

**RADIATION
PROTECTION
PRODUCTS**

UniRay



THE UNIRAY PROMISE



PROTECTION FOR THE PEOPLE WHO PROTECT LIFE

With over 3 decades of global experience in x-ray and radiation protection, we understand your role as a medical professional along with the risks you take to fulfill it. We know that you deserve the greatest level of protection while enabling efficiency, comfort, and style.

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.





UNIRAY EQUALS SAFETY

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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 a specified range of tube voltages from 60 kV to 150kV. The new standard IEC EN 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 backscatter by the material itself.

THE X-FACTOR

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



MaxLite™

MaxLite™ 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 composite materials.

LEV 0.25mm Pb - weight 3.10 kg/sqm



LITELEAD™

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

LEV 0.25mm Pb - weight 3.40 kg/sqm



KRYPTOLITE™

KryptoLite™ with its multi-layer technology eliminates fluorescence radiation and back scatter thus providing optimum safety to the user. **KryptoLite™** is at least 15-20% lighter than any other lead-free material in the world. This environmentally friendly lead-free material is formulated with a mixture of bismuth and antimony.

LEV 0.25mm Pb - weight 2.80 kg/sqm



LiteGreen™

LiteGreen™ This Environmentally friendly lead-free material is formulated with a mixture of Bismuth, Tungsten and Antimony. **LiteGreen™** is the material of choice for users.

LEV 0.25mm Pb - weight 3.10 kg/sqm

01 SKIRT & VEST

ULTIMATE PROTECTION FOR USER



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



Aprons are available in S/M/L/XL and custom sizes
Aprons are available in LEV 0.25, 0.35, 0.5 mm Pb



Maxx™

- Complete overlap on the front opening of the vest, as well as the 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



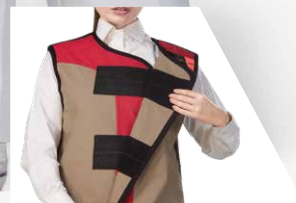
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02 DOUBLE-SIDED APRON

ALL ROUND PROTECTION SOLUTION



Optixx™



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

Aprons are available in S/M/L/XL and custom sizes
Aprons are available in LEV 0.25, 0.35, 0.5 mm Pb



Maxx™

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



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03 BACKSAVER APRON

UPTO 50% REDUCTION IN LOAD ON BACK

UniRay's **BackSAVER** lifts the entire back panel of the apron with use of a membrane. An upthrust is created when pressure is exerted at specific points and directions. The thrust opposes the weight of the apron and sufficiently lifts it, taking the load off the shoulder, back and spine.

Available in Skirt & Vest, Double-Sided and Coat Apron

Also available in magnetic closure.



- Floatation on shoulder



- Built in belt, easy to clean and disinfect



Aprons are available in S/M/L/XL and custom sizes
Aprons are available in LEV 0.25, 0.35, 0.5 mm Pb

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04 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
Aprons are available in LEV 0.25, 0.35, 0.5 mm Pb

05 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



06 ZIPPER APRON

VEST WITH ZIP CLOSURE



- Zipper for better fitment
- Easy to clean for better hygiene



Aprons are available in S/M/L/XL and custom sizes
Aprons are available in LEV 0.25, 0.35, 0.5 mm Pb

