



From November 2022

X-Ray Protective Clothing & Accessories

In the Field of Medical Radiation

MAVIG



SAFETY SINCE 1921

MADE IN GERMANY

Index

Tradition and Innovation – Over 100 Years of MAVIG	04 - 05
Norms and Standards, Sizes Overview	06 - 07
Radiation Protection – Inlay Material	08 - 09
ComforTex® – Outer Material and Colours	10 - 11
NEW Levio® Edition and Outlast® Inlay	12 - 15

X-Ray Protection for Healthcare Staff 16 - 43

All-round Protection Models (RA631 and RA632)	16 - 19
Front Protection Models (RA660, RA650, RA641 and RA640)	20 - 27
Accessory Clothing: BRYGGA, Bolero, Sleeves	28 - 31
Embroidery, Pocket	32 - 33
Accessories for X-Ray Protection: Sternum Protection, Head Protection, Gloves, Eye Protection, X-Ray Protective Drapes	34 - 41 42 - 43

X-Ray Protection for the Patient 44 - 59

Dental X-Ray Protection	54 - 57
Thyroid and Sternum Protection for Patients	58 - 59
Storage for X-Ray Protective Clothing	60 - 63
Lead Rubber Rolls and Anti-scatter Grids	64 - 65
Template for Levio® Edition and Template for Made-to-Measure Clothing	66 - 67

DISTRIBUTION
WORLDWIDE



MAVIG looks back on a long history.

Over 100 years of quality, service and innovation, through three family generations that upheld these principles and led motivated employees who subscribed to our vision: right through to the present and into the future. In Germany. In Europe. Worldwide.

We all strive not just to satisfy our customers and partners, but to inspire them. With outstanding service, technical innovations and ongoing developments.

With craftsmanship, know-how, state-of-the-art technology and above all – with enthusiasm.

In this spirit, here's to the next 100 years!



TRADITION

For over **100 years**, MAVIG has specialised in personal protection at workplaces where people are exposed to radiation.



1921



1960



1972



1985



since 2006



What began in Leipzig in 1921 with the production of protective products for X-ray and welding has now become an internationally successful company with an excellent reputation in the field of radiation protection and medical support systems for hospitals and medical practices.

Production grew steadily in the decades that followed the founding of the company. Protective products for X-ray and welding were successfully marketed all over the world under the MAVIG® trademark. In the post-war years, the company's headquarters and production facilities were relocated to Munich.

The family-run company "MAVIG" has always maintained the principles of a modern company:

"The customer and customer satisfaction are the top priority."

MAVIG is 100% independent and owner-managed.

Quality Management

MAVIG products are designed, manufactured and distributed in strict observance of all laws, regulations and standards.

Every product is tested for its safety and reliability, in some cases applying higher and stricter requirements than are required by law.

Certifications

The intended use of our products requires the maximum reliability and quality.

To ensure the highest level of quality, MAVIG applies a consistent quality management system in accordance with

DIN EN ISO 13485:2016

for medical devices. Our top priority is to provide our customers with high-quality products that are free from defects and delivered on time.

MAVIG is certified in accordance with DIN EN ISO 13485:2016. The majority of MAVIG products are CE certified: Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices. In addition, we have numerous international certificates.



DIN EN 61331-1:2016

DIN EN 61331-1:2016 (IEC 61331-1:2014) describes the correct determination of the shielding properties of materials used in protection against radiation.

Of importance here, among other things, is the consideration of inverse broad beam geometry, which detects any fluorescent radiation that may arise using measurement technology. This may occur more frequently in the case of lead-reduced or lead-free radiation protection material. As this low-energy type of radiation type is biologically very active and can pose a risk to the user, the current standard is therefore of great importance.

Furthermore, it is obligatory for every manufacturer to prove the protective effect of the apron over the entire X-ray tube voltage range of 50 kV to 110 kV and/or 150 kV.

This is necessary because the protective effect shows a clear decrease at the lower and upper end of the X-ray tube voltage range, especially in the case of lead-reduced or lead-free protective material.

MAVIG uses for the production of X-ray protective clothing solely materials that are classified according to this standard.

CE Marking of Personal Protective Equipment

X-ray protective clothing for healthcare staff and for patients falls under the legally binding EU Directive 2016/425/EEC for personal protective equipment (PPE).



Please always check whether the product that you want to use is marked correctly!

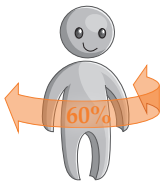
The familiar CE symbol alone is not sufficient here; the four-digit registration number issued by the authorised certification agency (notified body) must also be stated.

Naturally, all MAVIG products are correctly certified. With us, you "play it safe" in every respect.

CE 0302

In Accordance With the Standard DIN EN 61331-3:2016

The current DIN EN 61331-3:2016 (IEC 61331-3:2014) deals with the design of X-ray protective clothing. In order to meet these requirements, MAVIG X-ray protective clothing has been further developed and additionally optimised in a user-oriented manner.

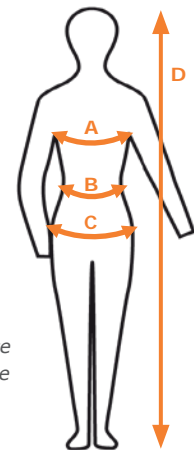


To protect the sides of the body as well, the front area of the protective clothing must cover **60% of the user's girth at its widest point**. Sophisticated weight-distributing mechanisms are extremely important, as the aprons will consequently have an altered overall weight.

Furthermore, the third part of the series of standards calls for more **transparency regarding the properties of the radiation protection material used**. The **weight per unit area** must be indicated on the apron to make it easier for the user to compare the protective clothing.



The aprons have to be **assigned to the body measurements**, so that it is easier to select the appropriate apron without the need to try them on. (see table)



- A Chest circumference
- B Waist circumference
- C Hip circumference
- D Body height

Sizing According to the Standard

The person's height, as well as either circumference of the **chest, waist or hip**, depending on which of the three dimensions is the greatest, is used for this purpose.

All-round Protection Costume BALANCE RA631	All-round Protection Coat SYNERGY RA632	Front Protection Apron BASIC RA640	Front Protection Apron EXTENDED RA641	Front Protection Apron ERGONOMIC RA650	Front Protection Apron COMFORT RA660
--	---	--	---	--	--

Overview of the size allocations of the PPE model series from MAVIG

RA631 Sizes	XS	S	M	L	XL	XXL	3XL
Chest circumference (for vest)	≤ 84 cm	85 - 95 cm	96 - 106 cm	107 - 117 cm	118 - 128 cm	129 - 139 cm	140 - 150 cm
Waist/hip circumference (for skirt)	≤ 86 cm	87 - 97 cm	98 - 107 cm	108 - 118 cm	119 - 129 cm	130 - 140 cm	141 - 151 cm
Lengths (skirt)	65 cm	70 cm	75 cm	80 cm			
for a body height of	150 - 170 cm	170 - 180 cm	180 - 190 cm	190 - 200 cm			
RA632 Sizes	XS	S	M	L	XL	XXL	3XL
Chest circumference	≤ 84 cm	85 - 95 cm	96 - 106 cm	107 - 117 cm	118 - 128 cm	129 - 139 cm	140 - 150 cm
Waist/hip circumference	≤ 98 cm	99 - 108 cm	109 - 119 cm	120 - 130 cm	131 - 141 cm	142 - 152 cm	153 - 163 cm
Lengths (coat)	90 cm	100 cm	110 cm	120 cm	130 cm	140 cm	
for a body height of	150 - 160 cm	160 - 170 cm	170 - 180 cm	175 - 190 cm	185 - 195 cm	195 cm - 205 cm	
RA640/RA641/RA650/RA660	XS	S	M	L	XL	XXL	3XL
Chest circumference	≤ 84 cm	85 - 95 cm	96 - 106 cm	107 - 117 cm	118 - 128 cm	129 - 139 cm	140 - 150 cm
Waist/hip circumference	≤ 91 cm	92 - 102 cm	103 - 112 cm	113 - 123 cm	124 - 134 cm	135 - 145 cm	146 - 156 cm
Lengths (apron)	90 cm	100 cm	110 cm	120 cm	130 cm	140 cm	
for a body height of	150 - 160 cm	160 - 170 cm	170 - 180 cm	175 - 190 cm	185 - 195 cm	195 cm - 205 cm	

3x Protection Inside

High Performance Radiation Protection

The quality demands on X-ray protective clothing are now greater than ever. Wearing times of the protective clothing are extended by modern, radiologically supported procedures in diagnostics and treatment. The protection requirement differs widely depending on the intended use.

MAVIG, as the international market leader for radiation protection, offers you a well thought-out variant policy and a sophisticated and wide range of models.

Three different protective materials are used to attenuate X-ray radiation. These are optimally adapted to the required radiation protection with minimal weight.

Safety & Control

Through extensive research and testing we ensure a healthy work environment for the users of our products, with the greatest possible ecological and toxicological harmlessness.

This is achieved by the careful selection of the materials as well as our suppliers and strict controls in the production process and the final recycling of the materials.



1 Standard Lead X-Ray Protection Material 50 - 150 kV

- ✓ Standard lead protection material
- ✓ High quality, flexible
- ✓ For applications in the upper X-ray tube voltage range, e.g. CT applications
- ✓ Tested radiation protection in the X-ray tube voltage range of 50 - 150 kV
- ✓ Compliant with standards: IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

2 NovaLite® X-Ray Protection Material 50 - 110 kV

- ✓ Lead-reduced protective material
- ✓ Outstanding rating with regard to weight and radiation protection
- ✓ Fulfilment of basic work-related physiological requirements
- ✓ For workplaces with long wearing times for protective clothing
- ✓ Tested radiation protection in the X-ray tube voltage range of 50 - 110 kV
- ✓ Compliant with standards: IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

3 NEW: Leadfree X-Ray Protection Material 50 - 110 kV

- ✓ Lead-free protective material
- ✓ Outstanding rating with regard to weight and radiation protection
- ✓ Fulfilment of basic work-related physiological requirements
- ✓ For workplaces with long wearing times for protective clothing
- ✓ Tested radiation protection in the X-ray tube voltage range of 50 - 110 kV
- ✓ Compliant with standards: IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

Absorbtion Values and Weights per Unit of Area of MAVIG X-Ray Protection Inner Materials

Protective material	Weight/area	Lead equivalent	X-ray tube voltage				
			50 kV	70 kV	90 kV	110 kV	150 kV
Standard lead	3.30 kg/m ²	0.25 mm Pb	99%	96%	91%	87%	80%
Standard lead	4.60 kg/m ²	0.35 mm Pb	> 99%	98%	95%	92%	87%
Standard lead	6.60 kg/m ²	0.50 mm Pb	> 99%	99%	97%	95%	92%
NovaLite 0.25	3.00 kg/m ²	0.25 mm Pb	99%	96%	92%	87%	-
NovaLite 0.35	4.30 kg/m ²	0.35 mm Pb	> 99%	98%	95%	91%	-
NovaLite 0.50	6.00 kg/m ²	0.50 mm Pb	> 99%	99%	97%	95%	-
Leadfree	2.95 kg/m ²	0.25 mm Pb	99%	96%	91%	85%	-
Leadfree	4.18 kg/m ²	0.35 mm Pb	> 99%	98%	94%	91%	-
Leadfree	5.89 kg/m ²	0.50 mm Pb	> 99%	99%	97%	95%	-

3x Outside Comfort

Flexible Wearing Comfort and Best Processing

Smoothness and flexibility are special quality features of MAVIG X-ray protective clothing.

In order to further optimise the wearing comfort for the user, a special emphasis is placed on selective tailoring and top workmanship in our factory.

MAVIG's innovative textiles were developed in accordance with the relevant requirements of DIN EN 13795-1:2019. This series of standards sets vital, reasonable safety requirements for the necessary quality of surgical textiles for the protection of patients and staff from infections. The following requirements were used as a basis for performance capability:

- **Protection for the staff and the patients**
- **High barrier function**
- **Optimal hygiene/cleaning**
- **Low particle release**
- **Material strength**
- **Protection against electrostatic charge**

1 ComforTex® HPMF Robust, Protective, Safe

Our proven ComforTex® HPMF offers you the highest level of wearing comfort in everyday working life: whether as a body-hugging material for our Hybrid or as the entire surface for your X-ray protective clothing.

Additionally, our ComforTex® HPMF, as well as the two more advanced textiles ComforTex® HPMF Hybrid and Duplex, offers safety and protection against electrostatic charge, which could affect the proper functioning of sensitive medical devices.



Titan

Blue Admiral

Regatta

Curacao

Lagoon

2 ComforTex® HPMF Hybrid and ComforTex® HPMF Duplex

In order to best meet your needs in everyday working life, you can choose from several variants of our ComforTex® HPMF outer material.

With our ComforTex® HPMF variant Hybrid and Duplex, we combine maximum comfort for the wearer with optimum hygienic and cleaning properties.

In the Hybrid material, the side in contact with the body is manufactured with ComforTex® HPMF, so the well-known wearing comfort is maintained. At the same time, the surface on the outside of the protective clothing shows significantly improved hygienic and cleaning properties thanks to a special coating.

For this reason, our Hybrid material is particularly suitable in areas with high fluid volumes.

3 NEW: Selected MAVIG products can be ordered with ComforTex® HPMF Duplex. Here the special coating of ComforTex® HPMF Hybrid is used on both sides.

Colour Selection and Special Design

A fresh look, a pleasant feel and comfort for the wearer are the first impressions of the current X-ray protection collection by MAVIG.

These demands are also reflected in the constantly evolving colour palette of our collection.

The range includes a total of eight colours for the outer materials of ComforTex® HPMF, ComforTex® HPMF Hybrid, and ComforTex® HPMF Duplex.

Our children's design "Happy" is exclusively available in the outer material ComforTex® HPMF.



Mandarin

Orchidee

Baccara

"Happy"
(only ComforTex® HPMF)

Please note that for printing reasons, the colours in the photos may differ from the original product colours.

Revolution

The Levio® Concept Simple. Effective.

