

# RADIATION PROTECTION PRODUCTS



*Cworld*

 PHILLIPS SAFETY  
PRODUCTS INC.

**HBS**  
M E D I C A L

# About us

## Distributing cutting edge medical products

Through its predecessors, HBS Medical Kft. has been on the Hungarian medical market since 1991.

Distributing innovative medical products and devices has been one of our main activity from the beginning. All our partners whom we are representing manufacture products of highest quality both for the healthcare staff and the patients. In recent years our company has focused on surgical professionals such as urologists, gynecologists, traumatologists, neurosurgeons, cardiologists and general surgeons mainly helping them to perform operations at the highest level. Our professional and well-experienced staff in close cooperation with the manufacturers serves our customers with first class products and fulfil their requirements at the right price.

## HBS Medical and CWorld

The Korean company, CWorld, has been manufacturing radiation protection products since 2001. As one of the trendsetter firms of the field of radiation protection, CWorld is renowned for its lead-free products that are very popular among their customers.

Certifications of Cworld products:  
 FDA  
 ISO13485 : 2016  
 IEC/EN 61331-1,3 : 2014  
 PPE Module D (CE2895, UKCA0338)  
 PPE Module B EU Type-Examination

In 2019 HBS Medical Kft. became the exclusive distributor of Cworld in the European market.



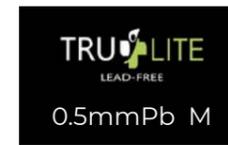
## Radiation Shielding Apron & Accessories

Customers can choose an apron from several different styles and sizes (page 12) with familiar colors and patterns. Our aprons can be made of two types of protective core materials.

1. Lead-free (TRU-LITE)
2. Lead compound (TRU-COMFI)

CWORLD lead-free aprons are remarkably lighter than conventional lead aprons at the same protection rate. CWORLD manufactures a full line of lead-free and lead aprons.

- Cost effective
- Quality you can trust
- Proven radiation protection
- The sheet is not sticky.
- Waterproof nylon outer fabric.



Inner net prevents apron from adhering to the body due to perspiration



The thyroid cover connector prevents separation from the apron



### Apron layer

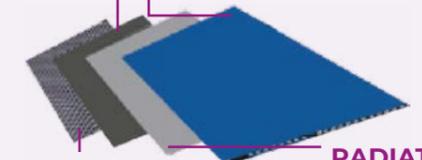
**DURABILITY**  
Waterproof inner fabric

**WATERPROOF**  
Waterproof fabric helps prevent water and pollutants from penetrating

**BREATHABILITY**  
Polyester mesh fabric  
Anti-sweat

**RADIATION SHIELD**  
TRU-LITE or TRU-COMFI

**HEM**  
Waterproof



## Custom Made

CWORLD offers customized radiation protection aprons and accessories according to customer's request.

## Colors

CWORLD aprons and accessories have seven standard colors as below. Logo and embroidery options are available. Any colors are available for OEM



## Lead-free TRU-LITE

Eco-friendly non-hazardous disposal, recyclable and lightweight.



### N-XR-Lead-free sheet

Tungsten compound

Standard Dimensions: 62 cm in width  
Thickness: 0.48~0.53 mm  
mmPb equivalency: 0.25, 0.35, 0.5

The Lead-free materials are remarkably lighter than conventional lead only materials. It is cost-effective for customers to purchase our lead-free sheet rolls.

## Lead compound TRU-COMFI

### N-XR-Lead compound sheet

Standard Dimensions: 62 cm in width  
Thickness: 0.53~0.62 mm  
mmPb equivalency: 0.25, 0.35, 0.5

Lead aprons are apron is generally used in the field of radiation and nuclear. It is cost-effective for customers to purchase our lead compound.



## Tru-Lite: Future without Lead

### A Treatise on Radiation Protection Fabrics

Traditionally, lead used to be considered the only effective element regarding radiation protection clothing. The protection level has been measured in mmPb ever since the first clothes were manufactured. This data shows the protection an element provides compared to a lead plate which would provide the same level of protection. For example, 0.5mmPb means that the fabric in question gives the same protection as if it were 0.5mm thick lead.

Lead still counts as one of the most effective elements regarding radiation protection. However, lead has some serious drawbacks, too.

