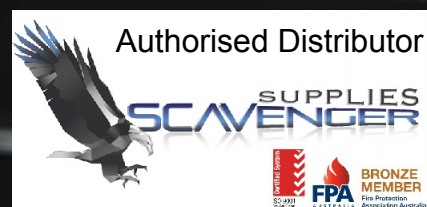




> > > WELDING PROTECTION



**Honeywell**











# THE EXPERT RANGE

## BY EXPERTS FOR EXPERTS

The Expert range of optoelectronic welding helmets has been conceived for welding experts. The helmets are designed for a wide range of welding methods, to cater for the most diverse of needs and meet even the most discerning demands.

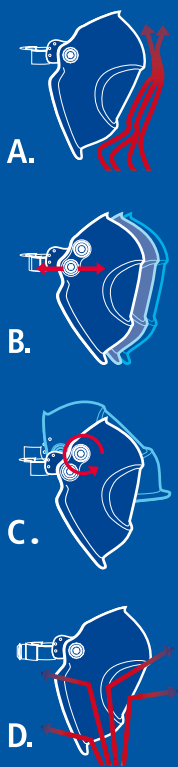
You can use the shade level table to see which helmet is suitable for your application. The amperage used and the application indicate which shade level is recommended by the EN 169 standard. The chart shows you which helmets may be suitable. You can then check for functions such as Sensitivity, Delay and Grind in the detailed helmet description on the following pages.

EXPERT RANGE																						
Amperage range	1,5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500		
MMA	8							9	10			11		12			13			14		
	Optrel® e680							Optrel® e670 / Optrel® e650														
								Optrel® e640														
MAG	8							9	10			11		12			13					
	Optrel® e680							Optrel® e670 / Optrel® e650														
								Optrel® e640														
TIG		8		9			10			11			12			13		14				
	Optrel® e680*							Optrel® e670 / Optrel® e650														
								Optrel® e640														
MIG heavy metals								9	10			11			12			13			14	
	Optrel® e680							Optrel® e670 / Optrel® e650														
								Optrel® e640														
MIG light metals Stainless, Al										10			11		12		13		14			
	Optrel® e680									Optrel® e670 / Optrel® e650												
										Optrel® e640												
Plasma cutting									9	10	11	12			13			14				
	Optrel® e680								Optrel® e670 / Optrel® e650													
Micro plasma welding		4	5		6		7	8	9	10			11		12		13					
	Optrel® e680							Optrel® e670 / Optrel® e650														
Grinding																						
	Optrel® e680*							Optrel® e670 / Optrel® e650														
Amperage range	1,5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500		

## COMFORT & PERFORMANCE THANKS TO THE BENEFITS OF THE EXPERT HELMET SHELL

The e600 helmet shell from Optrel® not only offers a state-of-the-art design, but also maximum levels of comfort and performance. Much work and care has gone into developing the e600 shell, making it a preferred helmet to many welders around the world. The helmet shell has been engineered to be light in weight, yet continue to maintain the robustness that welders require. There is also a high level of protection to the cover lens during every day handling. The rounded shape of the shell and the heat reflectant metallic paints used, deflects fumes and decreases the temperature inside the helmet, making it a comfortable choice for welders.

