

RADIATION
PROTECTION
PRODUCTS

UniRay



THE UNIRAY PROMISE

PROTECTION FOR THE PEOPLE WHO PROTECT LIFE

With over 3 decades of experience, UniRay has developed radiation protection apparel based on application knowledge derived out of its team's experience working with most of the prestigious hospitals in Germany. Its products are designed and developed in Germany with production in India using the latest German advances and equipments to deliver flawless products.

UniRay is your destination for radiation protection products that represent a synergy of technological innovation, applied research and dedicated care. Our products meet and exceed the highest safety standards of the industry.

We design protective apparel used in interventional radiology and cardiology, Cath labs, x-ray assisted surgery and general radiology. UniRay offers a complete range of products that are designed with both function and style in mind. Quality, weight, ergonomics and aesthetics form the core attributes of every UniRay product.

**DESIGNED &
DEVELOPED
IN GERMANY**





UNIRAY EQUALS SAFETY

When you use UniRay products, you are guaranteed optimum protection against scattered radiation.

UniRay products are tested according to IEC 61331-1:2014/ DIN EN 61331-1:2016, which establishes the protection of aprons across specified range of tube voltages from 60 kV to 110 and/or 150kV. The new standard IEC 61331-1:2014/DIN EN 61331-1:2016, adopted a new testing methodology called "Broad Beam Geometry" (BBG) method to measure all Radiation Protection Aprons including lead, lead free and lead composite protection materials. This testing methodology determines the lead equivalence of protection material considering fluorescent radiation as well as back scatter by the material itself.

We ensure a healthy workplace for medical practitioners and patients. Our products are environment friendly and non-toxic.

THE X-FACTOR

Our radiation protective sheetings are manufactured for perfect uniformity, suppleness and durability.



KryptoLite™ with its multi layer technology absorbs fluorescence radiation and back scatter thus providing optimum safety to the user. KryptoLite™ is at least 15-20% lighter than any another lead free material in the world.

LV 0.25mm Pb – weight 2.80 kg/sqm*



This environmentally friendly lead free material is formulated with a mixture of bismuth, tungsten and antimony. Lite Green™ is the material of choice for users.

LEV 0.25mm Pb – weight 3.10 kg/sqm*



Max Lite™ uses the substitution technique over a large part of lead in protective sheeting to result in a product that is 20-30% lighter than most leaded materials.

LEV 0.25mm Pb – weight 3.10 kg/sqm*



LITE Lead™ is our classic leaded material with proprietary advance binding system.

LEV 0.25mm Pb – weight 3.4 kg/sqm *

* tolerance of 7% +/- in weight as per standard

01 SKIRT & VEST

ULTIMATE PROTECTION FOR USER

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Optixx™

- Significant overlap on the front opening of the vest as well as the skirt (covering the waist area) also provides added protection
- Optimised weight distribution to reduce load on back and shoulders
- Full overlap on skirt circumference for added lower body protection



Maxx™

- Complete overlap on the front opening as well as the vest, as well as the vest overlap of the skirt for added protection
- Optimised weight distribution to reduce load on the back and shoulders
- Full overlap on skirt circumference for added lower body protection



Aprons are available in S/M/L/XL and custom sizes

02 DOUBLE-SIDED APRON

ALL ROUND PROTECTION SOLUTION



Optixx™

- Significant overlap in front for added protection
- Velcro closure for a perfect fit
- Flexible belt to release load on back and shoulder



Maxx™

- Full overlap in front for total protection
- Flexible belt to release load on back and shoulder
- Smart side closure to prevent accidental exposure



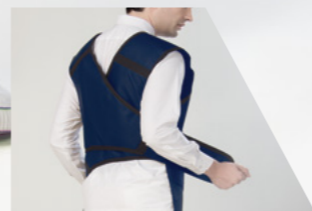
Aprons are available in S/M/L/XL and custom sizes

03 COAT APRON

THE GOLD STANDARD FOR X-RAY ROOMS



- Complete frontal protection
- Smart and flexible insert with Velcro closure
- Built-in shoulder relief pads



Aprons are available in S/M/L/XL and custom sizes

04 SURGICAL APRON

MAKING SURGERIES EASIER

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- Complete frontal protection
- Easy drop off from under a surgeon's scrubs when removing
- Optimised weight distribution



05 CUSTOMISATION

EMBROIDERY

We offer to embroider names, logos, cartoon characters made possible by our in-house precision embroidery equipment. We can provide a name tag of doctors or of a hospital for easy attachment on the apron pocket. We maintain a vast design bank which can be embroidered on pockets or a customized name or logo. You can now express yourself in your own unique way.



CUSTOMISED DESIGNS

Our new designs score high on protection, function and fashion. These new designs are developed keeping in mind the new standards and would be an example of applying the ALARA principle.



