



**WELDLINE**<sup>®</sup>

by Lincoln Electric

**vdbm**  
vandenbroucke metalen



**ACCESSORIES**

MORE COMFORT & SAFETY FOR WELDERS

**CATALOGUE 2022**



WELD PLAY  
EuroSPEED LS

WELDLINE™  
by Lincoln Electric



## MORE comfort and safety for welders

WELDLINE<sup>®</sup> by Lincoln Electric is the transversal brand for the Welder's Environment.

By a complete offer of individual protective equipment as well as tools and accessories dedicated to welding applications, our objective is to create more comfort and safety for the welder. The portfolio is a careful selection of quality products including:

- ▣ Welding torches and expendables
- ▣ Personal protection equipment
- ▣ Other accessories for welding applications

## THIS BRAND HAS A TRIPLE COMMITMENT :

### Quality products

Chosen by our international team, WELDLINE<sup>®</sup> by Lincoln Electric products comply with the European standards, always aiming to meet customer's requirements in the best possible way.

### Value for money

We use our global purchasing power to ensure that our customers can benefit from quality products with the right price.

### Optimized logistics

A single brand supporting Lincoln Electric, OERLIKON & SAF-FRO networks to ensure increase product availability to all our customers.

## Products commercialized by SAF-FRO, OERLIKON and LINCOLN ELECTRIC networks.



[www.saf-fro.com](http://www.saf-fro.com)



[www.oerlikon-welding.com](http://www.oerlikon-welding.com)



[www.lincolnelectric.eu](http://www.lincolnelectric.eu)



Download your safety data sheets  
and conformity certificates  
on our websites





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# DO YOU OFFER YOUR WELDERS THE BEST POSSIBLE PROTECTION?



## THE RISKS

### FACE & EYES

90% of all workplace eye injuries are preventable with the use of proper safety eyewear, welding goggles and helmets.

Only 1% of approximately 770 workers suffering face injuries were wearing face protection.

### BODY

Every day, people are admitted to burn centers annually with severe arc flash burns.

### HAND AND FOREARM

25% of all work place accidents involved hands and fingers

### LEGS

Risks of clothes catching fire from welding spatter and molten metal.

### FEET

Risks are perforations, falling object, burns and slipping.

## THE SOLUTIONS

### WELDING HELMET & SAFETY GLASSES

Electronic helmet allow the welder to be immediatly and automatically protected during the welding operation. A pair of safety glasses gives additional protection against i.e. grinding particules.

### WELDING JACKET

Welding jacket of flame retardant material of leather to protect the upper body, against welding spatters, grinding particles which permit to avoid burns.

### WELDING APRON

Welding apron in premium grade, split or grain leather will protect clothes from welding spatters and grinding particules.

### GLOVES & SLEEVES

The choice of welding gloves will depend on the welding application in order to offer the right protection and comfort. Sleeves over the jacket offer an additional protection of the arms.

### TROUSERS

Trousers of flame retardant material to protect the lower body against welding spatters, grinding particules and molten metal.

### SHOES & GAITERS

Combining welding shoes with gaiters permits to protect completely the bottom of the leg.



Weldline by Lincoln Electric, more comfort and safety for welders.  
Discover our offer of quality products at [www.weldline.eu](http://www.weldline.eu)





**WELDLINE**<sup>®</sup>  
by Lincoln Electric

# 1 PERSONAL PROTECTION EQUIPMENT



## PROTECTION

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# LINCOLN ELECTRIC WELDING HELMET EURO & VIKING SERIES

**TIG AMP RATING  
5 AMPS AC / DC**



**EXTERNAL LOW  
PROFILE GRIND  
CONTROL**

**SUPERIOR PUT DOOR  
PERFORMANCE**

**DIN: 8-13  
AUTO-DARKENING  
SHADE RANGE**

**WARRANTY  
2  
YEARS**

**TIG AMP RATING  
2 AMPS AC / DC**

**WARRANTY  
3  
YEARS**

**DIN: 5-13  
AUTO-DARKENING  
SHADE RANGE**



**VIKING**  
WELDING HELMETS

## Light Shade technology

See More! Weld Better!

- ◆ Provides a better, clearer view of the welding puddle
- ◆ Improves visibility
- ◆ Reduces eye strain



## 4C Lens technology

- 1 - Clarity - Optical Clarity 1/1/1
- 2 - Color - Real Color View
- 3 - Carat - Light Weight
- 4 - Cut - Even Shade From Any Angle



## 1/1/1 Optical clarity

Eliminating Distortion



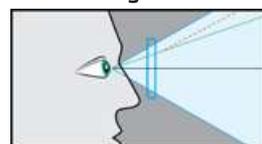
Uniform Shade



Removing Blurriness



Consistent Angle Performance



Consistent Shade at all Angles

## Welding helmet EURO & VIKING Series Comparison

### Tailored Features

	Biggest			Bigger			Normal
	<b>NEW</b>	<b>NEW</b>	<b>NEW</b>	<b>NEW</b>			
<b>Specifications</b>	<b>FGS™ Series</b>	<b>3350 Series*</b>	<b>2450 Series*</b>	<b>Eurowave 3.0 LS* Black / Streetart</b>	<b>Eurosport LS Black / Weld play</b>	<b>Chamelon 3VO Streetart / Welding Legend / Squad</b>	<b>Euroone</b>
Variable Shade Range/Control	5-13 Internal	5-13 Internal	5-13 Internal	8-13 Internal	9-13 Internal	8-13 Internal	9-13 External
Optical Clarity Rating	1/1/1	1/1/1	1/1/1	1/1/1	1/1/1/2	1/1/1/2	1/1/1/2
Auto-Darkening Viewing Area	108 x 75 MM	95 x 85 MM	97 x 62 MM	97 x 60mm	98 x 44 mm	97 x 40 mm	98 x 44 mm
Grind Mode Shade / Control	DIN4 / Internal	DIN4 / Internal	DIN4 / Internal	DIN3/Internal	DIN3,5 / Internal	DIN3,5 / No	DIN4 / External
Delay Control Dark to Light (sec)	0,0-1,0 Digital Adjustment	0,1-1,0 s fully adjustable	0,1-1,0 s fully adjustable	0,1-1,0 s fully adjustable	0,1-1,0 by infinitely dial knob	0,1-1,0 by infinitely dial knob	0,1-1,0 by infinitely dial knob
Number of Arc Sensors	4	4	4	4	2	2	2
Weight (g)	793	595	595	560	475	445	490
Lens Switching Speed (sec)	1/25,000	1/25,000	1/25,000	1/25,000	1/25,000	1/16,000	1/16,000
Optic Technology	4C Technology	4C Technology	4C Technology	Light Shade Technology	Light Shade Technology	Standard	Standard
Magnifying "Cheater" Capable Lens	Yes	Yes	Yes	Yes	Yes	Yes	No
TIG Amp Rating	≥2 A /DC ≥2 A /AC	≥2 A /DC ≥2 A /AC	≥2 A /DC ≥2 A /AC	≥2 A /DC ≥2 A /AC	≥5 A /DC ≥5 A /AC	≥5 A /DC ≥5 A /AC	≥10 A /DC ≥10 A /AC
Light Sensitivity Control	Digital Display Control	Continuous	Continuous	Continuous	by infinitely dial knob	by infinitely dial knob	by infinitely dial knob
Bonus accessories	Side Windows + Planch of stickers + Bag + Bandana	Planch of stickers + Bag + Bandana	Planch of stickers + Bag + Bandana	-	Planch of stickers	-	-
Cartridge Size (mm)	114 x 133 mm	114 x 133 mm	114 x 133 mm	114 x 133 mm	110 x 90 mm	110 x 90 mm	110 x 90 mm
Auto-Darkening Viewing Area (mm <sup>2</sup> )	8100	8075	6014	5820	4312	3880	4312
Headgear Type	UPGRADED FOUR AXIS PIVOT	FOUR AXIS PIVOT	FOUR AXIS PIVOT	FOUR AXIS PIVOT	FLEXSPEED LS + cushion	FLEX3VO	FLEXONE
Battery Type	Solar cell + 2 CR2450 Replaceable Batteries	Solar cell + 2 CR2450 Replaceable Batteries	Solar cell + 2 CR2450 Replaceable Batteries	Solar cell + 2xCR2450 replaceable lithium battery	Solar cell + Battery replaceable (2xAAA Alkaline batteries)	Solar cell + 2 alkaline battery	Solar cells, no battery change required
Graphic options	1	4	2	2	3	3	1
<b>Value Proposition</b>	<b>Best In Class Specifications With Added Productivity &amp; Safety Features</b>	<b>Best In Class Specifications &amp; Features</b>	<b>Enhanced Versatility</b>	<b>Light state DIN3</b>	<b>Good value</b>	<b>Efficient value solution with Optical class improved and variant graphics</b>	<b>Efficient value solution with grinding mode</b>

\* Official launching September 2022

**NEW**

HELMETS  
REFLECT

# VIKING™ 3250D FGS™ SERIES

(EU) 2016/425  
Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

**VIKING**  
WELDING HELMETS

WARRANTY  
**3**  
YEARS

lens  
technology  
**4C™**

CE

## The single helmet solution.

In any fabrication environment, productivity, safety and optic clarity are important.

Our most technologically advanced helmet series incorporates a « flip-up » clear face shield with anti-fog coating for increased safety and productivity.

### Processes:

Stick, TIG, Pulsed TIG, MIG, Pulsed MIG, Flux-Cored, Gouging, Grinding

### What's Included:

- ◆ Comes with helmet bag
- ◆ Bandana
- ◆ 5 outside cover lenses
- ◆ 2 inside cover lenses and sticker sheet.



**VIKING™ 3250D FGS™**  
K3540-3-CE

## Auto-Darkening Lens Specs

Variable shades



Low TIG amps rated



Grind mode / Shade control



Lens switching speed



Arc sensors



Optical class



Comfort



Viewing area



Enhanced Outdoor Performance



### Key features:

- 4C® Lens Technology** provides an unparalleled view of the arc, puddle and base material while reducing eye strain
- Perfect 1/1/1 Optical Clarity** eliminates distortion and blurriness while maintaining shade consistency and improving angle performance
- 8 064,5 mm² Auto-Darkening Display** offers a widescreen process view to broaden field of view and enhance operator control
- Shade 5 Side Windows** increases peripheral vision in the closed helmet position
- Flame Retardant Head Covering** provides protection from spatter and improves comfort
- Large Integrated Grinding Shield** protects operators from impacts while providing a clear viewing area for grinding and material inspection
- Anti-Fog Coating** helps maintain a consistently clear view
- 4 Axis Headgear** provides multi-directional adjustments to evenly distribute weight and improve comfort

**NEW**

# HELMETS

(EU) 2016/425  
Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

# VIKING<sup>®</sup>

WELDING HELMETS

WARRANTY  
**3**  
YEARS

lens  
technology  
**4C<sup>™</sup>**



PERSONAL PROTECTION  
EQUIPMENT  
**1**



## Extra Large Auto-Darkening Lens

The 8 064,50 mm<sup>2</sup> auto darkening lens provides a large field of view to increase versatility and operator control.

## Maximising Field of View

The VIKING™ FGS™ 3250D welding helmet increases field of view in both the open and closed positions. This provides operators with various safety and productivity enhancements.



### SAFETY

- ◆ ANSI Z87.1 compliant grind shield protects operators from various impact hazards
- ◆ The 161 Degree field of vision makes material inspection, grinding and general movements less hazardous
- ◆ Shade 5 side windows increase peripheral vision in the closed position
- ◆ The anti-fog lens coating allows for a more consistently clear view



### PRODUCTIVITY

- ◆ The integration of a clear grind shield shortens the amount of time needed to begin grinding operations and eliminates the need for a separate face shield
- ◆ The expanded field of vision in both positions can reduce setup, inspection and weld time
- ◆ The large auto-darkening viewing area enhances operator control

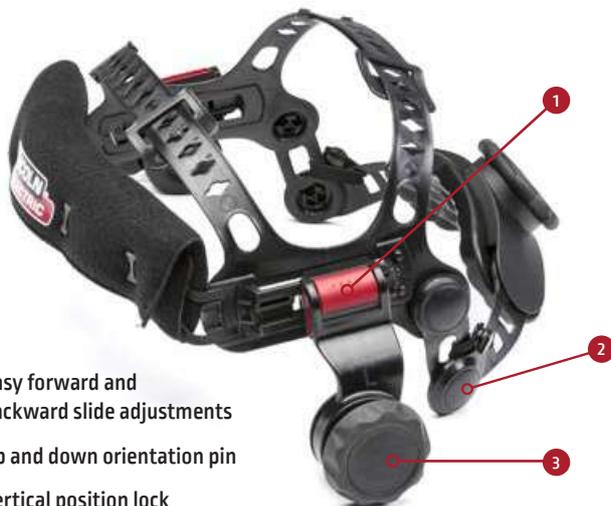


Open Position



Closed Position

## UPGRADED FOUR AXIS PIVOT



- 1 Easy forward and backward slide adjustments
- 2 Up and down orientation pin
- 3 Vertical position lock



**NEW**

HELMETS  
HELMETS

# VIKING™ 3350 SERIES 4\*

The new & improved VIKING™ 3350, our top-of-the line helmet series, is the ultimate blend of optics comfort & versatility.

**Processes:**

Stick, TIG, Pulsed TIG, MIG, Pulsed MIG, Flux-Cored, Gouging, Grinding.

**What's included:**

- ◆ Comes with helmet bag.
- ◆ Bandana.
- ◆ 5 outside cover lenses.
- ◆ 2 inside cover lenses and sticker sheet.

(EU) 2016/425  
Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

**VIKING**  
WELDING HELMETS

WARRANTY  
**3**  
YEARS

lens  
technology  
**4C™**

CE

AVAILABLE  
1<sup>ST</sup> SEMESTER  
2022

5-13 auto-darkening  
shade range for use  
in all welding and  
plasma cutting  
applications

Superior outdoor  
performance for all  
environment use



Low-profile external grind button  
provides seamless transition  
between weld & grind mode



**VIKING™ 3350 BlackMat**  
K3034-4-CE



**VIKING™ 3350 Dardevil**  
K3683-4-CE



**VIKING™ 3350 Motorhead™**  
K3100-4-CE



**VIKING™ 3350 Mojo™**  
K3101-4-CE

\* Official launching August 2022

## Auto-Darkening Lens Specs

Variable shades



Low TIG amps rated



Grind mode / Shade control



DIN 4

Lens switching speed



1/25,000 sec

Arc sensors



Optical class



Comfort



Viewing area



95 mm x 85 mm

Enhanced Outdoor Performance



## X6 HEADGEAR - SUPERIOR COMFORT

- 1 Adjustable, form fitting top head supports and distributes weight to optimize balance
- 2 Orientation adjustment pin for optimal resting position

**NEW**

HELMETS  
HELMETS

# VIKING™ 2450 SERIES\*

The new & improved VIKING™ 2450, our lightweight premium helmet series, offers an excellent blend of optics, comfort & versatility.

**VIKING**  
WELDING HELMETS

WARRANTY  
**3**  
YEARS

lens  
technology  
**4C™**

CE

PERSONAL PROTECTION  
EQUIPMENT

1

(EU) 2016/425  
Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

**Processes:**  
Stick, TIG, Pulsed TIG, MIG,  
Pulsed MIG, Flux-Cored,  
Gouging, Grinding.

**What's included:**  
◆ Comes with helmet bag.  
◆ Bandana.  
◆ 5 outside cover lenses.  
◆ 2 inside cover lenses and sticker sheet.

## Auto-Darkening Lens Specs

Variable shades



Grind mode / Shade control



Enhanced Outdoor Performance



### VIKING™ 2450 Black

K3028-4-CE

**Low-profile external grind button** provides seamless transition between weld & grind mode

Low TIG amps rated



Lens switching speed



Arc sensors



Optical class



Comfort



Viewing area



**5-13 auto-darkening shade range** for use in all welding and plasma cutting applications

\* Official launching August 2022

**Superior outdoor performance** for all environment use



**VIKING™  
Heavy Metal®**  
K3029-4-CE

- Rotatable front headband for personalised support and fit
- Innovative and easy to use forward and backward adjustments
- Strategically positioned rear headband improves balance
- Unique flexible backpad eliminates common pressure point



**NEW**

[EU] 2016/425

Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

# HELMETS

## EUROWAVE 3.0 LS\*

Light-weight autodarkening helmet with optimised head protection and an exclusive design.

**PREMIUM OPTICS** with **Eclusive LS technology** which creates a crystal clear, true colour view of the arc and puddle. This enhances control and increases weld quality whilst reducing eye strain. Additionally, the EUROWAVE 3.0 LS SERIES lens has a 1/1/1 optical clarity rating which showcases the absence of common lens imperfections such as blurring and distortion whilst also providing consistent brightness and performance at an angle.

Reduced helmet weight and improved balance, to help minimize torque on the welding operator's neck and lessen fatigue.



WARRANTY

**2**  
YEARS

### Processes:

Stick, TIG, Pulsed TIG, MIG, Pulsed MIG, Flux-Cored, Gouging, Plasma Cutting, Grinding.

### What's included:

- ◆ 5 outside cover lenses.
- ◆ 2 inside cover lenses and sticker sheet.

### Auto-Darkening Lens Specs

Variable shades



Grind mode / Shade control



DIN 3

Low TIG amps rated



Lens switching speed



1/25,000 sec

Arc sensors



Optical class



1/1/1

Comfort



Viewing area



97 mm x 60 mm



EUROWAVE 3.0 LS  
Black

W403900

EUROWAVE 3.0 LS  
Streetart

W403901

### X4 PIVOT

- ◆ Soft, Padded front headband helps eliminate pressure points
- ◆ Two adjustable top head straps help distribute weight for increased comfort
- ◆ Ratchet adjustable rear headband allows operator to set tightness
- ◆ Turn and slide forward and backward adjustments



\* Official launching September 2022

# HELMETS

## EUROSPEED LS

All the comfort and security of an autodarkening helmet, delivered with different stickers for personalisation. **PREMIUM OPTICS** with **Eclusive LS technology** which creates a crystal clear, true colour view of the arc and puddle.

WARRANTY

**18**  
MONTH

### Processes:

Stick, TIG, Pulsed TIG, MIG,  
 Pulsed MIG, Flux-Cored, Gouging,  
 Plasma Cutting, Grinding.



### What's included:

- ◆ Two outside and one inside protection plate plus a sweat band.
- ◆ Comfort cushion on the headgear.
- ◆ Stickers Planch.

### Auto-Darkening Lens Specs

Variable shades



Internal

Grind mode /  
 Shade control



DIN 3.5 / Internal

Lens switching speed



1/25,000 sec

Viewing area



98 mm x 44 mm

Comfort



Arc sensors



2

Optical class



1/1/1/2



EUROSPEED LS

W000403824

Internal  
 grinding mode



EUROSPEED LS  
 Weld Play

W000403824-6

### FLEXspeed

- 1 Setting on the top
- 2 Removable sweatband
- 3 Comfort cushion
- 4 Rack setting



# HELMETS

## CHAMELEON 3VO

Auto Darkening Welding Helmet, Comfortable and light with Auto-Start ADF Filter, Black, Blue and Red. Anti-fog coating - helps maintain a consistently clear view.

Processes:  
Stick, MIG.

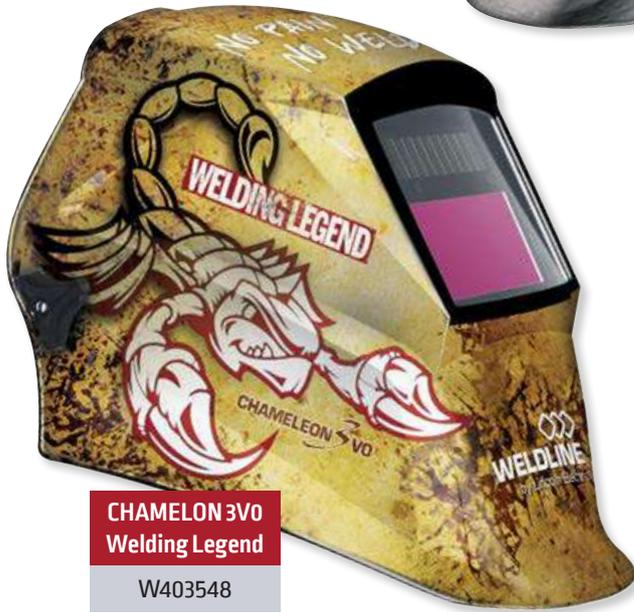
WARRANTY  
**1**  
YEAR

**What's included:**

- ◆ Two outside and two inside protection plates plus an antifog treated screen.
- ◆ One anti-transpiration headband.
- ◆ One comfort cushion.



**CHAMELON 3VO  
Streetart**  
W000403546



**CHAMELON 3VO  
Welding Legend**  
W403548



**CHAMELON 3VO  
Squad**  
W403547

### Auto-Darkening Lens Specs

Variable shades



Arc sensors



Optical class



Viewing area



Battery

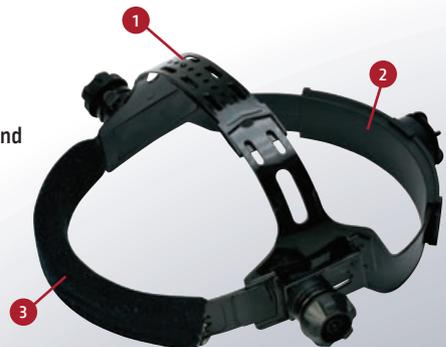


Lens switching speed



### FLEXone

- 1 Setting on the top
- 2 Removable sweatband
- 3 Rack setting



# HELMETS

## EUROONE

Auto Darkening Welding Helmet  
Comfortable and light with external grinding mode, Black and Red.

### Processes:

Stick, MIG, Plasma  
Cutting, Grinding.

### What's included:

◆ Two outside and two inside protection plates plus a sweat band.

### Auto-Darkening Lens Specs

Comfort



Arc sensors



Optical class



Viewing area



98 mm x 44 mm

Variable shades



External

Grind mode / Shade control



DIN 3.5 / External

Lens switching speed



1/16,000 sec

External grinding mode



(EU) 2016/425  
Harmonized standards  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997

WARRANTY

**1**  
YEAR

EUROONE

W000403823

### FLEXone



- 1 Setting on the top
- 2 Removable sweatband
- 3 Rack setting



**NEW**

# HELMETS

Compatible with all Lincoln Electric helmets and most competitive models

## OPTIONAL ACCESSOIRES

**LINCOLN ELECTRIC Split leather helmet bib with Press Fit Silicone Seal**



Split leather helmet bib  
KP3729-1



**LINCOLN ELECTRIC Grain leather helmet bib with Press Fit Seal**



Grain Leather Helmet Bib  
KP3730-1

- ◆ NECK PROTECTION - Durable split leather construction protects the neck from arc flash, spatter and sparks.
- ◆ INNOVATIVE CONNECTION - Unique press fit silicone seal easily attaches to the welding helmet edge for full frontal neck coverage.
- ◆ DURABLE - Kevlar stitched seams with hemmed edge to prevent rips or tears.
- ◆ COMPATIBILITY - Use with all Lincoln welding helmets and most competitive models.

### VIKING Cheater Lens\*



To order	
Cheater lens 1.00 magnification	KP3046-100
Cheater lens 1.25 magnification	KP3046-125
Cheater lens 1.50 magnification	KP3046-150
Cheater lens 1.75 magnification	KP3046-175
Cheater lens 2.00 magnification	KP3046-200
Cheater lens 2.25 magnification	KP3046-225
Cheater lens 2.50 magnification	KP3046-250

### 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 3VO, CHAMELEON 4V+ LS, EUROLUX LS, ZEPHYR 4500 LS and FLIPAIR 4500 LS

\* These magnifying glasses can be used with Eurowave 3.0 LS, Viking 2450 series, Viking 3350 series, Viking FGS and EUROPURE 5500 LS

### DUFFLE BAG



**TO ORDER**  
2019-STUDENTSET



**TO ORDER**  
SPORTBAG

Generous Dimensions - WELDLINE BY LINCOLN ELECTRIC Duffle bag holds your Welding Gear and/or after-work street cloths Black/Red (68 x 34 x 31 cm)

Generous Dimensions - LINCOLN ELECTRIC Duffle bag holds your Welding Gear and/or after-work street cloths Black/Red (62 x 29.5 x 29.5 cm)

# HELMETS

## OPTIONAL ACCESSOIRES\*

### Led light



**LED LIGHT**

WP202201



Welding helmet lights for darker workstations.

Darker workstations cause inefficiency.

The added ambient light is intended to illuminate the area around the weld zone, so that old tired eyes, and young defective eyes can better see the markers of direction of travel and speed needed to get a good weld, no matter what shade you are using. It is adding to the reflected light surrounding the weld area, but only in a minute amount to the light coming from the arc, and the molten metal of the puddle.



### LINCOLN ELECTRIC Helmet BackPack

Great for protecting your welding helmet!

Lightweight Storage Carrying Bag.

Center compartment opens wide for easy access to your helmet. Side pockets are perfect for spare cover lenses and other small gear.

