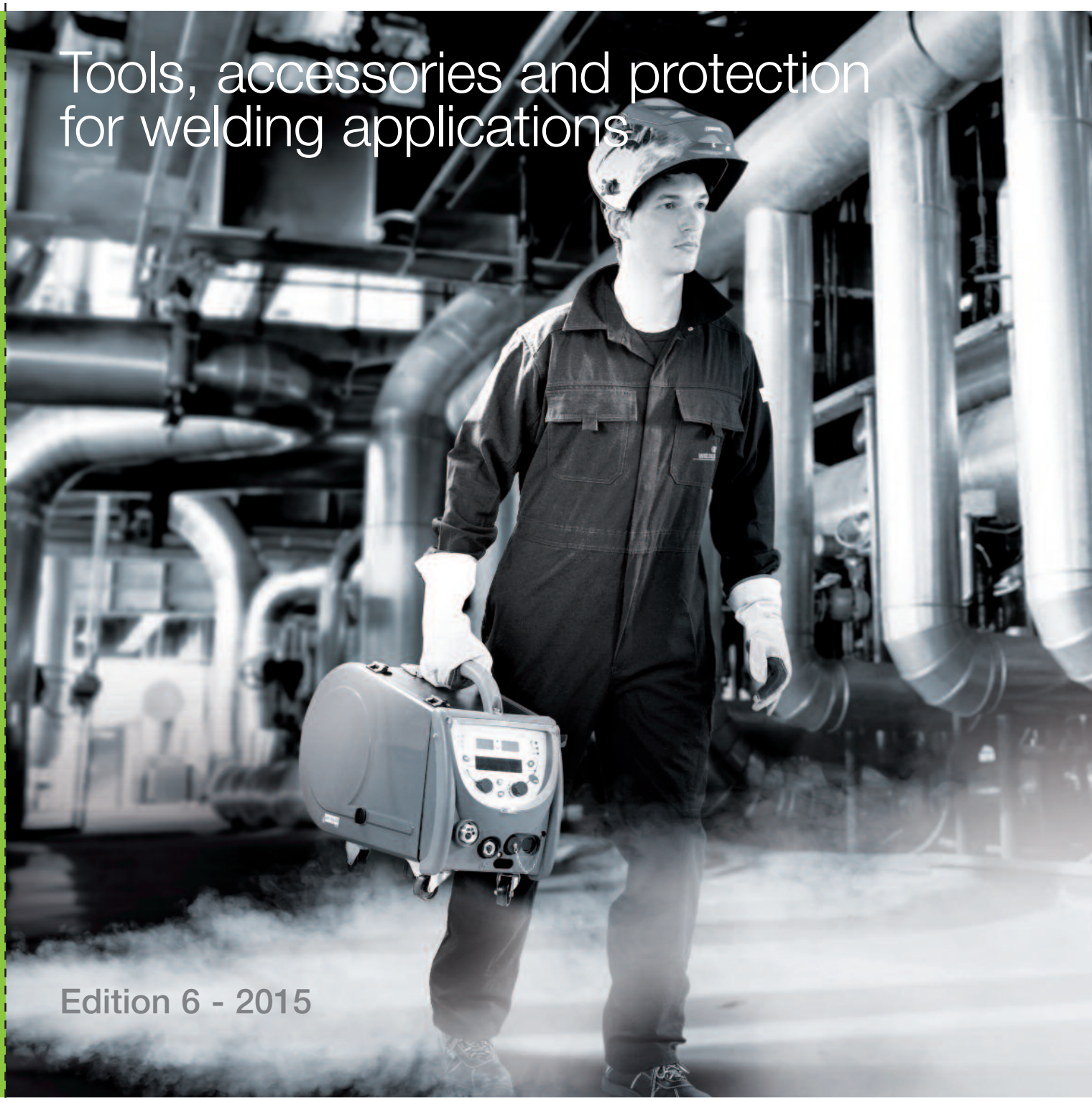
WELDLINE

Creating a Professional Environment

“Le Catalogue”



Tools, accessories and protection for welding applications

Edition 6 - 2015

www.weldline-alw.com

AIR LIQUIDE WELDING

WELDLINE

Creating a Professional Environment

Le Catalogue



WELDLINE is the “Welder’s Environment” brand of the Air Liquide Welding group. This brand offers a large range of tools and accessories dedicated to welding applications (cables, earth clamps, brushes and hammers, sprays…) as well as individual protective equipment for the welder (gloves, clothes, goggles, masks…) and for his environment (strips curtains, etc..).

The WELDLINE products are available through the commercial networks of the Air Liquide Welding group (OERLIKON, SAF-FRO or CEMONT). Continuous research on the best products, permanent availability, high quality products at the right price, compliance with the most rigorous European standards, are the main master words that describe the WELDLINE offer with a major objective: the customer’s satisfaction...

This trademark is a triple commitment of the Air Liquide Welding group:

◆ The choice of quality products

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

◆ Balancing quality with price

The purchasing power of the Air Liquide Welding group for the benefit of its customers.

◆ Optimised logistics

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

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PROTECTION

1 - Personnal protection equipment






- Helmets and handshields ..... 6 to 11
- Welding glasses ..... 12 to 13
- Electronic helmets ..... 14 to 19
- Goggles / spectacles ..... 20 to 23
- Leather clothes ..... 24 to 29
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WELDLINE

Choice of head protection

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

Handshields and passive helmets offer **light duty** or **heavy duty** products:

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

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







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

EN 175

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Helmets

WELDLINE

An **Electronic helmet** allows the welder to be immediately and automatically protected when the welding operation begins.
The result is a better efficiency, a better comfort, and at least a better result.
Electronic helmets exist with fixed or variable shade.

The choice depends on the welding process.









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

EN 175

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

Light duty solutions

EN 175 Handshield

Hand TP



2007-831

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

Single window 108 x 51 mm

Cat N°: W000335125

Single window 98 x 75 mm

Cat N°: W000011121

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

Cat N°: W000372272

Window 110 x 90 mm

Cat N°: W000372273

Hand FG (sliding window)

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

2011-483



2007-830

Sliding window 110 x 90 mm

Cat N°: W000011123

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Passive helmets

WELDLINE

Light duty solutions

EN 175 Helmet

Helmet TP

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

Window 110 x 90 mm

Cat N°: W000011113

Window 98 x 75 mm

Cat N°: W000011114



2007-833

Flip-up WTP helmet

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

Flip-up window 105 x 50 mm

Cat N°: W000372270

Flip-up window 110 x 90 mm

Cat N°: W000374762



2011-481

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

Heavy duty solutions

EN 175 Helmet

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

Cat N°: W000011103

Window 110 x 90 mm

Cat N°: W000011104



2007-832



2011-477

Flip-up helmet FG

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

Flip-up window 105 x 50 mm

Cat N°: W000372271



0947075

Weldlux

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

Extra wide window 114 x 133 mm

Cat N°: W000335131

Multi Flip-up

- Light weight 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

Cat N°: W000010804



2014-563

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Passive helmets leather

WELDLINE

Leather helmets in for welding operations in difficult access place, 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

Cat N°: W000011115

Flip-up leather helmet

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



Flip-up window
105 x 50 mm

Cat N°: W000011135

Spare parts

Adjustable type "A" headgear



For WELDLUX helmets

Cat N°: W000335158

Adjustable type "B" headgear



For TP and FG helmets.

Cat N°: W000010884

Leather protection for the neck

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



Cat N°: W000335139

Sweat band

Foam band



Cat N°: W000260486

(10 pieces pack)

Comfort sweat band



For WELDLUX helmet

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

Cat N°: Z00820115

(2 pieces pack)

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDGLASS

Choose the lens shade adapted to your working conditions

Current (A)	Coated electrodes	MIG Heavy metals	MIG Light alloy	MAG	TIG	Gouging	PLASMA Cutting	PLASMA Welding
1								
2.5								6
5					8			7
10								8
20	8				9			9
30	9				10			10
40								11
60	10			9	11		11	
80								12
100	11	10		10	12			
150		11	11	11	13	10		13
175							12	
200	12	12	12	12		11		
225								
250			13	13		12		14
300							13	
350	13	13		14		13		
400			14		14	14		
450								
500				15		15		15
	14	14	15					



EN 166: Clear glasses
EN 169: Coloured glasses

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDGLASS

Filtering coloured glasses EN 169 - EN 166

DIMENSION 105 x 50 mm

Skin pack		Shade		Box
5 pieces	W000335009	5	W000010915	100 pieces
5 pieces	W000335010	6	W000010916	100 pieces
5 pieces	W000335011	7	W000010917	100 pieces
5 pieces	W000335012	8	W000010918	100 pieces
5 pieces	W000335013	9	W000010919	100 pieces
5 pieces	W000335014	10	W000010920	100 pieces
5 pieces	W000335015	11	W000010921	100 pieces
5 pieces	W000335016	12	W000010922	100 pieces
5 pieces	W000335017	13	W000010923	100 pieces

DIMENSION 98 x 75 mm

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

DIMENSION 110 x 90 mm

Skin pack		Shade		Box
5 pieces	W000335035	5	W000010927	100 pieces
5 pieces	W000335036	6	W000010928	100 pieces
5 pieces	W000335037	7	W000010929	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

DIMENSION 108 x 51 mm

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

SILVER PROTANE® glasses EN 169 - EN 166

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

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

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

"Test SILVER PROTANE® and weld cool".