VEST WITH ZIP CLOSURE

- No Velcro for better hygiene
- Zip closer for higher protection
- Easy to clean



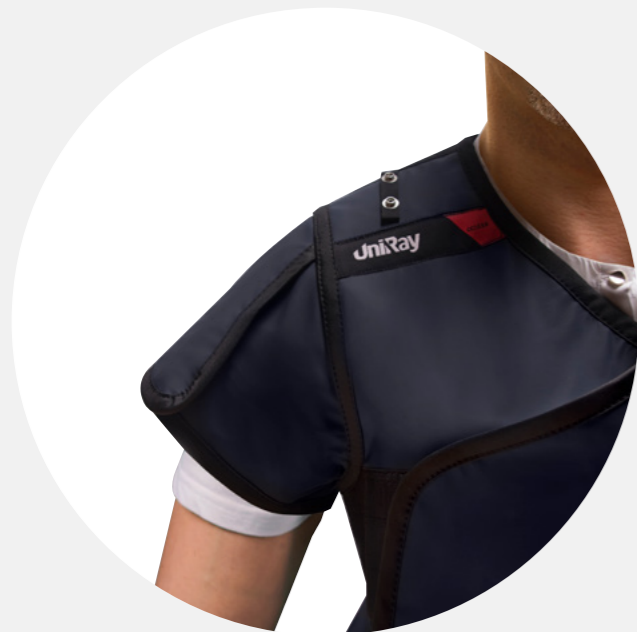
SKIRT WITH LUMBAR SUPPORT

- Releases load on the back
- Reduces occupational fatigue
- Suitable for long duration procedures

06 SHOULDER PROTECTION

SLEEVES

Shoulder sleeves significantly reduce radiation on the shoulder joint. Radiation through armholes is also reduced. UniRay's Shoulder Sleeves allow complete freedom of hand movement during procedures. Sleeves are available in both Sewn-on and Button-on versions in either only left, only right or both shoulders versions.



SEWN-ON SLEEVE

- Factory attached



BUTTON-ON SLEEVE

- Attaches easily to all models of Vests and Double Side Aprons

07 DENTAL APRON

MAKING DENTAL X-RAYS SAFE

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PANORAMIC APRON

Perfect for use with standing exposure on panoramic or tele radiographic and for digital volume tomography.



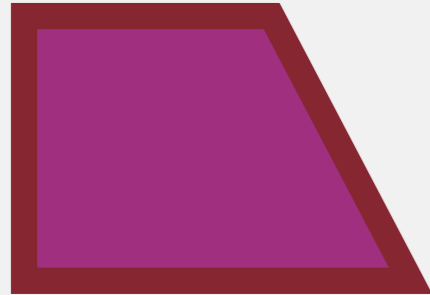
DENTAL APRON

Total protection for the patient in dentist's chair

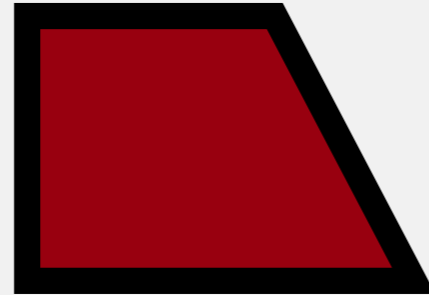
08 FABRICS AND COLORS

VIBRANT COLORS THAT LIFT MOODS

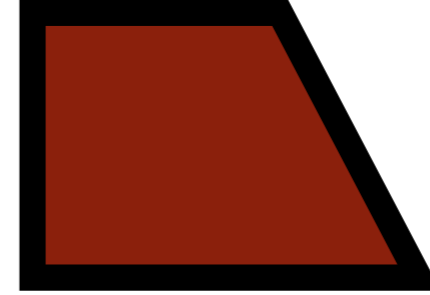
UNITEX™, our safest radiation protection fabric yet. Invented to resist contaminants and woven with cutting edge technology, this fabric makes our apparel some of the safest and most reliable in the world. Better still, it is soft on the skin and doesn't wrinkle easily.



