

Eye protection. Respiratory protection. Accessories.

PRODUCT PROGRAM

August 2019



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

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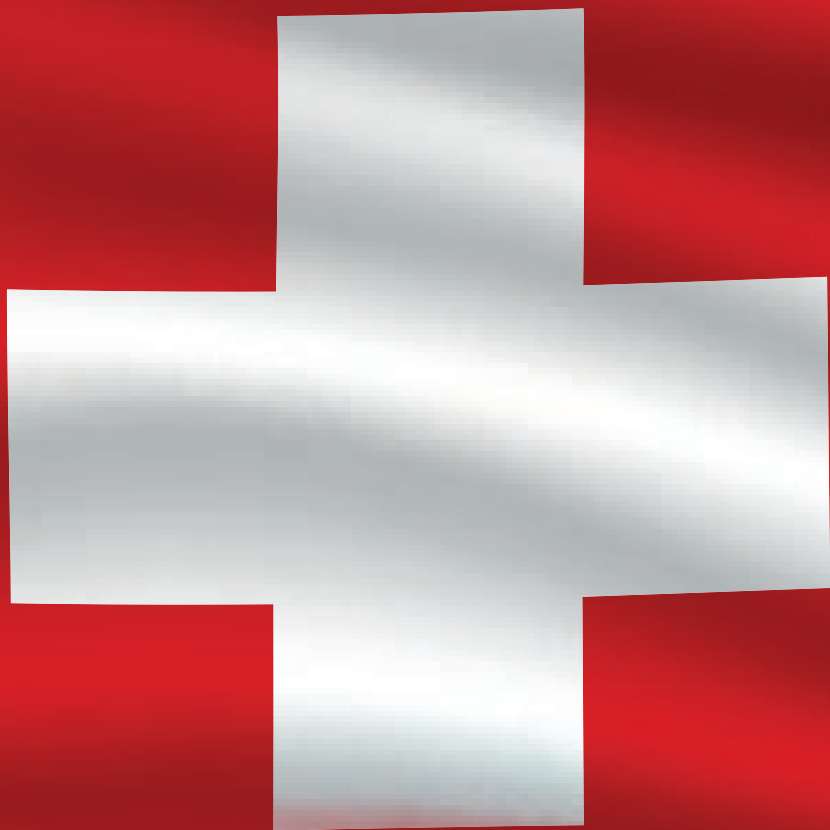
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swiss made



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

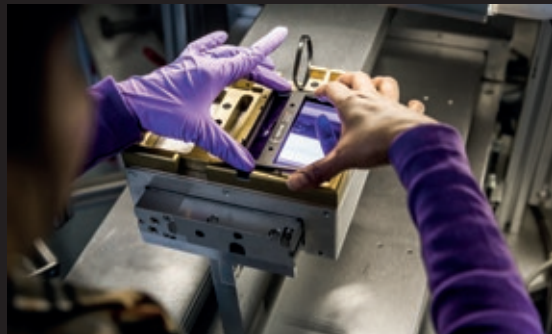


INNOVATION IS IN OUR GENES

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 **crystal 2.0** 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 **crystal 2.0** 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



RESPIRATORY
PROTECTION



GRIND MODE





Helmet system	Item no.
 crystal 2.0 welding helmet silver	1006.900
 crystal 2.0 fresh air helmet silver	4441.900

Technical data

Protection level	4-12
Brightness level	2,0
Shade Adjustment	Autopilot or manual
Activation	Auto on/off, sleep mode
Power supply	Battery (approx. 3,000 h operating time)
Sensitivity	adjustable individually
Switching time, bright to dark	0.10 ms (room temperature) 0.07 ms at 55°C
Switch-off time, dark to bright	Delay function 0,05-1,0 s, with twilight function
Classification EN379	1/1/1/2
Operating temp.	-10°C to +70°C
Storage conditions	dark environment
Weight	482 g

panoramaxx

Maximize your horizon.



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.



