

e684x1

optrel  
swiss made 



**Do not settle for anything less!**

## Do not settle for anything less!

The welder is recognised as the top athlete among the metal craftsmen. They need to cope with harsh work conditions such as fumes, constantly changing levels of brightness and heat.

Additionally, welders have a high level of responsibility. A flawed welding seam might, in extreme cases, be the cause for deadly incidents. Hence, a perfect welding helmet becomes increasingly important. It makes the weld process safer, more efficient, more accurate and more comfortable. Therefore only the best is good enough.

So do not settle for anything less!

Discover the uniqueness of the optrel e684.



# e684x1

The optrel e684 is the perfect welding protection gear for demanding joining processes of aluminium, nickel-chromium alloys, special metals as well as steel.

Thanks to the infinitely variable shade range of SL 5 to SL 13 the optrel e684 is suitable for all electric arc welding as well as grinding processes.

The optrel e684 is the welder's loyal companion, especially for industry applications such as vehicle & railway construction, agricultural & construction machinery, steel/machinery/tank/vessel/plant construction, pipeline & tube making, as well as shipbuilding and offshore.

Do not settle for anything less!



## Unlimited possibilities

The e684 provides numerous upgrade options to suit your individual requirements.

The options include powered air purifying respirator, hard hat, neck and head protection or magnifying lenses. As a result of this you can effortlessly upgrade the e684 without the need to purchase a new welding helmet.





## Fully automatic welding helmet in HD quality.

### Adaptive Shade Autopilot

Set it and forget it.

The adaptive shade level control automatically adjusts the perfect shade level. An additional sensor that measures the arc intensity makes this autopilot function work. Therefore you always keep control of the appropriate trajectory regardless of which actual welding parameter is set. This allows you to stay focused on what really matters: Your welding process!



### High Definition Viewing

Superior viewing at every angle.

Like viewing a high definition television, the optrel e684's special HD lens provides a true color view to the welder. Its class 1 angular dependency allows welders to see the clearest, crispest view possible, enabling welders to concentrate more accurately on their weld.



### Cooling Helmet Design

Keep cool, even when the heat is on.

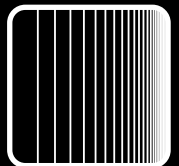
Reflecting light and heat, the optrel e684's special silver helmet keeps the welder's head cooler by 23% compared to other unpainted helmets. In extreme environments, welders can work longer and be more comfortable in the long term.



### Wellness for the Eyes

Groundbreaking technology prevents / reduces eye fatigue automatically.

Unlike other ADF lenses that rapidly return to light, the optrel e684's 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.



### Increased Safety! Enhanced Productivity!

Take a deep breath.

The use of an optrel PAPR system sustainably reduces the risk of respiratory disorders. The combination with the optrel e3000 PAPR offers you the highest protection level of TH3. Furthermore, thanks to the variable air distribution inside the helmet you fatigue much less and therefore you can stay concentrated longer. Protection and comfort for higher productivity!



### Daily Multi-Purpose use

Darkening levels from 5 to 13 cover the majority of welding applications and with a protection level 4 in its general mode, the welder has a bright and well-lit view of the work-place. This feature predestinates the optrel e684 for grinding jobs as well.



Helmet systems	Ref. no.	e684 / e3000 PAPR system	Ref. no.
e684 Welding helmet	1006.500	e3000 green Standard with e684	4550.200.G
e684 Welding helmet & Hard hat	1006.550	e3000 green Longlife with e684	4550.200.G-L
e684 PAPR	4441.600	e3000 green Standard & e684 & Hard hat	4550.250.G
e684 PAPR & Hard hat	4441.650	e3000 green Longlife & e684 & Hard hat	4550.250.G-L
e684 Cartridge (without helmet shell)	5012.480	e3000 blue Standard with e684	4550.200
		e3000 blue Longlife with e684	4550.200-L
		e3000 blue Standard & e684 & Hard hat	4550.250
		e3000 blue Longlife & e684 & Hard hat	4550.250-L

[www.optrel.com/e684](http://www.optrel.com/e684)

## Technical Data

<b>Type description</b>	Fully automatic welding helmet with true colour definition, auto darkening filter with shade level range of 5 - 9 / 9 - 13	<b>Classification EN 379</b>	Optical class 1 Scattered light 1 Homogeneity 1 Angular dependence 1
<b>Shade level (SL)</b>	SL 4/5-13	<b>Classification EN 166</b>	Front cover lens B
<b>Autopilot</b>	Adaptive shade autopilot for the range of SL 5 - 13 with the option of an individual calibration of +/- 2 shade levels.	<b>Classification EN 166</b>	Inside cover lens F
<b>Manual mode</b>	Infinitely variable outside operability for two shade ranges, SL 5 - 9 and 9 - 13.	<b>Classification EN 175</b>	Helmet shell B
<b>Sensitivity</b>	Infinitely variable, newly with "Super High" sensitivity setting range.	<b>Shape stability</b>	Welding mask up to 220°C / 428°F Front cover lens up to 137°C / 279°F
<b>Grinding mode</b>	Shade level 4	<b>Protection for ADF</b>	Spherically shaped front cover lens with patented seal, which makes it suitable for overhead welding.
<b>Twilight technology</b>	Patented delay time control to open the Auto Darkening Filter, adjustable from 0.1 to 2.0 seconds.	<b>Operating temperature</b>	-10°C to + 70°C / 14°F to 158°F
<b>Dimension of ADF ( Auto Darkening Filter)</b>	90x110x7mm / 3,55x4,33x 0,28" 50x100mm / 1,97x3,94" (Viewing area)	<b>Storage temperature</b>	-20°C to + 80°C / -4°F to 176°F
<b>Power supply</b>	solar cells, 2pcs LI-batteries 3V exchangeable (CR2032)	<b>Weight</b>	500g / 17,637 oz
<b>Operating time batteries</b>	approx. 3000 hours (operating)	<b>Application ranges</b>	all 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 / Plasmacutting & Oxy-gas Welding / Grinding / Overhead welding. Prohibited for laser and gas welding!
<b>Sensors</b>	Three sensors. Adjustable arc detection angle by means of a sensor slider.	<b>Scope of delivery</b>	Welding helmet, 1 front cover lens, 1 soft bag and instruction manual
<b>Eye protection ultraviolet/infrared protection</b>	maximum at any shade setting	<b>Standards</b>	CE, ANSI Z87.1, AS/NZS, EAC, complies with CSA Z94.3
<b>Switching time light to dark</b>	0,170 ms at room temperature 0,110 ms at 55°C / 131°F	<b>Warranty</b>	2 years from date of sales for manufacturing and material defects (except batteries) 1 additional year after online registration within the first 6 months. <a href="http://www.optrel.com/register">www.optrel.com/register</a>
<b>From dark to light</b>	0.1s to 2.0s with patented twilight technology		



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