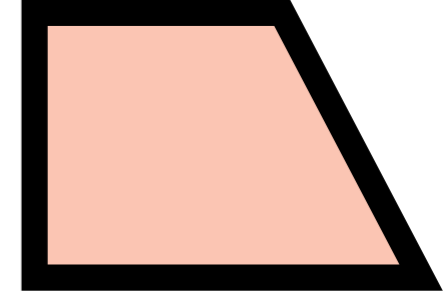
FUSCHIA
Joyful



CHERRY
Warm



RED
Dynamic



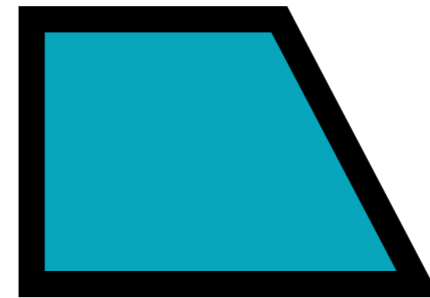
SAKURA PINK
Optimism



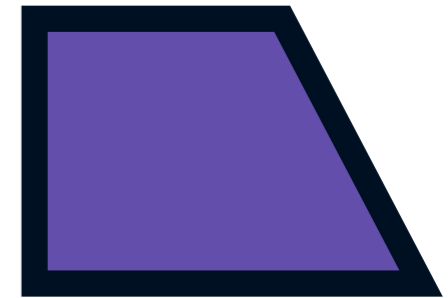
ROYAL BLUE
Energetic



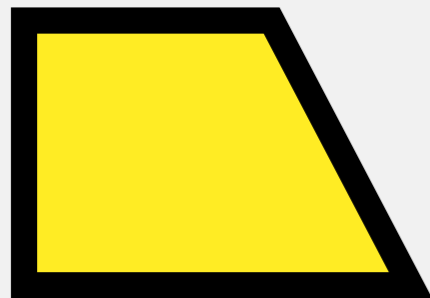
NAVY BLUE
Classic



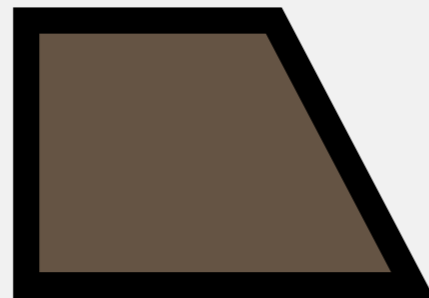
AZURE BLUE
Serenity



PURPLE
Inspiring



LEMON
Cheerful



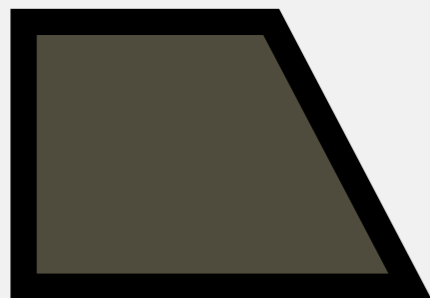
CAMEL
Neutral



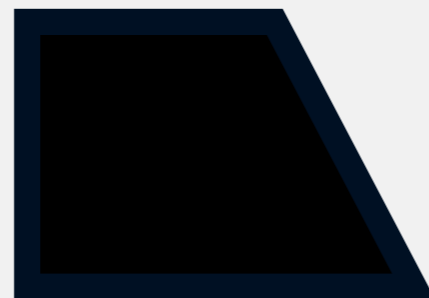
FOREST GREEN
Natural



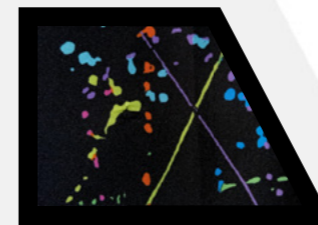
AQUA GREEN
Nurturing



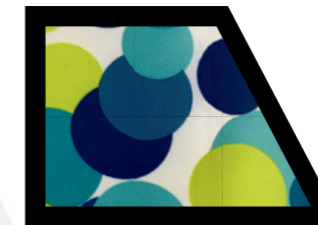
MOUNTAIN GREY
Stable



BLACK
Mystery



RETRO
Fun



HOOP
Upbeat



BAMBINO
Playful

09 INNER FABRIC

UNITEX™ 360°

A futuristic range of apparel lining, made from breakthrough bamboo charcoal fiber. Organic in DNA, cutting edge in process, this new-age fabric scores high on function and fashion.

