Technical Data

Part numbers	Helix 2.5	Helix QUATTRO	Helix CLT	
	1050.000	1050.100	1050.200	(incl. optrel HARD HAT)

Product description	Welding, grinding and cutting helmet series Internal flip-up ADF cartridge for clear view. (e.g. for grinding work) Includes industrial safety helmet optrel HARD HAT black (technical data for the industrial safety helmet can be found on the technical data sheet for the optrel HARDHAT)
Headband	optrel IsoFit® headband
Cartridge size	125 x 58 mm with nose cut-out
Viewing area without cartridge	198 x 110 mm
Power supply	280mAh Li-Polymer accumulator rechargeable via Micro-USB port and solar cell Auto-ON and sleep mode.
Battery life	300 to 500 charging cycles
Sensors	Five sensors, with Multi Sensor Detection
Sensitivity adjustment	Infinitely variable adjustment with "Super High" sensitivity range
Opening delay	Infinitely variable adjustment with Fade Tronic,

Switching times	Light to dark	90 µs (0.090 ms)	at 23°C (room temperature)
		70 µs (0.070 ms)	at 55°C / 131°F
	Dark to light	0.1 s to 2.0 s	(with FadeTronic)

Classification	Helix 2.5	Helix QUATTRO	Helix CLT	
EN 379	1	1	1	AWF - Optical class
	1	1	1	AWF - Scattered light
	1	1	1	AWF - Homogeneity
	2	1	2	AWF - Angular dependency
ISO 16321	ET	ET	ET	Front cover lens – minimum strength
	HMT	HMT	HMT	Front cover lens – minimum strength
ANSI Z87.1	Z87+	Z87+	Z87+	Welding helmet - minimum strength
ISO 16321	E	E	E	Welding helmet - minimum strength
	HM	HM	HM	Welding helmet - minimum strength

**T at extreme temperatures*

Shade levels	Helix 2.5	Helix QUATTRO	Helix CLT
Shade level light (inactive)	2.5 *(3.5)	3 *(4)	2.0 *(3)
ShadeTronic®	5<12 *(6<13)	4<13 *(5<14)	4<12 *(5<13)
Manual mode	7-12 *(8-13)	8-13 *(9-14)	7-12 *(8-13)

*(xxxx) Shade level extension when using "Inner protection lens color-true +1.0" – Article 5000.173

Light transmission	Ultraviolet/infrared protection	maximum throughout the shade level range

Weight	Helix 2.5	Helix QUATTRO	Helix CLT	
	618 g	620 g	640 g	Weight excl. Minimizer and HARD HAT
				Weight Minimizer: 20 g

Shape stability	Welding protection mask up to 220°C / 428°F Front cover lens up to 137°C / 278°F
Cartridge protection	Front cover lens and inner protection lens (always required)
Helmet material	PA6.6
Helmet color / Design	Black
Operating temperature	-10°C to +55°C / +14°F to +131°F
Storage temperature	-20°C to +70°C / - 4°F to +158°F

Application ranges

All electrical welding processes
Stick welding (SMAW) / MIG / MAG (metal active/inert gas welding, GMAW) / GMAW high-performance welding / Flux cored wire welding/ TIG welding (GTAW)/ Plasma welding / Microplasma welding / Plasma cutting
Gas welding, grinding work with flip-up internal flip. Not suitable for laser welding!

Lifetime

Unlimited
(applies as long as no visible or irreparable defects occur)

Complies with

* PPE Regulation (EU) 2016/425 (EN379 / EN166 / ISO16321)
PPE Regulations (2016/425) (for UK)
* ANSI Z87.1

*Conformity assessment conducted by: ECS GmbH, European Certification Service, Hüttfeldstrasse 50, 73430 Aalen, Germany – Notified body 1883

Compatibility / combination options with:

Respiratory protection system - SWISS AIR		4700.010	YES
Safety helmet - Optrel Hard Hat	black	5011.400	YES
	White	5011.401	YES
	Red	5011.402	YES
	Orange	5011.403	YES
	Yellow	5011.404	YES
	Blue	5011.405	YES
	Green	5011.406	YES
Inner protection lens color-true +1.0		5000.173	YES
Optrel standard headband			NO
Optrel BumpCap			NO
Parking Buddy			NO
Optrel Halo			NO