
032023	ManuDev-P	Developer	to make	7 x 15 l
032025	ManuFix-P	Fixer	to make	10 x 10 l
032026	ManuFix-P	Fixer	to make	5 x 22,5 l
032027	ManuFix-P	Fixer	to make	7 x 15 l

Dental Film Processing Chemicals

The special formulations of the dental film processing chemicals guarantee excellent quality results with all common brands of X-ray film.

033010	Dent R	Developing sets to make 2/2 x 5 l solution (developer/fixer). For processing in roller type processors, e.g. Dürr (AC 1330, AC 1416, AC 245L, XR 24), Gendex (Clarimat GX-300), Philips (Rollomat 810, Rollomat 820), Siemens (P 10)
033020	Dent A 500	Developing sets 5/5 x 0,5 l concentrate (developer/fixer). For processing in dipping type processors, e.g. Girardelli (X-3D), Gendex (Clarimat Universal), Philips (Dry-o-mat)
033030	Dent A 3000	Developing sets 1/1 x 3,0 l concentrate (developer/fixer). For processing in dipping type processors, e.g. Girardelli (X-20, X-24), Gendex (Clarimat Super S II und Super S III)

Cleaning Agents

034001	Universal Tank Cleaner / Film Processor Cleaner Box with 7 bags (to make 7 x 15 L)
034002	Water Tank Cleaner Box with 6 bags (to make 6 x 15 L)

Minimum order for processing chemicals: 1 pallet

X-Ray Film Processors

PROTEC - Automatic Processors

PROTEC OPTIMAX

Automatic roller type processor for all standard medical X-ray films. Table top unit. Automatic film detection, start/stop system and stand-by mode. Automatic replenishment according to film surface. Anti-crystallization and anti-oxidation programmes. Light protection cover for film-infeed. Temperature selection for developer and fixer. Automatic circulation pump system, fresh water supply during processing and tank filling by replenishment pumps.

Film formats:	10 x 10 cm to 35 cm width
Processing time:	90 sec.
Capacity / h:	10 x 10 cm – 840 films 18 x 24 cm – 258 films 24 x 30 cm – 129 films 35 x 43 cm – 75 films
Tank volumes:	5 l each (developer, fixer, water)
Development temperature:	28 – 37 °C
Dryer temperature:	65°C
Water consumption:	1,9 l/min during processing
Energy consumption:	1,4 kWh during processing
Dimensions:	59 x 42 x 77 cm (w/h/d)
Weight:	35 / 50 kg (empty / full)

220/240 V – 50/60 Hz or 110/120 V – 60 Hz

080100 **OPTIMAX Processor**

080101 **OPTIMAX Mammo Processor**

080110 **Open Working Table**

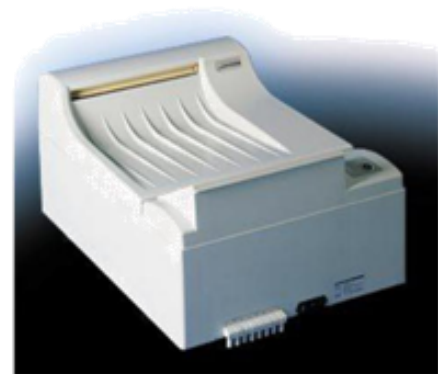
080120 **Closed Base Cabinet**

080130 **Through the Wall Set**

Film output. cannot be retrofitted

080191 **OPTIMAX Small Parts Set**

080192 **OPTIMAX Spare Parts Set**



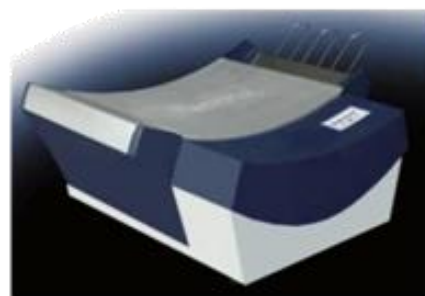
Conventional Radiology

PROTEC ECOMAX

Automatic roller type processor for all standard medical X-ray films. Table top unit. Automatic film detection, start/stop system and stand-by mode. Automatic replenishment according to film surface. Anti-crystallization and anti-oxidation programmes. Light protection cover for film-infeed. Automatic circulation pump system, fresh water supply during processing and tank filling by replenishment pumps.

Film formats:	10 x 10 cm to 35 cm width
Processing time:	100 sec.
Capacity / h:	10 x 10 cm – 417 films 18 x 24 cm – 148 films 24 x 30 cm – 74 films 35 x 43 cm – 45 films
Tank volumes:	2,3 l each (developer, fixer), 2,1 l (water)
Development temperature:	32 °C
Dryer temperature:	60°C
Water consumption:	1,0 l/min during processing
Energy consumption:	1,2 kWh during processing
Dimensions:	66 x 42 x 88 cm (w/h/d)
Weight:	26,5 / 34 kg (empty / full)
220/240 V – 50/60 Hz or 110/120 V – 50/60 Hz	

080200	ECOMAX Processor
080210	Open Working Table
080291	ECOMAX Small Parts Set
080292	ECOMAX Spare Parts Set



Conventional Radiology

PROTEC OPTIMAX 2010

Automatic roller type processor for all standard medical X-ray films. Table top unit. Automatic film detection, start/stop system and stand-by mode. Automatic variable replenishment rate according to film surface. Anti-crystallization and anti-oxidation programmes. Light protection cover for film-infeed. Digital display for temperature settings, filling levels, processing time, error messages and film counter. Automatic circulation pump system, fresh water supply during processing and tank filling by replenishment pumps.

Film formats:	10 x 10 cm to 35 cm width
Processing time:	90 – 180 sec.
Capacity / h:	10 x 10 cm – 840 films 18 x 24 cm – 258 films 24 x 30 cm – 129 films 35 x 43 cm – 75 films
Tank volumes:	5 l each (developer, fixer, water)
Development temperature:	28 – 37 °C
Dryer temperature:	70°C
Water consumption:	1,9 l/min during processing
Energy consumption:	1,4 kWh during processing
Dimensions:	59 x 42 x 77 cm (w/h/d)
Weight:	35 / 50 kg (empty / full)

220/240 V – 50/60 Hz or 110/120 V – 60 Hz

080300	OTIMAX 2010 Processor
080310	Open Working Table
080320	Closed Base Cabinet
080330	Through the Wall Set
	Film output. Cannot be retrofitted
080391	OPTIMAX 2010 Small Parts Set
080392	OPTIMAX 2010 Spare Parts Set



Conventional Radiology

PROTEC COMPACT 2

Automatic roller type processor for all standard medical X-ray films. Microprocessor controlled with digital display. Five individual programs can be stored. Automatic film detection, start/stop system and stand-by mode. Film surface measurement by sensors for automatic replenishment individually for developer and fixer. Intermediary rinsed squeeze rollers. Anti-crystallization and anti-oxidation programmes. Light protection cover for film-infeed. Automatic circulation pump system, fresh water supply during processing and tank filling by replenishment pumps with economy function.