First of all, lead products are considerably heavy. Wearing lead clothing for a long time burdens the body parts holding the weight (in most cases, the shoulders). Over the years, the frequent wearing of lead clothing may cause health problems. Most lead products are rigid and inflexible, therefore they are uncomfortable to wear.

Moreover, lead is a hazardous material: the regulations of its disposal are strict, which increases the costs in a long term. Each year more than 400,000 kg of toxic lead waste is produced by radiation protection clothing users in the world. Recycling this metal is complicated or impossible in most cases.

Lead can be dangerous during it is worn, too. If a protection shield or suit becomes damaged, some dust of lead may enter the air, which also has toxic effect both on the medical staff and the patients.

### New Ways of Protection

To overcome these issues, manufacturers started to develop lead composite fabrics (in which lead is partially replaced by other elements providing radiation protection), and lead-free materials. The first lead-free products appeared in the 1990s.

Modern lead-free radiation protection suits and shields can provide the same level of protection as a lead product can, but they have several advantages over them. The market share of the lead-free products has constantly been increasing, and this is predicted to be an ongoing trend according to the market predictions.



### Advantages of Tru-Lite

There are certain products on the market in which lead is indeed replaced by an element whose atomic mass is almost the same as that of lead. Products made of these elements are just as heavy as lead ones. Bismuth is a good example for this. In other cases, low-atomic-mass elements – like iron – are used. For reaching the same protection level as a lead product has much more of these fabrics has to be used. In the end the product may be even heavier than a lead one.

In case of Tru-Lite tungsten is used instead of lead. This element has lower atomic mass than lead, yet it provides considerable protection level.

Apart from its weight, Tru-Lite has several advantages over traditional lead products.

- True-Lite products are more flexible than lead protection suits, therefore they are more comfortable
- It is easy to put them on or take them off due to their design
- True-Lite does not count as hazardous waste – its material is recyclable
- Their surface is Water-resistant, it has customizable parts for names or logos
- Its special inner surface prevents sweating
- Tru-Lite products have no micro air pockets. (Certain materials used for personal radiation protection contain micro air pockets, which might hold some leftover radiation after use.)
- Their lifespan is higher than that of lead products

### Whom is Tru-Lite recommended?

For any medical environment where the staff are exposed to scattered radiation frequently and/or for a long time, including diagnostic methods where real-time imaging is performed.

Some of the most important fields are traumatology, general surgery, orthopedic interventions, urology, cardiology and emergency room services.

Tru-Comfi: A reasonable trade-off

Tru-Comfi is another material CWorld radiation protection products are made from. It belongs to the group of lead composite matters. Tru-Comfi thus contains lead, but in smaller quantity than traditional lead products do.

Therefore, Tru-Comfi products are somewhat lighter than lead-only products, and they are cheaper than lead-free suits and shields. Most Cworld products have a Tru-Lite and Tru-Comfi versions.

### Whom Tru-Comfi is recommended?

Although purchasing Tru-Comfi products is cost-effective, the most important factor is the intended use of the radiation protection products.

Therefore, Tru-Comfi is the best choice for those who have to use radiation protection clothing occasionally only, because their weight is significantly higher than Tru-Lite products.

Lead-free materials do provide sufficient protection in case of the most common applications. However, in certain, less typical environments (e.g. x-ray tubes with very high voltage, about 150kV) are used, their protection may be less than lead products. Tru-Comfi is recommended for those who frequently work with uncommon radiation devices.

## Apron styles

Most of the products are available in leaded and non-leaded version, except otherwise stated

### Buckle Type Front Shield Apron

*N-XR-1-a / N-XR-1-a-L*

The apron buckle can be quickly fastened and unfastened.

This shield apron provides 0.25, 0.35, 0.5 mmPb protection



### Front Back Shield Apron

*N-XR-2 / N-XR-2-L*

The front back shield apron with detachable shoulder allows you to remove your apron quickly and easily without breaking the sterile field. Shoulder detachable type is available.

This shield apron provides 0.25, 0.35, 0.5 mmPb front protection  
Backside protection is the half of the front protection.



**Vest Skirt Shield Apron**  
N-XR-3 / N-XR-3-L

The Vest-Skirt combination is the preferred choice for full protection and it can reduce back fatigue. You control the amount of back support by adjusting the inner elasticized belt. Shoulder detachable type is available.

This shield apron provides 0.25, 0.35, 0.5 mmPb front protection. Backside protection is the half of the front protection.



