

# Crystal 2.0

You won't believe your eyes.

**optrel**<sup>®</sup>  
swiss made 



Crystal Lens  
Technology

Automatically better welding



ptrel  
swiss made 

Crystal 2.0



# CRYSTAL LENS TECHNOLOGY TRUE COLOR VISION DIRECTLY WHEN WELDING.

For the first time in the history of welding you as a welder see the joining. How the weld pool melts, how the weld seam is created. You can see how the filler material is immersed in the welding pool and gain complete control over your work.



Crystal Lens Technology, CLT, offers you a brilliant vision, like through a window pane. Crystal clear. Thanks to optrel autopilot you will always have the right protection level.



**Crystal Lens Technology**  
31% Light Transmission

CLT2.0

**Visible Light range**  
380nm (2.75eV) ... 750nm (2.00eV)  
Attenuation Coefficient:  
 $Q_{\text{signal}} = \frac{T_{\text{signal}}}{T_{V D65}} = 9.842 \times 10^{-4}$

# OPTREL REVOLUTIONISES THE WELDER'S WORK. CRYSTAL LENS TECHNOLOGY CHANGES EVERYTHING.

## PROTECTION

Superior visibility before and during welding dramatically increases your safety at work. No stumbling. No unintentional contact with dangerous workpieces. Fewer injuries. Perfect all-around safeguard.

## COMFORT

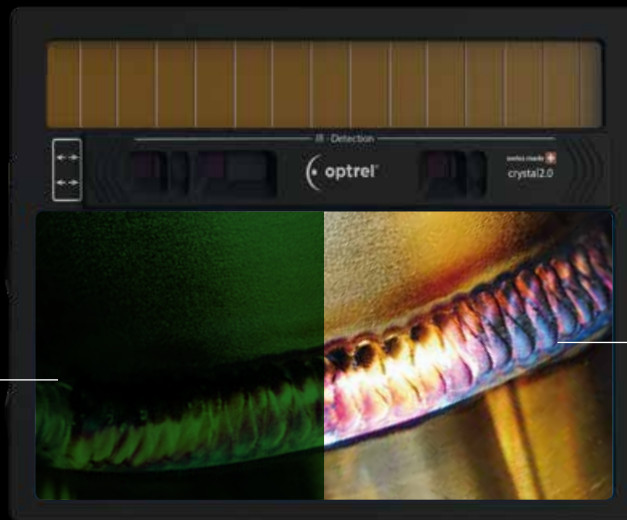
The crystal 2.0 helmet makes previous occupational safety a worry of the past. The helmet is there, but it does not impede your work. You can work with ease as if you were not wearing it at all. Like all optrel helmet, the crystal 2.0 is one of the lightest welding helmets available, weighing just one pound.

## EFFICIENCY

Thanks to CLT, you can clearly see where the weld needs to start and where it ends. You can see grains and marks on the workpiece during welding. No more annoying interruptions to check the position of your welding torch.

View with an industry standard auto-darkening filter (limited color spectrum and strong darkening)

Color spectrum



Vision with Crystal Lens Technology (natural color spectrum and minimal darkening)

Color spectrum



Reduces the risk of accidents and improves occupational safety.

Leaves you less tired and ensures a more pleasant work day and better work results.

Clear vision boosts performance by up to 30% due to fewer work interruptions, superior welding results and less rework.

approx. 1920  
Welding with passive  
glass

1986  
Welding with  
auto-darkening  
filter

2018  
Welding  
with Crystal Lens  
Technology

# OPTREL CRYSTAL 2.0 THE ENLIGHTENMENT IN WELDING.

## WELDING HELMET AND TRANSPARENT VISOR IN ONE

With the **crystal 2.0**, optrel for the first time offers a welding helmet equipped with the new CLT auto-darkening technology. This gives you a visual impression comparable to that through a window pane. In fact, 92% of the visible color spectrum corresponds to that of a neutral window pane. This also has a positive effect on the brightness level. With a protection level of 2.0 in it's light state, you can see your working environment as if you were not wearing an auto darkening lens at all.

## AUTOPILOT INCLUDING PROTECTION LEVEL 2/4 -12

Light state  
Inactive  
mode  
and  
grinding  
mode

### Autopilot Range



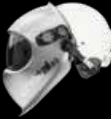





for all important work sequences

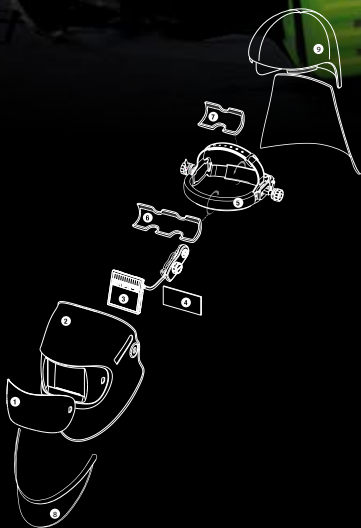
Adjusts automatically to the changing light conditions of the current welding method.  
**automatic adjustment up to shade level 12!\***



Adaptive protection level control sets the right protection level automatically in a range between 4 and 12. This is ensured by an additional brightness sensor which measures the intensity of the welding arc. This means that you are perfectly protected at all times, no matter what parameters you are welding with. Manual adjustments are no longer necessary.



