



**Personal Protection Against
Diagnostic or Therapeutic Radiation Exposure**

MAVIG

TRADITION AND INNOVATION



COMPANY HISTORY

The manufacturing and trading company HÄNEL was founded in 1921. The young company devoted itself to creating solutions for employee protection in high-risk work environments. Even then, the family held company strived to create a model of today's corporate philosophy:

The customer is the focal point, and their satisfaction is top priority.

In subsequent decades Hänel established globally successful products in the field of protective clothing and radiation protection equipment under the MAVIG trademark.

In 1983 the foundation for the company's successful future was established with the opening of the new factory premises in the Moosfeld industrial area of Munich.

Spacious production and office areas provided room for further development and innovation. In addition to the historical product lines, modern equipment suspension systems were added to expand the product range.

In 1999 the uniform identification of company and product was achieved with the renaming of Hänel GmbH to MAVIG GmbH.

TODAY

As an independent research and manufacturer company, MAVIG has been successful across the globe for more than 90 years. MAVIG products stand for quality and reliability.

We set international standards with our intelligent solutions for the medical industry. Our products are manufactured with the latest technology and processes at the company's location in Munich, Germany.

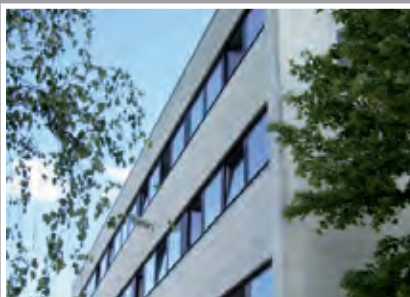
The recognition from our customers is both an affirmation and motivation to continue to invest our energy and competence in further research and the development for innovative solutions in the medical field.

QUALITY: SIGNED AND SEALED

MAVIG is DIN EN ISO 13485 certified.

All MAVIG products are certified in accordance with the applicable CE standard: EU Directive 89/686/EU (Personal Protective Equipment) and/or 93/42/EU for medical products.

Even here MAVIG was a pioneer. Already in the middle of 1995, MAVIG protective clothing was approved according to the then new, binding CE directives.



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High Performance Radiation Protection

MAVIG

A medical fabric of the highest performance class has been used for the first time as an outer cover for X-ray protective clothing, which is based on DIN EN 13795.

The demands for disinfection in the healthcare industry are continually growing. This has created a higher strain on X-ray protective clothing and its performance, especially in regards to chemical durability from cleaning agents.

In response MAVIG has sets a new standard with its ground breaking ComforTex® HPMF material.

Our innovative outer textile ensures considerably higher protection for the radiation protective inlay than was previously possible. The barrier effect has also increased to meet the high requirements of hygiene in today's work environment.



Balance 631

Synergy 632

Classic 636

Ensemble 637

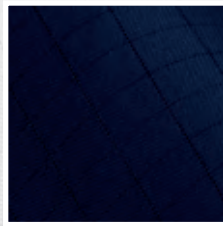
ComforTex® HPMF – Designed for a Sense of Well-being



Curacao



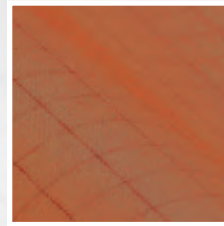
Regatta



Ocean



Limette



Indian Summer



Orchidee

ComforTex® HPMF

Colour Samples

A fresh appearance, pleasing to touch and comfortable to wear are the first impressions of the new textile collection from MAVIG.

Rough, worn, or plastic like surfaces are not found on our products.

- ComforTex® HPMF new colours:
- Curacao
 - Regatta
 - Ocean
 - Limette
 - Indian Summer
 - Orchidee

Please note that the actual colours can differ slightly from their printed representation.



Basic 640

Ergonomic 650

Comfort 660

Primary Tasks of a Functional Outer Textile

The newly developed material from MAVIG fulfils the relevant requirements of an OP textile in the high performance category.

Protection of Personnel and Patients Against Health Risks

The special material composition creates a highly effective protective barrier which prevents any penetration of pathogens and their carrier media, such as fluids and solid particles.

Additionally, the material structure repels liquids and counteracts any growth of micro-organisms on the surface. The special micro-fibre fabric also provides maximum freedom from the release of textile particles.

To ensure the protection of patients and personnel against infections, important and sound safety requirements for the necessary quality of an OP textile are regulated in the DIN EN 13795 standard.

This standard was applied in the development of our innovative textile collection for an effective basis:

- Barrier function
- Cleanliness
- Particle release
- Strength

Robustness for Protecting the Inner Layers from Damage

An usable textile as the outer cover for X-ray protective clothing must provide a high degree of robustness to ensure permanent protection and safety.

If unsuitable materials are used, external influences, mechanical forces and normal wear can drastically diminish or destroy the protection it provides.

The performance criteria of the new ComforTex® HPMF from MAVIG define a new standard in X-ray protective clothing.

Safety does not End with Radiation Protection

Electrostatic charging when wearing personal protective equipment is uncomfortable and endangers the proper operation of sensitive medical equipment.

With ComforTex® HPMF, MAVIG puts the problems of electrostatic discharges to rest.

Quality and Comfort

The quality of X-ray protective clothing is more important than ever today. The wearing times of protective clothing have been extended in modern radiologically based methods involved in diagnostics and therapy, as well the protection requirements differ according to the respective application.

Our large product portfolio allows us to provide you with a well-developed and wide range of models which can be expected of us as the international market leader in radiation protection.



Lead Rubber Multilayer Material

Lead rubber based on natural rubber has helped us maintain our leading position in the manufacture of X-ray protective clothing for many years.

Our high-grade, flexible material provides radiation protection in accordance with DIN EN 61331-1 and DIN 6857-1.

NovaLite X-Ray Protective Material

This X-ray protective material achieves an outstanding balance between weight and radiation protection. NovaLite assures the fulfilment of fundamental occupational health requirements, especially in workplaces where X-ray protective clothing is worn for long periods. This, of course, also includes X-ray protection in accordance with DIN EN 61331-1 and DIN 6857-1.

Flexible Wearing Comfort and Finest Workmanship

Moveability and flexibility are special features of MAVIG's X-ray protective clothing. To further optimise the wearing comfort for the user, special attention is paid to the clothing's cut and finest workmanship in production. In our factory, the latest production technology and numerous quality controls ensure constant implementation of our brand-value concept.

§ CE / PSA

X-ray protective clothing for radiation exposure falls under the legally binding EU Directive 89/686/EU relating to personal protective equipment (PSA).

The directive not only stipulates strict penalties for producers and those placing it on the market, but also for those responsible for its purchase, and its users in case of non-compliance. It is imperative to check that the product you want to use is correctly marked!

The well-known CE mark alone does not suffice here. The four-digit registration number of the authorised certification office (Notified Body) must also be specified.

Of course, all MAVIG products are properly certified. You are always on the safe side with our products.

§ DIN 6857-1

DIN 6857-1 is used as the correct determination of shielding properties of lead-free or lead-reduced protective clothing. If products for X-ray protective clothing are manufactured based on this standard, they achieve the same screening effect as pure lead.

In the manufacturing of X-ray protective clothing, MAVIG only uses materials which are classified according to this standard.



Basic 640

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Basic 640

Basic 640

The classic Basic RA640 model has proved itself over many years and is normally worn as front protection for short and occasional periods during conventional X-ray without fluoroscopy.

It is also highly suited as protective clothing for accompanying personnel. The apron's cut takes into account all the requirements of conventional radiology.

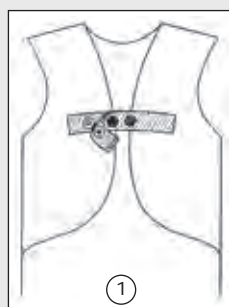
Above and beyond the specifications of DIN EN 61331-3, the back panels provide protection of the entire area and not just the minimum requirements of up to 11 cm underneath the shoulder seam as defined in the norm.

For the manufacture of RA640 basic aprons we only use high-quality, flexible, multilayer lead rubber material.

Flawless X-ray protective properties are a necessity to be in compliance with DIN 6857-1.

The Choice is Yours ...

We offer 3 different fastening systems for our Basic series to choose from:



①



②



③

Snap Buttons (Fig. 1)

An elastic rubber belt with snap buttons, which closes in the back.

Criss Cross Velcro (Fig. 2)

2 cross belts with Velcro, which close in the back.

Cross Straps with Buckle (Fig. 3)

Cross straps with a snap buckle for closing in the front.

Material

Multilayer lead rubber material

Lead Equivalent Value

Front protection Pb 0.25 mm, Pb 0.35 mm or Pb 0.50 mm
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee

Edging

All edges covered with a seam band

Sizes

SMALL recommended for chest sizes of up to approx. 99 cm
MEDIUM recommended for chest sizes of approx. 100 – 114 cm
LARGE recommended for chest sizes of approx. 115 cm

Custom sizes possible on request.

Lengths

90 cm (recommended for heights of approx. 145 – 155 cm)
100 cm (recommended for heights of approx. 155 – 165 cm)
110 cm (recommended for heights of approx. 165 – 175 cm)
120 cm (recommended for heights of approx. 175 – 185 cm)
130 cm (recommended for heights of approx. 185 – 195 cm)

Breast Pocket

Available on request.
(see information on page 23)

Embroidery

Available on request.
(see information on page 23)



Comfort 660

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Comfort 660

Comfort 660

Are you just looking for the "obligatory" X-ray apron, or are you looking for X-ray protective clothing to accompany your active working day with outstanding qualifications?