Circular glasses diameter 50 mm

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

Magnifying glass EN 166

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

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

Protection glass or plate CR-39® EN 166

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

CHAMELEON

CE EN 175 for helmets
CE EN 379 for LCD cells

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

- Covering shape for an optimised head protection.
- 4 plans adjustable head-gear delivered with comfort cushion (for CHAMELEON 4 V+).
- Auto-start: the LCD cell automatically turns on.
- Reset button: press the reset button twice to re-initialize the original parameters.

RoHS Compliant 2002/95/EC

1

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





2007-909

2010-403

Warranty 1 year

CHAMELEON 3 V0

2

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







New: grinding mode with external button

2011-518

Warranty 2 years

CHAMELEON 4 V+ / Digital setting

	1 CHAMELEON 3 V0	2 CHAMELEON 4 V+
Applications	Every welding process. Recommended for MMA and MIG/MAG	Every welding process. Recommended for TIG
Optical class	1 / 1 / 1 / 2	1 / 1 / 1 / 2
Shade	**Variable**	
Dimensions	110 x 90 mm	
Weight	445 g	
Field of view	97 x 40 mm	97 x 47 mm
Clear shade	DIN 4	
Dark shade	Variable from DIN 9 to 13	
Switching time clear-dark	0,06 ms	0,05 ms
Sensitivity adjustment	Yes	
Switching time dark-clear	Adjustable from 0.1 to 1 second	
Sensors	2 independent optical sensors	3 independent high sensititvity optical sensors
Power supply	Solar cells + 2 alcaline batteries	Solar cells + 2 lithium batteries
Protection	Permanent protection against UV and IR	
To order		
Helmet CHAMELEON	**W000276910**	**W000372475**
LCD cell	**W000377928**	**W000372461**

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

CITOLUXE and EUROLUX Advance

CE EN 175 for helmets
CE EN 379 for LCD cells

LCD autodarkening welding helmets.

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

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

The advantages of the CITOLUXE and EUROLUX Advance helmets

Exclusive design:

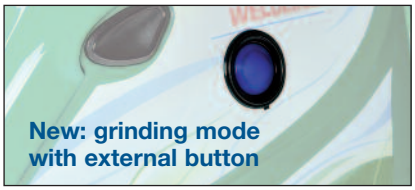
- Easy filter release by simply pressing the push button.
- Adjustable head gear with 4 positions.

Comfort and protection:

- Covering shape for an optimized head protection.
- Optimization of the volume for a better breathing comfort.
- Manufactured with high resistance synthetic material (Nylon 66). Lightweight and heat resistant.

PREMIUM RANGE





Filter Advance 4500 - Infotrack shade 4/9-13

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

4 adjustment modes via the LCD screen with digital keys:

- Welding: variable shades 4/9-13, 4 optical sensors, regulation of the sensitivity and return to a clear shade.
- Grinding: activation of the filter in clear shade level 4.
- Cutting, low current welding: adjustable shades 5 to 9 for low intensity TIG process, microplasma, oxy-fuel gas welding…
- "X mode": adjustable shade 4 to 9-13 with magnetic sensors for outside use or obscured arc welding…
- Infotrack system: provides useful information (current time - total welding time - alarm - temperature)

	1 CITOLUXE Advance 4500	2 EUROLUX Advance 4500
Optical class	1 / 1 / 1 / 2	
Switching time clear-dark	0.05 ms	
Switching time dark-clear	10 positions from 0.1 s to 1 s	
Sensitivity adjustment	Setting per digital key (10 positions)	
Modes Welding Grinding Cutting X mode* Infotrack system**	Yes shade 9 to 13 per digital key Yes shade 4 (per external button) Yes shade 5 to 9 per digital key Yes Yes	
Sensors	4 independent optical sensors - Magnetic in "X" mode	
Viewing area	97 x 60 mm	
Constant UV/IR protection	Yes	
Battery type	2 lithium CR2450 3 Volts	
Solar cell	Yes	
Temperature scale Use Storage	 From -5 °C to +55 °C From -30 °C to +70 °C	
Weight	510 g (helmet + LCD filter)	
Standard LCD filter Helmet	CE EN 379 CE EN 175	
To order		
Complete helmet	**W000372474**	**W000372465**
LCD filter	**W000372462**	

** X-mode: this mode allows welding in outdoor conditions or with very low arc current (lens turn when it's sense the welding current)*

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



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

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ZEPHYR / FLIP'AIR

The ultimate welder protection

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

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

- The ZEPHYR of 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

CE EN 175 for helmets CE EN 379 for LCD cells





Autodarkening
LCD filters with wide vision field

Advance 4500 / 4500 i

The top-of-the-range solution for any application:
5 adjustment modes from an LCD screen with digital keys:

- Welding: variable shades 4/9-13, 4 optical sensors, regulation of the sensitivity and return to a clear shade.
- Grinding: activation of the filter in clear shade level 4. (except on FLIP'AIR with its flip-up front filter.
- Cutting, low current welding: adjustable shades 5 to 9 for low intensity TIG process, microplasma, oxy-fuel gas welding…
- "X mode": adjustable shade 4 to 9-13 with magnetic sensors for outside use or obscured arc welding…
- Infotrack system: provides useful information (current time - total welding time - alarm - temperature.



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Electronic helmets

EN 12941 TH2

WELDLINE

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

** X-mode: this mode allows welding in outdoor conditions or with very low arc current (lens turn when it's sense the welding current)*
*** Infotrack system: provides useful information (current time - total welding time - alarm - temperature)*

To order

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

The ZEPHYR / FLIP'AIR air flow system

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

Inside, 3 kinds of filters can be included.

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

The whole system is water proofed



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







Flow circulation

You can choose between:
- air flow from the top of the helmet (1)
- or a lateral flow coming from each side at the mix level (2) (only for ZEPHYR),
- or a mix of these two solutions.

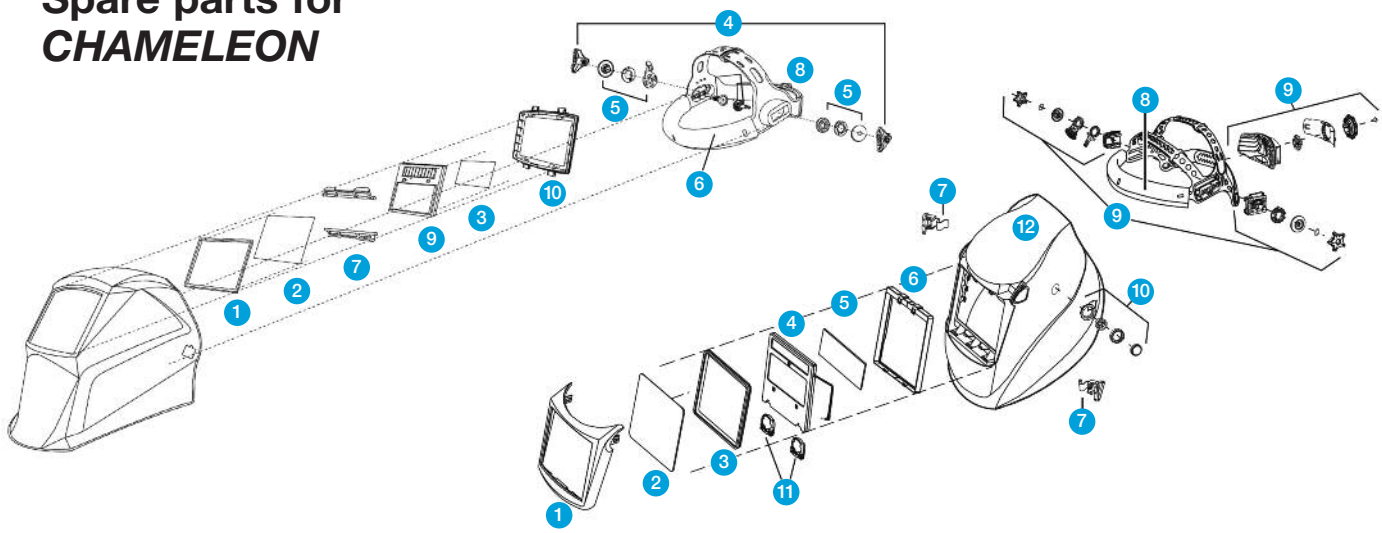
These features ensure excellent welder comfort.