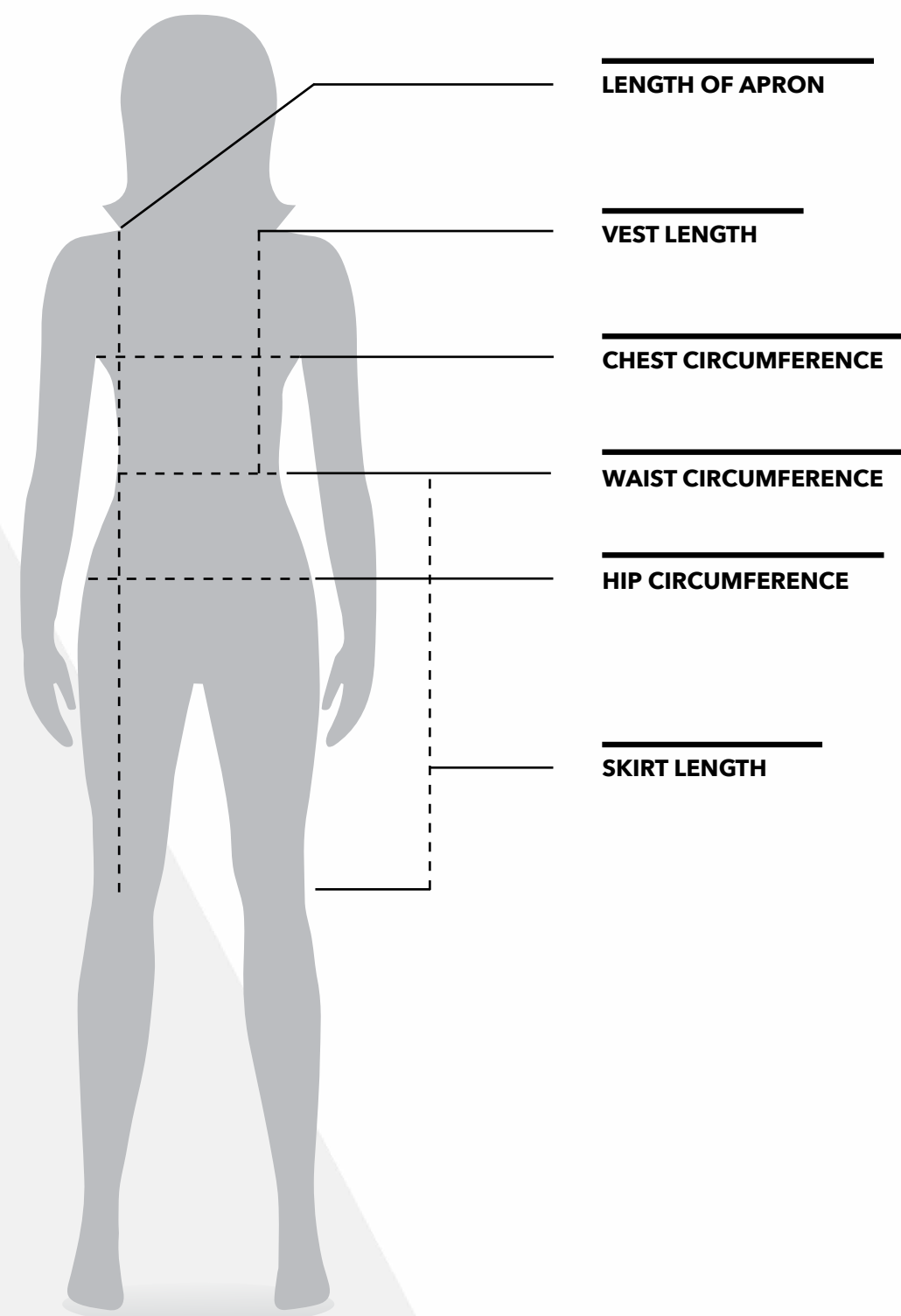
07 MEASUREMENTS

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



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08 THYROID SHIELDS & COLLARS

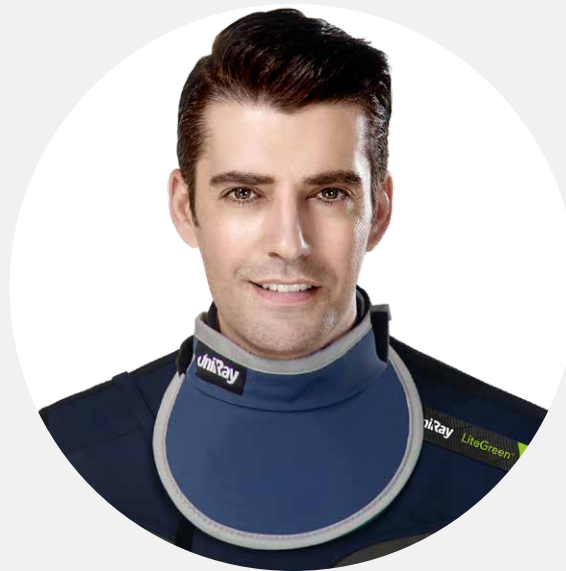
THE SENSITIVE GLAND PROTECTION

All thyroid shields can be affixed to the apron using a push button.