The broad stretch insert on the back panels of the Comfort RA660 provide an exceptional wearing comfort.

Easy to put on and take off, ergonomic shape, good fit, and shoulder comfort has made this model the favourite apron for front protection among our customers.

The entire area of the back panels contain a protective inlay material, providing an advantage in protection to conventional models and guaranteeing what is covered is protected.

We offer this apron series in two different types of inlay material so that you can make your decision to buy according to frequency of use and respective wearing times.

Our first-class NovaLite X-ray protective material option is the choice for radiological workplaces that require long wearing periods and ensures the fulfilment of fundamental occupational health requirements. The NovaLite X-ray protective material achieves an outstanding balance between weight and X-ray protection.

The high-quality, multilayer lead rubber material option is suitable for use in conventional X-ray with low to average frequency of use and short wearing times.

Both variants comply with DIN 6857-1.

Special Features:

The broad stretch inserts on the back panels ensure individual adjustment, good fit and shoulder comfort, even during long wearing periods.

Generous, overlapping back panels provide additional X-ray protection.



RA 660

Fastening System:

MAVIG uses only the highest quality class of Velcro fastening systems. The large fastening surface area provides for a longer product life.

If wear does occur, the fastening system is easily repaired by replacing a single component.

Material

Optional with NovaLite or multilayer lead rubber X-ray protective material

Lead Equivalent Value

Front protection Pb 0.25 mm, Pb 0.35 mm or Pb 0.50 mm
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee

Edging

All edges covered with a seam band

Sizes

SMALL recommended for chest sizes of up to approx. 99 cm
MEDIUM recommended for chest sizes of approx. 100 – 119 cm
LARGE recommended for chest sizes of approx. 120 – 129 cm
X-LARGE recommended for chest sizes of approx. 130 cm

Custom sizes possible on request.

Lengths

90 cm (recommended for heights of approx. 145 – 155 cm)
100 cm (recommended for heights of approx. 155 – 165 cm)
110 cm (recommended for heights of approx. 165 – 175 cm)
120 cm (recommended for heights of approx. 175 – 185 cm)
130 cm (recommended for heights of approx. 185 – 195 cm)

Breast Pocket

Available on request.
(see information on page 23)

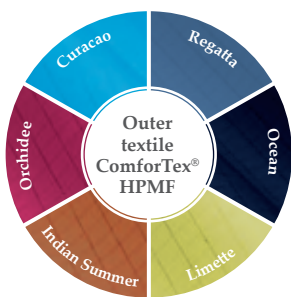
Embroidery

Available on request.
(see information on page 23)

Peace of Mind Through Safety

This statement distinguishes the BALANCE RA631 series more than one might think at first glance.

- Significantly less weight burden on the spinal column
- The two piece kit allows better ventilation of body heat
- Ideal fit, maximum wearing comfort



Balance 631

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Balance 631

Balance 631

All around optimal protection!

The patented Balance RA631 series sees you through a safe and comfortable day.

Its special features differentiate this model significantly from previously known two-piece models.

Fully overlapping front panels achieve lead equivalent values of Pb 0.35 mm or 0.50 mm for the front and create the basis for the incredible wearing comfort of the Balance series, with its great weight distribution, a high degree of movement and flexibility.

The integrated, colour-contrast safety zones guarantee ideal X-ray protection. An elastic insert in the back of the skirt makes it easy to keep in place without restricting, but ensures a secure fit.

Produced with the first-class X-ray protective material NovaLite, the apron ensures fulfilment of fundamental occupational health requirements for long wearing periods in radiological workplaces. NovaLite X-ray protective material achieves an outstanding rating in terms of weight and X-ray protection.

Back Relief

The elastic insert in the back of the skirt allows an appropriate relaxed posture to be maintained during the daily routine. The upper width of the skirt can be varied by different inserts. These inserts are attached with a zipper and easy to exchange.

In addition to the high quality Velcro fastener, the skirt also has a wide webbing belt. The lower skirt area is also secured with a snap button fastener.

Movement Made Easy

A contour cut-out has been incorporated into the skirt to provide greater freedom of movement. Of course, the knees are still always optimally protected from the front and side.

A Safe Fit

Safety zones provide the assurance that you are optimally protected in all situations. In the side area, the vest and skirt each have a good 8 cm wide double layer. As well as in the sections of the shoulder area where the cut is designed as non-overlapping. The vest generously overlaps the skirt in the back section so that you are properly covered from behind when bending over.

Thyroid Gland Protection

The thyroid gland is considered one of the most X-ray sensitive parts and should especially be protected. Wearing additional protection during intensive dose examinations has become a standard. For this reason, the costume vest is fitted with press buttons for attaching the RA614 thyroid gland and sternum guard, which was designed as part of the Balance RA631 series (separate item, see page 22).



RA 631

Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.35 mm or Pb 0.50 mm
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee

Edging

All edges covered with a seam band

Sizes

X-SMALL recommended for chest sizes of up to 89 cm and waist sizes of up to 65 cm
SMALL recommended for chest sizes of 90 - 99 cm and waist sizes of 66 - 80 cm
MEDIUM recommended for chest sizes of 100 - 115 cm and waist sizes of 81 - 99 cm
LARGE recommended for a chest sizes of 116 - 135 cm and waist sizes of 100 - 125 cm
X-LARGE recommended for chest sizes of 136 - 145 cm and waist sizes of 126 - 140 cm

Custom sizes available on request.

Skirt Lengths

Skirt I = 70 cm
recommended for heights up to approx. 180 cm
Skirt length II = 75 cm
recommended for heights from approx. 181 cm

Breast Pocket

Available on request.
(see information on page 23)

Embroidery

Available on request.
(see information on page 23)

Thyroid Gland and Sternum Protection

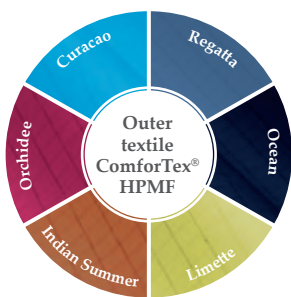
Collar RA614 can be ordered separately.

Shoulder Padding

Standard.

Our definition of ideal radiation protection lets you tackle the daily work routine unencumbered.

- Reduction of the weight burden on the spinal column
- Ideal fit, maximum wearing comfort
- Continuous support from the broad elastic belt without restricting breathing



Synergy 632

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Synergy 632

Synergy 632 – Optimum All Around Protection

In terms of weight, heavy all around protection aprons lead to considerable physical stress for the user. To solve this problem, we developed a new generation of X-ray protection coats – the patented Synergy RA632 series.

The special user comfort also includes the simple and convenient donning of the garment. The coat is simply closed with Velcro fasteners at chest height and fits properly without any fuss.

An elastic belt ensures the shoulders are free to move without any uncomfortable restriction. Optimum alignment to your waist height is ensured by a variable press stud strip.

The necessary front protection is provided from side seam to side seam by overlapping front panels. The RA632 series creates the required safety zones by a double-layer structure in the sensitive areas.

Our first-class NovaLite X-ray protective material option is the choice for radiological workplaces that require long wearing periods and ensures the fulfilment of fundamental occupational health requirements.

The NovaLite X-ray protective material achieves an outstanding balance between weight and X-ray protection.

Back relief par excellence:

The elastic belt provides continuous support and takes the "load off the shoulders". This is without any uncomfortable feeling of restriction. You can button the belt on the coat on one side or both sides. The variable press stud strip permits each user to adjust the belt to their waist height.

Movement made easy

A contour cut-out has been incorporated into the skirt to provide greater freedom of movement. Of course, the knees are still always optimally protected from the front and side.

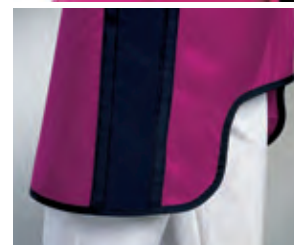
In the lower area, the coat is also secured with a snap button fastener.

A safe fit

In the side area, the coat has a good 8 cm wide double layer. Also in the sections of the shoulder area where the cut is designed as non-overlapping.

Thyroid gland protection

The thyroid gland is considered one of the most X-ray sensitive parts and should especially be protected. Wearing additional protection during intensive dose examinations has become a standard. For this reason, the costume vest is fitted with press buttons for attaching the RA614 thyroid gland and sternum guard, which was designed as part of the Balance RA632 series (separate item, see page 22).



RA 632

Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.35 mm or Pb 0.50 mm
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee

Edging

All edges covered with a seam band

Sizes

X-SMALL recommended for chest sizes of up to approx. 89 cm
SMALL recommended for chest sizes of approx. 90 - 99 cm
MEDIUM recommended for chest sizes of approx. 100 - 115 cm
LARGE recommended for chest sizes of approx. 116 - 130 cm
X-LARGE recommended for chest sizes of approx. 131 - 145 cm

Custom sizes possible on request.

Lengths

90 cm (recommended for heights of approx. 145 - 155 cm)
100 cm (recommended for heights of approx. 155 - 165 cm)
110 cm (recommended for heights of approx. 165 - 175 cm)
120 cm (recommended for heights of approx. 175 - 185 cm)
130 cm (recommended for heights of approx. 185 - 195 cm)

Stretch Belt

Delivery including matching stretch belt

Breast Pocket

Available on request
(see information on page 23).

Embroidery

Available on request.
(see information on page 23).

Thyroid Gland and Sternum Protection

Collar RA614 can be ordered separately.

Shoulder Padding

Standard.



