

Eyes protection. Respiratory protection. Accessories.

PRODUCT PROGRAM

October 2018



Automatically better welding

”

WE ARE WORKING HARD
ON MAKING THE LIVES
OF THOSE EASIER, WHO
LOVE WELDING. BY
REDUCING THEIR HEALTH
RISKS DRAMATICALLY.

Marco Koch, CEO optrel AG

CONTENT

INTRODUCTION

4 swiss made – optrel means quality

EYE PROTECTION

Automatic welding helmets

- 6 optrel crystal2.0
- 8 optrel panoramaxx
- 10 optrel e684
- 12 optrel liteflip autopilot
- 14 optrel vegaview2.5
- 16 optrel neo p550
- 18 optrel weldcap series

Grinding helmets/Visors

- 20 optrel clearmaxx

ATEMSCHUTZ

- 22 High-performance PAPR system
optrel e3000

TECHNICAL FEATURES

Comfort meets performance

- 24 Autopilot
- 25 Outside Adjustment
- 25 True Color view
- 26 Delay and Twilight Function
- 26 Comfort Head Band
- 27 Sensitivity Adjustment
- 27 PAPR Adaptor

swiss made



OPTREL MEANS QUALITY

Using the swiss made sign optrel queues in the long tradition of swiss companies reaching for unequaled quality, highest performance and absolute safety by working on outrageous innovation and reliability. Optimal and method adapted protection is the central factor when it comes to the safety and health of the welder: Trust in highest swiss quality. Trust optrel.

ISO 9001
BUREAU VERITAS
Certification

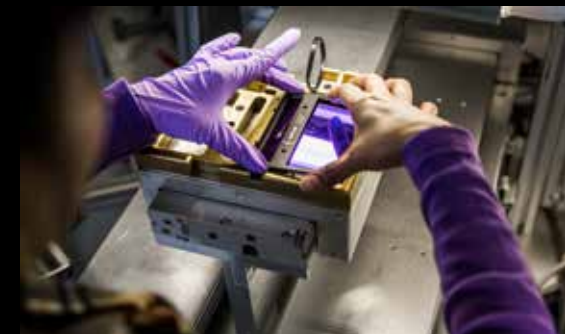


INNOVATION IS IN OUR GENES

optrel AG settled in Wattwil, Switzerland, is a leading manufacturer of active eye protection products, which are first of all used in fields of applications like welding, grinding and health care focussing on safety, health and efficiency of its users.

The internationally working company was founded in 1986 and since that is known as a technology leader in the market of ADFs for welders, but also throughout other opto-electronical protection systems.

With its world-leading innovations optrel regularly raises this claim and offers customers and users enormous advantages world-wide.



Crystal 2.0

You won't believe your eyes.



CRYSTAL CLEAR VISION.

BEFORE, DURING AND AFTER WELDING.

The world premiere for an absolute world record. The **crystal2.0** sees optrel beat the best brightness level, which it set itself three years ago – and which had never been achieved previously. Light transmission in the inactive state is now 31 percent.

The crystal clear view in bright state makes the **crystal2.0** the ideal combined helmet without compromises. The colour perception in light state is almost like looking through clear window glass and in dark mode you enjoy a detailed and high-contrast view of the welding pool with a never-seen-before clearness.



**CRYSTAL LENS TECHNOLOGY
WITH LIGHT STATE 2.0**



**AUTOPILOT
SHADE LEVEL 4 TO 12**



HEAT-REFLECTING PAINT



SENSITIVITY CONTROL



GRIND MODE



Helmet system

Item no.



crystal2.0
welding helmet silver

1006.900



crystal2.0
welding helmet silver
with industrial helmet

1006.660



crystal2.0
fresh air helmet silver

4441.900



crystal2.0
fresh air helmet silver
with industrial helmet

4441.910

Technical data

Protection level	4-12
Brightness level	2,0
Setting	Autopilot or manual
Power supply	Battery (approx. 3.000 h operating time)
Sensitivity	adjustable individually
Switching time	0,10 ms (room temperature) 0,07 ms at 55°C
Switch-off time	Delay function 0,05-1,0 s, with twilight function
Classification EN379	1/1/1/2
Operating temperature	-10°C to +70°C
Weight	489 g
Standards	CE, ANSI, EAC, complies with CSA



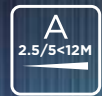
OUR BEST INNOVATIONS IN ONE HELMET.