**HELMET BACKPACK**

WP202203

### LINCOLN ELECTRIC Flame retardant cotton extended protection for head with Press Fit silicone Seal



**FLAME RETARDANT COTTON  
EXTENDED PROTECTION**

WP202204



- ◆ HEAD PROTECTION - Durable flame retardant cotton construction protects the head from arc flash, spatter and sparks
- ◆ INNOVATIVE CONNECTION - Unique press fit silicone seal easily attaches to the welding helmet top for full head coverage
- ◆ DURABLE - Kevlar stitched seams with hemmed edge to prevent rips or tears
- ◆ COMPATIBILITY - Use with all Lincoln welding helmets and most competitive models

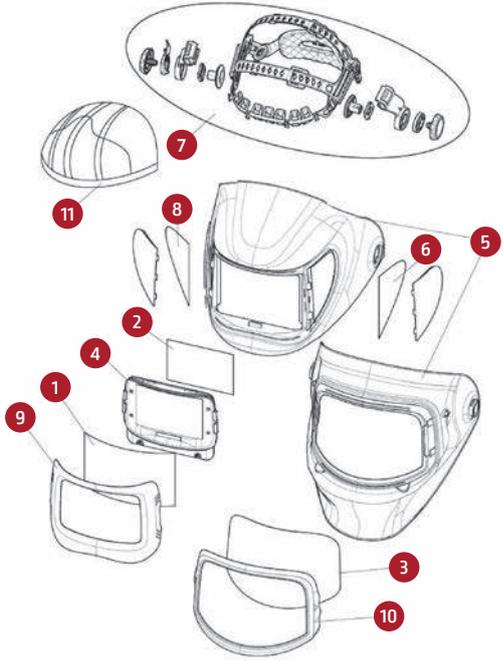
**NEW**

HELMETS  
HELMETS

**VIKING**  
WELDING HELMETS

**REPLACEMENT PARTS**

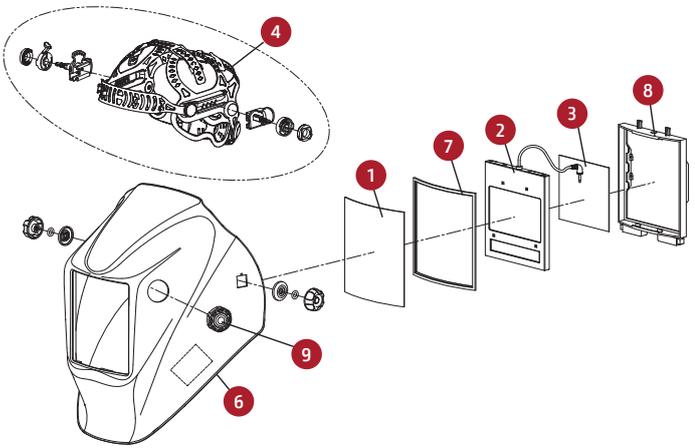
**FGS**



To order	Description	Qty	Reference
1 -	Outside Cover lens (158.2 x 100 x 1.2 mm)	1	KP3700-1
2 -	Inside Clear lens (108.3 x 78.3 x 1 mm)	1	KP3701-1
3 -	Grind Shield Clear lens (221.4 x 133.4 x 1.2 mm)	1	KP3702-1
4 -	3250D FGS ADF	1	KP3703-3
5 -	Replacement Shell (FGS Series Welding Helmet) (including Side Window installed)	1	KP3704-1
6 -	Side Lens Cover (1 pair)	1	KP3705-1
7 -	Headgear (including sweatband)	1	KP3706-1
8*	Sweatband (Pkg Qty: 2)	1	KP2930-1
9 -	Front lens holder	1	95S32652-10
10 -	Grind Shield lens holder	1	95S32652-3
11 -	Head cover	1	KP3709-1

*\*Not illustrated*

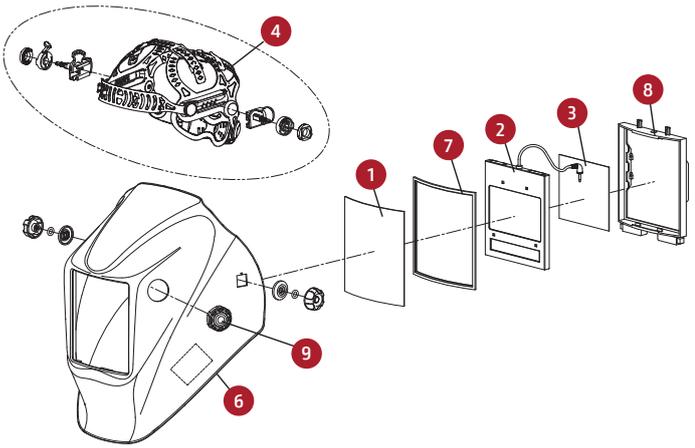
**VIKING™ 3350**



To order	Description	Qty	Reference
1 -	Outside clear lens (Pkg. Qty: 5) Oculars safety lenses 133.0 x 114.0 x 1.0 mm	1	KP2898-1
2 -	ADF cartridge for VIKING™ 3350 4C (S27978-151)	1	KP3045-4
3 -	Inside clear lens (Pkg. Qty: 5) Oculars safety lenses 94.7 x 89.7 x 1.0 mm	1	KP3044-1
4 -	Headgear assembly (including sweatband & Retrofit washer)	1	KP4470-1
5*	Sweatband (Pkg. Qty: 5)	1	KP2930-1
6 -	Replacement shell (VH1)	1	KP4561-1
7 -	Outside clear lens seal	1	S27978-32
8 -	ADF holder	1	S27978-153
9 -	Grind button assembly	1	KP4562-1
10*	CR2450 replacement battery	1	KP4491-1
11*	Headgear cushion back pad (Pkg. qty: 2)	1	KP4541-1

*\*Not illustrated*

**VIKING™ 2450**



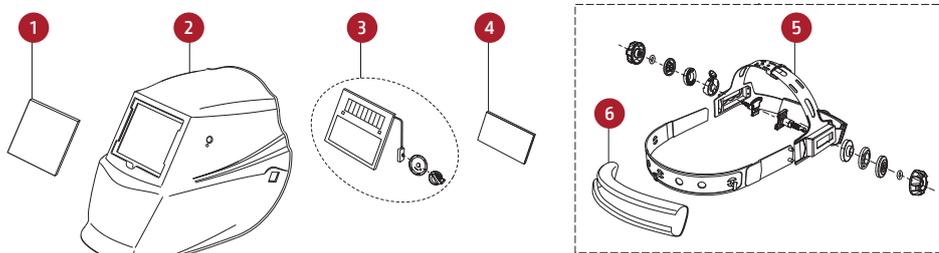
To order	Description	Qty	Reference
1 -	Outside clear lens (Pkg. Qty: 5) Oculars safety lenses 133.0 x 114.0 x 1.0 mm	1	KP2898-1
2 -	ADF cartridge for VIKING™ 2450 4C (S27978-150)	1	KP2932-4
3 -	Inside clear lens (Pkg. Qty: 5) Oculars safety lenses 98.5 x 66.5 x 1.0 mm	1	KP2931-1
4 -	Headgear assembly (including sweatband & retrofit washer)	1	KP4470-1
5*	Sweatband (Pkg. Qty: 2)	1	KP2930-1
6 -	Replacement shell (VH1)	1	KP4560-1
7 -	Outside clear lens seal	1	S27978-32
8 -	ADF holder	1	S27978-153
9 -	Grind button assembly	1	KP4562-1
10*	CR2450 replacement battery	1	KP4491-1
11*	Headgear cushion back pad (Pkg. Qty: 2)	1	KP4541-1

*\*Not illustrated*

# HELMETS

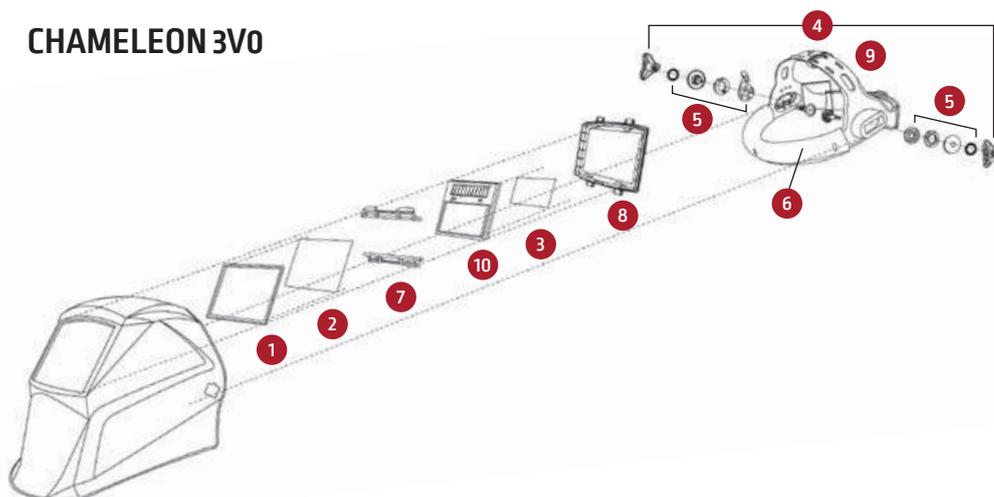
## REPLACEMENT PARTS

### EUROONE



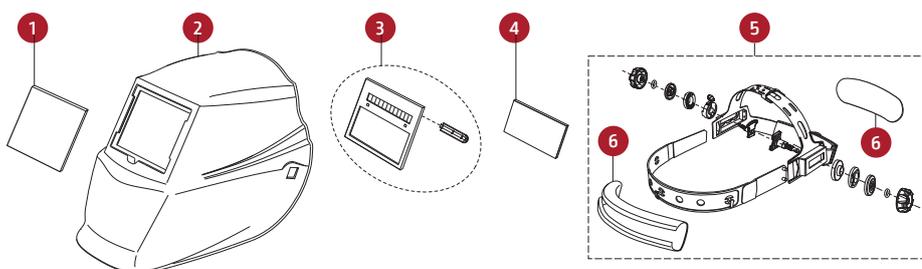
To order		
Description	Qty	Reference
1 - Front Cover Lens	1	W000404065
2 - Shell (Welding Mask)	1	W000404066
3 - Auto-Darkening Filter	1	W000404067
4 - Inside Cover Lens	1	W000404068
5 - Headgear Assembly (Including Sweatband)	1	W000404069
6 - Sweatband	1	W000404073

### CHAMELEON 3VO



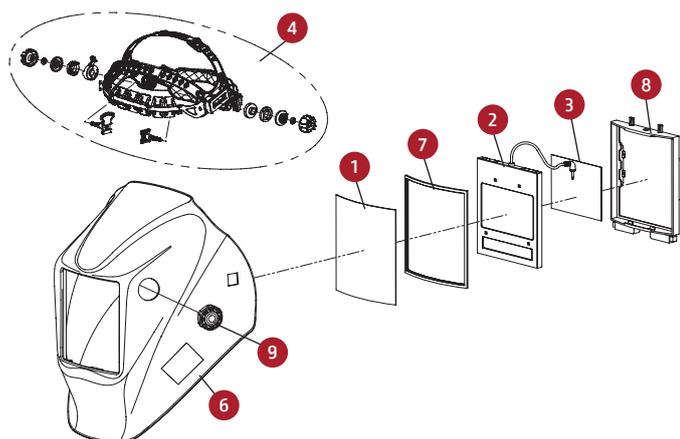
To order	
Description	Reference
1 - Gasket front cover lens	W000261985
2 - Front cover lens	W000261983
3 - Inside cover lens	W000335163
4 - Headgear	W000261986
5 - Headgear adjusting kit	W000261987
6 - Sweatband	W000261999
7 - Cartridge holder hook	W000261990
8 - Cartridge holder	W000261989
9 - Comfort cushion	W000261991
10 - Cell	W000377928

### EUROSPEED LS



To order		
Description	Qty	Reference
1 - Front Cover Lens	1	W000404065
2 - Shell (Welding Mask)	1	W000404096
3 - Auto-Darkening Filter	1	W000404097
4 - Inside Cover Lens	1	W000404068
5 - Headgear Assembly (Including Sweatband)	1	W000404098
6 - Sweatband	1	W000404073

### EUROWAVE 3.0 LS



To order	
Description	Reference
1 - Outside clear lens (Pkg. Qty: 5) Oculars safety lenses 133.0 x 114.0 x 1.0 mm	KP2898-1
2 - ADF cartridge for EuroWave 3.0LS	KPW4039-2
3 - Inside clear lens (Pkg. Qty: 5) Oculars safety lenses 98.5x66.5x1.0 mm	KP2931-1
4 - Headgear assembly for EuroWave 3.0LS (including sweatband)	KPW4039-1
5 - Sweatband (Pkg. Qty: 2)	KP2930-1
6 - EuroWave 3.0LS replacement shell BLACK (VH11)	KPW4039-3
7 - EuroWave 3.0LS replacement shell STREETART (VH11)	KPW4039-4
8 - Outside clear lens seal	S27978-32
9 - ADF holder	S27978-153
10 - Grind button assembly	KP4562-1
11 - CR2450 replacement battery	KP4491-1

**Pure Stream** is an initiative to help reducing the exposure of welding fumes to the welders.



## PURE STREAM FUME MANAGEMENT IN 3 STEPS

1. Optimization
2. Ventilation & exhaust
3. Safe work practice and PPE

When used properly, the solutions proposed by **LINCOLN ELECTRIC** can significantly reduce the amount of fumes inhaled by welders.



## GLOBAL SOLUTION TO REDUCE THE EXPOSURE TO WELDING FUMES

Where welding operations are concerned, safety is directly connected to air quality. **PURE STREAM** is not only a customized offer but also an initiative to reduce the exposure of welding fumes to the welders.

- Europure Plus 5500 LS
- Zephyr 4500LS
- Flipair 4500 LS
- CLEANSPACE 2™

Bring fume protection and filtered air directly to the operator in difficult environments and keep it there all day with the **ZEPHYR LS** Powered Air Purifying Respirator or the **CLEANSPACE2™**.



Contact us for more information.



## HELMETS

## PAPR SOLUTION

Auto-darkening helmets with PAPR  
Comparison - Tailored Features

Specifications	Europure Plus 5500 LS	Zephyr LS/Flipair 4500 LS
Variable Shade Range/Control	5-13 Internal	5-13 Internal
Graphic options	1	2
Optical Clarity Rating	1/1/1/1	1/1/1/2
Auto-Darkening Viewing Area	107 x 75 mm	97 x 60 mm
Grind Mode Shade / Control	DIN4/Internal	DIN3,5/Internal
Delay Control Dark to Light (sec)	0,1-1,0 s fully adjustable	0,1-1,0 s fully adjustable
Number of Arc Sensors	4 independent optical sensors	4 independent optical sensors - Magnetic in X mode
Weight (g)	793 + 1867	938 + 1760
Lens Switching Speed (sec)	1/25,000	1/25,000
Optic Technology	Light Shade Technology	Light Shade Technology
Magnifying "Cheater" Capable Lens	Yes	Yes
TIG Amp Rating	≥2 A /DC ≥2 A /AC	≥2 A /DC ≥2 A /AC
Light Sensitivity Control	Continuous	Continuous
Bonus accessories	Side Windows + Planch of stickers + Duffle Bag + Bandana+Shoulder Straps	Duffle Bag +Shoulder Straps
Cartridge Size (mm)	156 x 123 mm	110 x 90 mm
Auto-Darkening Viewing Area (mm <sup>2</sup> )	8025	5820
Headgear Type	Advanced Headgear	FLEXTECH I
Battery Type	Solar cells + 2 exchangeable lithium batteries Battery type: Rechargeable Li-ion Battery (More effective)	Solar cells + 2 exchangeable lithium batteries Battery type: Rechargeable Li-ion Battery (More eff ective)
Low Battery Indicator	Visible, Audible and Vibrate alarms to ensure safety	Visible, Audible and Vibrate alarms to ensure safety
Stand by time of battery (h)	9	8
Time of charge of battery (h)	1	4
Air flow rate (l/min)	Low speed: 170l/min High speed: 210l/min	Low speed:160l/min High speed:200l/min
Battery Type	Solar cell + 2 CR2450 Replaceable Batteries	Solar cell + 2 CR2450 Replaceable Batteries
Value Proposition	<b>The ultimate welder protection - TH3 Class</b>	<b>Complete solution designed to protect welders in the most effective way - TH2 Class</b>

(EU) 2016/425 (PPE)  
 EN 166:2001,  
 EN 379:2003+A1:2009,  
 EN 175:1997,  
 EN 12941:2009-02

# HELMETS

# EuropurePLUS™ 5500 LS



## POWERED AIR PURIFYING RESPIRATOR-TH3 Class

The **EuropurePLUS™ 5500 LS** Powered Air Purifying Respirator features a smart blower system, integrated grind shield & side windows and a extra large auto-darkening lens with our exclusive light shade technology.

What's Included:

- ◆ EuropurePLUS™ 5500 LS with Powered Air purifying Respirator Welding Helmet
- ◆ 5pcs front cover lens
- ◆ 2pcs inner cover lens
- ◆ 1 set side lens cover
- ◆ Pre-Filter
- ◆ 2 Filter
- ◆ Lithium Ion Battery
- ◆ Spark Screen
- ◆ 120V Battery Charger
- ◆ Hose with Cover
- ◆ Padded Belt
- ◆ Headcovering
- ◆ Shoulder Straps
- ◆ Airflow Indicator
- ◆ Duffle Bag



**WARRANTY**  
**1**  
**YEAR**

Blower

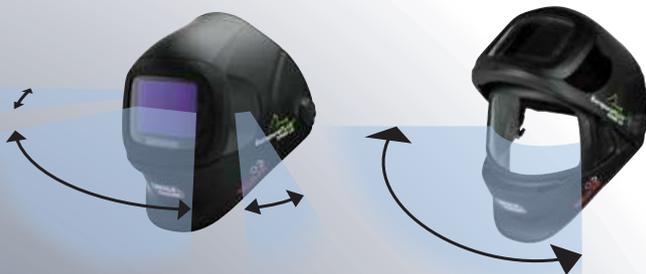
## Extra Large Auto-Darkening Lens

The 8 025 mm<sup>2</sup> auto darkening lens provides a large field of view to increase versatility and operator control.



## Maximising Field of View

The integrated clear grind shield and shade 5 side windows increase field of view in both the open and closed positions to offer productivity and safety enhancements.



**WARRANTY**  
**2**  
**YEARS**

Welding  
Helmet



## Auto-Darkening Lens Specs

Variable shades



Arc sensors



Optical class



Low TIG amps rated



Grind mode / Shade control



Lens switching speed



Comfort



Viewing area



Class

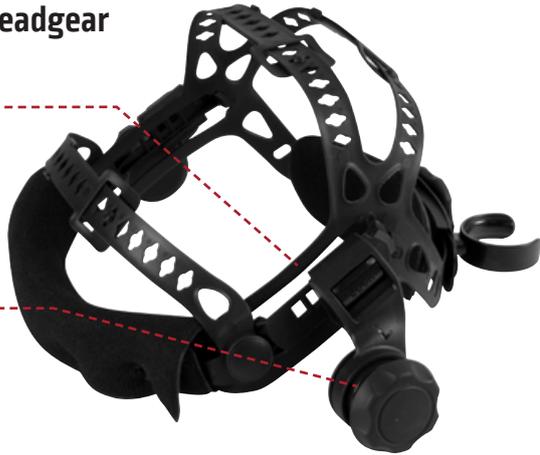


# HELMETS

## Advanced Headgear

Easy forward and backward slide adjustments

Vertical position lock



## Comfortable Headcovering

- ◆ Flame Retardant Cotton with super soft seal.
- ◆ Two small drawstrings to adjust fit and comfort.
- ◆ Easily replaceable via hook & loop seal.

## Side Window Covers

- ◆ Used to block all light from entering through the side windows.
- ◆ Lightweight & easy to install.



## Respiratory Specs

Easy on, off & airflow adjustments

Dynamic flow rate

Battery life indicator

Battery charge time



Lithium ion battery

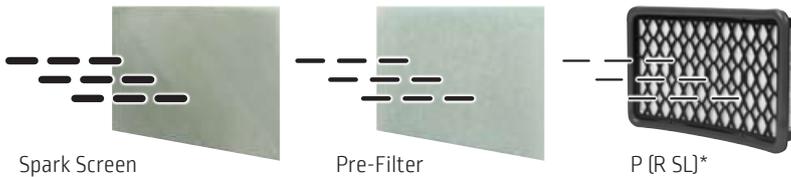


Filter life indicator

Audible and Vibrating alerts for low battery filter life

- ◆ **Easily adjustable:** One-touch operation.
- ◆ **User-friendly:** Indicator lights on display screen to check the status.
- ◆ **More considerate:** Visible, Audible and Vibrate auto alarming function to ensure safety.
- ◆ **High quality:** High level respirator protection EN 12941 TH3 P R SL.

## Multi-Component Filter System



Spark Screen

Pre-Filter

P (R SL)\*

\* Particulates (R=replaceable, SL=test against sodium chloride and paraffin oil)

## Specification

	EuropurePLUS™ 5500 LS
Air flow rate	Low speed: 170+ lpm(6+cfm) High speed: 210+ lpm(74+cfm)
Battery	Battery type: Rechargeable Li-ion Battery (More effective)
Air flow rate	Battery duration: 9 hours (Standard battery, 170+lpm) 5-6 hours (Standard battery, 210+lpm) Battery charge time: 1 hour (Standard battery) Battery life: 550 charges
Filter Operating Temp.	Filter efficiency: ≥99.97% Offering particulate protection from dust and welding fume hazards. For use with all welding applications. Visible, Audible and Vibrate alarms to ensure safety. -5 °C ~ +55 °C (23 °F ~ 131 °F)
Storing Temp.	-10 °C ~ +55 °C (14 °F ~ 131 °F)
Operating Relative Humidity	< 90%
Storage Relative Humidity	< 85%
Head Covering	FR Flame Retardant
Weight	2.66 kg (mask + air flow system)
PAPR Certification	EN 12941 TH3 P R SL
Warranty - Blower Assembly	1 Year
Warranty - Helmet Auto Darkening Lens	2 years
<b>To order</b>	
Complete PAPR Systems	W403676

List of spare parts : see page 28



(EU) 2016/425 (PPE)  
EN 166:2001,  
EN 379:2003+A1:2009,  
EN 175:1997,  
EN 12941:2009-02



HELMETS  
HELMETS

# ZEPHYR LS / FLIP'AIR LS



The ultimate welder protection.

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

With the ZEPHYR LS / FLIP'AIR LS 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'AIR 4500 LS**  
W000403675

Flip-up LCD filter for grinding



**ZEPHYR 4500 LS**  
W000403674



Grinding mode with external button



Autodarkening LCD filters with wide vision field.

**Filter Advance 4500 LS - Infotrack shade 3/8-13:**

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

4 adjustment modes from an LCD screen with digital keys:

- ◆ Welding: variable shades 8-13, 4 optical sensors, sensitivity regulation and return to a clear shade.
- ◆ Grinding: filter activation in clear shade level 3 (except on FLIP'AIR with its flip-up front filter).
- ◆ Cutting, low current welding: adjustable shades 5 to 8 for low intensity TIG process, microplasma, oxy-fuel gas welding...
- ◆ "X mode": adjustable shade 3 to 8-13 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



# HELMETS

## The ZEPHYR LS / FLIP'AIR LS 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.

### 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.



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.



Class



Comfort



Arc sensors



Optical class



Respiratory protection



Grind mode / Shade control



Lens switching speed



Variable shades



Viewing area



X-mode



	ZEPHYR 4500 LS	FLIP'AIR 4500 LS
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 Grinding Cutting X mode* Infotrack system**	
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	938 g (helmet) + 1760 g (air flow system)	
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

	ZEPHYR 4500 LS	FLIP'AIR 4500 LS
Package (helmet + airflow system + LCD filter)	W000403674	W000403675
LCD filter	W000402681	W000402682

List of spare parts : see page 27

# HELMETS

## OPTIONAL ACCESSOIRES\* EUROPURE PLUS 5500 LS

### PAPR - Adjustable Leather Belt Assembly

Adjustable leather belt assembly secures EUROPURE PLUS 5500 LS air purifying blower to operators waist.

Features:

- ◆ Cushioned backpad for enhanced comfort
- ◆ Leather belt offers excellent durability against heat, spatter, sparks and more
- ◆ Slide adjustable fit allows operator to adjust tightness



**PAPR - ADJUSTABLE  
LEATHER BELT ASSEMBLY**

WP403676-29

### Backpack

Replaces belt and shoulder straps to improving weight distribution and comfort.