Ergonomic 650

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Ergonomic 650

Ergonomic 650

Front protection in the purest form - this includes full-surface protection of the entire front and for the upper area of the back below the shoulder seam.

Comfortable, wide crossover belts allow the apron to be slid off easily under the surgical gown by simply opening the Velcro fasteners on the front.

We were able to further increase the wearing comfort of this classic front protection apron by some modifications in the new product generation.

The special cut of the RA650 model series provides the particular advantage that all standard ready-to-wear sizes fit almost all body types.

Our first-class NovaLite X-ray protective material option is the choice for radiological workplaces that require long wearing periods and ensures the fulfilment of fundamental occupational health requirements.

The NovaLite X-ray protective material achieves an outstanding balance between weight and X-ray protection.



Material

NovaLite X-ray protective material

Lead Equivalent Value

Apron available in Pb 0.25 mm, Pb 0.35 mm or Pb 0.50 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee

Edging

All edges covered with a seam band

Sizes

Univeral size.

Custom sizes possible on request.

Lengths

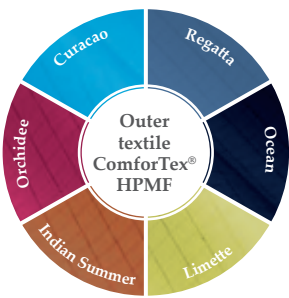
- 90 cm (recommended for heights of approx. 155 – 165 cm)
- 100 cm (recommended for heights of approx. 165 – 175 cm)
- 110 cm (recommended for heights of approx. 175 – 185 cm)
- 120 cm (recommended for heights of approx. 185 – 195 cm)

Breast Pocket

Available on request.
(see information on page 23)

Embroidery

Available on request.
(see information on page 23)



Classic 636

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Classic 636

Classic 636

The classic all-round protection model: A coat which is closed at the front with an approximately 15 cm wide overlap.

The weight which presses on the shoulders by the X-ray apron is significantly reduced here by shoulder padding.

Three Velcro fasteners on the front of the coat allow it to be put on easily and individual adjusted. In the upper leg area, a slit has been incorporated for greater freedom of movement.

This coat series can also be easily combined with an optional belt: Either with a wide, elastic stretch belt for excellent back relief or a webbing belt.

The stretch belt can be attached to the coat with press stud buttons and varied in height. If the coat is combined with a webbing belt, this is attached by loops.

Our first-class NovaLite X-ray protective material option is the choice for radiological workplaces that require long wearing periods and ensures the fulfilment of fundamental occupational health requirements.

The NovaLite X-ray protective material achieves an outstanding balance between weight and X-ray protection.



Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.35 mm or Pb 0.50 mm
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee

Edging

All edges covered with a seam band

Sizes

SMALL recommended for chest sizes of up to approx. 99 cm
MEDIUM recommended for chest sizes of approx. 100 – 110 cm
LARGE recommended for chest sizes of approx. 111 – 125 cm

Custom sizes possible on request.

Lengths

90 cm (recommended for heights of approx. 145 – 155 cm)
100 cm (recommended for heights of approx. 155 – 165 cm)
110 cm (recommended for heights of approx. 165 – 175 cm)
120 cm (recommended for heights of approx. 175 – 185 cm)

Breast Pocket

Available on request.
(see information on page 23)

Embroidery

Available on request.
(see information on page 23)

Stretch Belt

Ordered separately:
Model RA632SG

Webbing Belt

Ordered separately:
Model RA636GG

Shoulder Padding

Standard.



Ensemble 637

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the German X-ray ordinance. Naturally, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA). MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal specifications.

Ensemble 637

Ensemble 637

All around protection that is comfortable to wear through optimum weight distribution with vest and skirt. The skirt takes the weight off your shoulders.

In this model once again, the garments are easy to put on and take off. The top quality velcro fasteners at the front of the vest and skirt also allow for individual adjustments. As a rule, there is an overlap of about 15 cm, provided the garments are properly closed.

The skirt is fitted with a waist webbing belt for a secure fit.

Our first-class NovaLite X-ray protective material option is the choice for radiological workplaces that require long wearing periods and ensures the fulfilment of fundamental occupational health requirements.

The NovaLite X-ray protective material achieves an outstanding balance between weight and X-ray protection.

Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.35 mm or Pb 0.50 mm,
Back protection in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee

Edging

All edges covered with a seam band

Sizes

SMALL recommended for chest sizes of up to approx. 90 cm and waist sizes of 70 cm
MEDIUM recommended for chest sizes of approx. 91 – 108 cm and waist sizes of 66 – 95 cm
LARGE recommended for chest sizes of approx. 109 – 125 cm and waist sizes of 96 – 110 cm

Custom sizes possible on request.

Skirt Lengths

Standard skirt length is 60 cm, or 70 cm when requested. All other lengths can be produced for a surcharge.

Breast Pocket

Available on request.
(see information on page 23)

Embroidery

Available on request.
(see information on page 23)



Hygienic cover

Thyroid Gland and Sternum Protection

Today we know that the thyroid gland is particularly sensitive to radiation, requiring special protection. It has therefore become commonplace to wear appropriate additional protection for high dosage X-ray examinations.

Our programme offers you two versions of the thyroid/sternum shield. Both include outstanding features such as first-class design and ideal fit, with radiation protection naturally in the forefront.

The well conceived idea behind both versions ensures that one size fits all neck sizes.

An uncomplicated velcro fastener gives plenty of range for individual adjustments.

Thyroid Gland and Sternum Protection RA614

With press buttons for the RA631 and RA632 model series

Thyroid Gland and Sternum Protection RA615

For the RA636, RA637, RA640, RA650 and RA660 model series

Hygienic Cover

To comply with hygiene requirements we recommend the use of our washable hygienic cover made from the special ComforTex® MF material in the Ocean colour.

Please be aware that the cut of each collar model has been created for optimal protection for specific MAVIG aprons.

Material

RA614 with NovaLite X-ray protective material

RA615 with multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.50 mm

Edging

All edges covered with a seam band

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee



RA615



RA614

These models comply with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the german X-ray ordinance. Of course, MAVIG X-ray protective clothing also has easy type examination and certification in accordance with PSA 89/686/EU (CE/PSA).

MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal requirements.

EMBROIDERY & SLEEVES

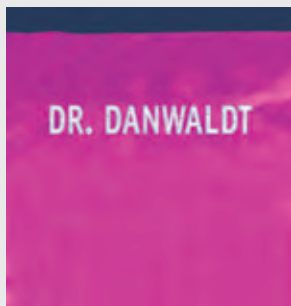
Embroidery

In many cases, it is advisable to mark X-ray protection clothing with embroidery to indicate that it belongs to a certain person or department. We offer the following possibilities:

- Embroidery on the left shoulder seam
- Embroidery on the breast pocket
- Interchangeable embroidery
- Embroidery on the skirt border
- Logos and letter styling (eg. cyrillic, arabic)

Breast Pocket

The breast pocket is an outer storage pocket, positioned on the left chest side.



Provide us with your desired text and we will carry out the embroidery in top quality. Block letters are standard for clear legibility. The height of the lettering is determined by the length of the text and number of lines.

Sleeves

For all models (except for the RA650), you can select optional sleeves to extend protection. The exposure of the shoulder joint to radiation can be significantly reduced by wearing aprons with sleeves. This also reduces laterally occurring radiation.

MAVIG offers the sleeves as a button-on or permanent stitched on solution. You can also select only a right or left sleeve, or a pair.

The standard lead equivalent value is Pb 0.25 mm, which ensures good mobility during the daily work routine.

HS100 – Sterile Protective Gloves with Screening Effect Against X-Ray Radiation



Important information on the legal regulations within the EU:

Sterile gloves that protect against scattered X-ray radiation are categorised as personal protective equipment as well as a medical product.

Thus, CE conformity to both relevant European Directives 89/686/EU (PSA) and 93/42/EU (MPG) is mandatory for these products.

With the MAVIG HS100 product, you have the assurance that our protective gloves are properly certified and CE-compliant to the EU Directives mentioned above.

In Appendix A of DIN 6815, the use of surgical gloves that protect against radiation is recommended where applicable for personnel involved in angio/DSA, heart catheter examinations and intraoperative X-ray examinations.

HS100 – Efficient Protection for Your Hands Against Scattered X-Ray Radiation

Sterile protective gloves from MAVIG for the use against scattered X-ray radiation allow better optimisation of the X-ray protective measures for medical personnel.

The development of these gloves has achieved an effective solution to traditional contradictory properties: High absorption, high elasticity, high touch sensitivity and protection against scattered X-ray radiation.

Drastically lowering the equivalent radiation exposure for medical personal is a must, and not just to the permissible levels of the effective dose. The concept of optimisation in radiation protection specifies that every possible measure must be taken to minimise the dosage from radiation exposure.

The HS100 X-ray radiation absorbent, sterile gloves from MAVIG provide an efficient possibility for reducing the dosage values in the area of scattered radiation exposure.

Worthy to note is that a protective factor of 2 is achieved when using the gloves in the scattered radiation area (X-ray tube voltage of 60 – 80 kV). This dose reduction of >50% helps in effectively minimising risks.



Order numbers

Size 6.5 = HS10065	Size 7.0 = HS10070
Size 7.5 = HS10075	Size 8.0 = HS10080
Size 8.5 = HS10085	Size 9.0 = HS10090

The dispenser box contains 5 pairs of gloves of one size. Each pair is stored safely under sterile conditions in an individual peel away package with additional inlay. This guarantees use under sterile conditions.