BALANCE

Unique design to protect the thyroid & sternum



UNIVERSAL

An all time favourite

- Magnetic closure

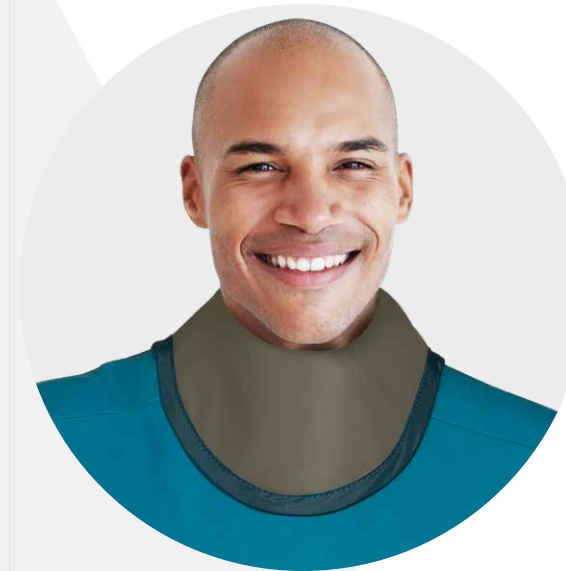


- Velcro closure



DUPLEX

All round thyroid protection



ELEGANCE

For a snug fit enabling total protection

- Magnetic closure



- Velcro closure



Available in S/M/L/XL and custom sizes
Available in LEV 0.5 mm Pb

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09 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



NETO FLEXIBLE GONAD SHIELD

LEV 1.0 mm Pb in set of 4 sizes



GONAD/OVARIAN SHIELD

LEV 1.0 mm Pb in set of 3 sizes

10 HEAD PROTECTION

SUPERLATIVE PROTECTION AGAINST HAIR FALL

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FEZ

Protection of frontal cortex

Top view



Available in universal size
Available in 0.25, 0.35, 0.5 mm Pb

11 CUSTOMISATION

EXPRESS YOUR UNIQUE WAY

We maintain a vast design bank which can be embroidered on pockets or printed by our in-house precision embroidery equipment. We also provide a name tag of doctors or of a hospital for easy attachment on the apron pocket.



CUSTOMISED PRINT



CUSTOMISED LOGO



NAME ON BUTTON TAG



NAME WITH VELCRO TAG

12 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
- Also available in full sleeves



BUTTON-ON SLEEVE

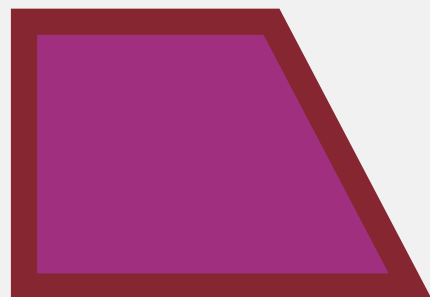
- Attaches easily to all models of Vests and Double-Sided Aprons
- Also available in full sleeves

13 FABRICS AND COLORS

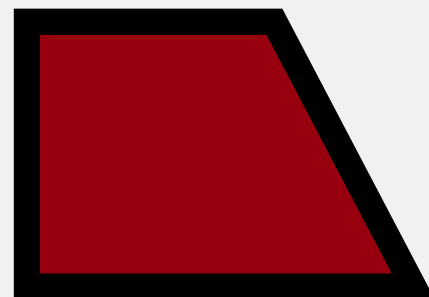
VIBRANT COLORS THAT LIFT MOODS

UNITEX™, is antibacterial, comfortable & stain resistant.

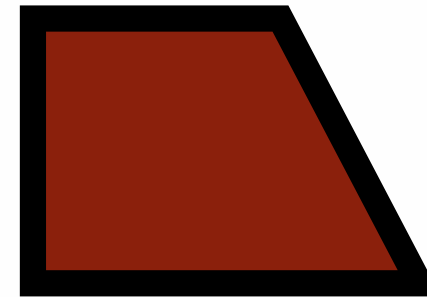
It is Invented as a soft & anti-wrinkle covering for all radiation protection apparel.