The unique nose cut-out floats above the nose to position the auto-darkening display closer to the eyes. This enlarges the field of vision 6 times compared to conventional welding masks, without adding extra weight.

The panorama view – in combination with the 2.5 shade at light-state and the optrel True Color optics – opens an entirely new visual dimension to the welding experience.

The **panoramaxx** features optrel's patented Autopilot function. Our unique 5-sensor array measures the brightness of the welding arc and automatically adjusts to the correct shade level.

Featuring a lithium-polymer power pack in combination with high-performance solar cells and an external USB charging option, the **panoramaxx** is the energy-independent, maintenance-free choice for professional welders.



AUTOPILOT



PANORAMA FIELD OF VISION



STATE-OF-THE-ART POWER TECHNOLOGY



MULTI SENSOR DETECTION



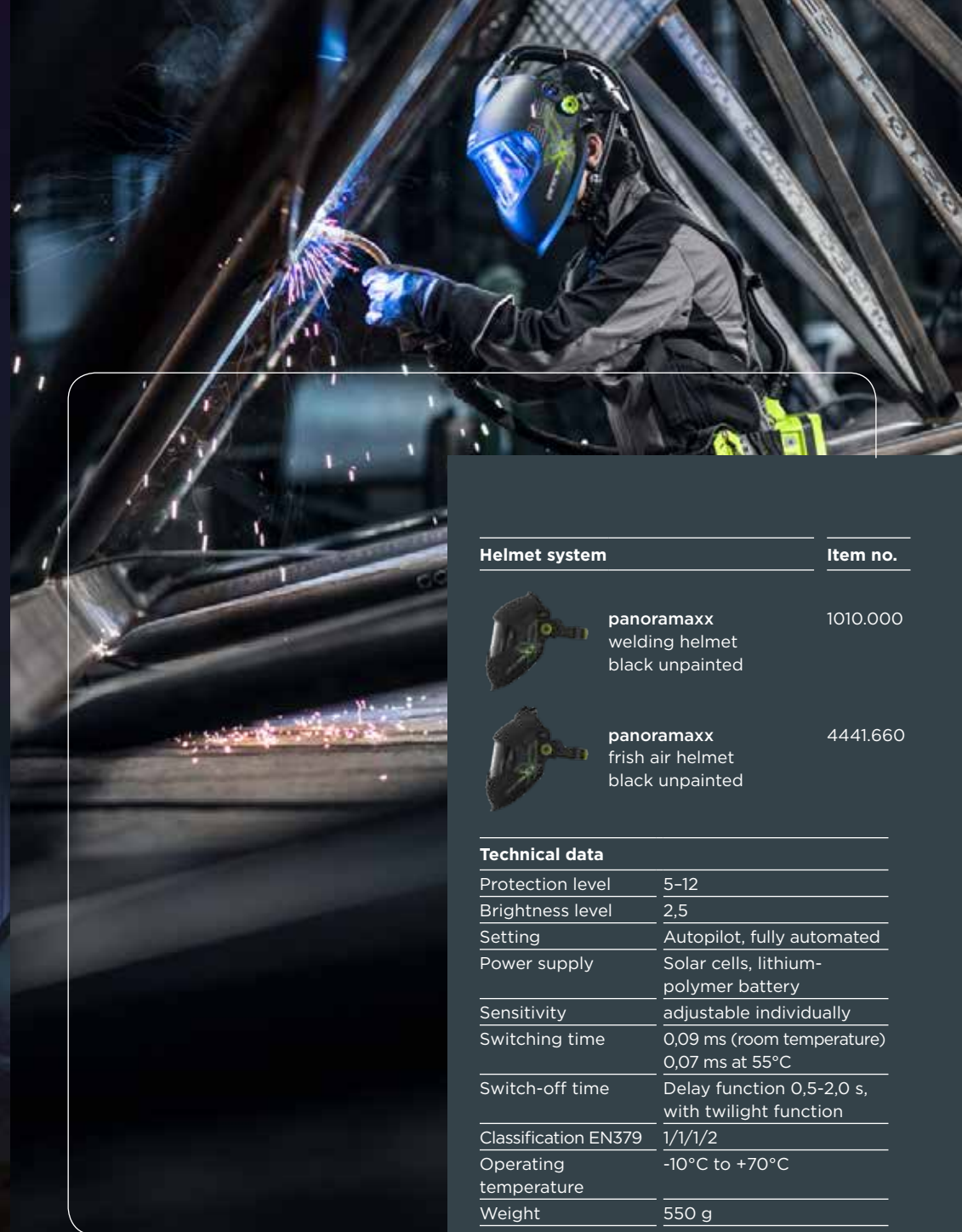
TRUE COLOR



LIGHT STATE 2.5



RESPIRATORY PROTECTION



Helmet system	Item no.
 panoramaxx welding helmet black unpainted	1010.000
 panoramaxx fresh air helmet black unpainted	4441.660

Technical data

Protection level	5-12
Brightness level	2.5
Setting	Autopilot, fully automated
Power supply	Solar cells, lithium-polymer battery
Sensitivity	adjustable individually
Switching time	0,09 ms (room temperature) 0,07 ms at 55°C
Switch-off time	Delay function 0,5-2,0 s, with twilight function
Classification EN379	1/1/1/2
Operating temperature	-10°C to +70°C
Weight	550 g
Standards	CE, ANSI Z87.1 (ADF and helmet shell), EAC, complies with CSA Z94.3

e684x1

Experience the difference.

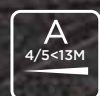


FULLY AUTOMATIC WITH ULTRA-HD QUALITY.

Optrel's exclusive Adaptive Shade Autopilot automatically adjusts to the appropriate shade level as you weld. An additional brightness sensor immediately detects changes in arc intensity and adjusts accordingly. You remain perfectly protected, regardless of your current welding parameters. Manual adjustment is no longer necessary – but it's available at the push of a button whenever you want it.

