



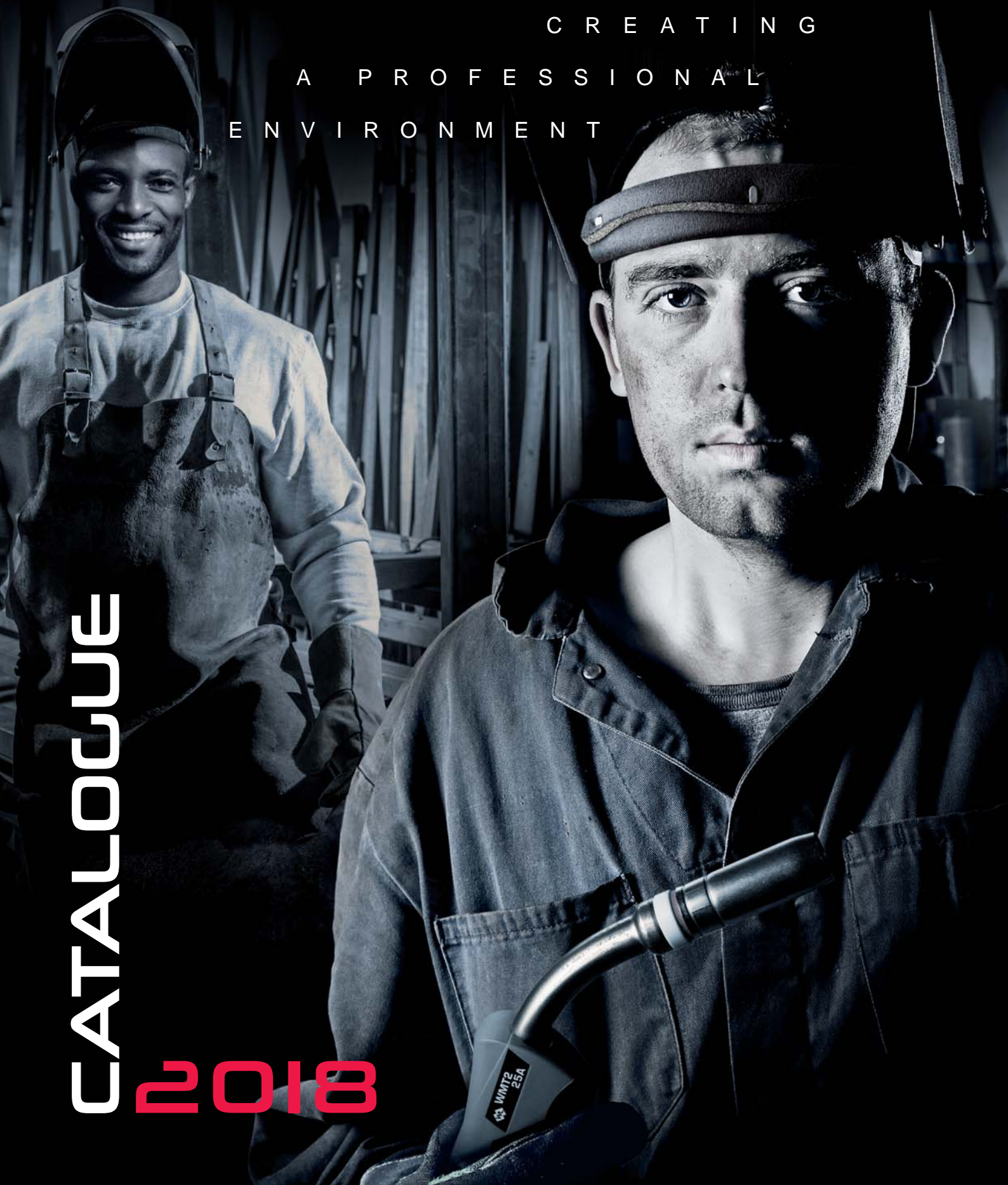
WELDLINE

by Lincoln Electric

C R E A T I N G
A P R O F E S S I O N A L
E N V I R O N M E N T

CATALOGUE

2018







WELDLINE is the "Welder's Environment" brand that offers a large range of tools and accessories dedicated to welding applications (*manual torches, cables, earth clamps, brushes and hammers, sprays...*) as well as individual protective equipment for the welder (*gloves, clothes, goggles, masks...*) and for his environment (*strips, curtains, etc..*).

Continuous research on the best products, high quality at the right price, compliance with the most rigorous European standards, are the main master words that describe the WELDLINE offer with a major objective: our customer's satisfaction.

THIS TRADEMARK IS A TRIPLE COMMITMENT:

The choice of quality products

Chosen by an international team, WELDLINE products comply with European standards, aiming to meet customer's requirements better.

Balancing quality with price

The purchasing power for the benefit of our customers.

Optimised logistics

Single image, single stock, single numbering to increase product availability.

Products commercialized by Saf-fro, Cemont and Oerlikon networks.



www.saf-fro.com



www.cemont.com



www.oerlikon.com



SUMMARY



1 PERSONAL PROTECTION EQUIPMENT

- ◆ Electronic helmets 6 to 14
- ◆ Respiratory protection 15
- ◆ Helmets and handshields 16 to 19
- ◆ Welding glasses 20 to 21
- ◆ Goggles / spectacles 22 to 25
- ◆ Leather clothes 26 to 31
- ◆ Safety shoes for welding 32 to 33
- ◆ Gloves 34 to 38
- ◆ Protective clothes 39



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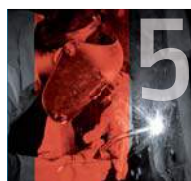
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WELDLINE
by Lincoln Electric

1 PERSONAL PROTECTION EQUIPMENT

PROTECTION

◆ Electronic helmets	6 to 14
◆ Respiratory protection	15
◆ Helmets and handshields	16 to 19
◆ Welding glasses	20 to 21
◆ Goggles / spectacles	22 to 25
◆ Leather clothes	26 to 31
◆ Safety shoes for welding	32 to 33
◆ Gloves	34 to 38
◆ Protective clothes	39



HELMETS

All products have to be in accordance with EU standards and the CE marking is mandatory:
EN 175

Choice of head protection

An **electronic helmet** allows the welder to be immediately and automatically protected when the welding operation begins.

The result is a better efficiency, a better comfort, and at least a better result.

Electronic helmets exist with fixed or variable shade.

The choice depends on the welding process.



Passive products (handshields and helmets) would be chosen for punctual or discontinue use. In case of continual welding, **an electronic helmet** is necessary.

Handshields and passive helmets exist for 2 types of applications: **light or heavy duty**.

- ◆ **Light duty:** you will prefer thermoplastic products (*light, low price, flexible*).
- ◆ **Heavy duty:** generally polyester with fibreglass (*heat resistant, spatters resistance*).

The **size of the window** depends on countries habits.





ELECTRONIC HELMETS

CHAMELEON

All the comfort and security of liquid crystal technology in a protective and comfortable welding helmet.

- ♦ Covering shape for an optimized head protection.
- ♦ 4 plans adjustable headgear delivered with comfort cushion (for CHAMELEON 4 V+).
- ♦ Auto-start: the LCD cell automatically turns on.
- ♦ Reset button: press the reset button twice to re-initialize the original parameters.
- ♦ The low battery indicator lights when 2-3 days of battery life remain.

CHAMELEON 3 V0

Delivered with:
2 outside protection plates and 1 inside protection plate, and 1 sweat band.

WARRANTY
1
YEAR



CHAMELEON 4 V+ Digital setting

Delivered with:
5 outside protection plates and 2 inside protection plates, 1 sweat band and 1 comfort cushion on the headgear



WARRANTY
2
YEARS



	CHAMELEON 3 V0	CHAMELEON 4 V+
Applications	Every welding process. Recommended for MMA and MIG/MAG	Every welding process. Recommended for TIG
Optical class	1/1/1/2	1/1/1/2
Shade	Variable	
Cartridge dimensions	110 x 90 mm	120 x 113 mm
Weight (helmet + LCD filter)	445 g	510 g
Viewing area	95 x 40 mm	97 x 47,5 mm
Clear shade	DIN 4	DIN 3
Dark shade	Variable from DIN 9 to 13	
Switching time clear-dark	0,06 ms	0,05 ms
Sensitivity adjustment	Yes	
Switching time dark-clear	Adjustable from 0.1 to 1 second	
Sensors	2 independent optical sensors	3 independent high sensitivity optical sensors
Power supply	Solar cells + 2 alcaline batteries	Solar cells + 2 lithium batteries
Protection	Permanent protection against UV and IR	

To order		
Helmet CHAMELEON	W000276910	W000372475
LCD cell	W000377928	W000372461

List of spare parts : see page 10



ELECTRONIC HELMETS

CITOLUXE and EUROLUX Advance

LCD autodarkening welding helmets

- ♦ High Tech LCD autodarkening filter.
- An extra-wide vision: 5820 mm².

The advantages of the CITOLUXE and EUROLUX Advance helmets

Exclusive design:

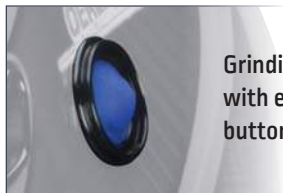
- ♦ Easy filter release by simply pressing the push button.
- ♦ Adjustable headgear with 4 positions.

Comfort and protection:

- ♦ Covering shape for an optimized head protection.
- ♦ Optimization of the volume for a better breathing comfort.
- ♦ Manufactured with high resistance synthetic material (Nylon 66).
- ♦ Lightweight and heat resistant.
- ♦ The low battery indicator lights when 2-3 days of battery life remain.

Delivered with:

5 outside protection plates
and 2 inside protection plates,
1 sweat band and
1 comfort cushion on the headgear.



Grinding mode
with external
button

	CITOLUXE Advance 4500	EUROLUX Advance 4500
Optical class	1/1/1/2	
Switching time clear-dark	0.05 ms	
Switching time dark-clear	10 positions from 0.1 s to 1 s	
Sensitivity adjustment	Setting per digital key (10 positions)	
Modes	Welding Yes shade 9 to 13 per digital key Grinding Yes shade 4 (per external button) Cutting Yes shade 5 to 9 per digital key X mode* Yes Infotrack system** Yes	
Sensors	4 independent optical sensors Magnetic in «X» mode	
Clear shade	DIN 3	
Dark shade	Adjustable from 5 to 13	
Viewing area	97 x 60 mm	
Constant UV/IR protection	Yes	
Battery type	2 lithium CR2450 3 Volts	
Solar cell	Yes	
Temperature scale	Use From -5 °C to +55 °C Storage From -30 °C to +70 °C	
Weight	510 g (helmet + LCD filter)	
Standard	LCD filter	CE EN 379
	Helmet	CE EN 175

To order

Complete helmet	W000372474	W000372465
LCD filter	W000372462	

* X-mode: this mode allows welding in outdoor conditions or with very low arc current
 ** Infotrack system: provides useful information

List of spare parts : see page 10



2012-237



2012-234

Filter Advance 4500 - Infotrack shade 4/9-13:

The top-of-the-range solution for any application:

4 adjustment modes via the LCD screen with digital keys:

- ♦ Welding: variable shades 4/9-13, 4 optical sensors, regulation of the sensitivity and return to a clear shade.
- ♦ Grinding: activation of the filter in clear shade level 4.
- ♦ Cutting, low current welding: adjustable shades 5 to 9 for low intensity TIG process, microplasma, oxy-fuel gas welding...
- ♦ «X mode»: adjustable shade 4 to 9-13 with magnetic sensors for outside use or obscured arc welding...

Infotrack system: provides useful information
 [current time - total welding time - alarm - temperature].

WARRANTY

2
YEARS

- ♦ Auto-start function: it is not necessary to push the "on" button before starting to weld. Automatic starting.
- ♦ Reset button: press the "reset" button twice to re-initialize the original parameters.
- ♦ Grinding mode: fixed shade 4 is activated, to ensure optimum protection when grinding.



2011-487

ELECTRONIC HELMETS

GOLDENARK

Think bigger.

- ♦ **Extra wide field of view:**
112 x 78 mm
- ♦ **All applications:**
4 operating modes : Welding, Cutting, Grinding & X-mode.
- ♦ **Multi language help menu**
Available in English, French and Spanish with InfoTrack system.
- ♦ The low battery indicator lights when 2-3 days of battery life remain.



WARRANTY
2
YEARS

I50iw - InfoTrack
(auto darkening welding lens)



A display function of arc time Control

The arc time function records the amount of time the lens assembly is dark (exposed to an arc). Arc time is accumulated and displayed hours and minutes as Max. 99 hours 59 minute.



A display function of Current time

You can access to set a current local time.



Timer function

A time-management function with alarms.



Multi-language support

Help menu displays in Korean and English as default setting (up to 6 languages supportable)



Alarm function

Alarm clock functions to turn on alarm at a specific time.



Help menu

Help menu displays abbreviated instructions, modes, and notes on proper usage.



2010-009

See the video



External grinding
button

4 optical sensors



LCD welding filter

To protect eyes during welding from the harmful rays such as ultraviolet rays and infrared rays, Goldenark provides an improved optic natural-looking yellow color instead of green color for more contrast and a brighter and more realistic view.

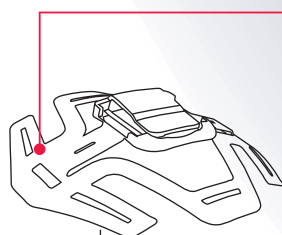


Before - Green

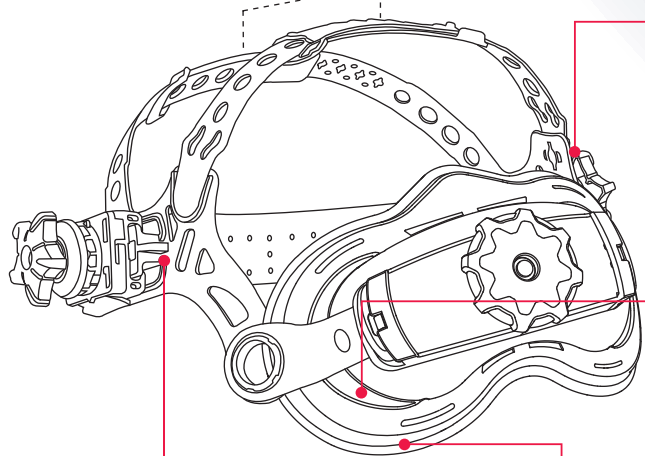


After - Yellow

New comfortable headgear

Flextech
Headband**Flextech PAD: headgear suspension pad**

The high elasticity buffer distributes the helmet weight evenly, and the dual injection urethane prevents slipping as a slip resistant. The features of detachable and easy relocation provide to comfortable fit on diverse shape heads even a long time to wear.

**Ergonomic Top headgear band**

Redesigned as two top bands provide extensive adjustability, settings, and enhanced support. The 2nd band is designed with rotational motion, which is increasing wearable on the head.

Flextech Cushion: oversized comfort cushion provides unsurpassed comfort and stability.

Oversized comfort cushion provides to decentralize the weight in a head for long time wear and it supports to release a helmet load and relief pressures.

Easily detachable and quick adjusting rail function

Distance Adjustment by six level rail systems between the face and the lens.
Release tabs as one touch.

The high elasticity urethane cushion is made of dual injection, and it gives to reduce not come off easily when wearing on/off a helmet. Also the high Adhesiveness provides to easy fit on various shape head. It transfers the center of gravity towards the back of the head, so to provide a balance with stable fit.

	GOLDENARK
Optical class	1/1/2
Viewing area	112 x 78 mm
Switching time clear to dark	0.05 ms
Switching time dark to clear	Between 0.1 and 1.0 sec
Clear shade	DIN 3
Available shades All shades provide continuous UV and IR protection	- Welding: DIN 9-13 - Cutting: DIN 5-9 - Grinding: DIN 4 - X-mode: DIN 9-13
Color of the cell	Yellow, to help clearing color sorting
Power supply	2 CR2450 Lithium batteries
Sensors	4 independent
Operating temperature	From -10°C to +55°C
Storage temperature	From -20°C to +70°C
Weight (helmet + LCF filter)	650 g

To order

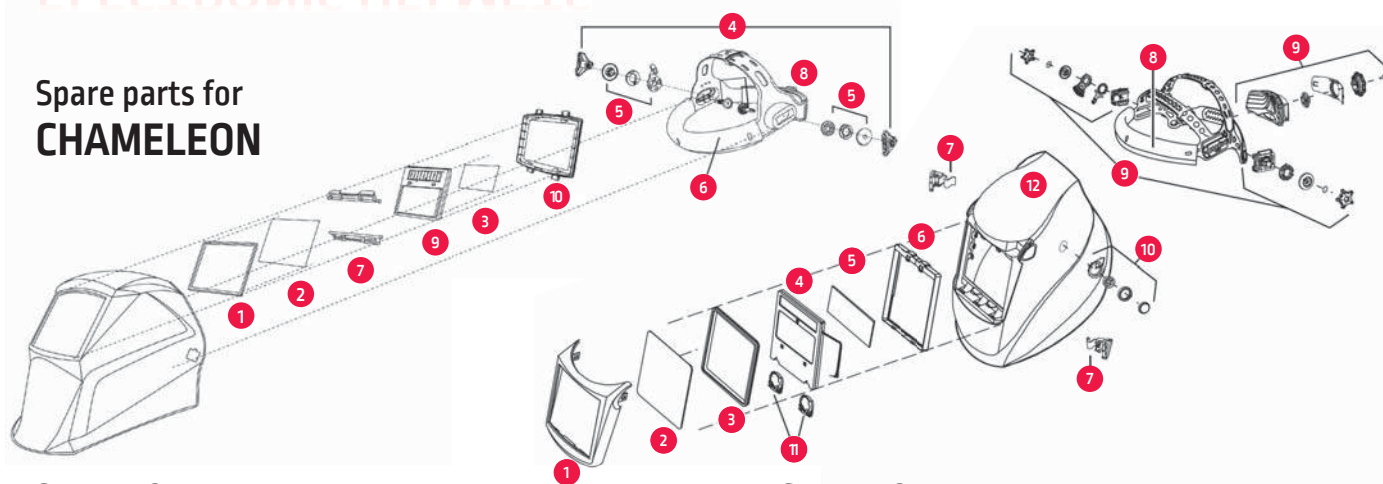
Electronic welding helmet GOLDENARK	W000386519
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List of spare parts : see page 10



ELECTRONIC HELMETS

Spare parts for CHAMELEON



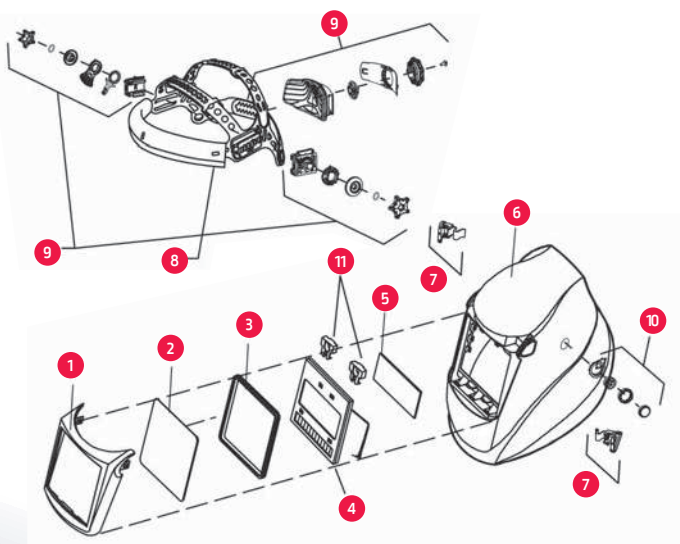
CHAMELEON 3V0

To order	
1 - Gasket front cover lens	W000261985
2 - Front cover lens	W000261983
3 - Inside cover lens	W000335163
4 - Headgear	W000261986
5 - Headgear adjusting kit	W000261987
6 - Fabric sweatband	W000261999
7 - LCD filter holder hook	W000261990
8 - Comfort cushion	W000261991
9 - LCD cell	W000377928
10 - Internal lens holder	W000261989

CHAMELEON 4V+

To order	
1 - Front cover lens holder	W000373136
2 - Front cover lens	W000261993
3 - Gasket front cover lens	W000261992
4 - LCD cell	W000372461
5 - Inside cover lens	W000261984
6 - Internal lens holder	W000380495
7 - Lens holder buttons (left & right)	W000276258
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - External grinding button kit	W000378989
11 - Spare batteries	W000260920
12 - Helmet shell	On request

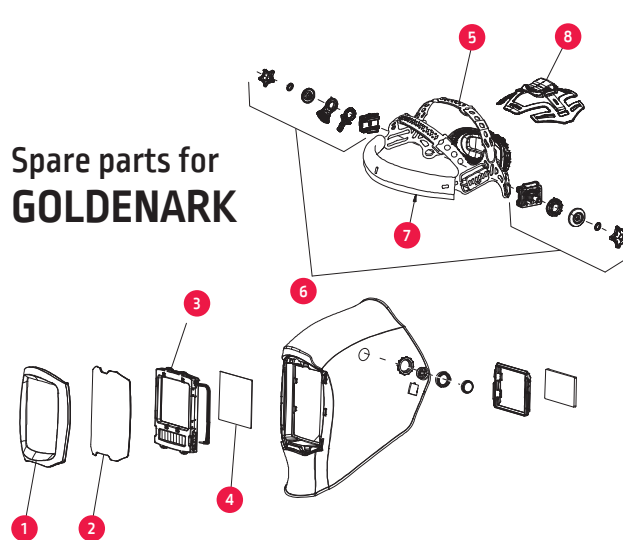
Spare parts for EUROLUX / CITOLUXE



EUROLUX 4500 / CITOLUXE 4500

To order	
1 - Front cover lens holder (Citoluxe)	W000272829
1 - Front cover lens holder (Eurolux)	W000261995
2 - Front cover lens	W000261993
3 - Gasket front cover lens	W000261992
4 - LCD cell	W000372462
5 - Inside cover lens	W000261994
6 - Helmet shell	On request
7 - Lens holder buttons (left & right)	W000261996
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - External grinding button kit	W000378989
11 - Spare batteries	W000260920

Spare parts for GOLDENARK



GOLDENARK

To order	
1 - Front cover lens holder	W000386520
2 - Front cover lens	W000386521
3 - LCD autodarkening cell	W000386522
4 - Inside cover lens	W000386528
5 - Headgear	W000386523
6 - Kit headgear adjust angle	W000386524
7 - Sweatband	W000386525
8 - Cushion top headgear	W000386526

ELECTRONIC HELMETS

WELDCAP

Welding has never been so comfortable.

◆ **Revolutionary wear comfort:**

WELDCAP® is an auto-darkening welder's helmet that brings together the comfort of a casual cap and the advantages of a full welding helmet. WELDCAP® weighs only 400 grams, so it is absolutely lightweight. The design eliminates pressure points and reduces strain on the welder's neck.

◆ **Very easy to take on and off:**

WELDCAP® stands for a swift handling. Thanks to its special shape, it is very easy to take on and off. It can easily be parked with the parking buddy. This also increases the productivity of the welder.

◆ **Improving welders' performance and safety:**

The heart of this innovative product is the optical unit featuring a well-defined nose cut out. Thereby the visual unit is placed closer to the eyes which enlarges the welder's line of sight. This increases the lateral and the horizontal fields of vision and helps the welder's performance and safety.



ULTRA LIGHT

WARRANTY
2
YEARS

◆ **Utmost protection and multi-purpose use:**

The textile part is robust, easily detached and made of washable flame retardant fabric. WELDCAP® is completely hygienic and classified for EN 379 and EN 175 F. Darkening levels from 9 to 12 cover the majority of welding applications and with a protection level 3 in its general mode, the welder has a bright and well-lit view of the work-place. This feature predestinates the WELDCAP® for grinding jobs as well.

◆ **Increased protection:**

The WELDCAP® BUMP version with an additional ergonomic protection offers increased protection while keeping optimal comfort.

**Protective shell
WELDCAP® BUMP**



	WELDCAP
Application range	All electric arc welding processes. All thermal cutting processes. Grinding.
Optical classification according to EN 379	1 / 1 / 2 / 2
Protection	UV/IR permanent
Shade (clear)	DIN 3
Shade (dark)	Variable DIN 9 to DIN 12
Switching time - Clear to dark	- 0.16 ms at room temperature - 0.11 ms at 55 °C
Switching time - Dark to clear	0.3 s
Weight	400 g
Power supply	2 lithium batteries 3 V exchangeable (CR2032)

To order	
WELDCAP®	W000385154
WELDCAP® BUMP	W000385155
Nose rest (set of 2 pcs)	W000385404
Battery cover (set of 2 pcs)	W000385405
Front cover lens (set of 5 pcs)	W000385406
Inside cover lens (set of 5 pcs)	W000385407
Parking buddy hook	W000385408
Replacement kit (textile + thermoplastic face protection)	W000385409
Replacement kit (textile + thermoplastic face protection) - BUMP version	W000385410





ELECTRONIC HELMETS

ZEPHYR / FLIP'AIR

The ultimate welder protection.

Discover a complete solution designed to protect welders in the most effective way.

With the ZEPHYR/FLIP'AIR solution, you will find in a rugged carry bag:

- ♦ The ZEPHYR or FLIP'AIR helmet,
- ♦ The ZEPHYR air flow system,
- ♦ A protected hose connection,
- ♦ A shoulder strap,
- ♦ A battery charger,
- ♦ An air flow-meter,
- ♦ One extra filter.