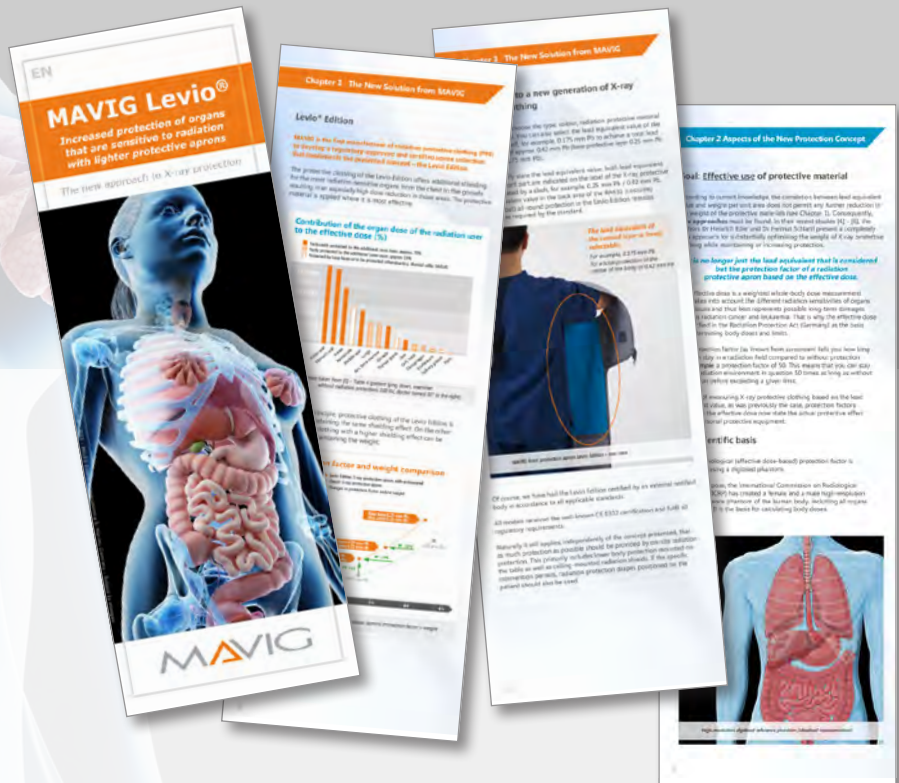
For some time now, the focus has been on reducing the weight of personal protective equipment. Until now, the X-ray apron has protected the front of the body from the neck down to the knees with a uniform lead equivalent.

The MAVIG Levio Edition addresses both challenges – it optimises the weight/protection ratio and protects where protection is particularly effective.

Scientifically Based. Proven. Certified.

Latest scientific studies show that approximately **80% of the effective dose** for the examiner is in the area from the **chest to below the gonads** because the organs that are particularly sensitive to radiation, such as the colon, stomach, bladder, gonads, lungs and large parts of the active bone marrow, are located there.

Levio®



**For Optimised Protection.
Lead Equivalent. Protection Factor.**

The effective dose can be effectively reduced if the radiation protective material is concentrated in the predetermined area – from above the chest to below the gonads.

MAVIG is the first manufacturer of radiation protective clothing (PPE) to develop an **approved and certified apron collection** that implements this concept – the new **Levio Edition**.

The details of the publications and results can be found in our scientifically prepared brochure. You can find it online on our website or on request.

www.mavig.com/levio

**Levio-Panel. More Protection.
Less Weight.**

NEW

Levio®
Optimised Protection Concept

The basis for the Levio Edition is always an X-ray protection apron with a standard-compliant lead equivalent value of 0.25 mm Pb (front or all-round protection, depending on the type). You have the choice of how high the **additional shielding** (Levio panel) **for the most radiation-sensitive organs** from the chest to below the gonads should be.

The area with the reinforced protective material is clearly visible in colour (for example, coat RA632, inside in the colour Regatta – see fig. A and B).

The Levio Edition is available for selected models of MAVIG's portfolio of X-ray protective clothing.



Advantages

- ✔ **Increased protection for the centre of the body** (0.42 mm Pb)
- ✔ Same weight (compared to classic 0.35 mm Pb)
- ✔ Personalized X-ray protection based on the respective body dimensions
- ✔ Type-examination certificate according to (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:201
- ✔ Available for selected MAVIG aprons

Advantages

- ✔ Equal protection of the centre of the body (0.50 mm Pb)
- ✔ **More than 10% weight reduction** (compared to classic 0.50 mm Pb)
- ✔ Personalized X-ray protection based on the respective body dimensions
- ✔ Type-examination certificate according to (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:201
- ✔ Available for selected MAVIG aprons

Outlast® Inlay

**Included with Head Wear.
Optional for all Apron Models.**

Keep a cool head – always!

**Outlast® Inlay. Patented
Temperature Regulation.**

Optionally, all MAVIG aprons can now be completed with an inlay material that has been tried and tested for years. For our head wear the Outlast® inlay is included.

The Outlast® technology enhances textiles by providing the intelligent benefit of a dynamic, proactive temperature regulation.

The Outlast® inlay material absorbs heat specifically, stores and releases it again when needed, to achieve an ideal temperature for well-being.
The result: Greater comfort.

Not too hot, not too cold, but just right.
The advantages at a glance:

- **Active temperature regulation**
- **Even heat distribution**
- **Less overheating**
- **Reduced perspiration**
- **More comfort**



**Convenient Climate.
Phase Change Materials (PCM).**

In contrast to other materials and insulations, Outlast® products continuously and proactively regulate the temperature to maintain a balanced climate.

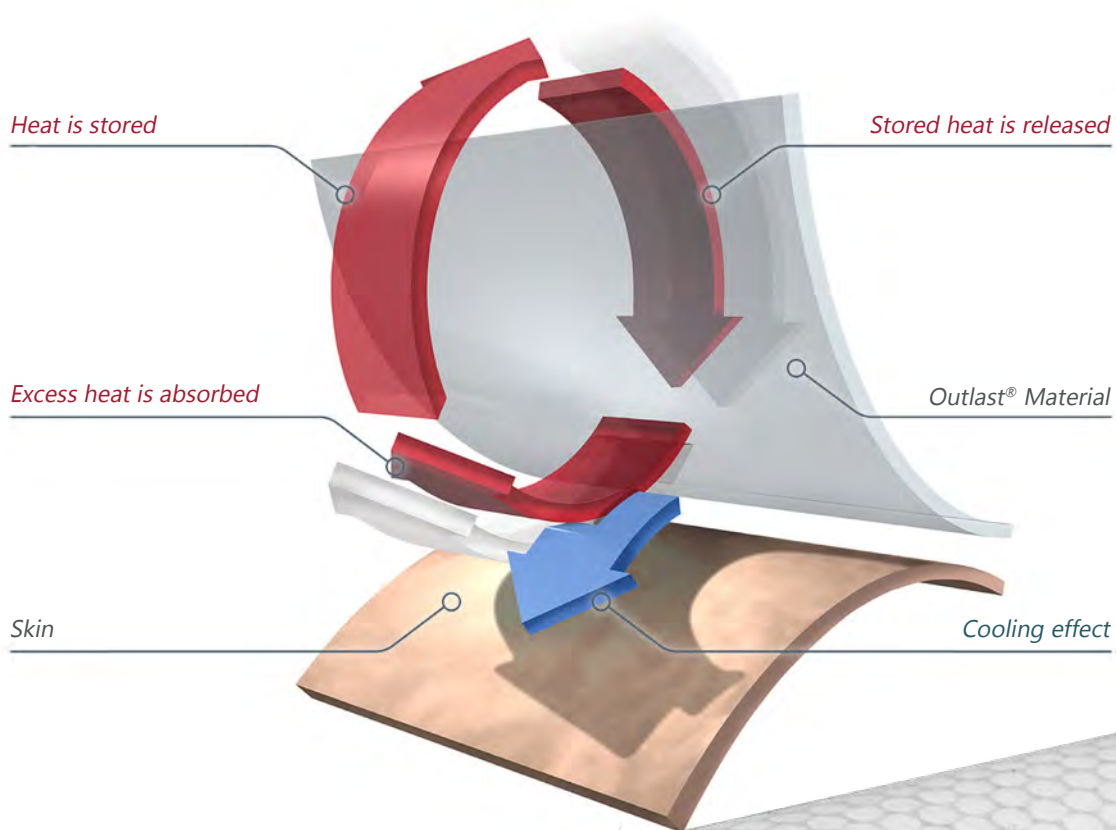
**Decades of Experience.
Environmentally Friendly Quality.**

Over 30 years of profound experience are within Outlast® materials. These are ecologically harmless, free of harmful substances and certified according to Oeko-Tex® Standard 100.

NEW



Outlast Temperature Regulation



Balance RA631

All-round Protection: Vest & Skirt

The two-part design optimally counteracts any stress on the body caused by heat or weight.

- ✔ Completely overlapping front parts achieve the selected lead equivalent value in the front
- ✔ Ideal fit and amazing wearing comfort
- ✔ Suitable for long wearing times
- ✔ Clearly reduced weight on the spine
- ✔ Standard equipment includes shoulder pads
- ✔ In the lower area, the skirt is additionally secured with a snap closure
- ✔ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

Optionally, the vest can be fitted with a **button-on stretch belt**. This provides even more weight relief for the shoulders and also supports the back.

Alternatively, the costume can be combined with our shoulder relief system **BRYGGA** (see p. 28).

An elastic insert in the rear of the skirt makes it easy for the user to hold their posture and can be easily replaced if necessary, thanks to a zip.

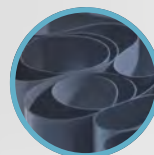
High-quality hook-and-loop fasteners to close the vest and skirt are, of course, standard.



Fig.: ComforTex HPWF, Curacao

Protection/Lead Equivalent Standard Collection

Novalite, Leadfree or Standard lead



Front:
0.25 mm Pb, 0.35 mm Pb or 0.50 mm Pb

Back generally:
0.25 mm Pb

Protection/Lead Equivalent Levio Edition

Novalite, Leadfree or Standard lead



Total value Levio-Panel:
0.42 mm Pb or 0.50 mm Pb (outside 0.25 mm Pb)

Back generally:
0.25 mm Pb

Levio® 
Optimised Protection Concept

Patented Safety

Ideal radiation protection is provided by colour-contrasting (Titan) safety zones on the sides and in the shoulder area. These are equipped with the full lead equivalent value of the front part and give you the certainty of being optimally protected in all situations.

If the front wing is within this clearly recognisable zone when the protective clothing is closed, you are covering the full 60% of the girth with the selected protective value.



BRYGGA Shoulder Relief



Outlast Temperature Regulator

Higher Protection – Levio Edition

The area with the reinforced protective material is clearly recognisable by its colour.

Back Relief

The elastic insert in the back of the skirt makes it easier for users to maintain their posture in daily routines.

Free Movement

For greater freedom of movement, the skirt has a cut-out in the back. Of course, the knees are still optimally protected at the front and sides.

Overlapping Area

In order to ensure protection during movement (e.g. when bending over), the vest has sufficient length and it overlaps the skirt.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

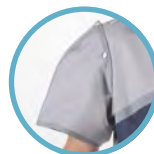
from XS to 3XL
(page 7)



Skirt lengths:
from 65 - 80 cm
(page 7)

Optional

(pages 14, 28-33)



On request:
Outlast
BRYGGA
Sleeves
Stretch belt (external)
Breast pocket
Embroidery
Made-to-measure protection

Accessories/Replacement

Bolero (page 30)
Thyroid/sternum protection



Stretch insert:
(Adjustment via zip)
Stretch belt:
(Adjustment via
snap fastener)

Synergy RA632

All-round Protection: Coat

The simple, convenient way of putting it on adds to the comfort. The coat is simply closed with a hook-and-loop fastener at chest level and sits correctly right away.

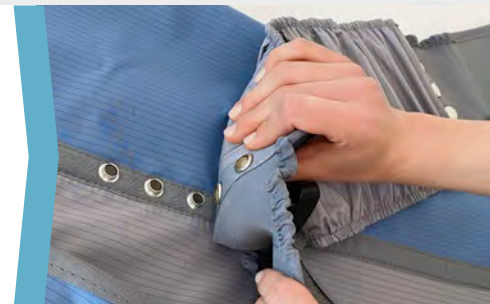
- ✔ Completely overlapping front parts achieve the selected lead equivalent value in the front
- ✔ Ideal fit, maximum comfort for the wearer
- ✔ Continuous support thanks to the wide elastic stretch belt (included)
- ✔ Standard equipment includes shoulder pads
- ✔ In the bottom area, the coat is additionally secured with a snap closure
- ✔ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

For additional shoulder relief, the coat can be combined with our **BRYGGA** shoulder relief system (see p. 28).



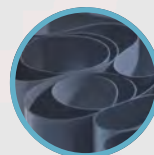
Optimal adjustment to your waist height is ensured by a variable snap button fastener of the belt.

This allows it to be attached variably in height and to be buttoned to the coat on one or both sides.



Protection/Lead Equivalent Standard Collection

Novalite, Leadfree or Standard lead

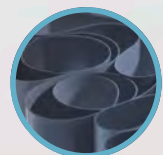


Front:
0.25 mm Pb, 0.35 mm Pb or 0.50 mm Pb

Back generally:
0.25 mm Pb

Protection/Lead Equivalent Levio Edition

Novalite, Leadfree or Standard lead



Total value Levio-Panel:
0.42 mm Pb or 0.50 mm Pb (outside 0.25 mm Pb)

Back generally:
0.25 mm Pb

A Safe Fit

Colour-coded (Titan) contrasting safety zones give you the certainty of being optimally protected in all situations.

If the front panel is within this clearly recognisable zone when the protective clothing is closed, then you are covering the full 60% of the girth with the maximum protective value.

Levio® 
Optimised Protection Concept



BRYGGA Shoulder Relief



Outlast Temperature Regulation

Higher Protection – Levio Edition

The area with the reinforced protective material is clearly recognisable by its colour.

Safety Zone

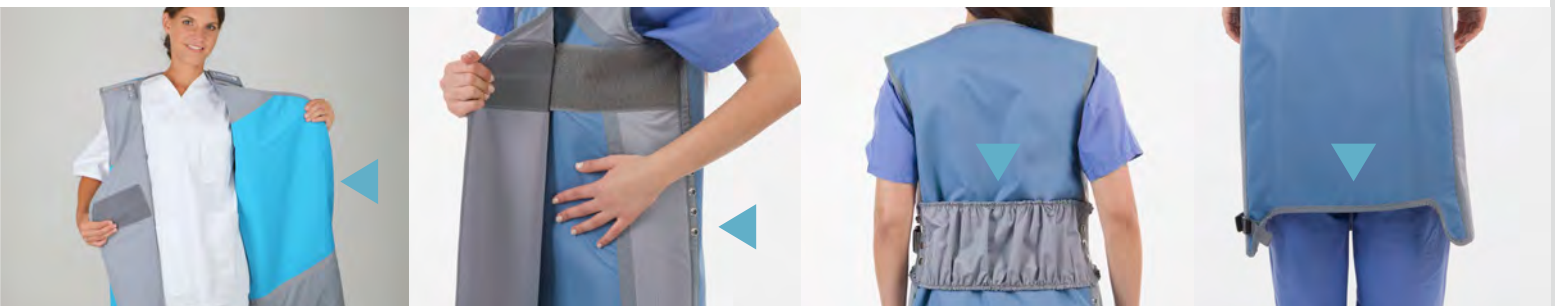
This zone (colour-contrasted in Titan) ensures a risk free, seamless and safe closing of the coat RA632.

Back Relief

The wide elastic stretch belt makes it easier for you to keep your posture in daily routines.