A specially developed UV/IR filter allows the realistic color perception typical of optrel, bringing color to the welder's world

The optrel **e684**'s autodarkening lens achieves the highest image quality standard in all four classifications. Its excellent viewing angle dependency in particular demonstrates the quality of the optrel autodarkening lens and makes working with the optrel **e684** so enjoyable.



AUTOPILOT



**WELDING IN
ULTRA-HD QUALITY**



TRUE COLOR



**RESPIRATORY
PROTECTION**



**HEAT-REFLECTING
PAINT**







TWILIGHT FUNCTION



Helmet system

Item no.

	e684 welding helmet silver	1006.500
	black unpainted	1006.501
	dark blue	1006.502
	e684 helmet silver, with hard hat	1006.550
	black, with hard hat	1006.551
	dark blue, with hard hat	1006.552
	e684 fresh air helmet silver	4441.600
	black unpainted	4441.601
	dark blue	4441.602
	e684 fresh air helmet silver, with hard hat	4441.650
	black, with hard hat	4441.651
	dark blue, with hard hat	4441.652

Technical data

Protection level	5-13
Brightness level	4
Setting	Autopilot, fully automated
Power supply	Solar cells, battery (approx. 3.000 h operating time)
Sensitivity	adjustable individually
Switching time	0,17 ms (room temperature) 0,11 ms at 55°C
Switch-off time	Delay function 0,5-2,0 s, with twilight function
Classification EN379	1/1/1/1
Operating temperature	-10°C to +70°C
Weight	500 g
Standards	CE, ANSI, EAC, AS/NZS, complies with CSA Z94.3

Look into the future.

THE FIRST FLIP-UP WITH AUTOPILOT ARRIVED.

Super lightweight flip-up welding helmet with automatic shade level adjustment makes welding much more comfortable and easy.

With a shade level range from 5 to 14 and fully automatic adjustment, the optrel **liteflip autopilot** achieves a new level of performance. All work sequences, such as measuring, testing, grinding, and other welding applications, can be handled without any manual adjustments at the helmet. And of course, without displacing the helmet itself. The welder is always protected perfectly.