THE PROCESS



BAMBOO

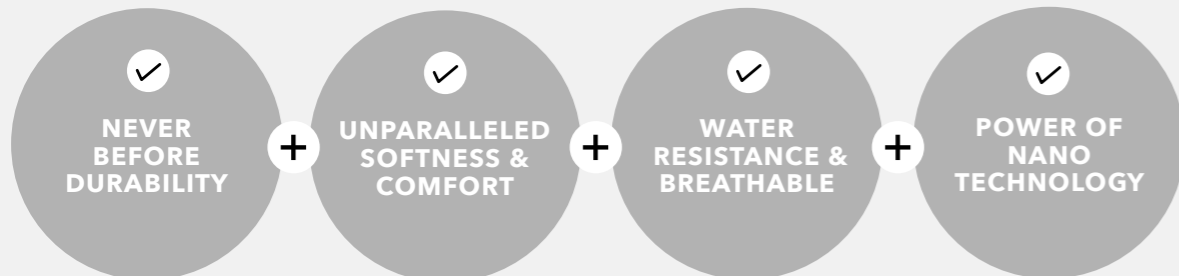


HEAT



CHARCOAL

THE BENEFITS



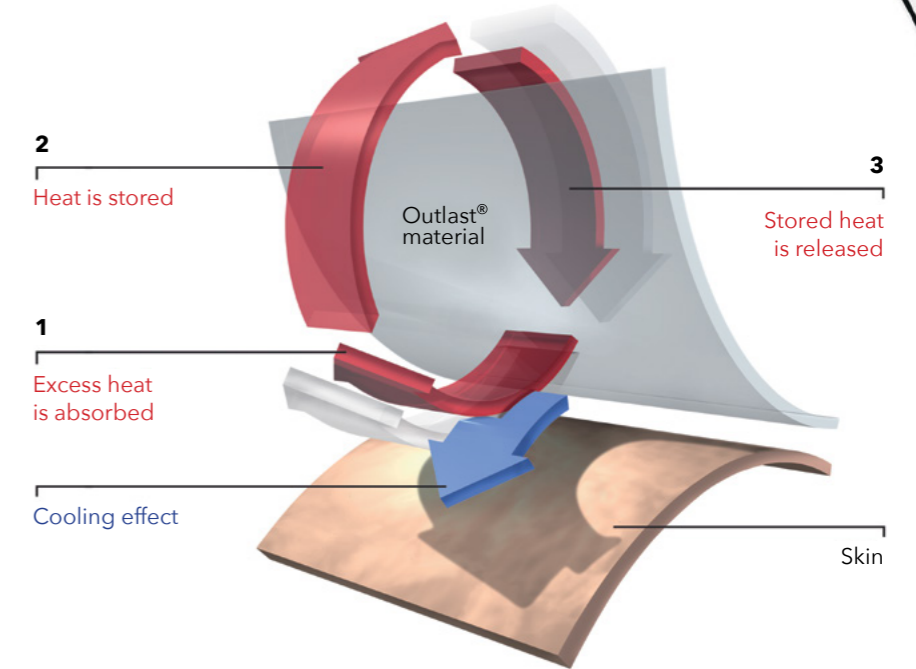
Available only in Charcoal Black Colour

OUTLAST®- A UNIQUE TEMPERATURE REGULATED FABRIC

Outlast® technology uses phase change materials (PCM) to absorb, store and release heat to achieve an optimum heat and moisture management. This gives Outlast® technology the ability to continually regulate the skin's microclimate. As the skin gets hot, the heat is absorbed, and as it cools, that heat is released. Outlast® technology does not only balance temperature fluctuations but reduces moisture.

THE EFFECT

- PCM changes from solid to liquid and back
- Absorbes body heat
- Stores body heat
- Releases body heat
- Maintains comfort zone



THE BENEFITS

- Less overheating
- Less chilling
- Less perspiration
- More comfort
- Not too hot, not too cold, just right.

Studies show that Outlast® products can reduce the sweat production average between 30% to 50%

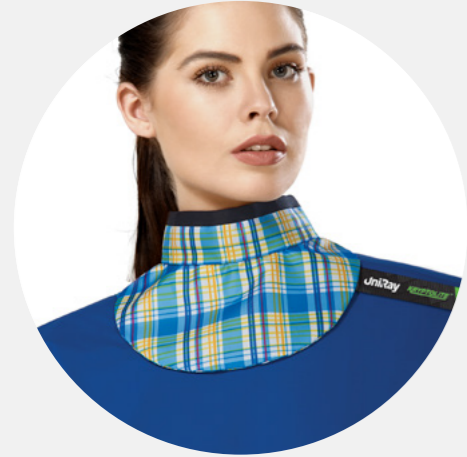


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10 THYROID SHIELDS & COLLARS

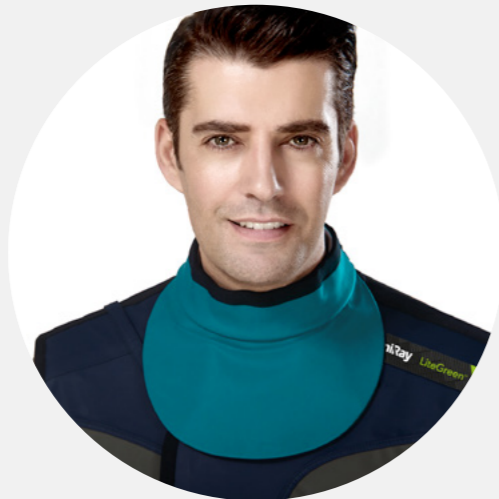
THE SENSITIVE GLAND PROTECTION

Our thyroid shields and collars are designed in 3 sizes. All thyroid shields can be affixed to the aprons.



