

EN



BR330

Radiation Protection and Eye Lens Dosemetry Redefined

MAVIG

# BR330

## The Future of Eye Lens Radiation Protection

### Three Project Partners – One Goal:

**New standards for X-ray protection and eye lens dosimetry are introduced by these three project partners: Dosilab, Mirion Technologies (AWST) GmbH (formerly Evaluation Centre of the Helmholtz Centre) and MAVIG.**

**For present and future requirements, they have bundled their competences in the X-ray protection dosimetry glasses MAVIG model BR330.**

The BR330 is based on the latest scientific findings in the field of occupational exposure of the eye lens to X-rays. They best protect the eyes of the user from scattered radiation from all angles. For that purpose MAVIG uses extensive radiation protection glazing with gap-free adjoining lateral radiation protection zones up to the temples.

For the first time the European EURATOM Directive 2013/59 limits the annual value for the eye lens dose at a mandatory threshold of max. 20 mSv per year. However, even below this limit the exposure to radiation is to be kept as low as possibly achievable. In addition, regular monitoring of the eye lens dose is mandatory for the risk group of occupationally exposed persons - in accordance with the new Radiation Protection Ordinance (31.12.2018), and applicable with a potential organ dose equivalent of 15 mSv.



- More than 50 years of experience in dosimetry
- Precise and reliable dose determination
- Accredited measurement laboratory in Switzerland and in several European countries



- Germany's/Europe's oldest and largest individual dosimetry laboratory
- Individual-, local- and environmental dosimetry at a high level
- Accredited measurement laboratory with over 1.8 million evaluated dosimeters per year



- Manufacturer of high-quality medical devices and personal protective equipment
- Leader in quality and innovation in the field of X-ray protection since 1921
- Innovative research and development with experience and craftsmanship



## The BR330: Safety. Precision. Flexibility.



### Full X-Ray Protection

The BR330 has uninterrupted radiation protection, which extends from the nose to the temples and ensures a tight seal around the cheekbones. The lens of the eye has also the best possible protection against lateral radiation.



### Intelligent Dosemeter Integration

In the case of monitoring the eye lens dose, a constant position of the dosimeter(s) is most ideal. Together with the project partners AWST Evaluation Centre of the Helmholtz Centre and Dosilab, MAVIG has efficiently integrated eye lens dosimetry in a concept for radiation protection glasses. The BR330 glasses allow the use of dosimeters due to the patented dosimeter connection on the left, right or on both sides. The glasses are also available without a dosimeter connection in the form of pure radiation protection glasses.



### Vision Correction

Designed with a flat base curve, the front of the BR330 glasses allow a very wide range of vision correction for single-vision, bifocal, and progressive lenses.



### Individually Adaptable

Maximum comfort when wearing and optimum radiation protection, tailored to the user's individual facial geometry, call for a wide range of adjustment options of the BR330: The inclination at the front, the length of the temples and the soft nose pad can all be adjusted to your individual needs.

Our glasses are made of the highest quality mineral radiation protection glass. Excellent light transmission and perfect transparency are guaranteed. Precision processing and fitting of the lenses into the frames can be taken for granted with our approach to quality.

An anti-reflective coating increases light transmission and ensures comfortable vision by avoiding distracting reflections or mirror images. Symptoms of fatigue are reduced, and the wearer can easily see everything that is relevant to them.

A headband ensures that the radiation protection glasses are securely held in place, even during long periods of wear. It can be easily adjusted and taken off as often as required, e.g. for cleaning.

The BR330 glasses are designed to best protect the user's eyes from scattered radiation from all angles of incidence.

This challenge was surmounted constructively by means of extensive radiation protection glazing and gap-free adjoining lateral radiation protection zones up to the temples including a tight seal against the cheekbones.



The temple ends have been designed like the legs of golfing glasses but not necessarily intended to be in direct contact with the ears. The BR330 glasses now offer the possibility of positioning the temple ends towards the back of the head.

The temples have an additional swivel joint for an inclination of +/- 22.5°.

This gives you the possibility of individually determining the angle of inclination for the front of the glasses.

BR330 glasses offers the possibility to combine dosimetry and radiation protection – for the first time. Due to the patented design of the dosimeter connections as a twist lock bayonet coupling, regular dosimeter replacement is easy and safe to handle.

The soft nose pad prevents pressure points and can be individually adjusted.

The special mechanism allows the length to be easily adjusted.

The BR330 glasses are also available without a dosimeter connection in the form of pure radiation protection glasses.