Helmet
with powered and
filtered airflow

Flip-up
LCD filter
for grinding

Grinding mode
with external
button



Autodarkening LCD filters with wide vision field. Advance 4500 / 4500 i

The top-of-the-range solution for any application:

4 adjustment modes from an LCD screen with digital keys:

- ♦ Welding: variable shades 4/9-13, 4 optical sensors, regulation of the sensitivity and return to a clear shade.
- ♦ Grinding: activation of the filter in clear shade level 4. *[Except on FLIP'AIR with its flip-up front filter].*
- ♦ Cutting, low current welding: adjustable shades 5 to 9 for low intensity TIG process, microplasma, oxy-fuel gas welding...
- ♦ "X mode": adjustable shade 4 to 9-13 with magnetic sensors for outside use or obscured arc welding...

Infotrack system: provides useful information *[current time - total welding time - alarm - temperature].*

WARRANTY
2
YEARS



ELECTRONIC HELMETS

	ZEPHYR Advance 4500	FLIP'AIR 4500 i
Optical class	1 / 1 / 1 / 2	
Switching time light to dark	0.05 ms	
Switching time dark to light	10 positions from 0.1 s to 1 s (setting per digital key)	
Delay setting	10 positions (setting per digital key)	
Mode	Welding Yes shade 9 to 13 per digital key Grinding Yes shade 4 (per external button) - For FLIP'AIR flip-up LCD for grinding Cutting Yes shade 5 to 9 per digital key X mode* Yes Infotrack system** Yes	
Sensors	4 independent optical sensors - Magnetic in «X» mode	
Viewing area	97 x 60 mm	
Constant UV/IR protection	Yes	
Battery type	2 lithium CR2450 3 Volts	
Mix power (battery/cell)	Yes	
Temperature scale	Use : -5 °C to +55 °C - Storage : -30 °C to +70 °C	
Weight	510 g (helmet + LCD filter)	
Standard	LCD filter: CE EN 379 - Helmet: CE EN 175	

* X-mode: this mode allows welding in outdoor conditions or with very low arc current

** Infotrack system: provides useful information (current time - total welding time - alarm - temperature)

To order		
Package (helmet + airflow system + LCD filter)	W000372468	W000372470
LCD filter	W000372462	W000372469

List of spare parts : see page 14



The ZEPHYR / FLIP'AIR air flow system

- ♦ Air flow system: **2 flow rates** (low 160 l/min and high 200 l/min).
- ♦ This equipment includes an indication of the **chosen flow**, an indication of the **battery charge**, and **two alarms** in case of flow insufficiency: **a tone and a vibration**. This is important for the welder who is often in a noisy environment. A specific system **sends the tone through the hose** to bring the sound to the welder.
- ♦ The belt, as well as the shoulder strap, is made in **flame retardant material**.
- ♦ The belt includes a cushion to ensure a high comfort level.
- ♦ **Disconnecting the battery is easy** with only one button to push. It is a **lithium battery with an 8-hour lifetime duration**. A stronger one can be put in place for special cases with **14-hour duration ±5%** (on request). No need to fully discharge the Li-Ion battery before recharging it.
- ♦ Opening the filter is simple by turning a quarter to the left. Two symbols indicate if it is locked or open, this is also indicated inside the filter box.

Inside, 3 kinds of filters can be included.

- ♦ One pre filter against the biggest particles
- ♦ One particle filter against the dust (> 0.3 micron)
- ♦ One carbon filter against the fumes and the odour.

The whole system is water proofed.



Hose connection and hose cap.

The connection between the flow system and the helmet is made via the hose. The connection with the air flow system is water proof. The helmet includes a quick connection allowing flexibility when the welder moves his head. The hose is protected with an outer covering (75% cotton, 25% Kevlar).



Flow circulation

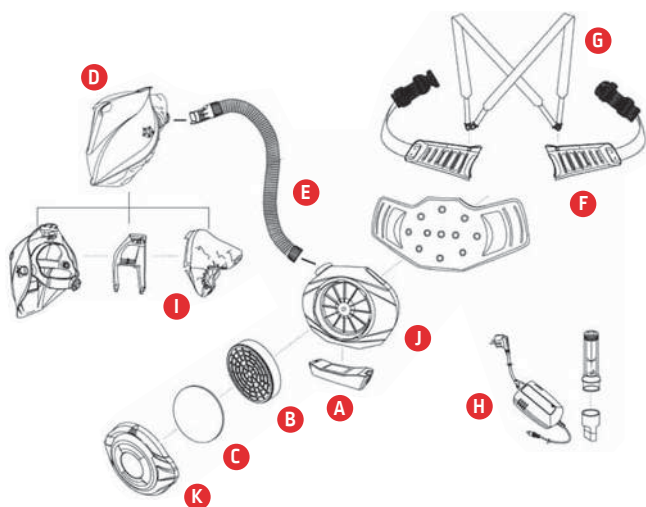
You can choose between:

- ♦ air flow from the top of the helmet **1**
 - ♦ or a lateral flow coming from each side at the mix level **2** (only for ZEPHYR),
 - ♦ or a mix of these two solutions.
- These features ensure excellent welder comfort.



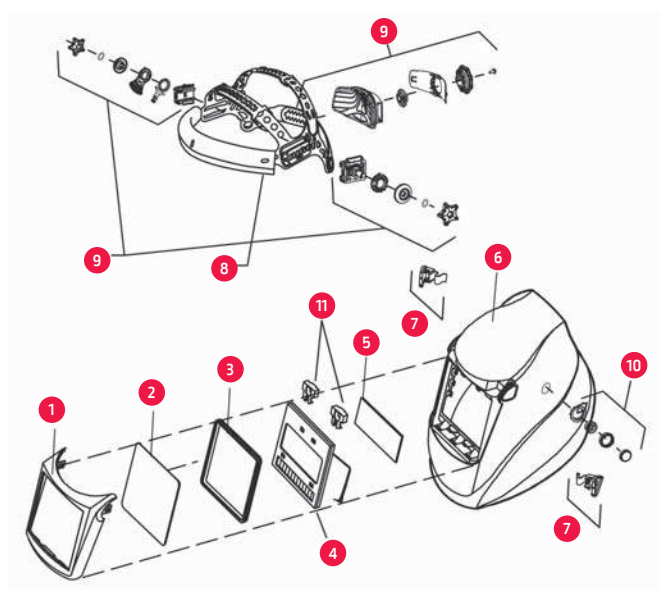
ELECTRONIC HELMETS

Spare parts for ZEPHYR / FLIP'AIR



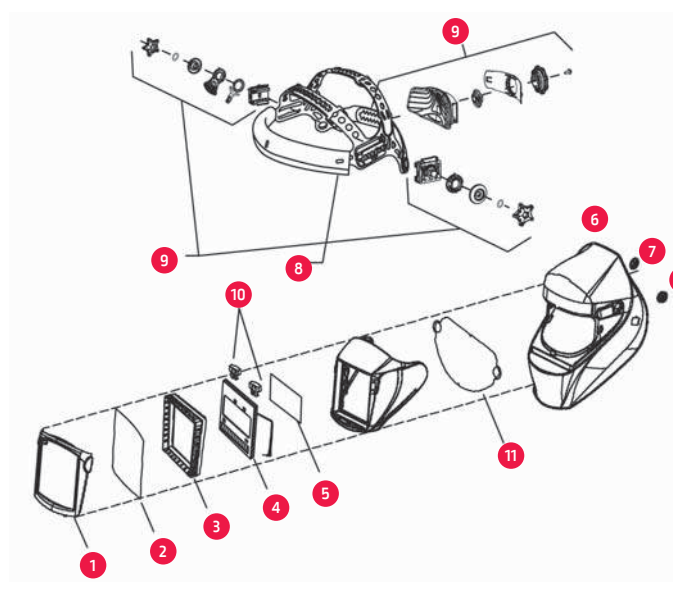
ZEPHYR air flow system

To order	
A 8 hours battery ($\pm 5\%$)	W000271210
A 14 hours battery ($\pm 5\%$)	W000274379
B Particle filter P3	W000271208
C Pre filter	W000271207
Carbon filter (odours filter)	W000271209
D ZEPHYR shell without lens	W000271212
E Hose 110 cm	W000271205
Hose protective cover	W000271206
F Comfort belt (size 70 - 113 cm)	W000271203
G Shoulder strap	W000271204
H Battery charger	W000271211
I Green protection ZEPHYR	W000272540
I Green protection FLIP'AIR	W000382676
J Motor	W000377929
K Filter cover	W000378987



ZEPHYR 4500

To order	
1 - Front cover lens holder	W000272828
2 - Front cover lens	W000261993
3 - Gasket front cover lens	W000261992
4 - LCD cell	W000372462
5 - Inside cover lens	W000261994
6 - Helmet shell	On request
7 - Lens holder buttons (left & right)	W000276258
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - External grinding button kit	W000378989
11 - Spare batteries	W000260920



FLIP'AIR

To order	
1 - Front cover lens holder	W000378990
2 - Front cover lens	W000375551
3 - Gasket front cover lens	W000382321
4 - LCD cell	W000372469
5 - Inside cover lens	W000261994
6 - Helmet shell	W000380263
7 - Lens holder buttons (left & right)	W000382922
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - Spare batteries	W000260920
11 - Grinding cover kit	W000374799

RESPIRATORY PROTECTION

CLEANSPACE2™

A major innovation in personal respiratory protection - a compact and lightweight power unit is cushioned around the back of the neck, counter-balancing the soft silicone low profile mask and providing fresh, clean air, on demand, as you breathe. This unique method of personal respiratory protection delivers significant benefits to workers in industry.



INNOVATION

- ◆ Ergonomic design: compact with no trailing leads, cables or hoses.
- ◆ Patented micro-turbine toroidal motor generates airflow up to 200L/min with only one moving part.
- ◆ Provides positive pressure inside the mask, with an inbuilt pressure sensor that adjusts the air-flow to prevent contamination.
- ◆ Breath activated On/Off operation.

COMFORT

- ◆ The soft silicone mask seals gently and easily to your face - available in three sizes, to maximise fit.
- ◆ The AirSensit™ System intelligently delivers air on demand, and in unison with your breathing.
- ◆ Compact and light, the respirator sits at the back of your neck and close to your body.

EASE OF USE

- ◆ Simple to fit and use.
- ◆ Changing filters is quick and intuitive.
- ◆ Easy to clean.
- ◆ Fast 2 hour charge.
- ◆ On a single charge up to 11 hours* operating time [*with CleanSpace2™ Endurance Pack].

RELIABLE PROTECTION

- ◆ Light silicone mask, ensures a good face seal for long periods.
- ◆ Robust, reliable micro-turbine motor (up to 10 years operating life).
- ◆ High efficiency pleated particulate filter will remove solid and liquid particles.

COMPATIBILITY

- Welding & Safety Helmets
- Goggles, Spectacles and Face Shields
- Hearing Protection



	CLEANSPACE2™
Comfort Air Flow Settings	3 levels
Maximum Air Flow	200 L/Min
Weight	Power Unit: 485G / Mask: 115 G
Audible Alarm At Ear	75 DB [A]
Life	Motor: 10 years / Battery: 3 years or 500 cycles
Automatic Switch-Off	3 minutes after idle
Internal Battery Duration	Min 4.5 hours (typically > 6 hours)
Internal Battery Charging Time	2 hours (to 95%)
Ac Adaptor Charger Input Range	100 – 240 V
Output Range	13.5 V

To order	
CLEANSPACE2™ respirator unit*	W000386837
Silicon mask small	W000386838
Silicon mask medium	W000386839
Silicon mask large	W000386840
Particle filter P3	W000386841
Pre filter P3	W000386842
Battery charger	W000386843
Head support	W000386844
Large protecting neck	W000386846
Thin protecting neck	W000386847
Adaptor for filter	W000400236
P3 particle high capacity filter	W000400233
Filter A1P3	W000400234
Filter ABE1P3	W000400235

* Composition: 1 power unit + 1 filter P3 + 1 charger + 2 protecting neck (thin & large) + 1 flow test cap + 1 storage bag + 1 harness

PASSIVE HANDSHIELDS

Light duty solutions

Hand TP

- ◆ Thermoplastic handshield.
- ◆ Medium resistance.
- ◆ Delivered without protection glass.
- ◆ Light weight: 332 gr.

Single window 108 x 51 mm

To order W000335125

Single window 98 x 75 mm

To order W000011121



2007-831

Heavy duty solutions

Hand FG

- ◆ Polyester reinforced fibreglass.
- ◆ Excellent resistance to high temperatures (up to 400 °C) and to spatters.
- ◆ UV/IR protection shade 11.
- ◆ Excellent thermal and electrical isolation.
- ◆ Delivered without glass.
- ◆ Weight: 424 gr (without glass).

Window 105 x 50 mm

To order W000372272

Window 110 x 90 mm

To order W000372273



2011-483

Hand FG (sliding window)

- ◆ Reinforced fibreglass.
- ◆ Delivered without glass.
- ◆ Weight: 424 gr.

Sliding window 110 x 90 mm

To order W000011123



2007-830

EARPLUG

EN 352

- ◆ Box of 500 pieces.
- ◆ Without strings.
- ◆ SNR 34 DB.

To order W000010989

Technical description

- ◆ Non-irritating and hypoallergenic foam coating.



PASSIVE HELMETS

Light duty solutions

Helmet TP

- ◆ Thermoplastic helmet.
- ◆ Single window 108 x 51 mm, 98 x 75 mm or 110 x 90 mm.
- ◆ Adjustable "B" headgear.
- ◆ Delivered without glass.
- ◆ Weight: 420 gr.

Window 110 x 90 mm

To order W000011113

Window 98 x 75 mm

To order W000011114



2007-833

Flip-up WTP helmet

- ◆ Thermoplastic helmet.
- ◆ Thermal resistance up to 100 °C.
- ◆ Adjustable "B" headgear.
- ◆ Delivered without glass.
- ◆ Light weight: 450 gr.



2011-481

Flip-up window 105 x 50 mm

To order W000372270

Flip-up window 110 x 90 mm

To order W000374762



PASSIVE HELMETS

Heavy duty solutions

Helmet FG

- ◆ Reinforced fibreglass.
- ◆ High thermal resistance up to 400 °C.
- ◆ Adjustable "B" headgear.
- ◆ Delivered without glass.
- ◆ Weight: 414 gr.

Window 105 x 50 mm

To order W000011103

Window 110 x 90 mm

To order W000011104



Flip-up helmet FG

- ◆ Reinforced fibreglass.
- ◆ High thermal resistance up to 400 °C.
- ◆ Adjustable "B" headgear.
- ◆ Delivered without glass.
- ◆ Weight: 574 gr.

Flip-up window
105 x 50 mm

To order W000372271



Multi Flip-up



- ◆ Lightweight welding helmet.
- ◆ Optimal use/comfort.
- ◆ Long lifetime.
- ◆ Headgear with rack, rugged and very comfortable.
- ◆ Complete with headgear, sweat band, 2 flip-up lensholder welding lens.
- ◆ Shade 10.

Flip-up window 105 x 50 mm

To order W000010804

Weldlux



- ◆ Enveloping profile providing excellent throat and neck protection.
- ◆ Fibreglass reinforced polyester.
- ◆ Heat (170 °C) and humidity resistant.
- ◆ Headgear with rack, rugged and very comfortable.
- ◆ Delivered with headgear and glass.
- ◆ Very light weight: 390 gr.

Extra wide
window 114 x 133 mm

To order W000335131

PASSIVE LEATHER HELMETS

Leather helmets for welding operations in difficult access places, dedicated to short time applications and control.

Folding leather helmet

- ◆ Grain leather.
- ◆ Folding model, ideal for supervisors.
- ◆ Very light (120 grammes).
- ◆ Delivered with 105 x 50 mm shade 11 glass.



2054-53

Window 105 x 50 mm

To order W000011115

Flip-up leather helmet

- ◆ Ideal to work in extremely restricted areas.
- ◆ Adjustable headgear.
- ◆ Comfort foam at the forehead and chin levels.
- ◆ Delivered with one 105 x 50 mm shade 11 glass and two CR39 protection screens.
- ◆ 250 g (without glass).



0254-55

Flip-up window
105 x 50 mm

To order W000011135

SPARE PARTS

Adjustable type "A" headgear

For WELDLUX helmets.



2007-817

To order W000335158

Leather protection for the neck

- ◆ Grain leather.
- ◆ Fixation with adhesive band.
- ◆ Protection of the neck against arc.



1196-022

To order W000335139

Sweat band

Foam band.



2010-951

To order W000260486
(10 pieces pack)

Adjustable type "B" headgear

For TP and FG helmets.



2007-818

To order W000010884

Comfort sweat band

- Foam band For WELDLUX helmet.
- ◆ Fabric band covered with foam.
- ◆ Velcro closing.
- ◆ Fire-retardant.



2244-077

To order Z00820115
(2 pieces pack)

WELDING GLASSES

WELDGLASS

Choose the lens shade adapted to your working conditions.

Clear glasses
EN 166
Coloured glasses
EN 169

Current (A)	Coated electrodes	MIG Heavy metals	MIG Light alloys	MAG	TIG	Gouging	PLASMA Cutting	PLASMA Welding
1								
2.5								6
5					8			7
10								8
20	8				9			9
30	9				10			10
40								11
60	10			9	11		11	12
80		10		10	12			
100			11	11		10		13
150	11	11	12	12	13	11	12	
175								
200	12	12	13	13	14	13	13	14
225								
250								
300								
350								
400								
450								
500								



2007-839



2007-840

WELDING GLASSES

WELDGLASS



EN 169 - EN 166

Filtering coloured glasses

DIMENSIONS 105 x 50 mm				
Skin pack		Shade		Box
5 pieces	W000335009	5	W000010915	100 pieces
5 pieces	W000335010	6	-	100 pieces
5 pieces	W000335011	7	W000010917	100 pieces
5 pieces	W000335012	8	W000010918	100 pieces
5 pieces	W000335013	9	W000010919	100 pieces
5 pieces	W000335014	10	W000010920	100 pieces
5 pieces	W000335015	11	W000010921	100 pieces
5 pieces	W000335016	12	W000010922	100 pieces
5 pieces	W000335017	13	W000010923	100 pieces

DIMENSIONS 98 x 75 mm				
Skin pack		Shade		Box
5 pieces	W000335089	5	W000010939	100 pieces
5 pieces	W000335090	6	W000010940	100 pieces
5 pieces	W000335091	7	W000010941	100 pieces
5 pieces	W000335092	8	W000010942	100 pieces
5 pieces	W000335093	9	W000010943	100 pieces
5 pieces	W000335094	10	W000010944	100 pieces
5 pieces	W000335095	11	W000010945	100 pieces
5 pieces	W000335096	12	W000010946	100 pieces
5 pieces	W000335097	13	W000010947	100 pieces

DIMENSIONS 110 x 90 mm				
Skin pack		Shade		Box
5 pieces	W000335035	5	W000010927	100 pieces
5 pieces	W000335036	6	W000010928	100 pieces
5 pieces	W000335037	7	-	100 pieces
5 pieces	W000335038	8	W000010930	100 pieces
5 pieces	W000335039	9	W000010931	100 pieces
5 pieces	W000335040	10	W000010932	100 pieces
5 pieces	W000335041	11	W000010933	100 pieces
5 pieces	W000335042	12	W000010934	100 pieces
5 pieces	W000335043	13	W000010935	100 pieces

DIMENSIONS 108 x 51 mm				
Skin pack		Shade		Box
5 pieces	W000335047	5	-	-
5 pieces	W000335048	6	W000010952	100 pieces
5 pieces	W000335049	7	W000010953	100 pieces
5 pieces	W000335050	8	W000010954	100 pieces
5 pieces	W000335051	9	W000010955	100 pieces
5 pieces	W000335052	10	W000010956	100 pieces
5 pieces	W000335053	11	W000010957	100 pieces
5 pieces	W000335054	12	W000010958	100 pieces
5 pieces	W000335055	13	-	-

SILVER protane® glasses

EN 169 - EN 166

Skin pack	Dimensions 105 x 50 mm	Shade	Dimensions 133 x 114 mm	Skin pack
5 pieces	W000335025	9	W000335063	5 pieces
5 pieces	W000335026	10	W000335064	5 pieces
5 pieces	W000335027	11	W000335065	5 pieces
5 pieces	W000335028	12	W000335066	5 pieces
5 pieces	W000335029	13	W000335067	5 pieces

The SILVER PROTANE® glasses will prove their efficiency in all welding operations where the arc heat causes discomfort. The SILVER PROTANE® filter with a gold mirror coating reflects an additional 90% of the infrared radiation and reduces the amount of heat the eyes are exposed to.

- less irritation and therefore less tiredness,
- more precision and better quality work,
- more comfort and better working conditions.

“Test SILVER PROTANE® and weld cool”.

Circular glasses diameter 50 mm

Shade	Skin pack - 10 pieces	Box - 100 pieces
5	W000335085	W000010925
6	W000335086	W000010937
7	W000335087	W000010949
8	W000335088	-
Clear	-	W000010979

Magnifying glass EN 166

Diopter	108 x 51 mm or 105 x 50 mm
+1.0	W000335031
+1.5	W000335032
+2.0	W000335033
+2.5	W000335034

For some precision welding, magnifying the work zone is necessary. These lenses must be used with coloured filtering glasses.



These magnifying glasses can be used with CHAMELEON, EUROLUX, CITOLUXE and GOLDENARK helmets (see pages 6 - 9).

Protection glass or plate CR-39®

EN 166

Dimensions	Clear glass [EN 166]		Protection plate CR-39® [EN 166]	
	Skin pack - 5 pieces	Box - 100 pieces	Skin pack - 5 pieces	Box - 150 pieces
98 x 75 mm	W000335098	W000010950	W000335100	W000335099
105 x 50 mm	W000335018	W000010926	W000335020	W000335019
108 x 51mm	W000335056	W000010962	W000335058	W000335057
110 x 90 mm	W000335044	W000010938	W000335046	W000335045
133 x 114 mm	W000335069	-	W000335071	W000335070

GOGGLES

Choice criteria

Goggles are mainly used to protect the eyes against the light produced by flame welding or cutting or against mechanical particles (*grinding for example*).

Our products are classified in 3 categories:

- ◆ Welding range
- ◆ Protection range
- ◆ Grinding masks

Marking of the frame:

- ◆ EN 166 standard
- ◆ Resistance to impact: → **A**: High energy impact
→ **B**: Medium energy impact
→ **F**: Low energy impact
→ **S**: Increased strength

Lens marking:

X - X.XXXXXX

Possibilities:

- **8**: Short circuit resistance
- **9**: Spatter resistance
- **K**: Abrasion resistance
- **N**: Mist resistance
- **T**: Temperature resistance from -5 °C to +55 °C

Usage (Optical class):

- **1**: Continuous use
- **2**: Medium use
- **3**: Occasional use

Manufacturer's identification

Filter identification code

- UV: **2** or **3**
- IR: **4**
- Sun: **5** or **6**
- Welding: **4** to **7**
(see chart)

Welding scale				
	q = acetylene flow rate l/h			
	q ≤ 70	70 < q ≤ 200	200 < q ≤ 800	q > 800
Flame welding Brazing and soldering	4	5	6	7
	q = acetylene flow rate l/h			
	900 ≤ q ≤ 2 000	2 000 < q ≤ 4 000	4 000 < q ≤ 8 000	
Oxy-cutting	4	6	7	

Resistance to impact:

- **A**: High energy impact
- **B**: Medium energy impact
- **F**: Low energy impact
- **S**: Increased strength

Numerical filter scale (protection level)

- UV: **1.2** to **5**
- Infrared (IR): **1.2** to **10**
- Sun filters: **1.1** to **4.1**
- Welding filters: **4** to **14**

Caution: Goggles can not be used for arc welding > 7 due to UV, IR and skin protection requirements.
(recommendations of welding filter glass can be seen on page 21)



Round replacement lenses for the PILOT range

Round lenses
in mineral glass
Ø 50 mm.

Shade	Skin pack - 10 pieces	Box - 100 pieces	
5	W000335085	W000010925	EN 166 + EN 169
6	W000335086	W000010937	EN 166 + EN 169
7	W000335087	W000010949	EN 166 + EN 169
8	W000335088	-	
Clear	-	W000010979	EN 166 + EN 169

GOGGLES / SPECTACLES

Welding range

PILOT FLIP UP

- ◆ Flip up lenses anti-scratch treated.
- ◆ Elastic headband.
- ◆ Indirect ventilation value.
- ◆ Weight: 137 g.



EN 175

2005-254

Shade 5

To order W000011046

PILOT 1

- ◆ One piece soft black PVC frame allowing quick lens replacement.
- ◆ Elastic headband.
- ◆ Aerated side covers honeycombed casing for good ventilation and to prevent from lens dimming.
- ◆ Weight: 60 g.



EN 166 - EN 169

2005-253

Shade 5

To order W000011047

Shade 6

To order W000011048

PILOT EVEREST

- ◆ Standard black spectacles with foldable polyamide side shields and frame.
- ◆ Central screw for quick lens replacement.
- ◆ Weight: 70 g.



1798-29

Shade 5

To order W000011053

PILOT 2 METAL

- ◆ Double cup metal frame with nose bridge adjustment.
- ◆ Adjustable elastic headband.
- ◆ Weight: 80 g.



EN 166 - EN 169

2005-252

Shade 5

To order W000011050

PILOT 2 PLASTIC

- ◆ Double cup black plastic frame with nose bridge adjustment.
- ◆ Side ventilation value.
- ◆ Adjustable elastic headband.
- ◆ Weight: 65 g.



EN 175

2005-253

Shade 5

To order W000011052

PILOT 1 PLASTIC

- ◆ One piece soft black PVC frame allowing quick lens replacement.
- ◆ Elastic headband.
- ◆ Aerated side covers honeycombed casing for good ventilation and to prevent from lens dimming.
- ◆ Weight: 60 g.