**X-Type Shield Apron**  
N-XR-4 / N-XR-4-L

Our X-type Velcro band offers ultimate comfort as well as quick and easy adjustability. Shoulder detachable type is available.

This shield apron provides 0.25, 0.35, 0.5 mmPb protection.

**Half Shield**  
N-XR-5-L

This shield apron provides 0.25, 0.35, 0.5 mmPb protection. Only leaded version



40(L)x50(W)cm



**Maternity Shield**  
N-XR-8 / N-XR-8-L

The maternity apron provides 0.5 mmPb front protection. Backside protection is the half of the front protection.



98(L)x58(W)cm

**Maternity Shield**  
N-XR-8-1/N-XR-8-1-L

The maternity apron provides 0.5 mmPb protection. It is used in mammography area.

70(L)x58(W)cm



**Armplus Shield**  
N-XR-Armplus

The armplus shield provides 0.25, 0.35, 0.5 mmPb protection. It is used for upper arm protection and detachable.

31(L)x41(W)cm



**Thyroid Shield**  
N-XR-9 / N-XR-9-L

It provides 0.25, 0.35, 0.5 mmPb protection to the neck area. Especially the thyroid gland



25(L)x59(W)cm



**Thyroid Shield**  
N-XR-9-3 / N-XR-9-3-L

It provides 0.25, 0.35, 0.5 mmPb protection to the full neck area. Especially the thyroid gland



19(L)x33(W)cm



**Disposable Thyroid Shield Cover**  
N-XR-9 Disposable

The disposable thyroid shield cover allows the customer to feel clean and fresh



100pieces/box  
S) 27(L) x 14(W) x 4.5(H)cm  
L) 19(L) x 34(W) x 5(H)cm

**Thyroid Shield stand collar**  
N-XR-9-1 / N-XR-9-1-L

It provides 0.25, 0.35, 0.5 mmPb protection to the neck area. Especially the thyroid gland



25(L)x59(W)cm

**Thyroid Shield**  
N-XR-9-2 / N-XR-9-2-L

It provides 0.25, 0.35, 0.5 mmPb protection to the neck area. Especially the thyroid gland



17(L)x61(W)cm

**Cotton Thyroid Shield Cover**  
N-XR-9-1 cover

The Cotton Thyroid Shield cover allows the user to feel clean and fresh as absorption of sweat.



50(L)x30(W)cm

**Male Gonad Shield**  
N-XR-10-L

The Gonad Shield provides 0.25, 0.35, 0.5 mmPb protection. Only leaded version



31(L)x31(W)cm

**Male Gonad Pantytype Shield**  
N-XR-10-1-L

The Gonad Shield provides 0.25, 0.35, 0.5 mmPb protection of sweat. Only leaded version



36(L)x40(W)cm

**Pediatric Gonad Shield**  
N-XR-10-Ped-L

The Gonad Shield provides 0.25, 0.35, 0.5 mmPb protection. Only leaded version.



15(L)x15(W)cm

**Infant Gonad Shield**  
N-XR-10-Infant-L

The Gonad Shield provides 0.25, 0.35, 0.5 mmPb protection. Only leaded version.



6(L)x6(W)cm

**Female Gonad Shield**  
N-XR-11-L

The Gonad Shield provides 0.25, 0.35, 0.5 mmPb protection. Only leaded version.



28(L)x37(W)cm



**Head Shield**  
N-XR-12 / N-XR-12-L

The Head Shield helps protect the skull from radiation, providing 0.25, 0.35, 0.5 mmPb protection on all sides and 0.25 mm protection on top.

One size fits all. Back velcro helps size adjustability.



10(L)x19(D)cm



**Leg Shield**  
N-XR-13 / N-XR-13-L

The Legs and feet can be protected from radiation by our Leg Shield. This shield apron provides 0.25,0.35, 0.5 mmPb protection.



49(L)x22(W)cm

**TLD Pocket**  
N-XR-TLD

For the safety of the user, it is an apron attached to the chest lining of all aprons at the request of the user.



31(L)x31(W)cm

**Arm Shield**  
N-XR-14 / N-XR-14-L

Arms can be protected from radiation by our Arm Shield. This shield apron provides 0.25,0.35, 0.5 mmPb protection..



36(L)x40(W)cm

**Arm Shield**  
N-XR-14-2 / N-XR-14-2-L

It is used in animal hospital. The Arm Shields have 0.25, 0.35, 0.5 mmPb protection.