Free Movement

For greater freedom of movement, the coat has a cut-out in the back. Of course, the knees are still optimally protected at the front and sides.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL
(page 7)



Coat lengths:
from 90 - 140 cm
(page 7)

Optional

(pages 14, 28-33)



On request:
Outlast
BRYGGA
Sleeves
Breast pocket
Embroidery
Made-to-measure protection

Accessories/Replacement

Bolero (page 30)
Thyroid/sternum protection



Stretch belt:
(Adjustment via
snap fastener)

Comfort RA660

Front Protection Apron

Our RA660 range offers up-to-date radiation protection clothing which accompanies your active working day and provides outstanding service. The extraordinarily good wearing comfort is supported by the wide stretch insert integrated in the back panels.

- ✓ Suitable for a wide range of applications with only frontal radiation exposure
- ✓ Ideal fit, maximum comfort for the wearer
- ✓ Suitable for long wearing times
- ✓ Optionally "without protection" in the back, for a reduced weight of the apron
- ✓ Standard equipment includes shoulder pads
- ✓ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016



The stretch insert running across the entire width of the back ensures a good fit and shoulder relief even when the X-ray protective clothing is worn for long periods.



Protection/Lead Equivalent Standard Collection

Novalite, Leadfree or Standard lead

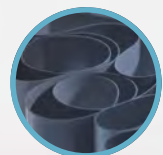


Front:
0.25 mm Pb, 0.35 mm Pb or 0.50 mm Pb

Back generally:
0.25 mm Pb

Protection/Lead Equivalent Levio Edition

Novalite, Leadfree or Standard lead



Total value Levio-Panel:
0.42 mm Pb or 0.50 mm Pb (outside 0.25 mm Pb)

Back generally:
0.25 mm Pb

Levio® 
Optimised Protection Concept

Sales Champion

Our customers report that this model is their favourite front apron. This is because it can be put on and taken off easily, fits the body well, stays in place well and provides excellent shoulder relief.

Closure System

MAVIG uses only top quality, low-wear hook-and-loop fasteners.



Outlast Temperature Regulation

Higher Protection – Levio Edition

The area with the reinforced protective material is clearly recognisable by its colour.

User Friendly

The sophisticated design of the RA660 front protection apron makes it easy and quick to put on or take off.

Special Feature

The stretch insert offers ideal relief especially for long periods of wear.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL
(page 7)



Lengths:
from 90 - 140 cm
(page 7)

Optional

(pages 14, 30-33)



On request:
Outlast
Sleeves
Breast pocket
Embroidery
Made-to-measure protection

Accessories

Bolero (page 30)
Thyroid/sternum protection



Ergonomic RA650

Front Protection Apron

Front protection in its pure form: Model RA650 offers full-body protection over the entire front section covering the required 60% of the girth.

- ✔ Suitable for a wide range of applications with only frontal radiation exposure
- ✔ Ideal fit, maximum comfort for the wearer
- ✔ Possibility to slip off the apron
- ✔ Optionally "without protection" in the back, for a reduced weight of the apron
- ✔ Standard equipment includes shoulder pads
- ✔ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

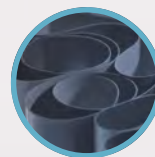


Comfortable, wide crossbands allow the apron to be slid off easily by opening the hook-and-loop fasteners in the side area.



Protection/Lead Equivalent Standard Collection

Novalite, Leadfree or Standard lead



Front:
0.25 mm Pb, 0.35 mm Pb
or 0.50 mm Pb

Back generally:
0.25 mm Pb



Outlast Temperature Regulation

Closure System

MAVIG uses only top quality, low-wear hook-and-loop fasteners.

Fast, Simple and Convenient

The apron can be slid off by simply opening the hook-and-loop fasteners in the side area, even through the sterile surgical gown.

Shoulder Relief

Thanks to the extra-wide, comfortable crossbands, the load is optimally distributed over the entire shoulder area.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL
(page 7)



Lengths:
from 90 - 140 cm
(page 7)

Optional

(pages 14, 30-33)



On request:
Outlast
Breast pocket
Embroidery
Made-to-measure protection

Accessories

Bolero (page 30)
Thyroid/sternum protection



Extended RA641

Front Protection Apron for Applications in a Sitting Position

Radiation protection aprons are already part of the standard equipment in various specialized applications, such as urology, anaesthesiology, etc. Most aprons commonly used these days are designed for working in standing positions. However, especially in the examples mentioned, interventions are often carried out in a seated position.

- ✓ Suitable for various, seated applications with only frontal radiation exposure
- ✓ Integrated gonad protection for the sitting position
- ✓ Ideal fit, maximum comfort for the wearer
- ✓ Soft shoulder pads as standard equipment
- ✓ Closure options: Straps with snap buckle (standard, in the front) or two snap buckles (optional, in the back)
- ✓ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

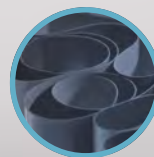


Well thought-out relief, exchangeable – the innovative, elastic belt, located on the inside of the front protection, supports most of the apron's weight on the hips. This relieves stress on the back and shoulders.



Protection/Lead Equivalent Standard Collection

NovoLite, Leadfree or Standard lead



Front:
0.25 mm Pb, 0.35 mm Pb
or 0.50 mm Pb

Back generally:
0.25 mm Pb



Outlast Temperature Regulation

For Sitting Positions Especially

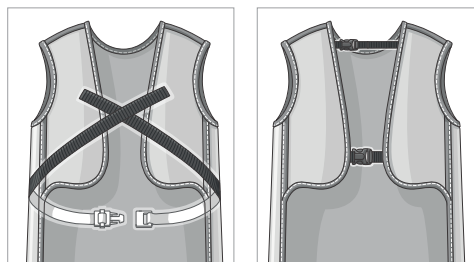
In order to ensure sufficient protection even when sitting, a gonad protection has been attached to the inside of the apron. This hangs protectively in front of the gonads, while the apron rests on the legs.

The new design effectively prevents the apron from slipping down the legs and exposing them. The larger side panels in the lower part keep the apron in position also during movement.

When you are standing, the RA641 also guarantees complete X-ray protection from neck to knees.

Closure Systems

The RA641 model offers two different variants for closing the apron.



Strap closure with snap buckle
Standard, in the front

Double snap buckle closure
Optional, in the back

Removable Gonad Protection

The gonad protection which is attached with a hook-and-loop fastener can be simply removed for weight reduction while standing.

Correct Length!

For seated work, the apron should be chosen 10 cm longer than the length that corresponds to your body height, so that the knees are also covered. (see here: "Lengths, recommended height of user")

Side Flaps

The side flaps of the lower part of the apron can simply be fastened together in the back, so that they do not interfere with movement and you can work unrestrictedly.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

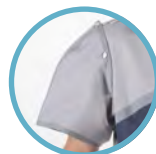
from XS to 3XL
(page 7)



Lengths:
from 90 - 140 cm
(page 7)

Optional

(pages 14, 30-33)



On request:
Outlast
Sleeves
Breast pocket
Embroidery
Made-to-measure protection

Accessories/Replacement

Bolero (page 30)
Thyroid/sternum protection



Inner belt
(Adjustment via zip)
Gonad protection
(Adjustment via
hook-and-loop fastener)

Basic RA640

Front Protection Apron

The basic RA640 model has proven effective for years and is used as front protection usually for short and seldom wearing times in conventional X-ray situations without fluoroscopy.

- ✔ Ideal fit, maximum comfort for the wearer
- ✔ Ideal for short and infrequent wear
- ✔ Soft shoulder pads as standard equipment
- ✔ Various closure types to choose from
- ✔ Type testing and certification in accordance with (EU) 2016/425, IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016

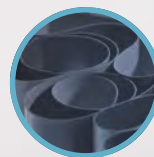


For model RA640 it is also possible to choose whether a protection of 0.25 mm Pb should be maintained in the back panels or not, in order to reduce the weight of the apron.



Protection/Lead Equivalent Standard Collection

NovoLite, Leadfree or Standard lead



Front:
0.25 mm Pb, 0.35 mm Pb or 0.50 mm Pb

Back generally:
0.25 mm Pb



Outlast Temperature Regulation

Different Closure Types – You can choose ...

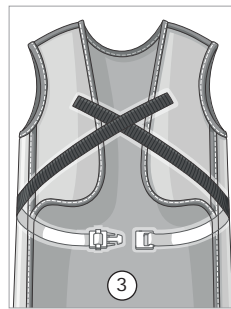
We offer different closure systems for this series of aprons. Choose your favourite:



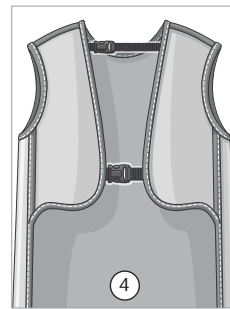
Snap fastener closure
Elastic band with snap fasteners for closing in the back.



Crossband closure
Crossbands with hook-and-loop fastening for closing in the back.



Strap closure
Straps with snap buckle closure for closing in the front.



Snap buckle closure
Two webbing straps with snap buckles for closing in the back.



Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL
(page 7)



Lengths:
from 90 - 140 cm
(page 7)

Optional

(pages 14, 30-33)



On request:
Outlast
Sleeves
Breast pocket
Embroidery
Made-to-measure protection

Accessories/Replacement

Bolero (page 30)
Thyroid/sternum protection



Crossband closure
(Adjustment via
snap fastener)

BRYGGA®

Shoulder Bridge

For Individual Weight Relief

Wearing a BRYGGA shoulder brace under the protective X-ray apron is an easy-to-use and efficient way to reduce the weight load on the shoulders and prevent muscle fatigue.

- ✔ Patented solution – Made in Sweden
- ✔ For MAVIG apron models RA631 and RA632
- ✔ No impairment for the user, ideal for long wearing times
- ✔ Promotes an ergonomically correct posture
- ✔ Significantly reduces the risk of tension and numbness in the arms
- ✔ Full freedom of movement for neck and arms
- ✔ Easy cleaning



Lighter Feeling – Less Pressure

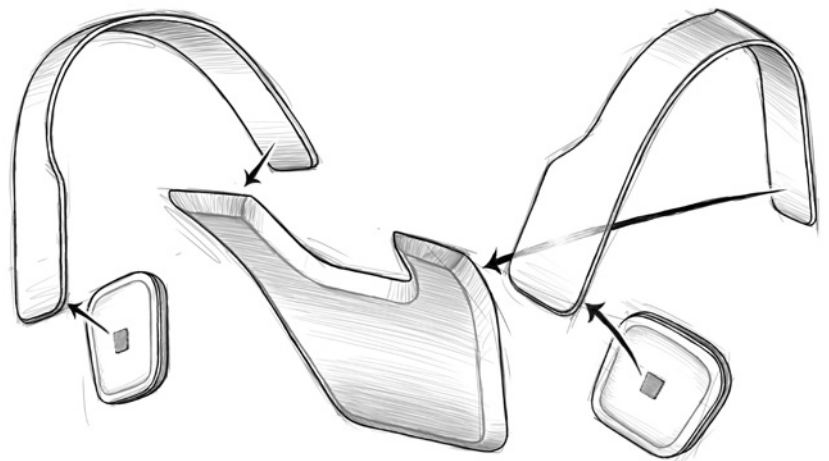
In a unique way, the patented invention from Sweden reduces the pressure on the shoulder area that is normally caused by the weight of the apron.

Optimum Weight Distribution

BRYGGA distributes the weight more evenly and primarily on the bone structure rather than the muscles and nerve cords. This proves to be particularly advantageous for long periods of wear.

Modular Structure

The multi-part construction allows for an individual adjustment to the respective user and ensures a pleasant and comfortable fit in an easy and uncomplicated way.



Webvideo

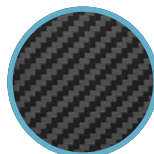
Scan QR code to view:



MAVIG website:
www.mavig.com/product/ra-brygga/

Material

Robust,
 100% carbon fibre



Foam padding:
 Exterior: Evazote
 Interior: Polyethylene

Sizes

S/M and L
 Individually adjustable



Structure:
 5-piece

Bolero RA637

Shoulder Protection



Shoulder Protection – Bolero

Thanks to the newly developed Bolero as an alternative to the sleeves, the radiation exposure due to scattered radiation for the shoulder joint can be significantly reduced. Freedom of movement is maintained to the greatest extent possible with the design, which is open underneath the arm.

At the same time, the design considerably reduces the scattered radiation coming in from the sides via the armholes.

The "Bolero" shoulder protection is available for all models and is therefore ideal for combination with MAVIG all-round protection or front protection aprons.

It is worn directly under the X-ray protection and is simply closed with a hook-and-loop fastener in the front.

The standard lead equivalent value is 0.25 mm Pb. This ensures good mobility during the daily working routine.

The shoulder protection is always manufactured in the colour "Titan". The correct size as well as the protective material depend on the chosen X-ray protective clothing.

Protection/Lead Equivalent

Novalite, Leadfree or Standard lead



As standard:
0.25 mm Pb
On request:
0.35 mm Pb
or 0.50 mm Pb

Outer Material

Titan colour only (pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL (matching the PPE)



Optional

(pages 32-33)



Embroidery:
Text at the left sleeve hem

Sleeves



Button-on

Sewn-on

right,
left or
pair



Shoulder Protection – Sleeves

For all model ranges (except RA650), you can optionally choose sleeves in order to extend the radiation protection*.

The radiation on the shoulder joint is significantly reduced by the sleeves. Likewise, incident radiation on the side via the armholes is considerably reduced.

The standard lead equivalent value is 0.25 mm Pb. This ensures good mobility during the daily working routine.

The shoulder protection is always manufactured in the colour "Titan".

The correct size as well as the protective material depend on the chosen X-ray protective clothing.

MAVIG offers the sleeves both as a button-on solution or firmly sewn-on. You can also choose whether you want only one sleeve, on the right or left, or a pair.

**Please note: The protective surface of the front (surface without pinholes) ends at the seams. This also applies to the sewn-on sleeves. With the button-on sleeves, a continuous protective surface is ensured by the overlap.*

Protection/Lead Equivalent

NovaLite, Leadfree
or Standard lead



As standard:
0.25 mm Pb

On request:
0.35 mm Pb
or 0.50 mm Pb

Outer Material

Titan colour only
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

from XS to 3XL
(matching the PPE)



Personalise

Your Protective Equipment

Embroidery

In many cases, it is useful to assign X-ray protection clothing to an individual or a department using an embroidery.

The accessories can also be embroidered on request when ordered.