2008-755

Clear

To order W000011049

GOGGLES / SPECTACLES

Welding range

CLASSIC OVER WELDING

- ◆ Over spectacles.
- ◆ Polycarbonate.
- ◆ Lateral protection.
- ◆ Protection against high-speed particles - low energy.
- ◆ Protection against high-speed particles at extreme temperatures.
- ◆ Resistance to surface damage by fine particles.
- ◆ Weight: 37 g.



Shade 5

To order

W000383506

EN 166 - EN 167 - EN 168 -
EN 169 - EN 175

CLASSIC WELDING

- ◆ Anti-scratch surface.
- ◆ Nylon frame and side shields.
- ◆ Changeable polycarbonate lenses.
- ◆ Central screw for quick lens replacement.
- ◆ Weight: 35 g.



Shade 5

To order

W000011055

Box of 20 tinted
lenses (shade 5)

To order

W000376663

FASHION WELDING

- ◆ Spectacles.
- ◆ Polycarbonate.
- ◆ Protection against high-speed particles - low energy.
- ◆ Protection against high-speed particles at extreme temperatures.
- ◆ Resistance to fogging of oculars.
- ◆ Resistance to surface damage by fine particles.
- ◆ Weight: 31 g.



Shade 5

To order

W000383505

Protection range

CLASSIC OVER VISIT

EN 166

- ◆ Panoramic spectacles also usable as over spectacles.
- ◆ Polycarbonate lens and frame.
- ◆ Protection against high-speed particles - low energy.
- ◆ Protection against high-speed particles at extreme temperatures.
- ◆ Resistance to surface damage by fine particles.
- ◆ Weight: 37 g.



Clear

To order

W000383507

CLASSIC VISIT CLEAR

- ◆ Anti-scratch surface.
- ◆ Nylon frame and side shields.
- ◆ Changeable polycarbonate lenses.
- ◆ Central screw for quick lens replacement.
- ◆ Weight: 35 g.



Clear

To order

W000011057

Box of 20
transparent lenses

To order

W000376662

GOGGLES / SPECTACLES

Protection range

FASHION VISIT

- ◆ Impact resistant.
- ◆ Polycarbonate single lens.
- ◆ Sports and ergonomic design.
- ◆ Weight: 22 g.

Clear

To order

W000011062



2014-575

EN 166



Grinding masks

FIRST

- ◆ Anti-scratch polycarbonate lens.
- ◆ Direct ventilation.
- ◆ Adjustable elastic headband.
- ◆ Weight: 75 g.

Clear

To order

W000011068



2005-264

EN 166

STAR

- ◆ Anti-scratch and anti-mist treated with adjustable elastic headband.
- ◆ Soft foam for better adherence to the user's face.
- ◆ Weight: 55 g.

Clear

To order

W000011070



2005-265

OVER



2004-962

- ◆ 180° field of vision.
- ◆ Durable and adjustable elastic headband.
- ◆ Indirect ventilation.
- ◆ Anti-mist and anti-scratch treated and wearable as over spectacles or with a respiratory mask.
- ◆ Weight: 85 g.

Clear

To order

W000011069

LEATHER CLOTHES

Reminder:

EEC directive 89/686 is mandatory with the compliance to **EN 13588** and **EN 11611** standards for welder's protective equipment.

About Weldline clothes:

- ◆ The best quality leather only is selected by our experts.
- ◆ No dangerous substances for skin.

Gaiters

EN 13588 - EN 11611

Gaiters are used to protect the bottom of the trousers and shoes from sparks and heat generated during welding or grinding operations.

Technical description

- ◆ Natural split leather tanned with chromium salts [mineral substances].
- ◆ The gaiters are manufactured in four pieces that are stitched together, completed with adjustable leather belt or velcro strap and under-strap to secure the shoes.

Protective limits

- ◆ Due to the presence of the securing straps, the gaiters should not be worn when using machinery with moving or rotating parts, without additional protection.
- ◆ The gaiters are not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The gaiters are not meant for any other type of protection than the use described above. The manufacturer will not be held responsible for any damages that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean, use soap and water with a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, [perchloride ethylmeme] tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.



Leather belt

To order W000010590

Velcro belt

To order W000010591

Standards

- ◆ Gaiters are designed and manufactured to meet the basic health and safety requirements prescribed by EEC directive 89/686 of Decree Law 475/92 and to comply with the requirements prescribed by EN 13588 Standards, related to general requirements, and EN 11611 standards related to protective equipment for welders and similar activities.
- ◆ When worn correctly, the gaiters do not impede normal welding activities, quality and performance are guaranteed and maintained according to the instructions supplied. Protection category II [in accordance with Decree Law 475/92].



LEATHER CLOTHES

Short and long sleeves

The short and long sleeves in split leather are intended to protect arms from fine welding spatters.



Length: +/- 400 mm

To order

W000010592

2005-127



Length: +/- 650 mm

To order

W000010593

2005-128

Technical description

- ◆ Entirely in split leather tanned with chromium salts (*mineral substances*).
- ◆ Fixed with leather straps.
- ◆ Tightening elastic to the wrists.
- ◆ Single size.

Protective limits

- ◆ Due to the presence of the securing straps the sleeves should not be worn when using machinery with moving or rotating parts, without additional protection.
- ◆ The sleeves are not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The sleeves are not meant for any other type of protection than the use described above. The manufacturer will not be held responsible for any damage that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean use soap and water to a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, (*perchloride enthymeme*) tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.

Standards

- ◆ These welder sleeves constitute an EAR category 2.
- ◆ These sleeves were designed to comply with the following European standards:
 - **EN 13688:** Protective clothing - General requirements,
 - **EN 11611:** Protective clothing used during welding and related processes.

> Mechanical tests:

- thickness: conform,
- dimensional variation: conform,
- breaking strength: conform,
- tensile strength: conform.

> Chemical tests:

- fat content rate: conform.

> Thermal tests:

- inflammability: conform,
- withdrawal to heat,
- behavioural contact with small spatter: conform.

- ◆ These sleeves have been examined by a competent CE organisation.
- ◆ The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.



LEATHER CLOTHES

Grain leather apron

This apron is designed to protect clothes from welding spatters and grinding particles.

Technical description

- ◆ Protective welding apron in premium grade grain leather tanned with chromium salts (*mineral substances*).
- ◆ Leather strap fixed through bound eyelets to the waist and flap.
- ◆ Single size.

Protective limits

- ◆ Due to the presence of the securing straps, the apron should not be worn when using machinery with moving or rotating parts, without additional protection.
- ◆ The apron is not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The apron is not meant for any other type of protection than the use described above. The manufacturer will not be held responsible for any damage that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean use soap and water to a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, (*perchloride ethylene*) tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.

Standards

- ◆ This welding apron is an EAR category 2.
- ◆ This apron was designed to comply with the following European standards:
 - **EN 13688:** Protective clothing - General requirements,
 - **EN 11611:** Protective clothing used during welding and related processes.
 - > **Mechanical tests:**
 - thickness: conform,
 - dimensional variation: conform,
 - breaking strength: conform,
 - tensile strength: conform.
 - > **Chemical tests:**
 - fat content rate: conform.
 - > **Thermal tests:**
 - inflammability: conform,
 - withdrawal to heat,
 - behavioural contact with small spatter: conform.
- ◆ These aprons have been examined by a competent CE organisation.
- ◆ The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.



1100 x 800 mm

- ◆ Length: 1100 mm.
- ◆ Width: 800 mm.

Leather straps

To order W000010588

LEATHER CLOTHES

Split leather
apron

This apron is designed to protect
clothes from welding spatters
and grinding particles.

900 x 600 mm

- ◆ Length: 900 mm.
- ◆ Width: 600 mm.

Leather straps,
closing by clips

To order W000010586

Cotton straps

To order W000010585

Cotton straps vegetable
tanning: without
chromium salts

To order W000010589

1 100 x 800 mm

- ◆ Length: 1 100 mm.
- ◆ Width: 900 mm.

Leather straps,
closing by clips

To order W000010587

Technical description

- ◆ Protective welding apron in premium grade split leather tanned with chromium salts (*mineral substances*), except **W000010589**.
- ◆ Leather or cotton strap with quick release clips to the waist and flap.

Protective limits

- ◆ Due to the presence of the securing straps the apron should not be worn when using machinery with moving or rotating parts, without additional protection.
- ◆ The apron is not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The apron is not meant for any other type of protection than the use described above. The manufacturer will not be held responsible for any damage that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean use soap and water to a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, (*perchloride enthymeme*) tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.

Standards

- ◆ This welding apron is an EAR category 2.
- ◆ This apron was designed to comply with the following European standards:
 - ◆ **EN 13688**: Protective clothing - General requirements,

- ◆ **EN 11611**: Protective clothing used during welding and related processes.

> Mechanical tests:

- thickness: conform,
- dimensional variation: conform,
- breaking strength: conform,
- tensile strength: conform.

> Chemical tests:

- fat content rate: conform.

> Thermal tests:

- inflammability: conform,
- withdrawal to heat,
- behavioural contact with small spatter: conform.

- ◆ These aprons have been examined by a competent CE organisation.
- ◆ The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.



2002-057



LEATHER CLOTHES

Split leather welding jacket

These jackets are designed to protect the upper body of the user from fine welding spatters and grinding particles.



Size XL

To order W000010594

Size XXL

To order W000010595

Technical description

- ◆ The complete jackets are manufactured in premium grade split leather tanned with chromium salts (*mineral substances*).
- ◆ The jacket fastens in the front with an overlap of leather and Velcro for additional protection against spatters, the inner neck is made of double cotton for comfort.
- ◆ Tightening elastic to the wrists.
- ◆ Finished in red trim.
- ◆ Length: +/- 780 mm.
- ◆ Available sizes: XL and XXL (*other sizes on demand*).

Protective limits

- ◆ The jackets are not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The jackets are not meant for any other type of protection than that usage describe above. The manufacturer will not be held responsible for any damage that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean use soap and water with a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, (*perchloride enthymeme*) tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.

Standards

- ◆ These welding jackets are an EAR category 2.
- ◆ These jackets are designed to comply with the following European standards:
 - **EN 13688:** Protective clothing - General requirements,
 - **EN 11611:** Protective clothing used during welding and related processes.
 - > **Mechanical tests:**
 - thickness: conform,
 - dimensional variation: conform,
 - breaking strength: conform,
 - tensile strength: conform.
 - > **Chemical tests:**
 - fat content rate: conform.
 - > **Thermal tests:**
 - inflammability: conform,
 - withdrawal to heat,
 - behavioural contact with small spatter: conform.
- ◆ These jackets have been examined by a competent CE organisation.
- ◆ The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.



LEATHER CLOTHES

Welding grain leather jacket

Half-back flame-retardant cotton

These jackets are designed to protect the upper body of the user from fine welding spatters and grinding particles. The design gives a light, breathable, flexible and comfortable jacket.

Technical description

- ◆ The complete jacket is manufactured in premium grade grain leather tanned with chromium salts (*mineral substances*).
- ◆ Half of the back is made from flame retardant cotton ensuring a light, flexible Jacket.
- ◆ The jacket fastens in the front with an overlap of leather and Velcro for additional protection against spatters, the inner neck is made of double cotton for comfort.
- ◆ Tightening elastic to the wrists.
- ◆ Finished in red trim.
- ◆ Length: +/- 780 mm.
- ◆ Available sizes: XL and XXL (*other sizes on demand*).

Protective limits

- ◆ The jackets are not heat resistant and should not be exposed either to convective or radiated heat sources.
- ◆ The jackets are not meant for any other type of protection than the use described above. The manufacturer will not be held responsible for any damage that could occur from such practices.

Maintenance and storage

- ◆ Recommended storage: a safe dry well ventilated area that is not exposed to direct light.
- ◆ To clean use soap and water with a maximum temperature of 60 °C.
- ◆ Do not use any type of bleach, dry clean, (*perchloride enthymeme*) tumble driers or sharp and abrasive cleaning products.
- ◆ Maximum 30 wash cycles.

Standards

- ◆ These welding jackets are an EAR category 2.
- ◆ These jackets are designed to comply with the following European standards:
 - ◆ **EN 13688:** Protective clothing - General requirements,
 - ◆ **EN 11611:** Protective clothing used during welding and related processes.
 - > **Mechanical tests:**
 - thickness: conform,
 - dimensional variation: conform,
 - breaking strength: conform,
 - tensile strength: conform.
 - > **Chemical tests:**
 - fat content rate: conform.
 - > **Thermal tests:**
 - inflammability: conform,
 - withdrawal to heat,
 - behavioural contact with small spatter: conform.
- ◆ These Jackets have been examined by a competent CE organisation.
- ◆ The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.



Size XL

To order W000010596

Size XXL

To order W000010598

SAFETY SHOES FOR WELDING

WELDLINE safety shoes

- ◆ Our safety shoes always include a toe protection (in steel or in other material with a resistance > 200J).
- ◆ The European directive 89/686/EEC recommends the wearing of safety shoes for workers.
- ◆ Weldline proposes products with toe protection only (>200 J) that can be in steel, aluminium or in fiberplast and with an antipuncture plate in steel or in fibre textile.

- ◆ The standard EN ISO 20345 includes several levels.

Safety level	Toe protection	Shock absorber	Antistatic plate	Antipuncture plate	Water resistant
SPB	✓			✓	
S1	✓	✓	✓		
S2	✓	✓	✓		✓
S1P	✓	✓	✓	✓	
S3	✓	✓	✓	✓	✓

The criteria of choice are:

- 1 - Levels of protection as indicated above
- 2 - High or low shoes
- 3 - Upper in:
 - ◆ full-grain leather (water resistant),
 - ◆ split leather,
 - ◆ fabric (non water resistant),
 - ◆ pigmented split leather.
- 4 - Outsole:
 - ◆ PU+PU (dual density polyurethane lightweight),
 - ◆ PU+TPU (lightness and flexibility + more strength of the thermoplastic polyurethane),
 - ◆ PU + nitrile rubber for extreme temperatures (up to 300 °C).
- 5 - Antipuncture midsole:
 - ◆ in steel,
 - ◆ non metallic for more comfort.
- 6 - Toe protection:
 - ◆ steel,
 - ◆ aluminium (30% lighter),
 - ◆ fiberplast (extra lightweight).

SUPER FORJA



Safety level	Toe protection	Antipuncture plate	Outsole	Upper
S3	Steel	Steel	PU/PU	Full-grain leather

- ◆ The best performance for a reasonable price, fulfilling the most stringent safety footwear technical regulations and quality controls.
- ◆ Extra thick, antispark, waterproof leather.
- ◆ Resistant, agile, comfortable and safe footwear.
- ◆ Ergonomic last and Shock Absorber outsole.
- ◆ Anti-static sole.
- ◆ Extra padded collar for additional comfort.
- ◆ Very breathable lining, resistant to abrasion and wear and tear.

Size	To order
36	W000376225*
37	W000376226*
38	W000376229*
39	W000376230*
40	W000376231
41	W000376232
42	W000376233
43	W000376234
44	W000376235
45	W000376236
46	W000376237*
47	W000376238*
48	W000376239*

*On demand

SUPER FORJA METAL FREE



Safety level	Toe protection	Antipuncture plate	Outsole	Upper
S3	Plastic	Non metallic	PU/PU	Full-grain leather

- ◆ The best performance at reasonable price, always complying with all technical requirements and the toughest quality control.
- ◆ Extra thick, anti-sparking and waterproof leather.
- ◆ Tough, agile, comfortable and secure.
- ◆ Ergonomic last and shock absorber sole.
- ◆ Ant-static insole.
- ◆ Very lightweight, resistant and durable.
- ◆ Padded anti-friction collar.
- ◆ Extra breathable and resistant lining.

Size	To order
36	W000376200*
37	W000376201*
38	W000376202*
39	W000376203*
40	W000376204
41	W000376206
42	W000376215
43	W000376216
44	W000376217
45	W000376218
46	W000376219*
47	W000376220*
48	W000376221*

*On demand

SAFETY SHOES FOR WELDING

ULYSSE TOTALE



Safety level	Toe protection	Antipuncture plate	Outsole	Upper
S3	Steel	Non metallic	PU/Nitrile rubber	Full-grain leather

- ◆ The over-sized exterior flap provides extra protection against small splashes of molten metal.
- ◆ Top-quality full-grain leather, extra thick, waterproof.
- ◆ Anti-torsion outsole, resistant to oils and hydrocarbons.
- ◆ Extraordinary strength and durability.
- ◆ Especially wide last, does not restrict foot.
- ◆ Extra padding for additional comfort.
- ◆ Extra resistant and long-lasting.
- ◆ Anti-static sole.
- ◆ Very breathable lining, resistant to wear and tear.
- ◆ Anti-heat sole.

Size	To order
36	W000376253*
37	W000376254*
38	W000376255*
39	W000376256*
40	W000376257
41	W000376258
42	W000376259
43	W000376260
44	W000376261
45	W000376262
46	W000376263*
47	W000376264*
48	W000376265*

*On demand

FUSION TOTALE



Safety level	Toe protection	Antipuncture plate	Outsole	Upper
S3	Steel	Non metallic	PU/Nitrile rubber	Full-grain leather

- ◆ The over-sized exterior flap provides extra protection against small splashes of molten metal.
- ◆ Top-quality full-grain leather, extra thick, waterproof.
- ◆ Anti-torsion outsole, resistant to oils and hydrocarbons.
- ◆ Extraordinary strength and durability.
- ◆ Especially wide last, does not restrict foot.
- ◆ Extra padding for additional comfort.
- ◆ Extra resistant and long-lasting.
- ◆ Anti-static sole.
- ◆ Very breathable lining, resistant to wear and tear.
- ◆ Anti-heat sole.

Size	To order
36	W000376240*
37	W000376241*
38	W000376242*
39	W000376243*
40	W000376244
41	W000376245
42	W000376246
43	W000376247
44	W000376248
45	W000376249
46	W000376250*
47	W000376251*
48	W000376252*

*On demand

GLOVES

Choice criteria

Split leather or grain leather ?

- ◆ Split leather = heat resistant, comfort & protection

for MMA & MIG/MAG applications

Which gloves ?

General applications



LONG BASIC



LONG BASIC +



UNIVERSEL

Heat resistant, doubled fabric



STOPCALOR



STOPCALOR +



STOPCALOR ALU

- ◆ Grain leather = flexibility, dexterity

for TIG applications

Which gloves ?



TIG



European standard for gloves and welding gloves

EN 420

General requirements for gloves: safety, comfort, dexterity

- ◆ All the gloves meet European standards and carry the CE marking that indicates conformity to these standards.
- ◆ The pictograms indicate that an approved laboratory has tested the gloves, ensuring they are conform to CE.
- ◆ The welding gloves have to be conform to two specific standards added to the EN 420: the EN 388 and the EN 407.

For each criteria, the higher the figure is, the more efficient the glove is deemed. "X" indicates that a particular glove has not been tested within the criteria.

EN 388

Mechanical hazards



- A: Abrasion [0-4]
- B: Blade cut [0-5]
- C: Tear [0-4]
- D: Puncture [0-4]

EN 407

Heat resistance



- A: Flammability [0-4]
- B: Contact heat [0-4]
- C: Convective heat [0-4]
- D: Radiant heat [0-4]
- E: Small splashes of molten metal [0-4]
- F: Large splashes of molten metal [0-4]

EN 12477

Welding gloves



- A: Abrasion [0-4]
- B: Blade cut [0-5]
- C: Tear [0-4]
- D: Puncture [0-4]



- A: Flammability [0-4]
- B: Contact heat [0-4]
- C: Convective heat [0-4]
- E: Vertical electric resistance test [0-4]

WELDING GLOVES

LONG BASIC

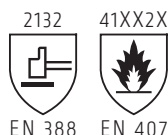
The **LONG BASIC** welding gloves are designed to protect the hands during normal welding applications in MMA/MIG/MAG processes and infrequent handling of component parts not exceeding **100 °C**.

Technical description

- ◆ American cut with webbed thumb and return on index.
- ◆ Palm and thumb in natural split leather to protect from the heat.
- ◆ Reinforcement in split leather of the seams on top of the thumb and the base of the finger backs.
- ◆ Cuff in natural split leather, length 150 mm (+/- 5 mm) and a thickness of 1.3 mm.
- ◆ Overall length of the glove: approximately 350 mm [size 10] +/- 5 mm.
- ◆ Seams in para-aramide wire [flame retardant and projectile resistant].
- ◆ Finished in red edge trim.
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.



EN 420 - EN 388 - EN 407

To order W000380517

Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.

LONG BASIC +

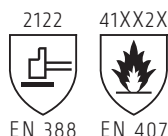
The **LONG BASIC +** welding gloves are designed to protect the hands during normal welding applications in MMA/MIG/MAG processes and infrequent handling of component parts not exceeding **100 °C**.

Technical description

- ◆ American cut with webbed thumb and return on index.
- ◆ Palm and thumb in natural split leather.
- ◆ Reinforcement of the blue split leather glove for added protection of the palm thumb and index finger.
- ◆ Reinforcement in split leather of the seams on top of the thumb and on the base of the finger backs.
- ◆ Cuff in natural split leather, length 150 mm (+/- 5 mm) and a thickness of 1.3 mm.
- ◆ Overall length of the glove: approximately 350 mm [size 10] +/- 5 mm.
- ◆ Seams in para-aramide wire [flame retardant and projectile resistant].
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.



EN 420 - EN 388 - EN 407

To order W000382262

Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.

WELDING GLOVES

UNIVERSEL

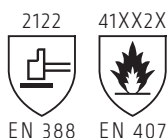
The UNIVERSEL welding gloves are designed to protect the hands during normal welding applications in MMA/MIG/MAG/TIG processes and have a grain leather palm for extra sensitivity.

Technical description

- ◆ American cut with webbed thumb and return on index.
- ◆ Palm index finger and inner of the thumb in natural grain leather for extra sensitivity.
- ◆ Reinforcement in grain leather of the seams on top of the thumb and on the base of the finger backs.
- ◆ Glove rear and cuff are made of natural split leather, length 150 mm (± 5 mm) and a thickness of 1.3 mm.
- ◆ Artery protection in grain leather.
- ◆ Overall length of the glove: approximately 350 mm (size 10) ± 5 mm.
- ◆ Seams in para-aramide wire (flame retardant and projectile resistant).
- ◆ Finished in red edge trim.
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.



EN 420 - EN 388 - EN 407

To order W000380518

Limits of protection

- ◆ Do not use to handle objects over 50 °C.
- ◆ Do not use to handle any chemicals.

STOPCALOR

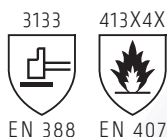
The STOPCALOR welding gloves are designed for a high level of protection of the hands during normal welding applications in MMA/MIG/MAG processes and handling of component parts not exceeding 100 °C.

Technical description

- ◆ American cut with webbed thumb.
- ◆ In split leather red colour, the glove is flame retardant treated and 1.3 mm thick (± 0.2 mm).
- ◆ Seams in para-aramide wire (flame retardant and projectile resistant) and reinforced by split leather.
- ◆ Back being one complete piece.
- ◆ Cuff of 145 mm (± 5 mm) with doubled fabric.
- ◆ Overall length of the glove: approximately 350 mm (size 10) ± 5 mm.
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.



EN 420 - EN 388 - EN 12477-A

To order W000380511

Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.

WELDING GLOVES

STOPCALOR +

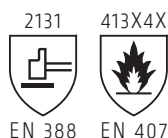
The STOPCALOR + welding gloves are designed for a high level of protection of the hands during normal welding applications in MMA/MIG/MAG processes and handling of component parts not exceeding **100 °C**. The natural grain leather palm gives extra sensitivity.

Technical description

- ◆ American cut with webbed thumb.
- ◆ Glove back and cuff in blue colour split leather 1.2 mm thick (+/- 0.2 mm) to abrasion resistance.
- ◆ Palm in natural grain leather for extra flexibility.
- ◆ Seams in cotton wire.
- ◆ Back being one complete piece.
- ◆ Cuff of 145 mm (+/- 5 mm) with doubled fabric.
- ◆ Overall length of the glove: approximately 350 mm (size 10) +/- 5 mm.
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 3.



Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.

STOPCALOR ALU

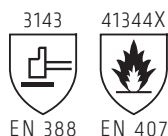
The STOPCALOR ALU welding gloves are designed for a high level of protection of the hands during heavy welding applications in MIG/MAG processes and handling of component parts not exceeding **100 °C**.

Technical description

- ◆ American cut with webbed thumb.
- ◆ Palm in red split leather flame retardant treated and double stitched in cotton tanned with chorium salts (mineral substances).
- ◆ Inside cuff in natural split leather and double stitched in cotton.
- ◆ Outside cuff and back of hand in one single piece of Kevlar fabric with one scraped face and one aluminised face. Doubled stitched with cotton reinforced with aluminised fabric.
- ◆ Seams in para-aramide wire (flame retardant and projectile resistant) and reinforced by split leather.
- ◆ Cuff of 145 mm (+/- 5 mm) with doubled fabric.
- ◆ Overall length of the glove: approximately 355 mm (size 10) (+/- 5 mm).
- ◆ Finished in red edge trim.
- ◆ Available size: 10.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 3.



Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.

WELDING GLOVES

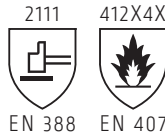
TIG

The favorite gloves of TIG welders.

The TIG welding gloves are designed to give a high level of dexterity and flexibility for normal welding applications in TIG/Flame processes.

Technical description

- ◆ Lamb skin glove.
- ◆ American cut with webbed thumb and return on index finger.
- ◆ Complete hand in natural grain leather to give more control and more movement while working.
- ◆ Cuff in natural cow split leather - Cuff 145 mm (+/- 5 mm).
- ◆ Seams in para-aramide wire (flame retardant and projectile resistant) and reinforced by split leather.
- ◆ Overall length of the glove: approximately 360 mm (size 10) (+/- 5 mm).
- ◆ Very comfortable and light weight !
- ◆ Excellent movement to get precise welds made with a TIG torch.
- ◆ Available size: 9 and 10.



Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.

Limits of protection

- ◆ Do not use to handle objects over 100 °C.
- ◆ Do not use to handle any chemicals.



Size 9

To order W000380519

Size 10

To order W000380520

2014-611

PROTECTIVE GLOVES

DOCKER

The DOCKER protective gloves are designed in a high quality with reinforced fingers for an increased life span.

Technical description

- ◆ DOCKER protective handling gloves.
- ◆ Palm in grain leather tanned with chorium salts (mineral substances).
- ◆ Cotton back.
- ◆ Fabric cuff.
- ◆ Elastic tightening glove back.

Standards and levels of protection

- ◆ These gloves have been examined by a competent CE organisation.
- ◆ Safety comfort and dexterity level = 5.

Limits of protection

- ◆ For use in a dry environment against mechanical risks.



To order W000381386



EN 388 - EN 420

2009-007

Accessories: Thermal screen

MIG/MAG and MMA welding processes.

Thermal protection added to a glove.

- ◆ Dimensions 200 x 150 mm.
- ◆ Fitted with two elastic straps at palm and cuff level.
- ◆ Split leather lined with Kevlar. Heat and flame resistant.
- ◆ One aluminized side reflects 95% of radiant heat.
- ◆ Double Kevlar thread seams.
- ◆ Delivered by 2 pieces.

EN 532

To order W000335162



1196-65

PROTECTIVE CLOTHES

WELDCOT 2

Comfort, lightness and high level of safety.
Last technology for heat protection combining
lightweight, high functionality and design.

New fiber:
Modacrylic



Flame retardant clothes

Composition: 60% Modacrylic, 38% cotton, 2% antistatic fiber.

Fabric Weight: 250 g/m2

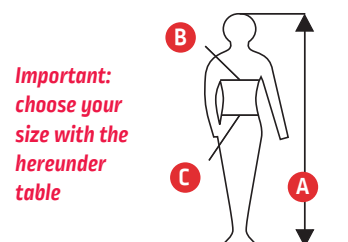
Conformity to standards:

- ♦ EN ISO 11612: 2008 - protective clothing for workers exposed to heat and flames *(not including welders and firefighters)* with performances (A1-B1-C1)
- ♦ IEC 61482-2: 2009 - Class 1 - Protective clothing against the thermal hazards of an electric arc
- ♦ EN ISO 11611: 2007 - Class 1 - A1 - protective clothing for use in welding and allied processes
- ♦ EN 1149-5: 2008 - protective clothing - Electrostatic properties.



Notified organisation - Control of production

BTTG - Notified Body - N° 0339



Important:
choose your
size with the
hereunder
table

Size	1 - Trousers	2 - Jacket	3 - Overall	4 - Coat	5 - Hood
S	W000372262	W000372268	W000372248	W000372242	W000372256
M	W000372261	W000372267	W000372249	W000372243	W000372255
L	W000372260	W000372266	W000372253	W000372244	W000372254
XL	W000372259	W000372265	W000372252	W000372245	-
XXL	W000372258	W000372264	W000372251	W000372246	-
XXXL	W000372257	W000372263	W000372250	W000372247	-

EU size		A	B	C
S	46	170-176	88-92	76-80
M	48	176-182	92-96	80-84
M	50	176-182	96-100	84-88
L	52	176-182	100-104	88-92
L	54	182-188	104-108	92-96
XL	56	182-188	108-112	96-100
XL	58	182-188	112-116	100-104
XXL	60	188-194	116-120	104-108
XXL	62	188-194	120-124	108-112
XXXL	64	188-194	124-128	112-116

2 GENERAL ARC WELDING

WELDING TOOLS AND ACCESSORIES

◆ Cables and connectors	42 to 43
◆ Clamps.....	44 to 45
◆ Magnetic ground clamps	46 to 47
◆ Hammers / brushes	48
◆ Tools.....	49
◆ Accessories / Markers.....	50

CABLES AND CONNECTORS



The different types of cable

Primary cables:

Three core for single phase or four core for three phase requirement.
The current indication is the maximum accepted to be conform to the 287 IEC recommendation.

Standard: H07RN-F

Secondary cables:

A single copper core between the power source and the clamp as well as between the power source and the electrode holder. The current indication is the maximum accepted to be conform to the 287 IEC recommendation.

For length over 10 meters, the section has to be increased.

For secondary cables, the European directive (2006/95/EC-low voltage directive) imposes the conformity to one of these two standards. It means that, for safety reasons (resistance to welding hot projections), PVC cables must not be used as welding cables, because they do not meet the standards' requirements.

**Standard: H01N2-E
extra flexible**

**Standard: H01N2-D
flexible**

Reference documents:


- H07RN-F standard for primary cables
- H01N2-E and H01N2-D standards for secondary cables
- Harmonized standard CENELEC HD 516 S2: 1997 / HD 22.6
- § 4.4.5 Document change through amendment A1: 2003
- Communication in the framework [01/02/2005] of the low voltage directive





Primary cables

H07RN-F

	A maxi *	To order Linear meter
3 x 1.5 mm ²	16 A	W000010098
3 x 2.5 mm ²	20 A	W000010099
4 x 2.5 mm ²	20 A	W000010100
4 x 4 mm ²	30 A	W000010101
4 x 6 mm ²	37 A	W000010102
4 x 10 mm ²	52 A	W000010103
4 x 16 mm ²	69 A	W000010104
4 x 25 mm ²	92 A	W000010105
4 x 35 mm ²	114 A	W000010106


* According EN 50565-1 (2014) - For a 60 °C temperature f the core and an ambient temperature: 30 °C

Cable connectors DINSE type

Push and twist design




EN 60974-12

Description		A maxi *	To order Linear meter
1 - Male	10-25 mm ²	200 A	W000010559
	35-50 mm ²	400 A	W000010560
	70-95 mm ²	600 A	W000010561
2 - Female	10-25 mm ²	200 A	W000010562
	35-50 mm ²	400 A	W000010563
	70-95 mm ²	600 A	W000010564
Male + Female	35-95 mm ²	600 A	W000010641

Secondary cables

Extra flexible (H01N2-E) - Flexible (H01N2-D)

	A maxi *			Extra flexible (H01N2-E)	Flexible (H01N2-D)	
	at 100%	at 60%	at 35%	Linear meter	Coil 50 m	Linear meter
16 mm ²	135 A	139 A	150 A	W000010137	W000260274	W000260272
25 mm ²	180 A	190 A	213 A	W000010138	W000260275	W000260273
35 mm ²	225 A	243 A	279 A	W000010139	W000260276	W000260270
50 mm ²	285 A	316 A	371 A	W000010140	W000260277	W000260271
70 mm ²	355 A	403 A	482 A	W000010141	W000260278	W000260269
95 mm ²	430 A	498 A	606 A	W000010142	W000260279	W000260268
120 mm ²	500 A	587 A	721 A	W000010143	-	-

*According EN 50565-1 (2014) - For an ambient temperature: 25 °C

Cables lugs



- ◆ Screw type
- ◆ Diameter: 11 mm
- ◆ Cable: 0-25 mm²

To order W000010094



- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 25-35 mm²

To order W000010095



- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 35-50 mm²

To order W000010096



- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 50-70 mm²

To order W000010640

- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 70-100 mm²

To order W000335165

CLAMPS



The choice of a clamp follows several criteria.

It firstly depends on the maximum amperage you are using.

Then, the kind of contact is important. For light duty or normal use, steel clamps **HIPPO** type, or brass clamps **CROCODILE** type are perfect. For heavy duty or intensive use, you can choose **MUSCLOR**, **DRAGON** or **SERRE-JOINT** types.

Lastly the **MAGNETIC** type is ideal for large component parts and the **ROTARY** for heavy use where the cable turns around the clamp.

Clamp for normal use

Choice criteria

	A maxi	Jaw opening (mm)
HIPPO 200	200	38
HIPPO 400	400	50
HIPPO 600	600	50
CROCODILE 300	300	38
CROCODILE 600	600	38



HIPPO 200 / 400 / 600



2004-634

Customer's benefit:

- ◆ Economical steel clamps.

HIPPO 200

To order W000010579

HIPPO 400

To order W000010580

HIPPO 600

To order W000010597

Technical characteristics:

	HIPPO 200	HIPPO 400	HIPPO 600
Amperage	200 at 35%	400 at 35%	600 at 35%
Cable Ø (mm²)	25	70	70
Weight	208 g	362 g	376 g

CROCODILE 300 / 600



2007-756

Customer's benefit CROCODILE 300:

- ◆ Brass clamps.
- ◆ Brass jaws.

CROCODILE 300

To order W000010577

Customer's benefit CROCODILE 600:

- ◆ Very good contact surface.

CROCODILE 600

To order W000010578

Technical characteristics:

	CROCODILE 300	CROCODILE 600
Amperage	300 at 35%	600 at 35%
Cable Ø (mm²)	50	95
Weight	405 g	634 g

MAGNETIC 500 / 600



2004-644

Customer's benefit:

- ◆ Large surface contact.
- ◆ Can be placed close to the welding position insuring good electrical contact.

MAGNETIC 500

To order W000010553

MAGNETIC 600

To order W000010554

Technical characteristics:

	MAGNETIC 500	MAGNETIC 600
Amperage	500 at 35%	600 at 35%
Cable Ø (mm²)	70	95
Weight	815 g	1722 g

Clamp for bulky parts

Choice criteria

A maxi

Jaw opening (mm)

MAGNETIC 500	500	N/A
MAGNETIC 600	600	N/A
ROTARY 800	800	82
ECR 1500-1	1500	N/A

ROTARY 800

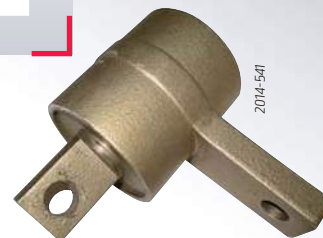
Customer's benefit:

- ◆ Brass clamps.
- ◆ Brass jaws.

To order W000010555

Technical characteristics:

	ROTARY 800
Amperage	800 at 35%
Cable Ø (mm²)	2 x 95
Weight	3319 g



2014-541

ECR 1500-1

Customer's benefit:

- ◆ Rotating clamps for heavy duty works in submerged arc welding.

To order W000374086

Technical characteristics:

	ECR 1500-1
Amperage	1500 at 100%
Weight	2614 g

Clamp for heavy duty use

Choice criteria

A maxi

Jaw opening (mm)

MUSCLOR 300	300	38
MUSCLOR 600	500	38
SERRE-JOINT 500	500	60
SERRE-JOINT 800	800	75
DRAGON 600	600	38

MUSCLOR 300 / 600



2004-638

Customer's benefit:

- ◆ Heavy duty brass clamps, powerful jaws giving excellent grip.

MUSCLOR 300

To order W000010583

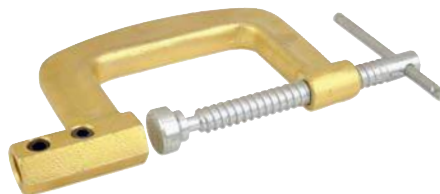
MUSCLOR 600

To order W000010584

Technical characteristics:

	MUSCLOR 300	MUSCLOR 600
Amperage	300 at 35%	600 at 35%
Cable Ø (mm²)	50	95
Weight	480 g	762 g

SERRE-JOINT 500 / 800



2014-560

SERRE-JOINT 500

To order W000010987

SERRE-JOINT 800

To order W000010988

Customer's benefit SERRE-JOINT 500:

- ◆ Cable fixed with brass sleeve.
- ◆ Improved grip through clamp tightening capacity.

Customer's benefit SERRE-JOINT 800:

- ◆ Cable fixed with brass sleeve.
- ◆ Improved grip through clamp tightening capacity.
- ◆ 3 positions of brass guide.

Technical characteristics:

	SERRE-JOINT 500	SERRE-JOINT 800
Amperage	500 at 35%	800 at 35%
Cable Ø (mm²)	95	95
Weight	744 g	1187 g

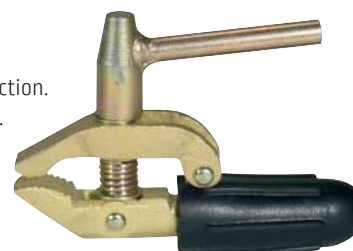
DRAGON 600

Customer's benefit:

- ◆ Brass jaws, rubber sheath cable protection.
- ◆ Screw tightening giving excellent grip.

Technical characteristics:

	DRAGON 600
Amperage	600 at 35%
Cable Ø (mm²)	95
Weight	816 g



2004-640

To order W000010582

MAGNETIC GROUND CLAMPS MAGSWITCH

WARRANTY
1
YEAR

Magnetic ground clamps and positioners

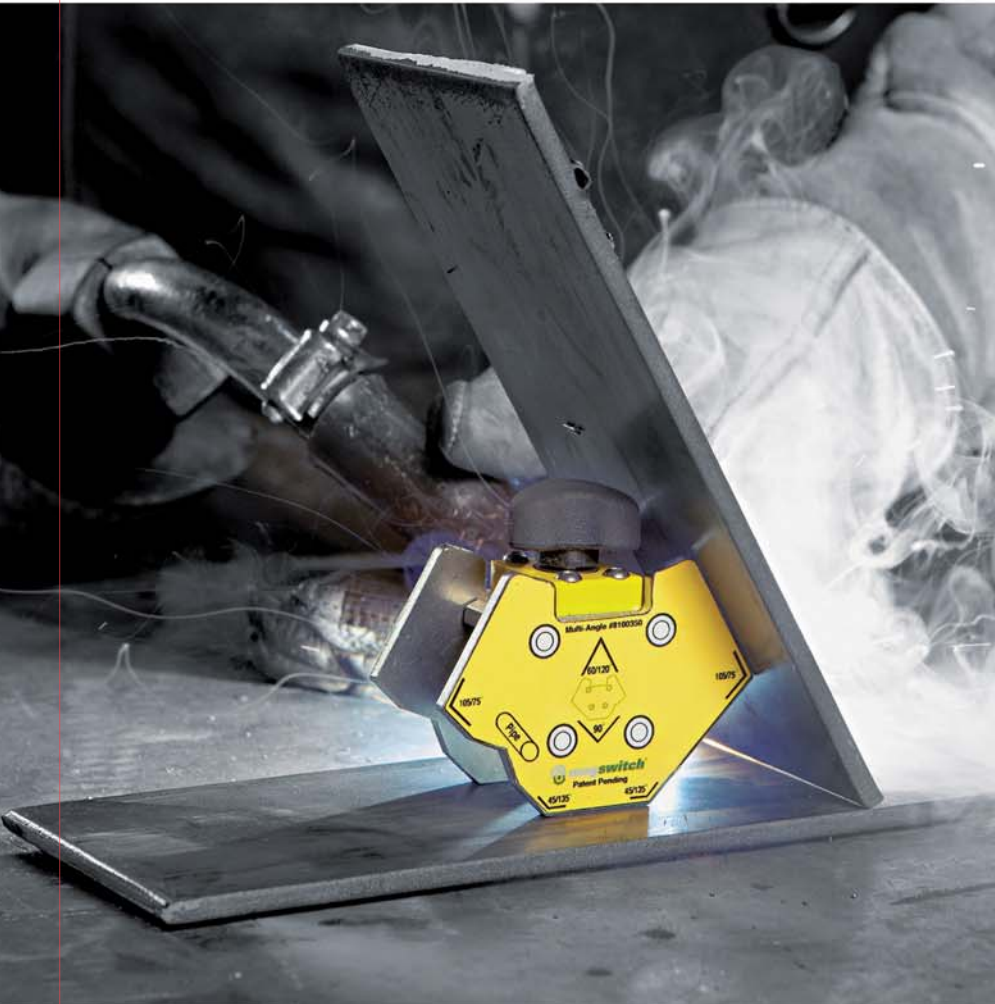
Productivity in time saving with faster set ups, convenience of no hassle use, and safety advantages of using your hands less and less to handle and position steel cannot be ignored.

From the point you receive steel in, to how you move it through your plant, to how you fabricate it, there is a MAGSWITCH tool that will improve safety and productivity. MAGSWITCH is simply a more productive way to do the job.

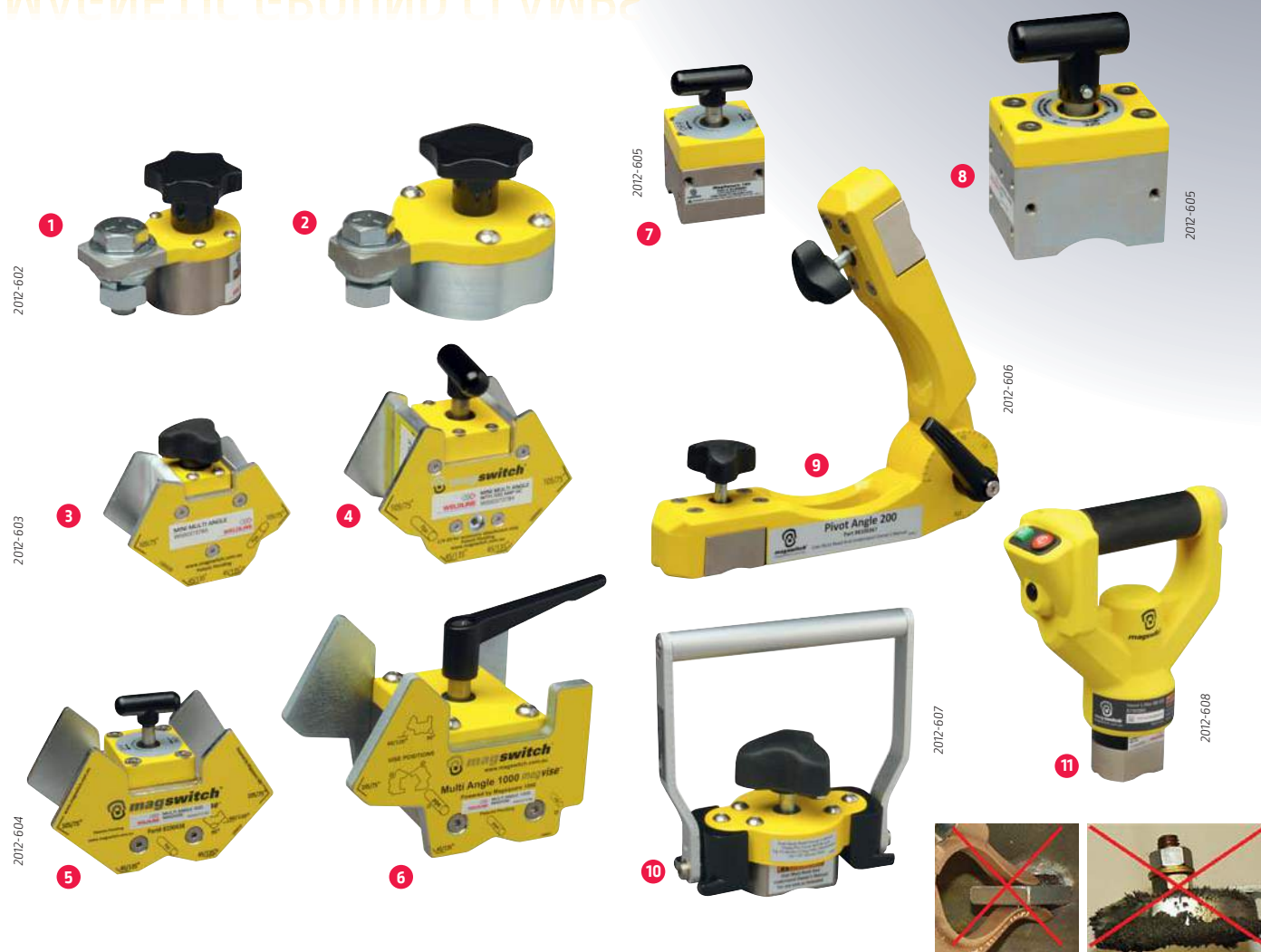
As you look at the products, consider these core common features of each tool:

- ◆ Complete on/off control.
- ◆ Precise placement/no fighting magnets.
- ◆ Super strong - does the big work.
- ◆ Holds strong on thin steel.

MAGSWITCH is indeed technology that “changes the way things are done”.



MAGNETIC GROUND CLAMPS



Name	Dimension (mm)			Weight (kg)	Hold on thick steel (kg)	Welding current (A)	Feature & benefit	Cat Nr
	H	W	D					
1 Magnetic ground clamp 300	57	40	69	0,3	40	300 A	Quickly set up	W000373781
2 Magnetic ground clamp 600	66	101	69	0,8	89	600 A		W000373782
3 Mini Multi Angle	65	72	32	0,18	40	N/A	Incredible strong	W000373783
4 Mini Multi Angle/300A ground	87	89	42	0,36	67	300 A		W000373784
5 Muti Angle 400 Mag-Vise	95	129	65	1,13	178	N/A	Super strong hold all slides	W000373785
6 Multi Angle 1000 Mag-Vise	146	184	110	4,25	446	N/A		W000373786
7 Mag Square 150	65	40	40	0,3	67	N/A	Positioning with incredible strong	W000373787
8 Mag Square 600	106	52	75	1,5	268	N/A		W000373788
9 Pivot Angle 200	240	240	91	1,72	90	N/A	From 22 to 270 degrees	W000373789
10 Hand Lifter 60 m Manual	140	120	60	0,64	27	N/A	For sheet dragging or small steel handing works	W000373790
11 Hand Lifter 60 CE, Cordless electric	209	173	75	1,45	27	N/A	For removing parts from cutting tables	W000373791

HAMMERS / BRUSHES

Chipping hammers

The choice of a hammer depends on the kind of steel you are working with *[carbon or stainless steel]* and design, for example wooden handle or not.



Steel hammer G type, tubular handle

Weight 410 g
Lenght 300 mm

To order W000010646



Steel head, wooden handle

Weight 660 g
Lenght 315 mm

To order W000010801



Steel head, red rubber grip

Weight 240 g
Lenght 260 mm

To order W000010800



Stainless steel hammer, red rubber grip

Weight 230 g
Lenght 255 mm

To order W000010556



Carbon steel English type, spring handle

Weight 290 g
Lenght 265 mm

To order W000335164

Wire brushes

4 rows brass coated steel wires

To order W000010162



4 rows steel wires

To order W000010163



2 rows stainless steel wires

To order W000010164



4 rows stainless steel wires

To order W000010165



Special brush for aluminium

To order W000010166

This brush is specially designed to clean aluminium parts before TIG or MIG welding.



Rivet wire brush

CARBON STEEL

To order W000335161

STAINLESS STEEL

To order W000335160



Blister packed

Name	AAA	AA	2D	3D	4D
Colour	Black				
Composition	Torch, pen style, 2 battery LR3	Torch, black nylon case, 2 battery LR6	Torch		
Weight	49 g	106 g	421 g	506 g	562 g
Diameter	13 mm	18 mm	-	-	-
Length	127 mm	145 mm	254 mm	307 mm	369 mm
Battery (type)	2 LR3	2 LR6	2 LR20	3 LR20	4 LR20

To order					
MAGLITE®	W000211966	W000211967	W000211968	W000211969	W000211970

Pack range

Designation	To order
AAA	W000211977
AA	W000211976



MAG Charger

- ◆ Nickel-cadmium battery [charger included].
- ◆ Rechargeable up to 1000 times: the most powerful torch.

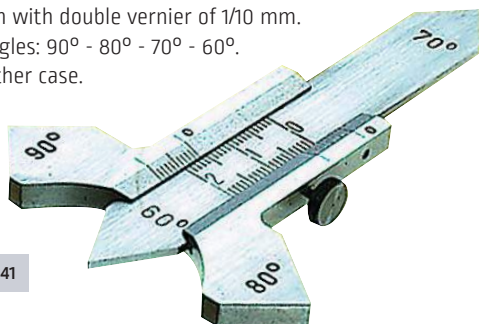
To order W000211929



Spare parts for MAGLITE® charger		To order
Designation	Bulbs	W000211654
Spare bulbs		To order
Designation	AAA	W000211653
	AA	W000211972
	2D	W000211973
	3D	W000211974
	4D	W000211975

Welding gauge

- ◆ Accurate mesure of the thickness of the welding beads, flat as well as angles of 90°.
- ◆ Capacity of 20 mm with double vernier of 1/10 mm.
- ◆ 4 bevel control angles: 90° - 80° - 70° - 60°.
- ◆ Delivered in a leather case.



To order W000011041

Temperature control stick

- ◆ Easy to use surface indicator.
- ◆ ± 1% accuracy.

Designation and temperature	Per pack of 12 pieces
100 [101 °C - 213 °F]	W000010156
120 [121 °C - 250 °F]	W000011042
150 [149 °C - 300 °F]	W000010157
177 [177 °C - 350 °F]	W000011045
200 [198 °C - 388 °F]	W000010158
250 [253 °C - 488 °F]	W000010159
300 [302 °C - 575 °F]	W000010160
350 [343 °C - 650 °F]	W000010161
370 [371 °C - 700 °F]	W000011043



ACCESSORIES

MIG pliers (original FIX®)

Useful to:

- ♦ Cut the wire
- ♦ Clean the nozzles
- ♦ Unscrew the tips
- ♦ Unscrew the nozzles



Nozzle Ø 12-15 mm

To order W000010453

Nozzle Ø 15-18 mm

To order W000010454

MIG torch stand

Simple stand with magnetic base to keep your work place clean.



To order W000010802



FLOWELD

- ♦ Designed to measure gas flow at the front of MIG/MAG torch
- ♦ Maximum flowrate: 20 l/min (Ar, CO₂ or mixed gas)
- ♦ Accuracy +- 10%
- ♦ Unbreakable

To order W000335159

MARKERS

Paint Marker



The Valve Action is a fast-drying liquid paint marker, that provides long-lasting, wear- and weather-resistant marks, that are safe for almost any surface. Most versatile liquid paint marker in the world, the xylene-free paint reduces user health risks.