### COMFORT & PERFORMANCE



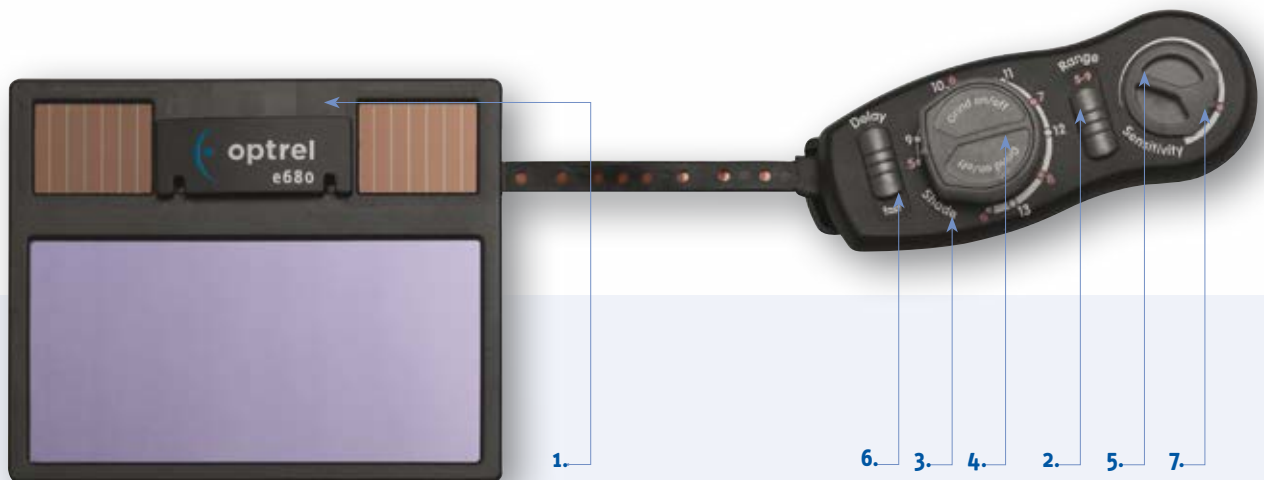
- Ergonomic design with optimum balance for minimum neck strain
- High-grade, heat-resistant material
- Heat-reflective colour for comfortable temperatures inside the helmet (except helmets that are untreated black)
- Contoured profile, channelling fumes away (A)
- Extremely long-life spherical cover lens with a seal to prevent the infiltration of gas, fumes and particles
- Telescoping adjustability of the headband to improve the field of vision (B)
- Tilt adjustability to set the optimum position of the helmet in relation to the chin (C)
- Extended coverage zone to protect the neck and ears (D)





# OPTREL® e680

The Optrel® e680 was based on the Optrel® Satellite and has been designed especially for welders with varying job requirements and a need for an extensive range of individual adjustment options. It offers protective levels from shade 5 to shade 13 and various additional options that provides welders with freedom and comfort. The enlarged field of view (+ 33%) and true colour filter ensures a brilliant, detailed view of the welding object.



	FEATURES
<b>Shade Level</b>	4/5-9 and 4/9-13
<b>Cartridge size / field of view</b>	90 x 110 x 7 mm / 50 x 100 mm
<b>Eye protection</b>	Maximum UV-&IR-protection at any shade setting
<b>True Colour View</b>	Yes
<b>Classification in accordance with EN379</b>	1/1/2
<b>Shade level setting</b>	2 shade level ranges: 5 to 9 and 9 to 13
<b>Control unit</b>	Outside of the helmet
<b>Sensitivity adjustment</b>	Yes
<b>Adjustment of the detection angle</b>	60° or 120°
<b>Grinding mode</b>	Yes (shade level 4)
<b>Switching time light to dark</b>	0.180 ms at room temperature 0.120 ms at 55 °C
<b>Switching delay dark to light</b>	Slow: 0.35 - 0.6 s Fast: 0.1 - 0.35 s
<b>Power supply</b>	Solar cells, and batteries no on/off switch necessary
<b>Battery life time</b>	2500 hours (operation)
<b>Operating temperature</b>	-10 °C to +70 °C
<b>Total weight</b>	490 g
<b>Recommended use</b>	All electric arc welding processes* and gas welding. Not suitable for laser welding!
<b>Warranty</b>	2 years (except batteries)
<b>Approvals</b>	AS/NZS 1337 & 1338

\*Electric arc welding processes: Electrode Welding (Stick Welding, SMAW), / MIG/ MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasma cutting

1. Adjustable sensor slide eliminates the effects of ambient light distractions with configurable detection angles of 60° or 120°
2. Button to select shade level ranges: shade 5-9 and shade 9-13
3. Variable shade level control between shade 5-9 and shade 9-13
4. Grinding mode to prevent automatic darkening when grinding and brazing
5. Sensitivity control to adjust the sensors ability to detect the welding arc
6. Selectable opening delay to provide protection from the afterglow and to adapt to personal needs
7. Batteries CR2032, 2 pcs (back side)



The shade 4/5-9 9-13 protective level function gives the welder the freedom to use a range of different processes, and therefore weld different materials. The other options enable the helmet to be personalised to the individual needs of the welder. The enlarged field of view (+ 33% compared to the Optrel® Satellite) and true colour filter allows the welder a brilliant, clear, detailed view of the welding application, plus the ability to read all Red LED's from a welding machine without having to remove the welding helmet.