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

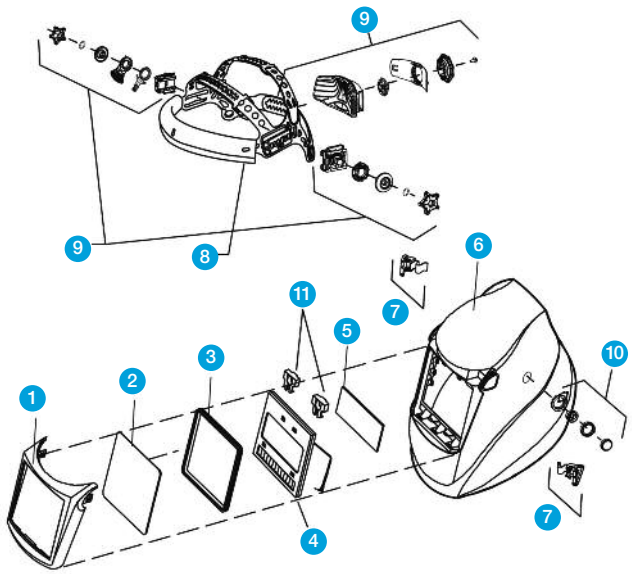
Spare parts for *CHAMELEON*



CHAMELEON 3V0	To order
1 - Gasket front cover lens	W000261985
2 - Front cover lens	W000261983
3 - Inside cover lens	W000335163
4 - Headgear	W000261986
5 - Headgear adjusting kit	W000261987
6 - Fabric sweatband	W000261999
7 - LCD filter holder hook	W000261990
8 - Comfort cushion	W000261991
9 - LCD cell	W000377928
10 - Internal lens holder	W000261989

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

Spare parts for *EUROLUX / CITOLUXE*



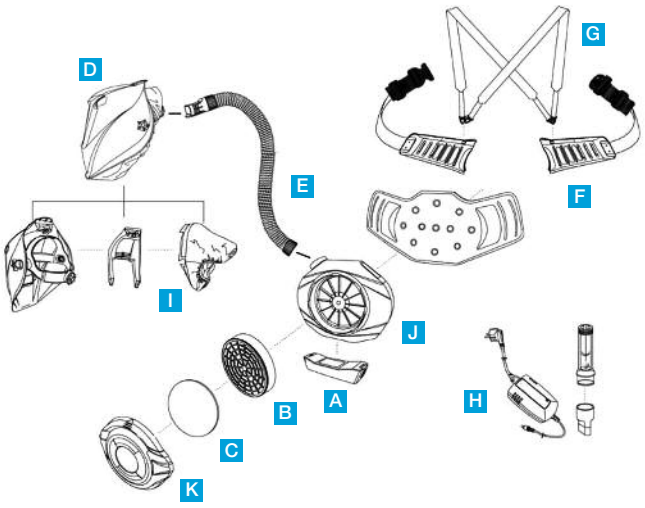
EUROLUX 4500 *CITOLUXE 4500*	To order
1 - Front cover lens holder (Citoluxe)	W000272829
1 - Front cover lens holder (Eurolux)	W000261995
2 - Front cover lens	W000261993
3 - Gasket front cover lens	W000261992
4 - LCD cell	W000372462
5 - Inside cover lens	W000261994
6 - Helmet shell	On request
7 - Lens holder buttons (left & right)	W000276258
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - External grinding button kit	W000378989
11 - Spare batteries	W000260920

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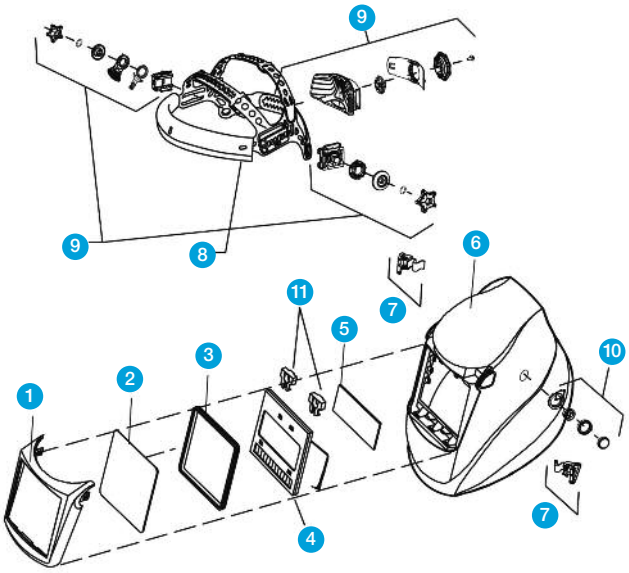
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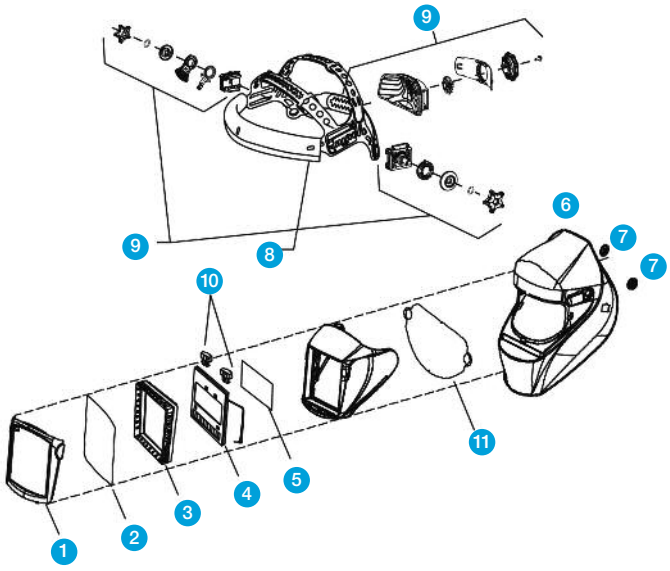
PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Spare parts for *ZEPHYR / FLIP'AIR*



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





ZEPHYR 4500	To order
1 - Front cover lens holder	W000272828
2 - Front cover lens	W000261993
3 - Gasket front cover lens	W000261992
4 - LCD cell	W000372462
5 - Inside cover lens	W000261994
6 - Helmet shell	On request
7 - Lens holder buttons (left & right)	W000276258
8 - Fabric sweatband	W000261999
9 - Headgear	W000373091
10 - External grinding button kit	W000378989
11 - Spare batteries	W000260920

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

Choice criteria

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

Our products are classified by:

- **Welding range**
- **Protection range**
- **Grinding masks**

Marking of the frame:

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

Verify that the product is conform with the EN standards (CE marking confirms conformity)

Main EN Standards are:

- EN 166 for basic conditions
- EN 169 for welding filters
- EN 170 for UV filters
- EN 171 for IR filters
- EN 172 for sunglasses filters
- EN 175 for personal eye-protection during welding

Lens marking:

X - X.X X X X X

Possibilities:
→ **8**: Short circuit resistance
→ **9**: Spatter resistance
→ **K**: Abrasion resistance
→ **N**: Mist resistance
→ **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 strength

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**
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 13)

Filter identification code
→ UV: **2** or **3**
→ IR: **4**
→ Sun: **5** or **6**
→ Welding: **4** to **7**
(see chart)

Welding scale

	q = acetylene flow rate l/h			
	q ≤ 70	70 < q ≤ 200	200 < q ≤ 800	q > 800
Flame welding Brazing and soldering	**4**	**5**	**6**	**7**

	q = acetylene flow rate l/h		
	900 ≤ q ≤ 2 000	2 000 < q ≤ 4 000	4 000 < q ≤ 8 000
Oxy-cutting	**4**	**6**	**7**

Round replacement lenses for the PILOT range

Round lenses in mineral glass Ø 50 mm.