**BACKPACK**

WP403676-31

### Filter type: A1B1E1K1

Features:

- ◆ Captures organic, inorganic and acidic gases and vapours



**FILTER TYPE:  
A1B1E1K1**

WP403676-30

### Fast-charging Extended battery

Features:

- ◆ Battery type : Rechargeable Li-ion Battery
- ◆ Battery duration : 15 hours (Low speed : 170+ lpm)  
9 hours (High speed : 210+ lpm)
- ◆ Battery charge time : 2 hours
- ◆ Battery life : 550 charges

**FAST-CHARGING  
EXTENDED BATTERY**

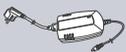
WP403676-2



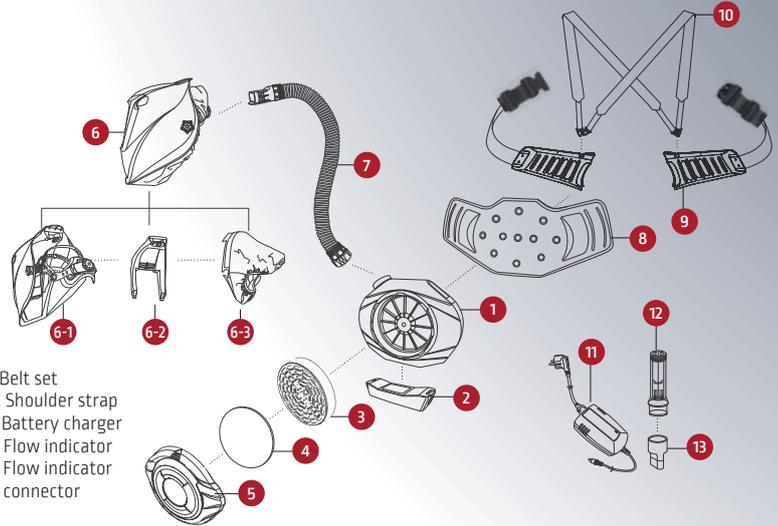
\* Official launching August 2022

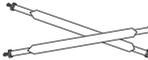
## Spare parts for ZEPHYR LS / FLIP'AIR LS

### ZEPHYR air flow system

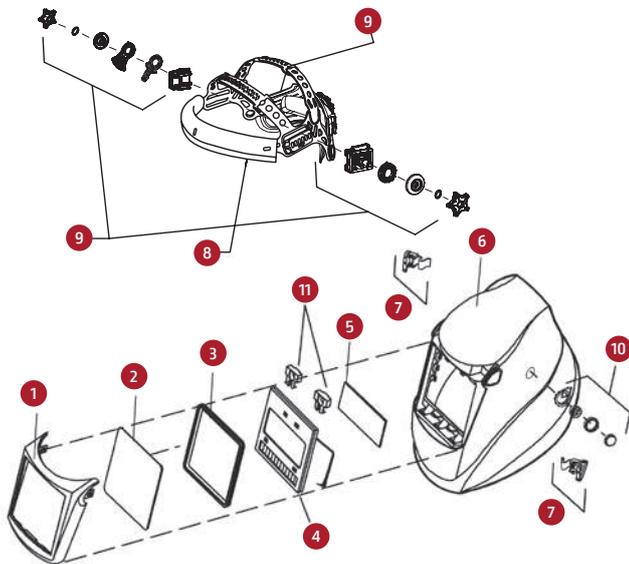
To order		
	Air flow system body	On demand
	Prefilter Z	W000271207
	Filter cover	On demand
	Flow indicator	On demand
	Particle filter (P3)	W000271208
	2021 Battery	W000271210-1
	2021 Battery charger	W000271211-1
	Flow indicator connector	On demand

1. Air flow system body
2. Battery
3. Particle Filter (P3)
4. Prefilter
5. Filter cover
6. Helmet Shell
- 6-1. Helmet
- 6-2. Blow
- 6-3. Hood
7. Air hose
8. Belt cushion



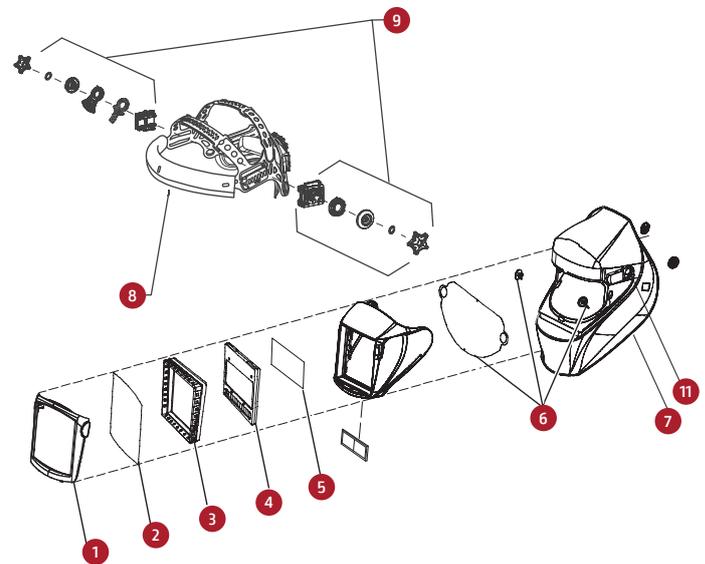
To order		
	Belt and Belt cushion	W000271203
	Shoulder strap	W000271204
	Air hose	W000271205

To order		
Option Item		
	Helmet Shell	W000402494 (ZEPHYR) W000403675-SP-1 (FLIP AIR)
	Odor filter	W000271209
	Air hose cover	W000271206



### ZEPHYR LS 4500

To order	
1 - Front Lens Holder	W000272828-1
2 - Outside Lens Cover	W000261993
3 - Gasket, Lens Assembly	W000261992
4 - Auto-darkening Lens Assembly Advance 4500	W000402681
5 - Inside Lens Cover	W000261994
6 - Helmet Shell	W000402494
7 - Buttons, Front Lens Holder (L/R)	W000276258
8 - Fabric Sweatban	W000402690
9 - Headgear I	W000402692
10 - Kit external grinding button	W000378989
11 - Spare batteries (CR 2450 lithium)	W000260920



### FLIP'AIR LS

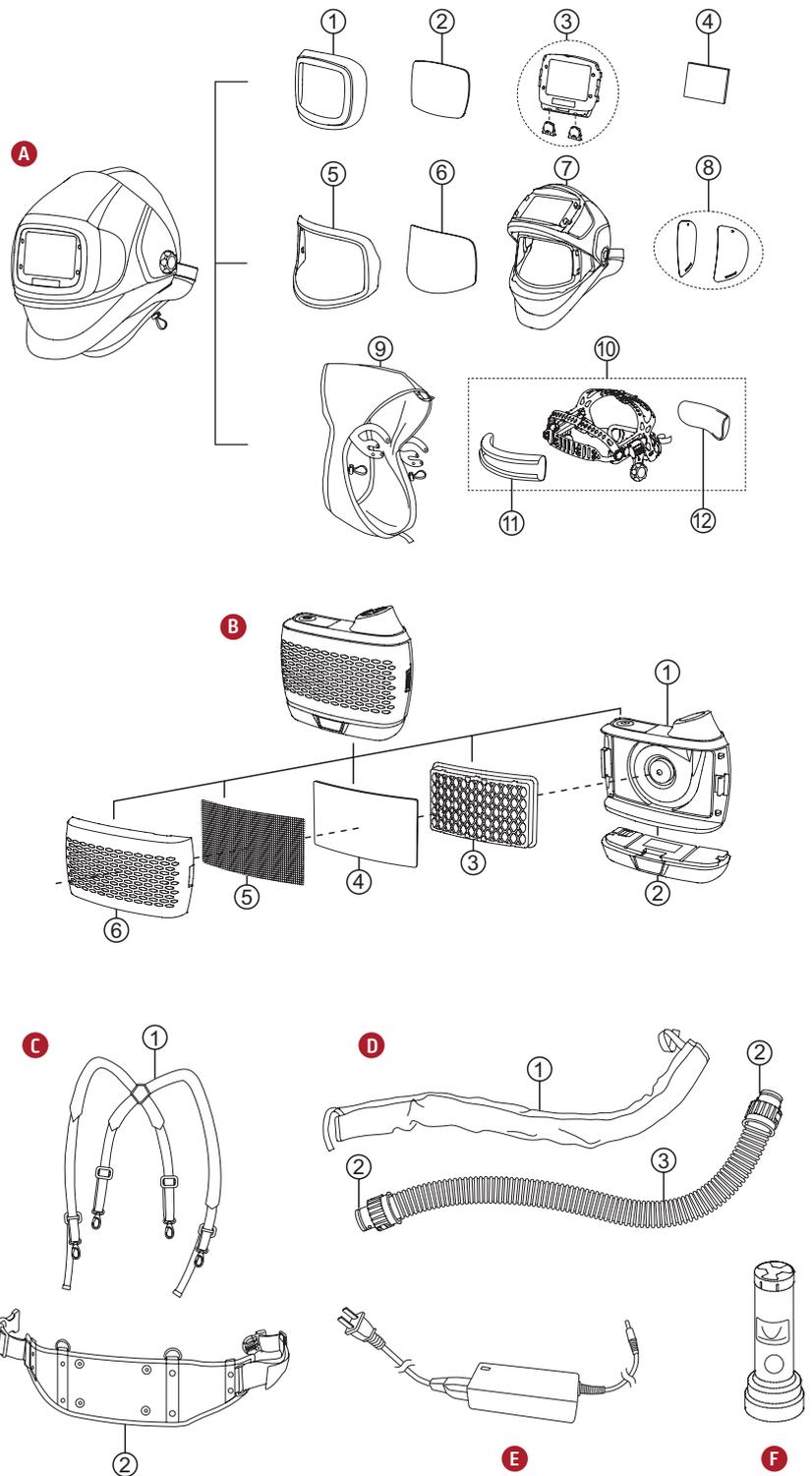
To order	
1 - Front Lens Holder	W000403674-1
2 - Outside Lens Cover	W000375551
3 - Gasket for FLIP'AIR LS	W000403675-6
4 - Auto-darkening Lens Assembly	W000402682
5 - Inside Lens Cover	W000335163
6 - Grinding cover kit	W000374799
7 - Helmet Shell	W000403675-SP-1
8 - Fabric Sweatband	W000402690
9 - Headgear I	W000402692
10 - Spare batteries (CR 2450 lithium)	W000260920
11 - HINGE X2	W000403675-7

# HELMETS

## Spare parts for EUROPURE PLUS

### EUROPURE PLUS

To order		
<b>A Helmet with Air Duct Assembly</b>		
<b>A 1</b>	Front lens holder	WP403676-4
<b>A 2</b>	Outside cover lens (160.36 x 107.3 mm)	WP403676-5
<b>A 3</b>	Auto darkening filter	WP403676-6
<b>A 4</b>	Inside cover lens (107 x 80 mm)	WP403676-7
<b>A 5</b>	Grind lens holder	WP403676-8
<b>A 6</b>	Grind lens (anti-fog, 223 x 129.8 mm)	WP403676-9
<b>A 7</b>	Helmet shell with air duct	WP403676-10
<b>A 8</b>	Side lens cover	WP403676-11
<b>A 9</b>	Face seal	WP403676-12
<b>A 10</b>	Headgear (Including sweatband & soft pad)	WP403676-13
<b>A 11</b>	Sweatband	WP403676-14
<b>A 12</b>	Soft pad	WP403676-15
<b>B Blower Unit</b>		
<b>B 1</b>	Body	WP403676-16
<b>B 2</b>	Fast-charging standard battery	WP403676-1
<b>B 3</b>	Particle filter (P3 filter)	WP403676-17
<b>B 4</b>	Pre-filter	WP403676-18
<b>B 5</b>	Spark screen	WP403676-19
<b>B 6</b>	Filter cover	WP403676-20
<b>C Wears</b>		
<b>C 1</b>	Shoulder strap	WP403676-22
<b>C 2</b>	Belt cushion (Including screws & washers)	WP403676-23
<b>D Hose</b>		
<b>D 1</b>	Hose cover	WP403676-24
<b>D 2</b>	O-ring	WP403676-25
<b>D 3</b>	Hose (Including O-ring)	WP403676-26
<b>E Battery Charger</b>		
<b>E</b>	Fast-charging battery charger	WP403676-3
<b>F Airflow Indicator</b>		
<b>F</b>	Airflow indicator	WP403676-27
<b>PAPR duffle bag</b>		
PAPR duffle bag		WP403676-28



# 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.



### 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.

### 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.

### 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 year<sup>l</sup> operating life).
- ◆ High efficiency pleated particulate filter will remove solid and liquid particles.

### COMPATIBILITY



	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

## 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



### 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.

Helmet standard  
(EU) 2016/425 (PPE)  
EN 175:1997



Window 110 x 90 mm

To order W000011113

Window 98 x 75 mm

To order W000011114

# 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

### 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



# 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.

Window 105 x 50 mm

**To order** W000011115



# SPARE PARTS

### Adjustable type "B" headgear

For TP and FG helmets.



**To order** W000010884

### Comfort sweat band

Foam band For WELDLUX helmet.

- ◆ Fabric band covered with foam.
- ◆ Velcro closing.
- ◆ Fire-retardant.



**To order** Z00820115

{2 pieces pack}

# WELDING GLASSES

## WELDGLASS

(EU) 2016/425 (PPE)  
EN166:2001  
EN169:2002

Choose the lens shade adapted to your working conditions.

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			8
20	8				9			9
30	9				10			10
40	9				10			11
60	10			9	11			11
80	10			10	12		11	12
100	11	10		10	12		11	12
150	11	11	11	11	13	10		13
175	11	11	11	11	13	11		13
200	12	12	12	12	13	11	12	13
225	12	12	12	12	13	12		13
250	12	12	13	13	14	12		14
300	13	13	13	13	14	13	13	14
350	13	13	14	14	14	13		14
400	13	13	14	14	14	14		14
450	13	13	14	14	14	14		14
500	14	14	15	15	15	15		15



# WELDING GLASSES

## WELDGLASS



[EU] 2016/425 (PPE)  
EN166:2001  
EN169:2002

### Filtering coloured glasses

DIMENSIONS 105 x 50 mm				
Skin pack		Shade		Box
5 pieces	W000335009	5	-	100 pieces
5 pieces	W000335010	6	-	100 pieces
5 pieces	W000335011	7	-	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	-	100 pieces
5 pieces	W000335090	6	-	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	-	100 pieces
5 pieces	W000335097	13	-	100 pieces

DIMENSIONS 110 x 90 mm				
Skin pack		Shade		Box
5 pieces	W000335035	5	-	100 pieces
5 pieces	W000335036	6	-	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	-	100 pieces
5 pieces	-	7	-	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	-	-

[EU] 2016/425 (PPE)  
EN166:2001 / EN169:2002

### SILVER protane® glasses

Skin pack	Dimensions 105 x 50 mm	Shade	Dimensions 133 x 114 mm	Skin pack	Dimensions 98 x 75 mm
5 pieces	W000335025	9	W000335063	5 pieces	W000335173
5 pieces	W000335026	10	W000335064	5 pieces	W000335174
5 pieces	W000335027	11	W000335065	5 pieces	W000335175
5 pieces	W000335028	12	W000335066	5 pieces	W000335176
5 pieces	W000335029	13	W000335067	5 pieces	W000335177

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”.**

### Protection glass or plate CR-39®

Dimensions	Clear glass		Protection plate CR-39®	
	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

[EU] 2016/425 (PPE)  
EN166:2001

### Circular glasses diameter 50 mm

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

# GOGGLES

(EU) 2016/425 (PPE)  
EN166:2001  
EN169:2002  
EN 175:1997



## 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:

- ◆ EN166:2001
- ◆ Resistance to impact: → **A**: High energy impact  
→ **B**: Medium energy impact  
→ **F**: Low energy impact  
→ **S**: Increased robustness

### Lens marking:

**X - X.XXXXX**

Possibilities:

- **4**: Protection against large dust particles - particles > 5 µm
- **5**: Protection against gas and fine dust particles - particles < 5 µm
- **9**: Protection against projections of molten metals and hot-soli
- **R**: Increased reflectance of the ocular in the IR
- **K**: Resistance of the ocular to surface damage by fine particles
- **N**: Resistance of the ocular to fogging
- **T**: Temperature resistance from -5°C to +55°C

Resistance to impact:

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

Usage (Optical class):

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

Manufacturer's identification

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**

Filter identification code

- UV: **2 or 3**
- Sun: **5 or 6**
- IR: **4**
- 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

**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)

#### Specification according to EN175:1997

This standard applies to PPE for eye and face protection during welding and related procedures. The conforming PPE is designed to include protection filters with or without protective/reinforced oculars, certified in conformity to EN166:2001 and to EN169:2002.

### 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	EN166:2001 + EN169:2002
6	W000335086	W000010937	EN166:2001 + EN169:2002
7	W000335087	W000010949	EN166:2001 + EN169:2002
8	W000335088	-	EN166:2001 + EN169:2002
Clear	-	W000010979	EN166:2001 + EN169:2002

# GOGGLES / SPECTACLES

## Welding range

### PILOT FLIP UP

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

EN 175:1997



Shade 5

To order W000011046

### PILOT 2 PLASTIC

EN 175:1997

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



Shade 5

To order W000011052

### 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.

EN166:2001  
EN169:2002



Shade 6

To order W000011048

### 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.



Clear

To order W000011049

### PILOT EVEREST

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

EN166:2001  
EN169:2002



Shade 5

To order W000011053

# 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

(EU) 2016/425 (PPE)  
EN166:2001  
EN169:2002  
EN 175:1997

### CLASSIC WELDING

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



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

- ◆ 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

(EU) 2016/425 (PPE)  
EN166:2001

### 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



# GOGGLES / SPECTACLES

## Protection range

### FASHION VISIT

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

Clear

To order W000011062



(EU) 2016/425 (PPE)  
EN166:2001



## Grinding masks

### FIRST

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

Clear

To order W000011068



(EU) 2016/425 (PPE)  
EN166:2001

### 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



### OVER



- ◆ 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



**WELDLINE**<sup>®</sup>

by Lincoln Electric



# PERSONAL PROTECTIVE EQUIPMENT

MORE COMFORT & SAFETY FOR WELDERS

# GLOVES AND CLOTHES IN PREMIUM EUROPEAN LEATHER



The leather selection comes from one of the most important tanning centers in the world. Our partners are the experts in recognizing the origin of the leather, strength of the fibers and quality. Each production process, beginning with purchasing raw materials and ending with sewing, is fully controlled and validated.

These high quality leathers are required to produce the most prestigious products in the sector.

## DESIGNED FOR WELDERS BY WELDERS

Our gloves and clothes were studied and tested by a team of professional welders to better understand the Customer needs. Thanks to proper research and including professionals at development stage, we were able to provide products with lightness, softness, ergonomics and durability incomparable in the market.

## THE STITCHING

The thread used for the stitching is very important, we use a high tenacity thread. By norm ISO 13938-1 the strength stitching must be > 110 Newton, our bursting strength of stitching is 608 Newton.

## ECO FRIENDLY LABEL

Lincoln Electric company follows a moral obligation to maintain focus on eco-friendly solutions. Our leather products are manufactured using 80% less water than traditional leather treatment, additionally all leather scraps are collected by a certified company in Italy (ILSA S.p.A.), which reuses the scraps and transform them into organic fertilizer.

# LEATHER CLOTHES

## YOUR SAFETY IN THE WELD'fit COMFORT!

WELD'fit products, heat and flame resistant, provide the higher protection for the welders.

### Standard:

Rules (EU) 2016/425 European Regulation on Personal Protective Equipment

**EN ISO 13688:2013:** *[general requirements for innocuousness, ergonomics and sizes],*

**EN ISO 11611:2015:** *[use in welding operations and related procedures]*

Products are manufactured according to the Rules (EU) 2016/42

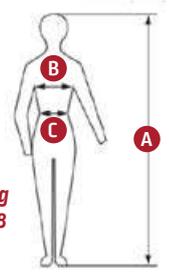
### Composition:

- **Jacket:** split leather, grain leather
- **Apron, Sleeves and Gaiters:** split leather, grain leather

### Use:

Jackets, Apron, Sleeves and gaiters are clothes for welders in Class 2 suitable for use during manual welding techniques in which major drops and splatters are formed, such as, for example: MMA welding *[with basic electrode or covered with cellulose]*, MAG welding *[CO<sub>2</sub> or mixed gases]*, MIG welding *[with high current]*, welding with flux cored wire, plasma cutting, trimming, oxygen cutting, thermal spray painting, and operation of machinery, for example, in tight spaces, welding and cutting in overhead or similar positions, or in narrow spaces.

The garment protects accidental contact with small flames, splattered molten metal, radiating heat and brief accidental electrical contact. 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.



### Chart Size

Sizing according to: **EN ISO 13688** (in cm)

Art. nr.	A	B	C
W2985-SIZE-CE			
W2987-SIZE-CE	166	98	90
W3106-SIZE-CE	-	-	-
W3112-SIZE-CE	200	160	120
WP10570-SIZE			

	A	B	C*
M [48]	171 - 176	96	84
L [52]	177 - 182	104	92
XL [56]	183 - 187	112	100
2XL [60]	188 - 192	120	112
3XL [64]	193 - 196	128	124

\* C = +5 cm

## GAITERS



Gaiters in split leather fastened with straps or with leather band. Gaiters are used to protect the bottom of the trousers and shoes from sparks and heat generated during welding and grinding operations. Width 30cm.

### Technical description

- 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.

**GAITERS with STRAPS** W000404081

**GAITERS with VELCRO** W000404082

**PPE II° category**  
Certified by EU 425/2016  
EN 11611 A1 Class 2

## SHORT AND LONG SLEEVES

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



**SHORT OVERSLEEVES**

W000404083

**Cover sleeves width 40 cm,** ergonomic, elastic at the end.

### Technical description

- Fixed with leather straps.
- Tightening elastic to the wrists.
- Single size.

**PPE II° category**  
Certified by EU 425/2016  
EN 11611 A1 Class 2

**Cover sleeves width 60 cm,** ergonomic, elastic at the wrist and leather laces on the shoulders, fastening with rapid connection.



**LONG OVERSLEEVES**

W000404084

# LEATHER CLOTHES

## GRAIN LEATHER APRON

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

### Technical description

- Leather strap fixed through bound eyelets to the waist and flap.
- Single size.
- With leather laces, fastening with rapid connection, measures 1100x800 mm.

PPE II° category  
 Certified by EU 425/2016  
 EN 11611 A1 Class 2

**GRAIN APRON 1100x800** W000404085



## SPLIT LEATHER APRON

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

**Split leather apron** with leather laces, fastening with rapid connection, measures 1100x800 mm.



Closing by clips or cotton straps

**SPLIT APRON 1100x800** W000404086

**Split leather apron** fastening with rapid connection, measures 900x600 mm.

**SPLIT APRON 900x600**  
 Leather laces W000404087

**Split leather apron** with eyelets and fabric laces, measures 900x600 mm.

**SPLIT APRON 900x600**  
 Fabric laces W000404088

### Technical description

- Leather or cotton strap with quick release clips to the waist and flap.
- Single size.
- Sewn finish with red fabric border

PPE II° category  
 Certified by EU 425/2016  
 EN 11611 A1 Class 2



# LEATHER CLOTHES

## SPLIT LEATHER WELDING JACKET

Split leather jacket, comfortable, fastened with snap buttons covered by leather, pocket inside, elastic at the wrist.

Welding jacket in split leather are designed to protect the upper body of the user from fine welding spatters and grinding particles.

### Technical description

- 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: L, XL and XXL.

Button closure under flap



Breathable



SPLIT LEATHER  
WELD JACKET  
Size L

W000404090-L

SPLIT LEATHER  
WELD JACKET  
Size XL

W000404090

SPLIT LEATHER  
WELD JACKET  
Size XXL

W000404091

PPE II<sup>o</sup> category  
Certified by EU 425/2016  
EN 11611 A1 Class 2

*Customize your welding jacket thanks to the removable velcro band*

# LEATHER CLOTHES

## GRAIN LEATHER WELDING JACKET



Grain leather jacket, comfortable, regular fit, fastened with snap buttons covered by leather, pocket inside, elastic at the wrist.

Half-back flame-retardant cotton.

### Technical description

- 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: L, XL and XXL.

GRAIN LEATHER  
WELD JACKET  
Size L

W000404092-L

GRAIN LEATHER  
WELD JACKET  
Size XL

W000404092

GRAIN LEATHER  
WELD JACKET  
Size XXL

W000404093

PPE II° category  
Certified by EU 425/2016  
EN 11611 A1 Class 2



With the blank velcro add your company logo, name, message of your choice\*.

\* Not included

# LEATHER CLOTHES

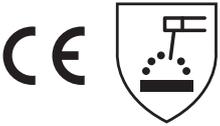
## YOUR SAFETY IN THE WELD'FIT COTTON CLOTHING!

WELD'fit WELDING GARMENTS are made from 305 gr/m<sup>2</sup> flame retardant fabric - high heat resistance and spatter, contain multiple pockets which are fastened with velcro and manufactured according to EN ISO 11611:2015 Class 1/A1+A2.

### Regulation

Personal Protective Equipment Regulation PPER (EU) 2016/425.

EN ISO 11611:2015 → EN ISO 11611 - Protective clothing for welding and related processes.



Class 1 A1+A2  
EU 2016/425

Class 1 = protection against less hazardous welding techniques and situations causing lower levels of spatter and radiant heat.

A1-A2 = Protection against limited flame spread.

Clothing produced according to EN ISO 11611 serves to protect the wearer whilst welding or performing allied processes involving comparable risks. This clothing provides protection against spatter (minor splashes of molten metal) and so-called welding beads as well as brief contact with flames and radiant heat from the arc. Under normal welding conditions, it offers limited electrical insulation against DC voltage of up to approximately 100 V.

According to EN ISO 11611, the clothing is divided into the following classes depending on their level of protection: Class 1 or Class 2.

Sleeve tightening snap button



Customizable Velcro



### IMPORTANT:

AS REQUESTED BY EN NORMS, OUR ITEMS HAVE CLEAR AND PERMANENT MARKING AND ARE SOLD TOGETHER WITH THEIR INSTRUCTION MANUAL

# LEATHER CLOTHES

## FR\* BLACK WELDING TROUSERS

Practical and comfortable trousers in flame retardant cotton. Black & Red flame retardant fabric 305 gr./m<sup>2</sup>.

Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2

### Technical description

- Knee protection.
- Left side back pocket, fastened with velcro.
- Black Kevlar thread (Aramid fabric).
- Machine Washable 40°.

Index no	
Size M	WP10570-M
Size L	WP10570-L
Size XL	WP10570-XL
Size 2XL	WP10570-2XL



## FR\* WELDING HOOD



One size fits all. Head and neck cover. Black & Red flame retardant fabric 305 gr./m<sup>2</sup>.

### Technical description

- Black Kevlar thread (Aramid fabric).
- Machine Washable 40°.

FR\* WELDING HOOD - All size

W2995-ALL-CE

Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2

## FR\* DOO RAG

One size fits all. Let your WELDLINE by LINCOLN ELECTRIC colours show! This premium doo rag, made from 305 gr./m<sup>2</sup> flame retardant fabric, features an athletic mesh for fast sweat evaporation.

### Technical description

- Black Kevlar thread (Aramid fabric).
- Machine Washable 40°.

FR\* DOO RAG - All size

W2993-ALL-CE

Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2



## FR\* WELDING BEANIE

One size fits all. Protect your head with this authorized WELDLINE by LINCOLN ELECTRIC flame retardant beanie.

### Technical description

- Black Kevlar thread (Aramid fabric).
- Stretch.
- Machine Washable 40°.



FR\* WELDING BEANIE - All size

W2994-ALL-CE

Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2

\*FR = Flame Retardant cotton

# LEATHER CLOTHES

## TRADITIONAL SPLIT LEATHER-SLEEVED JACKET

Split cowhide sleeves resist spatter and wear, while lightweight material on the chest and back keep the wearer cool and comfortable. This basic jacket features an inside pocket and adjustable sleeves.