Helmet system	Item no.	Main accessories	Item no.
 <b>crystal 2.0</b> welding helmet, aluminium style	1006.900	 optrel parking buddy (belt hook)	5002.900
 <b>crystal 2.0</b> welder's helmet including safety helmet, aluminium style	1006.660	 Front cover lens (2 pcs.) Front cover lens (5 pcs.)	5000.210 5000.212
 <b>crystal 2.0</b> fresh air helmet, aluminium style	4441.900	 Adjustable headband	5003.250
 <b>crystal 2.0</b> fresh air helmet including safety helmet, aluminium style	4441.910	 optrel backpack for helmets	8000.100



Spare parts and accessories	Art. no.
1 Front cover lens (2 pcs.)	5000.210
Front cover lens (5 pcs.)	5000.212
2a Helmet shell <b>crystal 2.0</b>	4261.005
2b PAPR helmet shell <b>crystal 2.0</b>	4261.008
3 Spare auto-darkening cassette <b>crystal 2.0</b>	5012.900
4 Inside cover lens (5 pcs.)	5000.001
5 Adjustable headband (includes sweatband and comfort band)	5003.250
6 Cotton sweatband (2 pcs.)	5004.073
7 Comfort band (2 pcs.)	5004.020
8 Chest protection leather	4028.015
9a Head and neck protection, leather	4028.016
9b Head and neck protection PAPR, leather	4028.031



# THE FULL-FEATURED WELDER'S HELMET. OPTREL CRYSTAL 2.0

optrel's new flagship is packed with innovative technologies that make your work easier and more convenient.



## CRYSTAL LENS TECHNOLOGY WITH LIGHT STATE 2.0

Now you can clearly see what happens before, during and after welding



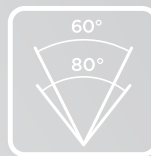
## HEAT REFLECTIVE PAINT

Helping you keep a cool head at all times



## AUTOPILOT PROTECTION LEVEL 4 TO 12

The welder's helmet automatically adapts to changing light conditions



## SENSOR SLIDE

Set the sensor detection angle individually to suit your requirements



## TWILIGHT FUNCTION

You can always remain relaxed even in case of fast lighting changes



## PATENTED ECCENTRIC

Positions the helmet optimally on your head - with just one twist



## SENSITIVITY CONTROL

Adapts the helmet to your environment and requirements



## COMFORT HEADBAND

Guarantees optimal weight distribution and is easy on the neck



## GRINDING MODE

The brightest vision during grinding work ever to be offered by a welder's helmet



## 3-YEAR WARRANTY AFTER REGISTRATION

Simply register at [register.optrel.com](http://register.optrel.com)

**WARNING:**  
**Welding with the crystal 2.0 is addictive**

# A TOTALLY DIFFERENT WELDING EXPERIENCE. OPTREL CRYSTAL 2.0

## TECHNICAL DATA

Description	Fully automatic welder's helmet with very bright and clear vision, both before and during welding (light level 2.0 in combination with Crystal Lens Technology).		Dimensional stability	Welding mask:	up to 220 °C
Protection levels	inactive	Access level 2.0		Front cover lens:	up to 130 °C
Autopilot	active, manual:	Protection levels 4-12	Eye protection	Ultraviolet/infrared protection: Maximum protection over the entire protection level range	
Voltage supply	Solar cells, 2 lithium button cells (CR2032)		Operating temperature	-10°C to + 70°C/ 14°F to 158°F	
Sensor system	Three sensors		Storage temperature	-20°C to + 80°C/ -4°F to 176°F	
Sensitivity	Continuously adjustable, new with "Super High" sensitivity		Gross weight	497 g/17.0 oz	
Switching time	Light to dark: 0.100 ms at room temperature 0.070 ms at 55°C  Dark to light: 0.1 s to 2.0 s (including lighting control function)		Areas of application	All electrical welding processes: Electrode welding (Stick Welding, SMAW) / MIG/MAG (Metal Shielded Arc Welding, GMAW) / GMAW High Performance Welding / Filler Wire Welding / TIG Welding (TIG, GTAW) / Plasma Welding / Plasma Cutting / Gas Welding / Grinding in Grinding Mode <i>Not suitable for laser welding!</i>	
Classification EN379	Optical class:	1	Scope of supply	Welder's helmet, operating instructions, storage bag, batteries, warranty card and front cover lens	
	Scattered light class:	1	Standards	CE, ANSI, EAC, fulfils CSA	
	Homogeneity class:	1	Warranty	2 years	
	Angle dependence class of light transmittance:	2		Additional 1 year warranty extension for product registration within the first 6 months on <a href="http://register.optrel.com">http://register.optrel.com</a>	

ABN 21 060 672 979

# TOOWOOMBA WELDING SUPPLIES



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**We deliver on time ... EVERYTIME**

We are an Australian locally owned family business