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Goggles / Spectacles

WELDLINE

Welding range

EN 166 - EN 169 - EN 175

PILOT FLIP UP

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



EN 175

Shade 5 - Cat N°: W000011046

PILOT 2 METAL

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



EN 166
EN 169

Shade 5 - Cat N°: W000011050

PILOT 1

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



EN 166
EN 169

Shade 5 - Cat N°: W000011047
Shade 6 - Cat N°: W000011048

PILOT 2 PLASTIC

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



EN 175

Shade 5 - Cat N°: W000011052

PILOT EVEREST

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



Shade 5 - Cat N°: W000011053

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 - Cat N°: W000011049

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding range

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

CLASSIC OVER WELDING

NEW

- 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 - Cat N°: W000383506

CLASSIC WELDING

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



Shade 5 - Cat N°: W000011055

FASHION WELDING

NEW

- 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 - Cat N°: W000383505

Protection range

EN 166

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 - Cat N°: W000383507

CLASSIC VISIT CLEAR

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



Clear - Cat N°: W000011057

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Goggles / Spectacles

WELDLINE

Protection range

EN 166

FASHION VISIT

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



Clear - Cat N°: W000011062

Grinding masks

EN 166

FIRST

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



Clear - Cat N°: W000011068

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 - Cat N°: W000011069

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 - Cat N°: W000011070

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Leather clothes

Reminder:
EEC directive 89/686 is mandatory with the compliance
to **EN 340** and **EN 11611** standards for welder's protective equipment.

For the WELDLINE garments:
- *The best quality leather only is selected by our experts.*
- *No dangerous substances for skin.*

Gaiters

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



Cat N°: W000010590
Leather belt

Cat N°: W000010591
Velcro belt

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- Gaiters are designed and manufactured to meet the basic health and safety requirements prescribed by EEC directive 89/686 of Decree Law 475/92 and to comply with the requirements prescribed by EN 340 Standards, related to general requirements,and EN 11611 standards related to protective equipment for welders and similar activities.
- When worn correctly the gaiters do not impede normal welding activities, quality and performance are guaranteed and maintained according to the instructions supplied. Protection category II (in accordance with Decree Law 475/92).

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Short and long sleeves

WELDLINE

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



EN 340
EN 11611

Length: +/- 400 mm

Cat N°: W000010592



Cat N°: W000010593

Length: +/- 650 mm

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- These welder sleeves constitute an EAR category 2
- These sleeves were designed to comply with the following European standards:
  - **EN 340**: Protective clothing - General requirements
  - **EN 11611**: Protective clothing used during welding and related processes

> Mechanical tests:
- thickness: conform
- dimensional variation: conform
- breaking strength: conform
- tensile strength: conform

> Chemical tests:
- fat content rate: conform

> Thermal tests:
- inflammability: conform
- withdrawal to heat
- behavioural contact with small spatter: conform



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

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WELDLINE is an **Air Liquide Welding** trademark

PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Grain leather apron

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



1 100 x 800 mm

- Length: 1 100 mm
- Width: 800 mm

Cat N°: W000010588

Leather straps

EN 340
EN 11611

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- This welding apron is an EAR category 2
- This apron was designed to comply with the following European standards:
  - **EN 340**: Protective clothing - General requirements
  - **EN 11611**: Protective clothing used during welding and related processes

> Mechanical tests:
- thickness: conform
- dimensional variation: conform
- breaking strength: conform
- tensile strength: conform

> Chemical tests:
- fat content rate: conform

> Thermal tests:
- inflammability: conform
- withdrawal to heat
- behavioural contact with small spatter: conform

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Split leather apron

WELDLINE

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



900 x 600 mm

- Length: 900 mm
- Width: 600 mm

Cat N°: W000010586

Leather straps, closing by clips

Cat N°: W000010585

Cotton straps

Cat N°: W000010589

Cotton straps vegetable tanning: Without chromium salts

1 100 x 800 mm

- Length: 1 100 mm
- Width: 800 mm

Cat N°: W000010587

Leather straps, closing by clips

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- This welding apron is an EAR category 2
- This apron was designed to comply with the following European standards:
  - **EN 340**: Protective clothing - General requirements
  - **EN 11611**: Protective clothing used during welding and related processes

  > Mechanical tests:
  - thickness: conform
  - dimensional variation: conform
  - breaking strength: conform
  - tensile strength: conform

  > Chemical tests:
  - fat content rate: conform

  > Thermal tests:
  - inflammability: conform
  - withdrawal to heat
  - behavioural contact with small spatter: conform
- These aprons have been examined by a competent CE organisation.
- The CE marking confirms they meet the essential requirements of the European Directive 89/686 related to individual protection equipment.

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Split leather welding jacket

WELDLINE

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



Cat N°: (Size XL): W000010594
Cat N°: (Size XXL): W000010595

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- These welding jackets are an EAR category 2
- These jackets are designed to comply with the following European standards:
  - **EN 340**: Protective clothing - General requirements
  - **EN 11611**: Protective clothing used during welding and related processes

> Mechanical tests:
- thickness: conform
- dimensional variation: conform
- breaking strength: conform
- tensile strength: conform

> Chemical tests:
- fat content rate: conform

> Thermal tests:
- inflammability: conform
- withdrawal to heat
- behavioural contact with small spatter: conform



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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding grain leather jacket Half-back flame-retardant cotton

WELDLINE

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



Cat N°: (Size XL): W000010596
Cat N°: (Size XXL): W000010598

Technical description

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

Protective limits

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

Maintenance and storage

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

Standards

- These welding jackets are an EAR category 2
- These jackets are designed to comply with the following European standards:
  - **EN 340**: Protective clothing - General requirements
  - **EN 11611**: Protective clothing used during welding and related processes
    - **> Mechanical tests:**
      - thickness: conform
      - dimensional variation: conform
      - breaking strength: conform
      - tensile strength: conform
    - **> Chemical tests:**
      - fat content rate: conform
    - **> Thermal tests:**
      - inflammability: conform
      - withdrawal to heat
      - behavioural contact with small spatter: conform



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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

Choice of criteria

Split leather or grain leather ?

- **Split leather = heat resistant, comfort & protection**

Which application ? MMA, MIG/MAG

Which gloves ?

General applications



LONG BASIC



LONG BASIC +



UNIVERSEL

Heat resistant, doubled fabric



STOPCALOR



STOPCALOR +



STOPCALOR ALU

- **Grain leather = flexibility, dexterity**

Which application ? TIG

Which gloves ?



TIG

European standard for gloves and welding gloves

EN 420:

General requirements for gloves: safety, comfort, dexterity

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

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

EN 388:

Mechanical hazards



A: Abrasion (0-4)
B: Blade cut (0-5)
C: Tear(0-4)
D: Puncture (0-4)

EN 407:

Heat resistance



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

EN 12477:

Welding gloves



A: Abrasion (0-4)
B: Blade cut (0-5)
C: Tear (0-4)
D: Puncture (0-4)



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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

LONG BASIC

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

EN 420
EN 388
EN 407



2014-605

NEW

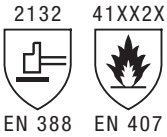
Cat N°: W000380517

Technical description

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

Standards and levels of protection

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



Limits of protection

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

LONG BASIC +

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

EN 420
EN 388
EN 407



2014-615

NEW

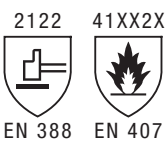
Cat N°: W000382262

Technical description

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

Standards and levels of protection

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



Limits of protection

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

UNIVERSEL

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

EN 420
EN 388
EN 407



2014-607

NEW

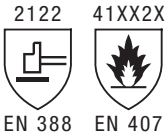
Cat N°: W000380518

Technical description

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

Standards and levels of protection

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



Limits of protection

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

STOPCALOR

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

EN 420
EN 388
EN 12477-A



2014-604

NEW

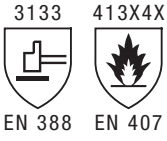
Cat N°: W000380511

Technical description

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

Standards and levels of protection

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



Limits of protection

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding gloves

WELDLINE

STOPCALOR +

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

EN 420
EN 388
EN 407
EN 12477-A



2014-614

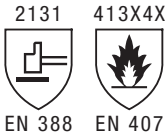
Cat N°: W000382261

Technical description

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

Standards and levels of protection

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



Limits of protection

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

STOPCALOR ALU

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

EN 420
EN 388
EN 407
EN 12477-A



2013-117

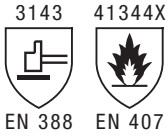
Cat N°: W000010420

Technical description

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

Standards and levels of protection

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



Limits of protection

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding gloves

TIG - The favorite gloves of TIG welders

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



EN 420
EN 388
EN 407
EN 12477-B

NEW

2014-611

Technical description

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

2111 EN 388 412X4X EN 407

Cat N°: W000380519 (Size 9)
Cat N°: W000380520 (Size 10)