OPTREL® e680

Designation	Part No.
Optrel® e680 dark blue	1006.110



# OPTREL® e670

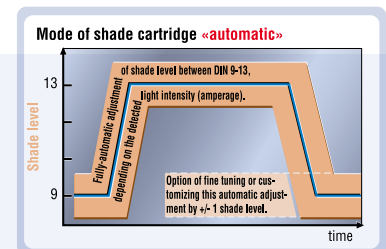
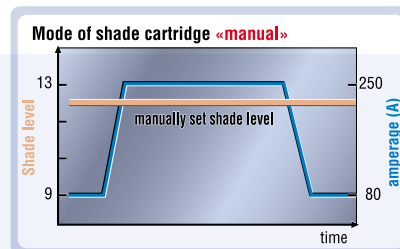
Welding requires complete concentration. This is no problem with the Optrel® e670 - the replacement to the Optrel® Orion. The unique sensor technology allows the welding cartridge to automatically darken to the required shade level by sensing the intensity of the arc and adjusting to suit.

The user can select "Auto" or "Manual". In the "Manual" setting, the user can select the protection level that is best for them. They can adjust the shade setting as required to ensure the most comfortable shade level at all times.

If the welder selects "Auto", the helmet automatically adapts the protection level to the current arc intensity. They can also use the fine adjustment to adjust the automatically selected protection plus or minus one shade level, to satisfy their individual needs. The enlarged field of view (+ 33% compared to the previous model) and true colour filter allows the welder a brilliant, detailed view of the welding object.



OPTREL® e670



FEATURES	
Shade Level	4/9-13
Cartridge size / field of view	90 x 110 x 7 mm / 50 x 100 mm
Eye protection	Maximum UV-&IR-protection at any shade setting
True Colour View	Yes
Classification in accordance with EN379	1/1/1/2
Shade level setting	Two different shade settings: automatic or manual
Control unit	Outside of the helmet
Sensitivity adjustment	Yes
Adjustment of the detection angle	60° or 120°
Grinding mode	Yes (shade level 4)
Switching time light to dark	0.180 ms at room temperature 0.120 ms at 55 °C
Switching delay dark to light	Slow: 0.35 - 0.6 s Fast: 0.1 - 0.35 s
Power supply	Solar cells and batteries, no on/off switch necessary
Battery life time	2500 hours (operation)
Operating temperature	-10 °C to +70 °C
Total weight	490 g
Recommended use	All electric arc welding processes.* Not suitable for laser welding!
Warranty	2 years (except batteries)
Approvals	AS/NZS 1337 & 1338

\*Electric arc welding processes: Electrode Welding (Stick Welding, SMAW), / MIG / MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasma cutting

## Designation

Optrel® e670 Cosmic Green

## Part No.

1006.210





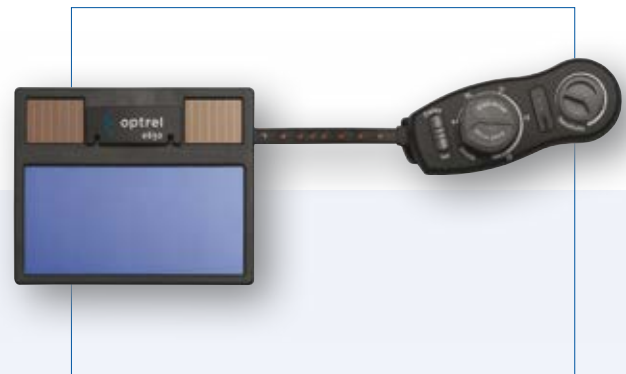
# OPTREL® e650



The new 9-13 helmet out of the Sperian Expert-line meets all sorts of needs: comfort and customisation possibilities, a large viewing area and consistent quality make the Optrel® e650 an optimal working product for most welding processes. In addition to the infinitely variable shade level from 9 to 13, the helmet offers a sensitivity and delay function. This guarantees maximum comfort and absolute efficiency for every welder.