- ① On an adaptable area approx. 5 x 10 cm below the left shoulder seam
- ② Sewn-on tape below the left shoulder seam
- ③ Line of text or logo on an optional breast pocket
- ④ Line of text on a tape on the skirt
- ⑤ Text or logo on the bib of the thyroid and sternum protector
- ⑥ Text on the collar of the thyroid and sternum protector
- ⑦ Text on the sleeve hem of the Bolero
- ⑧ Text on the left hand side of the head cover

Whatever you decide, you give us the text and we will produce a top quality embroidery. Due to their good readability, block letters are used as a standard. The font height is determined by the length of the text and the number of lines.

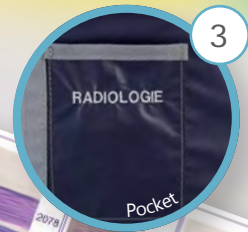
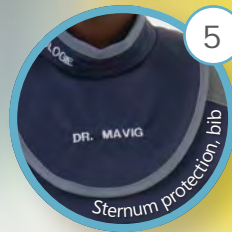
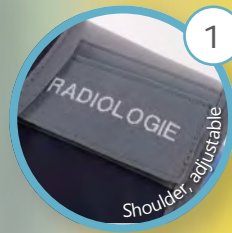
We are happy to offer logo embroidery in all colours as a special solution.

Pocket

The breast pocket (9a/b) is designed as a regular insertion pocket away from the body. For all-round protection (9a) the position is on the right, for front protection (9b) on the left, both from the user's point of view.

The skirt pocket is designed as a standard insertion pocket on the right side away from the body.





Model RA614

Thyroid & Sternum Protection

With Different Closures

Hook-and-loop fastener (RA614KL)

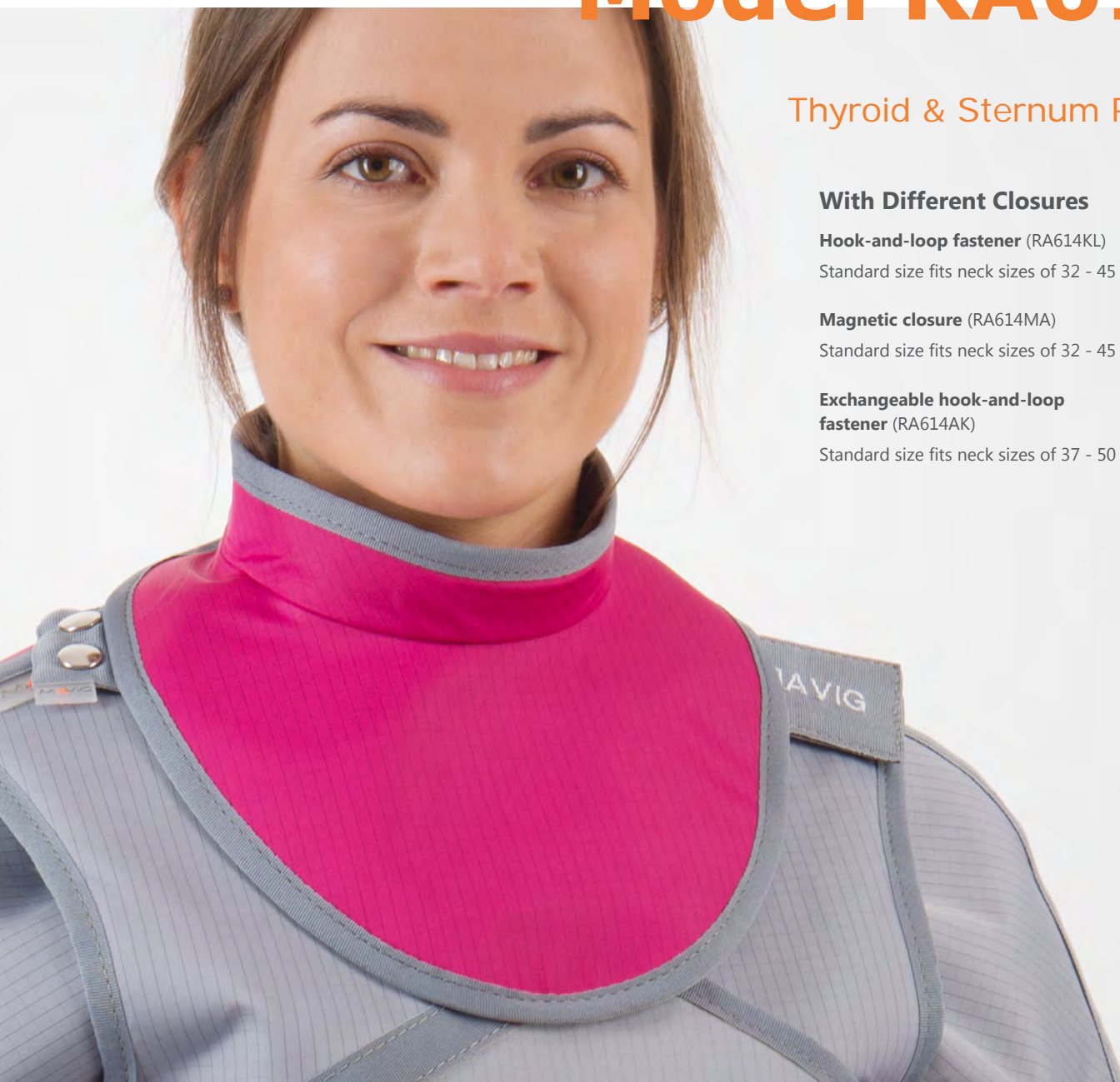
Standard size fits neck sizes of 32 - 45 cm.

Magnetic closure (RA614MA)

Standard size fits neck sizes of 32 - 45 cm.

Exchangeable hook-and-loop fastener (RA614AK)

Standard size fits neck sizes of 37 - 50 cm.



Protection/Lead Equivalent

NovoLite, Leadfree or Standard lead



As standard:
0.50 mm Pb

Outer Material

Colours
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Neck Sizes

Uniform
Depending on the model



Optional

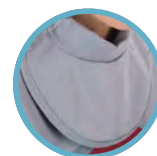
(pages 32-33)



On request:
Embroidery
Made-to-measure protection

Accessories/Replacement

Hygienic cover
(RA614HF)



Spare hook-and-loop fastener
(RA614AKV, adjustment
via snap buttons)

Thyroid and Sternum Protection

The thyroid is a radiation-sensitive organ of the human body and therefore in particular need of protection. Wearing an appropriate shield should therefore be a matter of course.

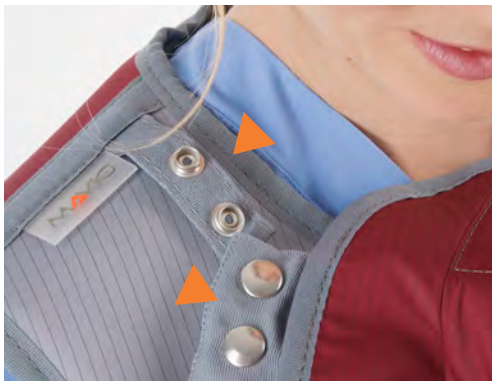
Our thyroid and sternum protector variants are characterised by a first-class cut and the best fit, taking into account all aspects of radiation protection.

Model Variants RA614

The thyroid and sternum protector with snap button connection to the vest/coat/apron is suitable for all model series.

As a standard, it is manufactured with a firmly sewn-on hook-and-loop fastener. The other closure types, magnetic closure and exchangeable hook-and-loop fastener, are available as options.

All variants provide enough room for adjustment.



Snap button connection
It allows for a secure adjustment of the thyroid and sternum protection on MAVIG X-ray protective clothing.



Closure type – via magnet
The thyroid and sternum protection is also available with a practical magnetic closure (variant RA614MA).



Accessories: Hygienic cover
To meet the hygienic requirements in everyday life, we recommend using our washable hygienic cover in the colour Titan made of the special ComforTex® MF material.



Closure type – exchangeable
As a third alternative, an exchangeable closure can be chosen (RA614AK). Please note the different neck sizes here.

RA611 & RA612

Radiation Protection Head Wear



In Two Designs

- ✓ Effective protection for the cranium
- ✓ Corresponds to work-related physiological aspects
- ✓ Perfect balance of radiation protection, weight and comfort
- ✓ **NEW:** Always with Outlast® material
- ✓ Design-protected, universal-size cuts
- ✓ Optimal adjustment to the respective head circumference and head shape
- ✓ Universal size: Suitable for head circumferences from 54 - 63 cm

Protection/Lead Equivalent

NovaLite, Leadfree
or Standard lead



Optional:
0.25 mm Pb, 0.35 mm Pb
or 0.50 mm Pb

Outer Material

Colours
(pages 10/11)



AS standard:
ComforTex® HPMF

Size

Suitable for head circumferences
from 54 - 63 cm



Optional

(pages 32-33)



On request:
left side

Included

Outlast®
Temperature regulation





Outlast Temperature Regulation

Radiation Protection Head Wear

Working in interventional radiology can entail risks. Currently, the likelihood of medical personnel being exposed to radiation and developing a brain tumour is the subject of a lively debate among experts.

Without effective on-site upper table scatter radiation protection, the cranium may well be exposed to high levels of radiation, depending on the procedure and fluoroscopy time.

MAVIG, therefore, has developed two different radiation protective head coverings to meet the individual needs of the user. The respective models differ in the size of the desired protection area and amount of heat elimination.



Temperature-regulating Outlast material is now included in both models for a more comfortable and cooler feeling (pages 14/15).



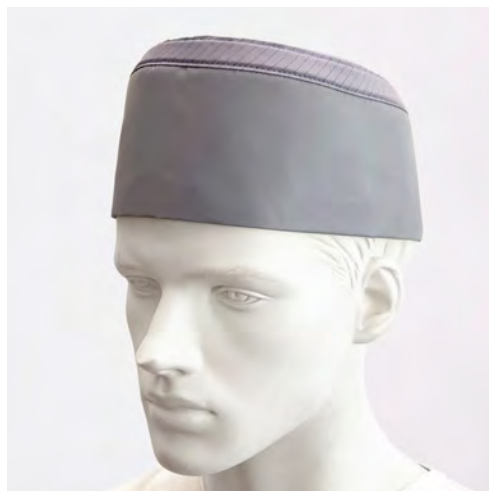
RA611 With Breathable Insert

A breathable insert is incorporated into the top of the cap, ensuring very good heat dissipation.



RA612 – Closed Cap

With a closed cap, the cranium is shielded frontally, on the sides and completely from above. However, this limits heat dissipation via the top of the skull.



Model HS100

X-Ray Protective Gloves



- ✓ Lead equivalent: 0.045 mm Pb
- ✓ Powder-free
- ✓ Low-protein natural rubber
- ✓ Lead free
- ✓ Non-toxic
- ✓ Sterile
- ✓ Excellent gripping ability and great touch sensitivity
- ✓ High elasticity and tear resistance
- ✓ Available in many sizes

The idea of optimisation in radiation protection dictates that every possible measure should be taken to minimise the dose from radiation exposure. Outstanding usage properties and an optimised fit now make it easy to comfortably protect yourself better.

Sterile Gloves With Protection Against X-Rays

Significantly reducing the equivalent dose for occupationally exposed medical staff is a must, not only because of the lowered limits for the effective dose.

Sterile protective gloves from MAVIG with shielding effect against scattered X-rays enable optimisation of the radiation protection measures for the medical staff.

The product is classified as a powder-free sterile glove, which features the additional benefit of X-ray protection properties on top of its core material characteristics of impermeability and protection against chemicals and microorganisms.

MAVIG offers with the sterile gloves HS100 an efficient way for a reduction of radiation exposure to the hands. Last but not least, this has contributed to the inclusion of sterile protective gloves with shielding effect against scattered X-ray radiation in the recommendations of DIN 6815:2021 as protective equipment for radiation users.

Of course, our gloves HS100 are certified and CE-compliant.

Application

The protective gloves HS100 are exclusively intended for use in the scattered radiation field. As a sterile product, they are intended for single use only.

Properties

With the development of these gloves, MAVIG has succeeded in synthesising traditionally opposing features:

- Powder-free, sterile
- Low-protein natural rubber
- High shielding effect against scattered radiation (average attenuation for scattered X-ray radiation of 45 - 55%, for example in the X-ray tube voltage range of 60 - 80 kV)
- Metal oxides – Lead free
- High elasticity and tear-resistant
- Excellent gripping ability, great touch sensitivity

A great elasticity in combination with an excellent anatomical fit allows for optimal working conditions, bringing it in the same category of high quality surgical gloves, while additionally offering efficient protection against secondary X-ray radiation (scattered radiation).

The gloves convince with its high touch-sensitivity and dexterity. The micro-textured surface provides a secure grip, even in moist conditions. The soft, stretchable material with its anatomical form prevents fatigue and provides optimal ergonomic features.

The gloves are easy to put on and are especially tear-resistant due to their elasticity. In addition, the rolled edge counteracts tearing when pulled over.

Sizes and 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 sales unit is a practical dispenser box containing five pairs of gloves of one size.

Each pair is sterile and securely packed in a peel pack with an additional inlay.

Use under sterile conditions is guaranteed.

Average Measured Values for the Attenuation of X-ray Radiation

X-ray scatter radiation (skin dose reduction)	60 kV / 55 %	80 kV / 45 %	100 kV / 39 %	120 kV / 35 %
--	---------------------	---------------------	----------------------	----------------------

The reduction parameters have been determined in the broad beam, according to DIN EN 61331-1:2016 (IEC 61331-1:2014).

BR & BRV Models

X-Ray Protective Glasses/Visors



X-Ray Protective Glasses and Visors in Separate Catalogue

Our individual program with different designs for an optimal fit can be found in our separate catalog.





Eye Protection for Medical Use of Radiation

The sensitivity of the human eye to radiation exposure is classified as very high. X-ray protective glasses for the radiation user provide protection from scattered radiation. This is secondary radiation, primarily emitted by the irradiated patient volume.

The correct fit is especially important in the case of protective glasses. Therefore, the differing facial geometries from person to person require a corresponding diversity of models.

Virtual Fitting on our website:

www.mavig.com/virtual-mirror/

Cataract Risk and Lens Opacity

It has been known for years that radiation-induced lens opacity can occur due to exposure to ionising radiation in the workplace.



According to current knowledge, the initial stages can already occur from a radiation exposure of only 0.5 Gy. Regardless of whether the dose is acute or protracted, the effect is cumulative, meaning individual doses are added up.

ST Drapes



Femoral Drape ST-FS5AMM



Radial Drape ST-RZ5AMM

Reusable Radiation Protection Drapes

The optimally adapted size of our economic, reusable drapes ensures constant excellent protection for the examiner and maximum comfort for the patient.

The special shape of the drapes is designed for the corresponding purpose:

- ST-FS5AMM with cut-out for femoral puncture
- ST-RZ5AMM without cut-out for radial puncture

At the same time the unique cuts of the drapes prevent their protrusion into the area to be imaged when the X-ray source is angled.

Sterile disposable covers for the drapes allow placement above the sterile patient cover. They ensure fast placement and easy removal in an emergency situation as well as continuous position monitoring.