Standards and levels of protection

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

Limits of protection

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

Protective gloves

DOCKER

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



EN 388
EN 420

2009-007

Cat N°: W000381386

Technical description

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

Standards and levels of protection

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

3123 EN 388

Limits of protection

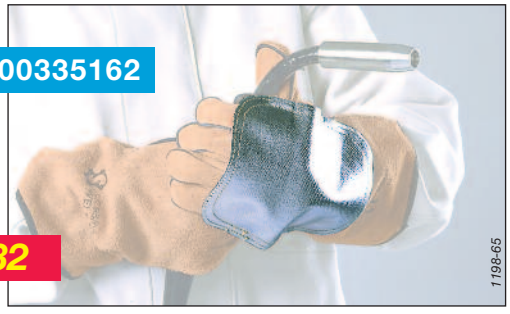
- For use in a dry environment against mechanical risks.

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.

Cat N°: W000335162



EN 532

1198-65

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Protective clothes

WELDLINE

WELDCOT 2

New protective clothes: comfort, lightness and high level of safety.

Last technology for heat protection combining low weight, high functionality and design.

New fiber: Modacrylic

Flame retardant clothes

Composition: 60% Modacrylic, 38% coton, 2% antistatic fiber.
Fabric Weight: 250 g/m²

Conformity to standards:

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

CE | EN ISO 11612 A1 B1 C1 | IEC 61482 | EN ISO 11611:2007 Class 1 - A1 | EN ISO 1149-5

Notified organisation - Control of production
BTTG - Notified Body - N° 0339



Important: choose your size with the hereunder table

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

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

EN ISO 20345

Safety shoes for welding

WELDLINE

Weldline safety shoes

- Our safety shoes always include a toe protection (in steel or in other material with a resitance > 200J).
- The European directive 89/686/EEC recommends the wearing of safety shoes for workers.
- The standard EN ISO 20345 includes several levels.

Safety level	Toe protection	Shock absorber	Antistatic plate	Anti-puncture plate	Water resistant
SPB	●			●	
S1	●	●	●		
S2	●	●	●		●
S1P	●	●	●	●	
S3	●	●	●	●	●

- Air Liquide Welding proposes products with toe protection only (>200 J) that can be in steel, aluminium or in fiberplast and with an antipuncture plate in steel or in fibre textile.

The criteria of choice are:

1- Levels of protection as indicated above

2- High or low shoes

3- Upper in :
- full-grain leather (water resistant)
- split leather
- fabric (non water resistant)
- pigmented split leather

4- Outsole :
- PU+PU (dual density polyurethane lightweight)
- PU+TPU (lightness and flexibility + more strength of the thermoplastic polyurethane)
- PU + nitrile rubber for extreme temperatures (up to 300 °C)

5- Antipuncture midsole:
- in steel
- non metallic for more comfort

6- Toe protection :
- steel
- aluminium (30% lighter)
- fiberplast (extra lightweight)

SUPER FORJA

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



2012-636

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

** on demand*

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

ULYSSE TOTALE

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



2012-638

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

** on demand*

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

SUPER FORJA METAL FREE

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



2012-637

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

** on demand*

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

FUSION TOTALE

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



2012-639

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

** on demand*

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

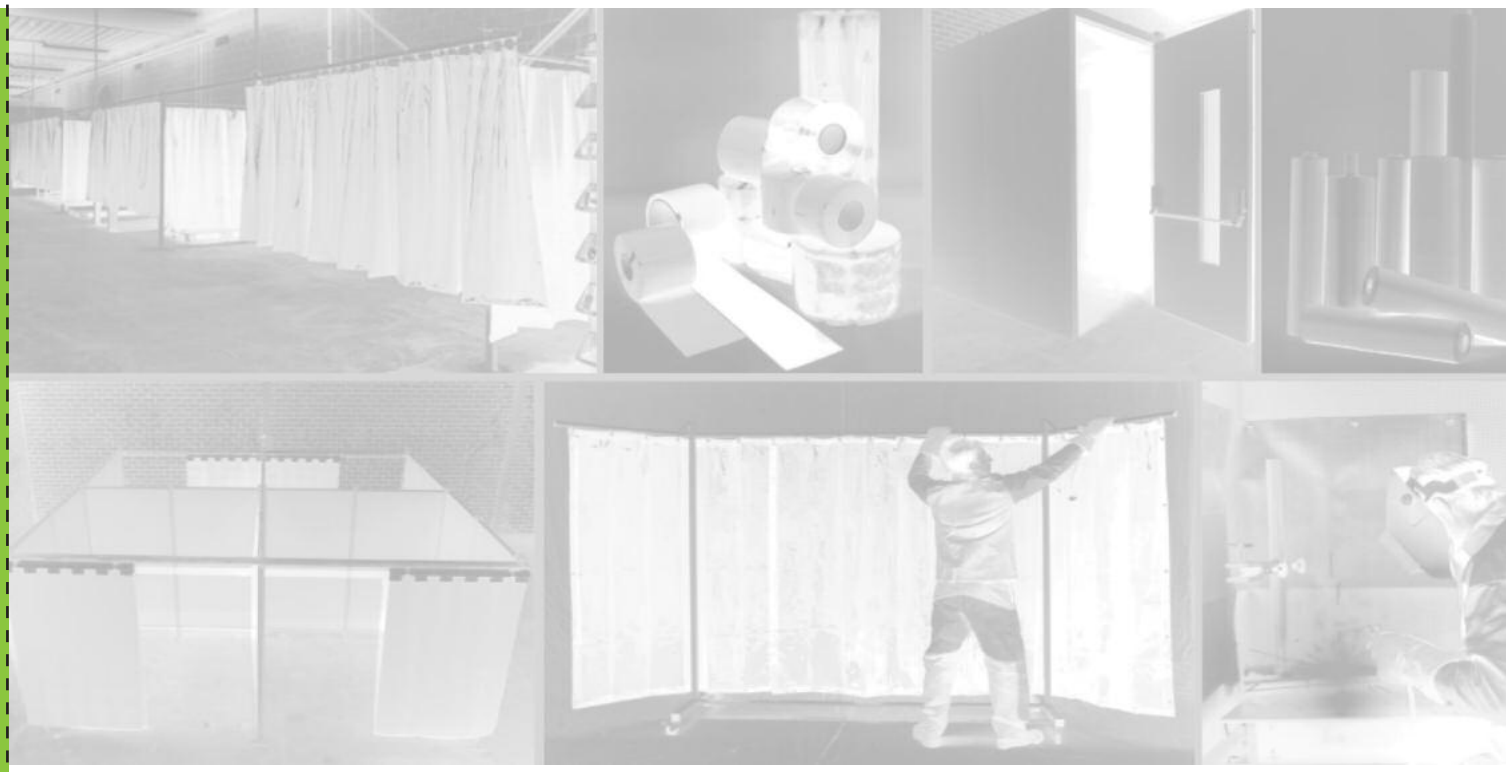
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

PROTECTION

2 - Collective protection equipment

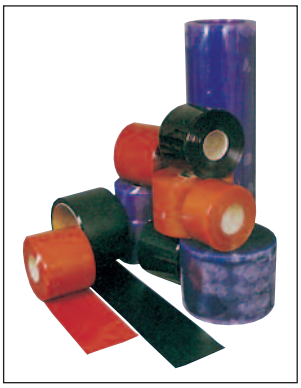


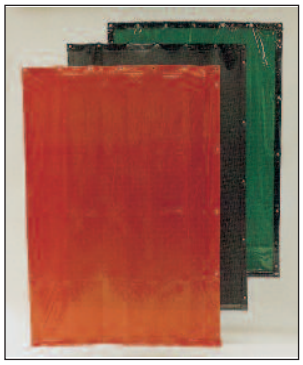
- Introduction 38
- Frames ..... 39 to 42
- Protection strips ..... 43 to 45
- Curtains 46
- Accessories (for curtains and strips) ..... 47 to 50
- Curtains and heat resistant fabrics ..... 51 to 53
- Sound insulating walls ..... 54 to 55
- Sound insulating elements ..... 56 to 57
- Sound insulating booths ..... 58 to 59
- Partition steel panels 60
- Welding tents 61

Protection strips, curtains, heat resistant fabrics, portable screens, accessories for curtains, strips and sound insulation

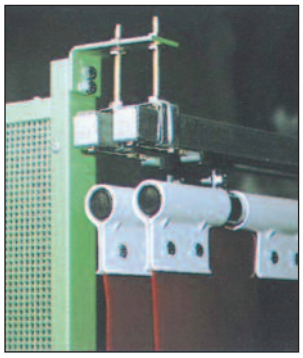
- Air Liquide Welding has an International competence in welding and related equipment.
  We offer a global and professional solution to get an efficient and safe working environment.
- PROTECTLITE is a wide range of products covering every need of your environment:
  - Welding strips, grinding strips or protection strips against dust or cold,
  - Curtains and fixed or movable screens, joining screens for welding and grinding,
  - A professional range of heat resistant fabrics,
  - All the useful spares to create your specific booths,
  - Standard elements and separation walls with sound insulating function "PROPHONIC" range.