37(L)x16(W)cm

**Arm Shield**  
N-XR-14-3

This product have 0.25, 0.35, 0.5 mmPb protection



37(L) x 20(W) /13 cm

**Radiation shield** // Coming soon - certification in progress

This Shield is made of lead glass. Customer can select several different shield types. It has rolling casters for smooth movement. Protection strengths and sizes are as follows.



**Lead glass shield**  
(two-thirds shield)  
**N-XR-g-1**

180(L)x90(W)cm with  
120(L)x90(W)cm  
window size

Protection: 1.65 mmPb.  
Lead glass thickness: 8 mm  
Lead plate thickness: 1.5 mm



**Lead glass shield**  
(half shield)  
**N-XR-g-2**

180(L)x90(W)cm with  
80(L)x90(W)cm  
window size

Protection: 1.65 mmPb.  
Lead glass thickness: 8 mm  
Lead plate thickness: 1.5 mm



**Lead glass shield**  
(partial shield)  
**N-XR-g-3**

180(L)x90(W)cm  
with 20(L)x30(W)cm  
window size

Protection: 1.65 mmPb.  
Lead glass thickness: 8 mm  
Lead plate thickness: 1.5 mm



**Lead plate shield**  
**N-XR-g-4**

180(L)x90(W)cm  
lead plate size

Lead plate  
thickness: 1.5 mm



**Lead glass shield**  
(dual)  
**N-XR-g-2D**

180(L)x90(W)cm dual  
with 80(L)x90(W)cm  
window size

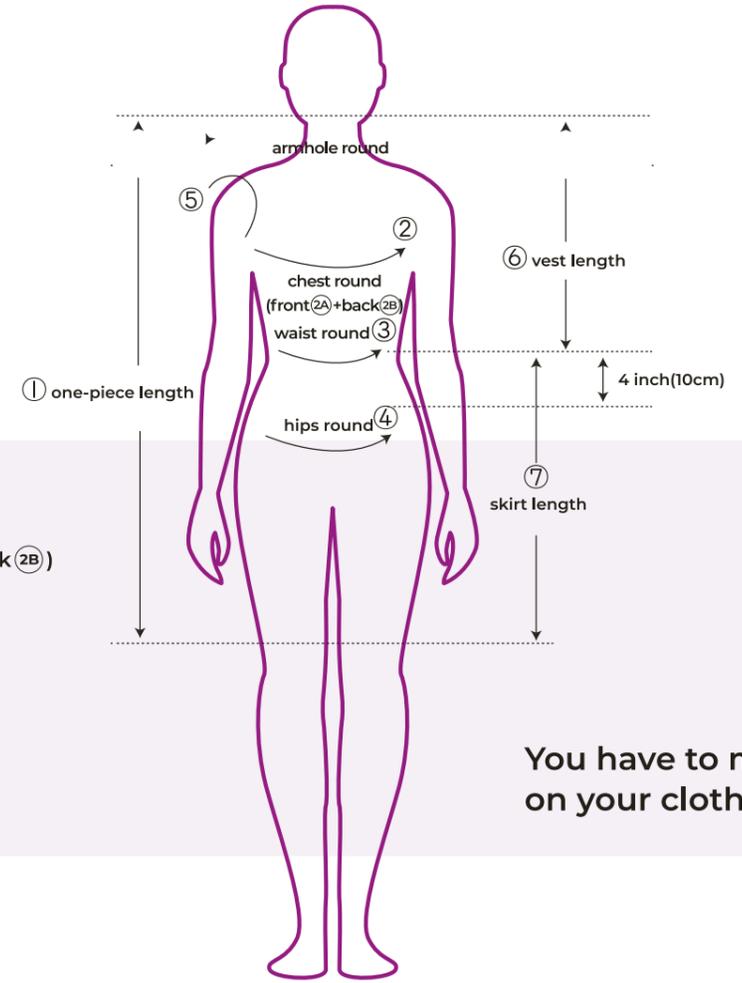
Protection: 1.65 mmPb.  
Lead glass thickness: 8 mm  
Lead plate thickness: 1.5 mm



**Lead Rotating shield**  
**N-XR-g-rotating**

180(L)x80(W)cm  
Lead plate thickness: 0.5  
mmPb

**Cworld apron sizing**



- ① one-piece length
- ② chest round (front 2A + back 2B)
- ③ waist round
- ④ hips round
- ⑤ armhole round
- ⑥ vest length
- ⑦ skirt length

You have to measure on your clothes.