AUTOPILOT



LIGHTWEIGHT



TRUE-COLOR VIEW



RESPIRATORY PROTECTION



TWILIGHT ADF TECHNOLOGY



Helmet system

Item no.



liteflip autopilot
welding helmet

1006.700



liteflip autopilot
welding helmet
with industrial helmet

1006.750



liteflip autopilot
fresh air helmet

4441.700



liteflip autopilot
fresh air helmet
with industrial helmet

4441.750

Technical data

Protection level	5-14
Brightness level	4 (Flip-up clear view: 1)
Settings	Autopilot, fully automatic
Power supply	Photovoltaic cell, battery (approx. 3.000 h operating)
Sensitivity	adjustable individually
Switching time	0,10 ms (room temperature) 0,10 ms at 55°C
Switch-off time	Delay function 0,3-1,5 s, with twilight function
Classification EN379	1/1/1/2
Operating temperature	-10°C to +70°C
Weight	530 g
Standards	CE, ANSI Z87.1, EAC, complies with CSA Z94.3

vegaview^{2.5}

bright. brighter. vegaview.

FOR ALL THOSE WHO WANT TO HAVE A BETTER VIEW AT WELDING.

The optrel **vegaview^{2.5}** lets the welders' most desired wish come true: bright view. With its ADF view with shade level 2.5, **vegaview^{2.5}** improves the visibility of welders' environment by 400%! Compared with traditional autodarkening welding helmets, **vegaview^{2.5}** sets the world record in the light state!

The **vegaview^{2.5}** is perfectly combined with the optrel **e3000** PAPR respiratory system. With its integrated high-performance particle filter (TH3), welders are adequately protected against smoke, gas, and dust.



ADF SHADE LEVEL
2,5 / 8-12



TRUECOLOR FILTER



GRIND MODE



LIGHTWEIGHT



RESPIRATORY PROTECTION



Helmet system

Item no.

Technical data



vegaview^{2.5}
welding helmet

1006.600



vegaview^{2.5}
welding helmet
with industrial helmet

1006.650



vegaview^{2.5}
fresh air helmet

4441.800



vegaview^{2.5}
fresh air helmet
with industrial helmet

4441.850

Protection level	8-12
Brightness level	2,5
Setting	manual, exterior
Power supply	Battery (approx. 3.000 h operating time)
Sensitivity	adjustable individually
Switching time	0,10 ms (room temperature) 0,07 ms at 55°C
Switch-off time	Delay function 0,05-1,0 s, with twilight function
Classification EN379	1/1/1/2
Operating time	-10°C to +70°C
Weight	489 g
Standards	CE, ANSI, EAC, complies with CSA



NEW DESIGN. EFFICIENT PERFORMANCE. OPTIMAL PRICE.

The optrel **neo p550** combines the advantages of the proven p550 helmet shell with the newest ADF technology from optrel. Experience true color vision in a mid-price helmet. With a new efficient energy concept that keeps it action-ready for 3,000 hours. And a reaction time of only 0.1 ms after striking a welding arc. Perfect protection and comfort for your eyes!



SHADE LEVEL
4 / 9-13



LIGHTWEIGHT







TRUE COLOR VIEW



NEW ENERGY CONCEPT



DELAY FUNCTION

Helmet system	Item no.	Technical data	
 neo p550 welding helmet black	1007.000	Protection level	9-13
 neo p550 welding helmet with hard hat	1007.001	Brightness level	4
 neo p550 welding helmet green	1007.011	Setting	Manual
 neo p550 welding helmet carbon	1007.073	Power supply	Solar cells, battery (approx. 3,000 h operating time)
		Sensitivity	adjustable individually
		Switching time	0,10 ms (room temperature) 0,10 ms at 55°C
		Switch-off time	Delay function 0,05-1,0 s
		Classification EN379	1/1/1/2
		Operating time	-10°C to +70°C
		Weight	495 g
		Standards	CE, ANSI, EAC, AS/NZS, complies with CSA Z94.3

weldcap® series

radical. casual.

weldcap

radical. casual.

COMFORT, SAFETY, PRODUCTIVITY. JOIN THE REVOLUTION.

The name says it all: the **weldcap®** stands for an auto-darkening welder's cap that combines the comfort of a casual cap with the advantages of a full welding helmet. The combination of plastics and textile is unique. It's soft where it must be comfortable, and robust where you need maximum protection.