Air Liquide Welding strives to supply its customers with safe products that comply with all applicable European standards.







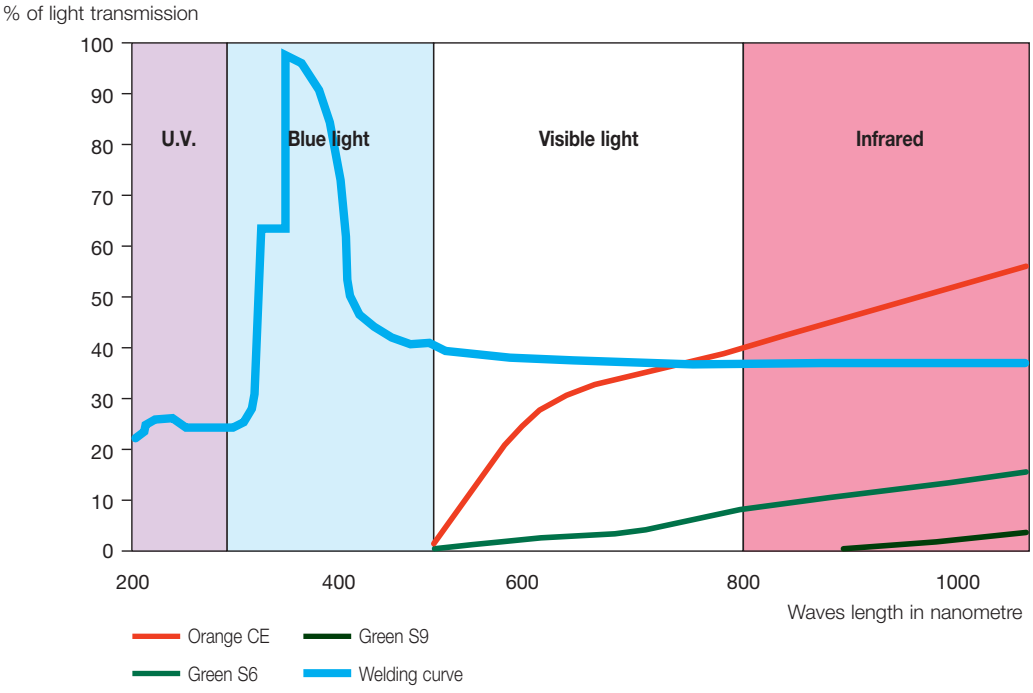


Technical data: light transmission through welding curtains or strips.

Remarks:

All welding curtains and strips Orange CE, Green S6, or Green S9, are in accordance with the EN 1598 standard.

Clear curtains must not be used for welding protection.



Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Frames - Simple

PREMIUM (Curtain)

The PREMIUM frame is a robust and portable screen. The curtain is tight and stable when in position.

- Width 1 750 mm, height 2 000 mm.
- Galvanized pipes frame (diam. 25 x 1 mm).
- UV protection in accordance with EN 1598 standard.
- Screen 1 700 mm x 1 700 mm.

Description	Complete screen	Curtains only
Orange CE	**W000371474**	**W000370400**
Green S6	**W000371473**	**W000371216**
Green S9	**W000371475**	**W000370401**

Frame only	W000370399



PROTECTLITE (Curtain or Strips)

Stable, the PROTECTLITE screen will assure an efficient and modular barrier against welding arcs, whether you are working in a workshop or not.

Curtain

- Rolling frame.
- Weight : 25 kg.
- Metal tube framework. Curtains delivered with 7 eyelets, 7 suspension metal rings on the width, and snap fasteners on the height. 4 sides-hemmed.

Designation	Complete screen (frame + 2 curtains)		Spare curtains	
	Width	Height	Width	Height
	2 000 mm	2 100 mm	1 400 mm	1 600 mm
Orange CE	**W000010521**		**2 x W000010355**	
T6 Green	**W000010522**		**2 x W000010351**	
T9 Green	**W000010523**		**2 x W000010359**	

On wheels frame only without curtain: reference **W000010224**





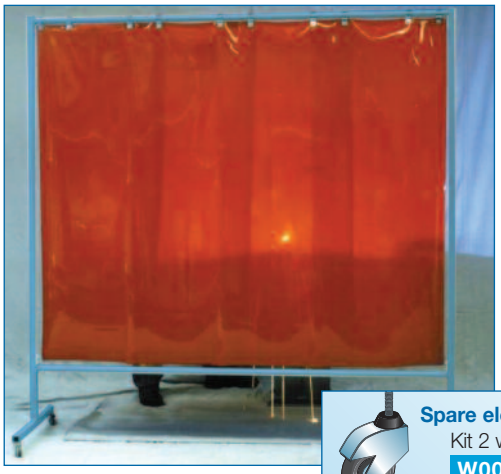


Spare element
Kit 2 wheels:
W000010497
- 1 free
- 1 locking

Strips

- Strips fixation by hooks (overlap covering 50 mm).
- Set of 13 suspension collars: reference **W000010483**

Designation	Complete screen (frame +1 set of 4 strips + 1 set of 13 suspension collars)		Set of 4 spare strips 570 x 1 mm	
	Width	Height	Width	Height
	2 000 mm	2 100 mm	2 000 mm	1 600 mm
Orange CE	**W000010471**		**W000010261**	
T6 Green	**W000010519**		**W000010484**	
T9 Green	**W000010520**		**W000010487**	





Spare element
Kit 2 wheels:
W000010497
- 1 free
- 1 locking

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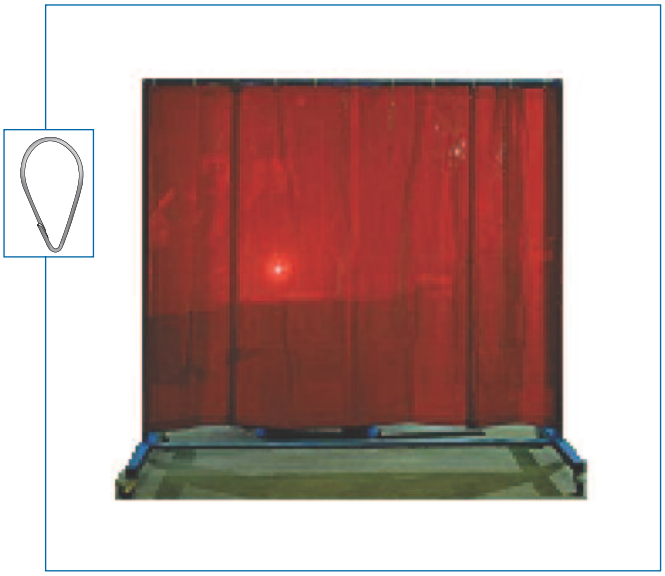
PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Frames - Simple

UNIVERSAL (Curtain or Strips)

The UNIVERSAL screen is a very stable screen, offered with castors. It is width 2 100 mm and equipped with 300 mm x 2 mm strips, an overlap of 66 % and a height of 1 800 mm.

- Width 2100 mm, height 2100 mm with castors,
- Painted steel frame,
- Equipped with 10 strips height 1 800 mm in accordance with EN 1598 standard.