PANORAMA FIELD
OF VISION



AUTOPILOT



TRUE COLOR



RECHARGABLE
POWER TECHNOLOGY



LIGHT STATE 2.5



MULTI SENSOR
DETECTION



RESPIRATORY
PROTECTION



GRIND MODE



Helmet system

Item no.



panoramax
welding helmet
black unpainted

1010.000



panoramax
frish air helmet
black unpainted

4441.660

Technical data

Protection level	5-12
Brightness level	2.5
Cartridge	panoramic nose cut-out 110x180
Shade Adjustment	Autopilot or manual
Activation	Auto on/off, sleep mode
Power supply	Solar cells, lithium- polymer battery
Sensitivity	adjustable individually
Switching time, bright to dark	0.09 ms (room temperature) 0.07 ms at 55°C
Switch-off time, dark to bright	Delay function 0.5-2.0 s, with twilight function
Classification EN379	1/1/1/2
Operating temp.	-10°C to +70°C
Storage conditions	bright environment
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



GRIND MODE



TWILIGHT FUNCTION



Helmet system

Item no.



e684 welding helmet
silver
black unpainted
dark blue

1006.500
1006.501
1006.502



e684 frish air helmet
silver
black unpainted
dark blue

4441.600
4441.601
4441.602

Technical data

Protection level	5-13
Brightness level	4
Shade Adjustment	Autopilot or manual
Activation	Auto on/off, sleep mode
Power supply	Solar cells, battery (approx. 3,000 h operating time)
Sensitivity	adjustable individually
Switching time, bright to dark	0.17 ms (room temperature) 0.11 ms at 55°C
Switch-off time, dark to bright	Delay function 0.5-2.0 s, with twilight function
Classification EN379	1/1/1/1
Operating temp.	-10°C to +70°C
Storage conditions	dark environment
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



Technical data

Protection level	5-14
Brightness level	4 (Flip-up clear view: 1)
Shade Adjustment	Autopilot
Activation	Auto on/off, sleep mode
Power supply	Photovoltaic cell, battery (approx. 3,000 h operating)
Sensitivity	adjustable individually
Switching time, bright to dark	0.10 ms (room temperature) 0.10 ms at 55°C
Switch-off time, dark to bright	Delay function 0.3-1.5 s, with twilight function
Classification EN379	1/1/1/2
Operating temp.	-10°C to +70°C
Storage conditions	dark environment
Weight	530 g
Standards	CE, ANSI Z87.1, EAC, complies with CSA Z94.3

Helmet system

Item no.



liteflip autopilot
welding helmet

1006.700



liteflip autopilot
fresh air helmet

4441.700

vegaview^{2.5}

bright. brighter. vegaview.



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

The optrel **vegaview2.5** lets the welders' most desired wish come true: bright view. With its ADF view with shade level 2.5, **vegaview2.5** improves the visibility of welders' environment by 400%! Compared with traditional autodarkening welding helmets, **vegaview2.5** sets the world record in the light state!

The **vegaview2.5** is perfectly combined with the optrel **e3000X** 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





Technical data

Protection level	8-12
Brightness level	2.5
Shade Adjustment	Manual, exterior
Activation	Auto on/off, sleep mode
Power supply	Battery (approx. 3,000 h operating time)
Sensitivity	adjustable individually
Switching time, bright to dark	0.10 ms (room temperature) 0.07 ms at 55°C
Switch-off time, dark to bright	Delay function 0.05-1.0 s, with twilight function
Classification EN379	1/1/1/2
Operating temp.	-10°C to +70°C
Storage conditions	dark environment
Weight	489 g
Standards	CE, ANSI, EAC, complies with CSA

Helmet system

Item no.



vegaview2.5
welding helmet

1006.600



vegaview2.5
fresh air helmet

4441.800



new. efficient. optimal.



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.
 neo p550 welding helmet black	1007.000
 neo p550 welding helmet green	1007.011
 neo p550 welding helmet carbon	1007.073

Technical data

Protection level	9-13
Brightness level	4
Shade Adjustment	Manual, exterior
Activation	Auto on/off, sleep mode
Power supply	Solar cells, battery (approx. 3,000 h operating time)
Sensitivity	adjustable individually
Switching time, bright to dark	0.10 ms (room temperature) 0.10 ms at 55°C
Switch-off time, dark to bright	Delay function 0.05-1.0 s
Classification EN379	1/1/1/2
Operating temp.	-10°C to +70°C
Weight	495 g
Storage conditions	dark environment
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.



PANORAMA FIELD OF VIEW



PROTECTION LEVEL
3 / 9-12



MULTI-PURPOSE USE AT
MAXIMUM PROTECTION



MINIMAL WEIGHT



SWIFT HANDLING



GRIND MODE



Welding cap	Item no.
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weldcap® RC 3/9-12	1008.000
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weldcap® bump RCB 3/9-12	1008.001
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weldcap® hard RCH 3/9-12	1008.002
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Technical data

Protection level	9-12
Brightness level	3
Cartridge	panoramic nose cut-out
Shade Adjustment	Manual
Activation	Manual on/off
Power supply	Battery (approx. 1,000 h operating time)
Sensitivity	adjustable individually
Switching time, bright to dark	0.16 ms (room temperature) 0.11 ms bei 55°C
Switch-off time, dark to bright	0.3 s
Classification	1/1/2/2 EN379
Operating temp.	-10°C to +60°C
Storage conditions	dark environment
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 **e3000X** 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.