Protection/Lead Equivalent

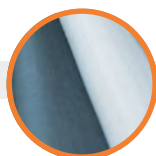
Standard lead



As standard:
0.50 mm Pb

Outer Material

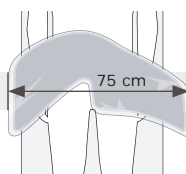
Colour – Two-sided
Mandarin/Titan



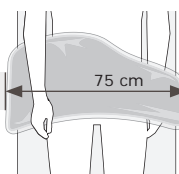
As standard:
ComforTex® HPMF

Size

Width approx. 75 cm, each



Femoral drape



Radial drape

Optional

Sterile disposable covers
(50 pieces each)

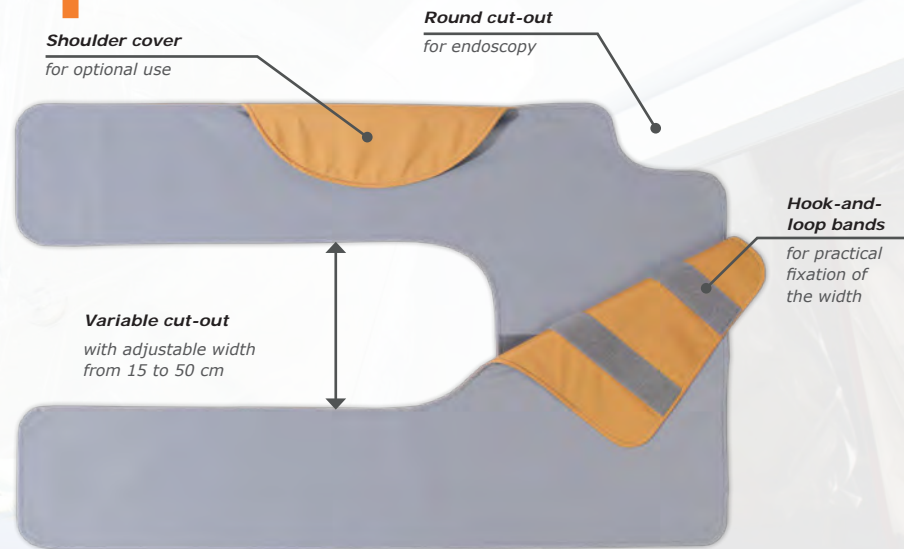


Available:
STEA-FSAM - for femoral drape
STEA-RZAM - for radial drape

ST-ER Drape

ERCp Drape

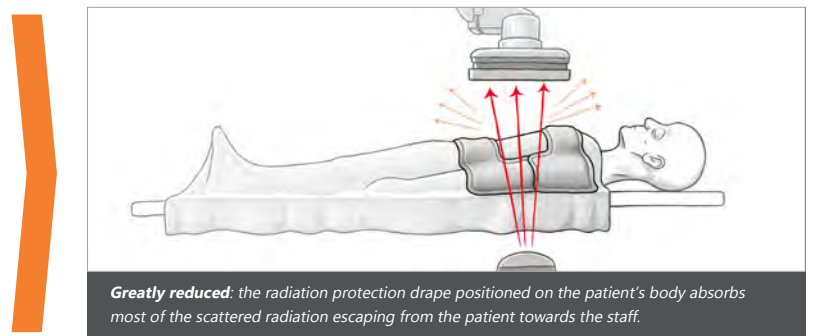
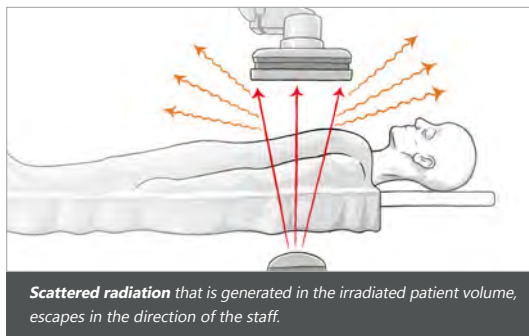
- ✓ Minimisation of scattered radiation by up to 90%
- ✓ Can be used in prone and lateral position
- ✓ Secure positioning due to individual adjustment options
- ✓ Adaptable to the type of examination
- ✓ Cut-out for endoscopes
- ✓ Optional cover to protect the shoulder joint
- ✓ Sustainable, as it is reusable



Radiation Protection Drape with Variable Cut-out ST-ER

The MAVIG ST-ER drape is designed to minimise scatter radiation from the patient's body, thus protecting staff.

The variable opening of the drape, which can be placed on the patient exactly in line with the useful radiation zone, significantly reduces the scattered radiation. A classic example of application is ERCp* but, in principle, a large number of other areas of application in which work is carried out with a fixed beam direction are possible.



Protection/Lead Equivalent

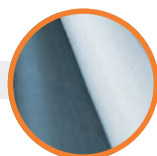
Standard lead



As standard:
0.50 mm Pb

Outer Material

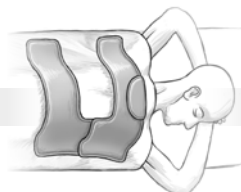
Colour – Two-sided



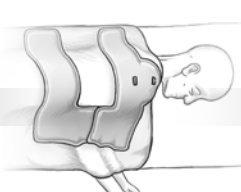
User side:
ComforTex® HPMF Hybrid / Titan
Patient side:
ComforTex® HPMF / Mandarin

Size / Application Possibilities

105 x 103 cm (L x W, max. external dimensions)



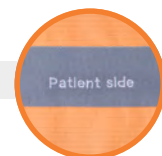
Supine / prone position:
(e.g. ERCp)



Lateral position:
with shoulder cover

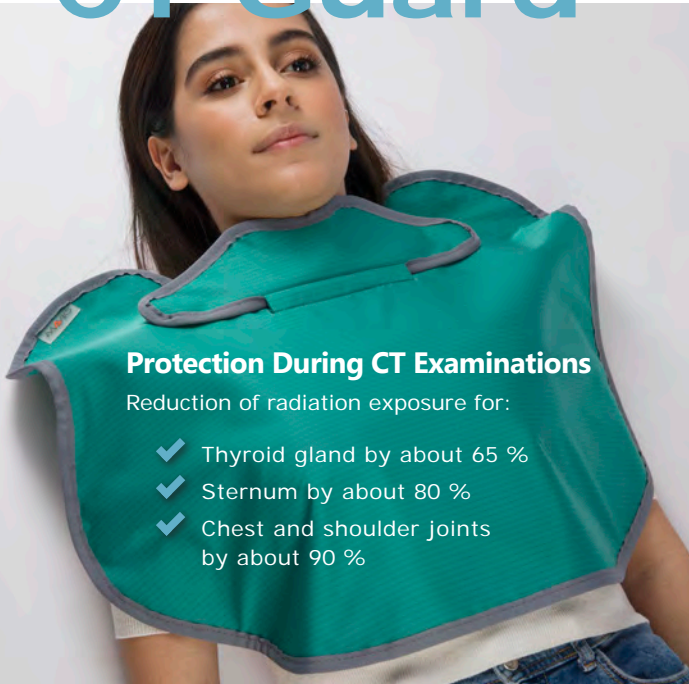
As Standard

Embroidery on the drape
„Patient side“



* ERCp (Endoscopic retrograde cholangiopancreaticography)

CT Guard



Protection During CT Examinations

Reduction of radiation exposure for:

- ✓ Thyroid gland by about 65 %
- ✓ Sternum by about 80 %
- ✓ Chest and shoulder joints by about 90 %

Drape



TIP: Don't be too "well-meaning" when choosing the size of your patient drape. Bear in mind that the drape also has to be moved by you and the size is directly related to the weight.

RP648 – Patient Protection for CT Examinations

The patient protection for CT examinations from MAVIG provides ideal X-ray protection. The drape can be put on quickly and remains securely in the desired position.

Optimally implemented in the RP648 patient CT drape: The patient protection is easy to apply and position without any additional aids or closure systems.

An additional thyroid protector can be folded into position if required.

RP689 – Patient Drape

This versatile patient drape is a must in every radiology practice. You can choose the format, depending on your intended use. Additional equipment like hook-and-loop fasteners or an individual cut according to your needs are also possible at any time.

Effective radiation protection for your patients concerns the areas of the body adjacent to the diagnostic field; so in most cases you will benefit from a stock of several smaller drapes, which you can then use in combination.

NEW: For an easier cleaning, our patient drape is now also available in ComforTex HPMF Duplex.*

Protection/Lead Equivalent

Standard lead



RP648 as standard:
0.35 mm Pb
RP689 optional:
0.50 mm Pb or 1.00 mm Pb

OuterMaterial

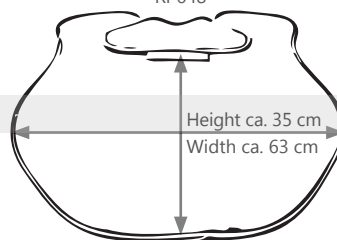
Colours/Design
(pages 10/11)



RP648 as standard:
ComforTex® HPMF
RP689 optional:
ComforTex® HPMF,
ComforTex® HPMF Duplex*

Size

RP648



Dimensions

RP689

The listed sizes/dimensions in the price list serve as examples only.
We are happy to manufacture individual dimensions (maximum width 120 cm) on request.

* NEW: Outer material with special coating (ComforTex HPMF Hybrid) on both sides

It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

Gonad Protection



NEW

For an easier cleaning, our gonad aprons RP643 are optionally also available in ComforTex HPMF Hybrid.

RP643 – Gonad Apron

An article of daily use has specific requirements in terms of material quality and workmanship, but also the functionality for a user-friendly use must be given.

The MAVIG RP643 series gonad aprons offer you this and more.

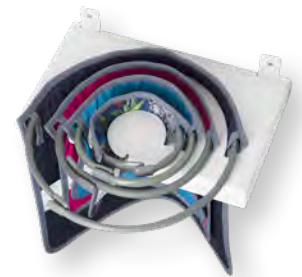
Even with the high patient flow in today's radiology practices, the RP643 is ideally suited, as the X-ray protection is quick and practical to put on and take off.

It couldn't be easier than with the flexible tension strap of our RP643 series. The radiation protection for your patients is perfect and the fit is just right.

In producing our gonad aprons, we use only high quality, flexible standard lead material. The best radiation protection properties are, of course, a basic requirement.

For gentle and proper storage of your gonad aprons, we recommend the use of the specially designed wall hanger AW417.

With everything clearly arranged, you can determine the right size for your patient at a glance and easily take the matching apron out of the wall system, without having to remove the one in front or behind.



Protection/Lead Equivalent

Standard lead



As standard:
0.50 mm Pb

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes

Recommended for:

- S** Toddlers,
apron size 20 x 25 cm (H x W)
- M** Children,
apron size 30 x 30 cm (H x W)
- L** Adult,
apron size 37 x 40 cm (H x W)
- XL** Adult,
apron size 45 x 50 cm (H x W)

Optional

Wall hanger AW417



It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

Basic^{Mini} – RP664

Children's Front Protection Apron

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

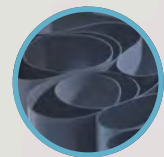
The generously cut, overlapping back panels provide a balanced fit.

- ✔ High quality, flexible NovaLite material with lead equivalent values of 0.50 mm Pb in the front and 0.25 mm Pb in the back
- ✔ Ideal fit for children
- ✔ Adjustable snap buckle closure
- ✔ Type testing and certification in accordance with (EU) 2016/425 and (EU) 2017/745, as well as IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016



Protection/Lead Equivalent

NovaLite



Front generally:
0.50 mm Pb

Back generally:
0.25 mm Pb

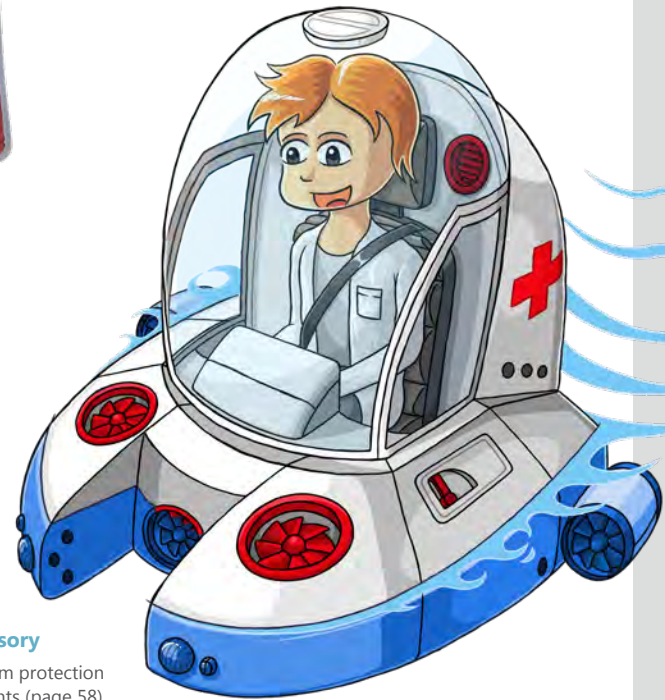
It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.



Children's X-ray protection in particular, should be easy to put on and take off.

The model RP664 can be easily closed in the front with a variable snap buckle closure leaving enough room for adjustments for an exact fit.

Children's X-ray protection is manufactured by MAVIG with the innovative NovaLite radiation protection material to achieve the best possible weight ratio and thus impose only the most necessary physical strain on the children.



▶ **Available sizes, recommended for:**

- SMALL** Length: 59 cm, Width: 35 cm for children aged approx. 3 - 5 years
- MEDIUM** Length: 67 cm, Width: 43 cm for children aged approx. 6 - 8 years
- LARGE** Length: 84 cm, Width: 45 cm for children aged approx. 9 - 12 years

Outer Material

Colours/Design (pages 10/11)



As standard:
ComforTex® HPMF

Sizes

SMALL, MEDIUM and LARGE



Accessory

Thyroid/sternum protection for small patients (page 58)



Classic^{Mini} – RP668

Children's All-round Protection Coat



This model provides practical all-round protection for your little patients.

The cut combines ideal radiation protection with variable fit and high wearing comfort. The flexible material and generous width adjustment allow for a comfortable fit.

- ✔ High quality, flexible NovaLite material with lead equivalent values of 0.50 mm Pb in the front and 0.25 mm Pb in the back
- ✔ Ideal fit for children
- ✔ Time-saving hook-and-loop fasteners
- ✔ Type testing and certification in accordance with (EU) 2016/425 and (EU) 2017/745, as well as IEC 61331-1:2014 / DIN EN 61331-1:2016 and IEC 61331-3:2014 / DIN EN 61331-3:2016



Protection/Lead Equivalent

NovaLite



Front generally:
0.50 mm Pb

Back generally:
0.25 mm Pb

Children's X-ray protection, in particular, must be easy to put on and take off. Small patients rarely have enough patience for long actions. Therefore our RP668 children's coat can be adjusted quickly and closed securely using the hook-and-loop fasteners in the front.