Stylish and comfortable.

Adjustable sleeves snap into place.

Made with 100% flame-retardant material for maximum protection.

Black & Red flame retardant fabric 305 gr./m<sup>2</sup>.

### Technical description

- One Internal left pocket.
- Sleeve tightening snap button.
- Collar fastened with velcro.
- Black Kevlar thread (*Aramid fabric*).
- Not Washable.

Personal Protective Equipment  
Regulation PPER (EU) 2016/425.  
EN ISO 11611:2015 Class 1/A1+A2

Index no	
Size M	W3106-M-CE
Size L	W3106-L-CE
Size XL	W3106-XL-CE
Size 2XL	W3106-2XL-CE
Size 3XL	W3106-3XL-CE



## FR\* WELDING JACKET



Made from 100% flame-retardant material, our cloth jacket is ideal for light-duty welding. A convenient inside pocket stows personal items. Protection for light & duty welding.

Black & Red flame retardant fabric 305 gr./m<sup>2</sup>.

### Technical description

- One Internal left pocket.
- Sleeve tightening snap button.
- Collar fastened with velcro.
- Black Kevlar thread (*Aramid fabric*).
- Machine Washable 40°.

Personal Protective Equipment  
Regulation PPER (EU) 2016/425.  
EN ISO 11611:2015 Class 1/A1+A2

Index no	
Size M	W2985-M-CE
Size L	W2985-L-CE
Size XL	W2985-XL-CE
Size 2XL	W2985-2XL-CE
Size 3XL	W2985-3XL-CE

*Customize your welding jacket using the removable velcro band*



# LEATHER CLOTHES

## FR\* WELDING LAB COAT

This knee-length coat is ideal for instructors, supervisors and occasional welders. Made from 100% flame retardant material, it's designed for use by not just the welder but anyone in the immediate work area. Pockets at the hips and chest store chalk, grease pens or other items. Black & Red flame retardant fabric 305 gr./m<sup>2</sup>. Ideal for instructors, supervisors. Protection for light & duty welding.

### Technical description

- Two external pockets at waist height and one on the left chest. All are fastened with velcro.
- Sleeve tightening snap button.
- Collar fastened with velcro.
- Black Kevlar thread (Aramid fabric).
- Machine Washable 40°.



Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2

Index no	
Size M	W3112-M-CE
Size L	W3112-L-CE
Size XL	W3112-XL-CE

## GRAIN LEATHER-SLEEVED JACKET



For optimal protection and freedom of movement for MIG or stick welding, choose our full-grain leather sleeve jacket with a flame-retardant, 100% cotton chest panel. The flip-up collar secures with an adjustable hook and loop closure, and the front panel secures with an extra flap for full closure. Horizontal hip pockets provide secure compartments for personal items.

Comfort and dexterity for MIG or stick welding. Black & Red flame retardant fabric 305 gr./m<sup>2</sup>.

### Technical description

- Two external pockets which are closable with velcro.
- Sleeve tightening snap button.
- Collar fastened with velcro.
- Black Kevlar thread (Aramid fabric).
- Not washable.

Personal Protective Equipment Regulation PPER (EU) 2016/425. EN ISO 11611:2015 Class 1/A1+A2

Index no	
Size M	W2987-M-CE
Size L	W2987-L-CE
Size XL	W2987-XL-CE
Size 2XL	W2987-2XL-CE
Size 3XL	W2987-3XL-CE

\*FR = Flame Retardant cotton



Using the blank velcro strip, add your choice of company logo, name, message\*\*

\*\*Not included



**WELDLINE**<sup>®</sup>

by Lincoln Electric

# WELDING SHOES

*Safety boots with special cuff  
for welding protection.*

**MORE COMFORT & SAFETY FOR WELDERS.**

# SAFETY SHOES FOR WELDING

## PANTER-FUSION 49 S3

### YOUR SAFETY IN STURDY, COMFORTABLE AND STYLISH WELDING SHOES

Safety boots with special cuff for welding protection. Produced from extra thick full grain leather, breathable and fireproof. Protects against high temperatures, additionally extraordinary strength and durability.



<b>Level of protection</b>	<b>Standard</b>
<b>S3+WG+Hi+Ci+HRO+AN</b>	<b>EN ISO 20345</b>
	<b>EN ISO 20349</b>

PANTER FUSION 49 S3			
Size 36	W49S3T36	Size 43	W49S3T43
Size 37	W49S3T37	Size 44	W49S3T44
Size 38	W49S3T38	Size 45	W49S3T45
Size 39	W49S3T39	Size 46	W49S3T46
Size 40	W49S3T40	Size 47	W49S3T47
Size 41	W49S3T41	Size 48	W49S3T48
Size 42	W49S3T42		



#### Natural full grain leather combining Maximum Hydrofugation and Flameproof Treatment

- Thick and resistant to tear
- Seams made with flame retardant wire
- Resistant to flame and splashes of molten metal
- Design, yarns, fiber and engineering complying with EN ISO 20349



Upper

#### PU + High Temperature (300 °C) Nitrile rubber

- Resistance to heat contact up to 300 °C
- Resistant to oils and hydrocarbons
- Resistant to abrasion - effective cold and extreme hot insulation
- Electrically insulating
- Special anti-slip design and system of energy absorption in the heel



Outsole



Insole



Midsole



#### Heat resistant

- Antifungal
- Antistatic
- Antibacterial

#### 200 J Plastic



Toe Cap

- Impact resistant to over 200 joules
- Extra wide
- Very light
- Elastic memory
- Electrically insulating
- Maximum EN ISO 20345 Certification

#### Puncture Proof Non-Metallic

- Extraordinary flexible and light
- Self molded to the natural shape of the foot without rigidity
- Comfort and protection
- Zero Penetration
- Super Flexible and light
- Maximum EN ISO 20345 Certification



**WELDLINE<sup>®</sup>**

by Lincoln Electric



# WELDING GLOVES

*Make sure to protect your hands.*

**MORE COMFORT & SAFETY FOR WELDERS**

# WELDING GLOVES

## YOUR SAFETY IN PREMIUM QUALITY GLOVES AT A FAIR PRICE

Our protective gloves are made from leather that has passed stringent thermal and electrical risk tests enabling the wearer to handle an object of 100°C for up to 15 seconds.

The Personal Protection Equipment guards against risks deriving from welding operations and related procedures (CLASS 2). The gloves are suitable for use in limited spaces for welding and cutting in overhead or similar positions and in forced positions that can produce hot spatter and droplets such as: MMA welding (with base electrode or cellulose coated), MAG (mixed CO2 or gas), MIG (high current) welding, core wire welding, plasma cutting, gouging, oxygen cutting, thermal spray painting and for the operation of machines.

### European Directive (UE) 2016/425: harmonization of member states' PPE legislation.

EN 420:2003+(A1:2009) Protective gloves - general requirements

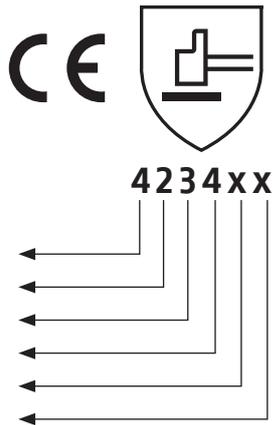
EN 407:2004 Protective gloves against thermal risk

EN 388:2016 Protective gloves against mechanical risks

EN 12477:2001+(A1:2005) Protective gloves for welders

#### Mechanical hazards

EN 388: 2016

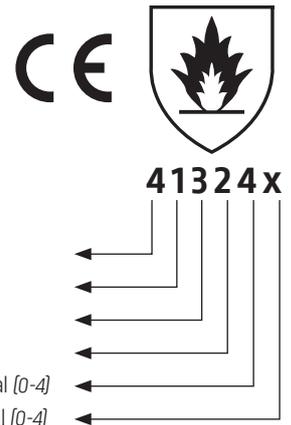


**TEST**

- Abrasion [0-4]
- Resistance to cutting [0-5]
- Resistance to tearing [0-4]
- Resistance to perforation [0-4]
- TDM resistance to cutting [E]; [A-F]
- Attenuation of impact [P]; [Pass/ Fail]

#### Heat resistance

EN 407: 2004



**TEST**

- Reaction to flame [0-4]
- Contact heat [0-4]
- Convective heat [0-4]
- Radiating heat [0-4]
- Splattering with small quantities of molten metal [0-4]
- Splattering with large quantities of molten metal [0-4]

An index of x indicates that the glove has not been tested for this type of risk.

### SIZE CHART



#### Worker Gloves

Gloves Size	Hand Circumference (mm.)	Hand length (mm.)	Minimum glove length (mm.)	
Size S	8	203	182	350
Size M	9	229	192	350
Size L	10	254	204	350
Size XL	11	279	215	355

#### Welding Gloves

Gloves Size	Hand Circumference (mm.)	Minimum glove length (mm.)	
Size S	7 1/2	190	230
Size M	8 1/2	216	230
Size L	9	229	230
Size XL	9 1/2	241	230

# WELDING GLOVES

## MIG UNIVERSAL COMFORT



2016  
EN 388  
2004  
EN 407

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

### Glove properties

Heat resistance



★★★★☆

Dexterity



★★★★★

Abrasion resistance



★★★★☆

Molten metal splashes



★★★★★

To order	
Size 9	WG-MIG-1-CE-T9
Size 10	WG-MIG-1-CE
Size 11	WG-MIG-1-CE-T11

Usage recommendation :  
MIG-MAG / MMA

Personal Protective  
Equipment regulation  
(UE) 2016/425

EN 420:2003+[A1:2009] - 3  
EN 407:2004 - 413 2 4 x  
EN 388:2016 - 2132 x  
EN 12477:2001+[A1:2005] - TYPE A

## MIG UNIVERSAL COMFORT +



2016  
EN 388  
2004  
EN 407

The UNIVERSAL COMFORT + gloves are designed to protect the hand during normal welding applications in MMA/MIG/MAG processes.

### Glove properties

Heat resistance



★★★★★

Dexterity



★★★★☆

Abrasion resistance



★★★★★

Molten metal splashes



★★★★★

To order	
Size 9	WG-MIG-2-CE-T9
Size 10	WG-MIG-2-CE
Size 11	WG-MIG-2-CE-T11

Usage recommendation :  
MIG-MAG / MMA

Personal Protective  
Equipment regulation  
(UE) 2016/425

EN 420:2003+[A1:2009] - 3  
EN 407:2004 - 413 2 4 x  
EN388:2016 - 423 4 x  
EN 12477:2001+[A1:2005] - TYPE A

# WELDING GLOVES

## MIG IRON PROTECT



2016  
EN 388  
2004  
EN 407

The MIG IRON PROTECT gloves are designed for a high level of protection of the hands during normal welding applications in MMA/MIG/MAG processes.

### Glove properties

Heat resistance



Dexterity



Abrasion resistance



Molten metal splashes



To order	
Size 10	WG-MIG-3-CE
Size 11	WG-MIG-3-CE-T11

**Usage recommendation:**  
MIG-MAG / MMA

**Personal Protective Equipment regulation (UE) 2016/425**

EN 420:2003+(A1:2009) - 3  
EN 388:2016 - 4234x  
EN 407:2004 - 41324x  
EN 12477:2001+(A1:2005) - TYPE A

## MIG IRON PROTECT +



2016  
EN 388  
2004  
EN 407

The MIG IRON PROTECT+ gloves are designed to protect for high level of protection of the hands during normal welding applications in MMA/MIG/MAG processes. The natural grain leather palm gives extra sensitivity.

### Glove properties

Heat resistance



Dexterity



Abrasion resistance



Molten metal splashes



To order	
Size 10	WG-MIG-4-CE
Size 11	WG-MIG-4-CE-T11

**Usage recommendation:**  
MIG-MAG / MMA

**Personal Protective Equipment regulation (UE) 2016/425**

EN 420:2003+(A1:2009) - 3  
EN 388:2016 - 2122x  
EN 407:2004 - 41324x  
EN 12477:2001+(A1:2005) - TYPE A

# WELDING GLOVES

## TIG FLEX SENSITIVE



The TIG FLEX SENSITIVE gloves are designed to give a high level of dexterity and flexibility for normal welding applications in TIG/Flame processes. The favorite gloves of TIG welders. Goat leather.

### Glove properties

Heat resistance	Dexterity
	
★★★★☆	★★★★★
Abrasion resistance	Molten metal splashes
	
★★★★☆	★★★★☆

To order	
Size 8	WG-TIG-8-CE
Size 9	WG-TIG-9-CE
Size 10	WG-TIG-10-CE
Size 11	WG-TIG-11-CE

Usage recommendation :  
TIG

Personal Protective  
Equipment regulation  
(UE) 2016/425

EN 420:2003+(A1:2009) - 3  
EN388:2016 - 2132x  
EN407:2004 - 41324x  
EN 12477:2001+(A1:2005) - TYPE A

## MIG IRON ALU



The MIG IRON ALU gloves are designed for a high level of protection of hands during heavy welding applications.

**COMFORT:** the Split leather (1.1-1.3 B" thickness 1.1 / 1.3 mm color Red, black) and the cotton fleece lining which increases the glove's thermal insulation.  
**RESISTANCE:** the aluminized textile back offers strong resistance to heat, radiation and small splashes of molten metal. Aluminized Fabric: 100% para-aramid, 480 g / m<sup>2</sup>, BASF THERMAL ENGINEERING. **SAFETY:** the split leather cuff helps to protect a large part of the forearm against mechanical hazards.

### Glove properties

Heat resistance	Dexterity
	
★★★★★	★★★★☆
Abrasion resistance	Molten metal splashes
	
★★★★★	★★★★★

To order	
Size 10	W10420

Usage recommendation :  
MIG-MAG / MMA

Personal Protective  
Equipment regulation  
(UE) 2016/425

EN 21420:2020  
EN 388:2019  
EN 407:2004  
EN 12477:2001+A1:2005

# WELDING GLOVES

## 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



## WORKER GLOVES FULL LEATHER STEEL

Top grain cowhide leather delivers excellent fit and dexterity while the goat skin back allows the glove to breathe. The palm is padded for comfort and the hook and loop soft rubber tabbed wrist closure, with a flexible elastic band, ensures a snug, comfortable fit.

**Usage recommendation:**  
Fabrication work

**Personal Protective Equipment regulation (UE)2016/425**

EN 388:2016+(A1) - 3111x



### To order

Size S	W2977-S-CE
Size M	W2977-M-CE
Size L	W2977-L-CE
Size XL	W2977-XL-CE





**WELDLINE®**  
by Lincoln Electric



**WELD'her**

*Personal protective equipment*

**MORE COMFORT & SAFETY FOR WELD'her**

# WELDING GLOVES

## TIG FLEX SENSITIVE *FEMALE*



The TIG FLEX SENSITIVE FEMALE gloves are designed to ensure the high level of dexterity and flexibility for regular welding applications in TIG/Flame processes. Made of goat leather, they are the favorite gloves of female TIG welders.

### Glove properties

Heat resistance



Dexterity



Abrasion resistance



Molten metal splashes



Index no	
Size 8	WG-TIG-8-CE-L
Size 9	WG-TIG-9-CE-L

**Recommended use:**  
TIG

**Personal Protective Equipment regulation (UE)2016/425**

EN 420:2003+[A1:2009] - 3  
EN388:2016 - 2132x  
EN407:2004 - 41324x  
EN 12477:2001+[A1:2005] - TYPE A

## MIG UNIVERSAL COMFORT *FEMALE*



The UNIVERSAL COMFORT FEMALE gloves are designed to protect hands during regular welding applications in MMA/MIG/MAG/TIG processes and have grain leather palms for extra sensitivity.

### Glove properties

Heat resistance



Dexterity



Abrasion resistance



Molten metal splashes



Index no	
Size 8	WG-MIG-1-CE-T8-L
Size 9	WG-MIG-1-CE-T9-L

**Recommended use:**  
MIG-MAG / MMA

**Personal Protective Equipment regulation (UE)2016/425**

EN 420:2003+[A1:2009] - 3  
EN388:2016 - 2132x  
EN407:2004 - 41324x  
EN 12477:2001+[A1:2005] - TYPE A

# LEATHER CLOTHES

## GRAIN LEATHER WELDING JACKET *FEMALE*

Fastened with snap buttons covered by leather, grain leather jackets for HER are adjustable and comfortable. These welding jackets are designed to protect the upper body.

### Technical description

- 100% leather
  - The jacket overlaps in the front offering additional protection against spatters. The inner neck coating consists of two layers of cotton for extra comfort
  - Finished in pink trim
  - Length: +/- 780 mm
  - Available sizes: S, M, L, XL
- Included: 1 split leather bag



Index no	
Size S	WJL-S-2019
Size M	WJL-M-2019
Size L	WJL-L-2019
Size XL	WJL-XL-2019

PPE II° category  
Certified by EU 425/2016  
EN 11611 A1 Class 2



**SMART:**  
Use the bag provided  
with the jacket to create  
your personalized package.



EUROSPEED LS  
EDITION FEMALE

W000403824-2



# 2 GENERAL ARC WELDING

## WELDING TOOLS AND ACCESSORIES

◆ Cables and connectors .....	60 - 61
◆ Clamps .....	62 - 63
◆ Magnetic ground clamps .....	64 - 65
◆ Hammers / brushes .....	66
◆ Tools .....	67



## 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**

### Reference documents:

- H07RN-F standard for primary cables
- H01N2-E and H01N2-D standards for secondary cables
- Harmonized standard CENELEC EN 50565-2:2014 / EN 50525-2-81:2011

### 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 IEC 60287 recommendation.

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

For secondary cables, the European directive [2014/35/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**



# CABLES AND CONNECTORS



## Primary cables

H07RN-F

	<b>A maxi</b> *	To order Linear meter
3 x 1.5 mm <sup>2</sup>	16 A	W000010098
3 x 2.5 mm <sup>2</sup>	20 A	W000010099
4 x 2.5 mm <sup>2</sup>	20 A	W000010100
4 x 4 mm <sup>2</sup>	30 A	W000010101
4 x 6 mm <sup>2</sup>	37 A	W000010102
4 x 10 mm <sup>2</sup>	52 A	W000010103
4 x 16 mm <sup>2</sup>	69 A	W000010104
4 x 25 mm <sup>2</sup>	92 A	W000010105
4 x 35 mm <sup>2</sup>	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		<b>A maxi</b> *	Plug diameter (mm)	To order
<b>1 - Male</b>	10-25 mm <sup>2</sup>	200 A	9 mm	W000010559
	35-50 mm <sup>2</sup>	400 A	13 mm	W000010560
	70-95 mm <sup>2</sup>	600 A	13 mm	W000010561
<b>2 - Female</b>	10-25 mm <sup>2</sup>	200 A	9 mm	W000010562
	35-50 mm <sup>2</sup>	400 A	13 mm	W000010563
	70-95 mm <sup>2</sup>	600 A	13 mm	W000010564
<b>Male + Female</b>	35-95 mm <sup>2</sup>	600 A	-	W000010641

## Secondary cables

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

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

To order W000010094



- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 25-35 mm<sup>2</sup>

To order W000010095



- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 35-50 mm<sup>2</sup>

To order W000010096



- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 50-70 mm<sup>2</sup>

To order W000010640

- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 70-100 mm<sup>2</sup>

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	300	50
HIPPO 600	400	50
CROCODILE 300	350	38
CROCODILE 600	400	38



## HIPPO 200 / 400 / 600



### 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%	300 at 35%	400 at 35%
Cable Ø (mm <sup>2</sup> )	16-25	50-70	70-95
Weight	208 g	208 g	376 g

## CROCODILE 300 / 600



### 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	350 at 35%	400 at 35%
Cable Ø (mm <sup>2</sup> )	35-50	70-95
Weight	405 g	634 g



## MAGNETIC 500 / 600



### 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 (mm <sup>2</sup> )	70	95
Weight	815 g	1722 g

## Clamp for bulky parts

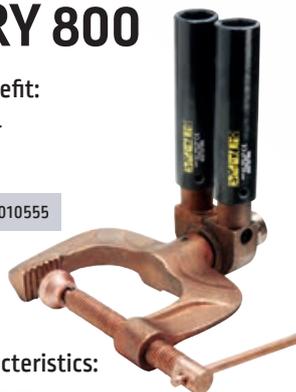
Choice criteria	A maxi	Jaw opening (mm)
MAGNETIC 500	500	N/A
MAGNETIC 600	600	N/A
ROTARY 800	800	82
ECR 1500-1	1500	N/A

## ROTARY 800

### Customer's benefit:

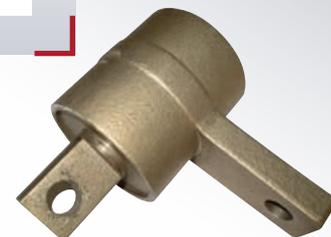
- ◆ Brass clamps.
- ◆ Brass jaws.

**To order** W000010555



### Technical characteristics:

	ROTARY 800
Amperage	800 at 35%
Cable Ø (mm <sup>2</sup> )	2 x 95
Weight	3319 g



## 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 35%
Weight	2614 g

## Clamp for heavy duty use

Choice criteria	A maxi	Jaw opening (mm)
MUSCLOR 300	250	38
MUSCLOR 600	500	38
SERRE-JOINT 500	500	60
SERRE-JOINT 800	800	75
DRAGON 600	600	38

## MUSCLOR 300 / 600



#### MUSCLOR 300

**To order** W000010583

#### MUSCLOR 600

**To order** W000010584

### Customer's benefit:

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

### Technical characteristics:

	MUSCLOR 300	MUSCLOR 600
Amperage	250 at 35%	500 at 35%
Cable Ø (mm <sup>2</sup> )	50	95
Weight	480 g	762 g

## SERRE-JOINT 500 / 800



#### 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 (mm <sup>2</sup> )	95	120
Weight	744 g	1187 g

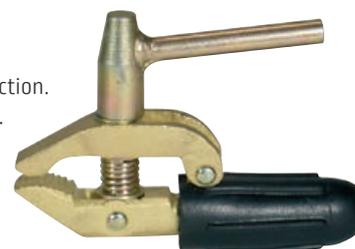
## DRAGON 600

### Customer's benefit:

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

### Technical characteristics:

	DRAGON 600
Amperage	600 at 35%
Cable Ø (mm <sup>2</sup> )	95
Weight	816 g



**To order** W000010582

# MAGNETIC GROUND CLAMPS

# MAGSWITCH

WARRANTY

**1**  
YEAR

## Magnetic ground clamps and positioners

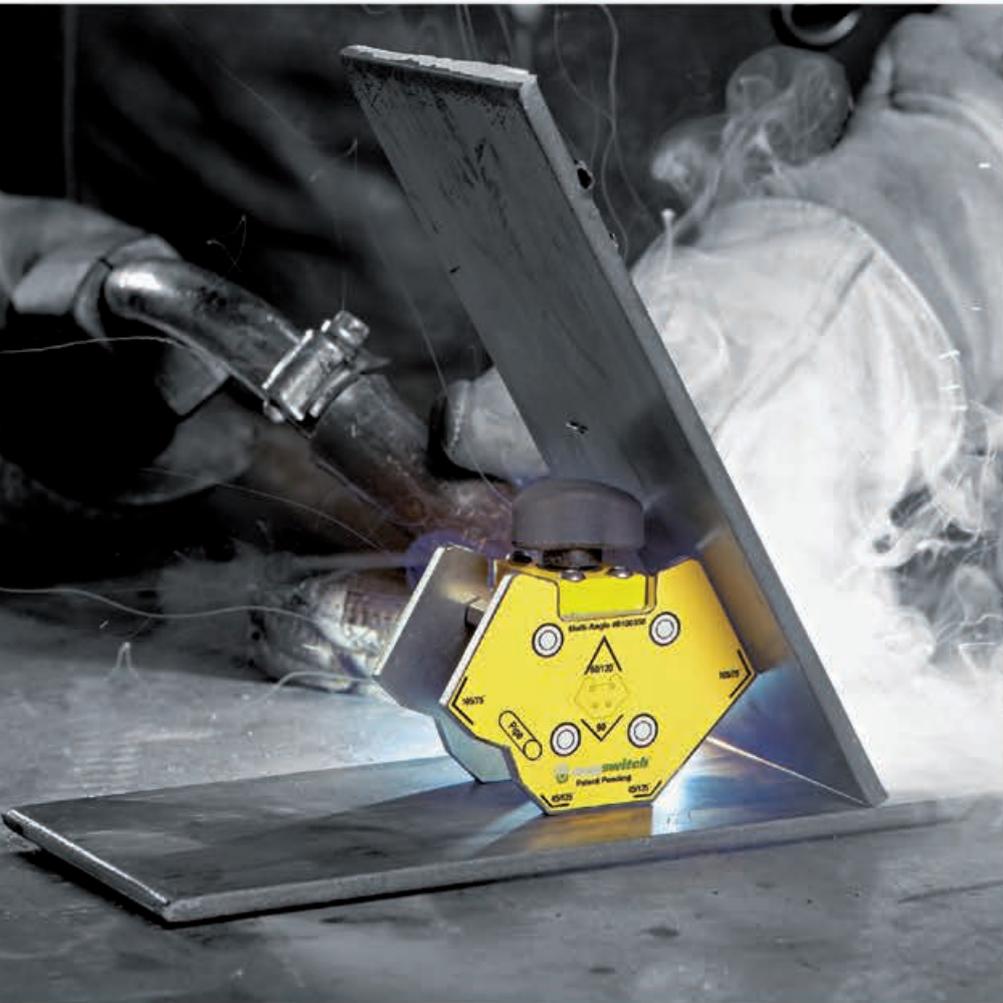
Productivity in time saving with faster set ups, convenience of no hassle use, and safety advantages of using your hands less and less to handle and position steel cannot be ignored.