Material

The high absorption of our gloves is achieved through metal oxides which do not contain lead.

The particular features of the MAVIG HS100 gloves are also contingent on the use of elastic natural rubber in their manufacturing. The production process ensures that the protein concentration is kept to the lowest possible level. Water-soluble, allergenic proteins are removed from the latex as much as possible.

Therefore, the gloves are referred to as low-protein latex gloves.



Outstanding comfort and an optimised fit now make it easy to offer protection with a good feeling.

- Lead equivalent value: Pb 0.03 - 0.04 mm
- Powder-free
- Low-protein natural rubber
- Lead free
- Non-toxic
- Sterile
- Excellent grip and touch sensitivity
- High elasticity and extremely tear resistant
- Available in multiple sizes

Average measured values	X-ray tube voltage/reduction		
Reduction of scattered X-ray radiation (main dose reduction)	60 kV / 63 %	80 kV / 53 %	100 kV / 46 %
Reduction of effective radiation	80 kV / 20–25 %		

The attenuation parameters have been determined in the broad radiation beam in accordance with IEC 61331-1. The values of the main dosage attenuation are based on a nominal material thickness of 0.30 mm.

Properties

The product is classified as a powder-free sterile glove that exhibits an X-ray absorbent effect in addition to its basic material properties of density, dimensions, and protection against chemicals and micro-organisms.

High elasticity in combination with an excellent, anatomical fit ensures optimal working conditions that reach the level of high-quality OP gloves with effective protection against secondary X-ray radiation.

The gloves are impressive due to high touch sensitivity and dexterity. Micro-textured surfaces support a secure grip even in a damp environment. The soft, stretchy material as well as the advantageous characteristic anatomical shape prevent fatigue and ensure optimum ergonomic properties.

The gloves are easy to put on. Special tear resistance has been achieved through the high elasticity of the product. The rolled edge also counters any tearing when pulling them over the hand.

Use

The gloves are intended for protection against secondary radiation and ensure an efficient protective absorption effect here. In the case of automatic dose rate control, use in the primary radiation area can be counter-productive.

If use in primary radiation is intended, the automatic dose rate control must be switched off. As a sterile product the gloves are intended for one-time use.



HS212



HS215

X-Ray Protective Gloves HS212

For many tasks which require working in the radiation field or in the immediate vicinity of the radiation field, it is possible that standard X-ray protective gloves cannot be used effectively. We have designed X-ray protective gloves with an open inner hand especially for such uses.

For intricate tasks, the user can move and grip objects with fingers while having the back and sides of the hand still shielded from radiation.

The extended glove length also protects most of the lower arm. The HS212 model series is produced from flexible and smooth lead rubber multilayer material with an easy to clean Nappaflex cover.

As an additional quality feature, the gloves are fitted with a pure cotton inner lining.

A secure hold and optimum fit are ensured by two rubber straps. These run over the inner surface of the hand as well as the thumb.

Lead equivalent value (Pb/mm)	Size*
0.25	x
0.35	x
0.50	x

* Overall length approx. 40 cm

An universal size covers all glove sizes.

X-Ray Protective Gloves HS215

For many years the original MAVIG HS214 X-ray protective gloves have set an unmistakable standard in quality. Due to a change of various additives by the chemical industry required for our customary production processes, the former production results can currently no longer be achieved.

We have, therefore, stopped production until further notice and offer a substitute product which has positioned itself internationally with an established quality.

Lead rubber single layer material, seamlessly immersed, with rolled edge in beige colour and an overall length of 40 cm.

Size	Garment	Lead equivalent value (Pb/mm)		
		0.25	0.35	0.50
Small (III)	7 – 10	x	x	x
Medium (II)	11 – 12	x	x	x
Large (I)	13 – 15	x	x	x

Included in delivery:
One pair of undergloves
made from 100 % cotton.





BRV501



BRV500

X-Ray Protective Visors BRV500 / BRV501

BRV500 full face coverage to the chin / **BRV501** facial coverage till cheek bones (with a nose cut-out)
 Specially developed for the protection of medical personnel involved in radiology applications. Optimum for protecting the lens of the eye from scattered X-ray radiation. Prescription glasses can be worn under both visor models. The visors allow heavy reduction of the radiation exposure to the eyes and a large part of the facial area (see table).

The quality features of our visors make them ideal for use in the medical environment:

- **Lead equivalent value** (weight): BRV500 Pb 0.10 mm (approx. 525 g)
 BRV501 Pb 0.10 mm (approx. 505 g)
- Certified in accordance with 89/686/EU Personal Protective Equipment, Category III
- Individually adjustable size and fit
- Versatile possibilities for adjustment to the facial geometry
- Easy to adjust by pressing and turning the pivot mechanism for a tight fit
- Comfortable, changeable, and washable padding
- Curved lead acrylic with Pb 0.10 mm
- Carefully selected materials reduce the risk of allergy to a minimum

Unfortunately, visors are not available with prescription.

X-ray tube voltage	Scattered radiation attenuation
50 kV	96.9 %
60 kV	94.4 %
80 kV	86.3 %
100 kV	80.0 %
120 kV	75.0 %



"State of the Art Eye Protection"



BR126 - Design: Cocoa / Light Blue

BR126 - Design: Silver Bronze / Orange

Special features of the BR126 & BR127 models:

- Great frame stability through high-grade synthetic materials
- Optimized balance of sturdy, light-weight frame and lenses
- No plasticizers used throughout the entire manufacturing process and low allergy risk due to carefully chosen materials
- Minimized risk of injury due to shape and used components
- Easy cleaning and superior resistance against chemical influences (disinfection)
- Robust and durable finish coating

BR126

The model BR126 offers the choice of two frame sizes: *small-medium or large*. The design of the glasses adapts harmoniously to the facial anatomy resulting in a comfortable fit. The model design features extended lateral protection through additional inlays in the frame.

Included in delivery: case, headband, and lens cleaning cloth

Lead equivalent values: *Front/side protection*
 (weight) Pb 0.50 mm / 0.50 mm (approx. 70 g)
 Pb 0.75 mm / 0.50 mm (approx. 80 g)

Additional anti-reflective coating for the lenses available (only plano and single lenses).

This model is also available with *single, bifocal or progressive lenses*.

MAVIG uses only protective lenses of the highest quality. This guarantees the best light transmission values and a maximum lens break resistance. An ideal composition of the protective material results in a high level X-ray absorption, and optimized production processes achieve an absolute homogeneous allocation of the glass additives.



"According to today's knowledge, initial stages of radiation-induced cataracts can occur from a radiation exposure level of 0.5 Gy." ^{1) 2)}

"Regardless of whether the dose occurs acutely or over an extended period, the effect is cumulative, single doses accumulate." ¹⁾



BR127 - Design: Terrablack

BR127

Individual sizes are the basis of a good fit of protection glasses. Large frames are not suitable for slim facial features. Here our BR127 is an ideal solution. The size of the lenses and the curved shape of the glasses are designed to optimize the protection of the eyes.

Included in delivery: case, headband, and lens cleaning cloth

Lead equivalent values:

(weight) Pb 0.50 mm (approx. 65 g)
Pb 0.75 mm (approx. 75 g)

Additional anti-reflective coating for the lenses available (only plano and single lenses).

This model is also available with *single, bifocal or progressive lenses*.

Cataract information brochure

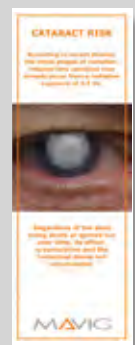
Further information can be found in our separate "Cataract Risk" flyer.

For details, please contact us at:

MAVIG GmbH
Address: Stahlgruberring 5
81829 Munich
Germany

Tel.: +49 (0) 89 / 420 96 0
Fax: +49 (0) 89 / 420 96 200
eMail: info@mavig.com

Web: www.mavig.com



1) SSK: *Radiation-induced cataracts, recommendation of the Radiation Protection Commission with scientific justification* [conference]. - Bonn, May 14th, 2009. - 234th edition
Session of the Radiation Protection Commission on May 14th, 2009. - P. 9, 18, 21

2) Radiological Protection Ordinance:
Ordinance on protection against damage caused by ionising radiation
[Ordinance]. - October 2011 - P. 31, 32, 34

“State of the Art Eye Protection”



BR128 - Design: Ebony / Graphite

BR128 - Design: White / Sand

Special features of the BR128 & BR129 models:

- Great frame stability through high-grade synthetic materials
- Optimized balance of sturdy, light-weight frame and lenses
- No plasticizers used throughout the entire manufacturing process and low allergy risk due to carefully chosen materials
- Minimized risk of injury due to shape and used components
- Easy cleaning and superior resistance against chemical influences (disinfection)
- Robust and durable finish coating

BR128

When other frames are also tight, our BR128 is designed to give you extra comfort. The size of the lenses and the curved shape of the glasses are designed to optimize the protection of the eyes.

Included in delivery: case, headband, and lens cleaning cloth

Lead equivalent values:

(weight)	Pb 0.50 mm (approx. 65 g)
	Pb 0.75 mm (approx. 75 g)

Additional anti-reflective coating for the lenses available.

Due to the highly curved frame, corrective lenses are unfortunately not available for this model.

MAVIG uses only protective lenses of the highest quality. This guarantees the best light transmission values and a maximum lens break resistance. An ideal composition of the protective material results in a high level X-ray absorption, and optimized production processes achieve an absolute homogeneous allocation of the glass additives.