Children's X-ray protection is manufactured by MAVIG with the innovative NovaLite radiation protection material to achieve the best possible weight ratio and thus impose only the most necessary physical strain on the children.



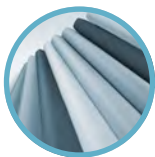
▶ **Available sizes**, recommended for:

- SMALL** Length: 60 cm
Hip circumference: 68 - 75 cm
for children aged approx. 3 - 5 years
- MEDIUM** Length: 80 cm
Hip circumference: 76 - 83 cm
for children aged approx. 6 - 8 years
- LARGE** Length: 84 cm
Hip circumference: 84 - 95 cm
for children aged approx. 9 - 12 years



Outer Material

Colours/Design
(pages 10/11)



As standard:
ComforTex® HPMF

Sizes

SMALL, MEDIUM
and LARGE



Accessory

Thyroid/sternum protection
for small patients (page 58)



Ovary Protection



Ovary Protection with Elastic Belt – RP679

The patient shield RP679 protects the ovaries during X-rays of standing patients.

It is also ideally suited for children as patient protection for X-rays in medical diagnostics in the appropriate size set for paediatrics.

The stretch belt* with snap buckle closure makes it easy to put on and take off and ensures convenient size adjustment.

* For patients with a circumference over 128 cm, a special-sized belt is available as an option.

- ✓ Easy and quick to put on
- ✓ Convenient size adjustment via the stretch belt with snap buckle closure and hygienic cover
- ✓ Set consisting of the belt and one protector in each of the following sizes: Small, Medium, Large
- ✓ Protectors adaptable to the belt by means of hook-and-loop fastener



Protection/Lead Equivalent

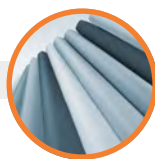
Standard lead



As standard:
1.00 mm Pb

Outer Material

Colours are size dependent



As standard:
ComforTex® HPMF

Sizes/Colours

Recommended for:

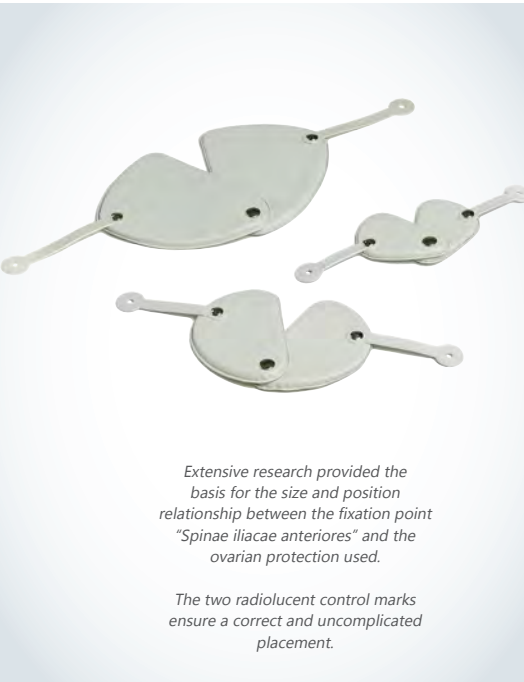
Adults	S	16 x 11 cm	Blue Admiral
	M	18 x 13 cm	Mandarin
	L	20 x 19 cm	Regatta
Children	S	7 x 6 cm	Orchidee
	M	9 x 8 cm	Lagoon
	L	10 x 10 cm	Curacao

Size Sets

The ovary protector is available as a set with protectors in three sizes and an adjustable stretch belt.

It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

Testes Safety



Extensive research provided the basis for the size and position relationship between the fixation point "Spinæ iliacæ anteriores" and the ovarian protection used.

The two radiolucent control marks ensure a correct and uncomplicated placement.



RP278 – Ovary Protection

The concept of this MAVIG ovarian shield is unsurpassed and meets all the requirements of radiological practice. Radiation exposure of the female gonads is significantly reduced without compromising the diagnostic technique.

For optimal fine adjustment, each model can be varied again by means of the modular principle. The RP278 is, of course, easy to clean and disinfect.

A complete set offers you the best possible protection for all your supine patients.

RP276 – Testes Protection

This male gonad protection model covers the penis and scrotum all around with a lead equivalent of 1.00 mm Pb.

Of course, MAVIG has made sure that there is no risk of injury to the patient when using the protection.

The hook-and-loop fastener provides a good hold when adjusted correctly. For cleaning and disinfection, this model series can be unfolded using the snap buttons.

We also offer suitable disposable hygiene bags.

RP280 – Testes Protection

The penis and scrotum are protected with a lead equivalent of 1.00 mm Pb.

The padded, elastic pouch closure provides gentle pressure for a secure and correct fit throughout the examination. The rounded design poses no risk of injury to the patient.

It is easy to put on and the skin-friendly coating of the MAVIG RP280 testicle capsules offers seamless hygiene inside and out. Cleaning and disinfection are easy.

Protection/Lead Equivalent

RP278, RP276 Standard lead
RP280 Lead rubber single layer



As standard:
1.00 mm Pb

Outer Material

RP278 und RP276
Soft PVC cover
in light grey

RP280

Skin-friendly
coating in medico-white

Sizes

Recommended for:

RP2781S	Small	Height 7 cm
RP2781M	Medium	Height 9 cm
RP2781L	Large	Height 12 cm

RP2761E	for men Dimensions 155 x 120 x 90 mm
RP2761K	for boys Dimensions 110 x 90 x 65 mm

RP2801E	for men Dimensions 135 x 105 x 60 mm
RP2801K	for boys Dimensions 105 x 85 x 55 mm

Hygiene Bags Testes Protection

RP-HYG-CE
Set of 100 in men's size

RP-HYG-CK
Set of 100 in boys' size

RP-HYG-CEK

Set of 100 each in men's size
and 100 each in boys' size

It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

Children Protection



RP276 – Testes Protection as a Set of 3 for Children

The model is intended to protect the male gonads of young patients in paediatrics during X-rays for medical diagnostics.

The design avoids any risk of injury to the patient. For cleaning and disinfecting, the protection can be unfolded via snap buttons.

The complete size set includes one testes protection each for infants, toddlers and children from 1 to approx. 10 years of age.

RP274 – Gonad Protection Pants Set

The gonad protection pants comfortably ensure complete protection of the gonads of your smallest patients.

The practical hook-and-loop fastening makes them quick and easy to put on and remove and enable convenient size adjustment.

The complete size set includes one pair of pants each for babies, toddlers and children from 1 to approx. 6 years of age.

Protection/Lead Equivalent

Standard lead



As standard:
1.00 mm Pb

Outer Material

Design „Happy“
(pages 10/11)



As standard:
ComforTex® HPMF

Sizes/Sets

Recommended for:

The 3-piece complete set RP2761G6212 includes one testes protection each for infants, toddlers and children from 1 to 10 years of age.

The 3-piece complete set RP2741G6212 is suitable for infants, toddlers and children from 1 to 6 years of age.

Each size of both sets is adjustable by means of a hook-and-loop fastener.

Note

Both the testes protection for children and the gonad protection pants are only available as a set:

RP2761G6212 3 sizes for children

RP2741G6212 3 sizes for children

Mammary Gland Safety



RP271 – Mammary Gland Protection for Paediatrics

The patient protection product for paediatrics reliably protects the mammary glands of your little patients during X-rays in medical diagnostics.

The children’s chest protector can be conveniently adjusted to the respective size required.

- ✔ Reduction of radiation exposure in the area of the mammary glands by about 80%
- ✔ Hygienically clean, skin-friendly outer cover
- ✔ Reusable, not a disposable product
- ✔ Comfortable, non-pressing neoprene stoppers
- ✔ Practical adjustment

RP270 – Mammary Gland Protection for Women

The mammary gland shield efficiently protects your patients during mammograms.

The shield consists of two equal parts, each 18 x 40 cm (W x H), connected by a length-adjustable hook-and-loop fastener for comfortable donning and easy adjustment.

Protection/Lead Equivalent

RP271 NovaLite
RP270 Standard lead



As standard:
0.50 mm Pb

Outer Material

RP271 in Design „Happy”
(pages 10/11)



As standard:
ComforTex® HPMF

Outer Material

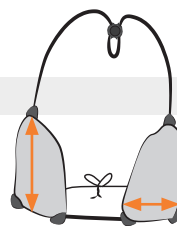
RP270 in Colours/Design
(pages 10/11)



As standard:
ComforTex® HPMF

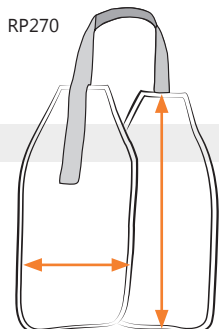
Dimensions

RP271



Height each approx. 11 cm
Width each approx. 10 cm

RP270



Height each approx. 40 cm
Width each approx. 18 cm

It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

NEW

Dental All-round RD639



Patient All-round Protection for Digital Volume Tomography (DVT)

The RD639 all-round protective apron offers optimum radiation protection in digital volume tomography.

The patient is protected at the front as well as the back with the full lead equivalent of 0.50 mm Pb.

The convenient hook-and-loop fastener on the shoulder allows the apron to be put on comfortably from the side. The circumference can be easily adjusted by means of the hook-and-loop fasteners in the back.

The integrated thyroid protection is height adjustable, so that it does not interfere with the imaging.



Protection/Lead Equivalent

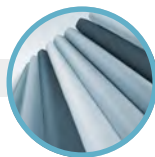
Standard lead,
Leadfree



As standard:
0.50 mm Pb
(front and back)

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes/Dimensions

Recommended for:

Small
80.0 x 60.0/60.0 cm
(Length x Width front/back)

Medium
80.0 x 70.0/60.0 cm
(Length x Width front/back)

Dental Panorama RD635



Patient X-Ray Apron for Panorama Shots While Standing

The RD635 protective apron for patients offers optimum radiation protection for standing X-ray exposures on panoramic or teleradiographic units.

The protective clothing is particularly comfortable to put on, as it can be individually adjusted to the patient's body circumference with a quick and easy movement.

The closure system in the front prevents parts of the protective clothing from entering the image-relevant area if the clothing is not closed properly. The back lies smooth and flat against the body.



Protection/Lead Equivalent

Standard lead,
Leadfree



As standard:
0.50 mm Pb
(front and back)

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes/Dimensions

Recommended for:

Adults
Front: 80.0 x 60.0 cm (L x W)

Children
Front: 60.0 x 45.0 cm (L x W)

Accessory

Thyroid/sternum protection
for patients (page 58)



Dental Chair RD642



Patient X-Ray Apron for X-Rays in a Seated Position

The MAVIG patient protective apron RD642, which is used for dental X-rays in a seated position, is flexible and comfortable to wear.

The high-quality hook-and-loop fasteners are conveniently placed in the shoulder area, making it precise, secure and quick to put on and remove.



Protection/Lead Equivalent

Standard lead,
Leadfree



As standard:
0.50 mm Pb
(front)

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes/Dimensions

Recommended for:

Adults
Front: 80.0 x 60.0 cm (L x W)

children
Front: 60.0 x 45.0 cm (L x W)

Accessory

Thyroid/sternum protection
for patients (page 58)



Dental Bicolour RD644



Patient X-Ray Apron with Thyroid Protection, for X-Rays in a Seated Position

Just like the classic dental apron (RD642), this model offers high flexibility and wearing comfort.

In addition to the large-area protection up to the gonads, the thyroid gland is also covered when taking X-rays of the seated patient.

The practical hook-and-loop fastener in the back of the neck of the thyroid protection collar ensures a snug, secure and quick fit.

Loops on the back allow an easy attachment to the dental chair.

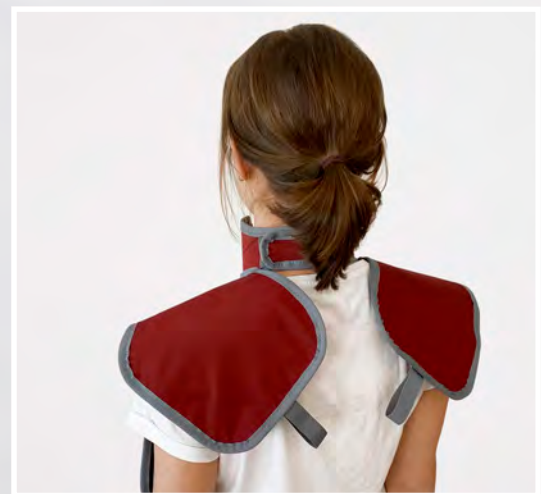


CAN BE USED ON BOTH SIDES

Model RD644 is designed as a reversible X-ray apron for patients.

The design thus allows you to choose between a one-colour or two-colour model.

Two-colour combinations are available in "Curacao with Orchidee" and "Blue Admiral with Baccara".