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

# 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 head, wooden handle**

Weight 660 g  
Lenght 315 mm

**To order** W000010801



**Steel hammer G type, tubular handle**

Weight 410 g  
Lenght 300 mm

**To order** W000010646



**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



# TOOLS

## MAGLITE®

Blister packed



WARRANTY  
**10**  
YEARS

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

To order	AA	2D	3D	4D
MAGLITE®	W000211967	W000211968	W000211969	W000211970

### MAG Charger

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

To order W000211929

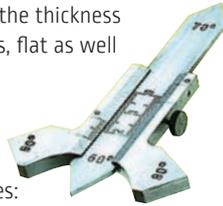


Spare parts for MAGLITE® charger		To order
Designation	Bulbs	W000211654

Spare bulbs	To order	
Designation	2D	W000211973
	3D	W000211974
	4D	W000211975

### Welding gauge

- ◆ Accurate measure 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

### 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, CO<sub>2</sub>, 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







**WELDLINE**<sup>®</sup>  
by Lincoln Electric

# 3 MMA WELDING

MMA WELDING

3

## WELDING TOOLS AND ACCESSORIES

◆ Electrode holders.....	70 - 73
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◆ Gouging torches.....	75
◆ Gouging electrodes.....	76
◆ Ovens / Quivers.....	77 - 80
◆ Welding accessories.....	81

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

### VESTALETTE 250



#### Customer's benefit:

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

#### Technical characteristics:

Amperage	300 at 35%
Cable cross-section (mm <sup>2</sup> )	35 max.
Electrode diameter (mm)	4.0 max.
Weight	280 g

**To order** W000010035

### STUBBY 400



#### 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 cross-section (mm <sup>2</sup> )	50 max.
Electrode diameter (mm)	6.3 max.
Weight	460 g

**To order** W000010036

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

			
		Maximum	Maximum
Screw type straight	VESTALETTE 250	4.0	35
	STUBBY 400	6.3	50
	MASTER 500	8.0	95
	VESTALE 500	6.3	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 cross-section (mm <sup>2</sup> )	95 max.
Electrode diameter (mm)	8.0 max.
Weight	530 g

**To order** W000010037

### VESTALE 500



#### Customer's benefit:

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

#### Technical characteristics:

Amperage	600 at 35%
Cable cross-section (mm <sup>2</sup> )	95 max.
Electrode diameter (mm)	6.3 max.
Weight	485 g

**To order** W000010038

### CURVA 400 / 600



#### Customer's benefit:

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

#### Technical characteristics:

	CURVA 400	CURVA 600
Amperage	400 at 35%	600 at 35%
Cable cross-section (mm <sup>2</sup> )	50 max.	70 max.
Electrode diameter (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



#### 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%	400 at 35%	600 at 35%
Cable cross-section [mm <sup>2</sup> ]	35 max.	50 max.	70 max.
Electrode diameter [mm]	4.0 max.	5.0 max.	6.3 max.
Weight	415 g	570 g	590 g

### COBRA 300

**To order** W000010039 W000010881\*



#### Customer's benefit:

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

#### Technical characteristics:

Amperage	300 at 35%
Cable cross-section [mm <sup>2</sup> ]	35 max.
Electrode diameter [mm]	4.0 max.
Weight	400 g

#### Choice criteria



Maximum



Maximum

SEGURA 300	4.0	35
SEGURA 400	5.0	50
SEGURA 600	6.3	70
COBRA 300	4.0	35
OPTIMUS 300	4.0	35
OPTIMUS 400	5.0	50
OPTIMUS 500	6.3	70

### OPTIMUS 300 / 400 / 500



#### 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%	400 at 35%	500 at 35%
Cable cross-section [mm <sup>2</sup> ]	35 max.	50 max.	70 max.
Electrode diameter [mm]	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



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%	400 at 35%	600 at 35%
Cable cross-section [mm <sup>2</sup> ]	25 max.	50 max.	70 max.
Electrode diameter [mm]	3.2 max.	5.0 max.	6.3 max.
Weight	370 g	425 g	500 g

## Hobby and light duty electrode holders

### HOBBY 200

To order W000268399



#### Customer's benefit:

- ◆ An industrial design for light works.

#### Technical characteristics:

Amperage	200 at 35%
Cable cross-section [mm <sup>2</sup> ]	25 max.
Electrode diameter [mm]	4.0 max.
Weight	135 g

### CAÏMY 200

To order W000010576



#### Customer's benefit:

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

#### Technical characteristics:

Amperage	200 at 35%
Cable cross-section [mm <sup>2</sup> ]	25 max.
Electrode diameter [mm]	3.2 max.
Weight	220 g

#### Choice criteria



Maximum



Maximum

CAÏMAN 200	3.2	25
CAÏMAN 400	5.0	50
CAÏMAN 600	6.3	70

# 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 mm<sup>2</sup> and 25 mm<sup>2</sup>.
- Plugs of 13 mm diameter correspond to a cable cross-section between 35 mm<sup>2</sup> and 50 mm<sup>2</sup> (max 90 mm<sup>2</sup>).

### ◆ Application & intensity

## The range:

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



## 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 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 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 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

## 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

# GOUGING TORCHES

## FLAIR™ 600 & 1600

- ◆ **360° rotating torch** The torch can rotate 360° on the monocable. This results in a comfortable and better freedom of movement.
- ◆ **Smooth finished body for perfect airflow**  
Manufactured with the greatest accuracy. The inner body is perfectly shaped which results in a perfect airflow, thus in a better cooling as well as a longer life time.
- ◆ **Highly conductive extruded body and nozzle (non-casted)** Better conduction and less heat development and consequently a longer product lifetime.
- ◆ **Thicker high heat resistant insulation** Longer product lifetime but also safer, more comfortable and more productive working conditions.
- ◆ **Flexible monocable (2.5 meter)** provides more ergonomical, comfortable working conditions.
- ◆ **The Airflow** can be regulated on the torch.

FLAIR® 600

To order W000010136



FLAIR® 1600

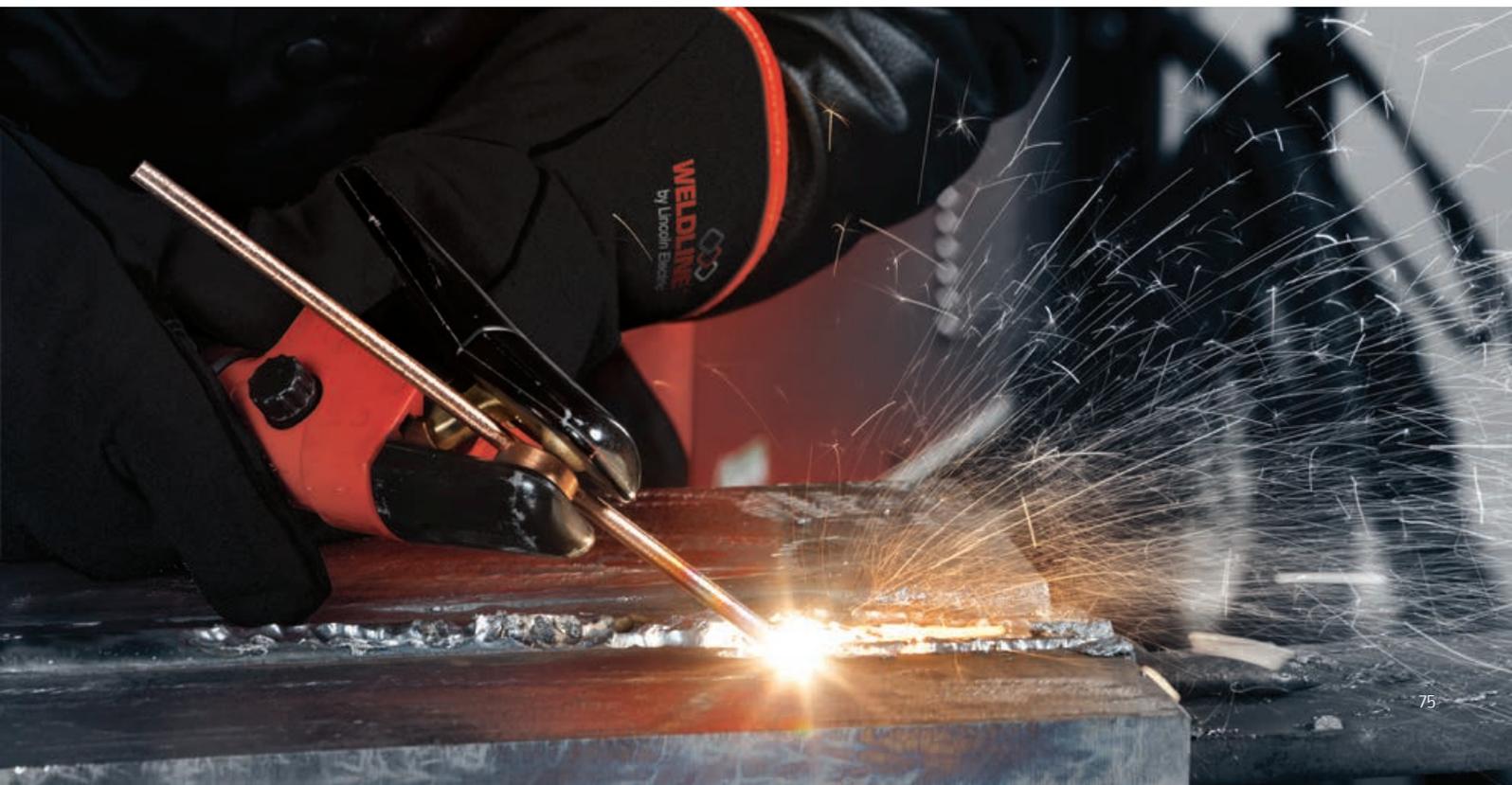
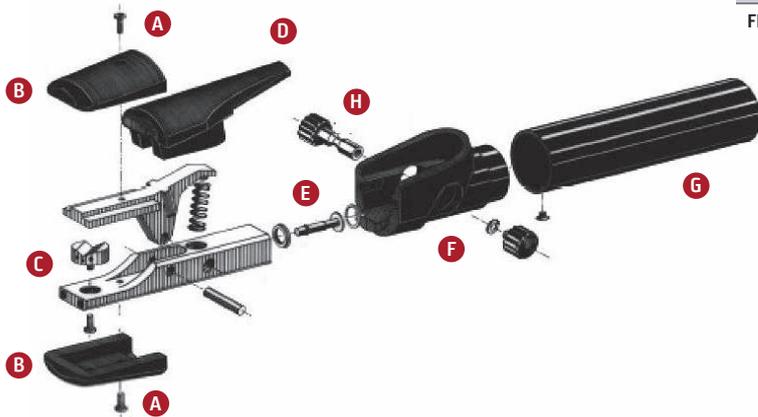
To order W000010118

### Technical characteristics:

Item Number	Output Power	Open arc voltage	Required Voltage	Compressed air	Electrode Diam Max
FLAIR® 600	600A@60%	> 60 VDC	35 - 56 VDC	400 ÷ 900 l/min @ 5 ÷ 7 bar	10mm - 3/8"
FLAIR® 1600	1600A@60%				19mm - 3/4"

### Spare parts

	FLAIR® 600	FLAIR® 1600
<b>A</b> Screw MRX 4 x 10 mm (10 pieces)	W000010124	
<b>B</b> Insulation cap (2 pieces)	W000010125	
<b>C</b> Injection nozzle complete with taptite	W000010127	W000011130
<b>D</b> Lever insulation	W000010128	
<b>E</b> Valve	W000010129	
<b>F</b> Safety ring (10 pieces)	W000010131	
<b>G</b> Handle	W000010132	W000401598
<b>H</b> Push-button and link	W000010133	
Monocable	W000010134	W000011128



# GOUGING ELECTRODES

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



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

## CARBONAIR

### Pointed electrodes

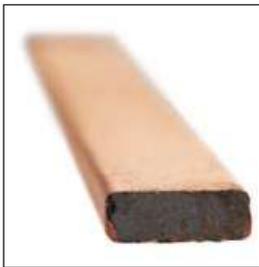
Versatile multi-purpose round gouging electrodes (most popular type)



Diameter x length (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I Max (A)	Air pressure (bars)	Airflow (m³/h)	To order
4 x 305	100	0.7508	150	200	5.0	10	W000010645
5 x 305	100	1.1582	200	300	5.0	10	W000010443
6.4 x 305	50	0.935	300	400	6.0	10,5	W000010444
8 x 305	50	1.4026	450	550	7.0	12	W000010445
10 x 305	50	1.9154	600	700	8.0	13	W000010446
13 x 305	50	3.4112	900	1100	9.0	14	W000010447

### Flat electrodes

Rectangle shape for close tolerance metal removal and/or to create rectangle grooves.



Diameter x length (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I Max (A)	Air pressure (bars)	Airflow (m³/h)	To order
5 x 15 x 305	50	2.0934	500	600	8.0	13	W202010453
5 x 18 x 355	25	1.6945	600	750	8.0	13	W202010454

### Hollow electrodes

Versatile multi-purpose round gouging electrodes



Diameter x length (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I Max (A)	Air pressure (bars)	Airflow (m³/h)	To order
6.5 x 305	50	1.0472	200	300	5.0	10	W202010455
8 x 305	50	1.3394	450	550	7.0	12	W202010456
9.5 x 305	50	2.0554	500	700	7.0	12	W202010457
12.7 x 305	50	3.3476	850	1100	8.0	13	W202010458

## CARBONAIR PLUS

### Jointed electrodes

Round electrodes with male and female ends to eliminate stub loss

**Application:** Cutting Metal medium and heavy duty

This process requires a MMA direct current (DC) power source, a gouging torch and a compressed air source.



Diameter x length (mm)	Quantity per box (thousand)	Gross weight per box (kg)	I mini (A)	I Max (A)	Air pressure (bars)	Airflow (m³/h)	To order
8 x 355	50	1.713	400	500	7.0	12	W000010448
10 x 430	50	3.0726	700	850	8.0	13	W000010449
13 x 430	50	5.0886	1 000	1 200	9.0	14	W000010450
16 x 430	25	3.8728	1 300	1 500	10.0	16	W000010451
19 x 430	25	5.3048	1 500	1 700	10.0	16	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



WELDRY PW8

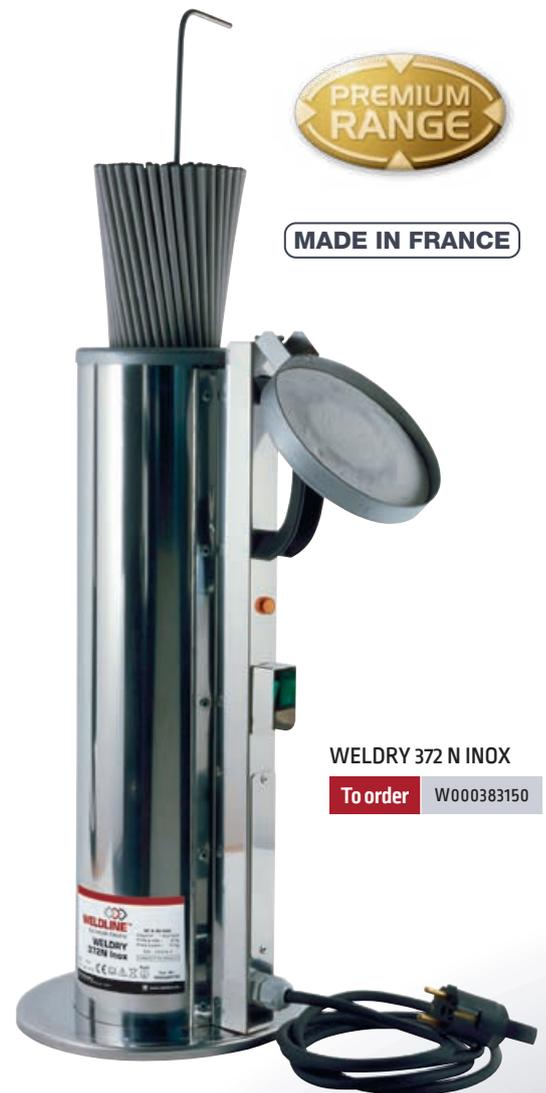
To order W000120427

To order [24 V] W000371464



WELDRY PW15

To order W000120428



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 MW2

To order W000120430



WELDRY MW4

To order W000120431



WELDRY MW6

To order W000120454

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

All WELDRY  
ovens are  
supplied  
with 2 m long  
cable

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 300 °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

# 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



WELDRY CW6

To order W000120467



WELDRY CW9

To order W000120468

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

On request: other models  
*[with fan ventilation system]*

All WELDRY  
ovens are  
supplied  
with 2 m long  
cable

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	4.6 kW	9,1 kW	13.6 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

# 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 FW100

To order W000120469



WELDRY FW200

To order W000120470



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)*

All WELDRY  
ovens are  
supplied  
with 2 m long  
cable

Technical data	WELDRY FW100	WELDRY FW200	WELDRY FW400
Load Capacity	60 kg	160 kg	320 kg
Max. Temperature	Adjustable up to 350 °C - air Adjustable up to 500 °C - heating elements		
Power	4 kW	6.6 kW	7.9 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 (each hopper)
External size (w x d x h)	670 x 710 x 1300 mm	825 x 819 x 1330 mm	1 620 x 850 x 1340 mm
Oven weight	90 kg	116 kg	210 kg
Height of the flap door for flux feeding	<b>a</b> = 500 mm	<b>a</b> = 450 mm	
Packaging dimensions (w x d x h)	690 x 750 x 1320 mm	850 x 860 x 1350 mm	1 640 x 870 x 1360 mm
Weight for transport	100 kg	130 kg	225 kg

# WELDING ACCESSORIES

See more  
page 50

## 4 rows steel wires

To order W000010163



## 4 rows stainless steel wires

To order W000010165



## Steel head, wooden handle

Weight 660 g  
Length 315 mm

To order W000010801







**WELDLINE**<sup>®</sup>  
by Lincoln Electric

# 4 MIG/MAG WELDING

## WELDING TOOLS AND ACCESSORIES

◆ MIG/MAG Torches .....	84 - 89
◆ Zirconium contact tips .....	90
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◆ Other accessories .....	92

# MIG/MAG TORCHES

MIG/MAG TORCHES

## LINGUN<sup>®</sup> PROMIG<sup>™</sup>

Premium MIG welding guns. Doubled warranty. Tested, approved & trusted.

### TOP FEATURES

- Resistant to mechanical damage and high temperatures
- Long-life, proprietary wear parts delivering up to 70% more welding wire per contact tip
- Dedicated high quality liners ensuring smooth wire feeding
- Simplified use and wear parts management to reduce downtime
- Model 230T with a rotatable swan neck
- Screwed nozzle
- Wide range
- Extended warranty, double the industry standard
- Delivered ready to weld: with a long-life contact tip and a liner
- Wear parts common to the previous PROMIG range
- Compliant with EN 60974-7 norm



### Choose your gun

rating calculated using CO<sub>2</sub>

- air cooled
- water cooled

Series	Size	Rate	160A	180A	200A	230A	250A	270A	330A	350A	420A	500A
LG PROMIG	270	60%	[Red bar]									
	300		[Red bar]									
	400		[Red bar]									
	330W	100%	[Blue bar]									
	400W		[Blue bar]									
	500W		[Blue bar]									

# MIG/MAG TORCHES



**AIR-COOLED MODELS**



		LG PROMIG 230T	LG PROMIG 270	LG PROMIG 300	LG PROMIG 400
Duty cycle	CO <sub>2</sub>	230 A @ 60%	270 A @ 60%	300 A @ 60%	400 A @ 60%
	M21	200 A @ 60%	240 A @ 60%	270 A @ 60%	370 A @ 60%
Wire diameter options		0.8-1.0 mm	0.8-1.0 mm	1.0-1.2 mm	1.0-1.6 mm
Original equipment	Contact tip	0.8 mm steel	1.0 mm steel	1.2 mm steel	1.2 mm steel
	Nozzle	Ø 12 mm	Ø 14 mm	Ø 16 mm	Ø 16 mm
Handle size, other feature		Small, <b>rotatable swan neck for comfortable welding in hard-to-reach places</b>	Small	Large	Large
Typical application		Thin plates, automotive industry, out of position welding	Thin plates, light fabrication, locksmithing	Vessel, manufacture, steel structures, boiler making, structural steelwork	Thick plates, heavy duty welding when water cooling is not possible
<b>Reference</b>					
	3 m	W000275408-2	W000345060-2	W000345066-2	W000345072-2
	4 m	W000275419-2	W000345061-2	W000345067-2	W000345073-2
	5 m	W000275420-2	W000345062-2	W000345068-2	W000345074-2



**WATER-COOLED MODELS**



		LG PROMIG 330W	LG PROMIG 400W	LG PROMIG 500W
Duty cycle	CO <sub>2</sub>	330 A @ 100%	400 A @ 100%	500 A @ 100%
	M21	300 A @ 100%	370 A @ 100%	450 A @ 100%
Wire diameter options		0.8-1.0 mm	1.0-1.2 mm	1.0-1.6 mm
Original equipment	Contact tip	1.0 mm steel	1.2 mm steel	1.2 mm steel
	Nozzle	Ø 14 mm	Ø 16 mm	Ø 16 mm
Handle size		Small	Small	Large
Typical application		Precision and high-intensity applications	Intensive applications such as boiler making, structural steelwork, mechanical welding	Thick plates, heavy duty welding
<b>Reference</b>				
	3 m	W000345063-2	W000345069-2	W000345075-2
	4 m	W000345064-2	W000345070-2	W000345076-2
	5 m	W000345065-2	W000345071-2	W000345077-2

## LINGUN® PROMIG™ 230T

Nozzle	
D12	W000345408
D14	W000345409

Steel	Ø mm	Contact tip	M 6 x 32		
				0,8	W000345574
				1,0	W000345575
				1,2	W000345577

Diffuser  
W000345335

LGP 230T	Steel (Steel liner)	Ø mm	Internal liner		
			3 m	4 m	5 m
		0,8	W100000273 (blue)	W100000274 (blue)	W100000275 (blue)
		1,0	W100000276 (red)	W100000277 (red)	W100000278 (red)
1,2					

## LINGUN® PROMIG™ 270 / 330W

Nozzle*	
D12	W000345410
D14	W000345411

Steel	Ø mm	Contact tip	M 6 x 32			
				0,8	W000345574	
				1,0	W000345575	
				1,2	W000345577	
				Aluminium	1,0	W000345576
				Aluminium	1,2	W000345578

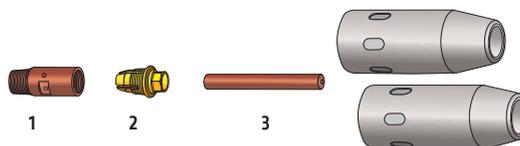
Diffuser  
W000345335

LGP 270 / 330W	Aluminium (PTFE liner)	Ø mm	Steel or PTFE liner		
			3 m	4 m	5 m
		0,8	W100000273 (blue)	W100000274 (blue)	W100000275 (blue)
		1,0	W100000276 (red)	W100000277 (red)	W100000278 (red)
		1,0	W100000279 (black)	W100000280 (black)	W100000281 (black)
		1,2			

\* Bottleneck nozzles W000345408 (D12) and W000345409 (D14) also can be used.