BR129 - Design: Ice Blue / Yellow

BR129 - Design: Titanium / Fire

BR129

The design of the BR129 has been optimized to suite a large range of individual faces. The curvature of the frame allows one size to fit most. The size of the lenses and the curved shape of the glasses are designed to optimize the protection of the eyes.

Included in delivery: case, headband, and lens cleaning cloth

Lead equivalent values:

(weight)	Pb 0.50 mm (approx. 55 g)
	Pb 0.75 mm (approx. 65 g)

Additional anti-reflective coating for the lenses available.

Due to the highly curved frame, corrective lenses are unfortunately not available for this model.

"The Traditional Series"



BR115 - Colour: Black



BR118 - Colour: Taupe

BR115

X-ray protective glasses with plastic frame.
Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 110 g)
- Available colour: Black
- Prescription lenses not available with this model



BR118

X-ray protective glasses with plastic frame and padded earpieces.
Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 60 g)
- Available colours: Taupe, blue, black, silver
- Prescription lenses available in: *single and bifocal*



§

The statutory annual dose limit value for eye lenses is 150 mSv (millisievert) for people older than 18 who are occupationally exposed to radiation. Beyond the specification of this limit value, the German X-ray ordinance (RoV) stipulates a minimisation requirement which implies that the radiation exposure must also be kept as low as possible below this limit value.



BR119 - Colour: Silver



BR178 - Colour: White transparent

BR119

X-ray protective glasses with plastic frame and padded earpieces.
Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 65 g)
- Available colours: Red, black, silver
- Prescription lenses available in: *single and bifocal*



BR178

This economical solution for X-ray protective glasses has a front protection of Pb 0.75 mm. The glasses can be adjusted to fit most head sizes with its flexible head band. The frame is made of an extremely durable plastic that ensures easy cleaning and good resistance to chemicals (disinfectant agents). The BR178 comes with a protect storage case.

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 100 g)
- Available colour: White transparent
- Prescription lenses not available with this model



“The Traditional Series”



BR310 - Colour: Tortoise

BR310

Plastic frame with a tortoise shell design in attractive brown tones with individually adjustable silicone nose pads.
Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 90 g)
- Lateral protective lenses with Pb 0.75 mm
- Prescription lenses available in: *single and bifocal*



BR321 - Colour: Bronze

BR321

Metal frame galvanised in a bronze colour with individually adjustable silicone nose pads.
Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 65 g)
- Side protection by special plastic shells in Pb 0.50 mm (underlaid on the inside with coated protective material to the level of the earpiece)
- Prescription lenses available in: *single and bifocal*

S The statutory annual dose limit value for eye lenses is 150 mSv (millisievert) for people older than 18 who are occupationally exposed to radiation. Beyond the specification of this limit value, the German X-ray ordinance (RoV) stipulates a minimisation requirement which implies that the radiation exposure must also be kept as low as possible below this limit value.



BR322 - Colour: Gold

BR322

Metal frame galvanised in a gold colour with individually adjustable silicone nose pads.

Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 70 g)
- Side protection by special plastic shells in Pb 0.50 mm (underlaid on the inside with coated protective material to the level of the earpiece)
- Prescription lenses available in: *single and bifocal*



BR331 - Colour: Blue-transparent

BR331

Plastic frame in transparent design contrasted with blue.

Included in delivery: case, soft headband

- **Lead equivalent value** (weight): Pb 0.75 mm (approx. 85 g)
- Side protection with Pb 0.50 mm (laterally angled frame underlaid on the inside with coated protective material to the level of the earpiece)
- Prescription lenses available in: *single and bifocal*



With the recommendations of April 2011, the IRCP advised a further dramatic reduction of the limit values. The annual exposure of the eye lens should not be more than 20 mSv over a 5 years average. Additionally no annual exposure should exceed 50 mSv.

AW417 model wall mount

Gonadal aprons are also available as a complete set in all 4 sizes with or without a wall mount. Price advantage!



Gonadal Apron RP643

In addition to being functional and easy to use, an article that is used every day has to meet special requirements when it comes to material quality and workmanship. The MAVIG gonadal aprons in series RP643 offer this and more. The radiation protection for your patients is flawless and the flexible tension strap can be adjusted to fit every size.

The number of patients passing through today's X-ray facilities is very high making it important for the X-ray shields to be practical, and easy to put on and take off quickly. The flexible tension strap of our series RP643 offers the easiest solution.

Our gonadal aprons are made only of high quality, flexible, lead rubber multi-ply material with outstanding weight distribution in this material category.

It goes without saying that excellent radiation protection properties are a basic requirement. We recommend our specially designed wall rack model AW 417 for proper storage of your gonadal aprons. With the aprons kept well organized, you will be able to select the appropriate size for your patient quickly, without having to remove the other aprons on the rack.

Please note the attractive prices for our complete sets, including wall rack system!

Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.50 mm

Edging

All edges covered with a seam band

Sizes

- S - for small children, covers 25 x 20 cm (HxW)
- M - for children, covers 30 x 30 cm (HxW)
- L - for adults, covers 37 x 40 cm (HxW)
- X - for adults, covers 40 x 45 cm (HxW)

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design



This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the german X-ray ordinance. MAVIG X-ray protective clothing is also certified in accordance with MPG 93/42/EWG (CE/MPG).

MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal requirements.

PATIENT COVER

Patient Cover RP689

This versatile patient protective shield is a must in all radiology practices: specific protection for your patients, combined with simple handling.

The format depends on selection and purpose – there are practically no limits to the possibilities. The protective cover can be supplied with velcro fasteners or made to suit your individual needs, just ask us about it.

Our MAVIG patient protective cover RP689 are made only from high quality, flexible lead rubber multilayer material with excellent weight distribution in this material category and best radiation protection properties.



TIP

Do not oversize the dimension of your patient protective cover. Remember that you have to manipulate the protective cover and that the size is in direct relation to the weight.

The radiation protection effective for your patient relates to the parts of the body directly adjacent to the area being diagnosed. You will be better served with a stock of several smaller shields that may be combined as required.

Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.50 mm or
Pb 1.00 mm

Edging

All edges covered with a seam band

Sizes

Our standard material widths are 60 cm and 90 cm, you specify the length. Other dimensions are available upon request.

Outer Cover /Colour

ComforTex® HPMF
available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design



Children's Apron RP664

This children's apron is especially adapted for universal use and provides the optimal front protection for your little patients.

The generously cut, overlapping back panels offer additional protection for the back of the body and ensure a balanced fit.

Especially for the X-ray protection of children, easy putting on and taking off is very important. The RP664 model is easily closed at the front with a variable snap fastener and also provides sufficient flexibility for exact fitting.

MAVIG produces children's X-ray protection in the innovative NovaLite radiation protection material in order to achieve the best possible weight ratio so the children only have to face the lowest necessary physical exertion.

Children's Apron 664



Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.50 mm
Back panels in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design

Edging

All edges covered with a seam band

Sizes

SMALL for children in the approx. 3 - 5 year age group
MEDIUM for children in the approx. 6 - 8 year age group
LARGE for children in the approx. 9 - 12 year age group

Save money by purchasing a set!





Children's Coat RP668

With this model, you have chosen the practical all around protection for your little patients.

The cut combines ideal radiation protection with variable fit and a high degree of wearing comfort. The flexible material plus the generously measured flexibility for width adjustment guarantee a comfortable fit.

X-ray protection for children must be particularly easy to put on and take off. The patients seldom have enough patience for long preparations. That is why the RP668 comes with Velcro fasteners on front for quick and safe adjust of the coat.

MAVIG produces children's X-ray protection with the innovative NovaLite radiation protection material, in order to achieve the best possible weight ratio and thus the children only have to face the lowest necessary physical exertion.

Children's Coat 668



RP 668

Material

NovaLite X-ray protective material

Lead Equivalent Value

Front protection in Pb 0.50 mm
Back panels in Pb 0.25 mm

Outer Cover /Colour

ComforTex® HPMF available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design

Edging

All edges covered with a seam band

Sizes

SMALL for children in the age of approx. 3 - 5 years
MEDIUM for children in the age of approx. 6 - 8 years
LARGE for children in the age of approx. 9 - 12 years

Save money by purchasing a set!

Material

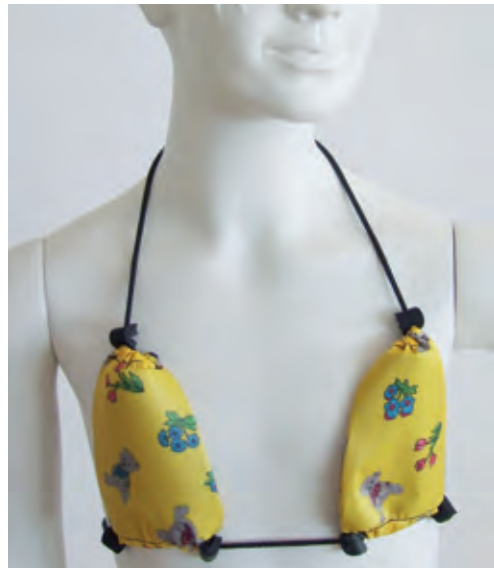
Radiation protective inlay in textile cover made of special, easy-to-clean material

Lead equivalent Value

Protection in Pb 0.50 mm

Outer Cover /Colour

- Teddy design



Radiation Protective Covering for Mammary Gland RP2716

Means of patient protection in paediatrics for X-ray images in medical diagnostics

- 80 % reduction of radiation exposure to the mammary gland area
- Perfectly hygienic, skin-friendly outer cover
- Suitable for multiple use
- Easily adjustable to the respective size
- Comfortable, non-irritating neoprene stopper



Material

Radiation protective inlay in textile cover made of special, easy-to-clean material

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

Set with 3 adjustable sizes

Outer Cover /Colour

- Teddy design



Protective Baby Undergarment RP274SET6

Means of patient protection in paediatrics for X-ray images in medical diagnostics

- Easy and quick to put on
- Comfortable size adjustment
- Size set for infants, toddlers and children

- 0 – 1 year
- 1 - 3 years
- 3 – 6 years



This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the german X-ray ordinance. MAVIG X-ray protective clothing is also certified in accordance with MPG 93/42/EWG (CE/MPG).

MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal requirements.

X-RAY PROTECTION PATIENT



Ovarian Protection for the Standing Patient RP679SET-E

Means of patient protection for X-ray images in medical diagnostics.

- Belt with hygienic cover
- Easy and quick to put on
- Comfortable size adjustment via the stretch belt
- Set consists of the belt and a protector in each of the sizes: Small, Medium, Large



* For female patients with a girth of more than 130 cm, a belt is optionally available in special sizes.

Material

Radiation protection inlay in textile cover made of special, easy-to-clean material, stretch belt with hygienic cover and bucket fastener. The protectors are adjustable via a Velcro fastener on the belt.

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

Set with shields in 3 sizes and a variably adjustable stretch belt

Outer Cover /Colour

Stretch belt with hygienic cover

Shield colours:

Small - Ocean

Medium - Indian Summer

Large - Regatta



Ovary Protection with Belt for Children RP679SET-K

Means of patient protection in paediatrics and for X-ray images in medical diagnostics.

- Easy and quick to put on
- Comfortable size adjustment via the stretch belt
- Belt with hygienic cover
- Size set with a belt and a protector in each of the sizes: Small, Medium, Large



Material

Radiation protection inlay in textile cover made of special, easy-to-clean material, stretch belt with hygienic cover and bucket fastener. The protectors are adjustable via a Velcro fastener on the belt.

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

Set with shields in 3 sizes and a variably adjustable stretch belt

Outer Cover /Colour

Stretch belt with hygiene cover

Shield colours:

Small - Orchidee

Medium - Limette

Large - Curacao

Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

RP2781 - Large (height 12 cm)
RP2782 - Medium (height 9 cm)
RP2783 - Small (height 7 cm)

Also available as a complete set with all 3 sizes at a lower price (RP278SET)

Outer Cover /Colour

Soft PVC cover in light grey colour



The development of this MAVIG ovarian protection is unequalled and fulfils all requirements of the radiology practice. The radiation exposure of the female gonads is significantly lowered without hindering the diagnostic techniques.

Ovarian Protection RP278

Extensive tests delivered the basis for the size and positional relationship between the fixation point "Spinae iliacae anteriores" and the ovarian protection applied.

The two radiolucent control marks ensure correct and uncomplicated fixation.

The shield is adjustable by means of two swivelling parts which allow fine adjustment.

A complete set (all 3 sizes) enables the best possible protection for all your patients.

Of course, the RP278 is easy to clean and to disinfect.

Material

Single-layer lead rubber material based on natural rubber with a skin-friendly coating in grey white colour.

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

RP280M - for men (dimensions approx. 135 x 105 x 60 mm)
RP280K - for boys (dimensions approx. 105 x 85 x 55 mm)

Outer Cover /Colour

Natural rubber in grey white colour

Hygienic Bag

RP-HYG-CM - Set of 100 units for size men
RP-HYG-CK - Set of 100 units for size boy
RP-HYG-CMK - Set of 100 units each for men and 100 units for boy



Most testicular pouches are either too tight or too loose. Older versions with hinges have an inherent acute danger of crushing.

Putting them on is often difficult or incomprehensible for the patients and the hygienic properties are insufficient.

MAVIG proves that there are other ways for testicle protection from the exemplary RP280 series.

Testicle Protection RP280

A padded, elastic case clasp ensures a safe and correct fit with gentle pressure for the duration of the entire test. The rounded edges pose no danger of injury to patients.

Putting on is easy and explained to the patient in one sentence. The skin-friendly coating of the MAVIG RP280 testicular pouches is seamless, offering flawless hygiene inside and out. Cleaning and disinfection are no problem.

Of course, radiation protection is the focus of our product design and with the use of the RP280 series, you can guarantee your patients that perfect protection of the genital area in compliance with all legal specifications is ensured. The penis and scrotum are completely protected with a lead equivalent value of Pb 1.00 mm.

This model complies with DIN EN 61331-1, DIN EN 61331-3, DIN 6857-1 and the german X-ray ordinance. MAVIG X-ray protective clothing is also certified in accordance with MPG 93/42/EWG (CE/MPG).

MAVIG X-ray protective clothing provides the assurance of fulfilling all applicable legal requirements.

Matching disposable hygienic bags are also available for the RP280 model series.

X-RAY PROTECTION PATIENT



Testicle Protection for Boys/Men RP276

This model for the protection of male gonads also completely covers the penis and scrotum with a lead equivalent value of Pb 1.00 mm. Of course, MAVIG has also taken into account that there must be no danger of injury to the patients from using the protection.

The Velcro fastener gives stability when correctly adjusted. This model series can be unfolded via press studs for cleaning and disinfection.

We also offer matching, disposable hygienic bags.

Material

Multilayer lead rubber material with soft PVC cover in light grey colour

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

RP276M - for men
(dimensions approx. 155 x 120 x 90 mm)

RP276K - for boys
(dimensions approx. 110 x 90 x 65 mm)

Outer Cover /Colour

Soft PVC cover in light grey colour

Hygienic Bag

RP-HYG-CM - Set of 100 units
for size men

RP-HYG-CK - Set of 100 units
for size boy

RP-HYG-CMK - Set of 100 units each
for men and 100 units for boy



Testicle Protection for Children RP276-S-SET

Means of patient protection in paediatrics for X-ray images in medical diagnostics



Material

Radiation protective inlay in textile cover made of special, easy to clean material

Lead Equivalent Value

Protection in Pb 1.00 mm

Sizes

Delivery as a complete set, 3 sizes

Outer Cover /Colour

- Teddy design

Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.17 mm

Edging

All edges covered with a seam band

Sizes

Small, Medium and Large

Outer Cover /Colour

ComforTex® HPMF
available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee
- Teddy design

Radiation Protective Head Covering RP685

Your implant patients will certainly find this protection measure reasonable. MAVIG has also ensured the highest degree of comfort for this radiation protection cap:

Extremely soft and flexible lead rubber multilayer material in hygienically perfect ComforTex® HPMF outer cover - and a perfect fit.

Available in 3 sizes. Naturally, there are matching hygienic covers made of 100% cotton fabric for this series, which can be easily attached via Velcro fasteners.



Material

Radiation protective inlay in textile cover made of special, easy-to-clean material. The protector can be positioned well and easily, without further aids or fastener systems.

Lead Equivalent Value

Protection in Pb 0.35 mm

Sizes

One size fits all

Outer Cover /Colour

ComforTex® HPMF
available in the colours:

- Curacao
- Limette
- Regatta
- Indian Summer
- Ocean
- Orchidee
- Teddy design

Protection for Thyroid Gland, Sternum, Chest and Shoulder Joints RP648

Means of patient protection for diagnostic CT of the skull area

Reduction of radiation exposure for:

- Thyroid gland by approx. 65 %
- Sternum by approx. 80 %
- Chest and shoulder joints by approx. 90 %

The flexible RP648 thyroid protection has a perfectly hygienic and skin friendly outer cover. Designed for reuse.



DENTAL X-RAY PROTECTION



Panorama Apron RD635

For dentistry patient protection a respective protective apron for images while standing for panoramic dental images or sitting. In both models depicted below, we offer you an optimal in price/performance ratio.

They meet all legal specifications and ensure faultless radiation protection for your patients.

Like all MAVIG aprons, easy putting on and taking off goes without saying.



Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.50 mm

Edging

All edges covered with a seam band

Sizes

RD635E - for adults
RD635K - for children

Fastener

Practical Velcro fastener in the front

Outer Cover /Colour

ComforTex® HPMF
available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design

Dental Apron RD642

For dental images of a sitting patient.



Material

Multilayer lead rubber material

Lead Equivalent Value

Protection in Pb 0.50 mm

Edging

All edges covered with a seam band

Sizes

RD642E - for adults
RD642K - for children

Fastener

Practical Velcro fastener on the upper back

Outer Cover /Colour

ComforTex® HPMF
available in the colours:

- Curacao
- Regatta
- Ocean
- Limette
- Indian Summer
- Orchidee
- Teddy design

STORAGE SYSTEMS FOR X-RAY PROTECTIVE CLOTHING

Storage Systems for X-Ray Protective Clothing – A Daily Helper

A storage system must fulfil a series of basic criteria, to be of assistance in daily working practices:

- Easy and uncomplicated access
- Requires minimum space
- Simple installation
- Clearly arranged
- Proper and safe storage

The MAVIG storage systems are designed with these aspects in mind. Functional, modular structure provides you with the greatest possible flexibility in room planning.



Wall System AW412

Always ready at hand, your dental apron is stored safely with minimum space required thanks to this practical wall system.

Can be used for front and panoramic dental aprons.

Functional metal construction, painted in grey white (RAL 9002).