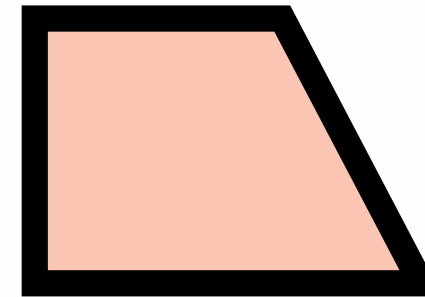
FUSCHIA
Joyful



CHERRY
Warm



RED
Dynamic



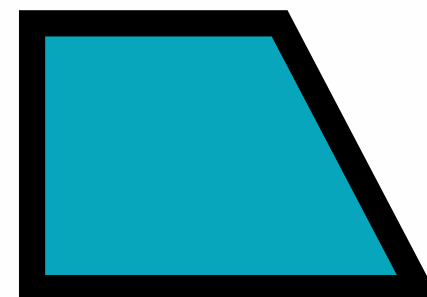
SAKURA PINK
Optimism



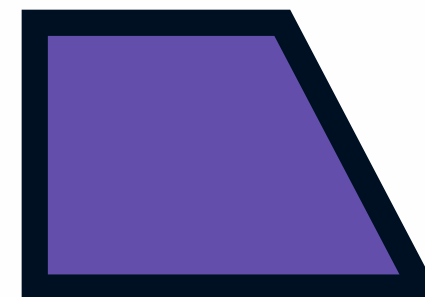
ROYAL BLUE
Energetic



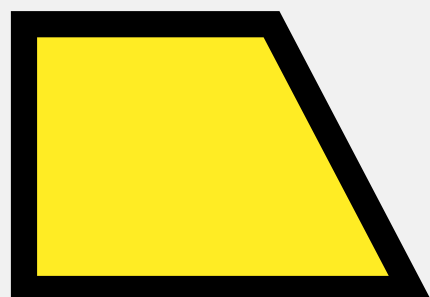
NAVY BLUE
Classic



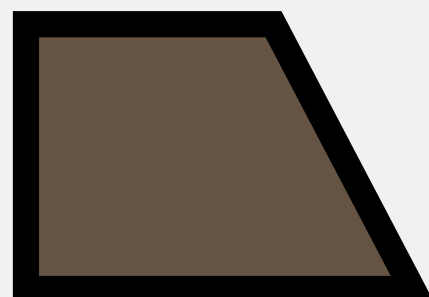
AZURE BLUE
Serenity



PURPLE
Inspiring



LEMON
Cheerful



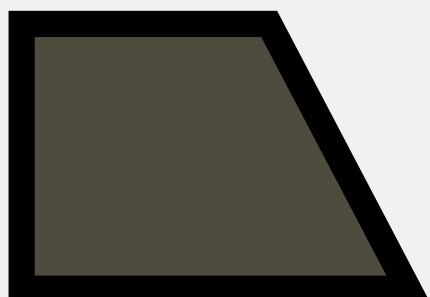
CAMEL
Neutral



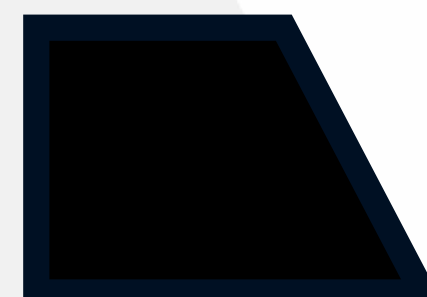
FOREST GREEN
Natural



AQUA GREEN
Nurturing



MOUNTAIN GREY
Stable



BLACK
Mystery

14 FABRICS AND PATTERNS

VIBRANT COLORS THAT LIFT MOODS

UNITEX™, is antibacterial, comfortable & stain resistant.

It is Invented as a soft & anti-wrinkle covering for all radiation protection apparel.