Curtain

Description	Complete screen	Curtains only
Orange CE	W000010524	2 X W000010356
Green S6	W000010525	2 X W000010352
Green S9	W000010526	2 X W000010360

Frame only	**W000010269**



Strips

Description	Complete screen (frame + 11 hooks + 3 sets of 4 strips)	Set of 4 strips
Orange CE	W000010490	3 X W000010333
Green S9	W000010492	3 X W000010335

Frame only	**W000010269**
Set of 11 hooks	**W000010459**



Spare element
Kit 4 wheels:
W000010297
- 2 free
- 2 blocking

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Frames - Passable

HORUS (Strips)

**The HORUS screen is a special screen with four 570 mm x 1 mm strips across the frame.
Its frame has a special design (one side with castors), which is easy to use and gives a very good stability when in position.
The HORUS screen is easy to walk through, it is also an easy solution to create a welding booth.**

- Width 1 860 mm, height 1 930 mm.
- Painted steel frame.
- Equipped with 4 strips of 1 800 mm height in accordance with EN 1598 standard.

Description	Frame only	Set of 4 strips
Orange CE	W000260715	W000010262
Green S6		W000010485
Green S9		W000010488



OPTILAM (Strips)

The OPTILAM screen is a special screen with 300 mm x 2 mm strips across the frame. Its frame has a special design to enable easy portability whilst giving a very good stability when in position. The design of the feet allows the screens to be placed at 90° of each other.

- Width 1 860 mm, height 1 930 mm.
- Painted frame.
- Equipped with 7 strips of 1 750 mm height in accordance with EN 1598 standard.

Description	Complete	Set of 7 strips
Orange CE	W000010472	W000010257
Green S9	W000010474	W000010256



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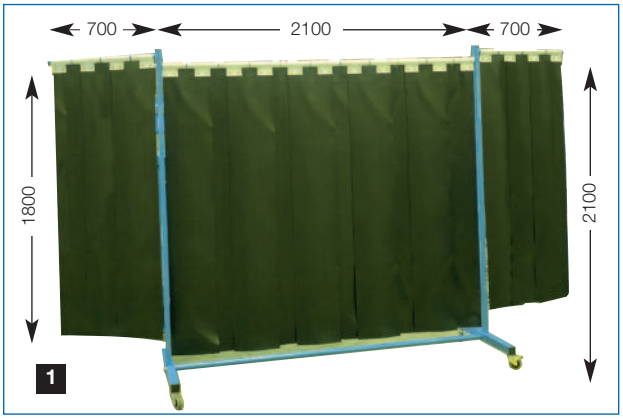
WELDLINE

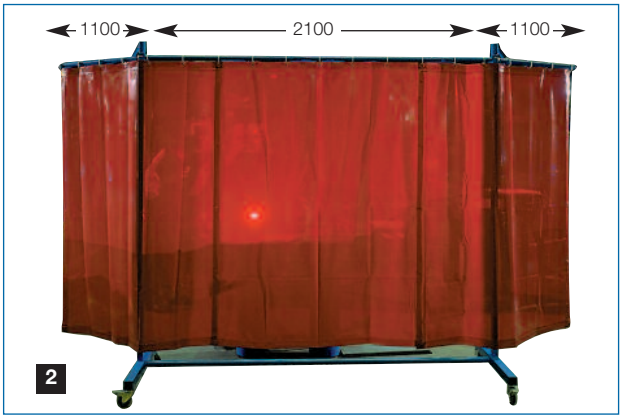
Frames - Triptych

TRIPTYCAL

The UNIVERSAL on wheels triptych frame is the most stable and the heaviest of our range.

- Screens frame made with square steel tubes of 50 x 30 x 2 mm, and round steel tubes of 35 x 2,5 mm.
- The big diameter movement wheels (75 mm) and the very robust frame make it a long-lasting investment.





1 Standard width	Frame height 2 100 mm / Screen L 3 500 mm (700 + 2 100 + 700 mm)		Spare curtains Width 1 400 mm Height 1 800 mm	Kit of 4 spare strips 300 x 2 mm Width 3 500 mm / Height 1 800 mm (overlap covering 66%)
	1 frame + 2 extensions + 3 curtains Height 1 800 mm	1 frame + 2 extensions + 1 set of accessories + 4 kits of 4 strips Height 1 800 mm		
Orange CE	W000010277	W000010282	3 x W000010356	4 x W000010333
Green T6	W000010275	-	3 x W000010352	-
Green T9	W000010276	W000010281	3 x W000010360	4 x W000010335
Transparent	W000010279	-	3 x W000010468	-

300 x 1 800 mm strips with a covering of 66%.

- UNIVERSAL frame on wheels. Reference **W000010269**
- Swiveling extensions length 0,70 m. Reference **W000010273**
- For the strips screens : kit accessories. Reference **W000010253**

2 Large width	Frame height 2 100 mm / Screen L 4 300 mm (1 100 + 2 100 + 1 100 mm)		Spare curtains Width 1 400 mm Height 1 800 mm	Kit of 4 spare strips 300 x 2 mm Width 4 300 mm / Height 1 800 mm (overlap covering 66%)
	1 frame + 2 extensions + 3 curtains Height 1 800 mm	1 frame + 2 extensions + 1 set of accessories + 5 kits of 4 strips Height 1 800 mm		
Orange CE	W000010287	W000010292	3 x W000010356	5 x W000010333
Green T6	W000010285	-	3 x W000010352	-
Green T9	W000010286	W000010291	3 x W000010360	5 x W000010335
Transparent	W000010289	-	3 x W000010468	

- Swiveling extensions length 1,10 m. Reference **W000010274**



Spare element
Kit 4 wheels:
W000010297
- 2 free
- 2 blocking

MODULABLE

- Frame's width 3 420 mm (810 mm + 1 800 mm + 810 mm) height 1 900 mm, weight 37 kg.
- Painted frame with 4 castors, including 2 with brakes.
- UV protection in accordance with EN 1598 standard.
- Curtain's height 1 300 mm.
- 2 colours: Orange CE and Green S9 *(see page 43)*.

Description	Complete	Curtains only
Orange CE	W000010476	W000010174
Green S9	W000010478	W000010173
Frame only	W000010175	

- Spare parts : 1 kit 4 castors: **W000010497**



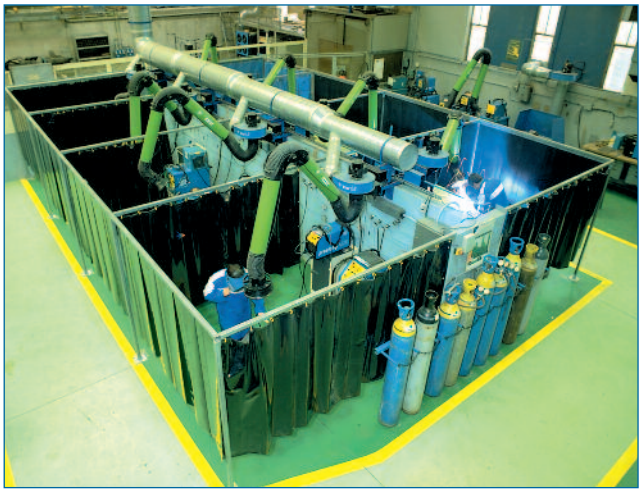
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding and protection strips

These strips are manufactured in accordance with the EN 1598 standard.



- **Welding strips come in different colours:**

Orange CE **Green S6** **Green S9**

The choice of colour will depend on the welding process concerned.

Generally a clear colour is convenient for brazing, flame welding and low amperage welding. The lighting of the workspace will be improved.

The green S9 is designed for high amperage welding and/or special application like aluminium MIG welding.

- **Clear protection strips**

Insure a protection against air, dust, humidity, spatters and noise.

They can be delivered either full rolls (50 meters) or cut and punched to any length. All strips are self extinguishing.

Strips with an overlap

Overlap of 66 %:

- width of the strips 300 mm,
- fully screen due to a wide overlap,
- efficiency against cold and very good mechanical resistance.

$$Nb = \frac{L - 100}{200}$$

Nb: number of strips

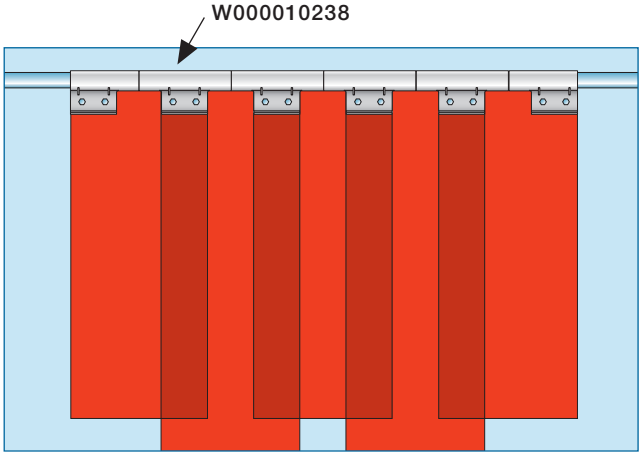
L: required length in mm

If Nb < x,5 so Nb = x

If Nb > x,5 so Nb = x+1

Ex: Nb = 10,6 allow 11 strips

In the first case, first and last strip will have a lower overlap. In the second case, first and last strip will have a wider overlap.