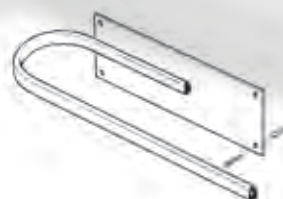
Wall System AW417

The correct solution for storage of your gonad aprons.

Clearly arranged, you can determine the correct apron size for your patients at a glance and immediately take the appropriate apron from the wall system without having to remove other aprons.

High-quality plastic construction in light grey (UN7021 / Pantone Cool Grey 7C / 3501).

	AW412	AW417
Wall system	•	•
Dimensions (H x B x T)	140 x 500 x 160 mm	145 x 365 x 210 mm
Version as (for)	AW412 (apron)	AW417 (gonad apron)
Max. capacity	1	4 (different sizes)
Front aprons	-	-
Coats	-	-
Gonad aprons	-	•
Dental aprons	•	-
Gloves	-	-





Wall System AW420

If you want to optimally store your X-ray protective gloves with minimum space, this system is recommended. Consists of six offset hangers for gloves.

The trick here is that the hangers can also be swivelled!

Functional metal construction, painted in grey white (RAL 9002), chrome-plated hangers.



Wall System AW424

The classic for storing an apron and optionally one pair of gloves. An ever present help for putting on the X-ray apron. You can put this on directly from the hanger with minimum effort.

Highly durable plastic design, base plate and hanger in grey (UN7021), glove holder in grey white (RAL 9002). Version B with additional hanger for one pair of gloves.



AW420

- 590 x 150 x 100 mm

AW420 (gloves)

3 pairs

-

-

-

-

•

AW424

- 140/(300) x 360 x 230 mm

AW424-A (apron)

AW424-B (apron/gloves)

1 + 1 pair

•

•

-

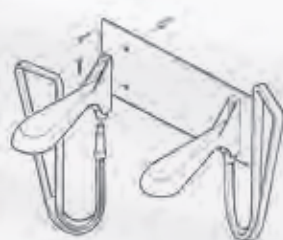
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• (only AW424-B)

Special Hanger AW106

Clothing hangers made of high-tensile material with a special form, well suited for the storage of individual aprons, coats or vest/skirt combinations.

Colour: Grey white (RAL 9002)



STORAGE SYSTEMS FOR X-RAY PROTECTIVE CLOTHING

Tip

Increase the service life of your X-ray protective clothing by using the correct storage from the outset.

Never fold the garments, lay them over edges or hang them on hook racks not suitable for the purpose! Also avoid storing close to heat sources. The use of damaged X-ray protective clothing is dangerous to your safety!

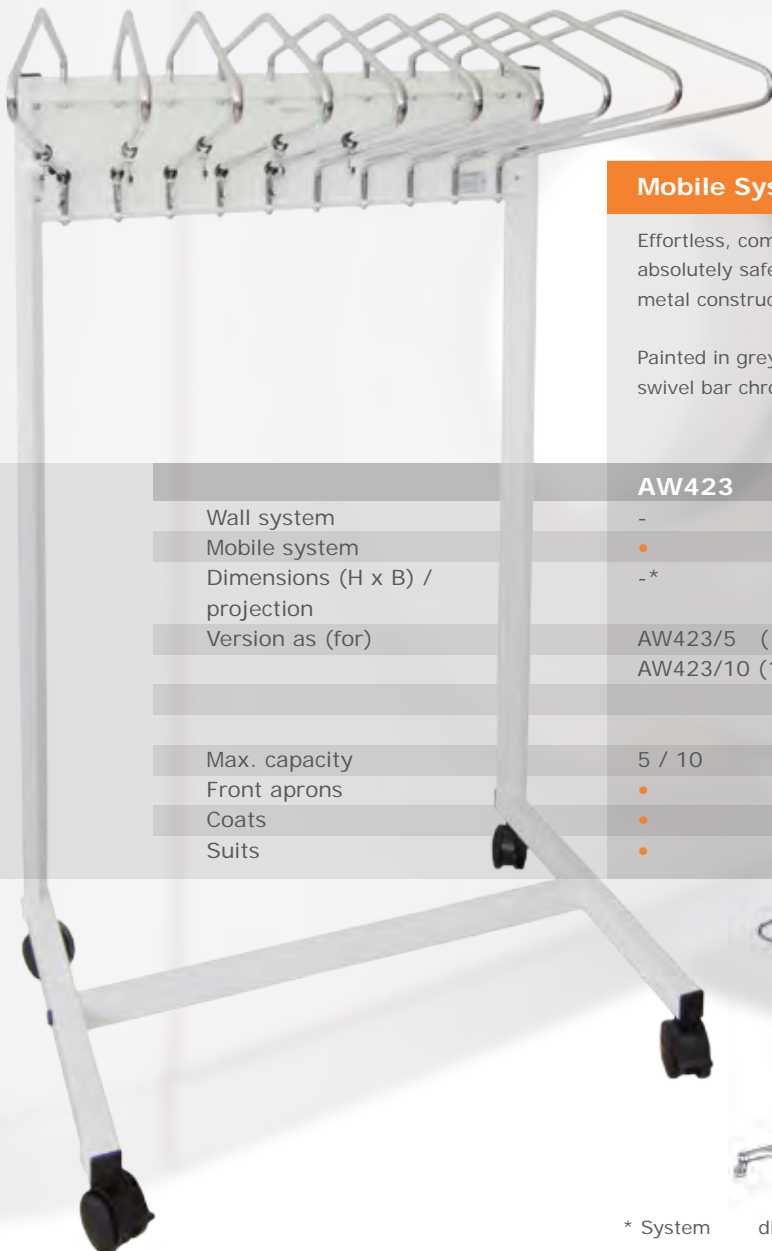
This is particularly critical because, in most cases, damage to the inner X-ray protective material is not always noticeable from the outside. Therefore, test the protective material for damage or defects!



Wall System AW421/1

If you want to store clothing with the least outward projection, this system is recommended.

Functional metal construction, painted in grey white (RAL 9002), chrome-plated swivel bar.



Mobile System AW423

Effortless, comfortable and absolutely safe to move. Functional metal construction with brakes.

Painted in grey white (RAL 9002), swivel bar chrome-plated.

AW423

-

•

-*

AW423/5 (5 aprons)

AW423/10 (10 aprons)

5 / 10

•

•

•

AW421/1

•

-

205 x 85 mm / 630 mm

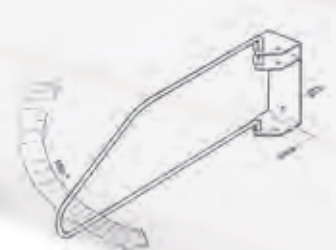
AW421/1

1

•

•

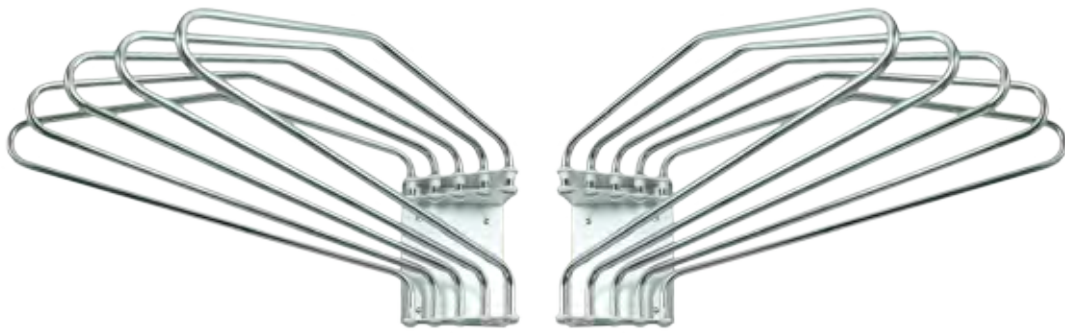
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* System dimensions (H x B x T)

AW423/10 1540 x 900 x 610 mm

AW423/5 1540 x 550 x 610 mm



Wall System AW419

The wall system with top marks for user-friendliness and storage space.

The five swivelling chrome hooks offer you a range of operation of 180°. In contrast, when folded parallel to one another against the wall, the hangers again create space for the room.

Do you need a wall system for up to 10 items of clothing which makes optimum use of the space and greatest convenience for the user? Then a combination of the AW419-R and AW419-L systems is ideal. The base plate form enables the seamless installation of both racks next to one another.

Functional metal construction, painted in grey white (RAL 9002), chrome-plated swivel bar.



Wall System AW421/2 & /3

Storage system for two or three items of clothing.

You can spread the hangers apart 180° as well as folding them flat against the wall.

Functional metal construction, painted in grey white (RAL 9002), chrome-plated swivel bar.

AW421/2 & AW421/3

-
-
- 205 x 85 mm / 630 mm

AW421/2-R (right stop)
AW421/2-L (left stop)
AW421/3

2 / 3

-
-
-

AW419

-
-
- 205 x 148 mm / 670 mm

AW419-R (right stop)
AW419-L (left stop)

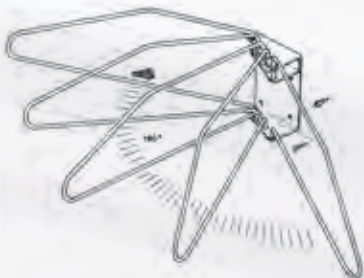
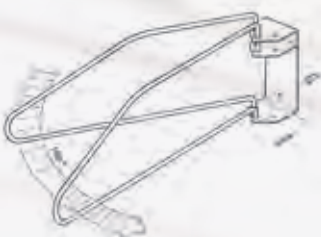
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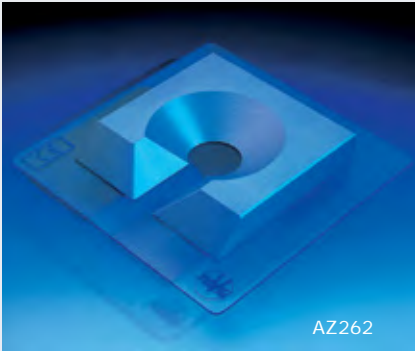
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Skirt Hooks AW427

For the storage of skirts, please use the systems AW419, AW421 and AW423 with our special hooks. This is no problem to retrofit the hooks on the chrome hangers.