The comfortable and easy-to-change textile part is made from flame-retardant material. And it's hygienic: you can simply wash it.

The heart of this innovative product is the optical filter featuring a well-defined nose cut-out. With its Shade level 3 in inactive mode, the welder has a bright and well-lit view of the work-place. This feature makes the optrel **weldcap®** perfect for grinding jobs as well.

weldcap® bump

radical. casual.

While normal autodarkening hoods protect only part of the head, the **weldcap® bump** now completely protects the crown of the head against painful strikes. The bump cap also provides additional stability and a feeling of safety like a full-face helmet, without getting noticeably heavier.

weldcap® hard

radical. casual.

Compatible with standard hard hats, the **weldcap® hard** attaches with minimal effort to your industrial helmet. The cap's design accommodates the use of ear muffs.



PROTECTION LEVEL
3 / 9-12



EXTENSIVE FIELD
OF VIEW



MULTI-PURPOSE USE AT
MAXIMUM PROTECTION



MINIMAL WEIGHT



SWIFT HANDLING



Welding cap

Item no.



weldcap® RC 3/9-12

1008.000



weldcap® bump RCB
3/9-12

1008.001



weldcap® hard RCH
3/9-12

1008.002

Technical data

Protection level	9-12
Brightness level	3
Setting	Manual
Power supply	Battery (approx. 1.000 h operating time)
Sensitivity	adjustable individually
Switching time	0,16 ms (room temperature) 0,11 ms bei 55°C
Switch-off time	0,3 s
Classification	1/1/2/2
EN379	
Operating time	-10°C to +60°C
Weight	approx. 400 g
Standards	CE (EN 379, EN 166, EN 175), ANSI Z87.1, AS/NZS 1337/1338

clearmaxx

Clear view. Clear air.



WORK WITH YOUR OWN CLIMATE COMFORT ZONE

Unlimited clear view of your workspace, filtered and clean air with adjustable air distribution makes the **clearmaxx** a unique face and respiratory system.

MULTI FUNCTION SYSTEM

Combine it with the optrel **e3000** PAPR system with mountain breeze filter the **clearmaxx** becomes the perfect buddy on countless types of work. The easytochange DIN5 front cover lens expands the system to the perfect protector for efficient plasma cutting.

COMFORTABILITY



Thanks to a minimized weight of only 330 g (PAPR version: 495 g) and an ergonomic fit the **clearmaxx** sets new benchmarks in wearing comfort.

ALWAYS A GREAT VIEW AND PERFECT AIR CONDITIONS WHEN PROTECTING YOUR FACE IS NECESSARY.

Ideal for:

- grinding
- metal industry
- food industry
- sand blasting
- wood working
- feather industry
- landfills
- agriculture



Helmet system	Item no.
 clearmaxx standard version	1100.000
 clearmaxx PAPR-version (e3000 PAPR system has to be ordered separately)	4900.020
Technical data	
Weight	330 g / PAPR-version 495 g
Standards	CE (EN 379, EN 166, EN 175), ANSI Z87.1, AS/NZS 1337/1338



Buckle up & take a deep breath!