Designation	To order
Paint Marker White	W000383103
Paint Marker Yellow	W000383104
Paint Marker Red	W000383105
Paint Marker Blue	W000383106
Paint Marker Green	W000383107
Paint Marker Black	W000383108
Paint Marker Orange	W000383109



Paint Tube



Markal Stylmark is a metal-ball tip marker to mark most surfaces. The aluminum squeeze tube and thick paint makes it suitable for rough, vertical and overhead surfaces with excellent adhesion on oily and wet surfaces. Xylene-free paint reduces user health risk.

Designation	To order
Paint Tube White	W000383110
Paint Tube Yellow	W000383111
Paint Tube Red	W000383112



Paintstik



Quik Stik is a smooth-marking solid paint crayon that dries quickly to leave a bold, permanent mark on most surfaces. The durable plastic twist-up holder prevents breakage. Keep hands, clothing, and toolboxes clean with the industry's largest twist-up solid paint marker.

Designation	To order
Paintstik White	W000383113
Paintstik Yellow	W000383114
Paintstik Red	W000383115



Welding Chalk



The soapstone welding crayon is resistant to heat up to 2000 °C (3630 °F) and will not contaminate welds.

To order W000383116



3 MMA WELDING

WELDING TOOLS AND ACCESSORIES

- ◆ Electrode holders..... 52 to 55
- ◆ MMA kits *[electrode holder with cable + clamp with cable]*..... 56
- ◆ Gouging torches 57
- ◆ Gouging electrodes 58
- ◆ Ovens / Quivers..... 59 to 62
- ◆ Welding accessories 63

For: clamps, connectors, cables, hammers, ceramic backings and others
see chapter 2 “**General arc welding**”

ELECTRODE HOLDERS



The choice of an electrode holder follows several criteria.

- ◆ In Europe, the supplier has to conform to the European standards on these products, for health and safety reasons.

The **CE** marking confirms the conformity of the product to these standards.

DON'T BUY ELECTRODE HOLDERS WITHOUT THIS MARKING.

- ◆ Choose your holder according to the maximal electrode diameter you use. This diameter dictates the maximum amperage and subsequently the size of the welding cable.

Selection criteria for the different type of electrode holders can be seen on the enclosed pages. Obviously the electrode holder will accept all sizes of electrode to the stated maximal diameter.

The lever type electrode holders are divided into two sections, large opening type - that has the optional pre-defined angles and closed head type - that has only a single position option.

Screw type

Very secure grip of the electrode that gives the possibility to twist the electrode once tightened.

Lever type

Secure grip of the electrode between the jaws with pre-defined angles for the electrode position, easy butt ejection.



ELECTRODE HOLDERS



Screw type electrode holders

TWIST 200 / 400



2004-488

Customer's benefit:

- ◆ Economical electrode holders.
- ◆ Insulation class: A.
- ◆ Well balanced, rubber handle, left hand thread.

Technical characteristics:

	TWIST 200	TWIST 400
Amperage	200 at 35%	300 at 35%
Cable Ø (mm)	25 max.	50 max.
Electrode Ø (mm)	3.2 max.	5.0 max.
Weight	335 g	480 g

TWIST 200

To order W000010565

TWIST 400

To order W000010566

VESTALETTE 250



Customer's benefit:

- ◆ Light and totally insulated, fibre glass head long life duration, left hand thread.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	250 at 35%
Cable Ø (mm)	35 max.
Electrode Ø (mm)	4.0 max.
Weight	295 g

To order W000010035 W000010883*

STUBBY 400



2004-215r

Customer's benefit:

- ◆ Well known, fibre glass single part head.
- ◆ Spare parts available, right hand thread.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	400 at 35%
Cable Ø (mm)	70 max.
Electrode Ø (mm)	6.3 max.
Weight	450 g

To order W000010036 W000010879*

Spare parts	To order
MASTER - Head	W000011082
STUBBY - Head	W000260716
MASTER - Insulation	W000011083
STUBBY/MASTER - Spring	W000011084
STUBBY/MASTER - Handle	W000011077
STUBBY - Body	W000011085
VESTALE - Handle	W000011086
VESTALE - Head	W000011087

Choice criteria

		mm Maximum	mm ² Maximum
Screw type straight	TWIST 200	3.2	25
	TWIST 400	5.0	50
	VESTALETTE 250	4.0	35
	STUBBY 400	6.3	50
	MASTER 400	8.0	95
	VESTALE 500	8.0	95
Screw type curve	CURVA 400	5.0	50
	CURVA 600	6.3	70

MASTER 500



Customer's benefit:

- ◆ Well known, fibre glass single part head.
- ◆ Spare parts available, right hand thread.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	500 at 35%
Cable Ø (mm)	95 max.
Electrode Ø (mm)	8.0 max.
Weight	530 g

To order W000010037 W000010882*

VESTALE 500



Customer's benefit:

- ◆ The heavy duty electrode holder.
- ◆ High resistance.
- ◆ Fibre glass head, left hand thread.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	500 at 35%
Cable Ø (mm)	95 max.
Electrode Ø (mm)	8.0 max.
Weight	470 g

To order W000010038 W000010880*

CURVA 400 / 600



2004-497

Customer's benefit:

- ◆ Curved electrode holders.
- ◆ Insulation class: B.

Technical characteristics:

	CURVA 400	CURVA 600
Amperage	300 at 35%	400 at 35%
Cable Ø (mm)	50 max.	70 max.
Electrode Ø (mm)	5.0 max.	6.3 max.
Weight	540 g	720 g

CURVA 400

To order W000010573

CURVA 600

To order W000010574

* Cat. number for display

ELECTRODE HOLDERS



Lever type closed head electrode holders

SEGURA 300 / 400 / 600



2004-493

Customer's benefit:

- ◆ Economical models.
- ◆ Nylon handle.
- ◆ Brass jaws.
- ◆ Insulation class: B.

SEGURA 300

To order W000010570

SEGURA 400

To order W000010571

SEGURA 600

To order W000010572

Technical characteristics:

	SEGURA 300	SEGURA 400	SEGURA 600
Amperage	300 at 35%	300 at 35%	400 at 35%
Cable Ø (mm²)	35 max.	50 max.	70 max.
Electrode Ø (mm²)	4.0 max.	5.0 max.	6.3 max.
Weight	415 g	570 g	590 g

COBRA 300

To order W000010039 W000010881*


2011-032

Customer's benefit:

- ◆ Light and multi purpose.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	300 at 35%
Cable Ø (mm²)	50 max.
Electrode Ø (mm²)	6.3 max.
Weight	420 g

TONG GRIP 400



0947-67

Customer's benefit:

- ◆ High duty electrode holder.

To order W000010622

Technical characteristics:

Amperage	400 at 35%
Cable Ø (mm²)	70 max.
Electrode Ø (mm²)	6.3 max.
Weight	500 g

Choice criteria

	mm Maximum	mm² Maximum
SAGURA 300	4.0	35
SAGURA 400	5.0	50
SAGURA 600	6.3	70
COBRA 300	6.3	50
OPTIMUS 300	6.3	70
OPTIMUS 400	8.0	95
OPTIMUS 500	8.0	95
TONG GRIP 400	6.3	70

OPTIMUS 300 / 400 / 500



2004-647

Customer's benefit:

- ◆ Economical models.
- ◆ High quality electrode holder.
- ◆ Well-known for intensive use and powerful grip on the electrodes.
- ◆ Specially designed for heavy duty works with a comfortable handle.
- ◆ Insulation class: A.

OPTIMUS 300

To order W000010410

OPTIMUS 400

To order W000010411

OPTIMUS 500

To order W000010412

Technical characteristics:

	OPTIMUS 300	OPTIMUS 400	OPTIMUS 500
Amperage	300 at 35%	300 at 35%	400 at 35%
Cable Ø (mm²)	35 max.	50 max.	70 max.
Electrode Ø (mm²)	4.0 max.	5.0 max.	6.3 max.
Weight	415 g	570 g	590 g

ELECTRODE HOLDERS



Lever type opened head electrode holders

CAÏMAN 200 / 400 / 600



2004-491

CAÏMAN 200

To order W000010567

CAÏMAN 400

To order W000010568

CAÏMAN 600

To order W000010569

Customer's benefit:

- ◆ Economical electrode holders.
- ◆ Polyamide handle, fibre glass reinforced.
- ◆ Brass jaws.
- ◆ Insulation class: B.

Technical characteristics:

	CAÏMAN 200	CAÏMAN 400	CAÏMAN 600
Amperage	200 at 35%	300 at 35%	400 at 35%
Cable Ø (mm²)	25 max.	50 max.	70 max.
Electrode Ø (mm²)	3.2 max.	5.0 max.	6.3 max.
Weight	370 g	425 g	500 g

Choice criteria



Maximum



Maximum

CAÏMAN 200	3.2	25
CAÏMAN 400	5.0	50
CAÏMAN 600	6.3	70
SAMSON ECO 300	6.3	70

SAMSON ECO 300



2004-648

To order W000010622

Customer's benefit:

- ◆ Light version, well known SAMSON electrode grip.
- ◆ Insulation class: A.

Technical characteristics:

Amperage	300 at 35%
Cable Ø (mm²)	70 max.
Electrode Ø (mm²)	6.3 max.
Weight	450 g

Hobby and light duty electrode holders

HOBBY 200

To order W000268399



2004-496

Customer's benefit:

- ◆ An industrial design for light works.

Technical characteristics:

Amperage	200 at 35%
Cable Ø (mm²)	25 max.
Electrode Ø (mm²)	4.0 max.
Weight	135 g

Choice criteria



Maximum



Maximum

HOBBY 200	4.2	25
CAÏMY 200	3.2	25

CAÏMY 200

To order W000010576



2004-486

Customer's benefit:

- ◆ A small professional tool for light works.
- ◆ Insulation class: B.

Technical characteristics:

Amperage	200 at 35%
Cable Ø (mm²)	25 max.
Electrode Ø (mm²)	3.2 max.
Weight	220 g

MMA KITS

Kits of accessories for MMA welding: electrode holders, earth clamps, cables and connectors, already assembled.

Advantages:

- ♦ "Ready to weld".
- ♦ A simple and full range in relation with all welding machines.
- ♦ Save 30 minutes of assembly time, before welding.
- ♦ Recommendations in relation to welding processes.

The kits choice depends of several criteria:

- ♦ Sections of machine sockets:
 - Plugs of 9 mm diameter correspond to a cable cross-section between 16 mm² and 25 mm².
 - Plugs of 13 mm diameter correspond to a cable cross-section between 35 mm² and 50 mm² [max 90 mm²].
- ♦ Application & intensity

The range:

- ♦ First digits describe cable diameter.
- ♦ Second digits describe type of connector.



2009-163

Choice criteria

	I max at 35%	Plug diameter
KIT 25C25	200 A	9 mm
KIT 25C25+	300 A	9 mm
KIT 25C50	300 A	13 mm
KIT 35C50	300 A	13 mm
KIT 50C50	300 A	13 mm
KIT 50C50+	400 A	13 mm

KIT 25C25

MMA power sources' types and applications:

- ♦ Small intensity power sources for semi professional welding.

To order W000011138

Technical characteristics:

I max	200 at 35%
Electrode holder	CAÏMAN 200
Cable length	3 m
Earth clamp	HIPPO 200
Cable length	3 m
Plug diameter	9 mm

KIT 35C50

MMA power sources' types and applications:

- ♦ High intensity power sources for intensive use (up to Ø 4 mm) or work site.

To order W000011139

Technical characteristics:

I max	300 at 35%
Electrode holder	SEGURA 300
Cable length	4 m
Earth clamp	HIPPO 400
Cable length	4 m
Plug diameter	13 mm

KIT 25C25+

MMA power sources' types and applications:

- ♦ Small intensity power sources for working site up to Ø 4 mm.

To order W000260683

Technical characteristics:

I max	300 at 35%
Electrode holder	SEGURA 300
Cable length	3 m
Earth clamp	HIPPO 400
Cable length	2 m
Plug diameter	9 mm

KIT 50C50

MMA power sources' types and applications:

- ♦ High intensity power sources for intensive use (up to Ø 5 mm) or work site.

To order W000260681

Technical characteristics:

I max	300 at 35%
Electrode holder	SEGURA 400
Cable length	4 m
Earth clamp	HIPPO 400
Cable length	4 m
Plug diameter	13 mm

KIT 25C50

MMA power sources' types and applications:

- ♦ High intensity power sources for intensive use (up to Ø 4 mm) or work site.

To order W000260684

Technical characteristics:

I max	300 at 35%
Electrode holder	SEGURA 300
Cable length	3 m
Earth clamp	HIPPO 400
Cable length	3 m
Plug diameter	13 mm

KIT 50C50+

MMA power sources' types and applications:

- ♦ High intensity power sources for intensive use (up to Ø 6.3 mm) or work site.

To order W000260682

Technical characteristics:

I max	400 at 35%
Electrode holder	SEGURA 600
Cable length	4 m
Earth clamp	HIPPO 600
Cable length	4 m
Plug diameter	13 mm

GOUGING TORCHES

FLAIR® 600 / 1600

- ◆ The FLAIR® gouging torch is a high quality torch.
- ◆ The airflow can be regulated on the torch.
- ◆ The recommended air pressure is 7 bar.

Technical characteristics:

	FLAIR® 600	FLAIR® 1600
Current	600 A	1600 A
Electrode Ø max.	10 mm - 3/8"	19 mm - 3/4"

Spare parts	FLAIR® 600	FLAIR® 1600
A Screw MRX 4 x 10 mm (10 pieces)	W000010124	
B Insulation cap (2 pieces)	W000010125	
C Injection nozzle complete with tapite	W000010127	W000011130
D Lever insulation	W000010128	
E Valve	W000010129	
F Safety ring (10 pieces)	W000010131	
G Handle	W000010132	
H Push-button and link	W000010133	
Monocable	W000010134	W000011128



FLAIR® 600

To order W000010136



FLAIR® 1600

To order W000010118

ARCAIR K4000®

- ◆ A well-known brand name in gouging process.

Technical characteristics:

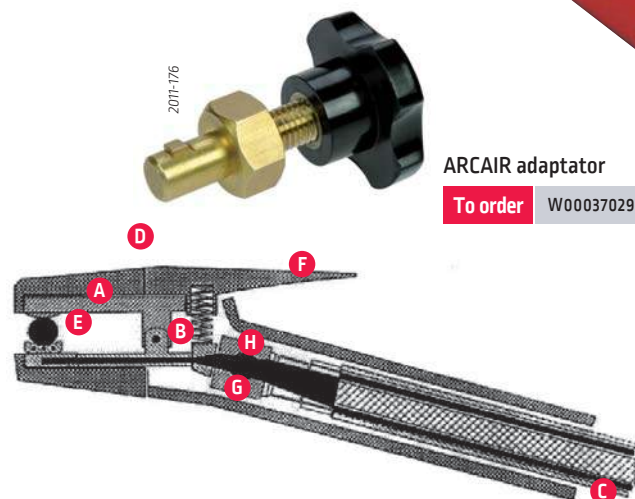
Current	1000 A
Electrode Ø max.	13 mm - 1/2"

Spare parts	ARCAIR K2000®	ARCAIR K4000®
A Jaw	W000011033	W000010991
B Spring	-	W000010990
C Cable 2.1 m	-	W000010993
D Shell	W000011030	W000010994
E Head	W000011031	W000010995
F Lever	W000011032	W000010996
G Body	-	W000010997
H Pushing kit	-	W000010998



ARCAIR K4000®

To order W000010992



ARCAIR adaptor

To order W000370297

GOUGING ELECTRODES

WELDLINE offers a complete range of graphite (carbon) electrodes for gouging.

CARBONAIR

Pointed electrodes



CAUTION: before use, carefully read and understand the safety datasheet available on our websites

Description diameter x lenght (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I maxi (A)	Air pressure (bars)	Airflow (m³/h)	To order
CARBONAIR 4 x 305	0.100	0.78	150	250	4.0	15	W000010645
CARBONAIR 5 x 305	0.100	1.08	200	250	4.0	15	W000010443
CARBONAIR 6.4 x 305	0.050	0.98	320	370	4.0	15	W000010444
CARBONAIR 8 x 305	0.050	1.34	400	450	5.5	40	W000010445
CARBONAIR 10 x 305	0.050	2.15	500	550	5.5	40	W000010446
CARBONAIR 13 x 305	0.050	3.55	800	1 000	5.5	50	W000010447

CARBONAIR PLUS

Jointed electrodes (no stub loss)

This process requires a MMA direct current (DC) power source, a gouging torch and a compressed air source. Please find hereunder a selection table.

Description diameter x lenght (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I maxi (A)	Air pressure (bars)	Airflow (m³/h)	To order
CARBONAIR PLUS 8 x 355	0.050	1.80	500	550	5.5	40	W000010448
CARBONAIR PLUS 10 x 430	0.050	3.22	600	650	5.5	40	W000010449
CARBONAIR PLUS 13 x 430	0.050	4.97	800	1 000	5.5	50	W000010450
CARBONAIR PLUS 16 x 430	0.025	3.70	1 000	1 200	6.9	60	W000010451
CARBONAIR PLUS 19 x 430	0.025	5.17	1 200	1 400	6.9	60	W000010452

OVENS / QUIVERS

Portable quivers

WELDRY PW8 / PW15 / 372 N INOX

- ◆ PW8 and PW15 portable quivers are necessary, for electrodes maintenance, near the welding working place. They preserve the electrodes from moisture, avoiding hydrogen inclusion in the welding joint.
- ◆ PW8 and PW15 portable quivers are provided with a handle, useful for moving. They also contain an extractable basket that avoids waste of heat. PW8 and PW15 ovens are provided with built-in adjustable thermostat.
- ◆ For the 372 N: preset temperature to 120 °C, plated heater resistance against the reservoir electrodes which allows a good repartition of temperature.

CAUTION: before use, carefully read and understand the safety datasheet available on our websites



MADE IN FRANCE



2008-578

WELDRY PW8

To order W000120427

To order (24 V) W000371464



2008-579

WELDRY PW15

To order W000120428



2014-698

WELDRY 372 N INOX

To order W000383150

On request: other models

- Without thermostat
- With thermometer
- With different power supply
- Stainless steel or lacquered finishing

Technical data	WELDRY PW8	WELDRY PW15	WELDRY 372 N - INOX
Capacity (number of electrodes)	100 electrodes Ø 3.25 mm	200 electrodes Ø 3.25 mm	100 electrodes Ø 3.25 mm
Temperature regulation thermostat	up to 120 °C		
Power	0.130 kW	0.275 kW	0.230 kW
Capacity	5 kg	10 kg	5 kg
Power supply	Single-phase 24 V or 230 V - 50/60 Hz		
Internal size	72 x 72 x 470 mm	100 x 100 x 470 mm	Ø 82.5 x 480 mm
External size	140 x 180 x 630 mm	180 x 220 x 630 mm	225 x 535 mm
Net weight	5 kg	8 kg	5.5 kg

All WELDRY ovens are supplied with 2 m long cable

OVENS / QUIVERS

Holding ovens for MMA electrodes

WELDRY MW

- ◆ MW ovens are used to keep the treatment of electrodes after the drying cycle and before the welding process.
- ◆ They preserve the electrodes from moisture, avoiding hydrogen inclusion in the welding joint.
- ◆ Equipped with a digital control panel and two adjustable thermoregulators for air and heating elements protection, positioned in front of the oven.



WELDRY MW4

To order W000120431



WELDRY MW2

To order W000120430



WELDRY MW6

To order W000120454

CAUTION:
before use, carefully read
and understand the safety
datasheet available on
our websites

Technical data	WELDRY MW2	WELDRY MW4	WELDRY MW6
Load capacity	135 Kg - 3 000 electrodes *	270 Kg - 6 000 electrodes *	405 Kg - 9 000 electrodes *
Shelves number	2	4	6
Heating elements	1	1	3
Max. Temperature	Adjustable up to 150 °C - air Adjustable up to 500 °C - heating elements		
Power	1.6 kW	2.7 kW	4.5 kW
Rating	Single phase - 230 V a.c. - 50/60 Hz		Three phase - 380 V a.c. - 50/60 Hz
Internal size (w x d x h)	720 x 510 x 350 mm	720 x 510 x 620 mm	720 x 510 x 890 mm
External size (w x d x h)	830 x 690 x 760 mm	830 x 690 x 1 040 mm	820 x 690 x 1 310 mm
Oven weight	90 kg	123 kg	152 kg
Packaging dimensions (w x d x h)	850 x 710 x 780 mm	850 x 710 x 1 060 mm	840 x 710 x 1 330 mm
Weight for transport	95 kg	135 kg	160 kg

* Quantity of pieces having Ø 3.25 mm

All WELDRY
ovens are
supplied
with 2 m long
cable

OVENS / QUIVERS

Re-baking ovens for MMA electrodes

WELDRY CW

- ◆ This oven is used for electrode re-baking treatment, heating the electrodes between 350 °C and 420 °C for a fixed time. In this way the moisture is removed and a good quality welding without hydrogen intrusion is guaranteed.
- ◆ Equipped with a digital control panel and two adjustable thermoregulators for air and heating elements protection, positioned in front of the oven, allows to set both drying and keeping cycles.



WELDRY CW3

To order W000120466

2008-569



WELDRY CW6

To order W000120467

2008-570



WELDRY CW9

To order W000120468

2008-571

CAUTION:
before use, carefully read
and understand the safety
datasheet available on
our websites

On request: other models
(with fan ventilation system)

Technical data	WELDRY CW3	WELDRY CW6	WELDRY CW9
Load capacity	203 Kg - 4 500 electrodes *	404 Kg - 9 000 electrodes *	608 Kg - 13 500 electrodes *
Shelves number	3	6	9
Heating elements	3	6	9
Max. Temperature	Adjustable up to 350 °C - air Adjustable up to 500 °C - heating elements		
Power	4.5 kW / 4.7 kW	9 kW / 9.4 kW	13.5 kW / 13.8 kW
Rating	Three phase - 380 V a.c. - 50/60 H		
Internal size (w x d x h)	560 x 740 x 560 mm	560 x 740 x 980 mm	560 x 740 x 1 430 mm
External size (w x d x h)	800 x 880 x 1 050 mm	800 x 880 x 1 480 mm	800 x 880 x 1 880 mm
Oven weight	140 / 144 kg	200 / 204 kg	266 / 270 kg
Packaging dimensions (w x d x h)	900 x 900 x 1 050 mm	900 x 900 x 1 500 mm	900 x 900 x 1 900 mm
Weight for transport	150 / 154 kg	215 / 219 kg	280 / 284 kg

* Quantity of pieces having Ø 3.25 mm

All WELDRY
ovens are
supplied
with 2 m long
cable

OVENS / QUIVERS

Hopper ovens for flux

WELDRY FW

- ◆ This model of oven is used for re-baking submerged arc welding fluxes, heating the flux between 350 °C and 420 °C for a fixed time. The inside tank is stainless steel made to prevent from the risk of pollution.
- ◆ The resistances are positioned inside the hopper for a direct contact to flux in order to obtain an optimal heating.
- ◆ The built-in digital control equipment with double thermoregulator for air and resistances protection avoids the flux being damaged and allows to set both drying and keeping cycles.



WELDRY FW200

To order W000120470



WELDRY FW100

To order W000120469



WELDRY FW400

To order W000120471

CAUTION:
before use, carefully read
and understand the safety
datasheet available on
our websites

On request: other models
(with one or two hoppers - with single
or double digital control equipment)

Technical data	WELDRY FW100	WELDRY FW200	WELDRY FW400
Load Capacity	80 kg	200 kg	400 kg
Max. Temperature	Adjustable up to 350 °C - air Adjustable up to 500 °C - heating elements		
Power	4 kW	4 kW / 6.7 kW	8 kW / 13.3 kW
Rating	Three phase - 380 V a.c. - 50/60 Hz		
Internal size (w x d x h)	530 x 390 x 640 mm	690 x 690 x 740 mm	690 x 690 x 740 mm <i>[each hopper]</i>
External size (w x d x h)	670 x 710 x 1 300 mm	825 x 819 x 1 330 mm	1 620 x 850 x 1 340 mm
Oven weight	90 kg	116 kg	210 kg
Height of the flap door for flux feeding	a = 500 mm	a = 450 mm	
Packaging dimensions (w x d x h)	690 x 750 x 1 320 mm	850 x 860 x 1 350 mm	1 640 x 870 x 1 360 mm
Weight for transport	100 kg	130 kg	225 kg

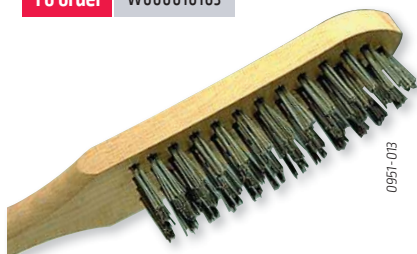
All WELDRY
ovens are
supplied
with 2 m long
cable

WELDING ACCESSORIES

See more
page 48

4 rows steel wires

To order W000010163



4 rows stainless steel wires

To order W000010165



Steel head, wooden handle

Weight 660 g
Lenght 315 mm



To order W000010801





WELDLINE
by Lincoln Electric

4 TIG WELDING

4 TIG WELDING

WELDING TOOLS AND ACCESSORIES

- ◆ TIG torches 66 to 67
- ◆ Tungsten electrodes 68 to 69
- ◆ Other accessories 70 to 71

TIG TORCHES

WTT2

STANDARD RANGE

Simple and reliable, this range is adapted to the most common applications.