Film formats:	10 x 10 cm to 35 cm width
Processing time:	60 – 300 sec.
Capacity / h:	10 x 10 cm – 3.020 films 18 x 24 cm – 697 films 24 x 30 cm – 348 films 35 x 43 cm – 245 films
Tank volumes:	12,5 l (developer), 12,0 l (fixer), 13,0 l (water)
Development temperature:	28 - 40 °C
Dryer temperature:	35 - 70°C
Water consumption:	1,9 l/min during processing
Energy consumption:	2,5 kWh during processing
Dimensions:	68 x 127 x 97 cm (w/h/d)
Weight:	77 / 115 kg (empty / full)

220/240 V – 50/60 Hz or 110/120 V – 60 Hz

080400	COMPACT 2 Processor with Open Working Table
080450	COMPACT 2 Processor with Closed Working Table
080401	COMPACT 2 Mammo Processor with Open Working Table
080451	COMPACT 2 Mammo Processor with Closed Working Table
080420	Through the Wall Set - Input
080421	Through the Wall Set - Output
080430	Roll Film Adapter
080492	COMPACT 2 Spare Parts Set



PROTEC - Accessories

PROTEC PROMIX A40

Automatic microprocessor controlled chemical mixer for preparing developer and fixer solutions out of powder or liquid concentrates. Mixing times individually selectable 2 – 30 min. Direct connection to 3 individual processors simultaneously.

Tank volumes:	20-40 l each
Reserve tanks:	13 l each
Dimensions:	65 x 93 x 44 cm (w/h/d)
Weight:	28 / 134 kg (empty / full)

220/240 V – 50/60 Hz – 2,0 A

080910	PROTEC PROMIX A40
080919	Spare Parts Set



PROTEC Air Clean 200

Exhaust air filter system with active carbon filters for PROTEC film processors. 220/240 V – 50 Hz

Capacity:	200 m³/h
080920	PROTEC Air Clean 200
080921	Fume Exhaust Device

Water Filter

for PROTEC film processors

080930	External Water Filter
080931	Spare Water Filter

Manual X-Ray Film Processing

Manual Film Processing Tank Sets

Made from durable acid-proof PVC for film hangers up to 35x43 cm - top bar of 46 cm. Connection of the tanks by PVC rails. With drip tray and draining system. Complete with tubes and clamps for direct installation.

090301

090302

- 1 tank of 20 l with lid and draining tap for developer
- 1 tank of 20 l with inlet and overflow for intermediate washing
- 1 tank of 20 l with lid and draining tap for fixer
- 1 tank of 30 l with inlet and overflow for final rinsing

Dimensions: 60 × 65 × 58 cm (w/h/d)

090310

Table Support for MANO-3/-4

- 1 tank of 20 l with lid and draining tap for developer
 - 1 tank of 20 l with lid and draining tap for fixer
 - 1 tank of 30 l with inlet and overflow for intermediate washing and final rinsing
- Dimensions: 40 × 65 × 58 cm (w/h/d)
- MANO 4**

Lifting the manual processing tank sets MANO 3 and MANO 4 to an ergonomic working level of 100 cm. Solid construction made from powder coated steel. Height of 35 cm



090320

Single Processing Tanks

Made from durable acid-proof PVC.
Capacities of 5, 10, 20, 30 or 40 litres.

Manual Thermo-Controlled Film Processors

Made from durable acid-proof PVC For film hangers up to 35 × 43 cm - top bar of 46 cm. Thermostatically controlled heater for the developing bath. Complete for direct installation.
230 V - 50/60 Hz - 1000 W

090331

THERMO 3

- 1 tank of 10 l with lid for developer
 - 1 tank of 10 l with lid for fixer
 - 1 tank of 80 l for intermediate washing and final rinsing
- Dimensions: 60 × 100 × 55 cm (w/h/d)

090332

THERMO 4

- 1 tank of 20 l with lid for developer
 - 1 tank of 16 l for intermediate washing
 - 1 tank of 20 l with lid for fixer
 - 1 tank of 100 l for final rinsing
- Dimensions: 105 × 105 × 60 cm (w/h/d)



CR Cassettes, Screens

CR Cassettes and Screens

We offer CR cassettes and screens in all available sizes from different manufacturers such as Carestream, Fujifilm, Agfa. Please ask while mentioning your type of CR Reader.

We also offer replacement CR screens to substitute worn out screens.
Please ask for an offer.

Laser Imagers

Laser Imager

X-DRY

Dry laser imager for pictures with diagnostic image quality.

X-DRY boasts a world-class high throughput speed of 80 sheets per hour with 35 x 43 cm (14 x 17") film. It is equipped with two universal film trays which enable printing on two different film sizes at the same time. Offering high resolution of 508 dpi and a maximum density of 4.0, X-DRY is ideal for high definition images.

- Applicable film:
XDI Dry Imaging Film
35 x 43 cm (14" x 17"); 100 sheet box
26 x 36 cm (10" x 14"); 150 sheet box
25 x 30 cm (10" x 12"); 150 sheet box
20 x 25 cm (8" x 10"); 150 sheet box
- Daylight film loading
- 2 trays (4 sizes of film are available by changing film trays)
- Approx. 80 sheets/hour 35 x 43 cm (14" x 17")
- Pixel size: 50 µm (508 dpi)/100 µm (254 dpi)
- Image memory: 1 GB
- Density adjustment: automatic
- DICOM network input
- Dimensions: 61 x 63 x 89 cm (w x d x h)
- Weight: 104 kg
- Power: 100–240 V AC; 50/60 Hz



Other Imagers

We also offer other laser imagers from different manufacturers. Please ask.

Film and Paper for Laser Imagers

Consumables for Laser Imagers

XDI Laserfilm

Medical Dry Laser Imaging Film, XDI, is special designed for use with MEDICAL DRY LASER IMAGER X-Dry. XDI is employed in recording the images from Computed Radiography (CR), Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Digital Subtraction Angiography (DSA), and other medical imaging modalities. The XDI film is specially packaged for daylight loading.

- Available film sizes:
 - 35 x 43 cm (14" x 17"); 100 sheet box
 - 26 x 36 cm (10" x 14"); 150 sheet box
 - 25 x 30 cm (10" x 12"); 150 sheet box
 - 20 x 25 cm (8" x 10"); 150 sheet box

We offers film and paper for most commonly used types of laser imagers, among them

- Agfa Drystar DT 1B
- Agfa Drystar DT 2B
- Agfa Drystar DT 5000
- Carestream DryView DVB
- Carestream DryView DVB Plus
- Fujifilm DI-AT
- Fujifilm DI-HL
- Konica SD-P
- Konica SD-Q

Please specify the exact type and size of the desired film or the type of your laser imager.

Monitors

EIZO Monitors

Radiforce MX-Series

Clinical Review Monitors

We offer the complete range of Radiforce MX-Series of review monitors. For specifications please ask for a brochure which includes all necessary technical data.

Radiforce G&R-Series

Diagnostic Monitors

We offer the complete range of diagnostic Radiforce G&R-Series monitors. For specifications please ask for a brochure which includes all necessary technical data.

NDS Monitors

Dome Displays

We offer the complete range of Dome series grayscale and color displays. For specifications please ask for all necessary technical data.



X-Ray Protection

Protective Shielding Systems

Protective Panels

Panels made from white veneered hardboard with lead lining and surrounding steel profiles. Mobile on swivelling castors with brakes for an easy movement. Lead glass observation window of 30 x 40 cm (w/h).