### Options: Adjustable Long Tip

1	Special Contact Tip Holder	W000345334	CT HOLDER D4.8
2	Collet	W000345329	COLLET CT D4.8
3	Special Contact Tip	W000345555	C TIP D4.8X50 0,8ST CUAG
		W000345556	C TIP D4.8X50 1,0ST CUAG
4	Nozzles	Please use standard nozzles for LGP 270 and 330W	



Red-colored wear parts assembled and delivered with the gun

# MIG/MAG TORCHES

## LINGUN® PROMIG™ 300 / 400W

Nozzle	
D12*	W000345420
D14	W000345421
D16	W000345422

Material	Ø mm	Contact tip
Steel	1,0	W000345580
	1,2	W000345582
	1,4	W000345584
	1,6	W000345585
Aluminium	1,0	W000345581
	1,2	W000345583

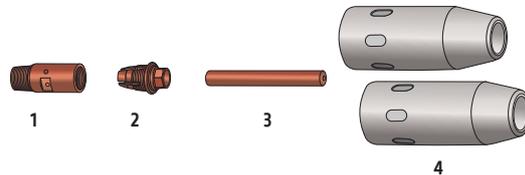
M 8 x 32

**Diffuser**  
W000345341

Liner	Ø mm	Steel or PTFE liner		
		3 m	4 m	5 m
Steel (steel liner)	1,0	W100000282 (red)	W100000283 (red)	W100000284 (red)
	1,2			
	1,4	W100000285 (yellow)	W100000286 (yellow)	W100000287 (yellow)
	1,6			
Aluminium (PTFE liner)	1,0	W100000288 (black)	W100000289 (black)	W100000290 (black)
	1,2			

### Options: Adjustable Long Tip

1	<b>Special Contact Tip Holder</b>	W000345340	CT HOLDER D6.3
2	<b>Collet</b>	W000345331	COLLET CT D6.3 CU
3	<b>Special Contact Tip</b>	W000345561	C TIP D6.3X55 1,0ST CUCRZR
		W000345563	C TIP D6.3X55 1,2ST CUCRZR
		W000345566	C TIP D6.3X55 1,6ST CUCRZR
		W000345564	C TIP D6.3X55 1,2AL CU
4	<b>Nozzles</b>	Please use standard nozzles for LGP 300 and 400W	



\* Narrow nozzle W000345420 (D12) can be used only with a special contact tip holder: W000345342

## LINGUN® PROMIG™ 400 / 500W

Nozzle	
D16	W000345427
D19	W000345428

Material	Ø mm	Contact tip
Steel	0,8	W000345586
	1,0	W000345587
	1,2	W000345589
	1,4	W000345591
Aluminium	1,6	W000345592
	1,0	W000345588
	1,2	W000345590
	1,6	W000345593

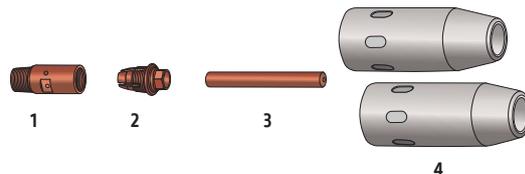
M 8 x 43,5

**Diffuser**  
W000345347

Liner	Ø mm	Steel or PTFE liner		
		3 m	4 m	5 m
Steel (steel liner)	1,0	W100000282 (red)	W100000283 (red)	W100000284 (red)
	1,2			
	1,4	W100000285 (yellow)	W100000286 (yellow)	W100000287 (yellow)
	1,6			
Aluminium (PTFE liner)	1,0	W100000288 (black)	W100000289 (black)	W100000290 (black)
	1,2			
Aluminium (PTFE liner)	1,6	W100000291 (black)	W100000292 (black)	W100000293 (black)
	1,6			

### Options: Adjustable Long Tip

1	<b>Special Contact Tip Holder</b>	W000345346	CT HOLDER D6.3
2	<b>Collet</b>	W000345331	COLLET CT D6.3 CU
3	<b>Special Contact Tip</b>	W000345561	C TIP D6.3X55 1,0ST CUCRZR
		W000345563	C TIP D6.3X55 1,2ST CUCRZR
		W000345566	C TIP D6.3X55 1,6ST CUCRZR
		W000345564	C TIP D6.3X55 1,2AL CU
4	<b>Nozzles</b>	Please use standard nozzles for LGP 400 and 500W	



Red-colored wear parts assembled and delivered with the gun

PERFORMANCE  
DEFINED

TESTED  
APPROVED  
& TRUSTED

★★★★★



DOUBLED  
WARRANTY

# LINGGUN<sup>®</sup> PROMIG<sup>™</sup>

## NEW PREMIUM MIG GUN LINE

- Reliable and robust guns ensuring perfect welding
- **Highly resistant to mechanical damage and high temperatures**
- Smooth wire feeding
- Perfect match with Lincoln Electric welding equipment
- Significant savings through long life wear parts



Mechanical  
Resistance



Resistance  
to overheating



Reduced  
downtime



Unfailing  
Power Cables

[www.lincolnelectric.eu](http://www.lincolnelectric.eu)

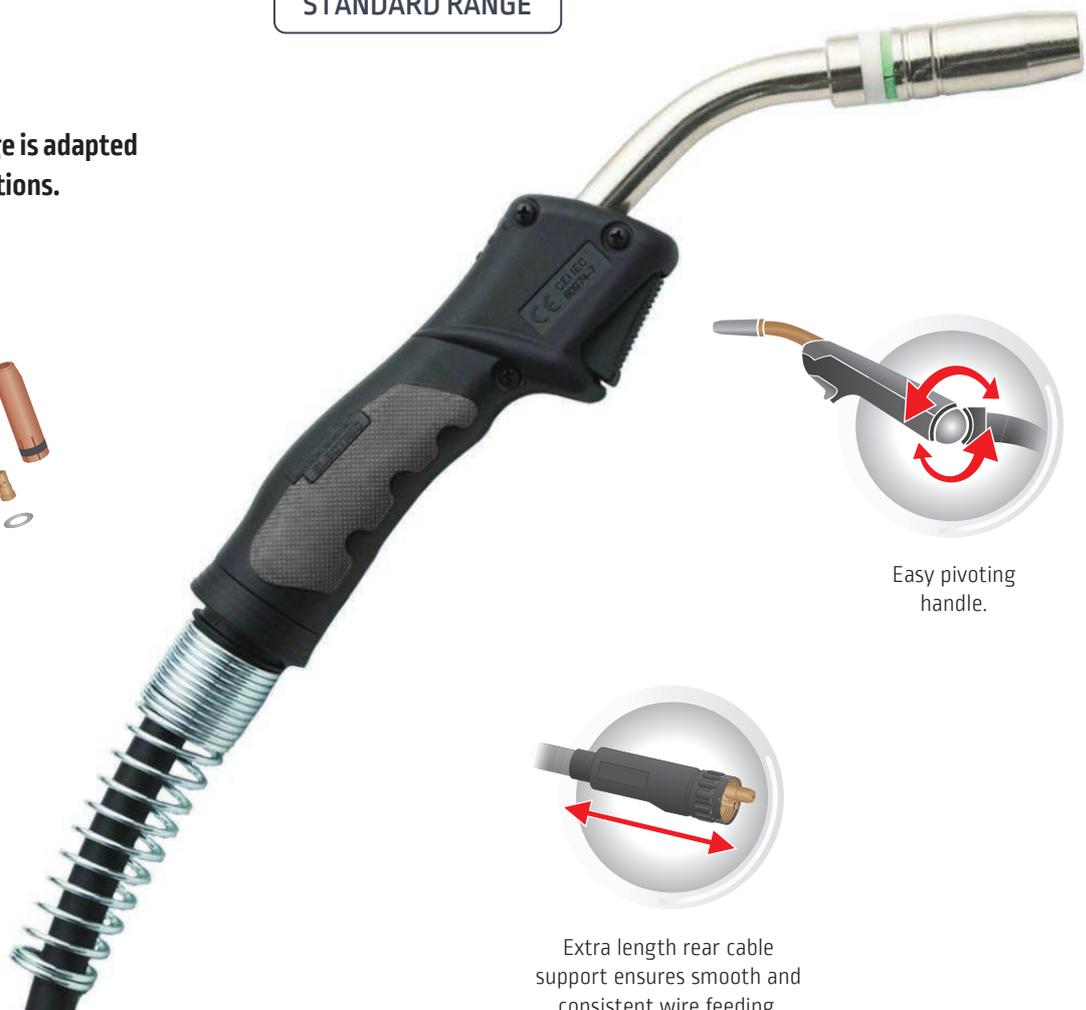
**LINCOLN<sup>®</sup>**  
**ELECTRIC**

# MIG/MAG TORCHES

## LGS2

STANDARD RANGE

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



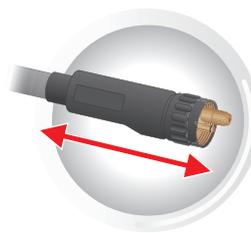
Wear parts compatible with the most common standard in Europe.



Easy pivoting handle.



Extra-flexible cable.



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

MODEL	AIR COOLING				WATER COOLING
	LGS2-150G	LGS2-250G	LGS2-240G	LGS2-360G	LGS2-505W
Duty cycle [CO <sub>2</sub> shielding gas]	180 A @ 60%	230 A @ 60%	250 A @ 60%	330 A @ 60%	500 A @ 100%
Applications	Thin plates, automotive industry	Thin plates, light fabrication	Thin plates, light fabrication	Vessel manufacture, steel structures	Heavy duty, high production
Wire diameter	Up to 1.0 mm	Up to 1.2 mm	Up to 1.2 mm	Up to 1.6 mm	Up to 2.4 mm
Original equipment	Contact tip	0.8 mm	1.0 mm	1.0 mm	1.2 mm
	Conical nozzle	12 mm	15 mm	12.5 mm	16 mm
<b>To order</b>					
3 m	W10429-15-3M	W10429-25-3M	W10429-24-3M	W10429-36-3M	W10429-505-3M
4 m	W10429-15-4M	W10429-25-4M	W10429-24-4M	W10429-36-4M	W10429-505-4M
5 m	W10429-15-5M	W10429-25-5M	W10429-24-5M	W10429-36-5M	W10429-505-5M

### Choose your gun

rating calculated using CO<sub>2</sub>

- air cooled
- water cooled

Series	Size	Rate	160A	180A	200A	230A	250A	270A	330A	350A	420A	500A	
LGS2	150G	60%	■										
	250G		■										
	240G		■										
	360G		■										
	505W	100%	■										

# MIG/MAG TORCHES

## Wear parts for LGS2 torches

LGS2 150G



LGS2 250G



LGS2 240G



LGS2 360G



LGS2 505W



	Ø mm	1 Contact tip	2 Contact tip holder	3 Nozzle	Nozzle spring	Steel or PTFE liner			Aluminium kit (PTFE/bronze) liner			4 - Insulating diffuser			
						3 m	4 m	5 m	3 m	4 m	5 m	Standard	High temperature	Ceramic	
LGS2 150G	M 6 x 25	W000010820 W000010823* W000010821 W000010824* WP10440-09 W000010822 W000010825*	W000277903	W000010787 (Con. D10) W000010786 (Con. D12.5) W000010788 (Cyl. D16) WP10468 (Innershield)	W000277448	W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	-	-	-
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
						WP10422-3M (blue)	WP10422-4M (blue)	WP10422-5M (blue)	-	-	-	-	-	-	
						W000010736 (red)	W000010737 (red)	W000010738 (red)	WP10419-3M (red)	WP10419-4M (red)	WP10419-5M (red)	-	-	-	
						W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	-	-	
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
LGS2 250G	M 6 x 25	W000010826 W000010830* WP10441-09 W000010827 W000010831* W000010828 W000010832* WP10441-08A W000010850 W000010851	W000010720	W000010791 (Con. D11) W000010790 (Con. D15) W000010792 (Cyl. D20)	W000277477	W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	-	-	-
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
						WP10422-3M (blue)	WP10422-4M (blue)	WP10422-5M (blue)	-	-	-	-	-	-	
						W000010736 (red)	W000010737 (red)	W000010738 (red)	WP10419-3M (red)	WP10419-4M (red)	WP10419-5M (red)	-	-	-	
						W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	-	-	
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
LGS2 240G	M 6 x 25	W000010820 W000010823* W000010821 W000010824* WP10440-09 W000010822 W000010825* WP10440-12 WP10440-12C* WP10440-08A WP10440-10A WP10440-12A	WP10455-1	WP10461-9 (Con. D10) WP10461-4 (Con. D12.5)	-	W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	WP10404-STD	WP10404-HT	WP10404-CR
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
						WP10422-3M (blue)	WP10422-4M (blue)	WP10422-5M (blue)	-	-	-	-	-	-	
						W000010736 (red)	W000010737 (red)	W000010738 (red)	WP10419-3M (red)	WP10419-4M (red)	WP10419-5M (red)	-	-	-	
						W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	-	-	
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
LGS2 360G	M 8 x 30	W000010834 W000010840* W000010835 W000010841* W000010836 W000010842* WP10445-132C* W000262703 W000010837 W000010843* WP10445-08A W000010853 W000010854 W000010855	W000010722	W000010795 (Con. D12) W000010794 (Con. D16) W000010796 (Cyl. D20)	-	W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	W000010780	W000010781	W000010782
						W000010733 (red)	W000010734 (red)	W000010735 (red)	-	-	-	-	-	-	
						W000010867 (yellow)	W000010868 (yellow)	W000010869 (yellow)	-	-	-	-	-	-	
						WP10422-3M (blue)	WP10422-4M (blue)	WP10422-5M (blue)	-	-	-	-	-	-	
						W000010736 (red)	W000010737 (red)	W000010738 (red)	WP10419-3M (red)	WP10419-4M (red)	WP10419-5M (red)	-	-	-	
						W000010745 (yellow)	W000010746 (yellow)	W000010747 (yellow)	-	-	-	-	-	-	
	M 8 x 30	W000010834 W000010840* W000010835 W000010841* W000010836 W000010842* WP10445-132C* W000262703 W000010837 W000010843* WP10445-08A W000010853 W000010854 W000010855	W000010724 WP10456-6 (Heavy duty)	W000010798 (Con. D14) W000010797 (Con. D16) W000010799 (Cyl. D20)	-	W000010730 (blue)	W000010731 (blue)	W000010732 (blue)	-	-	-	-	W000010783	W000010784	W000010785
						WP10410-3M (uncoated)	WP10410-4M (uncoated)	WP10410-5M (uncoated)	-	-	-	-	-	-	
						WP10411-3M (uncoated)	W000010740 (uncoated)	W000010741 (uncoated)	-	-	-	-	-	-	
						WP10422-3M (blue)	WP10422-4M (blue)	WP10422-5M (blue)	-	-	-	-	-	-	
						W000010736 (red)	W000010737 (red)	W000010738 (red)	WP10419-3M (red)	WP10419-4M (red)	WP10419-5M (red)	-	-	-	
						W000010745 (yellow)	W000010746 (yellow)	W000010747 (yellow)	-	-	-	-	-	-	

Original equipment parts

\* CuCrZr contact tips

5 Isolating washer

To order

WP10450-L77

# ZIRCONIUM CONTACT TIP

CuCrZr contact tips bring excellent performances compared to standard copper contact tips (Cu).

## The wear:

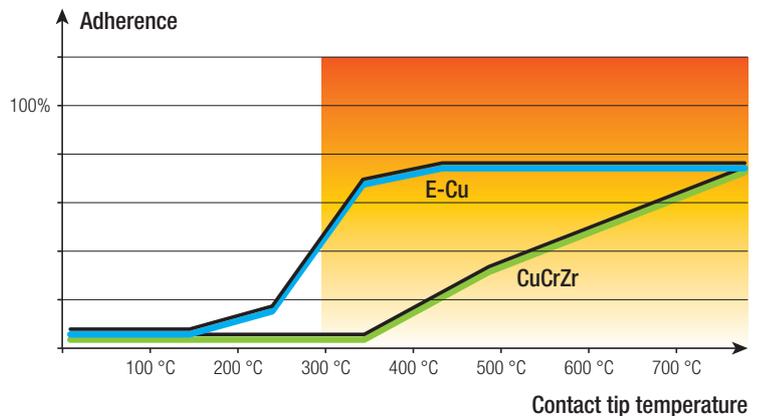
The electrical conductivity being superior in a CuCrZr alloy, the arc transfer will meet less resistance and the contact tip will wear out less rapidly.

## 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.

Zirconium contact tips are standard on the LG PROMIG guns, but are also available in addition to the LGS2 line.



# CERAMIC BACKINGS

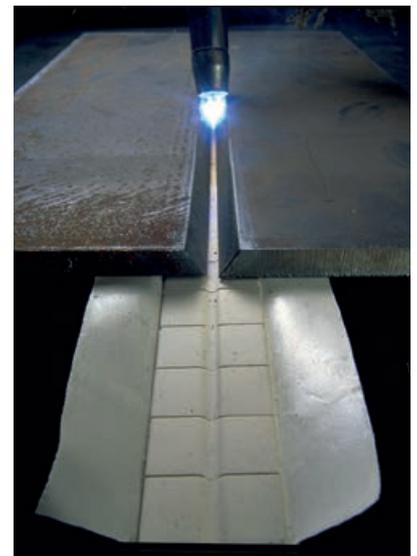
## Features

Our new range of ceramic backings enables you to build a much more efficient weld root:

- without gouging,
- without grinding,
- without re-welding,
- without rework,
- with a wide root gap,
- with a bigger root thickness permits higher welding current for the hotpass.

The use of the ceramic backings enables welding with higher intensity. The quality of the weld bead will be improved:

- higher penetration,
- minimum risk of lack of fusion,
- Smooth profile of the root pass.



## Choice of KERALINE slat type depending on the welding process

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

## 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)

# CERAMIC BACKINGS

## 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				
KERALINE TF3 - 13 mm	W000010396				
KERALINE TR1 - 6 mm	W000010397				600 mm / piece 50 pieces per bag (30 meters) 5 bags/carton (150 meters)
KERALINE TR2 - 7 mm	W000010398				
KERALINE TR3 - 8 mm	W000010399				600 mm / piece 20 pieces per bag (12 meters) 8 bags/carton (96 meters)
KERALINE TR4 - 9 mm	W000010400				600 mm / piece 20 pieces per bag (12 meters) 7 bags/carton (84 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)
KERALINE TJ10 T FULL PENETRATION	W000262368				600 mm / piece 10 pieces per bag (6 meters) 6 bags/carton (36 meters)
SET OF CERAMIC BACKING RAD 150	W000275493				16 pieces/Circle 18 Circles/carton (18 meters)
SET OF CERAMIC BACKING RAD 200	W000275532				4pcs/Segment 20 Segments / SET 12 Sets/carton (12 meters)
SET OF CERAMIC BACKING RAD 100	W000404095				12 pieces/Circle 22 Circles/carton (22 meters)

# CERAMIC BACKINGS

## BENEFITS

### For a well-made welding bead:

Without copper contamination

- Without risk of burn through in the first pass position (used as a support)
- Without re-welding
- Without risk of lack of fusion
- Without weld reversals
- Bigger root thickness permits higher welding current for the hot pass
- An increase in first pass deposit rate
- Wide root gap
- Total penetration without turning the parts to be welded
- Total penetration of joints difficult to access in reverse position
- Smooth profile of the root pass

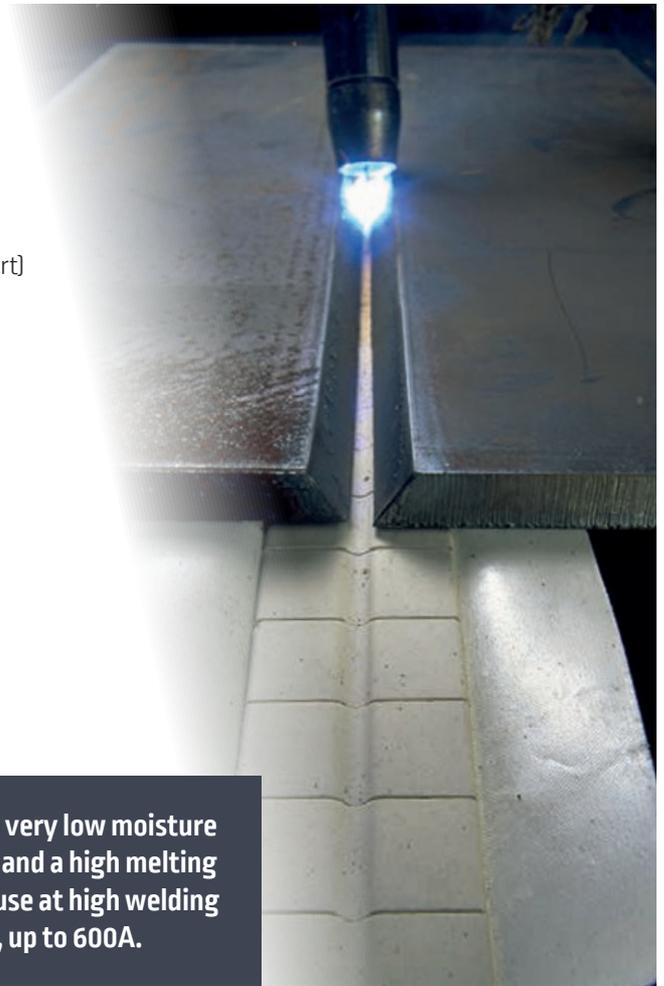
### For a well-made before welding:

- Ideal to compensate for variations in preparation of sheet edge backlashes
- Easy to use (adhesive/metallic support)
- Simplify chamfering preparations

### For higher productivity:

- Without gouging operation
- Without grinding operation
- Provides time saving and high quality
- Easy-to-use slats technique

**KERALINE has a very low moisture absorption rate and a high melting point, allowing use at high welding intensity, up to 600A.**



# OTHER ACCESSORIES

## SPRAYMIG H<sub>2</sub>O / CERASKIN

See page 115



## FLUXO S190 / P125 / R175

See page 117



## GALVASPRAY

See page 116



## MIG pliers

See page 67



## MIG IRON PROTECT +

See page 53



## EUROSPEED LS

See page 13



## FLOWELD

See page 67



## MIG torch stand

See page 67





**WELDLINE**<sup>®</sup>  
by Lincoln Electric

# 5 TIG WELDING

TIG WELDING

4

## WELDING TOOLS AND ACCESSORIES

◆ TIG torches .....	94 - 99
◆ Tungsten electrodes .....	100
◆ Other accessories .....	101 - 102

# TIG TORCHES

## PROTIG NG S & III S

Premium TIG torches for maintenance, light and heavy fabrication, construction, automotive industries.

All torches are supplied ready to use, the standard fitting table gives more information.

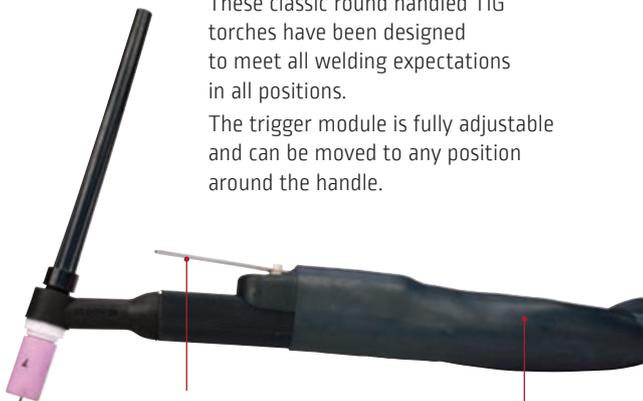
### Advantages:

- ◆ Two handle styles: EB and RL
- ◆ High resistant proprietary wear parts
- ◆ Improved robustness.
- ◆ Highly flexible cable, user-friendly and robust against spatter burn-in
- ◆ Two cable lengths: 5 and 8 m
- ◆ The blade trigger may be oriented around the handle *(only for PROTIG III S)*.
- ◆ Robust metal trigger *(only for PROTIG III S)*.
- ◆ Neoprene sleeve with good maneuverability.
- ◆ 1 reference: the C5B connection of the torch fitted as standard, a banana plug included also.

### PROTIG III S

The round handle with a blade trigger (RL).

These classic round handled TIG torches have been designed to meet all welding expectations in all positions. The trigger module is fully adjustable and can be moved to any position around the handle.



New design of the trigger module with metal blade.

The woven sheath and the handle sleeve ensure full flexibility of the harness.

### PROTIG NG S

The ergonomic handle with button (EB).

The best WELDLINE torches with an advanced ergo-design, using a colored soft grip for a maximum welder comfort.

These torches will give you an optimum welding quality, and increase the communication between the welder and the machine.



The modular system brings increased control over the power source. All torches are delivered with a single button module.

The ball joint gives excellent flexibility, and the first 1 m of the harness is leather which increases the service life of the welding hose.



# TIG TORCHES



## Air cooled

MODEL			PROTIG 10		PROTIG 20		PROTIG 30		PROTIG 40	
Duty cycle 35%			125 A		150 A		200 A		250 A	
Duty cycle 60%			80 A		100 A		130 A		200 A	
Fitted as standard	back cap		Long							
	nozzle		Ø 10 mm				Ø 12 mm			
	electrode		Ø 1.6 mm		Ø 2.0 mm		Ø 2.4 mm			
Length			5 m	8 m	5 m	8 m	5 m	8 m	5 m	8 m
PROTIG III S	Connection	C5B/S	W000382715-2	W000382716-2	W000382717-2	W000382718-2	W000382719-2	W000382720-2	W000382721-2	W000382722-2
PROTIG NG S			W000278394-2	W000278395-2	W000278396-2	W000278397-2	W000278398-2	W000278399-2	W000278400-2	W000278401-2

## Water cooled

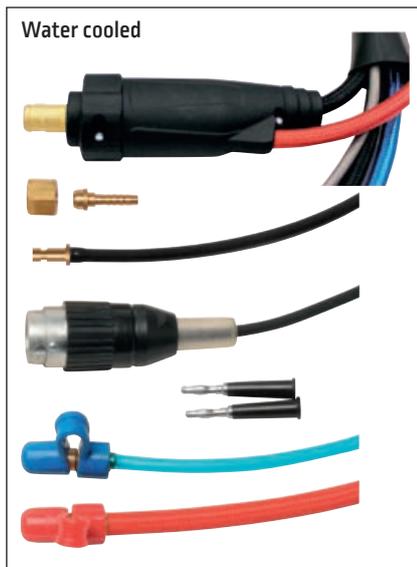
MODEL			PROTIG 10W		PROTIG 35W		PROTIG 40W	
Duty cycle 100%			220 A		350 A		450 A	
Fitted as standard	back cap		long					
	nozzle		Ø 12.8 mm		Ø 15 mm		Ø 14 mm	
	electrode		Ø 2.4 mm		Ø 3.2 mm		Ø 3.2 mm	
Length			5 m	8 m	5 m	8 m	5 m	8 m
PROTIG III S	Connection	C5B/S	W000382723-2	W000382724-2	W000382725-2	W000382726-2	W000382727-2	-
PROTIG NG S			W000278402-2	W000278403-2	W000278404-2	W000278405-2	W000278406-2	W000278407-2

⚠ Some machines require the use of the plug module p/n WP10529-5, see the section "Plug kits and button modules" at page 75.

## Connectors, adapters

### Connectors

The connectors to the machine are a new design, compact and fully protected delivering both strength and quality. All hoses are rubber with a woven sheath for heavy duty work.



### Extension cables

Extenders have a length of 15 m. They are equipped with power connectors, C5B plug (5 pins) and « banana » plugs. The connection is protected by a leather envelope with Velcro® fastener.

	To order
EXTENSION AIR 15 M	W000306135
EXTENSION WATER 15 M	W000306136



### Adapters

For old torches with central gas to be connected to power sources with separate gas, use W000306140.



For torches with separate gas to be connected to power sources with central gas, use W000306141.



Dinse 9 to 13 mm  
W000306139



Dinse 13 to 9 mm  
038055011



# TIG TORCHES

## PROTIG NG S & III S

### Wear parts

WELDLINE sets the standard for wear parts, ensuring maximum quality for both welding and gas protection.

**Gas lens, for welding where access is difficult**

The gas lens collet body **8** is supplied with a filter **9** and a sealing ring **7**.  
The ring **7** or the filter **9** are supplied on their own.

**PROTIG 40 W**

**Nozzles **6** **10** : choice of diameter**

Welding current (A)	70	90	120	200	350
Diameter (mm)	6	8	10	12	15

A - insulating nut  
B - nozzle seals  
C - water distributor

W000306452  
W000167673  
W000306454

### Wear parts box

A complete kit for all applications. The kit includes electrode collets, nozzles, back caps and collet body.