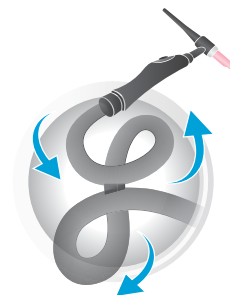
Standardised wear parts.



Handle, made with high temperature silicon rubber.

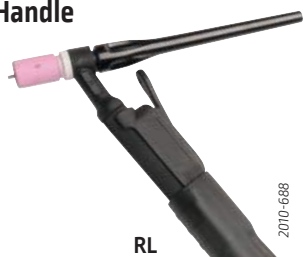


Easy pivoting handle (for EB handles).



Extra-flexible high performance cable.

Handle



RL

2010-688



EB

2010-685



V

2010-686



EB-FLEX

2015-673

Air cooling

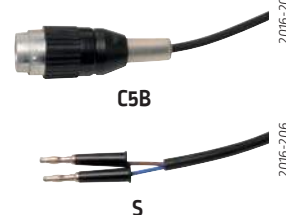
MODEL				WTT2 9		WTT2 17		WTT2 26	
Duty cycle at 40 °C		60%	80 A		100 A		130 A		
		35%	110 A		135 A		180 A		
Original equipment		back cap	Moyen						
		nozzle	Ø 10 mm				Ø 12 mm		
		electrode	Ø 1.6 mm		Ø 2.0 mm		Ø 2.4 mm		
Length *				4 m	8 m	4 m	8 m	4 m	8 m
Handle	RL	Connection	S	W000278878	W000278923	W000278883	W000278918	W000278888	W000278914
			C5B	W000278879	W000278922	W000278884	W000278917	W000278890	W000278913
	EB		S	W000278877	W000278929	W000278881	W000278920	W000278886	W000278916
			C5B	W000278875	W000278926	W000278882	W000278919	W000278887	W000278915
	V		V	W000278876	-	W000278880	-	W000278885	-
	EB-FLEX	S	W000382781	-	W000382782	W000382783	W000382784	W000382785	

Water cooling

MODEL				WTT2 20 W		WTT2 18 W	
Duty cycle at 40 °C		100%	200 A		320 A		
		60%	250 A		350 A		
Original equipment		back cap	Moyen				
		nozzle	Ø 12 mm				
		electrode	Ø 2.4 mm				
Length *				4 m	8 m	4 m	8 m
Handle	RL	Connection	S	W000278893	W000278906	W000278897	W000278900
			C5B	W000278894	W000278905	W000278898	W000278899
	EB		S	W000278891	W000278911	W000278895	W000278902
			C5B	W000278892	W000278909	W000278896	W000278901
	EB-FLEX		S	W000382786	W000382787	W000382788	W000382789

* Available in 8 m (see general catalog)

Connections



C5B

S

New connector :

Shaped cable output for a better robustness.



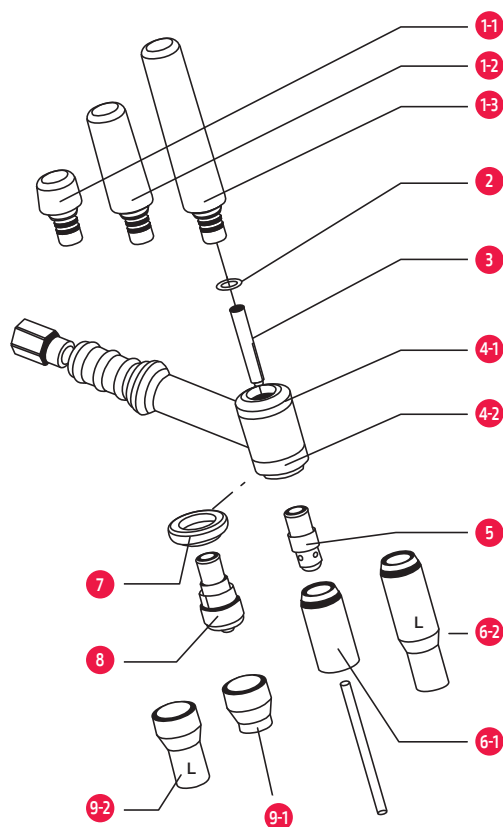
Air cooling



Water cooling

WTT2 TIG torches wear parts

		WTT2 9 / 9V WTT2 20W	WTT2 17 / 17V WTT2 26 / 26V WTT2 18W
1-1	Back cap short	W000306398	W000306399
1-2	Back cap medium	W000306400	-
1-3	Back cap long	W000306402	W000306403
2	Back cap O-ring	W000306404	W000306405
4-2	Sealing ring	W000306396	W000306397
4-1	Insulating ring	W000270780	W000306395
3	Collet	Ø 1.0	W000306406
		Ø 1.6	W000306407
		Ø 2.0	W000306408
		Ø 2.4	W000306409
		Ø 3.2	W000306410
		Ø 4.0	-
5	Collet body	Ø 1.0	W000306376
		Ø 1.6	W000306377
		Ø 2.0	W000306378
		Ø 2.4	W000306455
		Ø 3.2	W000306379
		Ø 4.0	-
6-1	Nozzle	Ø 6.4	W000306417
		Ø 8.0	W000306418
		Ø 9.6	W000306419
		Ø 11.2	W000306420
		Ø 12.8	W000306421
		Ø 16.0	W000306422
		Ø 19.2	-
6-2	Long nozzle	Ø 4.8	W000306456
		Ø 6.4	W000306457
		Ø 8.0	W000306458
		Ø 9.6	W000306459
		Ø 11.2	-
7	Gas Lens sealing ring	-	W000306466
8	Gas Lens collet body	Ø 1.0	W000306385
		Ø 1.6	W000306386
		Ø 2.0	W000306460
		Ø 2.4	W000306387
		Ø 3.2	W000306388
		Ø 4.0	-
9-1	Gas Lens nozzle	Ø 6.4	W000306429
		Ø 8.0	-
		Ø 9.6	W000306431
		Ø 11.2	W000306432
		Ø 12.8	W000306433
		Ø 16.0	-
9-2	Long Gas Lens nozzle	Ø 8.0	-
		Ø 9.6	-
		Ø 11.2	-
		Ø 12.8	-



Wear parts box

For an easier maintenance of the WTT2 torches, two boxes are available.

Box for WTT2 9 / 9V / 20W

To order W000371535

Box for WTT2 17 / 26 / 18W

To order W000371536



Gas Lens

The gas diffuser concentrates the flux in a homogenous and focused way around the tungsten electrode, which allows to get the electrode out much more than the nozzle.

This permits to access to the difficult access welding joints.



TUNGSTEN ELECTRODES

A complete range of tungsten electrodes:

- Pure tungsten,
- Tungsten + cerium,
- ■ Tungsten + lanthanum,
- Tungsten + rare earths ⁽¹⁾.

Product advantages :

- ◆ Very high life cycle
- ◆ Perfect arc ignition
- ◆ Very stable arc
- ◆ Tip longevity

CAUTION:
before use, carefully read and understand the safety datasheet available on our websites

Choice criteria

Type	Metal		Arc stability	Striking	Lasting	Thermal resistance
	Aluminium	Steel & Stainless steel				
WP - Pure tungsten	*		**	*	*	*
WC 20 - Cerium 2%		*	**	*	**	**
WL 15 - Lanthanum 1,5%	**	***	**	***	***	***
WL 20 - Lanthanum 2%	*	***	**	***	***	***
WS 20 - Rare earths ⁽¹⁾ 2%	*	*	**	***	***	***

*** Excellent - ** Good - * Average

⁽¹⁾ Rare earths = any of the abundant metallic elements, including scandium (atomic number 21), yttrium (39), and the 15 elements from 57 to 71 (lanthanide series include lanthanum and cerium) in the Mendeleyev classification.

NEW

Since september 2014, Weldline stopped to propose thorium electrodes

Benefits of Lanthanum Tungsten electrodes

The main criteria to select a tungsten electrode are: arc striking, arc stability and life duration. To achieve this criteria, we add oxides to tungsten. This was traditionally Thorium oxide.

We also know that under certain conditions [for example sharpening] the thorium dust contains radioactive elements.

Even though the radioactive element is very low and well below considered danger levels, producers are constantly trying to replace these thorium oxides with oxides that do not contain radioactive elements.

Lanthanum is the best electrode if you consider the following:

- ◆ Possibility to use with both alternative and continuous current
- ◆ Better arc striking than all the other types of tungsten electrodes
- ◆ Better arc stability due to the lower deformation of the electrode tip
- ◆ Longer life duration
- ◆ No radioactivity at all



TUNGSTEN ELECTRODES

WP - Pure tungsten

Light alloy (green tip)

Ø mm	150 mm length	175 mm length
	To order	
1.0	W000010009	-
1.6	W000010010	W000010375
2.0	W000010011	W000010376
2.4	W000010012	W000010377
3.0	W000010013	-
3.2	W000010014	W000010378
4.0	W000010015	W000335152

WC 20 - Cerium 2%

Steel and stainless steel (grey tip)

Ø mm	150 mm length	175 mm length
	To order	
1.0	W000010022	-
1.6	W000010023	W000335153
2.0	W000010024	W000010381
2.4	W000010025	W000335154
3.0	W000010026	-
3.2	W000335150	W000335157
4.0	W000010028	W000335155

WL 15 - Lanthanum 1.5%

Light alloy (using AC current), steel and stainless steel (using DC current) (gold tip)

Ø mm	150 mm length
	To order
1.0	W000402632
1.6	W000402663
2.0	W000402664
2.4	W000402665
3.0	W000402666
3.2	W000402667
4.0	W000402668

NEW

WL 20 - Lanthanum 2%

Light alloy (using AC current), steel and stainless steel (using DC current) (blue tip)

Ø mm	75 mm length	150 mm length	175 mm length
	To order		
1.0	W000011144	W000010373	-
1.6	W000011145	W000010016	W000010385
2.0	-	W000010017	W000010386
2.4	W000011146	W000010018	W000010387
3.0	-	W000010019	-
3.2	-	W000010020	W000010388
4.0	-	W000010021	W000010389

WS 20 - Rare earths 2%

Light alloy (using AC current), steel and stainless steel (using DC current) (turquoise tip)

Ø mm	175 mm length
	To order
1.0	W000335166
1.6	W000335167
2.0	W000335168
2.4	W000335169
3.0	W000335170
3.2	W000335171
4.0	W000335172




See the batch number on the tungsten electrode packaging and consult your conformity certificate on our websites



2006-528

Recommended welding intensities

Electrode diameter	Direct current	Alternating current	
	Tungsten with oxide addition	Pure tungsten	Tungsten with oxide addition
1.0 mm	10 A to 70 A	15 A to 55 A	15 A to 70 A
1.6 mm	20 A to 100 A	45 A to 90 A	60 A to 125 A
2.0 mm	50 A to 140 A	65 A to 125 A	85 A to 160 A
2.4 mm	70 A to 170 A	80 A to 140 A	120 A to 210 A
3.0 mm	100 A to 210 A	140 A to 180 A	140 A to 230 A
3.2 mm	130 A to 250 A	150 A to 190 A	150 A to 250 A
4.0 mm	150 A to 350 A	180 A to 260 A	240 A to 350 A

OTHER ACCESSORIES

TIG torch stand



To order W000010803

Simple stand with magnetic base to keep your work place clean.

OPTICLEAN II

Inverter-technology installation for cleaning, polishing and marking of stainless steel.



See page 93

TIG POINT

To order W000011101

Chemical sharpening of tungsten electrodes

Instructions for use:

- ◆ Take the electrode out of the torch of 15 mm.
- ◆ Use the welding current to warm the electrode to white
- ◆ Dip the electrode in the product while rotating the electrode
- ◆ Make sure that the result is satisfactory
- ◆ Carefully close the pot



TIG SHARP

Portable electric tool for tungsten electrodes sharpening

Characteristics:

- ◆ All you need to sharpen your tungsten electrodes (all ranges) delivered in a practical metal case:
 - Sharpening machine
 - Clamp to lock the machine on a bench
 - Standard blue head for the electrodes diameter 1.6 / 2.0 / 2.4 / 3.2 mm
 - Nozzle connectable on a vacuum cleaner for extraction of tungsten dusts
 - Electrode holder to clamp TIG electrodes
 - Tools to assemble and dismantle

- ◆ For an accurate sharpening:
 - Choose the electrode diameter
 - Select the grinding angle (10° to 70°)
 - Start the machine
 - Insert the electrode and turn it slowly

- ◆ An incredible result:
 - The grind is perfect
 - The grinding angle is very precise
 - Longitudinal sharpening, precise and symmetric angle.



This equipment has to be connected to a vacuum extraction for dusts



WARRANTY
2
YEARS

EN 50144-2-3
EN 60745-1
EN 60745-1/A1

See the video



Other products of the range:

Red head:
(for tungsten electrodes Ø 1.0 / 4.0 / 4.8 / 6.0 mm)

To order W000011037

Spare blue head:
(for tungsten electrodes Ø 1.6 / 2.0 / 2.4 / 3.2 mm)

To order W000011038

Spare diamond disk:

To order W000011036

To order W000011035

Technical characteristics:

Voltage:	220-230 volts
Frequency:	50 - 60 Hz
Power:	400 W
Amperage:	1.8 A
Disk speed:	30.000 rpm
Weight:	1.85 kg

Warranty: 2 years.
Conform to EU standards

OTHER ACCESSORIES

CHAMELEON 4V+

See page 7



Gloves TIG

See page 38



Cooling liquid FREEZCOOL

See page 91





WELDLINE
by Lincoln Electric

5 MIG/MAG WELDING

WELDING TOOLS AND ACCESSORIES

◆ MIG/MAG Torches	74 to 75
◆ Zirconium contact tip / Maintenance boxes	76
◆ Ceramic backings	77
◆ Other accessories	78

MIG/MAG TORCHES

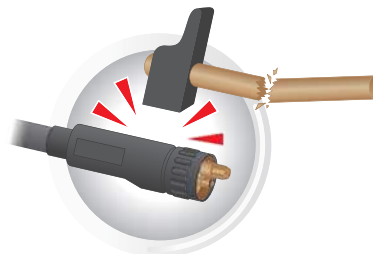
WMT2

Simple and reliable, this range is adapted to the most common applications.

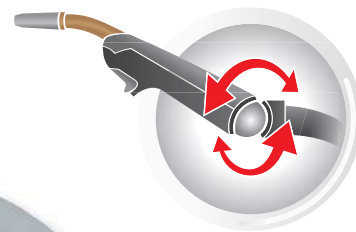
STANDARD RANGE



Wear parts compatible with the most common standard in Europe.



Extra length rear cable support ensure smooth and consistent wire feeding.



Easy pivoting handle.



Extra-flexible cable.



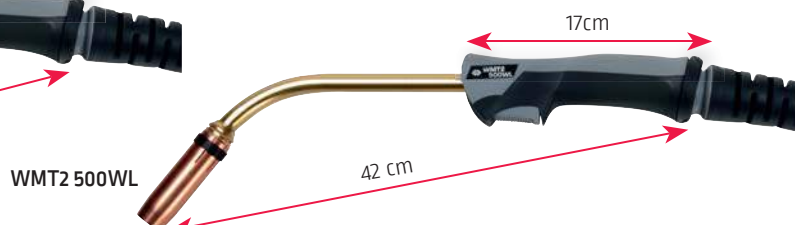
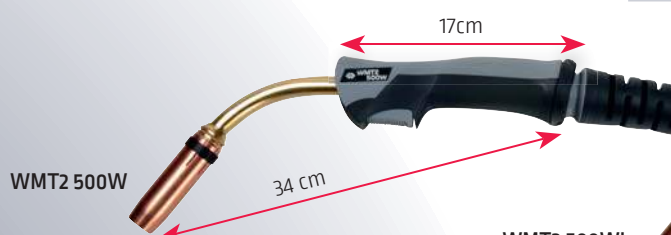
2014-570

Air cooling

MODEL		WMT2-15A	WMT2-25A	WMT2-36A
Duty cycle [CO ₂ shielding gas]		180 A @ 60%	230 A @ 60%	300 A @ 60%
Applications		Thin plates, automotive industry	Thin plates, light fabrication	Vessel manufacture, steel structures
Wire diameter		Up to 1.0 mm	Up to 1.2 mm	Up to 1.6 mm
Original equipment	Contact tip	0.8 mm	1.0 mm	1.2 mm
	Conical nozzle	12 mm	15 mm	16 mm
To order				
3 m		W000277445	W000277473	W000277482
4 m		W000277447	W000277474	W000277483
5 m		-	W000277475	W000277484

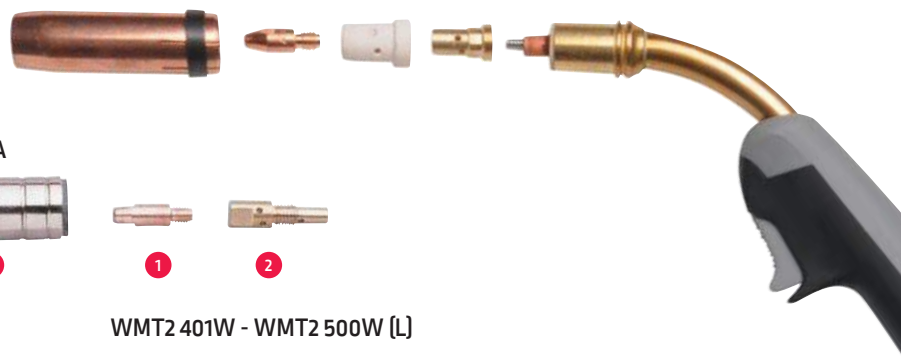
Water cooling

MODEL		WMT2 401W	WMT2 500W	WMT2 500WL
Duty cycle [CO ₂ shielding gas]		460 A @ 100%	500 A @ 100%	500 A @ 100%
Applications		Heavy duty, high production	Heavy duty, high production	Heavy duty, high production
Wire diameter		Up to 1.6 mm	Up to 2.4 mm	Up to 2.4 mm
Lance length		-	34 cm	42 cm
Original equipment	Contact tip	1.2 mm	1.2 mm	1.2 mm
	Conical nozzle	16 mm	16 mm	16 mm
To order				
3 m		W000370826	W000277492	W000277533
4 m		W000370827	W000277493	W000277534
5 m		W000370828	W000277494	W000277535



MIG/MAG TORCHES

Wear parts for WMT2 torches



WMT2 15A

WMT2 25A

WMT2 36A

WMT2 401W - WMT2 500W (L)

		Ø mm	1 - Contact tip	2 - Contact tip holder	3 - Nozzle	Nozzle spring	Spiral liner wire			4 - Insulating diffuser		
							3 m	4 m	5 m	Standard	High temperature	Ceramic
WMT2 15A	Steel	0.6	W000010820	W000277903	W000010787 (D10) W000010786 (D12.5) W000010788 (D16)	W000277448	W000010730	W000010731	-			
		0.8	W000010821				W000010733	W000010734	-			
		1.0	W000010822				W000010730	W000010731	-			
	Aluminium	0.6	W000010823				W000010730	W000010731	-			
		0.8	W000010824				W000010733	W000010734	-			
WMT2 25A	Steel	0.8	W000010826	W000010720	W000010791 (D12) W000010790 (D14) W000010792 (D17)	W000277477	W000010730	W000010731	W000010732			
		1.0	W000010827				W000010733	W000010734	W000010735			
		1.2	W000010828				W000010736	W000010737	W000010738			
	Aluminium	1.0	W000010850									
		1.2	W000010851									
WMT2 36A	Steel	0.8	M6 x 28	W000010721 (M6) W000010722 (M8)	W000010795 (D14) W000010794 (D16) W000010796 (D20)		W000010730	W000010731	W000010732	W000010780	W000010781	W000010782
		0.8	M8 x 30 x 28				W000010826	W000010834	W000010835			
		1.0	M6 x 28				W000010827	W000010835	W000010836			
		1.0	M8 x 30 x 28				W000010828	W000010836	W000010837			
		1.2	M6 x 28				W000010829	W000010837	W000010850			
		1.2	M8 x 30 x 28				W000010830	W000010838	W000010839			
	Aluminium	1.0	M6 x 28				W000010850	W000010853	W000010854			
		1.0	M8 x 30 x 28				W000010851	W000010854	W000010855			
		1.2	M6 x 28				W000010852	W000010855	W000010856			
		1.2	M8 x 30 x 28				W000010853	W000010856	W000010857			
		1.6	M6 x 28				W000010854	W000010857	W000010858			
		1.6	M8 x 30 x 28				W000010855	W000010858	W000010859			
	Steel	0.8	M8 x 30				W000010834	W000010835	W000010836			
		1.0	M8 x 30				W000010837	W000010838	W000010839			
		1.2	M8 x 30				W000010840	W000010841	W000010842			
		1.6	M8 x 30				W000010843	W000010844	W000010845			
		2.4	M8 x 30				W000010846	W000010847	W000010848			
WMT2 401W - WMT2 500W (L)	Steel	0.8	M8 x 30	W000010724 (M8)	W000010798 (D14.5) W000010797 (D16) W000010799 (D20)		W000010730	W000010731	W000010732	W000010783	W000010784	W000010785
		1.0	M8 x 30				W000010733	W000010734	W000010735			
		1.2	M8 x 30				W000010867	W000010868	W000010869			
		1.6	M8 x 30				W000010736	W000010737	W000010738			
	Aluminium	1.0	M8 x 30				W000010745	W000010746	W000010747			
		1.2	M8 x 30				W000010748	W000010749	W000010750			
		2.4	M8 x 30				W000010751	W000010752	W000010753			

Original equipment parts

5 Isolating washer

To order

W000010748

ZIRCONIUM CONTACT TIP

WMT2 MIG/MAG torches can be equipped with CuCrZr contact tips that bring excellent performances compared to standard copper contact tips [Cu].

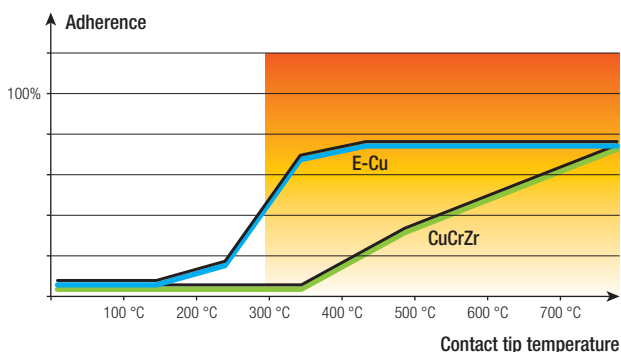
The wear:

The electrical conductivity being superior in a CuCrZr alloy, the arc transfer will meet less resistance and the contact tip will wear out less rapidly.

The lifetime:

The mechanical and thermal resistances also being superior to a copper alloy, the constraints, especially due to the wire friction and to the arc temperature, will be better tolerated with a CuCrZr contact tip.

Used in robotic welding for these advantages, the CuCrZr contact tip can improve the manual MIG/MAG welding performances as well.



Torch model	Screw thread	Wire diameter (mm)	To order
WMT2-15A	M6 x 25	0.6	W000010823
		0.8	W000010824
		1.0	W000010825
WMT2-25A & WMT2-36A	M6 x 28	0.8	W000010830
		1.0	W000010831
		1.2	W000010832
WMT2-36A	M6 x 28	1.6	W000010833
WMT2-36A, WMT2-401W & WMT2-500W [L]	M8 x 30	0.8	W000010840
		1.0	W000010841
		1.2	W000010842
		1.6	W000010843

MAINTENANCE BOXES

MIG-BOX for WMT2

The storage you were missing !



Features:

- ◆ Dimensions 36 x 24 x 5 cm.
- ◆ Plastified pieces guide included.
- ◆ Until 80 consumables.

Features & benefits:

- ◆ No more losses.
- ◆ All the pieces on hand.
- ◆ Wear parts compatible with the most common standard in Europe.
- ◆ Ready-to-use.