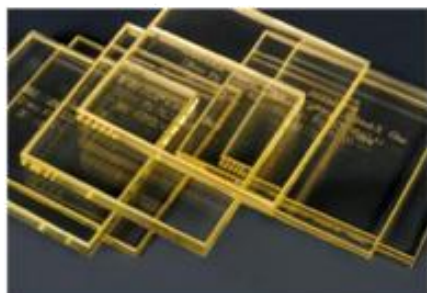
- 049201 **Protective Panel with Window**
Dimensions 110 x 200 x 75 cm (w/h/d)
Lead equivalent 2,0 mm PB
- 049202 **Protective Triple Panel**
centre section with Window plus two adjustable side wing panels fixed with radiation-proof hinges
Dimensions centre panel 80 x 200 cm (w/h), two side wing panels 60 x 200 cm (w/h) each
Lead equivalent 2,0 mm PB



- 049203 **Mobile X-ray protection shield**
X-ray protection for upper and lower body with unrestricted view due to generous lead acrylic glass panel. The panel is easily height-adjustable and retracts almost completely inside its steel base
Dimensions:
Steel body: width 78 cm, height 107 cm
Lead acrylic glass: width 70 cm
Overall height: 115 – 190 cm
Lead equivalent:
Steel body: 1.0 mm
Lead acrylic glass: 0.5 mm



X-Ray Protection



Protective Lead Glass

Lead glass protecting against X-rays and gamma rays. Available in all sizes requested within the maximum dimensions (see table). All edges are cut and grinded.

	Lead Equivalent mm Pb at 110 kV	Glass Thickness mm	Max. plate mass kg/m ²
049501	1,6	5,0 – 6,5	31,2
049502	2,3	7,0 – 8,5	40,8
049503	2,8	8,5 – 10,0	48,0
049504	3,2	10,0 – 11,5	57,6
049505	3,5	11,5 – 13,0	62,4
049506	4,7	16,0 – 18,0	76,8
049507	4,6 (at 150 kV)	20,0 – 22,0	86,4

Frames for Protective Lead Glass

Single-sided frames, made from stainless steel.

04951x

Frame for Lead Glass



Protective Lead Rubber

049601	Lead Rubber	Lead equivalent 0,175 mm Pb
049602	Lead Rubber	Lead equivalent 0,25 mm Pb
049603	Lead Rubber	Lead equivalent 0,50 mm Pb

Protective Building Materials

049701	Protective Window Frame
049702	Protective Doors
049703	Protective Vertical Blinds
049704	Shielded Wall Panels
049705	Protective Building Materials
049706	Lead Protective Sheets

X-Ray Protective Clothing

X-Ray Protective Aprons

For protective clothing several layers of flexible lead rubber foils are enclosed in a protective skin and are arranged so that they can move slightly one over the other and flex to body movement. The cover is made of a flexible and soft material in modern colours. It allows easy cleaning and disinfection.

Standard Order Details:

Height (cm)	Length of apron (cm)
<155	90
155-165	100
165-175	110
175-185	120
>185	130

Available colours:



Front Aprons

This is our most used apron and designed mainly for long use during X-ray medical procedure.

This apron guarantees sufficient protection against scattered rays. Sleeveless with shoulder and back protection of 0,25 mm Pb.

Sizes (Length/width): 90/60 cm, 100/60 cm, 110/60 cm, 120/60 cm, 130/60 cm

Other sizes on request.

041xxx

Front Apron

Lead equivalents:

Front 0,25 / 0,35 / 0,50 mm Pb

041xxx

Light Weight Front Apron

Lead equivalents:

Front 0,25 / 0,35 / 0,50 mm Pb



X-Ray Protection

Coat Aprons

A double sided apron with all-around protection in full length. Preferable used during cardiology. An apron with shoulder padding and belt to reduce the pressure on the shoulders. Sizes (Length/girth): 90/115 cm, 100/125 cm, 110/125 cm, 120/125 cm

Other sizes on request.

0420xx

Coat Apron

Lead equivalents:

Front 0,25 / 0,35 / 0,50 mm Pb

Back 0,25 / 0,35 mm Pb

0430xx

Light Weight Coat Apron

Lead equivalents:

Front 0,25 / 0,35 / 0,50 mm Pb

Back 0,25 / 0,35 mm Pb



Children Aprons

Special protective apron for paediatric patients. Providing optimal protection.

Sizes (Length/width): 50/42 cm (3-5 years), 60/46 cm (6-8 years), 70/50 cm (9-12 years)

0401xx

Children Front Apron

Lead equivalent of 0,50 mm Pb

0403xx

Children Coat Apron

Lead equivalent mm Pb: 0,50 front / 0,50 back

Surgeon Aprons

Designed for wearing under the gown. Releasing the Velcro-fastener allows the apron to drop without removing the sterile gown.

Front protection in full length, partial upper back protection of 0,25 mm Pb.

Sizes (Length/width): 100/60 cm, 110/60 cm, 120/60 cm, 130/60 cm

Other sizes on request.

044xxx

Surgeon Apron

Lead equivalents:

Front 0,25 / 0,35 / 0,50 mm Pb



Dental Aprons

Protection for patients during dental radiology. Full coverage of front and shoulder.

Sizes (Length/width): 90/60 cm (adults), 70/45 cm (children)

045xxx

Dental Apron

Lead equivalents: 0,25 / 0,50 mm Pb

Dental Aprons + Spine

Same as Dental aprons, additional back-spine protection.

Sizes (Length/width): 90/60 cm (adults), 70/45 cm (children)

045xxx

Dental Apron + Spine

Lead equivalents: 0,25 / 0,50 mm Pb



Panoramic Dental apron

Dental apron for panoramic dental X-ray.

Sizes (Length/width): 90/110 cm (adults), 70/90 cm (children)

0454xx

Panoramic Dental Apron

Lead equivalent: 0,5 mm Pb

X-Ray Protection

Skirt & Vest

Consisting of a separate skirt and vest. Comfortable to wear through division of weight on shoulders and hips.

Sizes (Length/width vest / length skirt): 60/107/55 cm, 60/107/60 cm, 60/107/65 cm, 60/117/60 cm, 60/117/65 cm, 60/117/70 cm, 60/127/65 cm, 60/127/70 cm, 60/127/75 cm
Other sizes on request.

0460xx

Skirt & Vest

Lead equivalents:

Front 0,50 mm Pb, Back 0,25 mm Pb

0465xx

Light Weight Skirt & Vest

Lead equivalents:

Front 0,50 mm Pb, Back 0,25 mm Pb



Half Apron

Gonad protection for patients during thorax and upper abdomen radioscopy. Closure with hip clamp.

Sizes: 20x25 cm (infants), 30x30 cm (children), 37x45 cm (adults), 40x50 cm (oversize)

0470xx

Half Apron

Lead equivalent: 0,50 mm Pb



X-Ray Protective Accessories

Belts

Belts can provide a reduction of the weight of aprons through allocation of a part of the weight on the pelvis.

047501

Standard Belt

width 5 cm

047502

Stretch Belt

width 15 cm

Protective Head Cap

Lead equivalent: 0,35 mm Pb

047505

Head Cap

Thyroid collar

Adjustable collar with Velcro closure. Providing optimal protection of thyroids. Ideal protection in combination with front or coat apron.

Lead equivalent: 0,50 mm Pb

047601

Thyroid collar



X-Ray Protection

Spectacles

X-ray protective lead glass spectacles with light weight frame. 047701 **Spectacles Design** with front glasses and lightweight plastic frame. Weight 70g. Lead equivalent 0,75 mm Pb



047702

Spectacles with side protection with front and side glasses and plastic frame. Weight 85 g. Lead equivalent 0,75 mm Pb (front) and 0,5 mm (sides)



Protective Gloves

X-ray protective gloves. Made from flexible and seamless lead vinyl. Including soft washable linen inner gloves.

047801

Protective Gloves

Lead equivalent 0,50 mm Pb



Surgical Gloves

X-ray protective gloves. Sterile, lead free, nontoxic. For single use only!