PROTIG 10 / 10W	W000306441
PROTIG 20	W000306442
PROTIG 30	W000306443
PROTIG 40 / 35W	W000306444
PROTIG 40W	W000306445

### Modular system:

Standard delivery for EB all torches is a single button module. Other control module formats are available to order.



### Other buttons

- 1** Horizontal potentiometer | W000279370 [4.7 Kohm] | WP10529-3 [10 Kohm]
- 2** Vertical potentiometer | W000279246 [4.7 Kohm] | WP10529-4 [10 Kohm]
- 3** 3 buttons module | WP10529-2
- 4** Blade | W000279245



### Adjustable heads

As an option, adjustable torch bodies are available, designed to make welding in limited access locations easier with a choice of 2 heads, small and large which are mounted on air cooled or water cooled bodies.



Choose one body and one head to get a complete torch.

· Air cooled body (10/20)	W000279381
· Water cooled body (10W)	W000279382
· Head PROTIG NG 10/10W	W000279383
· Head PROTIG NG 20	W000279384

⚠ Refer to the instruction manual to see the different connections for the modules. For potentiometer adapt the wiring to the welding machine.

# TIG TORCHES

Wear parts are common for both RL or EB handles.

		PROTIG 10 / 10W	PROTIG 20	PROTIG 30	PROTIG 35W / 40	PROTIG 40W
1 - Back cap	short	W000306220	W000306223	W000306223	W000306225	W000306227
	medium	W000306221	-	-	-	-
	long	W000306222	W000306224	W000306224	W000306226	W000306228
2 - Back cap o-ring		W000306229	W000306230	W000306230	W000306231	W000306232
3 - Sealing ring		W000306210	W000306211	W000306211	W000306212	-
4 - Electrode collet	Ø 1.0	W000306236	W000306241	W000306246	W000306252	-
	Ø 1.6	W000306237	W000306242	W000306247	W000306253	-
	Ø 2.0	W000306238	W000306243	W000306248	W000306254	-
	Ø 2.4	W000306239	W000306244	W000306249	W000306255	W000306262
	Ø 2.5	W000306259	W000306260	W000306261	-	-
	Ø 3.2	W000306240	W000306245	W000306250	W000306256	W000306263
	Ø 4.0	-	-	W000306251	W000306257	W000306264
5 - Collet body all diameters		W000306205	W000306206	W000306207	W000306208	W000306200
5* - Collet body heavy duty		-	-	-	* W000306201	-
6 - Nozzle	Ø 6.4	W000306269	W000306273	W000306277	W000306277	-
	Ø 8	W000306270	W000306274	W000306278	W000306278	-
	Ø 9.6	W000306271	W000306275	W000306279	W000306279	-
	Ø 11	-	-	-	-	W000306282
	Ø 12.8	W000306272	W000306276	W000306280	W000306280	-
	Ø 14	-	-	-	-	W000306283
6L - Long nozzle	Ø 4.8	W000306456	-	-	-	-
	Ø 6.4	W000306457	-	W000306462	W000306462	-
	Ø 8	W000306458	-	W000306463	W000306463	-
	Ø 9.6	W000306459	-	W000306464	W000306464	-
	Ø 11.2	-	-	W000306465	W000306465	-
	Ø 12.8	-	-	-	-	-
	Ø 14	-	-	-	-	-
7 - Gas lens sealing ring		W000306210	W000306216	W000306216	W000306217	-
8 - Gas lens collet body		W000306213	W000306214	W000306214	W000306215	-
9 - Gas lens filter		W000306218	W000306219	W000306219	W000306219	-
10 - Gas lens nozzle	Ø 8	W000306284	W000306287-2	W000306287-2	W000306287-2	-
	Ø 9.6	W000306285	W000306288-2	W000306288-2	W000306288-2	-
	Ø 11.2	W000306286	-	-	-	-
	Ø 12.8	-	W000306289-2	W000306289-2	W000306289-2	-
	Ø 15.7	-	W000306290-2	W000306290-2	W000306290-2	-
10L - Long gas lens nozzle	Ø 8	-	W000306467	W000306467	W000306467	-
	Ø 9.6	-	W000306468	W000306468	W000306468	-
	Ø 11.2	-	W000306469	W000306469	W000306469	-
	Ø 12.8	-	W000306470	W000306470	W000306470	-

\* For the collet body « heavy duty », use the gas lens nozzles

## Choose your module & your plug kit for Protig NG S

Button modules		 or 	 or 		
Reference	WP10529-2	W000279246 (4.7 Kohm)	W000279370 (4.7 Kohm)	WP10529-4 (10 Kohm)	WP10529-3 (10 Kohm)
Plug kit	<ul style="list-style-type: none"> <li>No plug kit needed</li> <li>Torch is connected to the machine through the C5B plug (5 pins)</li> </ul>	 WP10529-6	 WP10529-7	 WP10529-8	 WP10529-9
Work with	<ul style="list-style-type: none"> <li>Invertec 220/300/400 TPX</li> <li>Aspect 200</li> <li>Prestotig 200 AC/DC</li> <li>Prestotig 315/415 DC</li> <li>Citotig 200 AC/DC</li> <li>Citotig 315/415 DC</li> </ul>	<ul style="list-style-type: none"> <li>Prestotig 210 DC</li> <li>Prestotig 310 DC</li> <li>Prestotig 410 DC</li> <li>Prestotig 240 AC/DC</li> <li>Prestotig 310 AC/DC</li> </ul>	<ul style="list-style-type: none"> <li>Prestotig 210 AC/DC</li> <li>Prestotig 250 AC/DC</li> <li>Prestotig 350 AC/DC</li> </ul>	<ul style="list-style-type: none"> <li>Saxotech 170/220</li> <li>Saxotig 160 AC/DC</li> <li>Prestotig 180/220 Pro</li> <li>Prestotig 180/220 Force</li> <li>Citotig 1800/2200 Force</li> </ul>	<ul style="list-style-type: none"> <li>All Lincoln machines with pedal control</li> <li>Prestotig 315/415 DC</li> <li>Prestotig 315 AC/DC</li> <li>Citotig 315/415 DC</li> <li>Citotig 315 AC/DC</li> </ul>

The above modules work only with the PROTIG NG S torches (EB handle).

Remark for users of Prestotig/Citotig II DC, 240/310 AC/DC & 350W in water cooled configuration: plug kit p/n WP10529-5 must be adopted while using TIG torches with single button.

# 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).



Flexible high performance cable.



### Handle



RL



EB



V



EB-FLEX

### Air cooling

MODEL		WTT29		WTT217		WTT226			
Duty cycle at 40 °C	60%	80 A		100 A		130 A			
	35%	110 A		135 A		180 A			
Original equipment	back cap	Long							
	nozzle	Ø 9.6 mm				Ø 12.8 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	-	W000278882	W000278919	W000278887	W000278915
	V		V (Conn. 9 mm)	W000278876	-	W000278880	-	-	-
			V (Conn. 13 mm)	-	-	W10529-17-4V	-	W000278885	-
	EB-FLEX		S / C5B	W000382781	-	W000382782	W000382783	W000382784	W000382785

### Connections



C5B



S

### Connector:

Shaped cable output for a better robustness.



Air cooling



Water cooling

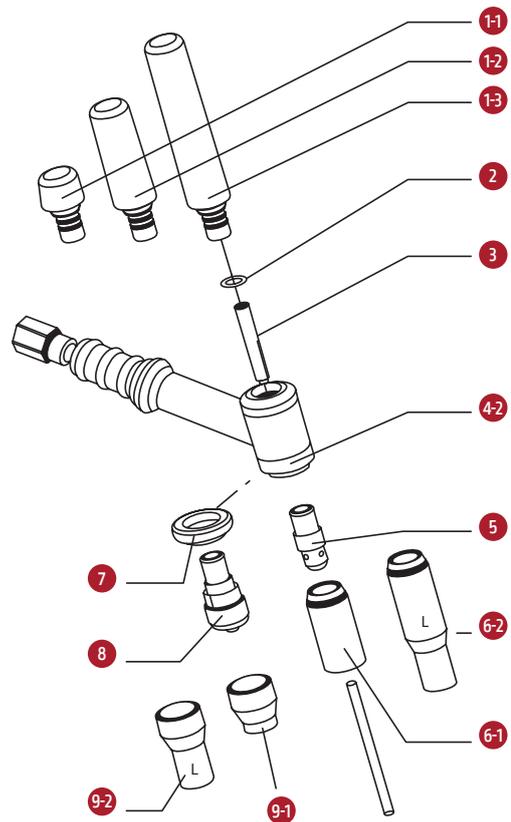
### Water cooling

MODEL		WTT220 W		WTT218 W			
Duty cycle at 40 °C	100%	200 A		320 A			
	60%	250 A		350 A			
Original equipment	back cap	Long					
	nozzle	Ø 12.8 mm		Ø 16 mm			
	electrode	Ø 2.4 mm		Ø 3.2 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 / C5B	W000382786	W000382787	W000382788	W000382789

# TIG TORCHES

## 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
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	-
		Ø 19.2	W000306461
6-2	Long nozzle	Ø 4.8	W000306456
		Ø 6.4	W000306457
		Ø 8.0	W000306458
		Ø 9.6	W000306459
		Ø 11.2	-
		Ø 11.2	W000306465
7	Gas Lens sealing ring	W000306396	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	-
		Ø 6.4	W000306429
		Ø 8.0	-
9-1	Gas Lens nozzle	Ø 9.6	W000306431
		Ø 11.2	W000306432
		Ø 12.8	W000306433
		Ø 16.0	-
		Ø 8.0	-
		Ø 9.6	-
9-2	Long Gas Lens nozzle	Ø 11.2	W000306469
		Ø 12.8	-
		Ø 12.8	W000306470
		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 <sup>(1)</sup>.

**Product advantages:**

- ◆ Very high life cycle
- ◆ Very stable arc
- ◆ Perfect arc ignition
- ◆ 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	*		**	*	*	*
WCe 20 - Cerium 2%		*	**	*	**	**
WLa 15 - Lanthanum 1,5%	**	***	**	***	***	***
WLa 20 - Lanthanum 2%	*	***	**	***	***	***
WS 2 - Rare earths <sup>(1)</sup> 2%	*	*	**	***	***	***

\*\*\* Excellent - \*\* Good - \* Average

<sup>(1)</sup> 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.

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

WLa 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

WCe 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

WS 2 - 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

WLa 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

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

### 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

Electrode diameter	Direct current	Alternating current	
	Tungsten with oxide addition	Pure tungsten	Tungsten with oxide addition
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 121

## 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 black head for the electrodes diameter (blue color is only the JAS standard color) 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 for changing the grinding wheel and for adjusting the grinding head

◆ 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.



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

WARRANTY  
**2**  
YEARS

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



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 products of the range:

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

To order W000011037

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

To order W000011038

Spare diamond disk:

To order W000011036

# OTHER ACCESSORIES

## VIKING 2450 & 3350

See pages 10-11



## Gloves TIG



See page 54

## Cooling liquid FREEZCOOL



See page 119





**WELDLINE**<sup>®</sup>  
by Lincoln Electric



# 6 PLASMA CUTTING

5 PLASMA CUTTING

## CUTTING TOOLS AND ACCESSORIES

◆ PLASMA Torches .....	104 - 106
◆ Plasma other accessories .....	106

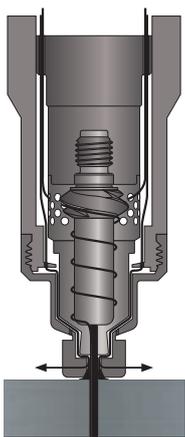
# PLASMA TORCHES

## MODERN TORCH TECHNOLOGY

### LC65 and LC105

The plasma torches with longer life time (running cooler). More cutting thickness, higher speed, standard and grid cutting.

- No HF
- Small electrode diameter
- High air-flow
- High speed rotating air
- Primary and secondary flow
- Concentrated plasma
- Long life electrodes and nozzles
- Torch connection - central connector, 9-pin

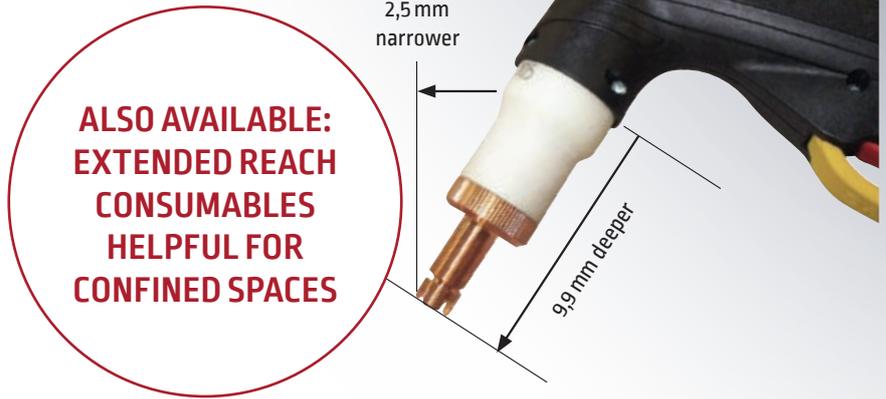


LC105 torch design with drag cup

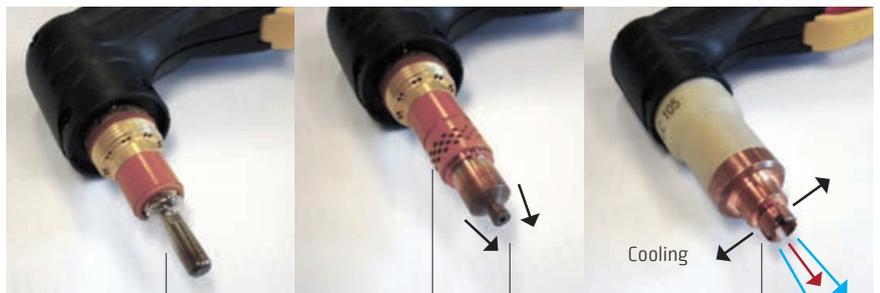
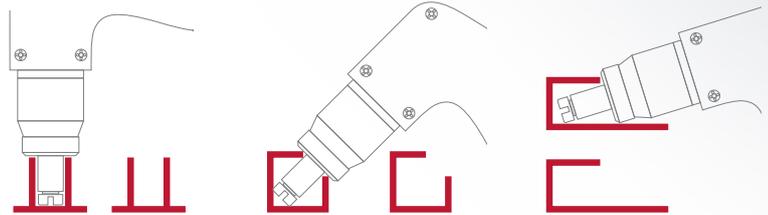
**HIGHER TRAVEL SPEED AND LONGER LIFE TIME CONSUMABLES**



For connection equipment/torch the Tomahawk are provided by CENTRAL CONNECTOR



**ALSO AVAILABLE: EXTENDED REACH CONSUMABLES HELPFUL FOR CONFINED SPACES**



Small diameter Electrode with "screw"

Air-flow through "diagonal" drilled holes in the direction of the "screw"

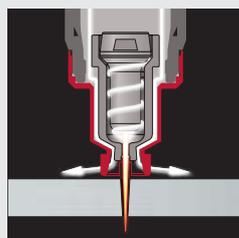
As a result high speed circular air flow around the electrode

Cooling

Primary Plasma beam in the middle. Secondary air stream with cold air concentrating the Plasma beam

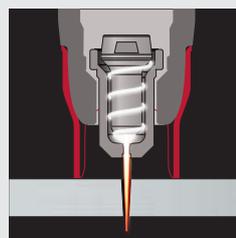
Secondary air-stream cold  
Plasma Beam hot

#### CONTACT OPTION 1



Convenient for the operator, simply drag the nozzle on the plate. Wellprotected nozzle.

#### STAND-OFF OPTION 2



Maximum flexibility and visibility of the plasma stream.

#### GOUGE OPTION 3



Allowing you to gouge different materials.

# PLASMA TORCHES

## LC 25

**To order** PTH-C25A-SL-3MR



**PLASMA-BOX LC25**  
W03X0893-118A



**LC 25**

**Air cooled**  
96 l/min@5.0 bar  
25A@60%  
10mm mild steel  
12mm severance

**ELECTRODE**



W03X0893-75A

**GAS DISTRIBUTOR**



W03X0893-5R

**TIP**



W03X0893-76

**SHIELD CUP BODY**



W03X0893-77A

**SPACER**



W03X0893-78R

## LC 65 (hand)

**To order**

7.5 m | PTH-061A-CX-7M5A

15 m | PTH-061A-CX-15MA



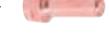
**PLASMA-BOX LC65**  
W03X0893-113A



**LC 65**

**Air cooled**  
130 l/min@5.0 bar  
60A@60%  
25mm mild steel  
30mm severance

**ELECTRODE**



W03X0893-25A  
(contact, stand off,  
shielded & gouging)



W03X0893-53A  
(extended)

**GAS DISTRIBUTOR**



W03X0893-50R

**TIP**



W03X0893-26A  
[40A]  
(contact)



W03X0893-27A  
[40A]  
W03X0893-28A  
[50A]  
W03X0893-29A  
[60A]  
(stand off)



W03X0893-33A  
[50A]  
W03X0893-34A  
[60A]  
(shielded)



W03X0893-39A  
(gouging)



W03X0893-40A  
[40A]  
W03X0893-54A  
[60A]  
(extended)

**RETAINING CAP**



W03X0893-41A

**SHIELD CUP BODY**



W03X0893-43A

**SPACER**



W03X0893-14R

**SHIELD CAP**



W03X0893-44A

**SHIELD CAP**



W03X0893-48A

**SHIELD CAP**



W03X0893-21A

**CONTACT**

**STAND OFF**

**SHIELDED**

**GOUGING**

**EXTENDED**

## LC 65 (machine)

**To order**

7.5 m | PTM-061A-CX-7M5A

15 m | PTM-061A-CX-15MA



**LC 65M**

**Air cooled**  
130 l/min@5.0 bar  
60A@60%  
25mm mild steel  
30mm severance

**ELECTRODE**



W03X0893-25A

**GAS DISTRIBUTOR**



W03X0893-50R

**TIP**



W03X0893-52A [40A]  
W03X0893-33A [50A]  
W03X0893-34A [60A]

**SHIELD CUP BODY**



W03X0893-43A

**SHIELD CAP**



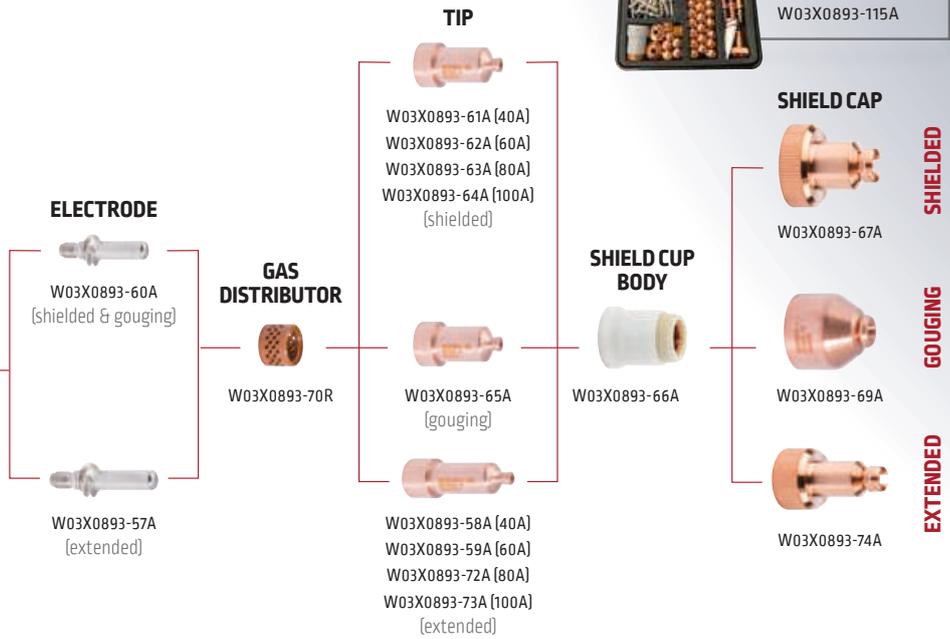
W03X0893-46A

**SHIELDED**

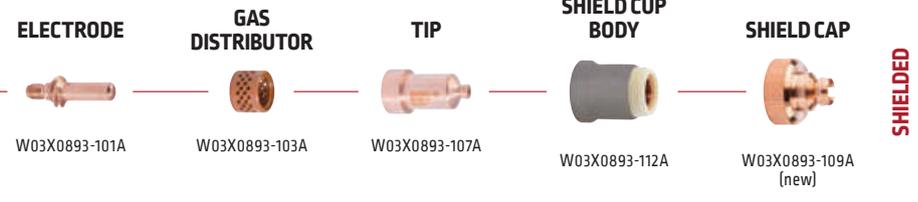
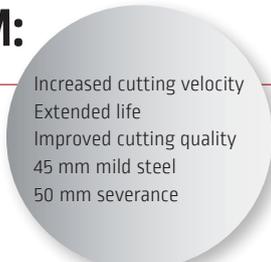
# PLASMA TORCHES

## LC 105 (hand)

To order	
7.5 m	PTH-101A-CX-7M5A
15 m	PTH-101A-CX-15MA

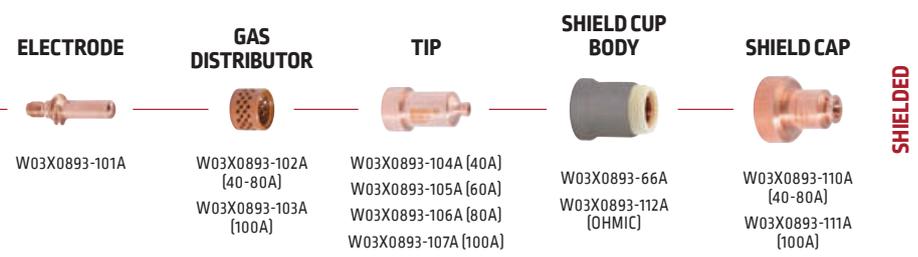


## PREMIUM: 100A



## LC 105 (machine)

To order	
7.5 m	PTM-101A-CX-7M5A
15 m	PTM-101A-CX-15MA



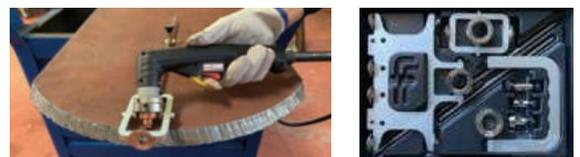
# PLASMA CUTTING OTHER ACCESSORIES

## CUTTING CIRCLES



## BEVEL TOOL

W03X0893-119A



# 7 FLAME

## WELDING TOOLS AND ACCESSORIES

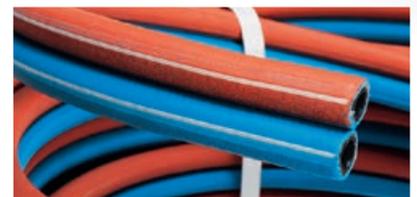
- ◆ Hoses / Automatic roller for oxygen hoses..... 109
- ◆ Quick action coupling ..... 110 - 111
- ◆ Cutting nozzles and other flame accessories ..... 112



Gas	Ø (mm)	Maximum pressure (bar)	Coil length (m)	To order
<b>Single hoses</b>				
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	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
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

<b>Twin hoses</b>				
TWIN (Oxygen - Acetylene)	5 x 11	20	40	1105628
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 - Acetylene)	10 x 16	20	40	W000010070
TWIN (Oxygen - LPG)*	10 x 16	20	40	W000010076

\* Propylene excluded



THE DATE PRINTED ON THE HOSE IS THE MANUFACTURING DATE

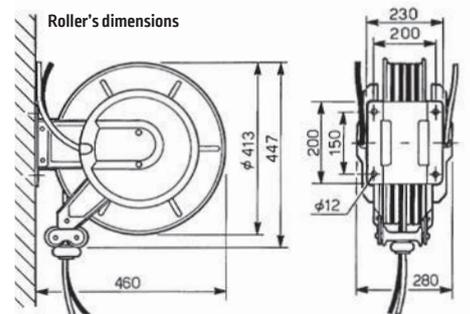
## AUTOMATIC ROLLER FOR OXYGEN HOSES TUBEREEL



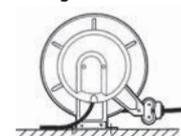
### Automatic roller for twin hoses diameter 8 or 10 mm.

- ◆ 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

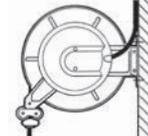
**To order** W000260575



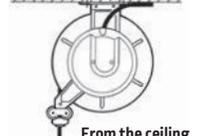
On the ground



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 key words that characterize this new range.