MIG-BOX WMT2 15A

To order W000387234

MIG-BOX WMT2 36A

To order W000387236

MIG-BOX WMT2 25A

To order W000387235

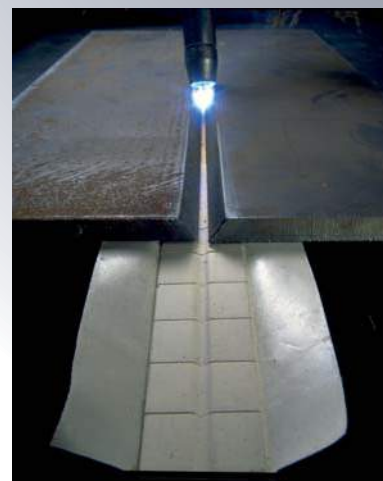
MIG-BOX WMT2 401W / WMT2 500W [L]

To order W000387237

CERAMIC BACKINGS

Choice of KERALINE slat type depending on the welding process

	MMA	TIG	MIG/MAG	SAW		MMA	TIG	MIG/MAG	SAW
KERALINE TA 1	-	✓	✓	-	KERALINE TR 2	✓	-	✓	-
KERALINE TA 2	-	✓	✓	-	KERALINE TR 3	✓	-	✓	-
KERALINE TA 3	✓	-	✓	-	KERALINE TR 4	✓	-	✓	-
KERALINE TF 1	-	✓	✓	-	KERALINE TR 5	✓	-	✓	-
KERALINE TF 2	-	✓	✓	-	KERALINE TR 6	✓	-	✓	-
KERALINE TF 3	✓	-	✓	-	KERALINE TM 1	✓	✓	✓	✓
KERALINE TR 1	✓	-	✓	-	KERALINE TM 2	✓	✓	✓	✓



Ceramic on aluminium-tape

Type	To order	Dimensions (mm)	3D diagram	Application	Packing
KERALINE TA1 - 6 mm	W000010391				600 mm / piece 10 pieces per bag (6 meters) 6 bags/carton (36 meters)
KERALINE TA2 - 9 mm	W000010392				
KERALINE TA3 - 13 mm	W000010393				
KERALINE TF1 - 6 mm	W000010394				
KERALINE TF2 - 9 mm	W000010395				600 mm / piece 10 pieces per bag (6 meters) 6 bags/carton (36 meters)
KERALINE TF3 - 13 mm	W000010396				
KERALINE TR1 - 6 mm	W000010397				
KERALINE TR2 - 7 mm	W000010398				
KERALINE TR3 - 8 mm	W000010399				600 mm / piece 50 pieces per bag (30 meters) 5 bags/carton (150 meters)
KERALINE TR4 - 9 mm	W000010400				600 mm / piece 20 pieces per bag (12 meters) 8 bags/carton (96 meters)
KERALINE TR5 - 12 mm	W000010401				600 mm / piece 20 pieces per bag (12 meters) 5 bags/carton (60 meters)
KERALINE TR6 - 15 mm	W000010402				600 mm / piece 15 pieces per bag (9 meters) 5 bags/carton (45 meters)

Ceramic on metallic support

Type	To order	Dimensions (mm)	3D diagram	Application	Packing
KERALINE TM1 - 13 mm	W000010403				600 mm / piece 10 pieces per bag (6 meters) 7 bags/carton (42 meters)
KERALINE TM2 - 18 mm	W000010404				600 mm / piece 9 pieces per bag (5.4 meters) 5 bags/carton (27 meters)

OTHER ACCESSORIES

SPRAYMIG H₂O / CERASKIN

See page 87



FLUXO S 190 / P 125 / R 175

See page 90



GALVASPRAY

See page 88



MIG pliers



See page 50

STOPCALOR +

See page 37



CHAMELEON 3VO



See page 7

FLOWELD

See page 50



MIG torch stand



See page 50





6 FLAME

WELDING TOOLS AND ACCESSORIES

- ◆ Hoses / Automatic roller for oxygas hoses..... 81
- ◆ Quick action coupling 82 to 83
- ◆ Cutting nozzles and other flame 84



HOSES

EN ISO 3824

Gas	Ø (mm)	Maximum pressure (bar)	Coil length (m)	To order
Single hoses				
Acetylene	6.3 x 12	10	5	W000010055
Oxygen	6.3 x 12	10	5	W000010056
Acetylene	6.3 x 12	10	10	W000010081
Oxygen	6.3 x 12	10	10	W000010057
Acetylene	6.3 x 12	10	20	W000010058
Oxygen	6.3 x 12	10	20	W000010059
Acetylene	6.3 x 12	10	40	W000010060
Oxygen	6.3 x 12	10	40	W000010061
LPG*	6.3 x 12	10	20	W000010052
LPG*	6.3 x 12	10	40	W000010062
Acetylene	10 x 16	20	10	W000010064
Oxygen	10 x 16	20	10	W000010065
Acetylene	10 x 16	20	20	W000010066
Oxygen	10 x 16	20	20	W000010067
Acetylene	10 x 16	20	40	W000010068
Oxygen	10 x 16	20	40	W000010069
LPG	10 x 16	20	20	W000010053
LPG/Acetylene*	10 x 16	20	40	W000010071
Oxygen	8 x 14	20	50	W000010079
Acetylene	8 x 14	20	50	W000010080
Argon	6.3 x 12	10	40	W000010072
Argon	10 x 16	20	40	W000010073

Twin hoses				
TWIN (Oxygen - Acetylene)	6.3 x 12	10	20	W000010077
TWIN (Oxygen - Acetylene)	6.3 x 12	10	40	W000010063
TWIN (Oxygen - Acetylene)	8 x 14	20	50	W000010078
TWIN (Oxygen - Acetylene)	10 x 16	20	20	W000010054
TWIN (Oxygen - LPG)*	10 x 16	20	40	W000010076

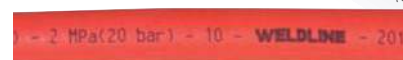
* Propylene excluded



0876-071_ret



2011-348



2011-350



2012-258

THE DATE PRINTED
ON THE HOSE IS THE
MANUFACTURING DATE

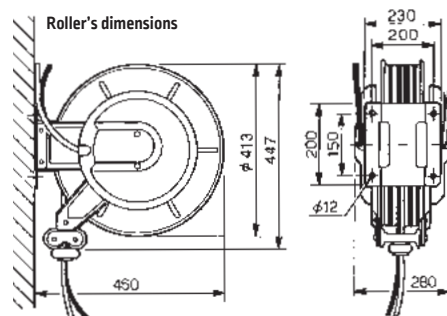
AUTOMATIC ROLLER FOR OXYGEN HOSES TUBEREEL



Automatic roller for twin hoses diameter 8 or 10 mm.

- ♦ Automatic roller for twin hoses diameter 8 or 10 mm.
- ♦ Allows the operator to choose the hose length suitable to his application
- ♦ Maximum length for inside diameter 8 mm: 20 m
- ♦ Maximum length for inside diameter 10 mm: 15 m
- ♦ Provided without hoses

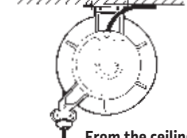
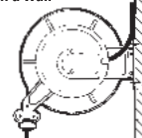
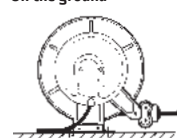
To order W000260575



On the ground

On a wall

From the ceiling



QUICK ACTION COUPLINGS

QUICKMATIC II

QUICKMATIC II is the new range of quick couplings designed and manufactured by Weldline.

Safety, Performance and Easy to Use are keys words that characterize this new range.

QUICKMATIC II is available in several versions:

- ♦ By type of gas - presence of a mechanical coding
- ♦ For mounting on the regulator, between pipes and on the blowpipe
- ♦ With integrated FBA (Flash Back Arrestor)

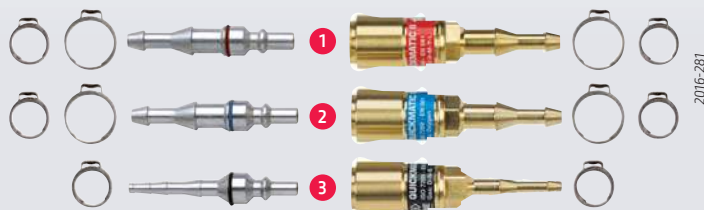
Advantages:

- ♦ **Safety**
 - Gas flow stopped during disconnection due to an internal mechanism
 - Specific design limiting accidental disconnections
- ♦ **Ease of use and ergonomics**
 - «Push System» connection with automatic locking
 - Studied design to allow to use with one hand
- ♦ **Performances**
 - 4 levels of tightness
 - Compatible with any welding or cutting blowpipe thanks to limited pressure losses

To order

Connection between hoses **A**

QUICKMATIC II	Ø hoses (mm)	To order	
		Female connector	Male connector
1 Fuel Gas	6 and 10	W000011002	W000011005
2 Oxygen	6 and 10	W000011001	W000011004
3 Neutral gas (Argon, ...)	4	W000011003	W000011006



Also available in kits :

Females kit



To order W000011015

Males kit



To order W000011016

Female / Male kit



To order W000011017

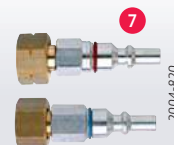
Regulator connection **B**

QUICKMATIC II	Thread	Ø hoses (mm)	To order	
			Female connector	Male connector
4 Fuel gas	M16 x 150 Left	6 and 10	W000011008	W000011005
	3/8" Left		W000011011	
5 Oxygen	M16 x 150 Right	6 and 10	W000011007	W000011004
	3/8" Right		W000011010	
	1/4" Right		W000011009	
6 Neutral gas (Argon, ...)	12 x 100 Right	4	W000011012	W000011006
	3/8" Right		W000386358	
	1/4" Right		W000386359	



Blowpipes' entry connection **C**

QUICKMATIC II	Thread	To order	Male connector
7 Fuel gas	16 x 150 Left	W000011014	
Oxygen	16 x 150 Right	W000011013	



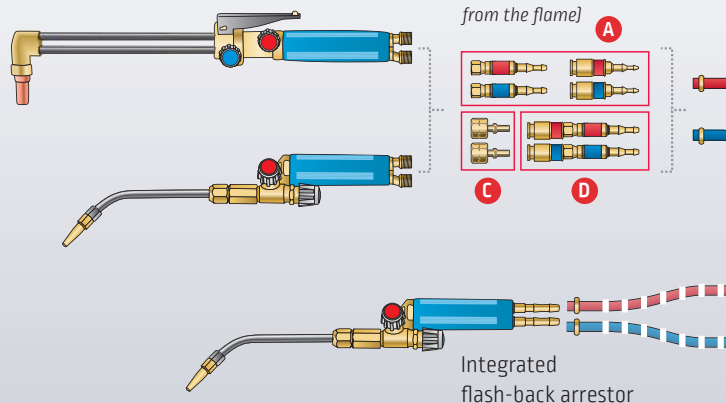
QUICKMATIC II with integrated FBA **D**

SECURTOP 662	Inlet	Outlet	To order
Oxygen	Hose	QUICKMATIC II female	W000386367
Fuel Gas	Ø 6,3 and 10 mm	QUICKMATIC II female	W000386365

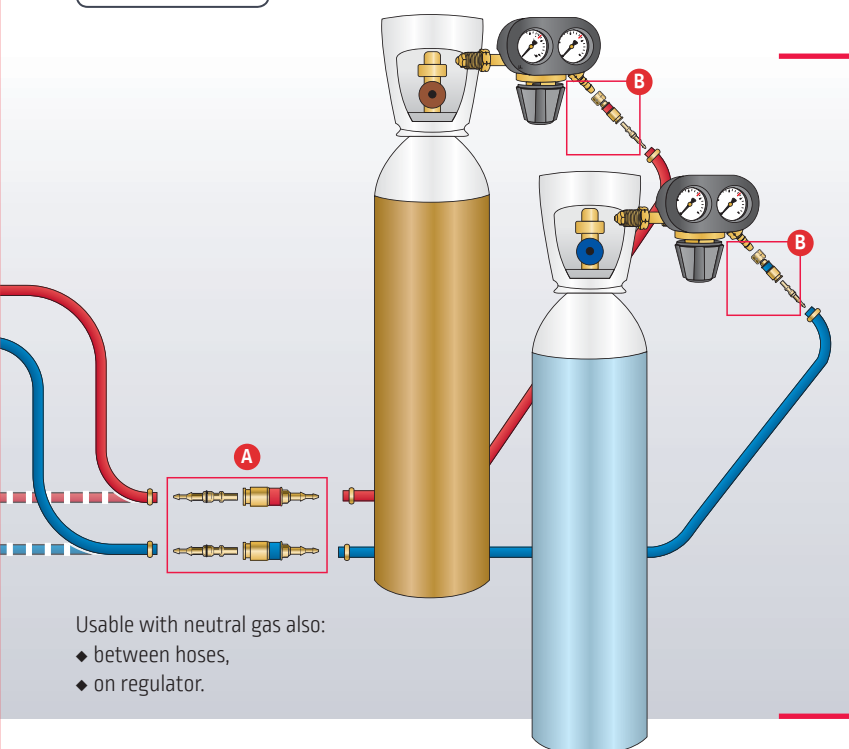


Recommendations for use

Flame installation



Visit our factory



Usable with neutral gas also:

- ◆ between hoses,
- ◆ on regulator.

Mounting on thread

QUICKMATIC II		Thread	To order	Female coupling
8	Fuel gas	16x150 Left	W000386360	
		3/8 Left	W000386362	
9	Oxygen	16x150 Right	W000386361	
		3/8 Right	W000386363	
		1/4 Right	W000386364	



Technical characteristics and usable gases:

Label		Gas		Pressure max. (bar)	Max Flowrate (m³/h)*
Letter	Color	Name	Letter		
F	Red	Acetylen	A	1,5	14
		Propane	P	5	22
		Hydrogen	H	10	215
		Methane	M	5	40
		MPS	Y	5	24
		Propylene	L	5	22
O	Blue	Oxygen	O	20	65
N	Black	Air	D	20	90
		CO ₂	B		73
		Nitrogen, neutral gas	N		92

* Maximal flowrate without flash-back arrestor



CUTTING NOZZLES AND ACCESSORIES

G1 cutting nozzles and IC cutting nozzles

G1 profile	Gauge (mm)	Cutting thickness (mm)	IC profile
Acetylene			Acetylene



0327-033

W000262059	7/10	3-10	W000262089
W000262060	10/10	10-25	W000262091
W000262061	12/10	25-50	W000262093
W000262062	16/10	50-80	W000262094
W000262063	20/10	80-120	W000262095
W000262064	25/10	120-200	W000262096
W000262065	30/10	200-300	W000262097



0327-031

Propane			Propane
W000262066	7/10	3-10	W000262098
W000262067	10/10	10-25	W000262099
W000262068	12/10	25-50	W000262100
W000262069	16/10	50-80	W000262101
W000262070	20/10	80-120	W000262102
W000262071	25/10	120-200	W000262105
W000262072	30/10	200-300	W000262106

PROTECFLAM

Heat shield protection for walls and floors during gas welding, brazing or soldering.

PROTECFLAM
Single use
200 x 250 mm

Asbestos free



2006-397

To order W000271449

Blister pack of 3 shields

PROTECFLAM TECH

Very flexible (*memory effect*)
Long life duration - Both sides usable
200 x 250 mm

No toxic fumes release

To order W000276078



2005-272R

Tip cleaners

Used to clean welding and cutting nozzles to restore nozzle performance. Contains a range of round needle files in a metal carry case.



To order W000290900

THERMISHIELD



See page 88

2009-249

Spark lighter



To order W000010978



Traditional tool with five renewal flints.



To order W000211924

Gun model with ten renewal flints.



Inspection mirrors

Mirror with magnetic stand

To order W000010557



To order W000010558

Spare part: mirror.

Circular telescopic mirror

For all angle viewing. Fast and accurate visual inspection of hidden areas with an almost limitless number of positions.



To order W000273291

2009-297

2009-298



WELDLINE
by Lincoln Electric

7 LIQUIDS & SPRAYS



WELDING TOOLS AND ACCESSORIES

- ◆ Anti-spatters..... 87 to 89
- ◆ Anti-corrosion / Sharpening of tungsten electrodes / Heat protection..... 88
- ◆ Cracks detection 89
- ◆ Non destructive cracks detection 90
- ◆ Cooling liquid for torches / Leakage control..... 91
- ◆ Stainless steels treatment 92
- ◆ Cleaning, polishing and marking of stainless steels..... 93



ANTI-SPATTERS

CERASKIN

Welding anti-spatters spray with ceramic coating

CERASKIN is a rapid drying ceramic coating spray providing exceptional protection of welding equipment and welded parts from damage caused by spatters.

Product features:

- ◆ An exceptionally fast drying, long lasting and durable ceramic coating formulated to withstand the most demanding requirements in the professional welding environment.
- ◆ The ceramic base makes a barrier and prevents weld spatters adhering to welding equipment and welded parts.
- ◆ CERASKIN grants 8 consecutive hours welding work (1 working day), without any further adds of product.
- ◆ Volume: 400 ml (net) - 520 ml (nominal).



2010-382

To order W000277679

SPRAYMIG H2O

Anti-spatters spray and liquid

- ◆ Water based and odourless.
- ◆ No influence on porosity and cold cracks.
- ◆ No influence of the content of diffusible hydrogen in the weld metal.
- ◆ Solvent and silicone free.
- ◆ Biodegradable.
- ◆ Allows parts to be lacquered.
- ◆ Easily washed off parts.

Description:

- ◆ Spraymig H2O silicone-free water-based anti-spatters based on highly efficient water soluble substances.
- ◆ It prevents spatters from sticking to nozzles, tips, and work pieces robots, and extends nozzle life considerably.
- ◆ It permits rapid changing and cleaning of the nozzles.
- ◆ Painting, galvanizing, lacquering of parts is possible.
- ◆ A preliminary test is recommended.
- ◆ Very low consumption for a high effectiveness.

Physical and chemical properties:

- ◆ Aspect: liquid uncoloured clear.
- ◆ Density at 20 °C: 1.00.
- ◆ Pure pH: 7.
- ◆ Volume: Spray: 400 ml (net), 520 ml (nominal) - Drum: 20 liters.
- ◆ Propellant gas: dimethylether.
- ◆ Base: water - based emulsion of organic substances.

CAUTION:
before use, carefully read
and understand the safety
datasheet available
on our websites



2007-394

Spray (400 ml)

Drum (20 liters)

To order W000010001

To order W000011074

SPRAYMIG SIB

Anti-spatters spray

- ◆ Silicone based.
- ◆ Do not for use on any parts that are about to be painted.
- ◆ Use on cold parts.
- ◆ Use on nozzles only and outside contact tip.

Specifications:

- ◆ SPRAYMIG SIB is a preventive maintenance product for MIG/MAG torches.
- ◆ To be used on cold parts only, do not use on threads or inside contact tips (as the product is electrically insulating).
- ◆ Volume: 400 ml (net) - 520 ml (nominal).
- ◆ Propellant gas: aliphatic hydrocarbons.
- ◆ Base: silicone and isoparaffinic solvent.



2010-382

To order W000011093

SPRAYMIG SVB

Anti-spatters spray

- ◆ Silicone free.
- ◆ Compatible with paint.
- ◆ Use on cold parts.
- ◆ Use on nozzles only and outside contact tip.

Specifications:

- ◆ SPRAYMIG SVB is an anti-spatters silicone free spray for welding applications.
- ◆ Volume: 400 ml (net) - 520 ml (nominal).
- ◆ Propellant gas: aliphatic hydrocarbons.
- ◆ Base: biodegradable synthetic polymers.



2007-394

To order W000011092

SPRAYMIG SVD

Anti-spatters spray

- ◆ Silicone free.
- ◆ Compatible with paint.
- ◆ Use on cold parts.
- ◆ Use on nozzles only and outside contact tip.
- ◆ Dichloromethane solvent.

Specifications:

- ◆ SPRAYMIG SVD is an anti-spatters silicone free spray for welding applications.
- ◆ Volume: 300 ml (net) - 520 ml (nominal).
- ◆ Propellant gas: aliphatic hydrocarbons.
- ◆ Base: Synthetic oil not siliconic.
- ◆ Dichloromethane solvent.



2009-250

To order W000271574

ANTI-SPATTERS

NETMIG

Anti-spatters dip

- ◆ Protects nozzles and contact tips from spatters by immersion.
- ◆ Silicone and solvent free.
- ◆ Odourless.

Specifications:

- ◆ Prevents spatters adhering:
 - To torch nozzles and contact tips,
 - To positioners and jaws of welding lathes.
- ◆ Does not clog threads or apertures.
- ◆ Does not cause porosity. Silicone and solvent free. Odourless.
- ◆ Base: waxes and oil.
- ◆ Volume: 300 gr.



To order W000011071

ANTI-CORROSION

GALVASPRAY

- ◆ Protection of welded joints.
- ◆ Permits welded parts to be lacquered.

Specifications:

- ◆ GALVASPRAY sprays a zinc protective finish.
- ◆ High resistance to oxidation and corrosion (*more than 80 hours in salty fog*)
- ◆ Quick drying (*about 5 minutes*) and no dripping.
- ◆ Volume: 400 ml (*net*) - 520 ml (*nominal*).
- ◆ Propellant gas: propane/butane.
- ◆ Base: zinc powder in a vegetal resin.

Instructions for use:

- ◆ Clean and degrease the area to be treated.
- ◆ Shake the can before use at least for 1 minute.
- ◆ Spray at 25 cm distance from the piece by short and regular passes.



To order W000011071

SHARPENING OF TUNGSTEN ELECTRODES

TIG POINT

Chemical sharpening of tungsten electrodes

Instruction for use:

- ◆ Pull the electrode out from the torch of 15 mm.
- ◆ Use the welding current to warm the electrode to white.
- ◆ Dip the electrode in the product while rotating the electrode.
- ◆ Make sure that the result is satisfactory.
- ◆ Carefully close the pot.



To order W000011101

HEAT PROTECTION

THERMISHIELD

Heat shield gel

Description:

- ◆ It is designed to stop heat from travelling through most metals during welding, brazing or soldering.
- ◆ It prevents from distortion of metals and even plastics caused by the heat of a welding torch.
- ◆ Volume: 500 ml

Instructions for use:

- ◆ Shake well before use and spray the product over the surface to be protected.
- ◆ Use in well ventilated areas only.

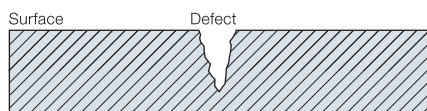


To order W000274839

CRACKS DETECTION

FLUXO

This non destructive technique allows the detection of cracks opening on the surface of the plate helping a visual control, due to the cracks becoming visible [30 to 50 μm].



A wide range of materials:

Steel, ceramic, plastic, glass...

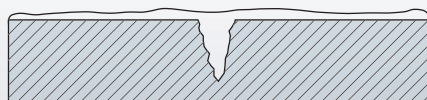
Many industries:

- ◆ Boilers maker ◆ Founders ◆ Petrochemical
- ◆ Railway ◆ Nuclear ◆ Shipyard ◆ Automotive...



1 Cleaning

Product: FLUXO S190 - CLEANER



+ Product:

- ◆ Perfect cleaning without dry rest.
- ◆ Quick drying (evaporation).
- ◆ Spray: - Spraying in all positions.

Spray based on Butane (extremely flammable).

Solvent: Heptane.

Necessity for protection (petroleum based) solvent.



2012-279

3 Cleaning

Product: water



4 Developer

Product: FLUXO R175 - DEVELOPER



+ Product:

- ◆ Thin and uniform film and transparent film. After drying, the white surface appears.
- ◆ Very good surface coverage due to the thin granulometry.
- ◆ Quick drying of the solvent included in the developer.
- ◆ Spray: works in all position.
- ◆ Very good identification of the cracks under white light.

Butane/propane spraying.



2012-278

2 Penetrant spray

Product: FLUXO P125 - PENETRANT



+ Product:

- ◆ Temperature of use: 0 °C to 50 °C. Easy to use even on hot plates.
- ◆ Good impregnation. A single spray lasts more than 30 min without drying.
- ◆ Powerful penetration. Due to its viscosity.
- ◆ Spray: works in all positions.
- ◆ Very good identification of cracks under white light.
- ◆ Easy to remove with water. No "ground" noise.

Butane/propane spraying (extremely flammable).



2012-277

5 Inspection of the defects



Cracks are visible at the surface of the plates, thanks to clear vivid red indications easily seen by the naked eye [no UV light required].



See the batch number on the packaging and consult your conformity certificate on our websites



NON DESTRUCTIVE CRACKS DETECTION



1 FLUXO S190 - CLEANER

**Piece degreasing & cleaning
of penetrant excess.**

Pieces degreasing before application
of the penetrant.

Instructions:

Spray FLUXO S190 - CLEANER until
disappearance of red or purple
PENETRANT traces.

- ◆ Propellant: Butane / Propane.
- ◆ Volume : 500 ml *[net]* -
650 ml *[nominal]*.

To order W000374827



2012-279

2 FLUXO P125 - PENETRANT

**Type II - level 2 - Methode AC
Non destructive testing.**

Localization of the emerging defects.
Water rinse. Without rhodamine.
Use temperature 0°C - 50°C.

Instructions:

Be sure the area is clean. Spray at 20 cm
FLUXO P125 - PENETRANT for a complete recover
of the area. Let it penetrate at least 10 minutes.
Rinse with FLUXO S190 - CLEANER or water.
Control with FLUXO R175 - DEVELOPER.

- ◆ Propellant: Butane / Propane.
- ◆ Volume : 500 ml *[net]* - 650 ml *[nominal]*.

To order W000374825



2012-277

4 FLUXO R175 - DEVELOPER

Detection of cracks and surface faults.

Defects highlight by coloration of the penetrant.
Daylight review.

Instructions: Be sure that the area is clean and without
penetrant last trace.

Shake the can until hearing clearly the ball bearing.

Spray at 20 cm for an uniform layer without super thickness.
Wait a few minutes until obtaining a dry powdery film before
examining the surface.

- ◆ Propellant: Butane / Propane.
- ◆ Volume : 500 ml *[net]* - 650 ml *[nominal]*.

To order W000374826



2012-278

CAUTION:
before use, carefully read
and understand the safety
datasheet available
on our websites

Also available: ARDROX

ARDROX 9PR5 CLEANER

Degreasing before application of the
penetrant, elimination of reveler excess.

To order W000374531

ARDROX 9VF2 PENETRANT

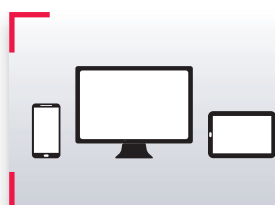
Localization of the emerging defects.
400 ml net.

To order W000374818

ARDROX NQ1 DEVELOPER

Drying compositions highlighting the defects
after the reveler action. 400 ml net.

To order W000374532



See the batch number on the packaging
and consult your conformity certificate
on our websites



COOLING LIQUID FOR TORCHES

FREEZCOOL *[red]* T°-27°C

For manual equipment

FREEZCOOL is a highly elaborated cooling liquid. It is formulated with multi metal corrosion inhibitors for a safe use into all types of circuits. Its thermal stability and dielectric properties make a cooling liquid especially suitable for « high tech » systems.

General use:

- ♦ Cooling of induction furnaces
- ♦ Cooling of tack welding systems, plasma flares
- ♦ Air conditioning
- ♦ Electric generators
- ♦ Motorcar industry: engines cooling systems, engines and gearboxes testing benches.
- ♦ Cooling of radar systems.