BALANCE

Unique design to protect the thyroid & sternum



UNIVERSAL

An all time favourite



ELEGANCE

For a snug fit enabling total protection

CLOSURE TYPES

Unique design to protect the thyroid & sternum



VELCRO CLOSURE

Traditional closure



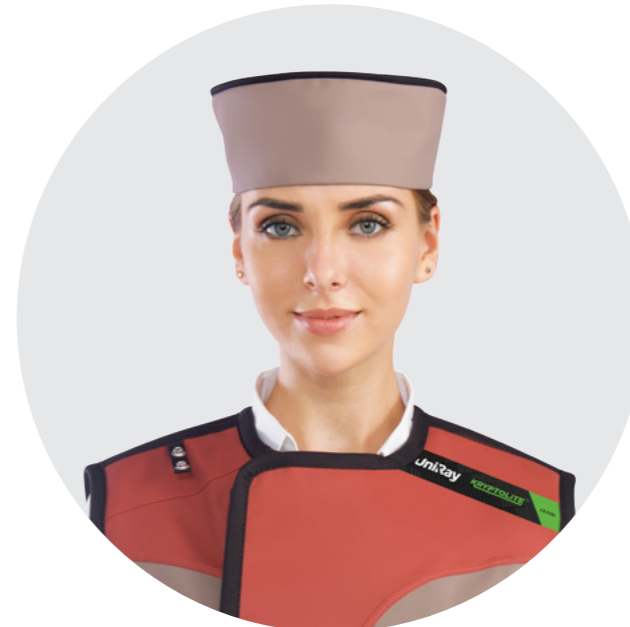
MAGNETIC CLOSURE

Ease of use and good hygiene

11 HEAD PROTECTION

SUPERLATIVE PROTECTION AGAINST HAIR FALL

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FEZ

Protection of Frontal Cortex



BUCKET

Protection for complete head area

12 LOWER BODY PROTECTION

PATIENT APRON



WITH SNAP BUCKLE & VELCRO CLOSURE

LEV 0.5 mm Pb in set of 4 sizes



WITH METALLIC RING CLOSURE

LEV 0.5 mm Pb in a set of 4 sizes



FLEXIBLE GONAD CAPSULE

LEV 1.0 mm Pb in set of 2 sizes



OVARIAN SHIELDS

LEV 1.0 mm Pb in set of 3 sizes

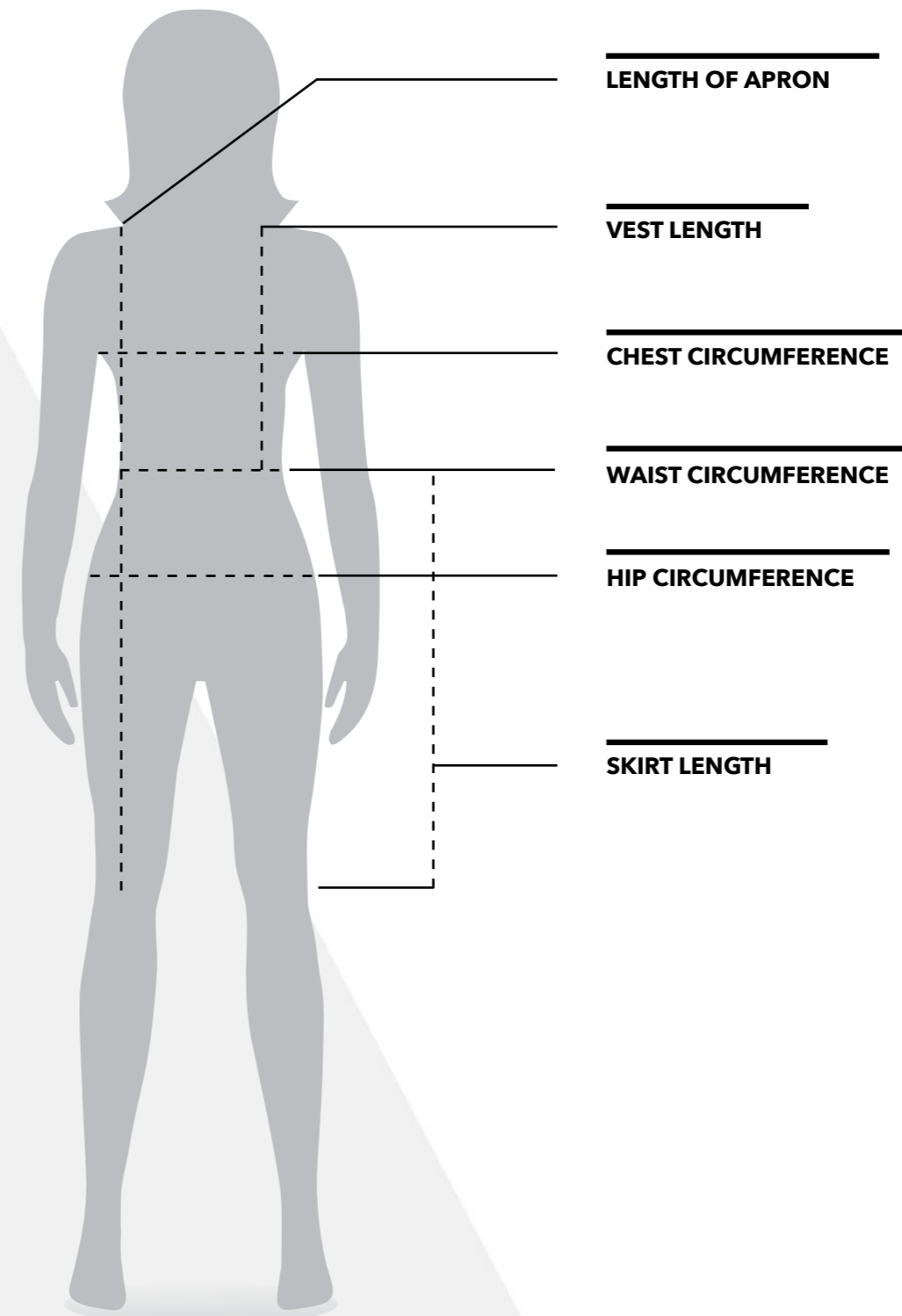
13 MEASUREMENTS

PERSONAL X-RAY PROTECTION - HOW TO MEASURE

These are body measurements; Apparel size can be determined based on these measurements.

The length of the X-ray protection clothing should be selected in accordance with the International Standard IEC 61331-3:2014 with coverage to below the knee for complete protection.

ALL DIMENSIONS IN CM



14 HAND PROTECTION

PROTECT HANDS FROM SCATTERED RADIATION

Each disposable glove is manufactured in our bacteria-free, state of the art dipping facility. [view here](#)



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ALL OUR GLOVES ARE GAMMA STERILIZED AND FEATURE:

- A lead-free proprietary hypoallergenic formulation
- Maximum contact and tactile sensitivity
- Textured surface for perfect grip
- 100% sterile and powder-free
- Elimination of finger fatigue with a unique design
- Ease of wear and removal with rolled and beaded cuff
- Latex or Latex -Free

RADIATION ATTENUATION - Tested as per IEC 61331-1:2014 - (BBG Method)

DIRECT BEAM ENERGY LEVEL	LATEX GLOVES		LATEX FREE GLOVES
	PRIME	SHEER	PRIME
60 KV	69.6%	46.8%	63.1 %
80 KV	60.9%	39.2%	54.4 %
100 KV	53.8%	33.5%	47.4 %
120 KV	48.2%	29.0%	42.0 %
LE, mm Pb 60 to 120 kV	0.047	0.024	0.039

15 EYE PROTECTION

European Standards 2013/59/Euratom have reduced the annual eye lens dose limit from 150 mSv/ year to 20 mSv / year for medical staff. Hence, use of Eyewear has become an essential need of personnel working in an environment with scattered radiation from all angles.