Please check whether the skirt is equipped with loops. This is not always the case for all skirts from all manufacturers.





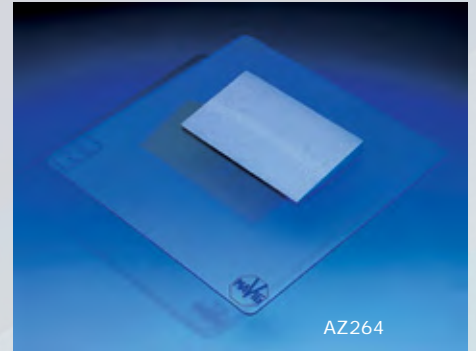
AZ262

Model AZ262
For images of the skull.



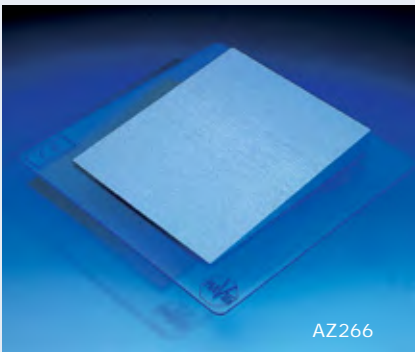
AZ263

Model AZ263
For images of the shoulder joint.



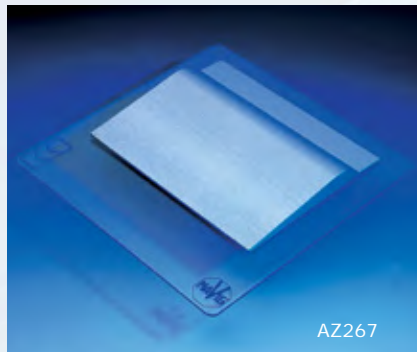
AZ264

Model AZ264
Wedge filter, small.



AZ266

Model AZ266
Wedge filter, large.



AZ267

Model AZ267
For images of the abdomen.



AZ268

Model AZ268
For images of the pelvis.



AZ270

Model AZ270
For leg comparison images.

Compensation Filter

An often indispensable aid when it comes to quality assurance, the MAVIG compensating filter. The use of this filter produces a considerable increase in detail detection, particularly in areas frequently subjected to over-radiation. You will also see a noticeable improvement in X-ray quality when it comes to the contrast range.

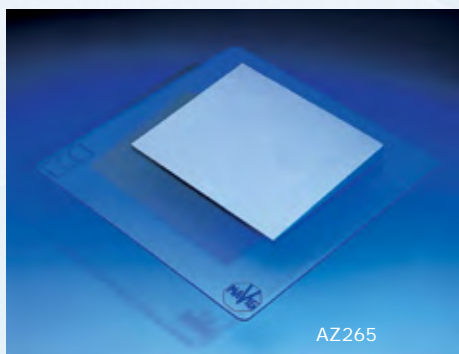
The extremely disturbing soft beam components which always occur in X-ray images can be eliminated by aluminium filters made from a special alloy. The shape of the aluminium body depends on the object of the X-ray. The aluminium body of all filters is mounted on a transparent base plate.

These filters are very easy to use: the filter is simply inserted into the accessories holder of the collimator. All previous adjustments and settings can be kept as usual.

When ordering compensating filters, please always state the manufacturer of the collimator so that the filter can be supplied with the appropriate base plate!

(e.g. Philips 169 mm x 169 mm
Siemens 176 mm x 176 mm)

SINGLE-LAYER MATERIAL



Model AZ265
Wedge filter, medium.



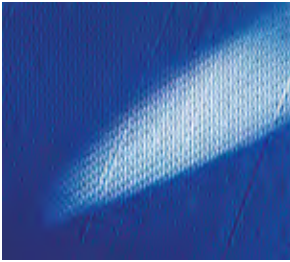
Model AZ269
For images of the thoracic spine.

Single-layer Material AZ187

This lead rubber single-layer material can be used for many different purposes in imaging technology. As a cassette cover or as a cover angle for hiding a specific image field are just a few possible examples.

The material is coated on both sides, thus making it easy to clean. Available as a roll with a usable width of 90 cm, edges uncut, and in different lead equivalent values from Pb 0.50 mm to Pb 2.50 mm in 0.50 mm intervals.





Scattered Radiation Grid

The most important and effective means of reducing scatter radiation, which considerably impairs image quality because of inadequate contrast reproduction, is the scatter grid. The MAVIG range of grids, based on the outstanding Lysholm products, provides considerable improvement in the quality of your X-rays.

The effect of scatter grids is based on their directional effect. Scatter radiation is emitted at a different angle than the primary radiation beam and is absorbed by the very fine lead strips. The primary radiation beam, which runs in the direction of the strips, passes through with minimum absorption. The quality of a grid depends to a large degree on the choice of interspacing materials. MAVIG uses only the highest quality aluminium medium between the lead strips allowing the primary radiation to pass through the grid essentially unweakened.

The grid surfaces protecting the lead strips and interspacing materials are also important to quality. Inadequate designs can result in unwanted weakening of the primary radiation beam or not adequately protecting the delicate “insides” of the grid. Our grids provide ideal protection against mechanical damage and the penetration of moisture, while ensuring excellent image quality.



Parallel Grid

Parallel grids are used when the X-ray technology cannot guarantee the stringent requirements of focused grids requiring precise centering and focusing, e.g. X-rays taken at the patient’s bedside or in the accident ward.

Here, most of the grids are parallel in design: the absorber strips are not inclined making the importance of the exact focusing of the central beam no longer important.

Tunnel Grid

The tunnel grid (grid bridge) design offers the following advantages:

- One scatter grid – usable for any number of cassettes of the same size with differing screen combination
- Additional protection of the grid from mechanical damage
- Practical use for X-rays taken at the patient’s bedside

It is worth paying particular attention to the clever design of the frame structure in the MAVIG tunnel grids. The design is easy to use, suitable for heavy duty application, and has a prolonged service life. The product is characterized by high quality materials and consistent implementation of quality directives.

SCATTERED RADIATION GRID

Interspacer, Number of Lines

The characteristics of a scatter grid also depend on the following variables:

- Height of the lead strips
- Thickness of the lead strips
- Thickness of the interspacing material
- Number of lines per cm

These characteristics determine the parameters which define the final grid design: ratio (height of lead strips versus distance between each strip) and lines/cm (number of lines per cm).

Line Progression

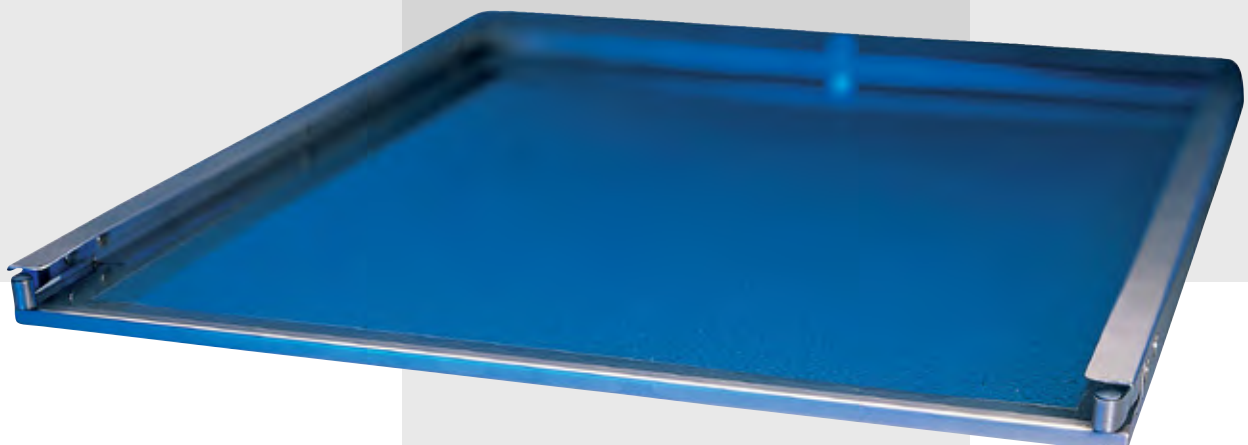
Standard line progression is parallel to the longitudinal side of the grid. On request, so-called "cross lamella" grids can be supplied, i.e. with line progression parallel to the narrow side of the grid.

Number of lines per cm	Aspect ratio (ratio)			
	Parallel grid			
	6:1	8:1	10:1	12:1
30 lines/cm	x	x		
40 lines/cm	x	x	x	x
70 lines/cm	x	x	x	x

Film format in cm	Tunnel grid parallel	
24.0 x 30.0	x	
35.6 x 43.2	x	

The cassette drawer is provided as standard in all sizes on the narrow side of the grid.

Upon customer request the drawer in the size 35.6 cm x 43.2 cm can be manufactured, but placed on the long side of the grid.



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