OPTREL® e650



FEATURES	
Shade Level	4/9-13
Cartridge size / field of view	90 x 110 x 7 mm / 50 x 100 mm
Eye protection	Maximum UV-&IR-protection at any shade level setting
True Colour View	No
Classification in accordance with EN379	1/1/1/2
Control unit	Outside of the helmet
Sensitivity adjustment	Yes
Adjustment of the detection angle	60° or 120°
Grinding mode	Yes (shade level 4)
Switching time light to dark	0.180 ms at room temperature 0.120 ms at 55 °C
Switching time dark to light	Fast: 0.35 - 0.6 s Slow: 0.1 - 0.35 s
Power supply	Solar cells and batteries, no on/off switch necessary
Battery life time	2500 hours (operation)
Operating temperature	-10 °C to +70 °C
Total weight	490 g
Recommended use	All electric arc welding processes.* Not suitable for laser welding!
Warranty	2 years (except batteries)
Approvals	AS/NZS 1337 & 1338

\*Electric arc welding processes: Electrode Welding (Stick Welding, SMAW), / MIG/ MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasma cutting

## Designation

## Part No.

Optrel® e650 black uncoated  
Optrel® e650 shiny ruby

1006.300  
1006.310



# OPTREL® e640

Standard functions in a top quality helmet. Thanks to the extremely high quality filter and expert helmet shell, the welder benefits from excellent optics, shade selection plus comfort and protection advantages.

The welder can select the protection level according to his requirements using the slide switch on the rear of the cartridge that can be set to either shade 10 or shade 11. The detection angle for ambient light can be selected using the sensor bar.



OPTREL® e640



Choose your shade level inside the helmet

	FEATURES
<b>Shade Level</b>	4/10-11
<b>Cartridge size / field of view</b>	90 x 110 x 7 mm / 38 x 98 mm
<b>Eye protection</b>	Maximum UV-&IR-protection at any shade level setting
<b>True Colour View</b>	No
<b>Classification in accordance with EN379</b>	1/1/1
<b>Shade level control</b>	Inside the helmet
<b>Sensitivity adjustment</b>	No
<b>Adjustment of the detection angle</b>	60° or 120°
<b>Grinding mode</b>	Not possible
<b>Switching time light to dark</b>	0.4 ms at room temperature 0.1 ms at 55 °C
<b>Switching time dark to light</b>	0.2 - 0.3 s
<b>Power supply</b>	Solar cells, no battery exchange, no on- and off-switch necessary
<b>Operating temperature</b>	-10 °C to +70 °C
<b>Total weight</b>	460 g
<b>Recommended use</b>	All electric arc welding processes.* Not suitable for laser welding!
<b>Warranty</b>	2 years
<b>Certificates</b>	AS/NZS 1337 & 1338

\*Electric arc welding processes: Electrode Welding (Stick Welding, SMAW), / MIG/MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasma cutting

## Designation

Optrel® e640 black uncoated

## Article No.

1006.400





# OPTREL® e1100



The Optrel® e1100 provides ideal protection against UV-&IR-radiations, flying particles, metal fumes and dusts emitted during welding and associated processes.

A blower powered by a rechargeable battery, draws ambient air through a fine filter and ventilates the helmet with clean and refreshing air. The units are fitted with both a visible and audible alarm which tells the operator if the filter is blocked or if the battery is low. For a well adapted fit, outstanding wearer comfort, and a perfect seal, the face seal used is made from a knitted soft flame retardant material. A comfortable flame-retardant waist belt threads through a leather lumbar support, which fits the system to the user's body.



OPTREL® e1100



## Designation

Optrel® e1100 with Optrel® e680 dark blue

## Part No.

4240.003

FEATURES	
<b>Protection level</b>	P2 Classification Nominal Protection Factor (NPF): 50 Assigned Protection Factor (APF): 20
<b>Blower unit</b>	Flow rate: min. 150l/min controlled
<b>Material</b>	Polyamid (PA-GF)
<b>Fan</b>	High quality ball bearing fan motor
<b>Fuse</b>	Electronic fuse
<b>Noise</b>	Max. 70 dB(A)
<b>Alarms</b>	Optical and audible alarms for low battery charge, low air flow, missing filter
<b>Battery (Standard)</b>	Li-Ion, 4400 mAh, weight: 420g
<b>Battery operating time</b>	Typical 11 hours
<b>Charging time</b>	7 hrs
<b>Filter</b>	1 x typ P3 for P2-system
<b>Hose</b>	Length: 1160 mm, weight: 185g
<b>Weight</b>	1205g (blower incl. filter and belt)
<b>Dimensions</b>	(LxWxH): 249 x 213 x 87 mm
<b>Warranty</b>	2 years (except battery)

## Protective & Safe

- The smart electronics of the e1100 provide a constant airflow rate of 170l/min, regardless of battery charge and filter loading and keeps a permanent overpressure in the helmet to avoid the penetration of pollutant.
- Maximum safety with dual alarm indicators - audible and visible - which indicate a clogged or missing filter or low battery charge.
- Short air duct attached to helmet decreases the risk of snagging upon surrounding structures in 3D constructions. The supply hose is equipped with a flame resistant protective sleeve.