UniRay offers a wide assortment of radiation protection glasses with adjoining lateral radiation protection zones and tight seal against the cheekbones and temples. All our eyewear have a 0.75mm frontal and 0.50mm lateral protection at 150kV

Our radiation protection glasses are available with 0.75mm frontal protection and 0.50mm Lateral protection when tested at 150kV. Optical corrections are available as single-vision, bifocal, and progressive lenses



NIKE EYE WEAR

Light | Comfortable | Stylish



BRAZEN

Fitting frames with additional nose bridge for comfort.



RABID

Frames designed to provide clarity and maximum protection.

OAKLEY OAKLEY EYE WEAR



OAKLEY GASCAN

Lightweight wraparound frame that is comfortable for all day use.

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FRONT & SIDE

the user from frontal as well as lateral radiation



VIENNA

Transparent design contrasted with blue, this x - ray protective glass has special material offering lateral protection



MAXX 30

Sporty model with padding on temples & bridge of the nose



SYDNEY

Metal frame in silver color with adjustable silicone nose pads, this eye-wear has an all round protection of the eye.



FIT OVER

A universal solution to fit over the user's eyewear with complete clarity and protection



TOKYO

The eye-wear has been designed to protect the eyes from scattered radiation from all angles of incidence.



SPORTY

wrap-around style of these frames helps protect the complete eye, with no danger of lateral radiation



ROME

Rectangular style frame with high-quality permanent side shields



PARIS

The wrap-around style with a rectangular shape and a durable and lightweight design



BERLIN

Sporty, light weight frame with integrated lateral protection



HELSINKI

Wraparound style and a lightweight design featuring removable side shields



LONDON

Wraparound style and a lightweight design featuring removable side shields



NEW YORK

Wraparound style and a lightweight design featuring removable side shields with temple grip and comfortable nose pads



UNIVERSAL SIDE SHIELDS

Innovative lateral eye radiation protection with optimum hygiene

PRESCRIPTION SERVICE

Prescription service is available in Single vision, Bi focal and Progressive versions.