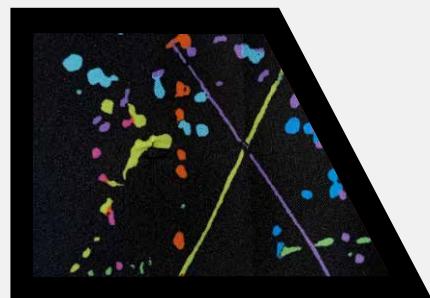
CAMOUFLAGE



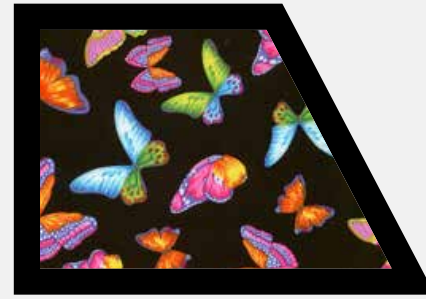
LEOPARD



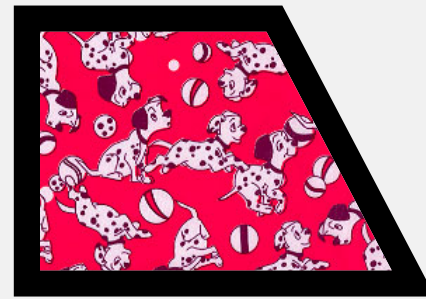
BAMBINO



RETRO



BUTTERFLY



PUPPIES



HOOP

15 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

Available in various sizes
Available in 0.25, 0.35 mm Pb

16 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

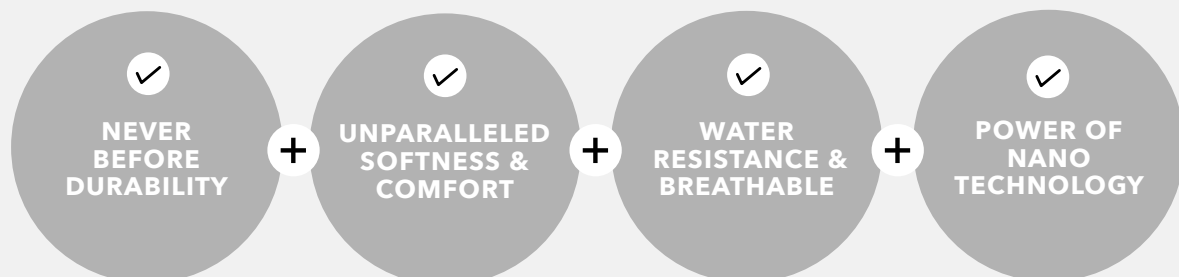


HEAT



CHARCOAL

THE BENEFITS



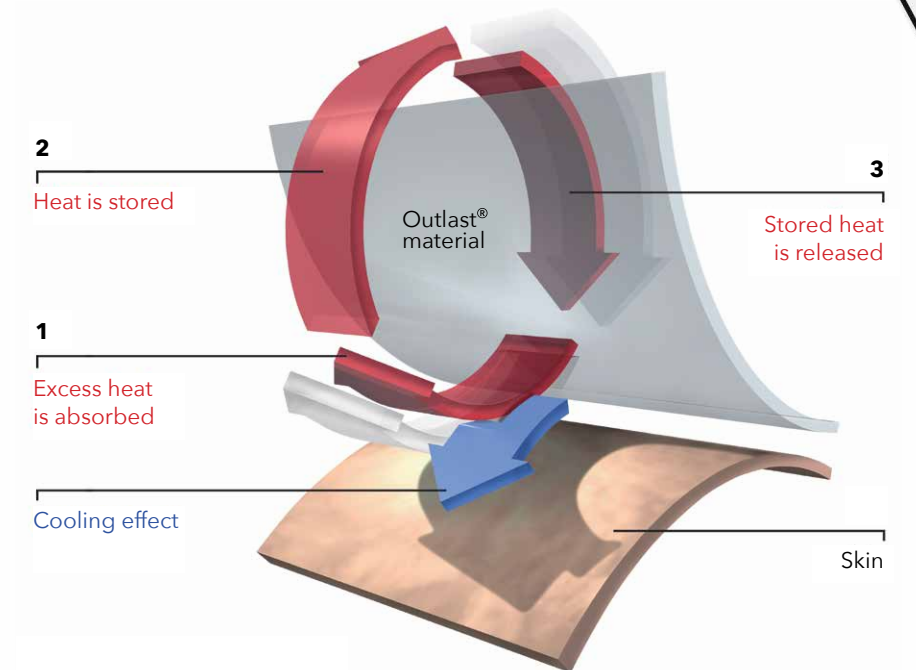
Available only in charcoal black colour

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 micro climate. 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
- Absorbs 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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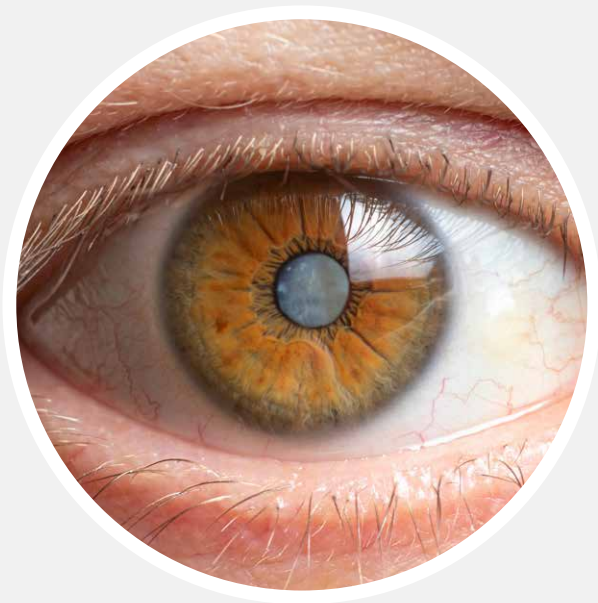
17 EYE PROTECTION

CLEAR VISION

European Standards 2013/59/Euratom has reduced the annual eye lens dose limit from 150 mSv/ year to **20 mSv/year** for medical staff.

Available with 0.75mm Pb frontal and 0.5mm Pb lateral protection

- Optical corrections are available as single-vision, bifocal and progressive lenses.



