

# CRYSTAL 2.0

Crystal Lens Technology changes everything.

# You won't believe your eyes.



Crystal Lens  
Technology



SEE  
WHAT YOU  
CAN DO



ptrel  
swiss made

Crystal 2.0

# Crystal Lens Technology

True color vision  
directly when welding.

With Crystal Lens Technology you see as a welder 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 ShadeTronic you will always have the right protection level.



# 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

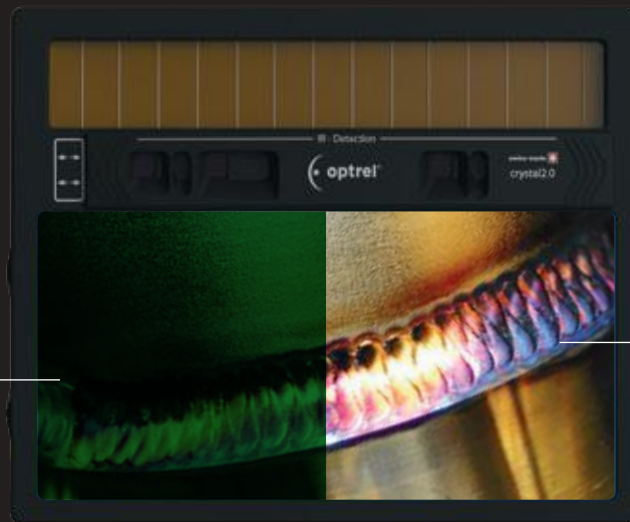
The crystal 2.0 helmet makes previous occupational safety a worry of the past. The helmet is there, but it does not impede your work. You can work with ease as if you were not wearing it at all. Like all optrel helmet, the crystal 2.0 is one of the lightest welding helmets available, weighing just one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



### ShadeTronic including protection level 2/4 -12

Light state

Inactive mode and grinding mode

#### ShadeTronic 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.
	optrel <b>crystal2.0</b> silver	1006.900
	optrel <b>crystal2.0</b> black	1006.901
	optrel <b>crystal2.0</b> PAPR silver	4441.900
	optrel <b>crystal2.0</b> PAPR black	4441.901

**Ready to Weld**

		Item no.
	<b>Ready-to-Weld Package crystal2.0</b> e3000X with crystal2.0 silver, parking buddy & e3000X bag	4530.050
	<b>Ready-to-Weld Package crystal2.0</b> e3000X with crystal2.0 black, parking buddy & e3000X bag	4530.054
	<b>Ready-to-Weld Package crystal2.0</b> swiss air with crystal2.0 silver, parking buddy & e3000X bag	4600.040
	<b>Ready-to-Weld Package crystal2.0</b> swiss air with crystal2.0 black, parking buddy & e3000X bag	4600.120



**Accessories**

		Item no.
	<b>optrel hardhat</b> EN 397 industrial safety helmet, available in black, white, red, orange and yellow	5011.130 5011.131 5011.132 5011.133 5011.134
	<b>optrel hardhat adapter</b> Usable with all optrel helmets	5011.180
	optrel parking buddy	5002.900
	optrel backpack for helmets	8000.100

**Spare parts**

		Item no.
1	Front cover lens (2 pcs.) Front cover lens (5 pcs.)	5000.210 5000.212
2a	Helmet shell <b>crystal 2.0</b> silver	5001.690
2b	Helmet shell <b>crystal 2.0</b> black	5001.691
2c	PAPR Helmet shell <b>crystal 2.0</b>	4261.008
2d	PAPR Helmet shell <b>crystal 2.0</b> black	4261.011
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.



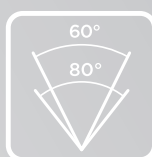
## Heat reflective paint

Helping you keep a cool head at all times.  
(silver version only)



## ShadeTronic 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.



## FadeTronic

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

**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).	
Protection levels	inactive	Access level 2.0
	active, manual:	Protection levels 4-12
ShadeTronic	Automatic protection level regulation over the protection level range 4-12M with individual calibration option of $\pm 2$ .	
Voltage supply	Solar cells, 2 lithium button cells (CR2032)	
Sensor system	Three sensors	
Sensitivity	Continuously adjustable, new with "Super High" sensitivity	
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 FadeTronic)	
Classification EN379	Optical class:	1
	Scattered light class:	1
	Homogeneity class:	1
	Angle dependence class of light transmittance:	2
Dimensional stability	Welding mask:	up to 220 °C
	Front cover lens:	up to 130 °C
Eye protection	Ultraviolet/infrared protection: Maximum protection over the entire protection level range	
Operating temperature	-10°C to + 70°C/ 14°F to 158°F	
Storage temperature	-20°C to + 80°C/ -4°F to 176°F	
Gross weight	497 g/17.0 oz	
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 / Grinding in Grinding Mode <i>Not suitable for gas and laser welding!</i>	
Standards	CE, ANSI, EAC, fulfils CSA	
Warranty	from date of purchase: 2 years for manufacturing and material defects, 6 months for battery	
Warranty extension	1 year additional (battery excluded) for online product registration within the first 6 months (from date of purchase) on <a href="http://optrel.com/register">optrel.com/register</a>	

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