180° FIELD
OF VISION



LIGHTWEIGHT



RESPIRATORY
PROTECTION



PATENTED
EXCENTER



ADJUSTABLE AIR DISTRIBUTION:

A rotary switch can be used to feed 20% of the cool air to the forehead. Direct air draft crossing the eye, by the air distribution system, leads to the avoidance of dry eyes.



ALWAYS A GREAT VIEW
AND PERFECT AIR CONDI-
TIONS WHEN PROTECTING
YOUR FACE IS NECESSARY.

Ideal for:

- grinding
- metal industry
- food industry
- wood working
- de-construction
- landfills
- agriculture

Helmet system

Item no.



clearmaxx
standard version

1100.000



clearmaxx
PAPER-version

4900.020

Technical data

Classification EN166	optical class = 1 mechanical strength = BT
Shape stability	Grinding mask up to 220°C / 428°F Front cover lens up to 137°C / 279°F
Operating temperature	-10°C to + 70°C / 14°F to 158°F
Storage temperature	-20°C to + 80°C / -4°F to 176°F
Weight	500 g
Standards	EN 166 / EN 169 / EN 170 / EN 12941:1998 TH3

e 3000X

X-tend your possibilities.



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 e3000X 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.
- A1B1E1 filter extension* protecting you from organic, anorganic and acidic gases.
- even air distribution in the fresh air helmet without eye irritation.
- automatic air flow control and adjustment.
- additional cooling effect for keeping a cool head about you.



HIGHEST CLASS PROTECTION LEVEL



OPTIONAL A1B1E1 GAS FILTER*



AUTOMATIC AIR FLOW CONTROL



ADJUSTABLE AIR FLOW



HIGH PERFORMANCE BATTERY



MOUNTAIN-BREEZE ODOR FILTER

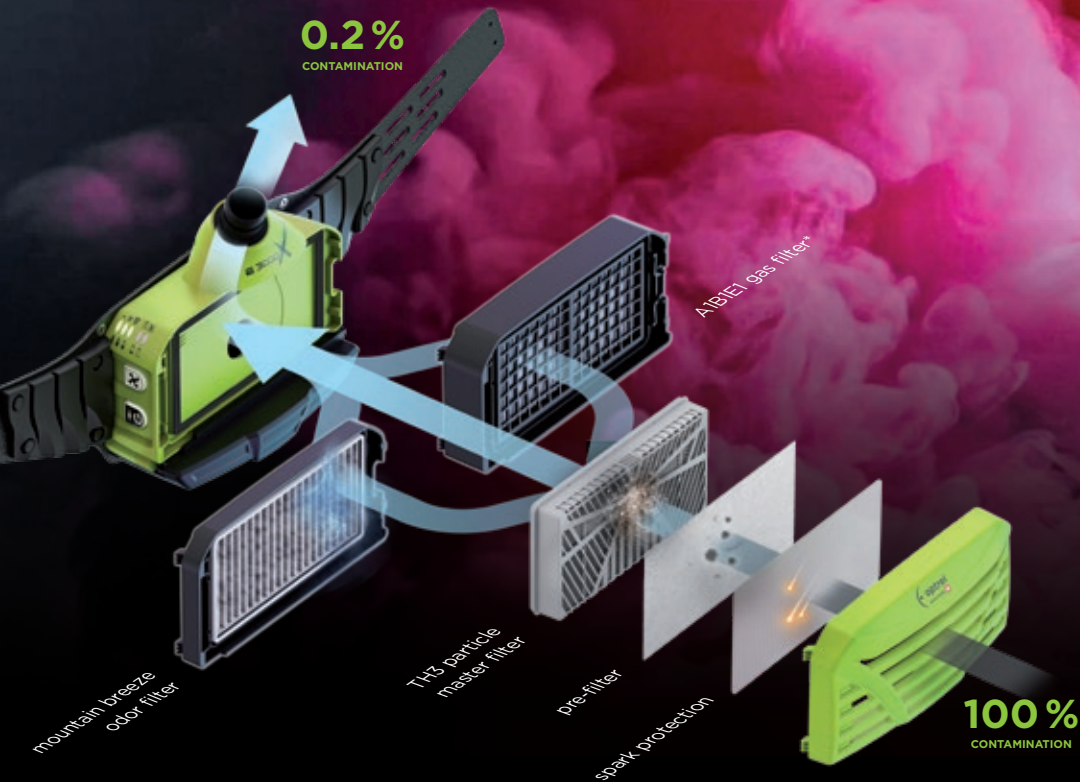


LOW OPERATING COSTS



ERGONOMIC BACKPACK PRINCIPLE

* available from Q2/2020



Filter system

Item no.