Protection/Lead Equivalent

Standard lead,
Leadfree



As standard:
0.50 mm Pb
(front)

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes/Dimensions

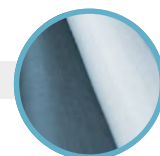
Recommended for:

Adults
Front: 80.0 x 60.0 cm (L x W)

Children
Front: 60.0 x 45.0 cm (L x W)

Optional

Also available in
two-colour design



Optional:
Curacao with Orchidee or
Blue Admiral with Baccara

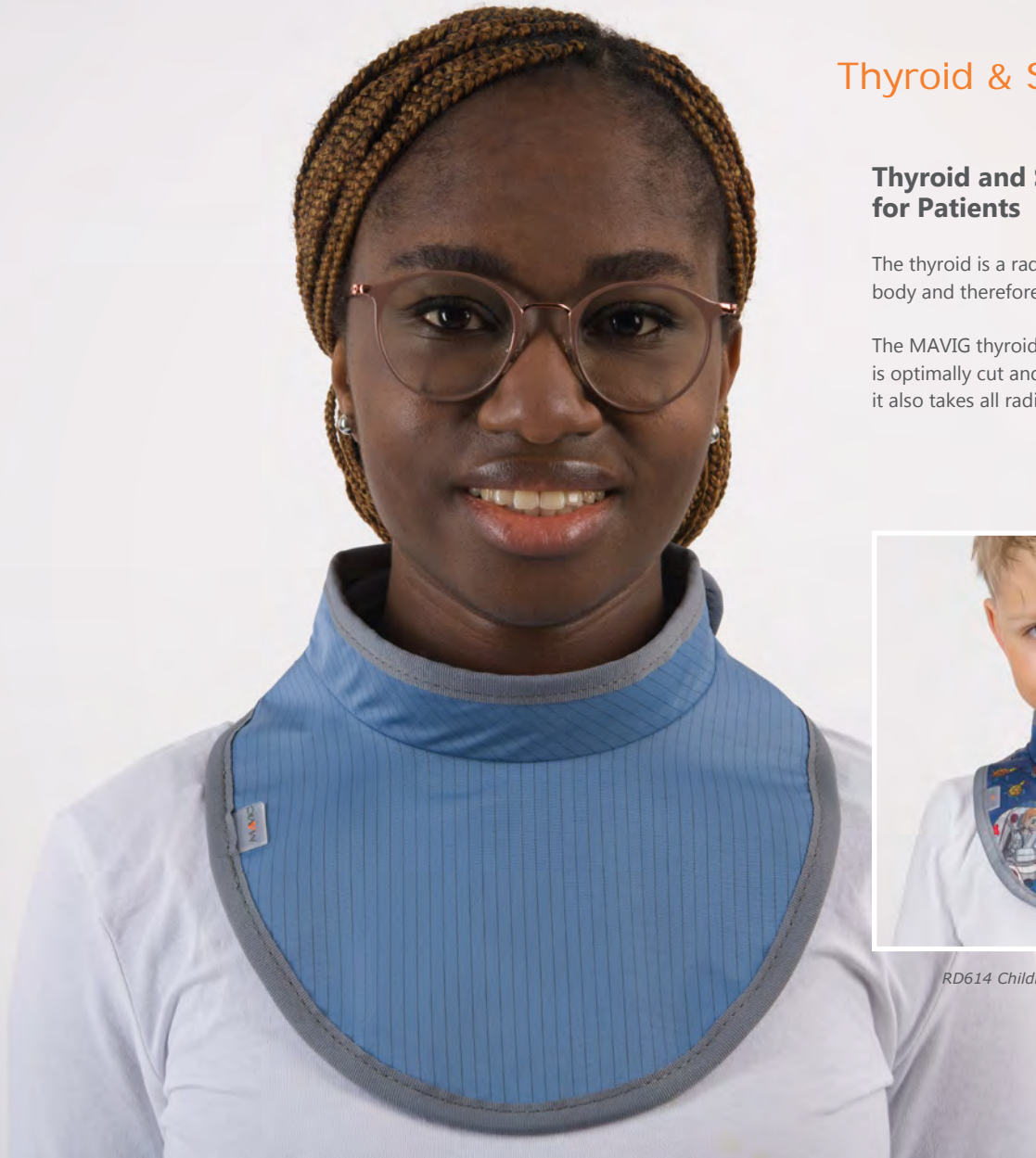
Model RD614

Thyroid & Sternum Protection

Thyroid and Sternum Protection for Patients

The thyroid is a radiation-sensitive organ of the human body and therefore in particular need of protection.

The MAVIG thyroid sternum protection for patients is optimally cut and has the best fit, and, of course, it also takes all radiation protection aspects into account.



RD614 Children Size in Design Happy

Protection/Lead Equivalent

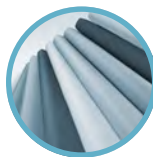
Standard lead,
Leadfree



As standard:
0.50 mm Pb

Outer Material

Colours/Design
(pages 10/11)



Optional:
ComforTex® HPMF,
ComforTex® HPMF Hybrid

Sizes According to Fastener Type

Recommended for:

Magnetic/hook-and-loop fastener:
Adults Standard size fits
neck sizes of 32 - 45 cm
Children Standard size fits
neck sizes of 28 - 36 cm

Exchangeable hook-and-loop fastener:
Adults Standard size fits
neck sizes of 37 - 50 cm
Children Standard size fits
neck sizes of 28 - 36 cm

Accessories/Replacement

Hygienic cover
Embroidery



Spare Hook-and-loop fastener
(Adjustment
via snap buttons)

It goes without saying that our patient protection products comply with Regulation (EU) 2016/425 for personal protective equipment and (EU) 2017/745 for medical devices.

With Different Fasteners

An uncomplicated magnetic or hook-and-loop fastener, which can also be replaced as an option, provides sufficient scope for adjustment.

Hook-and-loop Fastener (KL)

Standard sizes fit neck sizes of 32 - 45 cm for adults and neck sizes of 28 - 36 cm for children.



RD614 with normal hook-and-loop fastener

Magnetic Closure (MA)

Standard sizes fit neck sizes of 32 - 45 cm for adults and neck sizes of 28 - 36 cm for children.



RD614 with uncomplicated magnetic closure

Exchangeable Hook-and-loop Fastener (AK)

Standard sizes fit neck sizes of 37 - 50 cm for adults and neck sizes of 28 - 36 cm for children.



RD614 with exchangeable hook-and-loop fastener

Optimum Protection

In order to meet hygiene requirements, we recommend that you use our washable hygienic cover made from special ComforTex® MF material in colour "Titan".



Optional hygienic cover available

Safekeeping

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

This type of aid must fulfil a number of basic criteria to be of use to you in your daily work practice.

- ✔ Convenient & uncomplicated access
- ✔ Low space requirement
- ✔ Easy to assemble
- ✔ Clear arrangement
- ✔ Proper and protective storage

With these aspects in mind, we have designed the MAVIG storage systems for you. Functional, partly modular technology that offers you the greatest possible scope in spatial planning.



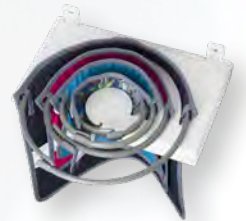
Wall System AW412

With this practical wall system, your radiation protection product is always at hand, stored carefully and in a space-saving manner.

Especially recommended for the following items:
Dental Protection, CT Protection RP648 or
Drapes ST-FS, ST-RZ and ST-ER

- ✔ Functional metal construction
- ✔ For one radiation protection product

- 140 x 500 x 160 mm (H x W x D)
- Lacquered in the colour "medico-white" (RAL 9002)
- Max. 10.0 kg weight capacity
- Empty weight: 1.5 kg



Wall System AW417

The right solution for storing your RP643 gonad aprons.

With the clear arrangement, you can determine the right apron size for your patient at a glance and take the right apron out of the wall system in one go, without having to remove any apron in front or behind it.

- ✔ Heavy duty metal construction
- ✔ For one set of gonad aprons (4 sizes)

- 80 x 365 x 215 mm (H x W x D)
- In the colour "cool white" (RAL 9016)
- Max. 5.0 kg weight capacity
- Empty weight: 1.3 kg

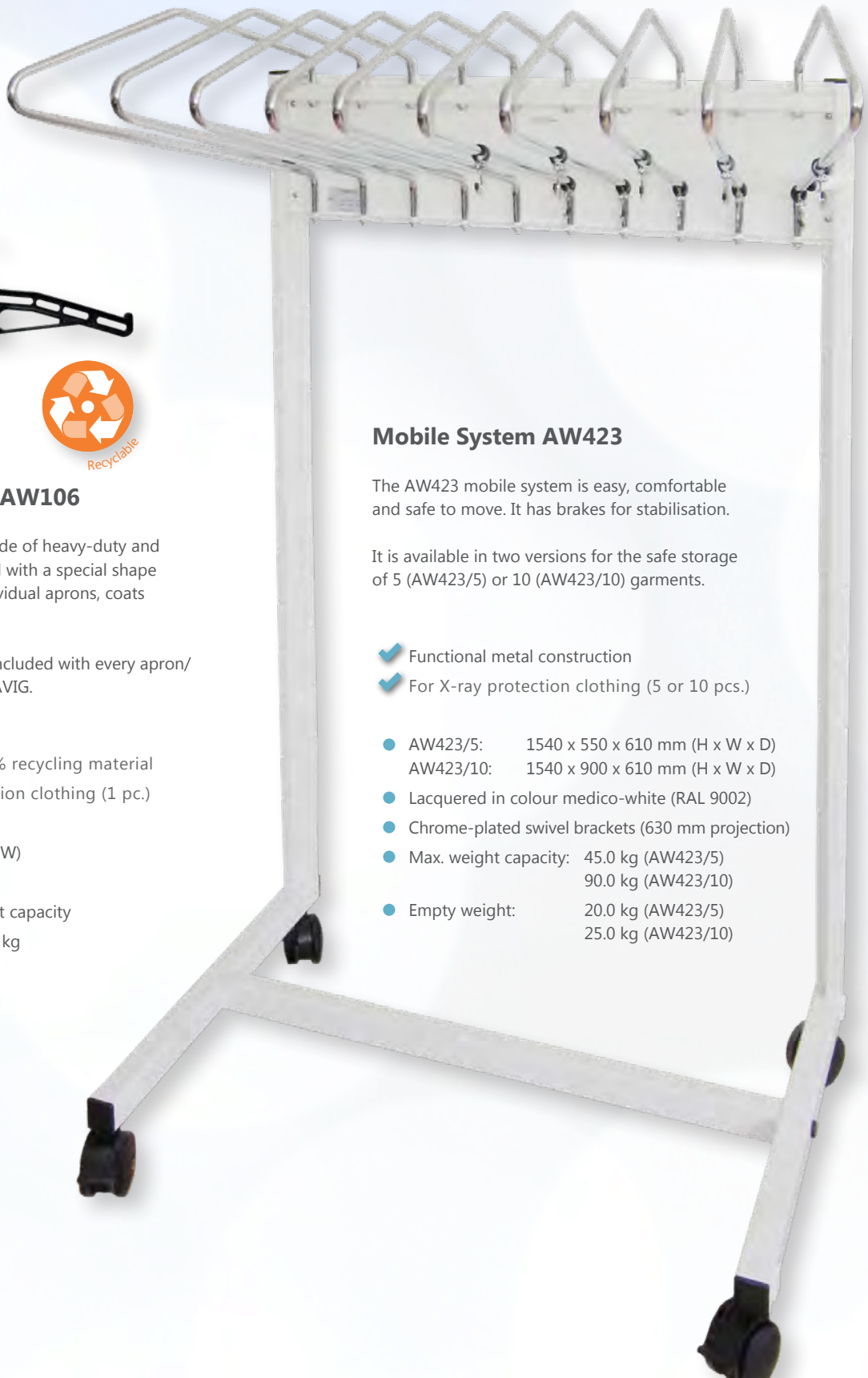


Special Hanger AW106

The MAVIG hanger made of heavy-duty and 100% recycled material with a special shape is ideal for storing individual aprons, coats or costumes.

The special hanger is included with every apron/coat/costume from MAVIG.

- ✓ Heavy duty, 100% recycling material
- ✓ For X-ray protection clothing (1 pc.)
- 90 x 520 mm (H x W)
- Colour: black
- Max. 9.0 kg weight capacity
- Empty weight: 0.2 kg



Mobile System AW423

The AW423 mobile system is easy, comfortable and safe to move. It has brakes for stabilisation.

It is available in two versions for the safe storage of 5 (AW423/5) or 10 (AW423/10) garments.

- ✓ Functional metal construction
- ✓ For X-ray protection clothing (5 or 10 pcs.)
- AW423/5: 1540 x 550 x 610 mm (H x W x D)
- AW423/10: 1540 x 900 x 610 mm (H x W x D)
- Lacquered in colour medico-white (RAL 9002)
- Chrome-plated swivel brackets (630 mm projection)
- Max. weight capacity: 45.0 kg (AW423/5)
90.0 kg (AW423/10)
- Empty weight: 20.0 kg (AW423/5)
25.0 kg (AW423/10)

Safekeeping

Tip

Increase the life of your X-ray protective clothing by making sure it is stored correctly from the start:



Clothing should never be folded, placed over edges, or hung on inappropriate hooks! It should also not be in the direct proximity of heat sources. The use of damaged radiation protective clothing is dangerous! This is particularly critical because damage to the internal radiation protection material is usually not noticed or is noticed very late.

So make sure to check that the protective effect is intact at regular intervals!

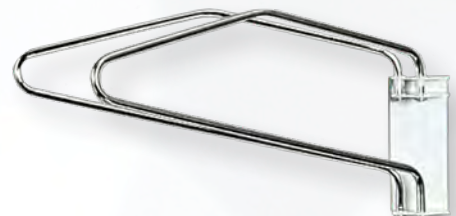


Wall System AW421/1

If you want to store a garment with the smallest projection, this system is recommended.

- ✔ Functional metal construction
- ✔ For X-ray protection clothing (1 pc.)

- Base plate: 205 x 85 mm (H x W)
- Lacquered in colour medico-white (RAL 9002)
- Chrome-plated swivel hanger (630 mm projection)
- Max. 12.0 kg weight capacity
- Empty weight: 1.2 kg



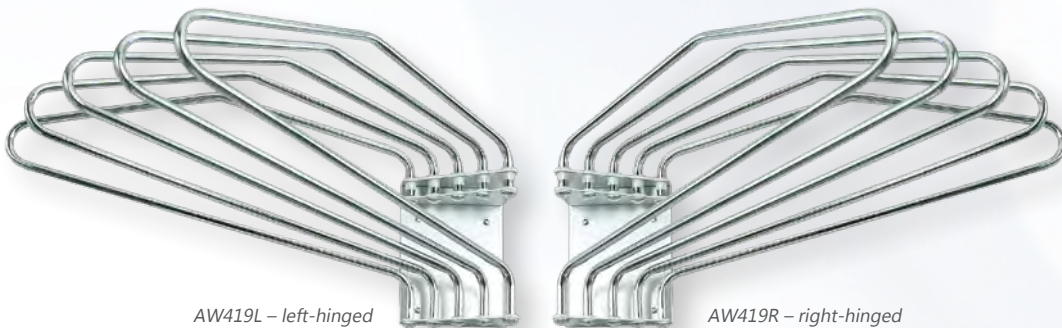
Wall System AW421/2 & AW421/3

Depending on the version, a wall system for the proper storage of two or three garments.

You can fan the hangers apart up to 180° and fold a maximum of two hangers flat to one side against the wall.

- ✔ Functional metal construction
- ✔ For X-ray protection clothing (2 or 3 pcs.)
- ✔ Available with a the right- or left-side hinge

- Base plate: 205 x 85 mm (H x W)
- Lacquered in colour medico-white (RAL 9002)
- Chrome-plated swivel hangers (630 mm projection)
- Max. weight capacity: 24.0 kg (AW421/2)
36.0 kg (AW421/3)
- Empty weight: 1.7 kg (AW421/2)
2.2 kg (AW421/3)



AW419L – left-hinged

AW419R – right-hinged



Wall System AW419

The wall system with top marks for user-friendliness and storage space. The five swivelling chrome hangers offer you a radius of action of 180°. Folded parallel to each other against the wall, the hangers create space in the room again.

Do you need a wall system for up to 10 garments with optimal space utilisation and best user comfort? Then the combination of the AW419-R and AW419-L systems is just the right thing for you. The base plate shape allows seamless mounting of the two systems side by side.