Product benefits:

- ♦ Ensures an anti-freezing protection down to -27 °C
- ♦ High electrical resistivity
- ♦ Non volatile *(no product losses)*
- ♦ Chemically stable, does not polymerize
- ♦ Anti-corrosion: contains multi metallic corrosion inhibitors.
- ♦ Anti-algae growth
- ♦ Non toxic
- ♦ Non flammable

9.6 L

To order W000010167



2004-216

Controls:

- ♦ Freezing point with a refract meter
- ♦ pH control
- ♦ Iron and copper contents

Physical properties:

- ♦ Physical form: red liquid
- ♦ Base: monopropylene glycol and water
- ♦ Specific gravity: 1.04 at 20 °C
- ♦ pH: 7+-2
- ♦ Freezing point: -27 °C
- ♦ Resistivity: 105 ohm.cm-1

Packaging:

FREEZCOOL is delivered in 10 kilos net weight, polyethylene drums. For any other type of packaging, please contact us.

Discover also

FREEZCOOL *[green]* T°-5°C

Coolant for welding and cutting torches. Less viscous, it contains antifreeze but in a less important proportion and anti-corrosion for brass and copper circuit. It is less sensible to friction and therefore it has a more important flow rate.

For automation

9.6 L

To order W000381407

CAUTION:

before use, carefully read and understand the safety datasheet available on our websites

LEAKAGE CONTROL

BUBBLE



A high-return product for leak detection suitable for all gases except high pressure oxygen > 150 bars.

- ♦ Volume: 500 ml *[net]* - 650 ml *[nominal]*
- ♦ Propellant gas: denaturate hydrocarbure
- ♦ Base: mixture of foam compounds
- ♦ Temperature of application: -10 °C/+130 °C

To order W000010963



2007-794

1000 BULLES

A leakage controller suitable for all gases except high pressure oxygen > 150 bars.

- ♦ Volume: 400 ml *[net]* - 650 ml *[nominal]*
- ♦ Propellant gas: nitrogen protoxyde
- ♦ Base: lauryether natrium sulfate

To order W000011090



2000-228

See the batch number on the packaging and consult your conformity certificate on our websites



STAINLESS STEEL TREATMENT

Weldline proposes a complete range of products for stainless steels treatment.

There are three essential phases for a good surface treatment:

- 1 **Degreasing**
- 2 **Pickling**
- 3 **Passivation**

The first two are «intermediate phases», which means that they can be repeated in different working stages. The third, passivation, always represents the final treatment step.

1 CLEANOX (Degreasing- Liquid)

Degreasing is the essential process before any thermal treatment. It avoids incidental remains of oil or dust which interact (*contamination*) with the metal during welding or thermal treatment of stainless steel. It can be repeated in the following phases, in case further thermal processing is required, before the final passivation.

How to use CLEANOX DEGREASER

Dilute the degreaser with 30% to 50% water and allow it to vaporize on the surface to be treated. Leave for a few minutes to allow the product to act and then rinse with clean water. Do not expose the product or treated surface to sunlight or to any atmospheric agents.



CLEANOX L (liquid) 6 kg

To order W000266423



CLEANOX L (liquid) 30 kg

To order W000266425

2 PICKLINOX (Pickling - Product in gel, paste or liquid)

Pickling is the operation that permits the remove of all oxides after welding, removing the surface layer following a thermal treatment. It is the most important step in the treatment process. A welding bead and generally a heated surface, lose their stainless property ($Cr < 12\%$). For this reason, a pickling operation does not mean only cleaning the welding bead but it restores the stainless steel characteristics.

How to use PICKLINOX GEL or PASTE

Degrease the surface to be treated with the specific CLEANOX product. Then apply a coat of PICKLINOX paste or gel. The exposure time will vary from a few minutes up to 30 minutes depending on the type of steel being welded. At the end of treatment, remove the gel or the paste with clean water. Do not expose the product or treated surface to sunlight or to any atmospheric agents.



PICKLINOX G (gel) 2 kg

To order W000266426



PICKLINOX P (paste) 2 kg

To order W000266428



PICKLINOX L (liquid) 30 kg

To order W000266422



3 RESTORINOX (Passivation - Product in gel)

This is the final phase of the process, and is absolutely necessary for restoring the stainless property. With passivation is created a « desired oxidation ». In fact this working phase restores the chromium layer damaged by heat shortening the spontaneous oxidation time. In this way, the oxide layer which protects the surface from external agents is restored.

How to use RESTORINOX

First degrease and pickle the part to be treated with CLEANOX and PICKLINOX. Then apply the product. The times required for exposure will vary from 20 minutes up to 60 minutes. At the end of the treatment remove the product with clean water. Do not expose the product or treated surface to sunlight or to any atmospheric agents.



RESTORINOX G (gel) 2 kg

To order W000266430

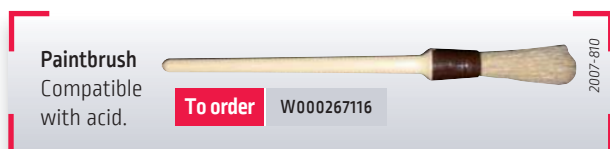
RESTORINOX G (gel) 10 kg

To order W000266431



RESTORINOX L (gel) 30 kg

To order W000266424



**Paintbrush
Compatible
with acid.**

To order W000267116

CLEANING, POLISHING AND MARKING OF STAINLESS STEELS

OPTICLEAN II

**Inverter-technology installation for
cleaning, polishing and marking of stainless steels.
Use on TIG welds.**

Your benefits:

- ◆ **AESTHETIC:** no stains on the steel after cleaning.
 - ◆ **ECOLOGICAL:** no need to wear gloves or protective masks with the neutral solution. Large outdoor areas are not required: no toxic vapor emissions, no need for water treatment plant.
 - ◆ **ECONOMIC:** no passivation after cleaning
 - ◆ **GAIN OF PRODUCTIVITY:** no need to dip the pump into the liquid and to interrupt the operation several times.
- Improvement of the quickness while increasing current.
Efficiency increased with the carbon blush.

**INVERTER
TECHNOLOGY**



OPTICLEAN II	To order
Machine OPTICLEAN II including :	W000382322
Torch	W000275260
Torch support	W000382323
Torch support extension	W000382325
Ground cable	W000375139
Torch power cable	W000375141
2,5 mm Allen key	W000382326
Brush	W000382329
Standard graphite insert 90°	W000382571
Narrow graphite insert 90°	W000382572
Standard TIG Bond pad 90° (by 10)	W000272348
Narrow Tig Bond pad 90° (by 10)	W000272351
Brill Bomar solution (100 ml)	W000272347
Brill Bomar solution (1,5 l)	W000387219
Neutral Bomar solution (100 ml)	W000272038
Neutral Bomar solution (1,5 l)	W000387218
Neutralizing solution Inox Fit 500 ml	W000274842

Optional	To order
Marking Kit INCLUDING :	W000271936
Black marking electrolyte 100 ml	W000272041
Erosion white marking electrolyte 100 ml	W000382573
Graphite marking insert 35 mm	W000272039
Marking felts insert	W000272040

Marking stencils dimensions	To order
25 x 15 mm	W000386781
54 x 16 mm	W000386780
54 x 32 mm	W000386779
85 x 27 mm	W000386785
85 x 54 mm	W000386786
128 x 42,5 mm	W000386787
128 x 85 mm	W000386782
170 x 54 mm	W000386783
170 x 108 mm	W000386784

Available sizes for the marking : 54 x 32 mm / 85 x 54 mm / 128 x 42,5 mm / 170 x 54 mm.
You just have to send your logo with the chosen dimensions.

You can simply order the marking kit and a cliché, providing us with your logo or any other writing: you can mark the product at least 500 times !

Technical data	OPTICLEAN II
Supply Voltage	230 V / 1Ph
Frequency	50/60 Hz
Capacity	450 W
Electrode Voltage	10/30 V AC/D
Isolation Class	IP 23
Noise level	< 10 dB [A]
Machine weight (empty)	7 kg
Machine dimensions	3 300 x 230 x 240 mm

See the video



1 - Cleaning

Place the cleaning solution onto the torch and choose whether you want to use the pad or the brush, which gives better access to angles that are difficult to reach. Rub the weld till its colour becomes clean.



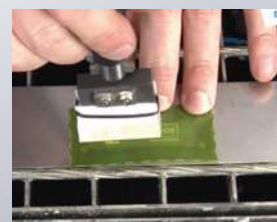
2 - Polishing

Place the polishing solution onto the torch and choose whether you want to use the pad or the brush. Rapidly, as you rub the weld, it will start to shine. Wipe your steel with a cloth rag in order to avoid stains.



3 - Marking

Take the appropriate suitcase containing both marking and eroding electrolytes. Rub the marking felt moistened with the electrolytic solution on the screen printing frame. Your logo is printed on the metal.



CAUTION:
before use, carefully read and understand the safety datasheet available on our websites



8 CUTTING & GRINDING DISKS

WELDING TOOLS AND ACCESSORIES

- ◆ Cutting and grinding disks 96 to 98
- ◆ Grinding accessories 99

CUTTING AND GRINDING DISKS

Weldline is offering a range of cutting and grinding disks designed for the main applications of industrial customers.

- ◆ Two extra thin cutting disks of 1 mm for steel and stainless steel.
- ◆ Flat and depressed center, hard cutting disk range for structural steel.
- ◆ A range of hard grinding disks for structural steel.
- ◆ A range of abrasive flap disks for grinding, finishing and cleaning applications.

EN 12413 - EN 13743



When buying such products, always ask for OSA certification, a warranty that the product complies with the safety standard and the additional requirements of the Organisation for the Safety of Abrasives

Pictograms description



Red line means maximum speed 80 m/s

Wheel diameter	Maximum revolution at 80 m/s
115 mm	13 300 rpm
125 mm	12 250 rpm
180 mm	8 500 rpm
230 mm	6 650 rpm



CUTTING AND GRINDING DISKS

DUCTIFLEX PRO

Top quality cutting disks for professional use.

A range of high quality products providing an ideal balance between performance and life duration.

Characteristics:

- ◆ Maximum speed 80 m/s.
- ◆ Diameter 115 to 230 mm.
- ◆ Thickness 1.0 to 3.2 mm.
- ◆ Should be used within 3 years from the production date.
- ◆ Design for steel, except the extra thin disks designed for steel and stainless steel.



Dimensions	Shape	Use	Specification*	Unit / box	To order
115 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261930
125 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261931
115 x 1.6 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000335001
125 x 1.6 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000335002
115 x 2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261932
125 x 2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261933
180 x 2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261934
125 x 1 x 22 mm	flat	alu	AC 46 S7 BF	50	W000401338 NEW
230 x 2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261935
180 x 2.5 x 22 mm	flat	steel	A 36 S7 BF	25	W000261936
230 x 2.5 x 22 mm	flat	steel	A 36 S7 BF	25	W000261937
115 x 3.2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261938
180 x 3.2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261939
230 x 3.2 x 22 mm	flat	steel	A 36 S7 BF	25	W000261940
125 x 3 x 22 mm	depressed	alu	AC 36 S7 BF	25	W000401348 NEW
115 x 2.5 x 22 mm	depressed	steel	A 36 S7 BF	25	W000261941
115 x 3.2 x 22 mm	depressed	steel	A 36 S7 BF	25	W000335005
125 x 2.5 x 22 mm	depressed	steel	A 36 S7 BF	25	W000261942
125 x 3.2 x 22 mm	depressed	steel	A 36 S7 BF	25	W000335006
180 x 2.5 x 22 mm	depressed	steel	A 36 S7 BF	25	W000261943
230 x 2 x 22 mm	depressed	steel	A 36 S7 BF	25	W000335003
230 x 2.5 x 22 mm	depressed	steel	A 36 S7 BF	25	W000261944
230 x 3.2 x 22 mm	depressed	steel	A 36 S7 BF	25	W000335004

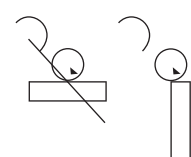
- ◆ Extra thin wheels providing a fast and economical cutting performance on steel and stainless steel.
- ◆ Extra long product life
- ◆ High cutting speed
- ◆ Specially efficient on steel bars, pipes, sheets or shaped sections
- ◆ No need to eliminate burr after cutting
- ◆ Less material waste

Same quality with depressed center

* Explanation of the specification: See next page

- ◆ Hard cutting disks for structural steel.
- ◆ Long life duration
- ◆ Iron and structural steel cutting

Recommendations:



Cutting will be faster by using a smaller contact surface between the disk and the work piece

CUTTING AND GRINDING DISKS

DUCTIFLEX

A grinding range for standard structural steel.

Characteristics:

- ♦ Steel surface cleaning, deburring, angle and corner dressing.
- ♦ Very good balance between performance and price, long life product.

Dimensions	Shape	Use	Specification	Unit / box	To order
115 x 6 x 22 mm	Depressed	Standard steel	A 30 S7 BF	10	W000261945
125 x 6 x 22 mm	Depressed	Standard steel	A 30 S7 BF	10	W000261946
180 x 6 x 22 mm	Depressed	Standard steel	A 30 S7 BF	10	W000261947
230 x 6 x 22 mm	Depressed	Standard steel	A 30 S7 BF	10	W000261948



2007-108

Explanation of the specifications

XXX	XX	X	XX	XX
Abrasive type	Grit size	Hardness	Structure	Bond

Abrasive type

A: Regular Aluminium oxide. For plain and low alloyed steel, cast steel and chilled cast iron
61A: Mixed Aluminium oxide. For grinding stainless steel and acid resisting steel

Grit size

16	20	22	24	30	36	40	46	54	60	70	80	90	100	120	150
Coarse				Medium						Fine					

Coarse for works without special precision, to fine for smoother surface

Hardness grade

E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Very soft			Soft			Medium			Hard					

Soft grade are dedicated to hard materials, hard grade to softer materials

Structure

3	4	5	6	7	8	9	10	11	12	13
Closed		Medium				Open		Very open		

Ratio between grain, bond and pore. The softer the material is the more open structure is recommended

Bond

V	B	BF
Vitrified bonded	Resinoid bonded	Glass fibre

Resinoid bond are more flexible, for dynamic and forceful use than vitrified bond Glass fibre increase the resistance specialty for heavy usage

DUCTIFLAP

Abrasive flap disks.

These disks are made by cutting abrasive fabrics, then cutting as flaps and bonding them on a fiberglass or nylon backing plate by an adhesive.

Our DUCTIFLAP disks are based on Zirconia Alumina, specially designed for steel, alloyed steel, non ferrous material; cast iron, wood and plastic. We use conical disks because it is possible to use them for curve surfaces, for edge grinding as well as lubricious or primed surfaces. The grits are either 40, 60 or 80. The higher the grit is, the more precise the result is.

The types are 115 x 22 mm and 125 x 22 mm.
 Bonding material: synthetic resin bonding phenolic resins.
 Backing plate: fiberglass or nylon (*plastic*).
 Filler: kryolits, calcide.
 Shape: flat or conical 15%.

Dimensions	Grit	Unit/box	Shape	
			15 % conical for fiberglass backing	Flat for nylon backing
115 x 22 mm	40	10	W000264532	W000273754
	60	10	W000264533	W000273759
	80	10	W000335007	W000273758
125 x 22 mm	40	10	W000264535	W000273757
	60	10	W000264534	W000273756
	80	10	W000335008	W000273755



2009-010

2009-011

Personal protection: protect your eyes and ears, wear a dust mask, safety gloves, (*safety shoes & leather apron are recommended*).

Storage: in dry and well ventilated areas.

Temperature between 18 and 22 °C, relative humidity between 45 and 60%.

The speed of the machine must never exceed the maximum operating speed of the disk: 80 m/s.

GRINDING ACCESSORIES

CITOLUXE

See page 8



STAR

See page 25



DOCKER

See page 38



EUROLUX

See page 8



EARPLUG

See page 16



AIR LIQUIDE WELDING FRANCE (ALWF) GENERAL TERMS AND CONDITIONS OF SALE

Article 1: Overview

The General Terms and Conditions of Sale (GTC) described hereinafter set forth the rights and obligations of ALWF and its customer in connection with the sale of products, processes, systems, solutions and related services for welding and cutting equipment. All the services offered by ALWF are directed at business customers. GCS may be negotiated by any client who request it expressly. Negotiation of any clause shall be state in writing in Particular Conditions of Sale previously to any order. In the absence of customer's reserve, by any means, before the reception of the ALWF confirmation of order, GCS shall apply. Pursuant to article L441-6 Of french commercial code, GCS form the only basis of all commercial negotiation and shall prevail on Customer General Conditions of Purchase. The offers, research, documents and any kind of information provided by ALWF, other than publicity leaflets and user instructions, shall remain the property of ALWF and they shall be deemed to be confidential. They shall not be forwarded to third parties or used by the customer for purposes other than the use of the relevant product supplied, without ALWF's written authorization.

Article 2: Order

Orders shall be final once received in writing by ALWF and when GCS are negotiated or expressly accepted. Any order cancellation on the part of the customer shall be subject to a cancellation fee, which may vary depending on the type, size and progress status of Order. Orders shall not be amended without ALWF's prior consent.

Article 3: Price

The prices of the products sold shall be those in force on the date of ordering. For catalogue items that are deliverable when available or within a short time, the prices that apply shall be those at ALWF's current rates, excluding packaging. They shall be expressed in euros and calculated net of VAT. For other items, the prices shall be set in accordance with the Parties' written agreement. For export, unless otherwise stipulated, prices shall be deemed to be CIP. ALWF grants itself the right to amend its rates at any time. However, it undertakes to invoice the items ordered at the prices stated when the order is logged. Recycling costs (collection): In accordance with Article R 543-172 and following ones of French Environmental Code, ALWF shall invoice the cost of collecting waste and shall show the relevant cost on the invoice. The customer shall be responsible for taking the equipment or used material to the collection points.

Article 4: Delivery

Delivery shall be effected by providing the products directly to the customer or by delivery to the place stated by the customer on the purchase order.

The delivery deadline stated at the order confirmation shall be intended for guidance purposes alone, and shall not be guaranteed in any manner whatsoever. Accordingly, any delay in delivering the products shall not entitle the customer to damages nor shall it entitle it to cancel the order. Any request to extend the delivery deadline stated by the customer shall be subject to ALWF's prior consent and to invoicing for the costs arising therefrom, on the same basis as late-payment interest to be applied to the value of the order, excluding taxes. The carriage risks shall be bear in full until delivery by the party who assumes responsibility for carriage. For export sales, transfer of risk shall be linked to Incoterms chosen. In the event that products go missing or are damaged in transit, the customer shall express all the necessary reservations on the delivery note when it receives said products. Said reservations shall also be confirmed in writing by registered letter with acknowledgement of receipt send to the carrier, within three days of the delivery.

A claim for a delivery that does not comply with the order must be made immediately to ALWF and confirmed in writing within eight days of receipt of the goods. If no claim is made, ALWF shall be released from any obligation towards its customer. Except customer express refusal, ALWF may, at its option, carry out partial deliveries.

Article 5: Force majeure

No party shall not be held liable from a case of force majeure. In that respect, force majeure shall mean any unforeseeable and irresistible event. In such case, contractual obligations shall be suspended until event termination unless the delay or the definitive characters of the event justified the order resolution.

Article 6: Terms and conditions of payment

For export customers, unless otherwise stipulated, invoices for catalogue items shall be payable in cash on delivery, net and without any discount as stipulated in the order or by bank transfer, or by irrevocable, confirmed letter of credit, under the terms and conditions stipulated in the order or by documentary remittance. he delay to pay any invoice shall not exceed 45 days from the date of issuance of such invoice.

Deferment of the payment date, failure to return the bill on the due date, failure to pay a single bill or invoice shall result in an event of default which shall render any monies owed to ALWF, even those that are not yet payable, immediately payable. In the event of failure to pay on the due date, the customer will be automatically subject to a penalty equivalent to the applicable legal interest rate plus 3 points, on the monies owed, without prejudice to the payability of the debt and ALWF's rights of recourse. Besides, a fixed compensation of 40 € will be borne by the customer for recovery costs. If these charges should be superiors, ALWF could charge a superior compensation for the real amount of recovery costs, on justification. Customer is not allowed to offset without the prior consent of ALWF. All payment should be received from the customer legal entity which passed the order.

Article 7: Retention of title clause

ALWF shall retain title to the products being sold until the price - principal and ancillary costs - has been paid in full. In that respect, if the customer is placed subject to court-ordered administration or liquidation proceedings, ALWF reserves the right to claim the products it has sold and for which it has not received payment in the context of the insolvency proceedings.

Article 8: Warranty

The warranty given by ALWF shall apply to all part of manual or automatic equipment. Said warranty shall apply to all parts that are acknowledged to be faulty as a result of a defect in manufacturing, assembling or raw material. Transport cost for the return of products are bear by the customer. The warranty shall cover the repair or replacement of defective parts by ALWF, at its expense. The defective parts that are replaced shall be the property of ALWF. The warranty shall not apply to improper use, failure to maintain or supervise, negligence, modifications or repair using parts that are not intended for the model, nor to parts that are not manufactured by ALWF not wearing parts. Duration of this contractual warranty is as stated in commercial documentation or on company's web site, and depends on type of product; the warranty period start from the invoice issued by ALWF. ALWF shall not be committed to any other warranty than those stated in this article. No specific customer's requirement shall entail any liability on the part of ALWF. In the absence of specific written stipulations, ALWF no guarantee any result or product's performance.

Article 9: ALWF's liability. Damages

ALWF's liability shall be strictly limited to the obligations set forth above. In the event that ALWF is held liable, only material and direct damage, in the limit of amounts paid by customer, could be compensate. In no case immaterial and/or indirect damage, as loss of profit, loss of production, loss of image, will not be supported.

Article 10: Proprietary Rights

All right, title and interest in the intellectual property (including all copyrights, patents, trademarks, trade secrets...) embodied in the products, packaging and documentation, shall belong solely and exclusively to ALWF, and the customer shall have no rights whatsoever in any of the above. Nothing in these Conditions of sale may be construed as a grant of any license or any other right to use any of the Intellectual Property of ALWF for any purpose whatsoever.

Article 11: Code of conduct/ restrictive sales:

Customer undertakes to respect the Air Liquide Code of Conduct available on the following link: www.airliquide.com/en/company/ethics/code-of-conduct.html Dual Use: Customer undertakes to respect the European Trade Policy and Dual-Use Export Regulations (http://ec.europa.eu/trade/import-and-export-rules/export-from-eu/dual-use-controls/index_en.html). Prohibited parties: Direct or indirect sales are strictly forbidden to the following countries: Iran, North Korea, Cuba, Sudan and Syria. Restrictive measures: a) The Customer shall perform its obligations under the General Conditions of Sale in full compliance with all Sanctions Regime, the (re-)export and other trade controls and regulations, including the laws of the European Union and of the United States of America. The Customer shall not sell, export, re-export or transmit, directly or indirectly, any goods, [software or technology] obtained by ALWF under the General Conditions of Sale to any destination or person if such sale, export, re-export, transfer is prohibited or restricted by the Sanctions Regime, the (re-)export and other trade controls and regulations, including the laws of the European Union and of the United States of America. (b) The Customer represents and warrants that at the effective date no export and other foreign trade control or other Sanctions Regime controls hinder or prevent the Customer from performing its obligations under the General Conditions of Sale. The Customer must as soon as possible notify the ALWF of any change in these export and other foreign trade controls which may hinder or prevent the Customer from performing its obligations under the General Conditions of Sale and keep ALWF informed of subsequent developments concerning this change. (c) Any violation of this clause shall be a material breach of the General Conditions of Sale and of the contractual relationship with the ALWF. (d) The Customer shall cause these obligations to be imposed on any party to which products under the General Conditions of Sale are sold, exported, re-exported, transmitted for the purposes of complying with its obligations under these General Conditions of Sale, and to obtain from such party end-user statement certificates. (e) Upon request of the ALWF, the Customer shall provide ALWF with the end user certificates in order for ALWF to perform ex post control of the end users. For the purposes of this clause, Sanctions Regime shall mean any law or regulation of any applicable jurisdiction which relates to any economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by a sanctioning authority, including a national government, the United Nations Security Council or the European Union or the United States of America (or any of its member states). **Anti-corruption:** The customer undertakes to respect the applicable laws and regulations in performing its obligations particularly regarding anti-corruption laws (<http://www.airliquide.com/en/company/ethics/anti-corruption-code-of-conduct.html>).

Article 12: Termination or Suspension Clause :

ALWF shall be exempted from the performance of any of its obligations under or in connection with the purchase order and the General Conditions of Sale, if and to the extent that such performance is in violation of or otherwise inconsistent with (a) any legislative or regulatory provision affecting the ALWF's ability to perform or (b) any contractual obligation of ALWF or any of its affiliates having a negative effect on the ALWF's or any of its affiliates' funding agreements or ability to raise funding in the EU, the US or the UK, or the Group's ability to preserve US-based shareholders or causing the Group's entities to be barred from contracting with state or local government in the United States of America. The obligations of the purchase order and the General Conditions of Sale shall be suspended or terminated, as notified by the ALWF and to the extent required by the provisions and the obligations mentioned above under (a) and (b), notwithstanding any other provision in these General Conditions of Sale. ALWF shall provide the Customer with reasonable evidence, such as an official notice or a legal opinion, of the legal impediments occurrence or continuation upon receipt of the Customer's written request and shall notify the Customer in a timely manner after the conditions to resume performance are met in accordance with this provision.

Article 13: Disputes

Any dispute relating to the interpretation and performance hereof shall be governed by French laws. If the dispute cannot be resolved out of court, it will be referred to the Commercial Court (Tribunal de commerce) of Paris.

AIR LIQUIDE WELDING FRANCE a French limited company (Société Anonyme or S.A.)

with share capital of 20 709 786 € - Registered Office: 25 Boulevard de la Paix, CS 30003 Cergy, 95895 Cergy Saint Christophe
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