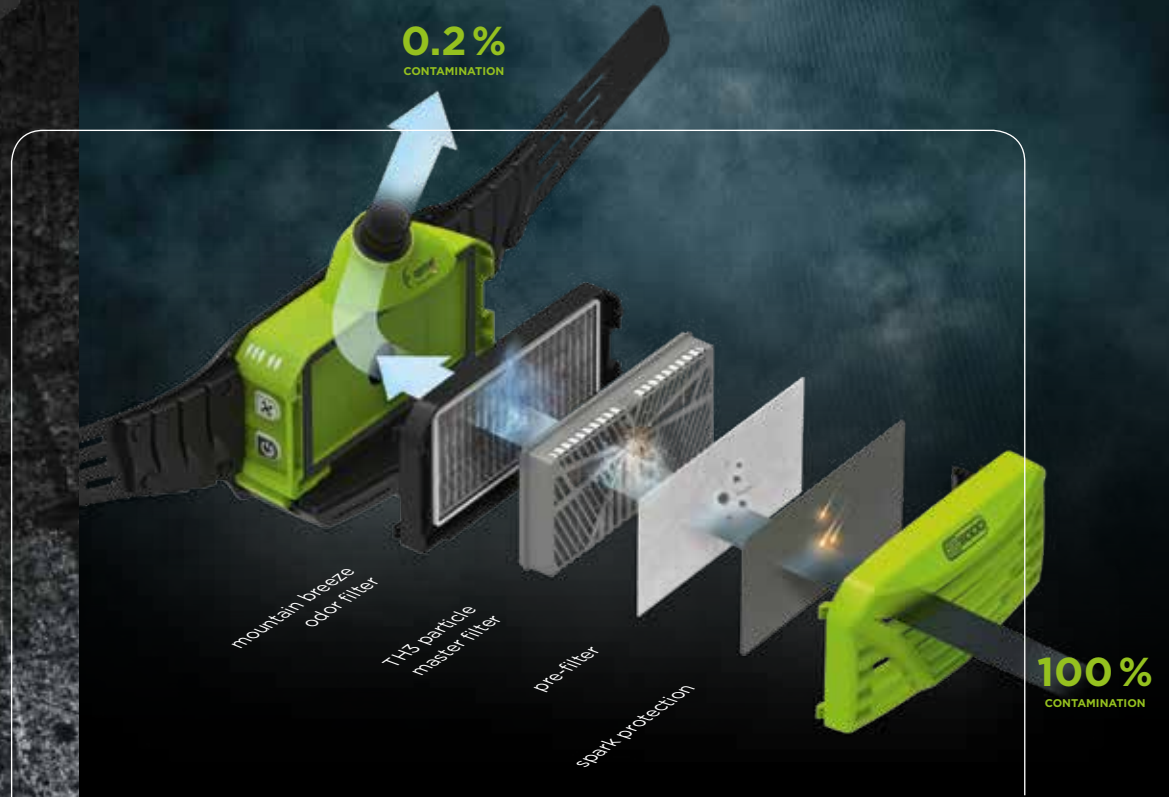
HIGH-PERFORMANCE PAPR SYSTEM WITH A SAFETY CLASS 3 FILTER

Effective aeration and ventilation is generally necessary for all work areas. Room ventilation solutions are elementary, but not always sufficient. An additional local exhaust vent in the immediate vicinity of a work station is hard to bring about and also risks suctioning off valuable protective gases.

If each worker is to be comprehensively protected from hazardous particles, personal protective breathing equipment is indispensable.

The e3000 PAPR system allows optrel to guarantee

- the highest class of protection (TH3) from respirable particles (smoke, aerosol, and dust). Breathing air becomes cleaner by a factor of up to 500.
- even air distribution in the fresh air helmet.
- automatic air flow control.
- additional cooling effect for keeping a cool head about you.



AUTOMATIC AIR FLOW CONTROL



ADJUSTABLE AIR FLOW



HIGH PERFORMANCE BATTERY



MOUNTAIN-BREEZE ODOR FILTER



LOW OPERATING COSTS

Filter system

Item no.

	e3000 PAPR green, 10h battery pack	4551.000.G
	e3000 PAPR green, 20h battery pack	4551.000.G-L
	e3000 PAPR blue, 10h battery pack	4551.000
	e3000 PAPR blue, 20h battery pack	4551.000-L

Technical data

Protection level	TH3 (EN 12941)
Type	TH3P R SL filter for TH3P system (EU)
Flow rates	Level 1: min. 150 l/min Level 2: min. 200 l/min Level 3: min. 250 l/min
Adjustment	Manual
Fuse	electronic
Noise level	max. 70dbA
Weight	1.560 g (incl. filter, belt and battery)
Standards	EN 12941:1998/A2:2008, AS/NZS 1716:2012, EAC: TP TC 019/2011

COMFORT MEETS PERFORMANCE

If a welder's helmet beats all expectations in comfort and performance, it's likely from optrel. The following pages show, what makes an optrel product so valuable for the user: second to none technology for a comfortable working day.