Sizes: 7½ (small), 8 (medium), 8½ (large), 9 (x-large)



047805

Surgical Gloves

Patients Protection

Ovary-Shield

Optimal protection of the female ovaries. With hip-belt for standing X-ray. Set of 3 sizes: S (<9 years) / M (9-14 years) / L (>14

Ovary-Shield
Lead equivalent 1,0 mm Pb

ears) 048001



Flexible Gonad-shield

Optimal protection of the entire male genitals. Allowing self-application by the patient. Made from multiply lead rubber sheets with vinyl cover for easy cleaning.

Sizes: S (children) / L (adults)

04820x

Flexible Gonad shield

Lead equivalent 1,0 mm Pb



04820x

Hygiene pouches

for flexible Gonad shield, 100 pcs.

X-Ray Protection

Dental Patient shield

Comfortable for the patient. To be held by the patient.
With exchangeable handle. Washable PVC-cover.

048500

Dental Patient shield

Lead equivalent 0,50 mm Pb



Aprons Cleaning Set

Special cleaning solution for X-ray protective clothing and Velcro-brush for cleaning Velcro fasteners

048900

Aprons Cleaning Solution 1 bottle of 500 ml

048901

Velcro-brush

Storage Racks

Wall mounted Racks

Made of stainless steel with swivelling arms. Allows a convenient and careful storage of the X-ray protective clothing. Including installation material for easy wall mounting.

- 049101 for 1 Pair of Gloves
- 049102 for 2 Pairs of Gloves
- 049103 for 3 Pairs of Gloves
- 049104 for 1 Apron
- 049105 for 1 Apron and 1 Pair of Gloves
- 049106 for 2 Aprons
- 049107 for 3 Aprons
- 049108 for 5 Aprons
- 049109 for 6 Aprons
- 049110 for 10 Aprons
- 049111 for 1 Dental Apron
- 049112 for 1 Set of 4 Half Aprons



Mobile Racks

Made of stainless steel with swivelling arms. Allows a convenient and careful storage of the X-ray protective clothing. Mobile on castors with 2 brakes.

- for 5 Aprons 0
- for 10 Aprons 4
- Clip on Hanger** to clip on the 1
- backside of the mobile racks 3
- 1 049132 049133 for 1 pair of gloves and 1 set of 4 half 3
- 049140 aprons
- for Skirt and Vest



Additional Hooks

049150

X-Ray Film Viewing Boxes

X-Ray Film Viewers / Negatoscopes



Film Viewing Units Crystal View for wall and table top mounting. Housing made of white powder coated steel. Viewing area with acrylic glass front panel for an uniform light distribution by daylight fluorescent tubes. Stainless steel film retention bars at the top. All units are equipped with electronic control gear for optimized light quality (high frequency), conservation of energy and extended life-time of the lamps 230 V – 50 Hz (others on special request).

Film Viewing Unit Standard

One single on-off-switch for the total unit on the front side. 2 fluorescent tubes per viewing area. No partition of the viewing areas, no nylon thread. Luminance approx. 2.000 cd/cm². Colour temperature 6500 K.

Film Viewing Unit Standard Plus

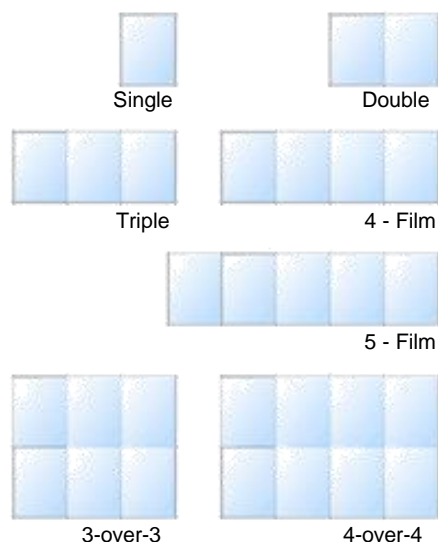
Same as Standard, but one off-switch per viewing area. With partition of the viewing areas and nylon thread.

Film Viewing Unit Standard Vario

One single on-off-switch for the total unit on the front side. Luminance control, one single dimmer for the total unit on the front side. 2 fluorescent tubes per viewing area. No partition of the viewing area, no nylon thread. Luminance approx. 2.000 cd/cm². Colour temperature 6500 K.

Film Viewing Unit Standard Vario Plus

Same as Standard Vario, but one on-off-switch and one dimmer per viewing area. With partition of the viewing areas and nylon thread.



Viewing Area (cm)	Dimensions (cm)	Standard	Standard Plus	Standard Vario	Standard Vario Plus
Single	35 x 43	38 x 50 x 10 060101	060301	060201	060401
Double	70 x 43	72,5 x 50 x 10 060102	060302	060202	060402
Triple	105 x 43	107,5 x 50 x 11 060103	060303	060203	060403
4-Film	140 x 43	142,4 x 50 x 11 060104	060304	060204	060404
5-Film	175 x 43	177,5 x 50 x 10 060105	060305	060205	060405
3-over-3	2 x 105 x 43	107 x 96 x 11 060106	060306	060206	060406
4-over-4	2 x 140 x 43	142 x 96 x 11 060107	060307	060207	060407

X-Ray Accessories

Film Viewing Unit Professional

One single on-off-switch for the total unit on the front side. 3 fluorescent tubes per viewing area. No partition of the viewing areas, no nylon thread. Luminance approx. 2.800 cd/cm². Colour temperature 6400 K.

Film Viewing Unit Professional Plus

Same as Professional, but one on-off-switch per viewing area. With partition of the viewing areas and nylon thread.

Film Viewing Unit Professional Vario

One single on-off-switch for the total unit on the front side. Luminance control, one single dimmer for the total unit on the front side. 3 fluorescent tubes per viewing area. No partition of the viewing area, no nylon thread. Luminance approx. 2.800 cd/cm². Colour temperature 6400 K.

Film Viewing Unit Professional Vario Plus

Same as Professional Vario, but one on-off-switch and one dimmer per viewing area. With partition of the viewing areas and nylon thread

Viewing Area (cm)	Dimensions (cm)	Pofessional	Pofessional Plus	Pofessional Vario	Pofessional Vario Plus
Single	35 x 43	38 x 50 x 10 060111	060311	060211	060411
Double	70 x 43	72,5 x 50 x 10 060112	060312	060212	060412
Triple	105 x 43	107,5 x 50 x 11 060113	060313	060213	060413
4-Film	140 x 43	142,4 x 50 x 11 060114	060314	060214	060414
5-Film	175 x 43	177,5 x 50 x 10 060115	060315	060215	060415
3-over-3	2 x 105 x 43	107 x 96 x 11 060116	060316	060216	060416
4-over-4	2 x 140 x 43	142 x 96 x 11 060117	060317	060217	060417

Film Viewing Boxes with Shutters

Negatoscopes with shutters for easy collimation of the viewing area. Housing made of white powder coated steel for wall and table top mounting. 3 fluorescent tubes per viewing area for an uniform light distribution. Stainless steel film retention bars at the top. Electronic and stepless luminance control 10 – 100%. High frequency regulator for flicker free light distribution. Easy replacement of the tubes by removing the front panel only.
230 V – 50 Hz (others on special request).



Viewing Area (cm)	Dimensions (cm)	Tubes	Luminance (cd/cm ²)	Article No.
Single	40 x 43	60 x 62,5 x 10	3 x 15 W 3.600	060501
Double	80 x 43	100 x 62,5 x 10	3 x 30 W 3.600	060502
Triple	105 x 43	125 x 62,5 x 10	3 x 36 W 3.900	060503
4-Film	140 x 43	160 x 62,5 x 10	3 x 58 W 5.200	060504

Dental Film Viewing Units

Negatoscopes for wall and table top mounting. Fluorescent tubes per viewing area for an uniform light distribution. Film retention bars.
230 V – 50 Hz (others on special request).