## Comfortable

- The face seal fits on easily. There are no straps to tear, no adjustments to be made.
- The Optrel® e1100 operates quietly.
- The fabric belt is highly ergonomic, lightweight and adjustable with excellent lumbar support.

The adaption of the hose to the helmet has been modified compared to the previous model. This optimisation gives greater ease of movement during welding.

## Adaptability

- Switch closed: 100% of the air is directed to the mouth (A).
- Switch open as shown: Air flow is directed to the forehead and the mouth area for a very comfortable cooling effect.

# OPTREL® EXPERT SPARE PARTS



## OPTREL® FRONT COVER LENSES

Designation	Part No.	Unit/box
Optrel® front cover lens to Expert helmets	5000.210	2 pcs
Optrel® front cover lens to Expert helmets	5000.212	5 pcs

## OPTREL® INSIDE COVER LENS

Designation	Part No.	Unit/box
Optrel® inside cover lens e680, e670, e650	5000.001	5 pcs

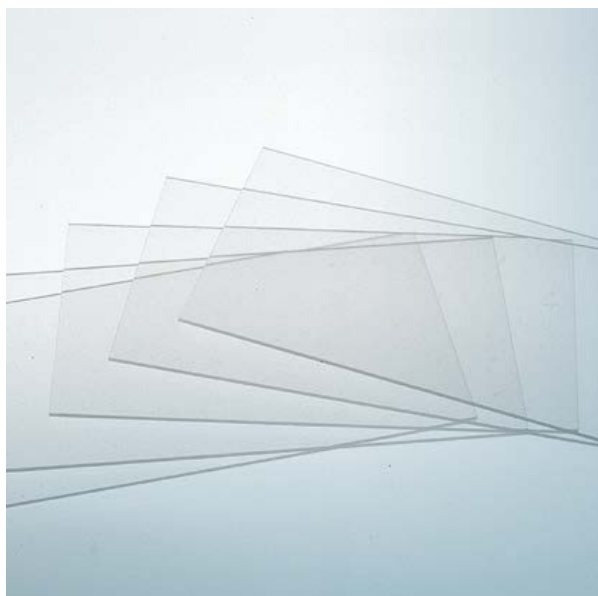
## OTHER OPTREL® SPARE PARTS

Designation	Part No.	Unit/box
Optrel® repairset 1 e600-series*	5003.500	1 pc
Optrel® repairset 2 e600-series*	5003.501	1 pc
Optrel® headband	5003.250	1 pc
Optrel® sweatband	5004.073	2 pcs

\* Repairset 1: 1 Potentiometer knob, 1 Satellite back cover, 1 Sensitivityknob  
Repairset 2: 2 Clips, 2 screws.

## OPTREL® e680, e670, e650 ACCESSORIES

Designation	Shade level	Part No.	Unit/box
Optrel® inside cover lens blue	+ 1 shade level	5000.011	5 pcs
Optrel® inside cover lens light green	+ 1.5 shade levels	5000.012	5 pcs
Optrel® inside cover lens dark green	+ 2 shade levels	5000.013	5 pcs
Optrel® diopter 1.00		5000.050	1 pc
Optrel® diopter 1.50		5000.051	1 pc
Optrel® diopter 2.00		5000.052	1 pc
Optrel® diopter 2.50		5000.053	1 pc



## OPTREL® e1100 SPARE PARTS

Designation	Part No.	Unit/box
Upgrade Kit Optrel® e680 dark blue-e1100 without cartridge	4242.003	1 pc
Optrel® e1100 Standard (without helmet)	4251.000	1 pc
Fabric belt with back support	4155.002	1 pc
e680 Helmet Short Duct (does not include shade cartridge)	4241.003	1 pc
Helmet Face Seal	4160.000	1 pc
e1100 Battery Pack	4255.006	1 pc
e1100 Battery Charger	4255.002	1 pc
Flow Indicator	4155.000	1 pc
Air hose	4155.021	1 pc
Protective sleeve	4155.003	1 pc
Charger Optrel® e1100	4255.001	1 pc
P3 filter for e1100 P2 system	4088.000	1 pc











# THE PROFESSIONAL RANGE



## COMFORT & PERFORMANCE

Easy handling and improved efficiency thanks to the benefits of the Optrel® Professional Series.