16 CHILDREN'S APRONS

TOTAL PROTECTION IN CHILD-FRIENDLY DESIGNS

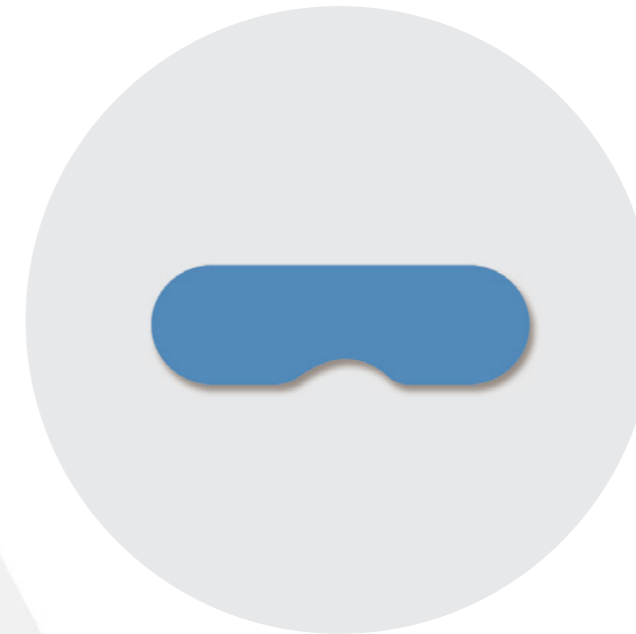
Available in a variety of popular and custom sizes, designs, colors and patterns.



17 CT SHIELD

Managing radiation doses during CT scans is key to avoid potential cancer risks and radiation damage to the sensitive tissues of the breast, thyroid gland and eyes.

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EYE SHIELD

Reduces over 60% radiation to the eye from the CT scanner



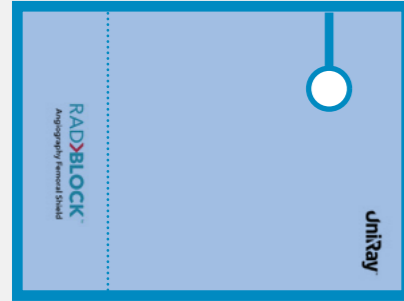
THYROID SHIELD

Provides over 65% protection to the sensitive thyroid gland and prevents tissue damage

18 SHIELDS & DRAPES

RADIATION PROTECTION AT SOURCE

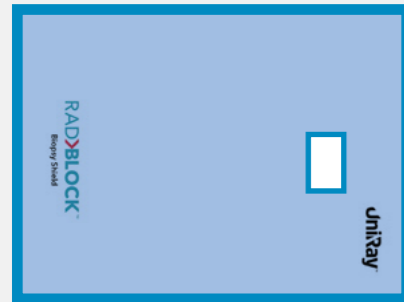
RadBlock is intended to protect the medical personnel from scatter radiation during fluoro-guided procedures. RadBlock provides attenuation between 75% to 96% depending on differentiating factors such as complexity of procedure, total fluoro time, size of patient and operator proximity to the primary beam/ image intensifier.