Viewing Area (cm)	Tubes	Luminance (cd/cm ²)	Article No.
24 x 30	4 x 8 W	2500	060601
30 x 24	4 x 8 W	2500	060602
3 x 15 x 30	3 x 2 x 8 W	2500	060603



X-Ray Accessories

Mammography Film Viewing Units

Mammography negatoscopes with shutters and very high luminance. Luminance control 10 – 100%. 4 fluorescent tubes per viewing area for an uniform light distribution. High frequency regulator for flicker free light distribution.

230 V – 50 Hz (others on special request).

Viewing Area (cm)	Dimensions (cm)	Tubes	Luminance (cd/cm ²)	Article No.
36 x 48	38 x 62,2 x 11	4 x 18 W	5.200	060701
72 x 48	74 x 62,2 x 11	8 x 18 W	5.200	060702
108 x 48	110 x 62,2 x 11	12 x 18 W	5.200	060703
144 x 48	146 x 62,2 x 11	16 x 18 W	5.200	060704
180 x 48	182 x 62,2 x 11	20 x 18 W	5.200	060705

Mammography Film Viewing Units with shutters

Mammography negatoscopes with shutters and very high luminance. Electronic and stepless luminance control 10 – 100%. High frequency regulator for flicker free light distribution.

230 V – 50 Hz (others on special request).

Viewing Area (cm)	Dimensions (cm)	Tubes	Luminance (cd/cm ²)	Article No.
42 x 48	66 x 67 x 12	12 x 18 W	10.400	060801
96 x 30	124 x 54 x 12	4 x 36 W	7.200	060802
2 x 96 x 30	124 x 89 x 12	12 x 30 W	9.000	060803

High Intensity Viewer

For detailed examination of darker film parts. Diaphragm adjustable from 5 – 98 mm. Krypton bulb with brightness of approx. 100.000 lux. Automatic switch-off- 230 V – 50 Hz – 100 W (others on special request).

- 061000 **Free standing** with stainless steel stand
- 061010 **Mounted model for viewing box**
- 061020 **Spare bulb**



Mobile Stand for Viewing Units

Made of white lacquered steel. Table board on top. Mobile on castors with brakes.

For viewing areas up to

061101	40 cm
061102	80 cm
061103	105 cm
061104	120 cm
061105	144 cm

Wet Film Attachment

For viewing of wet films after processing. Holder for film hangers with drip pan.

Length

061201	40 cm
061202	80 cm
061203	105 cm
061204	120 cm
061205	144 cm

X-Ray Accessories

Frame for wall recessed viewing units

Frame with lateral drill-holes. When ordering viewing units for wall recessing, please, mention in your order.

	For viewing area of
061301	40 x 43 cm
061302	80 x 43 cm
061303	105 x 43 cm
061304	120 x 43 cm
061305	144 x 43 cm
061306	2 x 144 x 43 cm

Film Viewing Box Accessories

Magnifying glass

Hand model with a diameter of 100 mm, 2-fold enlargement

062030 **Magnifying glass**



Mobile X-Ray Units

Mobile X-Ray Units

Mobile X-ray units for general diagnostics in private clinics, hospital wards, operating theatres and at patient's bedside. Equipped with advanced monobloc HF generator, double focus X-ray tube and collimator for high quality diagnostic images. Easily to operate by a microprocessor controlled console with 24 anatomical programs and LCD-display. Interfaces for connection to a dose area product meter (DAP), automatic exposure control (AEC) and potter bucky device. Variable tube head support with swivelling X-ray tube in a yoke for optimal adjustment of the X-ray tube head. Mobile stand with large rubber castors. Due to the low weight and compact dimensions the units are easy to move. They can be put into operation quickly wherever a standard single phase socket of 3 kVA, 230V- 50/60 Hz is available.

Focus - floor - distance: 46 - 200 cm

Tube head yoke rotation: $\pm 180^\circ$

Tube head rotation in yoke: ± 90

070110 **SMAM Roller 4**

Power: 4 kW

Voltage: 40 - 110 kV

Tube current: max. 80 mA

mAs Value: 0,5 - 200 mAs

Exposure time: 0,006 - 8,0 sec.

X-ray tube: fixed anode type

Focal spot: 1,8 mm single focus

Weight: 110 kg

070115 **SMAM Roller 8.5**

Power: 8,5 kW

Voltage: 40 - 125 kV

Tube current: 25 - 200 mA

mAs Value: 0,5 - 250 mAs

Exposure time: 0,003 - 6,3 sec.

X-ray tube: rotating anode type

focal spot: 0,6 mm single focus

Weight: 130 kg

070120 **SMAM Roller 15**

Power: 15 kW

Voltage: 40 - 125 kV

Tube current: 25 - 200 mA

mAs Value: 0,5 - 250 mAs

Exposure time: 0,003 - 6,3 sec.

X-ray tube: rotating anode type

focal spot: 0,6- 1,3mm

Weight: 150 kg

070130 **SMAM Roller 30**

Power: 30 kW

Voltage: 40 - 125 kV

Tube current: 50 - 400 mA

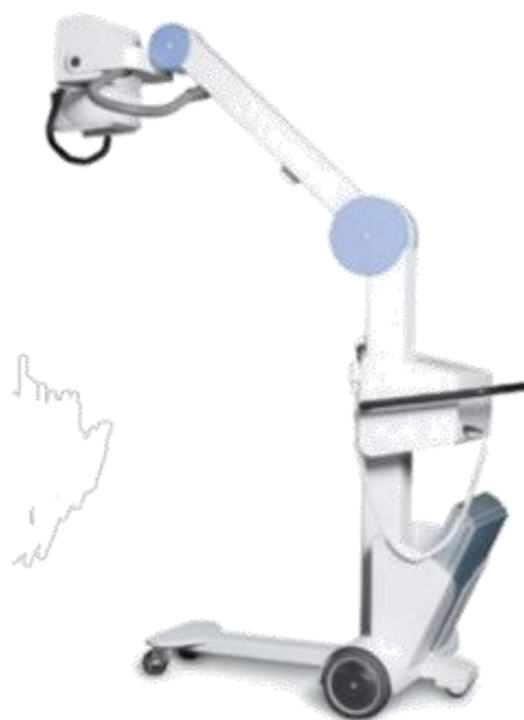
mAs Value: 0,5 - 250 mAs

Exposure time: 0,003 - 6,3 sec.

X-ray tube: rotating anode type

Focal spot: 0,6- 1,3mm Weight:

150 kg



X-Ray Accessories

Portable X-Ray Units

Compact portable radiographic unit for general diagnostics for small regional medical facilities and field applications outside of hospitals. Easy handling and operation. Integrated monobloc HF generator, tube head with single focus stationary X-ray tube, control panel, remote control and collimator with laser beam in a transport case. 110/230V - 50/60Hz

Voltage: 100 kV
 Tube current: 35 or 60 mA
 mAs value: 0,4 - 100 mAs
 Timer: automatic timer
 Programs: 8 anatomical programs
 X-ray tube: fixed anode type
 Focal spot: 1,2 or 2,0 mm single focus
 Weight: 13 kg (without case)



070200 **Portable X-Ray Unit**

Mobile Stand for Portable X-Ray Unit

Mobile stand on swivelling castors with two brakes for an easy movement and safe positioning. Height adjustable and horizontal swivelling $\pm 90^\circ$ support for the portable X-ray unit.

Height adjustable up to 180 cm.