**Lead Curtain Shield**  
**N-XR-g-5-L**

The Lead Curtain Shield can be attached in the ceiling with sliding rail. Only leaded version.



200(L)x150(W)cm / Protection: 0.25 mmPb.

**Lead Curtain Shield**  
**N-XR-g-6-L**

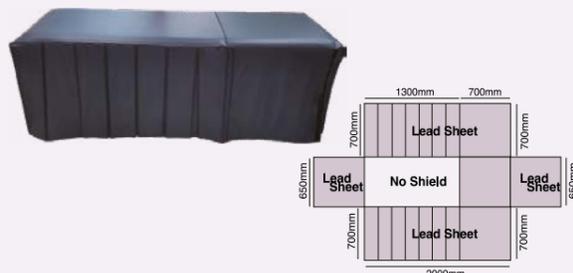
It can be used in the part that uses a radiology machine or the airport examination part for shielding scattered radiation. Only leaded version.



200(L)x150(W)cm / Protection: 0.25 mmPb.

**Saddle Curtain Shield**  
**N-XR-g-6-D-L**

It can be used in the angioroom for angio table shield curtain as part or total shield. Only leaded version.



**European apron size chart**

Cat No.	Apron Product Name	XS	S	M	L	XL	XXL
		LxWcm	LxWcm	LxWcm	LxWcm	LxWcm	LxWcm
N-XR-1	Front Shield	80 x 48	90 x 52	100 x 60	110 x 63	120 x 69	130 x 78
N-XR-2	Front Back Shield	80/70x45	90/80x48	100/90x55	110/100x60	120/110x65	130/120x70
N-XR-3	Vest Skirt Shield(Vest)	43x40	47x45	55x55	62x58	72x60	82x65
	Vest Skirt Shield(Skirt)	50 x 85	50 x 95	60 x 110	65 x 125	75 x 135	85 x 145
N-XR-4	X-type	80 x 48	90 x 52	100 x 60	110 x 63	120 x 69	130 x 78

## Apron hanger

Customer can select from several apron hanger styles.  
Materials : Stainless steel



**10arm apron hanger**  
N-XR-h-10-1  
60(L)x90(W)x147(H)cm



**8 arm apron hanger**  
N-XR-h-8  
60(D)x147(H)cm



**10 arm apron hanger**  
N-XR-h-10  
50(L)x60(W)x140(H)cm



**10 arm Apron with skirt hanger**  
N-XR-h-10-S  
50(L)x60(W)x140(H)cm (with 6 bar)



**5 arm apron hanger**  
N-XR-h-5  
50(L)x40(W)x140(H)cm



**5 arm apron hanger**  
N-XR-h-5-1  
50(L)x23(W)cm



**2 arm apron hanger**  
N-XR-h-2-1  
50(L)x15(W)cm



**2 arm apron hanger**  
N-XR-h-2  
25(L)x23(W)cm



**1 arm apron hanger**  
N-XR-h-1  
27(L)x44(W)cm

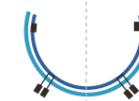
## Zone barrier // Coming soon - certification in progress

It protects y during X-ray monitoring surgery

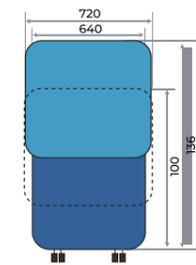


**Up and down**  
Without a motor, Zone Barrier moves up with hands and down with lever. Only leaded version.

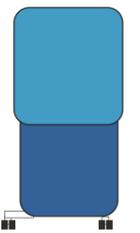
Model : N-XR-g-8-L



Top view



Front view



Side view

## Certificates and Declarations of Conformity

**EU Declaration of Conformity (CE PPE)**

**Cworld**

This declaration of conformity is issued under the sole responsibility of the manufacturer.

**Object of the Declaration :** X-ray Radiation Protective Clothing and Associated Accessories

The object of the declaration is in conformity with the essential health and safety requirements in the Annex II. of the Regulation 2016/425/EU.