- ✔ Functional metal construction
 - ✔ For X-ray protection clothing (5 pcs.)
 - ✔ Available with a right- or left-side hinge
- Base plate: 205 x 148 mm (H x W)
 - Lacquered in colour medico-white (RAL 9002)
 - Chrome-plated swivel hangers (670 mm projection)
 - Max. 60.0 kg weight capacity
 - Empty weight: 4.3 kg

Skirt Hook AW427

To store costume skirts, please add our MAVIG special hooks to the systems AW419, AW421 and AW423.

These can be easily fitted to the chrome hangers, even retrospectively.

However, please check first whether your costume skirt is also equipped with loops. Unfortunately, this is not the case with all manufacturers.

Protective Material

Lead Rubber Rolls AZ187

There are many possible uses for this robust lead rubber material, which is easy to cut by hand. Unlike with rolled lead, you do not touch any exposed metallic surfaces. Moreover, there are no sharp edges to worry about.

If used on site, please note that the material is only suitable for indoor use.

You can glue, clamp or screw the lead rubber when you further process it.

The high-quality AZ187 material has an easy-to-clean rubber coating on both sides. On the visible side the coating is in the colour "medico-white" (on the reverse side, colour deviations are possible due to the process).

The fabric insert in the centre of the material makes the lead rubber particularly robust.

Naturally, the radiation-absorbing additives are distributed absolutely homogeneously. We offer you the material in different lead equivalent values.

The usable width of the rolls is 90 cm (the edge protrusions on the right and left, each approx. 12.5 cm, cannot be used). They are delivered with untrimmed edges with a minimum purchase of 0.5 running metres.

Customised cuts are possible on request for an additional charge.

Protection/Lead Equivalent

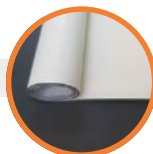
Lead rubber



Optional:
0.50 mm Pb, 1.00 mm Pb,
1.50 mm Pb, or 2.00 mm Pb

Outer Material

Medico-White



Coating:
on both sides

Sizes/Dimensions

Available as rolls
with a usable width of 90 cm,
edges untrimmed

Technical Specifications

Lead equivalent	Thickness	Weight
0.50 mm Pb	2.90 - 3.30 mm	7.5 kg/m ²
1.00 mm Pb	4.56 - 5.16 mm	13.5 kg/m ²
1.50 mm Pb	6.00 - 6.80 mm	19.5 kg/m ²
2.00 mm Pb	7.90 - 8.90 mm	27.0 kg/m ²

Grids

Anti-Scatter Grids

Anti-scatter grids support you in meeting the high requirements for image quality of X-ray images in medical diagnostics as well as the guideline of the German Medical Association for quality assurance in X-ray diagnostics and the European guidelines on quality criteria for X-ray images.

Anti-scatter grids are used in both analogue and digital imaging and increase image sharpness, overall contrast and detail resolution.

Radiation-absorbing strips integrated into the grid reduce the scattered radiation generated in the patient's body during fluoroscopy. If, on the other hand, this scattered radiation were to hit the image receptor area, it would result in a considerable loss of contrast or "fog". Hence, the use of anti-scatter grids really helps to ensure the required image quality.

Parallel Grids

In our portfolio you can find parallel anti-scatter grids, which are particularly recommended for images on the ward, e.g. for X-rays of the lungs in intensive care. In contrast to focussed grids, which require a specific distance between tube and screen, parallel grids have lower demands on centring and focussing. With a parallel grid, the absorber strips are not aligned to a focal point, i.e. they are not tilted but there is a parallel strip arrangement.

Tunnel Grids (grid bridge)

In a so-called grid bridge or tunnel grid, the anti-scatter grid is inserted into a frame construction. In the case of the MAVIG tunnel grids, the sophisticated design is particularly noteworthy. User-friendliness, resilience and the associated long service life of the anti-scatter grid are key. The anti-scatter grid is located in a robust housing and is additionally supported by radiopaque plastic plates.

Characteristics of the MAVIG Anti-Scatter Grids

- The number of lines describes the number of strips per cm of grid area (s/cm). We offer you our anti-scatter grids with 70 s/cm.
- The line defines the alignment of the strips either parallel to the longitudinal side of the grid or to the narrow side of the grid.
- The shaft ratio describes the relationship between the strip height and the distance between the strips (r). You have the choice of a ratio of 6:1 and a ratio of 8:1 for our anti-scatter grids.
- The formats 35.6 x 43.2 cm and 24.0 x 30.0 cm are available.
- For a parallel grid, there is no need for grid focusing (angle of inclination of the grid strips) as the strips are arranged in parallel.
- The cartridge insert is located on the narrow side of the grid bridge.



Shaft Ratio/Number of Lines

A anti-scatter grid has the following characteristic variables:

- Lead strip height
- Lead strip thickness
- Thickness of the shaft medium
- Number of lines per cm

This gives rise to the following key figures Ratio (shaft ratio) and lines/cm (number of lines per cm), which define the final grid design.

Line Course

The line course is aligned parallel to the long side of the grid (in the standard).

Parallel Grid		
Number of lines per cm	Shaft ratio	
70	6:1	8:1
	x	x

On request, "cross-stripped" grids can also be produced, i.e. with the line running parallel to the narrow side of the grid.

Film Formats

- Tunnel grid (parallel)
- 24.0 cm x 30.0 cm
- 35.6 cm x 43.2 cm

Levio® Edition - 2 Measurements

With the help of this template and a standard measuring tape, you can easily determine your body measurements. Based on the measurements an optimised Levio Edition apron will be made or, if needed, your MAVIG clothing size is determined. Before you use the measuring tape, please note the following:

The requested measurements should be body measurements, measured **without any additions** but also without being constricting. Correct values cannot be determined if you measure yourself. The measurements must always be taken by another person. The person being measured should stand straight with arms hanging to the sides.

Please fill in the following points.

Measurements for: _____
(First name and surname)

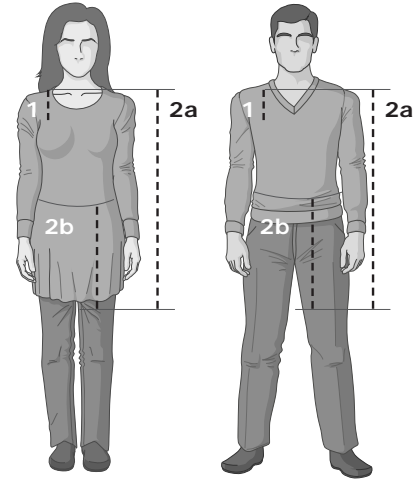
Woman **Man**

cm Position from above (Levio®)

Measure from the middle of the shoulder the start of the breast (about at the second rib, between the collarbone and the mammary papilla)

cm Levio® Length / Skirt panel length (Levio®)

a) Measure from the middle of the shoulder to below the gonads (about 10 cm below the crotch)
b) Skirt only: Measure from the waist (waistband of the skirt) to below the gonads (about 10 cm below the crotch)



Points 3 - 6 for a general determination of the size (optional)

cm Total height

cm Chest circumference

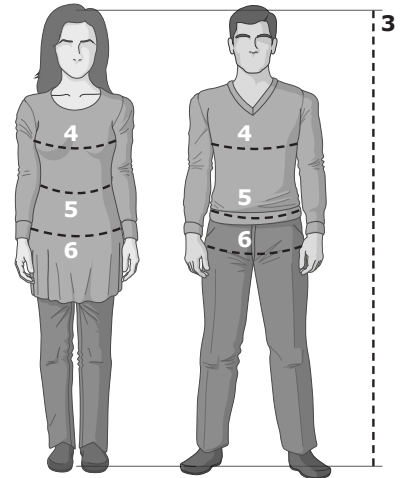
Across the broadest part of the chest (bust) horizontally around the body

cm Waist circumference

Measure around the waist without making it tight (for women measure at the narrowest part of the waist, for men measure around the body slightly below the navel)

cm Hip/buttock circumference

Place the measuring tape horizontally around the broadest part of the hips/buttocks



I Model RA631 Levio NovaLite
 RA632 Levio Leadfree
 RA660 Levio Standard lead

Pb Levio Panel: _____ mm
(Base layer : 0.25 mm Pb)

II Outer Material ComforTex® HPMF Hybrid
 ComforTex® HPMF
 with Outlast®, optional

In the Colour: _____
(Colour name or colour code)

III Sleeves Right / Left / Pair
(optional) Sewn-on / Buttoned-on

Pb: _____ mm
(Standard: 0.25 mm Pb)

IV Embroidery/Border Sewn-in
(optional) Adjustable

Text: _____

 (Please write legibly, in capital letters)

Measured by: _____ **on:** _____
 (Name) (Date)

From/by: Hospital / Supplier / MAVIG employee

Tailor Made Orders

With the help of this template and a standard measuring tape, you can easily determine your body measurements.

Based on the measurements, a made-to-measure apron will be manufactured. Before you use the measuring tape, please note the following:

The requested measurements should be body measurements, measured **without any additions** but also without being constricting. Correct values cannot be determined if you measure yourself. The measurements must always be taken by another person. The person being measured should stand straight with arms hanging to the sides.

The length of the X-ray protection clothing should be selected in accordance with the German Radiation Protection Ordinance (RöV) and DIN EN 61331-3:2016 so that the front of the body is covered from the base of the neck to at least the kneecaps (MAVIG recommends coverage to below the knee for complete protection).

Please fill in the following points completely.

Measurements for: _____
(First name and surname)

1 _____ cm **Total height**

2 _____ cm **Chest circumference**
Across the broadest part of the chest (bust) horizontally around the body

3 _____ cm **Waist circumference**
Measure around the waist without making it tight (for women measure at the narrowest part of the waist, for men measure around the body slightly below the navel)

4 _____ cm **Hip/buttock circumference**
Place the measuring tape horizontally around the broadest part of the hips/buttocks

5a _____ cm **Apron/coat length**
Measure from the middle of the shoulder, down the chest to the desired height of the lower edge of the apron/coat

5b _____ cm **Costume skirt length**
Measure from the waist down to the desired height of the bottom edge of the skirt

6 _____ cm **Back width**
Measure at the back, from armpit to armpit, with arms at the sides

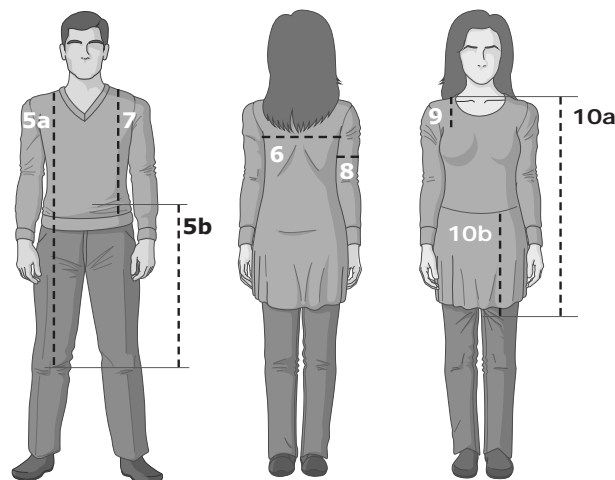
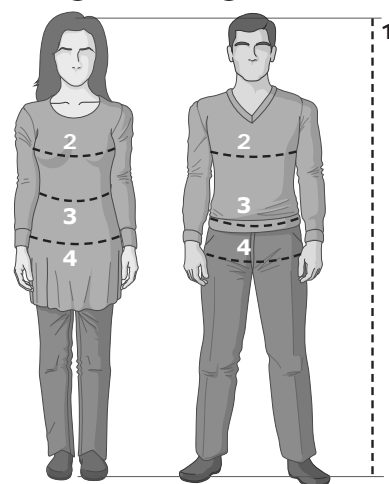
7 _____ cm **Front length of the upper body**
Measure from the middle of the shoulder over the chest down to the Iliac crest (Spinae iliacae anteriores)

8 _____ cm **Upper arm circumference (sleeves, optional)**
Horizontal circumference at the middle of the upper arm

9 _____ cm **Position from above (only Levio®)**
Measure from the middle of the shoulder the start of the breast (about at the second rib, between the collarbone and the mammary papilla)

10 _____ cm **Length / Skirt panel length (only Levio®)**
a) Measure from the middle of the shoulder to below the gonads (about 10 cm below the crotch)
b) Skirt only: Measure from the waist (waistband of the skirt) to below the gonads (about 10 cm below the crotch)

Woman **Man**



I Model RA NovaLite
 Levio Edition Leadfree
 Standard lead

Pb Front: _____ mm **Back:** _____ mm
(Standard: 0.25 mm Pb)

II Outer Material ComforTex® HPMF Hybrid
 ComforTex® HPMF
 with Outlast®, optional

In the Colour: _____
(Colour name or colour code)

III Sleeves (optional) Right / Left / Pair
 Sewn-on / Buttoned-on

Pb: _____ mm
(Standard: 0.25 mm Pb)

IV Embroidery/Border (optional) Sewn-in
 Adjustable

Text: _____

(Please write legibly, in capital letters)

Measured by: _____ **on:** _____
(Name) (Date)

From/by: Hospital / Supplier / MAVIG employee



MAVIG GmbH
Head Office

Stahlgruberring 5
81829 Munich
Germany

P.O. Box 82 03 62
81803 Munich
Germany

Phone +49 (0) 89 420 96 0
Fax +49 (0) 89 420 96 200
E-mail info@mavig.com

GLOBAL MAVIG LOCATIONS

Nordic & Baltic countries
MAVIG Nordic

Stockholm
Sweden

Phone +46 (0) 722 25 25 68
E-mail larsson@mavig.com

South-East Europe
MAVIG South-East Europe

Ljubljana
Slovenia

Phone +386 (40) 6 33 900
E-mail dejak@mavig.com

Benelux, GB, Ireland
MAVIG B.V.

Mercuriusweg 86
2516AW The Hague
The Netherlands

Phone +31 (0) 70 33 11 688
Mobile +31 (0) 61 595 43 48
E-mail simmonds@mavig.nl

France
MAVIG France SARL

66, Ave. des Champs Elysées
F-75008 Paris
France

Phone +33 (0)1 30 59 46 23
Fax +33 (0)1 30 59 46 23
E-mail info@mavig.fr

FOREIGN OFFICES

USA & Canada
Ti-Ba Enterprises, INC.

25 Hytec Circle
Rochester, NY 14606
USA

Phone +1 (1) 585 247 1212
Fax +1 (1) 585 247 1395
E-mail mavigusteam@mavig.com

Middle East & North Africa
Mena Medical Development

Ashrafieh – Adlieh Square – Alfaras St.
- Alboustany Building, 5th floor
Beirut
Lebanon

Phone +961 14 23 499
Fax +961 14 26 499
E-mail mavig@mena-md.com

Russian Federation
AO Sante Medical Systems

Novodmitrovskaya 2, Bld.1
127015 Moscow
Russia

Phone +7 499 551 55 73/75
E-mail info@sante.ru

www.mavig.com