WITHOUT EYE PROTECTION



WITH EYE PROTECTION



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



GASCAN

Light-weight wraparound frame that is comfortable for all day use

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FRONT & SIDE

The user from frontal as well as lateral radiation



MAXX 30

Sporty model with padding on temples & bridge of the nose



FIT OVER

A universal solution to fit over the user's eye-wear with complete clarity and protection



VIENNA

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



SYDNEY

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



TOKYO

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



SPORTY

Wraparound 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

Wraparound style with a rectangular shape and a durable and light-weight design



BERLIN

Sporty, light-weight frame with integrated lateral protection



HELSINKI

Wraparound style and a light-weight design featuring removable side shields



LONDON

Wraparound style and a light-weight design featuring removable side shields



NEW YORK

Wraparound style and a light-weight design featuring removable side shields with temple grip and comfortable nose pads



UNIVERSAL SIDE SHIELDS

Innovative lateral eye radiation protection with optimum hygiene

18 PRESCRIPTION SERVICE

ENHANCED VISION

Prescription service is available in single vision, bifocal and progressive versions. A template for Prescription Form for our Radiation Protection Glasses with corrective lenses is available.



Date: _____

PRESCRIPTION FORM

Prescription Values for Radiation Protection Glasses with Corrective Lenses

Customer/Name: _____ Date of Birth: _____

Please Tick: ☒

Single Vision: ☐ Lined Bifocal: ☐ Progressive Bifocal: ☐ Anti-Reflective coating: ☐ / Fog freecoating: ☐

Eyewear name and/or model number:

		SPHERICAL (SPH.)	CYLINDRICAL (CYL.)	AXIS (A)	ADDITION (ADD)
OD (oculus dextrus)	Right eye				
OD (oculus sinister)	Left eye				
PD (pupillary distance)	Right eye				
	Left eye				

Comments if any: _____

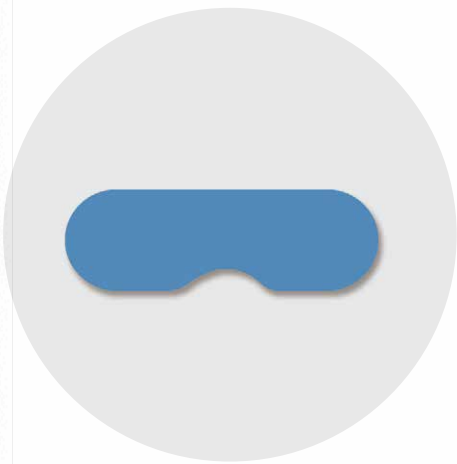
**Please attach doctor's prescription*

Signature: _____

19 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.



EYE SHIELD

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



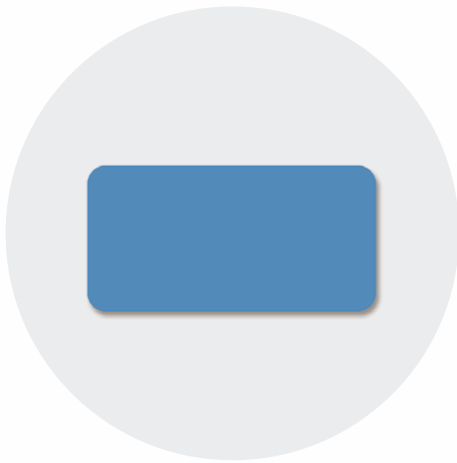
THYROID SHIELD

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



BREAST SHIELD

Reduces cancer risk during CT scan by providing over 67% protection to the sensitive tissues of the breast



PEDIATRIC SHIELD

Protects children who are more sensitive to radiation than adults

20 HAND PROTECTION

PROTECT HANDS FROM SCATTERED RADIATION

Each disposable glove is manufactured in our bacteria-free, state of the art dipping facility.



ALL OUR GLOVES ARE GAMMA STERILIZED AND FEATURE:

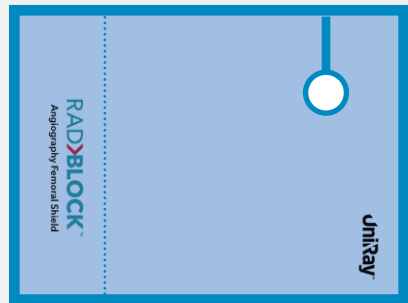
- A lead-free proprietary hypoallergenic formulation
- Maximum contact and tactile sensitivity
- Textured surface for perfect grip
- 100% sterile and powder-free
- Elimination of finger fatigue with a unique design
- Ease of wear and removal with rolled and beaded cuff
- Latex or Latex free

RADIATION ATTENUATION - Tested as per IEC 61331-1:2014 - (BBG Method)			
	LATEX GLOVES		LATEX FREE GLOVES
DIRECT BEAM ENERGY LEVEL	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