**Manufacturer :** **CWORLD**  
193-28, Neungan-ro, Jori-eup, Paju-si, Gyeonggi-do, Republic of Korea (Postal Code: 10935)  
T: +82 2 985 5301 / +82 31 942 1617  
E: cworld@choworld.com / W: www.choworld.com

**Authorized Representative :** **KTR Europe GmbH**  
Mergenthaler Allee 77, 65760, Eschborn, Germany  
T: +49 6196 887 1710 / F: +49 6196 887 1728

**Brand Name :** **TRU-LITE (Lead-free)**

**Model :**

N-XR-1 Front Shield Apron	N-XR-8 Maternity Shield Apron
N-XR-1-35p	N-XR-8-1 Maternity Shield Apron
Front Shield Pad Apron	N-XR-5-2 Half Shield Apron
N-XR-1-49p	N-XR-6 Dental Panorama Shield Apron
Front Shield Pad Apron	N-XR-6-1 Dental Panorama Shield Apron
N-XR-1-1012p	N-XR-6p Dental Panorama Shield Pad Apron
Front Shield Pad Apron	N-XR-7-1 Dental Intraoral Shield Apron
N-XR-2 Front Back Shield Apron	N-XR-7p Dental Intraoral Pad Shield Apron
N-XR-2-35p	N-XR-9 Thyroid Shield
Front Back Shield Pad Apron	N-XR-9-1 Thyroid Stand Collar Shield
N-XR-2-69p	N-XR-9-2 Thyroid Shield
Front Back Shield Pad Apron	N-XR-9-3 Thyroid Shield
N-XR-2-1012p	N-XR-10 Male Gonad Shield
Front Back Shield Pad Apron	N-XR-10-1 Male Gonad Panty Type Shield
N-XR-3 Vest Shield Apron	N-XR-10p Male Gonad Pad Shield
N-XR-3-35p	N-XR-11 Female Gonad Shield
Vest Shield Pad Apron	N-XR-12 Head Shield
N-XR-3-49p	N-XR-13 Leg Shield
Vest Shield Pad Apron	N-XR-14 Arm Shield
N-XR-3-1012p	
Vest Shield Pad Apron	
N-XR-4 X-type Shield Apron	
N-XR-4-35p	
X-type Shield Pad Apron	
N-XR-4-49p	
X-type Shield Pad Apron	
N-XR-4-1012p	
X-type Shield Pad Apron	

**Certificate of U.S. FDA Medical Device Establishment Registration**

**FY 2021**  
Awarded to

**CWORLD**  
193-28 Neungan-ro, Jori-eup  
Paju-si, Gyeonggi-do, 10935  
KOREA, REPUBLIC OF

Registration Number: 3012936510  
FEI Number: 3012936510  
Registration Status: Active  
Expiration Date: December 31, 2021

This certificate affirms that the above stated facility is registered with the U.S. Food and Drug Administration pursuant to Title 21, 807 et. seq. of the United States Code of Federal Regulations. Such registration having been verified as currently effective on, and as of the date hereof, by Provison Consulting Group, and Provison Consulting Group confirms that such registration remains effective upon request and presentation of this certificate until December, 2021, unless said registration is terminated after issuance of this certificate. Provison Consulting Group makes no other representations or warranties, nor does this certificate make any representations or warranties to any person or entity other than the named certificate holder, for whose sole benefit it is issued. This certificate does not denote endorsement or approval of the certificate-holder's device or establishment by the U.S. Food and Drug Administration. Provison Consulting Group assumes no liability to any person or entity in connection with the foregoing.

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Presented by

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**Joyce Kwon, CEO**  
Provison Consulting Group, Inc.  
Dated: Feb 9, 2021

## Positioner // Coming soon - certification in progress

### Head Positioner for CT

Scan Coated-Black Easy to cleaning  
Minimized Attenuation for Brain Scan  
Provides a comfortable head support for patient during supine imaging  
Designed to support the head in an anatomically correct position

Cat.no: N-RP-1  
Dimensions : 27(L) x 20(W) x 14(H)cm



### Head Holder for Gamma Camera

Scan Coated-Black Easy to cleaning  
Minimized Attenuation for Brain Scan  
Provides a comfortable head support for patient during supine imaging  
Designed to support the head in an anatomically correct position

Cat.no: N-RP-1-1  
Dimensions : 40(L) x 23(W) x 15(H)cm



### Hands Up Positioner for CT, PET-CT

Scan Coated-Black Easy to cleaning  
Provides a comfortable head, shoulder and arms support for patient during chest and abdominal imaging.  
Designed to support the head, arms in an anatomically correct position  
Scan Coated-Black Easy to cleaning