You can use the shade level table to see which helmet is suitable for your application. The amperage used and the application indicate which shade level is recommended by the EN 169 standard. The chart shows you which helmets may be suitable. You can then check for functions such as Sensitivity, Delay and Grind in the detailed helmet description on the following pages.

PROFESSIONAL																				
Amperage range	1,5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500
MMA				8				9		10		11			12		13		14	
																				
MAG				8				9		10		11			12		13			
																				
TIG				8		9		10		11		12		13		14				
																				
MIG heavy metals								9		10		11		12		13		14		
																				
MIG light metals Stainless, Al										10		11		12		13		14		
																				
Plasma cutting								9		10		11		12		13		14		
																				
Micro plasma		4	5	6	7	8	9			10		11		12		13				
																				
Grinding		4	5	6	7	8	9			10		11		12		13				
																				
Amperage range	1,5	6	10	15	30	40	60	70	100	125	150	175	200	225	250	300	350	400	450	500

## THE OPTREL® PROFESSIONAL SERIES MEETS THE DEMANDS OF PROFESSIONAL WELDERS.

The ergonomically designed, perfectly balanced shells provide the ideal basis for an ADF with all the basic functions. Thanks to the same patented headband found in the Expert range, all Optrel® Professional series helmets can be easily adapted to the needs of each welder.

### 1. Adjustment to head size

The user-friendly ratchet knob on the rear part of the headband and the perforated band enable the helmet to be quickly adjusted to the individual head size. The viewing window of the cartridge can be set to be in the correct position for each individual's personal viewing requirements by a simple adjustment of the upper head band. Once set, this position is maintained each time the helmet is used.

### 2. Adjustment of the distance between the cartridge and the eyes

The headband can be set to three settings by releasing the adjustment knobs on the side. This allows precise adjustment of the distance between the ADF and the eyes. This takes into account those wearing glasses and different head shapes adding to the comfort factor of wearing the helmet.

### 3. Adjustment of the helmet angle

The helmet angle can be adjusted by turning the eccentric knob linked to this support plate. This is an ideal adjustment when welding in different positions to ensure best protection and comfort.



# OPTREL® GALAXY HIGH IMPACT

The Optrel® Galaxy High Impact welding helmet is the only passive flip-front helmet that is high impact approved. The flip-up adaptor contains an integrated passive shade 10 welding filter, and the high velocity impact rating of the helmet keeps you safe during both grinding and welding applications.

Adjustable headgear provides improved comfort, increasing wearability and therefore safety. The Optrel® Galaxy high impact eliminates the need to remove your helmet to switch to a faceshield when moving from welding to grinding making this welding helmet your complete safety solution. Suggested Applications: Welding & Grinding.

Flip up  
when grinding



Flip down  
when welding



FEATURES	
<b>Type description</b>	Welding helmet with adjustable comfortable headband, closable flip-up adapter, passive protection shade 10 and protection lenses
<b>Window size</b>	105 x 50 mm
<b>Light transmittance</b>	Permanent ultraviolet- / infrared protection. Visible range Flip up opened clear. Vision visible range Flip up closed shade level shade 10
<b>Shape stability</b>	helmet shell up to 220°C / 428°F front cover lenses up to 137°C / 279°F
<b>Helmet colour</b>	black
<b>Operating temperature</b>	-10°C to + 70°C / 14°F to 158°F
<b>Weight</b>	490 g
<b>Application ranges</b>	All electric arc welding processes up to shade level shade 10 according to the mounted welding filter glasses Electrode Welding (Stick Welding, SMAW) / MIG / MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasmacutting prohibited for laser welding!
<b>Scope of delivery</b>	Welding helmet with headband, front cover lens, passive filter shade 10, inside cover lens and instruction manual
<b>Standards</b>	AS/NZS 1337:2010
<b>Warranty</b>	2 years from date of sales for manufacturing and material defects