Technical data



e3000X PAPP,
18h battery pack,
parking buddy and bag

4553.000

Protection level

TH3 (EN 12941)

Type

TH3P R SL filter for TH3P
system (EU)

Flow rates

Level 1: min. 170 l/min
Level 2: min. 210 l/min
Level 3: min. 240 l/min

Adjustment

Automatic

Air flow calibration

Automatic

Fuse

Electronic

Noise level

Appr. 65dba / max. 70dba

Weight

1,560 g (incl. filter, belt
and battery)

Standards

EN 12941:1998 / A1:2003 /
A2:2008, AS/NZS 1716:2012,
EAC: TP TC 019/2011



**Ready-to-Weld
Package crystal 2.0**
e3000X mit crystal 2.0,
parking buddy
& e3000X bag

4530.050



**Ready-to-Weld
Package panoramaxx**
e3000X mit panoramaxx,
parking buddy
& e3000X bag

4550.550



**Ready-to-Weld
Package e684**
e3000X mit e684,
parking buddy
& e3000X bag

4550.460

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.



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



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



NOSE CUT-OUT CARTRIDGE

PANORAMIC VIEW

Due to the optrel-exclusive nose cut-out in the cartridge the ADF moves closer to the eyes and offers a never-before seen field of vision.



THE ENLIGHTMENT BEFORE AND DURING WELDING

CRYSTAL LENS TECHNOLOGY

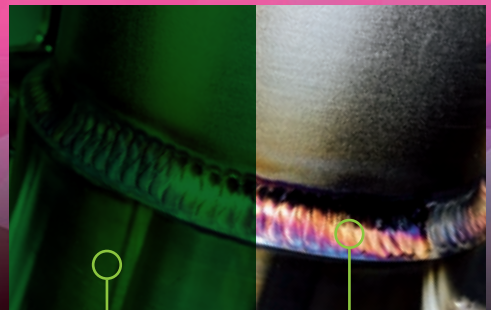
With light transmission of 31% in bright condition (protection level 2!) welders have for the first time a practically unclouded and clear view of their working environment.

This in combination with the almost perfect colour spectrum of the CLT for the first time allows welders to see what is really going on in the weld pool, and with a clarity that equates to insights into a new dimension.

COLOR SCHEME OF A STANDARD WELDING ADF



COLOR SCHEME OF AN OPTREL ADF WITH CRYSTAL LENS TECHNOLOGY



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.

STANDARD:
ABRUPT
OPENING



SOFT
OPENING
WITH
TWILIGHT
FUNCTION

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.



Increase the overall comfort of your optrel helmet with the headgear halo. It adapts ergonomically to the head shape and increases wearing comfort. Simply clip it into your headband.



ENERGY SAVING AND SAFETY COMFORT

AUTOMATIC ON/OFF SWITCH

Due to the optrel auto on-/off technology you never need to think about switching your helmet on or off. When you start working it will automatically switch on and protect you from the first start. And after usage it switches off for you, saving the battery power. It is exactly that easy.

The auto on-/off technology is available in all optrel helmets but the weldcap series.



ALWAYS FRESH AIR - EXACTLY WHERE YOU NEED IT

PAPR ADAPTOR

optrel consistently avoids any air turbulence inside the helmet that could irritate your eyes. The purified air is led directly to your mouth and nose in an internal air flow channel. After all, this is the only place we need this valuable breathing air. We have also thought of a pleasant cooling. In the forehead area a continuously adjustable air outlet offers you the option to let up to 20% of the air flow onto your forehead. Pleasantly soft! No more eye irritation!



SAVING TIME EVERY DAY

AUTOMATIC AIR FLOW CALIBRATION

Daily monitoring of air flow is prescribed for all respiratory devices available on the market. Conventional devices require manual checks. The optrel e3000X's intelligent sensor management allows it to perform an automatic air flow check on switch-on as well as an automatic adjustment when the filter is getting draggled.

Your optrel Reseller:



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