RADBLOCK - ANGIOGRAPHY FEMORAL



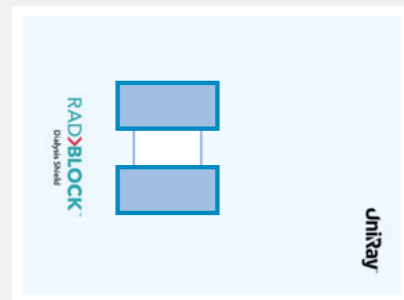
RADBLOCK - ANGIOGRAPHY RADIAL



RADBLOCK - BIOPSY



RADBLOCK - EP SUBCLAVIAN

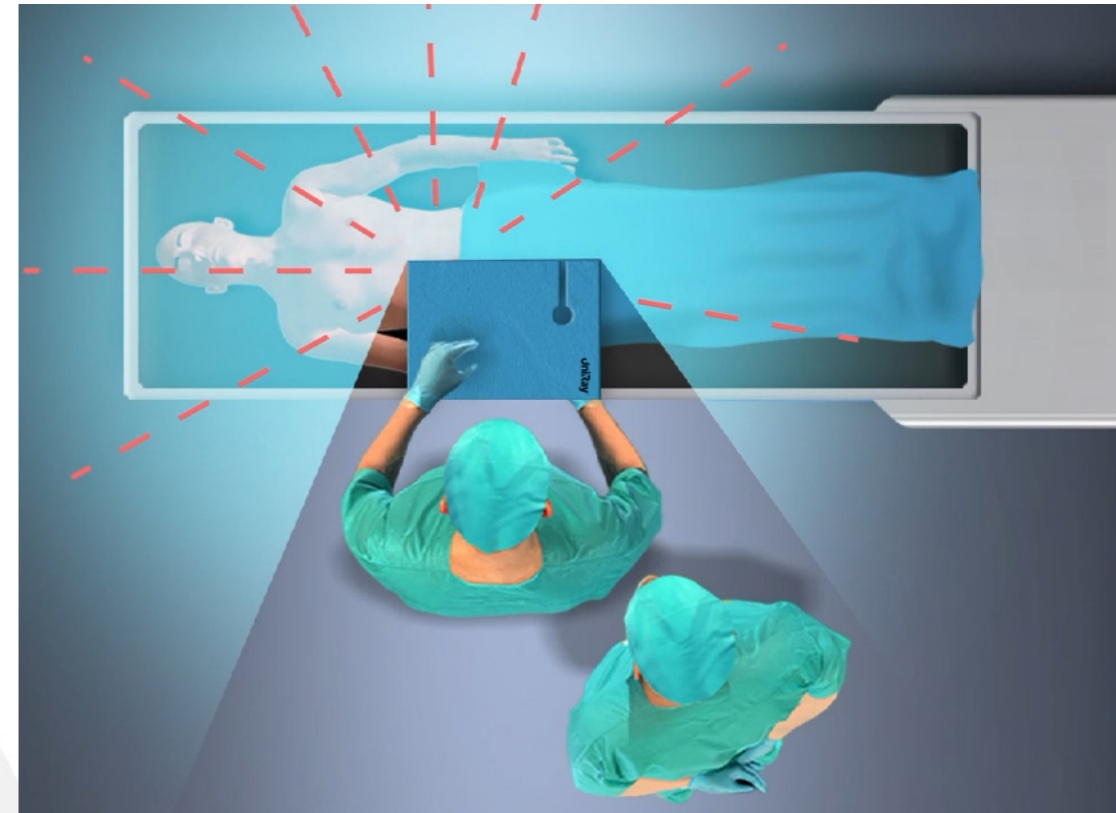


RADBLOCK - DIALYSIS



RADBLOCK - MULTIPURPOSE

SHADE WITH RADBLOCK DRAPES AND COVERS



APPLICATION	PROCEDURE
INTERVENTIONAL RADIOLOGY	Dialysis
	Liver Biopsy
	Chemo Immobilisation
CARDIAC CATH LAB	Biliary Drainage
	Vertebroplasty
	Balloon Angioplasty
	Cardiac Catheterization
ENDOVASCULAR SURGERY	Rotational Atherectomy
	Transcatheter Aortic Valve Replacement
	Carotid angioplasty and stenting
ELECTROPHYSIOLOGY (EP) LAB	Endovascular Aneurysm Repair
	Cardiac Mapping
	Cardiac Ablation
	Device Implantation

19 STORAGE SYSTEMS

COMPACT AND EFFICIENT

Our perfectly crafted range of storage system

MOBILE HANGERS & GLOVE HOLDERS

- Smart stainless steel system with brakes
- Detachable hooks, glove and shield storage
- 5 or 10 apron models

MOUNTED WALL RACKS

- Stainless steel swivel hangers for ease of use
- Space saver racks and several models

AVAILABLE MODELS

- Wall racks with one, two, three, and five hangers
- Glove holders and hooks are available for fixing on the mobile system



2 HANGER WALL SYSTEM



3 HANGER WALL SYSTEM



5 HANGER MOBILE STORAGE RACK

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ENERGY optimum
Exposure Mutation

LABS patient
products ISO
Surgical sensitive

shields
SAFETY EXPC
Mutation

health energy
CE TEST Lead
protection RADIATION

exposure BIOPSY X-Ray
Cath Dialysis Labs

sensitive SURGICAL
PRODUCTS ISO HEALTH

20 TESTING & APPROVALS



UniRay X-ray protective products conform to stringent quality norms of REGULATION (EU) 2016/425 on personal protective equipment (PPE)

All UniRay quality systems are assessed and certified as per the guidelines of EN ISO 13485:2016 and products are tested as per strict guidelines of IEC 61331-1:2014

Every UniRay aprons has the four-digit registration number issued by the authorised notified body) which is SGS- Fimko (Finland)

Our products also conform to stringent quality norms as specified by European Council's Medical Device Directive (MDD), contained in 93 / 42 / EEC as applicable.



User checklist for compliance of the IEC guidelines:

- Testing done in any method other than BBG is invalid
- CE certificate as per PPE Regulation (EU) 2016/425
- The product label should show the area weight "Ws" as mentioned in test report.
- The product label should mention compliance with tube voltage "60 kV - 110 kV"

UniRay

Do connect with us and get more information
about our other radiation protection products.

UniRay Medical LLP

Mumbai, India

E: sales@uniraymedical.com

W: www.uniraymedical.com