## Special Quality Features Optimise Use in the Medical Field

- Frame made of high-quality plastic materials with high shape stability
- Complete elimination of the use of plasticisers during production
- As hypoallergenic as possible
- Easy cleaning and a high degree of chemical resistance (resistance to disinfectants)
- Standard anti-reflective coating of the lenses
- Optical corrections are available for single-vision, bifocal, and progressive lenses

## Technical Data and Specifications



BR330 radiation protection glasses *without* dosemeter connection (Ocean Blue style shown)

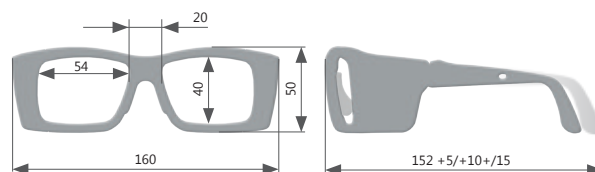


BR330 radiation protection glasses *with* right side dosemeter connection (Obsidian Grey/Black style shown)

### BR330

Radiation protection glasses with gap-free, extended lateral protection zones, available with and without integrated, patented dosemeter connection

Model	BR330	BR330
Colour style	Ocean Blue	Obsidian Grey/Black
Size	Universal/adjustable	Universal/adjustable
Adjustable temple length	✓	✓
Inclination adjustable	± 22.5°	± 22.5°
Lead equivalent - Front & side protection (50 - 150 kV)	Pb 0.50 mm	Pb 0.50 mm
Weight	Approx. 120 g	Approx. 120 g
Dosemeter mounting*	Without, left, right or both sides	Without, left, right or both sides
Anti-reflective coating of the lenses	✓	✓
Glasses strap, case, cleaning cloth	✓	✓
Cleaning / Disinfection	✓ / ✓	✓ / ✓
Conformity: IEC 61331-1:2014 / IEC 61331-3:2014	✓ / ✓	✓ / ✓



\* Dosemeters and the dosemetry service itself are additional and not included in the initial scope of delivery. Please note the following information for the purchasing of compatible dosemeters and the dosemetry service.

#### When ordering BR330 glasses, please note the following sources of supply depending on function and country assignment:

- Without** dosemeter connection ▶ MAVIG supplies the radiation protection glasses without dosemeter connection where needed in **Germany** and **Europe** through the industry and trade.
- With** dosemeter connection ▶ In **Germany**: You can obtain the radiation protection glasses with dosemeter connection by the dosemetry services (AWST, formerly Evaluation Centre of the Helmholtz Centre) of Mirion Technologies (AWST) GmbH ([www.auswertungsstelle.de](http://www.auswertungsstelle.de)) and through the industry and trade. Compatible dosemeters and the dosemetry service are provided by the Dosimetrie (AWST) of the Mirion Technologies GmbH.
- ▶ In **France, Belgium** and **Switzerland**: Radiation protection glasses with dosemeter connection can be obtained through the industry, trade and directly from MAVIG. Compatible dosemeters and the dosemetry service are available from Dosilab AG ([www.dosilab.ch](http://www.dosilab.ch)).
- ▶ If the glasses are needed in **other countries**, please contact MAVIG GmbH or Dosilab AG directly. (Dosilab AG – Phone: +41 (0) 31 744 92 00, Fax: +41 31 744 92 90, e-mail: [info@dosilab.ch](mailto:info@dosilab.ch))

MAVIG - Article Numbers	BR330 Ocean Blue	BR330 Obsidian Grey/Black
Without dosemeter connection	Plano: BR330LA5B2CAPL Single: BR330LA5B2CAPS Bifocal: BR330LA5B2CAPB Progressive: BR330LA5B2CAPP	Plano: BR330LA5G2CAPL Single: BR330LA5G2CAPS Bifocal: BR330LA5G2CAPB Progressive: BR330LA5G2CAPP
1x Dosemeter connection*, left	Plano: BR330LA5B1LAPL Single: BR330LA5B1LAPS Bifocal: BR330LA5B1LAPB Progressive: BR330LA5B1LAPP	Plano: BR330LA5G1LAPL Single: BR330LA5G1LAPS Bifocal: BR330LA5G1LAPB Progressive: BR330LA5G1LAPP
1 x Dosemeter connection*, right	Plano: BR330LA5B1RAPL Single: BR330LA5B1RAPB Bifocal: BR330LA5B1RAPB Progressive: BR330LA5B1RAPP	Plano: BR330LA5G1RAPL Single: BR330LA5G1RAPB Bifocal: BR330LA5G1RAPB Progressive: BR330LA5G1RAPP
2 x Dosemeter connections*, right and left	Plano: BR330LA5B2OAPL Single: BR330LA5B2OAPS Bifocal: BR330LA5B2OAPB Progressive: BR330LA5B2OAPP	Plano: BR330LA5G2OAPL Single: BR330LA5G2OAPS Bifocal: BR330LA5G2OAPB Progressive: BR330LA5G2OAPP

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