070210 **Mobile Stand**

Ultrasound Gel

Ultrasound Gel

Gel US

Ultrasound gel for use in external ultrasound applications. The gel can be used in therapeutic and diagnostic medicine.

050501	Gel US, 250 ml
050502	Gel US, 500 ml
050503	Gel US, 1000 ml
050504	Gel US, 5 l Canister ml
050505	Gel US, 5 l cubitainerl
050506	Gel US, 10 l canister



Dispenser

Dispensers for clean and easy pouring of the canisters

050508	Dispenser for 5 l canister
050509	Dispenser for 10 l canister

Equipment for Quality Control

Quality Control of Film Processing

Sensitometer Sensi C

21 step, dual-spectrum, single-side sensitometer for constancy testing of film processing of blue- and green-sensitive X-ray-films. Operated by rechargeable battery. Power supply available. 110140

110100

Sensi C

110101

Power supply

230 V / 50 Hz for Sensi C, Densoquick 2, Densonorm 21



Sensitometer Sensi-dent

Compact dual-spectrum, 5 point pocket sensitometer for constancy testing of dental films. Also usable for conventional blue- and green-sensitive X-ray films.

Sensi-Dent

110110



Densitometer Densoquick 2

Calibratable densitometer for single point measurements of optical densities of X-ray films.

Densoquick 2
Power supply

Power supply necessary, please order separately!

110140

110101



Densonorm 21 ECO

Power supply

230 V / 50 Hz for Sensi C, Densoquick 2, Densonorm 21



230 V / 50 Hz for Sensi C, Densoquick 2,
Densonorm 21

110141

Calibration film for Densoquick 2

Densitometer Denso-Dent

Pocket densitometer for single point measurements during
quality control of dental films and conv. X-ray films. Power supply
necessary, please order separately!

110150

Denso-dent

110151

Power supply

230 V / 50 Hz for Denso-Dent only

Combined devices (Sensitometer & Densitometer)

Densonorm 21 ECO

21 step sensitometer and densitometer with measuring arm
integrated in one unit.

For constancy testing of film processing and measurement
of test phantom films. Power supply necessary, please order
separately!

110170

110101

X-Ray Accessories

Densonorm 21 I

21 step sensitometer and densitometer with measuring arm and scanner for motorized measurement of 21 step film strips in one unit.

Automatic calculation of speed index, contrast index (according to DIN or ANSI), LE, LK, rel. speed and aver. gradient.

Memory function stores density values for up to 3 film strips. RS-232 interface for connection to a PC or compatible printer.

Mains and battery operation (short-term) possible, please order power supply separately!

110180 **Densonorm 21 I**

110101 **Power supply**

230 V / 50 Hz for Sensi C, Densoquick 2, Densonorm 21

Digital Thermometer

for testing the temperature of developing and fixing baths. Probe made from stainless steel.

Measuring range -50 – +150 °C

090811 **Digital Thermometer**



Dosimeter, Test phantoms and accessories

Alpha plus Dosimeter

ALPHA plus Dosimeter for constancy testing of X-ray exposure equipment as well as for mammography.

With LCD, serial interface and plug-in for different detectors.

Display of: dose, dose rate and exposure time.

110200 **Alpha plus Dosimeter**

Sensor in absorption filter

Fits the ALPHA plus Dosimeter for the constancy test of all analog X-ray equipment (direct radiography, fluoroscopic techniques) and digital fluoroscopic techniques. Not for digital radiography or mammography X-ray equipment!

The sensor is located above the patient-equivalent-filter (25mm Al) under the insertion plate.

Energy range: 50kV - 155kV

Effective dose range: 0,1mGy/s - 500mGy/s

110210 **Sensor in absorption filter**



Finger detector

Fits the ALPHA plus Dosimeter for the constancy test of digital and analog X-ray-equipment (direct radiography and fluoroscopy; not for dental or mammography systems).

Because of its shape the sensor is suitable for insertion into the patient-equivalent-filter for use with near-the-tube measurements as well as an external sensor.

Energy range: 50kV - 155kV

Effective dose range: 0,1mGy/s - 500mGy/s

110220

Finger detector



Mammography detector

Fits the ALPHA plus Dosimeter for the constancy test of all analog or digital mammography X-ray equipment.

Energy range: 24kV - 40kV

Effective dose range: 0,1mGy/s - 500mGy/s

110221

Mammography detector

X-Ray Accessories

Test Phantom Fluorad

With the Fluorad A+D Test Phantom it is possible to measure the following parameters:

- dynamic range
- contrast resolution
- spatial resolution
- beam quality
- homogeneity

The overall dimensions of the Test Phantom are 300 mm x 300 mm x 18.5 mm for the "Fluorad 30 A+D" and 200 mm x 200 mm x 18,5 mm for the "Fluorad 20 A+D".

The copper plate within the details is bedded in acrylglass plates. The acrylglass is white, so that the light beam can be better seen under spotlight conditions



110231

Fluorad 30 A+D

Dimensions: 200 mm x 200 mm x 18.5 mm



Test Phantoms Digrad

Test phantom per German standards (DIN 6868/58 and DIN 6868/13) for acceptance and constancy tests of digital radiography equipment (e.g. storage phosphor or full digital). With DIGRAD you are able to measure all parameters required by above standards.

- dynamic range
- contrast resolution
- homogeneity
- spatial resolution (optional)
- position and size of the effective radiation field

110240

Digrad A+K

110241

Absorption filter

25 mm aluminium filter with insertion frame for mounting near X-Ray tube. For use with Digrad A+K for acceptance tests

X-Ray Accessories

Dental Phantoms

110250 **Dental Test Phantom**
For constancy checks of analogue dental X-ray units



110260 **Dental Test Phantom Diradent**
for acceptance and constancy testing of digital dental X-ray-units per German standards DIN 6868/5 and DIN V 6868/151 and international standards IEC 61223-2-7 and IEC 61223-3-4

110261 **Copper plate 0,8 mm Cu**
For use with Test phantom

Diradent 110262 **Copper plate 1,8 mm Cu**
For use with Test phantom

Diradent 110263 **Phantom holder**
For diverse digital X-Ray units - please specify unit

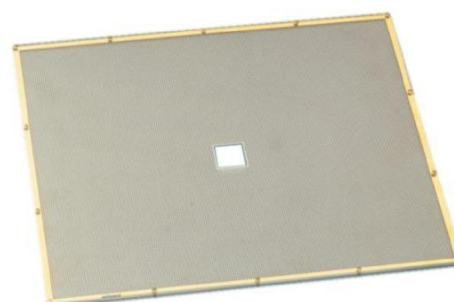


Cassette Quality control

110280 **Cassette Test Grid**
Test grid for testing cassette film-screen contact of normal X-ray cassettes
Mesh size: 3.15 mm
Wire diameter: 0.71 mm
Dimensions: 420 mm x 450 mm x 6 mm

110281 **Mammo Test Grid**
Very fine-mesh test grid especially to test the film-screen contact of mammography-cassettes.
Mesh size: 0.5 mm

Wire diameter: 0.1 mm Mammo Test Grid Dimensions: 240 mm x 300 mm x 6 mm



Aluminium Step Wedges

Aluminium step wedges for determination of the sensitometric curve shape, speed and mid-gradient of conventional X-ray screen-film systems.



	Steps	Step height mm	1st step mm	Step width mm	Dimensions mm (l x w x h)
110290	11	3,0	5,0	12,0	132 x 50 x ,5
110291	21	1,5	1,5	11,0	230 x 112 x 32

Mammo Step Wedge

21 step aluminium wedge for determination of sensitometric curve shape, speed and mid gradient of mammographic X-ray screen-film systems. Height of steps each 0,3 mm, depth of steps each 5,0 mm.