## Designation

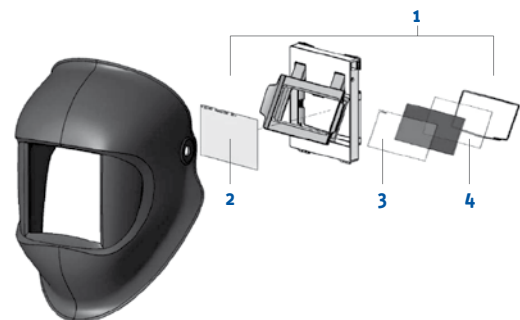
Optrel® Galaxy High Impact Flip Front Black Passive Welding Helmet. Approved to High Impact. Passive Shade 10 lens.

## Article No.

1000.571

Optrel® Galaxy High Impact Flip Front Black Passive Welding Helmet with hard hat adaptor.

1000.580



## OPTREL® GALAXY SPARE PARTS

No.	Part No.	Description
1	5002.069	High Impact Flip Front Adaptor with all lenses
2	5000.226	Inside Cover Lens for Helmet. Rated to High Impact. Pack of 5
3	5000.227	Cover Lens to suit adaptor. Pack of 5
4	5000.300	Inner Cover lens to suit adaptor. Pack of 5
5	5011.300	Hard hat adaptor to suit the Galaxy High Impact Helmet

\*Subject to change without prior notice  
Status 2010-10-07  
Optrel® AG, Switzerland



# OPTREL® NOVA

Converts Passive helmets to auto darkening The Optrel® Nova allows welders to convert their passive welding helmet into auto darkening. The Nova slides into most helmets to easily replace the passive lens. Electric arc welding processes: Suitable for MIG/MAG & Electrode Welding.



FEATURES	
Type description	The Optrel® Nova is a powerful single ADF which darkens to shade 10 and suits most passive welding helmets. Allows you to convert your passive welding helmet to auto darkening. Solar Energy panel eliminates the need for batteries
Dimensions	50.8 x 108mm
Light transmittance	Auto Darkening lens with shade 3/10 or by use of an additional coloured filter 4/11
Operation	Darkens automatically within a fraction of a millisecond
Weight	108 g
Application ranges	Suitable for MIG/MAG & Electrode Welding
Standards	AS/NZS 1337 & 1338
Warranty	2 years from date of sales for manufacturing and material defects

## Optrel® Nova - Autodarkening filter with solar cells

Designation	Article No.	Unit/box	Power Supply	Shade level	Cartridge size
Optrel® Nova Shade Cartridge	5012.202	1 pc	Solar cells	shade 3/10	108 x 51 x 5 mm

Authorised Distributor



## Order Placement

Office **08 9584 2500**  
Fax **08 9581 8897**  
Email  
[admin@scavengersupplies.com.au](mailto:admin@scavengersupplies.com.au)

**OPERATIONS MANAGER**  
Bryan Pemberton  
Mobile: **0416 212 981**

**SALES EXECUTIVE**  
Liz Milligan  
Mobile: **0422 679 445**

### Address

Unit 4/33 Thornbrough Rd.  
Mandurah 6210,  
WESTERN AUSTRALIA

[www.scavengersupplies.com.au](http://www.scavengersupplies.com.au)

[www.scavenger.com.au](http://www.scavenger.com.au)

## National Order Placement

**Head Office** 08 9584 2500  
**Fax** 08 9581 8897  
**Email** [admin@scavengersupplies.com.au](mailto:admin@scavengersupplies.com.au)

**Address** Unit 4/33 Thornbrough Rd  
Mandurah 6210, Western Australia



**Ken Johnston - WA, SA, NT**  
**Mobile** +61 (0) 457 021 178  
**Email** [ken@scavengersupplies.com.au](mailto:ken@scavengersupplies.com.au)

**Todd Blaker - NSW, Vic, Qld, Tas**  
**Mobile** +61 (0) 416 251 924  
**Phone** +61 (0) 2 4244 1008  
**Email** [todd@scavengersupplies.com.au](mailto:todd@scavengersupplies.com.au)  
**Address** 15 Waverley Drive, Unanderra NSW 2526

[www.scavengersupplies.com.au](http://www.scavengersupplies.com.au)

# Honeywell