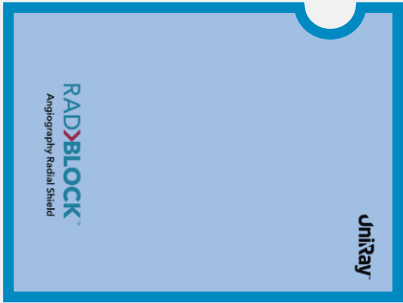
21 SHIELDS & DRAPES

RADIATION PROTECTION AT SOURCE

RadBlock provides protection at source when placed on the patient by creating a shade around the surgeon. Protection ranges between 75% to 96% of different types. RadBlock is available in a variety of protection levels. The Brain Saver cap provides upto 90% protection.



RADBLOCK - FEMORAL ENTRY SHIELD 5300



RADBLOCK - SUBCLAVIAN SHIELD 5400



RADBLOCK - PERIPHERAL SHIELD 5110

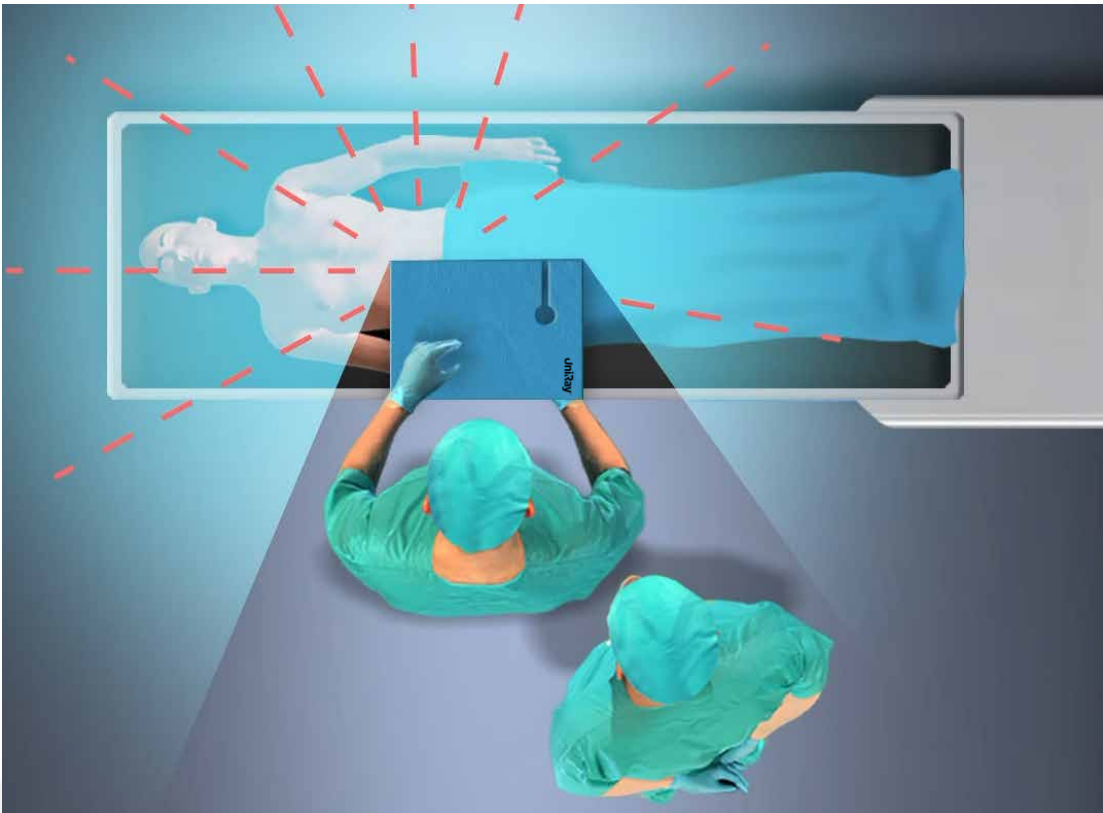


RADBLOCK - MULTIPURPOSE SHIELD 5511



RADBLOCK - BRAIN SAVER 9100

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
	Rotational Atherectomy
ENDOVASCULAR SURGERY	Trans catheter Aortic Valve Replacement
	Carotid angioplasty and Stenting
	Endovascular Aneurysm Repair
ELECTROPHYSIOLOGY (EP) LAB	Cardiac Mapping
	Cardiac Ablation
	Device Implantation