ALL IMPORTANT FUNCTIONS AT A FINGERTIP

OUTSIDE ADJUSTMENT

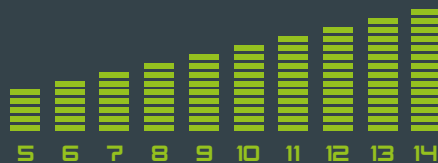
Shade level adjustment, grind mode or other features, which must be adjusted during welding processes, can be easily adapted from outside the helmet without putting it off. A central control unit, which is directly connected to the ADF, is placed on the left side of the helmet shell in reach of the welder.



THE TECHNOLOGY HIGHLIGHT FROM OPTREL

THE AUTOPILOT

With the autopilot optrel managed the impossible. The ADF not only darkens itself, it even darkens itself exactly on the level, the welding process at the very moment requires. Always exactly matching the intensity of the welding arc.



Why such? Your eyes are always perfectly protected, never too dark or too light. The laborious changing of the shade level during different work processes becomes unnecessary.

The autopilot function is available in the following products:

- optrel crystal2.0
- optrel panoramaxx
- optrel e684
- optrel liteflip autopilot



TRUE COLOR EXPERIENCE AT WELDING

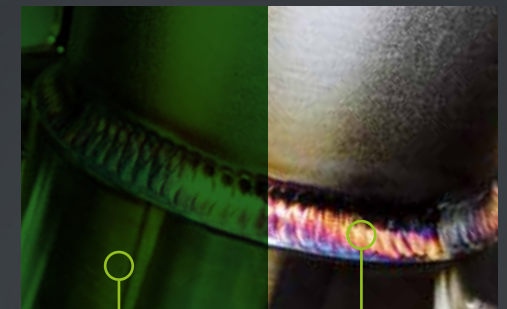
TRUE COLOR VIEW

A special UV-/IR-filter developed by optrel allows a color realistic perception and brings color to the world of the welder.

COLOR SCHEME OF A STANDARD WELDING ADF



COLOR SCHEME OF AN OPTREL ADF WITH TRUE COLOR VIEW



The welder's normal world: environment in green shades with low contrast levels

The optrel revolution: finally experience true color view during the whole welding process



PATENTED SAFETY WHEN SHUTTING OFF THE ADF

DELAY AND TWILIGHT FUNCTION

We all know how uncomfortable your eyes are when a material continues to glow after welding. If the helmet quickly switches from dark to light after a long period of welding, the welder can be briefly dazzled. The welder can use the delay function to delay the ADF from opening, thereby greatly improving operating comfort.



Groundbreaking technology prevents / reduces eye fatigue automatically. Unlike other ADF lenses that rapidly return to light, the twilight ADF technology restores light more naturally, presenting a smooth transition to the eyes. This exclusive technology reduces eye fatigue on welders who are continuously welding, enabling them to work longer and safer.



SIMPLY CONVENIENT WITHOUT COMPROMISES

COMFORT HEAD BAND

The combination of the optrel comfort headband and the ergonomic shape of the optrel helmet shells guarantees an optimum weight distribution for any head shape.



The outcome of this is a minimum strain on the neck and shoulders of the helmet wearer as well as a lasting increase of the welder's efficiency. Also the headband has a telescopic mechanism so that the helmet can be individually adjusted to ensure an optimum field of vision. The extensibility of the patented hard hat adapter also ensure that this range offers great comfort and protection.



NEW WITH „SUPER-HIGH-SENSITIVITY“

SENSITIVITY ADJUSTMENT

If several welders are working in a room or in close proximity to one another, sometimes the ADF responds too soon or not at all to the flash because the preset sensor sensitivity is not right for the working environment conditions. Continuously variable sensitivity control allows the sensor sensitivity to be adapted to the surroundings and workplace. This function can also be used if welding at low amperages and the ADF is not therefore darkening.



ALWAYS FRESH AIR

PAPR ADAPTOR

Most optrel helmets are available with PAPR adaptor for connecting an optrel e3000 high-performance PAPR blower system. By using the intelligent air distribution system the welder keeps a cool head at any time, means better working conditions for greater efficiency and comfort and better performance.



ADJUSTABLE AIR DISTRIBUTION

A rotary switch can be used to feed 20% of the air cooling the forehead area.

Your optrel Reseller:



optrel AG
industriestrasse 2
CH-9630 wattwil
switzerland
www.optrel.com
info@optrel.com

optrel.com