Cat.no: N-RP-2  
Dimensions : 53(L) x 50(W) x 18(H)cm



## Certificates

**BTTG**

Personal Protective Equipment Regulations (Regulation 2016/425 as brought into UK law and amended)

**Quality Assurance Certificate**

**Module D**

**Manufacturer:** **CWORLD**  
193-28, Neungan-ro, Jori-eup, Paju-si, Gyeonggi-do, 10935, Korea (The Republic of)

**Product Description:** X-ray Radiation Protective Clothing and Associated Accessories

**Product Code:** See page 2 for product codes

**Technical File Reference:** Cworld - Technical - module D - 20.10.2020

**Notified Body (EN ISO 13485 2013):** BSI

**Certificate Number:** 54205

Issued by: BTTG (Approved Body No. 0330 for Regulation 2016/425 as brought into UK law and amended)

First Issue: 26 November 2021 | Date of Issue: 20 November 2021 | Expiry: 26 November 2024

Authorized by: **C.A. Butcher**, Certification Manager

**Shirley**

Personal Protective Equipment Regulations (EU) 2016/425

**Certificate**

**Module B EU Type-Examination**

**Manufacturer:** **CWORLD**  
193-28, Neungan-ro, Jori-eup, Paju-si, Gyeonggi-do, Korea (The Republic of) (Postal Code: 10935)

**Authorized Representative:** **KTR Europe GmbH**  
Mergenthaler Allee 77, 65760, Eschborn, Germany

**Product Description:** X-ray Radiation Protective Clothing and Associated Accessories

**Product Code:** See page 2 for product codes

**Technical File Reference:** Cworld - Technical - module B - 20.10.2020

**Notified Body (EN ISO 13485 2013):** BSI

**Certificate Number:** 540267

Issued by: Shirley (Notified Body No. 2895 for Regulation (EU) 2016/425)

First Issue: 20 August 2021 | Date of Issue: 20 August 2021 | Expiry: 20 August 2026

Authorized by: **C.A. Butcher**, Certification Manager

**Shirley**

Personal Protective Equipment Regulation (EU) 2016/425

**Quality Assurance Certificate**

**Module D**

**Manufacturer:** **CWORLD**  
193-28, Neungan-ro, Jori-eup, Paju-si, Gyeonggi-do, Korea (The Republic of)

**Product Description:** X-ray Radiation Protective Clothing and Associated Accessories

**Product Code:** See page 2 for product codes

**Technical File Reference:** Cworld - Technical - module D - 20.10.2020

**Notified Body (EN ISO 13485 2013):** BSI

**Certificate Number:** 5400745

Issued by: Shirley (Notified Body No. 2895 for Regulation (EU) 2016/425)

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Authorized by: **C.A. Butcher**, Certification Manager



Phillips Safety Products manufactures a wide range of radiation safety products, including leaded eyewear, radiation mobile leaded barriers, radiation shielding glass, leaded apron racks, signage, and a full line of protective equipment for those working in the field of nuclear medicine. Our products assure maximum protection against harmful radiation in hazardous work environments, and we offer the highest attenuation ratings on the market. All products are PPE CE and UKCA certified.

**Radiation glasses**

**PHILLIPS  
MODEL RG-33**

Phillips Model RG-33 fitover radiation protective glasses offer a comfortable, lightweight, and durable design that fits over prescription eyewear. The frame is constructed of our durable TR-90 nylon and offers 0.50 mm lateral protection. This product offers our standard high quality, distortion-free SF-6 Schott glass radiation-reducing lenses with 0.75 mm lead equivalency. The Model RG-33 glasses will fit over almost any style of glasses and head sizes with comfort.



**Features**

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses  
Ultimate Fitover Design for Weight & Comfort  
0.50mmPb Lateral Protection

**Specs**

Frame size: 62-15-145  
Weight: 90g



**Features**

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses  
High quality TR-90 Nylon Frame

**Specs**

Frame Size: 55-17-140  
Weight: 88g

**PHILLIPS  
MODEL RG-15011-BKC**

The RG-15011-BKC is a rectangular hipster style safety frame made out of high quality TR-90 Nylon that has permanent side shields for added protection. This frame offers our standard high quality, distortion-free SF-6 Schott glass radiation-reducing lenses with 0.75 mm lead equivalency and 0.50 mm lateral production. The Model fits best for Medium to Large style heads.