22 STORAGE SYSTEMS

COMPACT AND EFFICIENT

Our perfectly crafted range of storage system

MOBILE HANGERS

- Smart stainless steel system with brakes
- Detachable hooks for multiple uses

MOUNTED WALL RACKS

- Stainless steel swivel hangers for ease of use
- Space saver racks in 1,3,5 or other types are available



1 HANGER WALL SYSTEM



5 HANGER WALL SYSTEM



3 HANGER WALL SYSTEM



**LOWER BODY METALLIC
RING STORAGE**



DETACHABLE HOOK

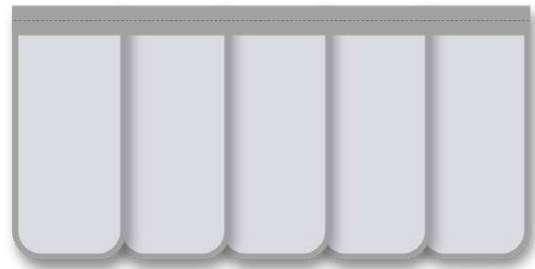
**5 OR 10 HANGER MOBILE
STORAGE RACK**

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23 OVERHEAD & LOWER BODY SHIELDS

SAFE AND DURABLE

Designed with strong, durable and overlapping lead panels 0.5mm Pb.
Multiples designs and custom shields can be made for every type of equipment.
All shields can be fabricated in any length or width.



OVERHEAD SHIELD

Panels that overlap with a fold-up center part

- A fold-up center part
- 70cm (height) X 100cm (width)

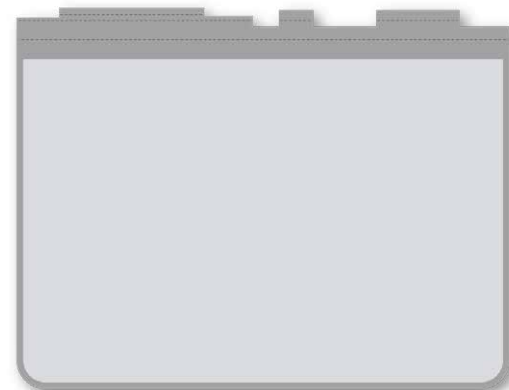
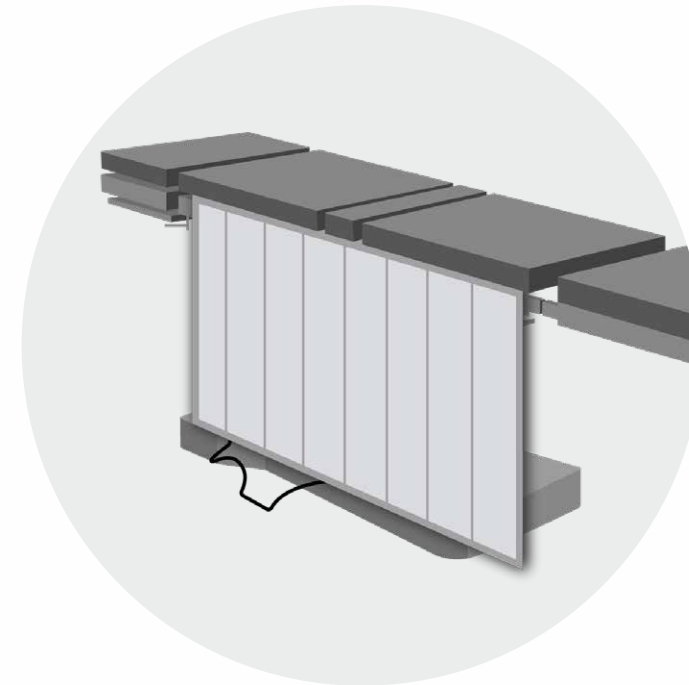


TABLE SHIELD

Shields can be swiveled or moved laterally

- Flexible curtains 70cm (height) X 92cm (width) are used as shields to fit over C-arm equipment.



LOWER BODY SHIELD

- Flexible overlapping panels
- Each panel is 70cm (height) X 20cm (width)

24 TESTING & APPROVALS

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

The quality systems at UniRay are assessed and certified as per the guidelines of EN ISO 13485:2016 and products are tested as per strict guidelines of IEC / EN61331-1:2014.

Every UniRay apron has a four-digit registration number issued by the authorized notified body SGS-Fimko (Finland).

User checklist for compliance of the IEC guidelines:

- Testing done in any method other than BBG is invalid
- CE certificate (Module D) as per PPE Regulation (EU) 2016/425
- The product label should show the area weight "Ws" as mentioned in the test report.
- The product label should mention compliance with tube voltage "60 kV - 150 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