105x10x6,3 mm (l x w x h)

110292 **Mammo Step Wedge**



Quality control for monitors and viewing boxes

Digital Luminance-/Illuminance Meters

for the acceptance test and constancy test of viewing boxes and monitors

- Especially designed for luminance measurements, including the influence of ambient light; of image display devices (monitors, display, screens etc.) according to german standards DIN V 6868-57 and of viewing devices according to DIN 6856
- Display and optical measurement system combined in one compact housing. Measurement of luminance in cd/m^2 and illuminance in lux with one device
- Back-light display for good readability in dark rooms

USB interface for data transmission to a PC and charging the rechargeable battery

110300 **CD mon**
Display and optical measurement system combined in one compact housing. Measurement of luminance in cd/m^2 and illuminance in lux with one device, Back-light display for good readability in dark rooms, USB interface for data transmission to a PC and charging the rechargeable battery

110310 **CD-LUX**
USB interface for data transfer to PC;
Storage of several measurements possible
Delivery without detectors, please order separately

110311 **Detector illuminance (lux)**
for CD-LUX

110312 **Detector luminance (cd/m^2)**
for CD-LUX



X-Ray Accessories

Dose Area Product Meters

DAP Dose Area Product Meters

Transparent ionization chamber with integrated electronics and internal LCD display.

The DAP are intended to be mounted on the face of diagnostic X-ray collimators for measuring dose area product or AEP (Area Exposure Product) during diagnostic radiological examinations.

They are especially designed for mounting close to the X-ray tube and are inserted into the guide rails of the collimator. The fixation of the chamber may be done by the user.

Delivered with optional choice of insertion frames (176 or 167 mm) or adapter for additional filters.

- | | |
|--------|---|
| 110400 | KermaX IDP
Ionization chamber with internal LCD display. |
| 110410 | KermaX SDP
Ionization chamber with external LCD display (single-line).
The external LCD display unit can be installed on the control console and connected to a PC or printer. |
| 110401 | Additional rails for Philips Adapter
For attachment of additional filters. |
| 110402 | Additional rails for Siemens Adapter
For attachment of additional filters. |



X-Ray Phantoms for Patient Simulation

X-ray Phantoms

High quality X-ray phantoms for a realistic patient simulation in medical education, training, scientific research, technical development and routine quality control. The phantoms are available with natural human bones or artificial bones for first-rate and realistic images. The bodies of the phantoms are made from special plastic material for a realistic tissue simulation in transparent or opaque version. All bones are mounted without metal parts. Natural bone phantoms are showing their individual characteristics. Phantoms are available as part or full body phantoms with mobile mounted skeleton and extremities. Body phantoms are imitating internal cavities and organs. Phantoms can also be produced according to customers' request

- | | |
|--------|-----------------------|
| 110500 | X-ray Phantoms |
|--------|-----------------------|



X-Ray Accessories

X-Ray Accessories

Lead Markers

Nickel plated lead markers based on a white plastic support. Height of letters 15 mm.

Lead Markers DeLuxe

Made from acryl glass with inserted lead letters. Height of letters 5 mm. Height of L+R as well as D+G 7,5 mm.

Lead Markers Set

Comprising of one set each: A-Z, 0-9 and L+R, one holder as well as one storage box.



05010x



05011x

	Lead Markers	Lead Markers DeLuxe
A - Z	050101	050111
0 - 9	050102	050112
L + R	050103	050113
D + G	050104	050114
Holder for Lead Markers	080105	050115
Lead Markers Set	050100	050110

Clip Markers L + R

Made from stainless steel. To be clipped onto the cassette. Both L and R on one single clip.

050121	Clip Marker L+R - AP Method
050122	Clip Marker L+R - PA Method



Radiopaque Legends

Made from acryl glass with inserted lead letters. Height of letters 5 mm.

050141	Single – Inscription as per request
050142	Set of 10 – Comprising of: AFTER EVACUATION, CONTROL, ERECT, EXPIRATION, INSPIRATION, PORTABLE, PRONE, POST MICTURTION, POST REDUCTION, SUPINE



050152

X-Ray Rulers

Made from plastics with radiopaque scale in 1 mm graduation.

050151	Solid , length as per request
050152	Flexible , length 50 cm

I.V.P. clocks

Made from acryl glass with radiopaque scale from 0 – 60 min. With one adjustable hand.

050131	I.V.P. clock 0-60 min
050132	I.V.P. clock 0-60 min with magnet



05014x

X-Ray Accessories

Patient Positioning

Positioning Pads

For a comfortable, careful and safe positioning of the patient. Extremely pleasant to the skin. Made from soft radiolucent foam material with special coating for an easy cleaning and disinfection.



050310

Standard Set – Set of 10 pcs. positioning pads in 7 different sizes:

1 round plate	Ø 22 x 5 cm
1 ring plate	Ø 22/8 x 5 cm
1 roll	Ø 10 x 25 cm
1 cuboid	18 x 24 x 5 cm
2 wedges	18 x 24 x 12 cm
2 wedges	18 x 10 x 5 cm
2 wedges	18 x 24 x 7 cm

050321

Baby Immobilizer for an easy and safe positioning in supine position

050322

Infant Immobilizer for an easy and safe positioning in supine position



050331

Occipital Head Support - Adults

050332

Occipital Head Support - Children

050341

Face support Prone - Adults

050342

Face support Prone - Children

050351

Head Support left+right - Adults

050352

Head Support left+right - Children



Injection cushions with depression

050332

Injection cushion – 30x15x12/4 cm

050341

Injection cushion – 45x15x13/5 cm

050342

Injection cushion – 60x15x13/5 cm

Sand bags

For a comfortable, careful and safe positioning of the patient. Extremely pleasant to the skin. Sewed white durable vinyl bags filled with cleaned quartz sand. For an easy cleaning and disinfection.

050361 10 x 20 cm, 0,5 kg

050362 20 x 30 cm, 2,5 kg

050363 30 x 30 cm, 5,0 kg

050364 30 x 40 cm, 7,0 kg



X-Ray Accessories

Radiographic table

Radiographic table with radiolucent table top. Mobile on four swivelling castors with brakes. Handles for an easy movement and safe positioning. 211 x 76 x 67 cm (w/h/d)

Height: 76 cm

Patient load: max. 130 kg

Optionally available: Under table potter bucky device
071000

Radiographic table



X-Ray Mattresses

Made from soft radiolucent foam material. A washable vinyl cover allows an easy cleaning and disinfection. Black longitudinal center marking.

050371 180 x 60 x 3 cm

050372 200 x 60 x 3 cm



Darkroom Equipment

Darkroom Equipment

ECO Safelight

Housing made from plastics. Adjustable for direct and indirect darkroom illumination. Bulb E27. Without filter. 230 V - 50/60 Hz - 15W

- | | |
|--------|--|
| 090510 | ECO Safelight without filter |
| | Filters required: |
| 090511 | ECO filter 195 x 145 mm for blue sensitive films |
| 090512 | ECO filter 195 x 145 mm for green sensitive films |
| 090513 | ECO Spare Bulb |



SPOT Safelight

Compact safelight for all blue- and green-sensitive X-ray films. For small and mid-sized darkrooms. Very high safety factor for X-Ray films thanks to special twin-filter system.