**PHILLIPS  
MODEL RG-Q100**

The Q100 plastic frame incorporates a rectangular shape. The durable and lightweight design assures a secure fit. This product offers our standard high quality, distortion-free SF-6 Schott glass, radiation-reducing lenses with 0.75 mm lead equivalency.



**Features**

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses  
Wraparound Frame  
Single Bridge

**Specs**

Frame Size: 50-19-130  
Weight: 69g



**PHILLIPS  
MODEL Q200**

The Q200 plastic frame incorporates a rectangular shape. The durable and lightweight design assures a secure fit. This product offers our standard high quality, distortion-free SF-6 Schott glass, radiation-reducing lenses with 0.75 mm lead equivalency.

**Features**

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses  
Wraparound Frame  
Single Bridge

**Specs**

Frame Size: 54-18-135  
Weight: 74g

**PHILLIPS  
MODEL RG-J136**

The RG-J136 is an in house frame, made of the highest quality tier 90 plastic. Its sleek, wraparound style is highly popular and typically fits medium to large heads. These frames are designed with an adjustable nose bridge, for a perfect fit. The glasses come with rubber temple bars for added comfort, and are available in black. The RG-J136 comes with our standard high quality, distortion-free SF-6 Schott glass radiation-reducing lenses with 0.75 mm lead equivalency.



**Features**

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses  
Sleek, streamlined look for comfort and style.

**Specs**

Frame Size: 53-17-130  
Weight: 71g



#### Features

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses

Extended Brow Guard to Fit Over Glasses

Adjustable, Ratcheting Temple Bars

#### Specs

Frame Size: 62-19-ADJ

Weight: 107g

#### PHILLIPS MODEL RG-66

Phillips model RG-66 fitover radiation protective glasses offer a comfortable, lightweight, and durable design with an extended brow guard, allowing them to fit over prescription eyewear. The temple bars are fully adjustable, ratcheting up and down and telescoping for a perfect fit.



#### Features

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses

Adjustable Ventilated Nose

Secure Wrap Temple Arms

#### Specs

Frame Size: 60-16-135

Weight: 80g

#### NIKE Brazen RG-NI-EV

The Nike Brazen frame combines streamlined style, comfort and lightweight durability. It features a nylon frame, metal accents and a ventilated nose bridge for reduced fogging. This product offers our standard high quality, distortion-free SF-6 Schott Glass Radiation-reducing lenses with 0.75 mm lead equivalency. The Model RG-NI-BRZN fits best for large head sizes.

#### PHILLIPS MODEL RG-17001

The RG-17001 is a rectangular plastic frame that is very durable and provides a comfortable fit. This large fit frame provides green accent secure grip rubber temples and integrated lateral protection. These can also be worn as a small fitover. This product comes with our standard high quality, distortion-free SF-6 Schott glass radiation-reducing lenses with 0.75 mm lead equivalency



#### Features

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses

Ultimate Fitover Design for Wight & Comfort

#### Specs

Weight: 95g

## Radiation Masks

#### Radiation Face Mask, Full Face Style RG12-FM-FULL

This X-Ray protective full mask eliminates blind spots caused by standard glasses and gives you a huge area of protection from radiation. Great for people who wear glasses or who want to protect more than just their eyes. The leaded acrylic has a 0.12 mm lead equivalency.



Product Weight: 407g

#### Radiation Face Mask, Panoramic Style RG12-FM-PAN

This x-ray protective panoramic mask eliminates blind spots caused by standard glasses and gives you a huge area of protection from radiation. Great for people who wear glasses or who want to protect more than just their eyes. The leaded acrylic has a 0.1 mm lead equivalency.



Product Weight: 350 g



#### Features

0.75 mm Lead Equivalency Schott SF6 Radiation Protective Lenses

Seamless Hinges

Removable Facial Cavity Seal

#### Specs

Frame Size: 67-18-125

Weight: TBD

#### PHILLIPS MODEL RG-CCTID

The Wiley X Tide is a sleek wraparound frame that features a removable facial cavity seal which keeps splashes, dust and debris from getting into your eyes. It has seamless hinges for extra durability. This product offers our standard high quality, distortion-free SF-6 Schott Glass Radiation-reducing lenses with 0.75 mm lead equivalency. The Model RG-CCTID fits best for Medium to Large head sizes.



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