QUICKMATIC II is available in several versions:

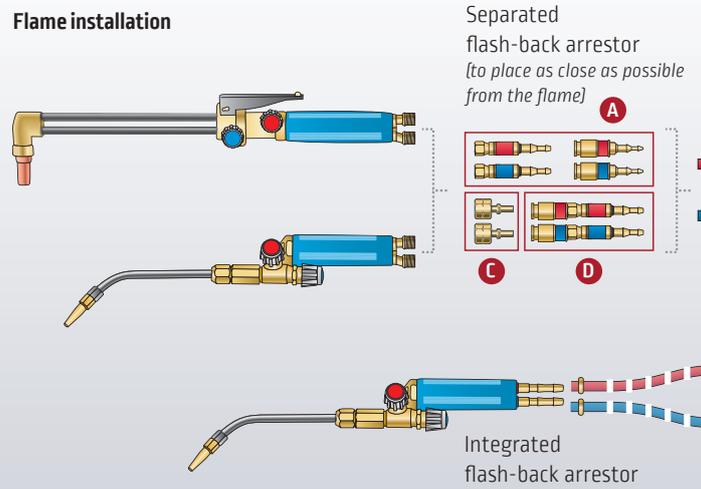
- ◆ By type of gas - presence of a mechanical coding
- ◆ For mounting on the regulator, between pipes and on the blowpipe
- ◆ With integrated FBA (Flash Back Arrestor)

### 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

### Recommendations for use

#### Flame installation



### To order

#### Connection between hoses **A**

QUICKMATIC II	Ø hoses (mm)	To order	
		Female connector	Male connector
1 Fuel Gas	6.3 and 10	W000011002	W000011005
	6.3 and 8	W000386369	
2 Oxygen	6.3 and 10	W000011001	W000011004
	6.3 and 8	W000386370	
3 Neutral gas (Argon, ...)	4 and 6.3	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**

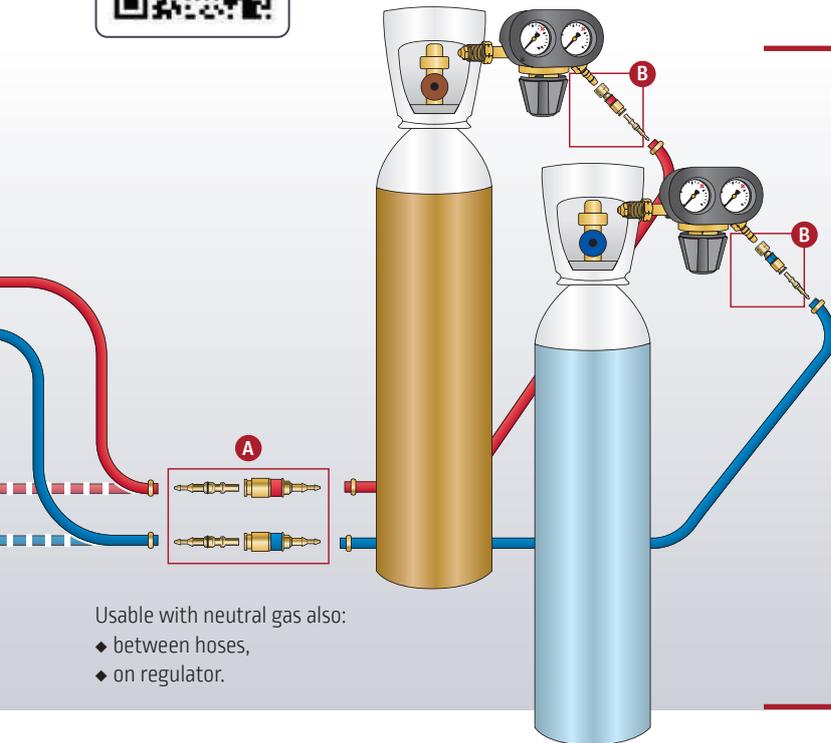
QUICKMATIC II	Thread	To order	Male connector
7 Fuel gas	16 x 150 Left	W000011014	
7 Oxygen	16 x 150 Right	W000011013	

#### QUICKMATIC II with integrated FBA **D**

SECURTOP 662	Inlet hoses (mm)	Outlet	To order
Oxygen	Ø 6.3 and 10	QUICKMATIC II female	W000386367
	Ø 6.3 and 8		W000386368
Fuel Gas	Ø 6.3 and 10		W000386365
	Ø 6.3 and 8		W000386366
Kit Oxygen + Fuel gas	Ø 6.3 and 10		W000400169
	Ø 6.3 and 8		W000400170



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 (m <sup>3</sup> /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 <sub>2</sub>	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



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



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



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



## 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 116

## 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



**WELDLINE**<sup>®</sup>  
by Lincoln Electric

# 8 LIQUIDS & SPRAYS



## WELDING TOOLS AND ACCESSORIES

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# ANTI-SPATTER



## CERASKIN

### Premium Ceramic Welding Anti-spatter spray

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

#### Product features:

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



To order W000277679

## SPRAYMIG H<sub>2</sub>O

### ECO Welding Anti-spatter spray and liquid

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

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

#### Description:

- ◆ Spraymig H<sub>2</sub>O silicone-free water-based anti-spatter based on highly efficient water soluble substances.
- ◆ It prevents spatter from sticking to nozzles, tips & work piece robots and extends nozzle life considerably.
- ◆ It permits rapid changing and cleaning of nozzles.
- ◆ Painting, galvanizing, lacquering of parts is possible.
- ◆ A preliminary test is recommended.
- ◆ Very low consumption for a maximum effectiveness.



Spray [400 ml]

To order W000010001

Drum [20 liters]

To order W000011074

#### 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.

#### Tips:

- ◆ Minimum spray 25cm of the part.

## SPRAYMIG SIB

### Basic silicone Welding Anti-spatter spray

- ◆ Lubricant.
- ◆ Water repellent.
- ◆ Sliding agent.
- ◆ Protects rubber.
- ◆ Antistatic.
- ◆ Polish.



#### 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.



To order W000011093

#### Tips:

- ◆ For preventive maintenance of MIG/MAG torches.
- ◆ Product to replace SVD with an identical result.

## SPRAYMIG SVB

### Basic silicone free Welding Anti-spatter

- ◆ Silicone free.
- ◆ Compatible with paint.
- ◆ Use on cold parts.
- ◆ Use on nozzles and outside contact tip only.
- ◆ Chlorine free / Not harmful.
- ◆ Silicone free / It allows treated surfaces to be overpainted, galvanized, etc...
- ◆ Easy to remove.



#### Specifications:

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



To order W000011092

# ANTI-SPATTER NETMIG



## Torches Anti-spatter paste. Anti-spatter DIP.

To order W00011071



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

### Specifications:

- ◆ Prevents spatter adhering:
  - To torch nozzles and contact tips,
  - To welding lathe positioners and jaws.
- ◆ Does not clog threads or apertures.
- ◆ Does not cause porosity.
- ◆ Base: waxes and oil.
- ◆ Volume: 300 gr.

# ANTI-CORROSION GALVASPRAY

## Zinc spray Anti-corrosion

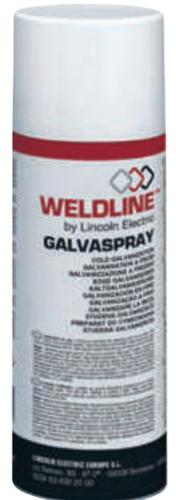
- ◆ Protection of welded joints.
- ◆ Permits welded parts to be lacquered.

### Instructions for use:

- ◆ Clean and degrease the area to be treated.
- ◆ Before use, shake the can for at least one minute.
- ◆ Spray in short, regular bursts at a 25cm distance from the item.

### Specifications:

- ◆ GALVASPRAY sprays a zinc protective finish.
- ◆ Highly resistant 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.
- ◆ Chlorinated solvent free.
- ◆ Light zinc colour.
- ◆ Overpaintable.
- ◆ High covering power.
- ◆ Forms an elastic film.
- ◆ Non-drip.



To order W00011094

# HEAT PROTECTION THERMISHIELD

**THERMISHIELD is a gel that protects all surfaces from heat during welding and soldering. It prevents the deformation of metals and plastics caused by the heat of the blowpipe.**



### Instructions for use:

Shake well before use. Spray Thermishield on the surface to be protected from the source of heat (walls, partitions, joints, plastics ...) and without forgetting on the area of the pipe between the hand and the weld. In all cases, check that the entire surface is covered by the product. Re-apply the gel if required to finish the work. Clean the surface with a wet spongeto remove the product. Do not let it dry. Do not leave within the reach of children.

### Specifications:

- ◆ THERMISHIELD is compatible with all types of materials, even sensitive: plexyglass, wood, steel, copper, polystyrene, etc.
- ◆ Respect of the environment
- ◆ Non-toxic
- ◆ Non-corrosive
- ◆ Non-flammable
- ◆ No-flowing
- ◆ No-staining

To order W000274839

### Description:

- ◆ Appearance: Translucent gel
- ◆ Volume: 500 ml
- ◆ Ph: 8.5 +/- 1 (pure product at 20°C)
- ◆ Physical state: Viscosity Brookfield Aig N°4 / RPM 60 : 4000m Pas / RPM 100 : 2000m Pas
- ◆ Density in 20°C: 1.010kg/m<sup>3</sup>
- ◆ Solubility: Soluble
- ◆ Storage: Fear frost / between 5°C and 30°C

#### Polystyrene Application



without protection

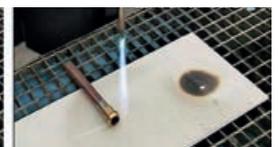


Protected with THERMISHIELD

#### Plaster Application



without protection

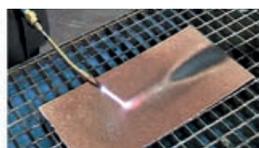


Protected with THERMISHIELD

#### Wood Application



without protection



protected with THERMISHIELD

#### Plexiglass Application



without protection

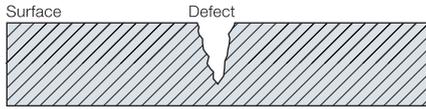


Protected with THERMISHIELD

# 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...

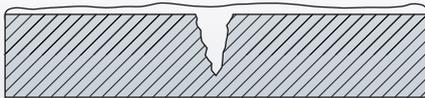
### Many industries:

- ◆ 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.

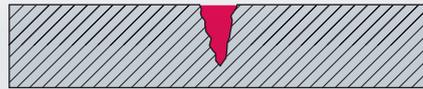
Spray based on Butane [extremely flammable].  
Solvent: Heptane.

Necessity for protection [petroleum based] solvent.



### 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.



### 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.

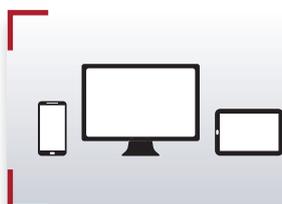
Butane/propane spraying [extremely flammable].



### 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



## 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



## 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



**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

FREEZCOOL is a highly elaborated cooling liquid. 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
- ◆ Not corrosive
- ◆ Non toxic
- ◆ Non flammable

9.6 L

To order W000010167

For manual equipment



### Controls:

- ◆ Freezing point with a refract meter
- ◆ pH control

### 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

### Packaging:

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

SAFETY DATA SHEET



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 is not corrosive 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 W000404005

# 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



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

## 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



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 G (gel) 10 kg

To order W000266427



PICKLINOX P (paste) 2 kg

To order W000266428

PICKLINOX P (paste) 10 kg

To order W000266429



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

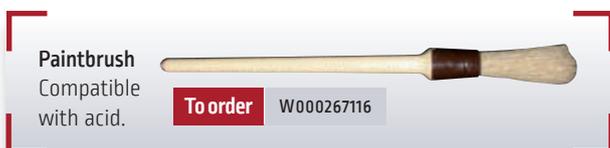
RESTORINOX G (gel) 10 kg

To order W000266431



RESTORINOX L (liquid) 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) Dim ext: 20 x 30 x 5 mm	W000272348
Narrow Tig Bond pad 90° (by 10) Dim ext: 20 x 20 x 5 mm	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

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



### 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

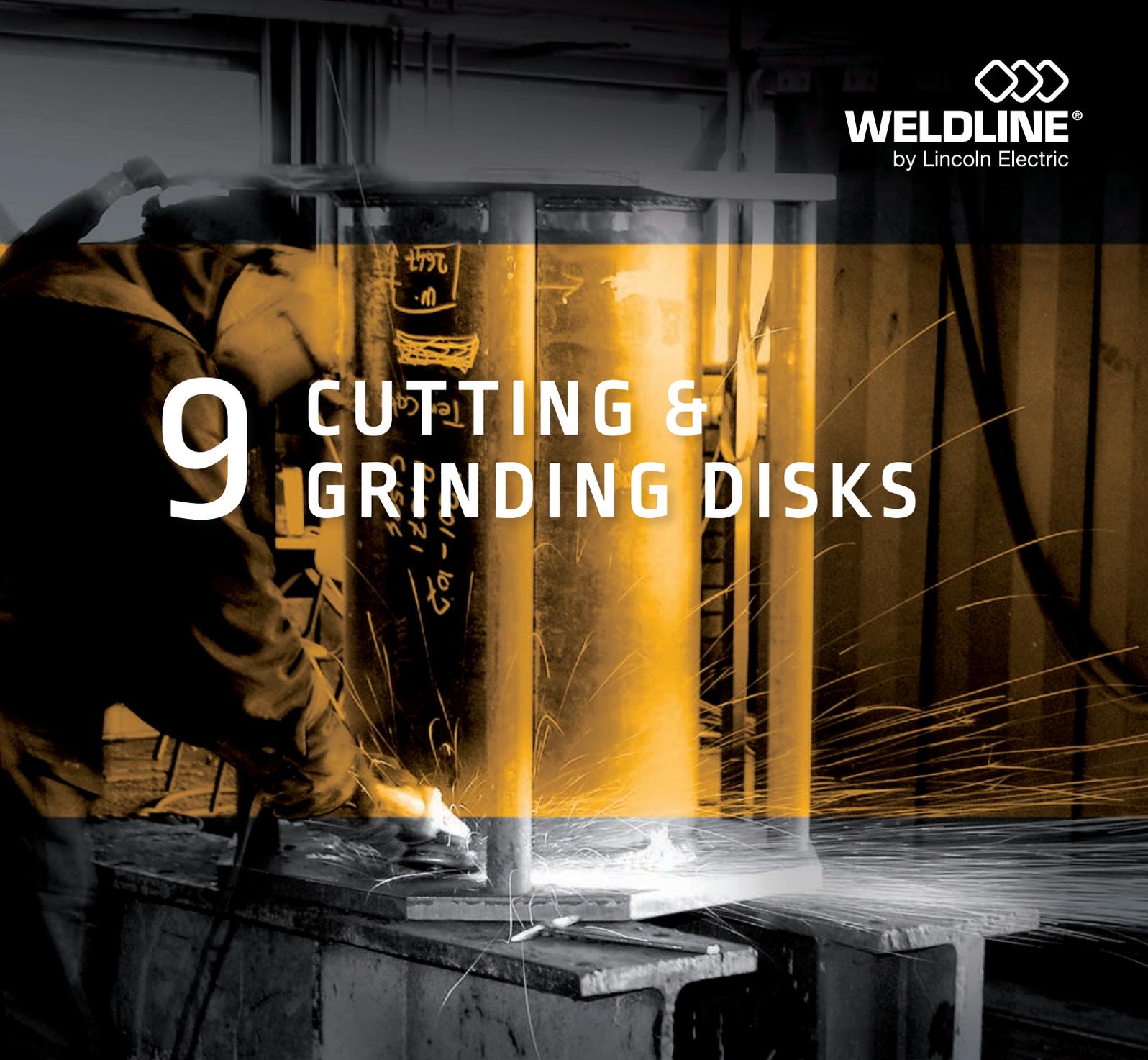


LINCOLN ELECTRIC

Vitality

WELDLINE  
by Lincoln Electric

WELDLINE  
by Lincoln Electric



# 9 CUTTING & GRINDING DISKS

## WELDING TOOLS AND ACCESSORIES

- ◆ Cutting and grinding disks ..... 124 - 126

# CUTTING AND GRINDING DISKS

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

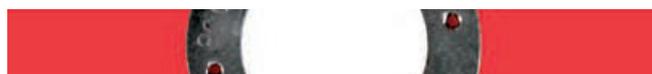
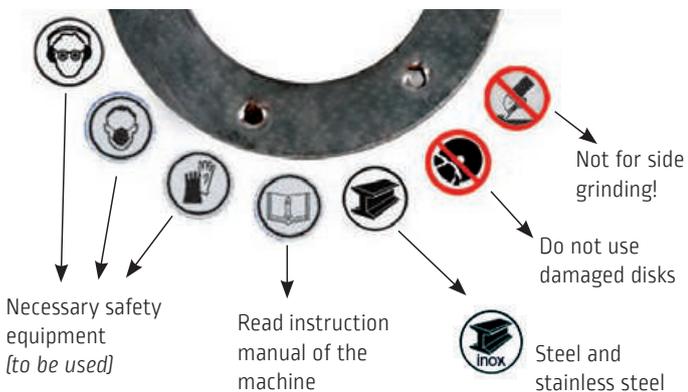
**EN 12413 - EN 13743**

- ◆ 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.



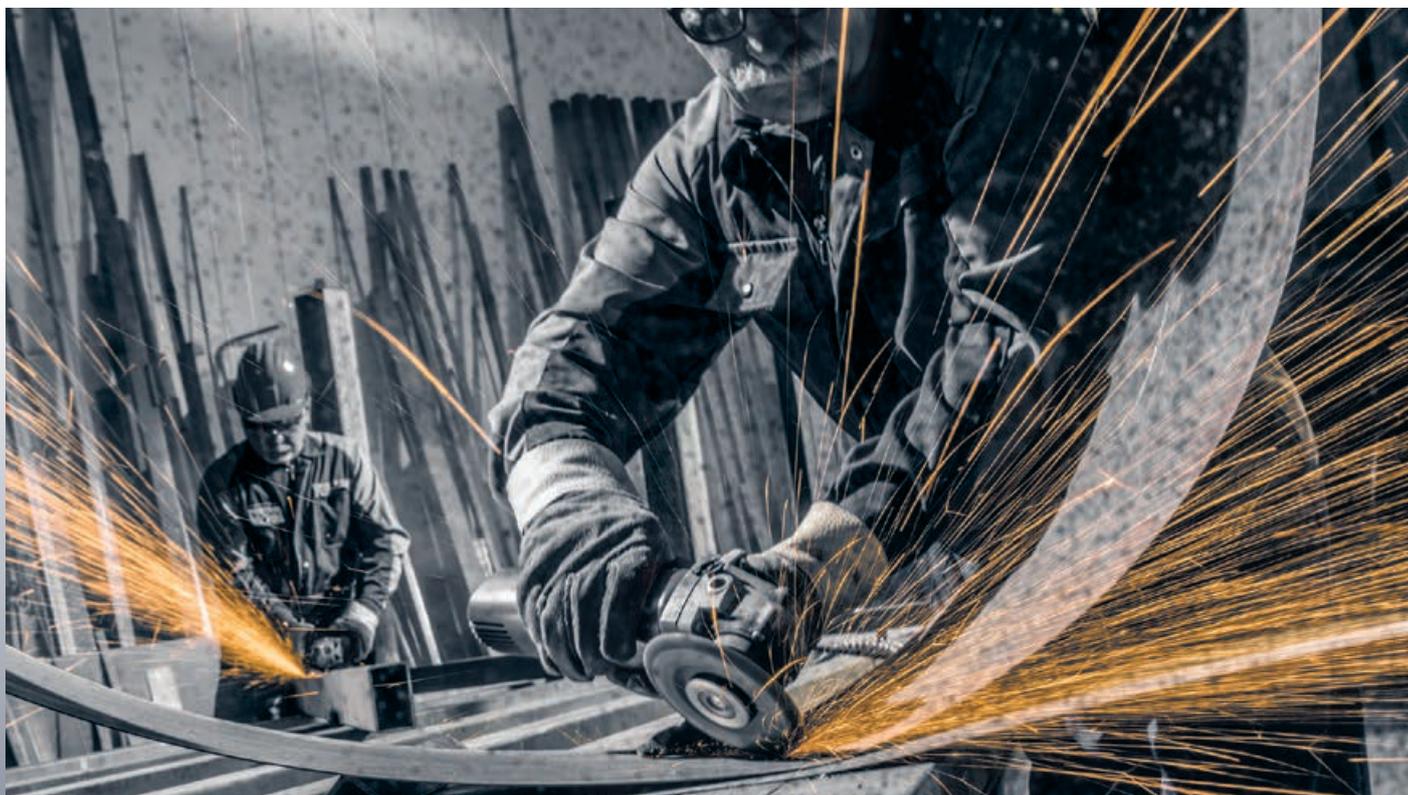
*When buying such products, always ask for OSA certification, a warranty that the product complies with the safety standard and the additional requirements of the Organisation for the Safety of Abrasives*

## 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.



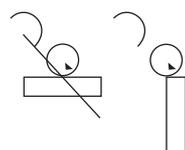
Dimensions	Shape	Use	Specification*	Unit / box	To order
115 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261930
125 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261931
115 x 1.6 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000335001
125 x 1.6 x 22 mm	flat	steel/stainless 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
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
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

- ◆ 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

\* Explanation of the specification: See next page

# 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



### 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 specially 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



**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.

# STANDS & PLATFORMS

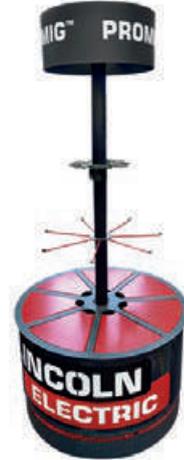
Lincoln Electric offer our partners a full range of display stands, in various configurations and available in all brands, to ensure accessibility for all.



**CRATE HELMET STAND**  
1550x650x300mm



**CRATE PPE STAND**  
2060x770x500mm  
2060x770x100mm (with the clothes hangers)



**PROMIG GUNS STAND**  
1900x800x800mm



**ACCESSORIES STAND**  
2000x500x780mm



**LARGE ACCESSORIES STAND**  
2340x600x1160mm



**EQUIPMENT STAND**  
2050x780x780mm



**RETAIL ALL-IN-ONE PLATFORM**  
800x600x600mm



**ALL-IN-ONE FLAT PLATFORM**  
500x1000x1000mm



**ALL-IN-ONE SQUARE PLATFORM**  
800x800x800mm

# DISTRIBUTOR SHOWROOM FIXTURES

You can join the special program to get the stands free of charge or you can directly buy them with product number \*

Stand	SAP Name	Description	Dimensions (mm)	Brands	Code
	Equipment Stand LE			LE	W403865LE
	Equipment Stand OE	Different topper for each brand – amount counted together	785x790x2020	Oerlikon	W403865OE
	Equipment Stand SAF			Saf-Fro	W403865SAF
	Weldline General Stand	As a current Weldline stand, updated topper with different brands options, price to be updated	1160x600x2340	Weldline	W000403864
	Expositional square LE			LE	W403866LE
	Expositional square OE	steel square on wheels - 3 brands available	2000x2000x500	Oerlikon	W403866OE
	Expositional square SAF			Saf-Fro	W403866SAF
	Consumables Square LE			LE	W403867LE
	Consumables Square OE	Steel square on wheels for consumables - you can see the cuts in the corners for TIG Rods, 3 brands available	800x800x800	Oerlikon	W403867OE
	Consumables Square SAF			Saf-Fro	W403867SAF
	Promig Gun Stand w. LED LE	Premium stand for our premium guns with 360° rotation – To display the complete Promig range of 7 guns + accessories. Delivered fully mounted.	800x800x1800	LE	W403868LE
	PPE Crate stand LE	Modified US Project – jackets, gloves, helmets – final place for gloves still determined. 1 topper – LE logo from one side, Weldline logo from the other side	500x500x2000	LE + Weldline	W403869LE
	Helmet Crate stand - budget version LE	Small crate stand for helmets – based on crate – 6 helmets + display	300x500x1800	LE	W403870LE
	Accessories Stand LE			LE	W403871LE
	Accessories Stand OE	Accessories stand - based on old, re-freshed model, 28 hooks, 4 different brand topper available	500x780x2000	Oerlikon	W403871OE
	Accessories Stand SAF			Saf-Fro	W403871SAF
	Accessories Stand WEL			Weldline	W403871WEL
	Retail Stand - budget version LE	Stand for our sub-distribution – Bester brand – space for consumables, power source and helmet. Son shelf instead of 2, without topper	600x600x800	Bester + LE	W403872LE

\* Please ask your local sales team to get more info.

# THE LINCOLN ELECTRIC COMPANY FRANCE (TLECF) 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 TLECF 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 TLECF 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 TLECF 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 TLECF, other than publicity leaflets and user instructions, shall remain the property of TLECF 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 TLECF's written authorization.

## Article 2: Order

Orders shall be final once received in writing by TLECF 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 TLECF's prior consent.

## Article 3: Price

Except for spare parts orders, orders with a minimum amount of 100 euros excl. taxes shall not be fulfilled by TLECF. A standard order processing fee of 30 euros excl. taxes shall be charged to the Customer for orders with a total amount between 100 euros excl. taxes and 500 euros excl. taxes. 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 TLECF'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 CIF. TLECF 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, TLECF 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 TLECF'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 TLECF and confirmed in writing within eight days of receipt of the goods. If no claim is made, TLECF shall be released from any obligation towards its customer. Except customer express refusal, TLECF 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. The 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 TLECF, 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 TLECF's rights of recourse. Besides, a fixed compensation of 40 € will be borne by the customer for recovery costs. If these charges should be superior, TLECF 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 TLECF. All payment should be received from the customer legal entity which passed the order.

## Article 7: Retention of title clause

TLECF 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, TLECF 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 TLECF 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 TLECF, at its expense. The defective parts that are replaced shall be the property of TLECF. 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 TLECF 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 TLECF. TLECF 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 TLECF. In the absence of specific written stipulations, TLECF no guarantee any result or product's performance..

## Article 9: TLECF's liability. Damages

TLECF's liability shall be strictly limited to the obligations set forth above. In the event that TLECF 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 TLECF, 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 TLECF for any purpose whatsoever.

## Article 11: Code of conduct/ restrictive sales:

Customer undertakes to respect the Lincoln Electric Group (to which TLECF belongs) Code of Conduct available on the following link: <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9MTk1MTE1fENoaWxkSUQ9LTF8VHlwZT0z&t=1>

**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](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 TLECF 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 TLECF 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 TLECF 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 TLECF. (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 TLECF, the Customer shall provide TLECF with the end user certificates in order for TLECF 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.

## Article 12: Termination or Suspension Clause

TLECF 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 TLECF's ability to perform or (b) any contractual obligation of TLECF or any of its affiliates having a negative effect on the TLECF'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 TLECF 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. TLECF 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.

#### CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to enquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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