230 V - 50/60 Hz - 15W

- | | |
|--------|-----------------------|
| 090520 | SPOT Safelight |
|--------|-----------------------|



LED Safelight

Red-light lamp for small and middle sized darkrooms for processing for all blue- and green-sensitive X-ray films. With brightness adjustment, Energy saving (only 4 W)

Dimensions: ca. 16 x 11 x 7 cm

AC 230 V - 50 Hz - 4 W; DC 12 V - 700 mA

- | | |
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| 090530 | LED Safelight |
|--------|----------------------|

Silver Recovery Unit

Body made from acid-proof PVC. Automatic electrolytic recovery of approximately 95 - 98% of the silver content in the fixer solution.

Suitable for connection to manual and automatic film processors.

Tank volume: 35 l

Capacity: 400 films / day

Recovery: max. 12 g Ag / hour

Dimensions: 22 x 65 x 54 cm (w / h / d)

230 V - 50 Hz - 30 W

- | | |
|--------|--|
| 090611 | Silver Recovery Unit ARGENT 400 |
| 090615 | Connection Set for ARGENT 400 |
| 090616 | Silver fishing net for ARGENT 400 |
| 090617 | Silver content test stripes , 100 pcs |



X-Ray Accessories

Darkroom Accessories

Film Hangers

Made from polished stainless steel. Safe fixation of the film by special clips.

Top bar of 46 cm length, ends with rubber sleeves. Available in all standard sizes, other sizes on special request.

090710	Film Hangers 13 x 18 cm, 5 pcs
090711	Film Hangers 10 x 24 cm, 5 pcs
090712	Film Hangers 18 x 24 cm, 5 pcs
090713	Film Hangers 15 x 30 cm, 5 pcs
090714	Film Hangers 24 x 30 cm, 5 pcs
090715	Film Hangers 35 x 35 cm, 5 pcs
090716	Film Hangers 20 x 40 cm, 5 pcs
090717	Film Hangers 30 x 40 cm, 5 pcs
090718	Film Hangers 35 x 43 cm, 5 pcs



Wet Film Stand

Made from stainless steel. For dripping and transport of 6 film hangers up to 35 x 43 cm. With PVC drip tray. Special fixing device prevents any contact of the film hangers. With handle.
090730 Wet Film Stand

Dripping Racks

Made from PVC. To accommodate wet film hangers.

090741 **Dripping Rack** for 12 film hangers
Length of 59 cm



Film Hanger Rack

Made from PVC. Two adjustable arms of stainless steel. To accommodate 20 film hangers.

090751 **Film Hanger Rack**

X-Ray Accessories

Film Clips

Made from stainless steel, length of 70 mm. With hook and inscription

stripe. 090720 **Film Clip** 20 mm width



Dental Film Holders

Made from polished stainless steel. Safe fixation of the film by single clips of 10 mm width

090910

Dental Film Holder 4 Clips

090911

Dental Film Holder 11 Clips



090810

Darkroom Timer 0-60 min

090811

Digital Thermometer for testing the temperature of developing and fixing baths. Probe made from stainless steel.

Measuring range -50 – +150 °C

090820

Stirring Rod Made from acid-proof PVC, length of approx. 60 cm. We recommend the use of one pair in order to avoid the contamination of developer and fixer baths.

090830

Tank Cleaning Brush with long handle for an easy cleaning of the processing tanks

090850

Immersion Heater for the heating of the processing solutions. Made from stainless steel with a hook. Immersion depth of 25 cm. Without thermostat. 230 V – 50/60 Hz – 600 W

090840

Film Cutter Metal base construction. Self-resharpening roller knife. Cutting length of 45 cm.

090841

Film Corner Cutter for softening sharp film edges. Metal construction, Self-resharpening hand model

090860

Illuminated Warning Sign Housing made from durable plastics for surface mounting. White front screen of 165 × 65 mm with a red inscription. 2 sockets E 14. For stationary connection to an existing power supply. Without cable. Inscriptions as per request. (X-RAY NO ENTRY, DARKROOM etc.) Dimensions of 205 × 90 × 50 mm (w / h / d). 115/230 V - 50/60 Hz - 10/15 W



Documentation and Archiving

Film Identification

Daylight ID-Camera IDC

Automatic daylight exposure of patient data onto the film by using ID-Cards. Suitable for ID-window-cassettes (US-type C1) only with data field of 26 x 76 mm. For A.P. and P.A. method. Automatic imprint of year, month, date and time. LCD display including error indication. Exposure density adjustable in 4 levels indicated by LED.



110 and 230 V, 50 and 60 Hz

027000
027010

Daylight ID-Camera IDC

ID-Cards US-type data field of 26 x 76 mm, without print, 1.000 pcs

Digital ID-Camera

Automatic daylight exposure of patient data onto the film by direct input and imprint. ID-cards not required. Suitable for ID-window cassettes. For A.P. and P.A. method. Automatic imprint of year, month, date and time. Exposure density adjustable in 10 levels. LCD display for all parameters including error indication. Connection to a computer system via serial DM9 female interface. Alternatively, direct connection to a computer keyboard by DIN 5 interface. Pre-configured with all main European languages. Including API/DLL software. Easy configuration within 2 minutes.

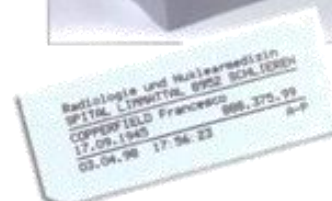


110 and 230 V, 50 and 60 Hz

027002
027020

Digital ID-camera

Computer-KeyBoard for digital ID-camera



Darkroom ID-printer

Exposure of patient data directly onto the film by using paper ID-stripes. For use in darkroom only prior to film development. Photo electric system independent from cassette type. Data field of 150 x 12 mm



230 V, 50 Hz

028000
028030
028040

Darkroom ID-printer

ID-Stripes for use with Darkroom ID-printer, 1.000 sheets of 8 stripes each

Cover stripes to cover ID-printer data fields on intensifying screens. Self adhesive. 1 pair

X-Ray Accessories

Film duplicator

Duplicating of original radiographs up to 40 x 43 cm by using duplicating films at a scale of 1:1. Simple operation by an integrated electronic exposure timer. Adjustable from 0,1 to 99 sec. For use in darkroom only. A red-light lamp supports an easy film insertion. Film exposure by 2 x 15 W fluorescent tubes.

230 V, 50 Hz



028020

Film duplicator

Archiving

100130

Archiving Files Made from strong carton with label and label Holder out of metal. Width of 8cm. 25 pcs.



Filing Labels

Self-adhesive labels for X-ray film envelopes and patient report files. For identification, marking and colour coding.

100200	Imprint "0"	colour: white	500 pcs
100201	Imprint "1"	colour: yellow	500 pcs
100202	Imprint "2"	colour: red	500 pcs
100203	Imprint "3"	colour: blue	500 pcs
100204	Imprint "4"	colour: orange	500 pcs
100205	Imprint "5"	colour: green	500 pcs
100206	Imprint "6"	colour: lilac	500 pcs
100207	Imprint "7"	colour: brown	500 pcs
100208	Imprint "8"	colour: grey	500 pcs
100209	Imprint "9"	colour: black	500 pcs
100210	Date of the year		500 pcs
100211	Imprint "L"		1.000 pcs
100212	Imprint "R"		1.000 pcs
100213	Legend Labels		500 pcs



X-Ray Film Envelopes

Made from strong natron kraft paper of 120 gr/m². With flap.

Without

imprint. 100221	for films 18 x 24 cm	1.000 pcs
100222	for films 24 x 30 cm	1.000 pcs
100223	for films 35 x 35 cm	1.000 pcs
100224	for films 30 x 40 cm	1.000 pcs
100225	for films 35 x 43 cm	1.000 pcs



Connect With Us



Radiology Accessories

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