Number of hooks is equal to number of strips + 1

Overlap of 33 %:

- width of the strips 300 mm,
- mainly used if strips are frequently overpass.

$$Nb = \frac{L - 50}{250}$$

Nb: number of strips

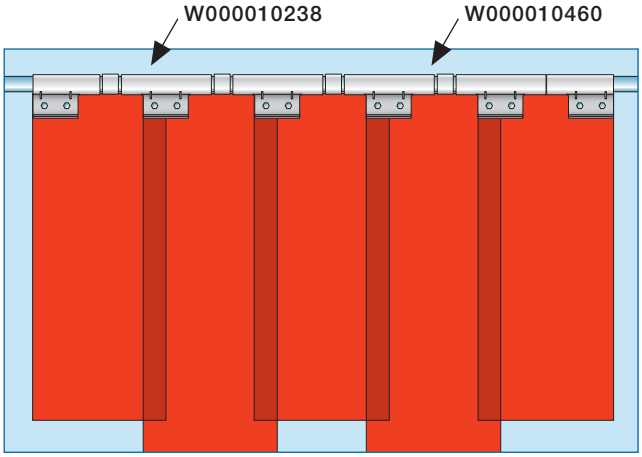
L: required length in mm

If Nb < x,5 so Nb = x

If Nb > x,5 so Nb = x+1

In the first case, first and last strip will have a lower overlap. In the second case, first and last strip will have a wider overlap.

Nota: don't forget the intermediate ring



Number of hooks is equal to number of strips + 1
Number of rings is equal to number of strips - 1

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Protection strips

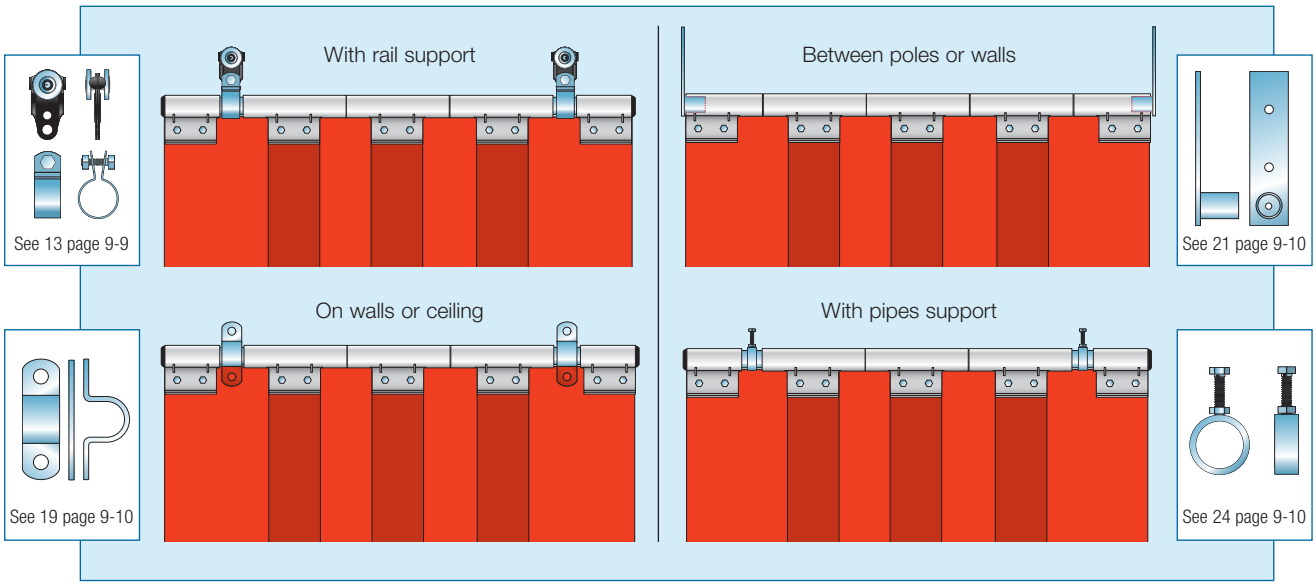
WELDLINE

Selection number of 300 mm strips

Number of strips	Overlap in mm 66 %	33 %	Number of strips	Overlap in mm 66 %	33 %	Number of strips	Overlap in mm 66 %	33 %
1	300	300	13	2 700	3 300	25	5 100	6 300
2	500	550	14	2 900	3 550	26	5 300	6 550
3	700	800	15	3 100	3 800	27	5 500	6 800
4	900	1 050	16	3 300	4 050	28	5 700	7 050
5	1 100	1 300	17	3 500	4 300	29	5 900	7 300
6	1 300	1 550	18	3 700	4 550	30	6 100	7 550
7	1 500	1 800	19	3 900	4 800	31	6 300	7 800
8	1 700	2 050	20	4 100	5 050	32	6 500	8 050
9	1 900	2 300	21	4 300	5 300	33	6 700	8 300
10	2 100	2 550	22	4 500	5 550	34	6 900	8 550
11	2 300	2 800	23	4 700	5 800	35	7 100	8 800
12	2 500	3 050	24	4 900	6 050	36	7 300	9 050

Mounting and hanging of 300 mm strips

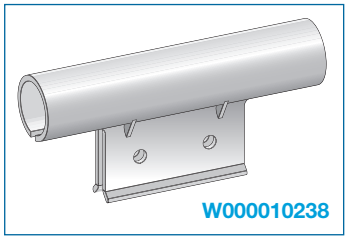
Different mounting configurations: examples of mounting: 300 mm strips with an overlap of 66%



Strip's hanging:

Remark: hanging hooks have to be fixed on the border of the strip just beside the overlap to avoid deformation or half-opening of the strips after use. Due to the hanging system, the first and the last hook have to be shortened.

Strip's hook



W000010238

Width 200 mm, for 33.7 mm pipes, (usable for 32 mm)

Ring



W000010460

For an 33 % overlap, between two handing hooks.



Kit of 11 hooks:	**W000010459**
Kit of 10 rings:	**W000010460**

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Protection strips

WELDLINE

TO ORDER

50 meters rolls

Width	Thickness	Colour	Catalogue n°
200 mm	2 mm	Clear	W000010239
300 mm	2 mm	Orange CE	W000010230
	2 mm	Green S6	W000010228
	2 mm	Green S9	W000010229
	2 mm	Clear	W000010240
	3 mm	Orange CE	W000010232
	3 mm	Green S9	W000010458
	3 mm	Clear	W000010241



Weight of the strips

Width	Thickness	Weight per meter
200 mm	2 mm	0.45 kg
300 mm	2 mm	0.67 kg
300 mm	3 mm	1.00 kg
400 mm	4 mm	1.67 kg
570 mm	1 mm	0.67 kg

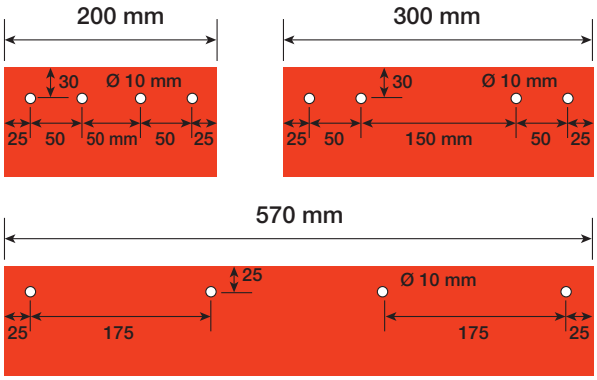
Cut and punched on request

Width	Thickness	Colour	Comments	Catalogue n° for 1 meter
300 mm	2 mm	Orange CE	Standard punching	W000010235
	2 mm	Green S6		W000010233
	2 mm	Green S9		W000010234
200 mm	2 mm	Clear	On request*	W000010243
300 mm	2 mm	Clear	On request*	W000010244
	3 mm	Clear		W000010245
400 mm	4 mm	Clear	On request*	W000010246

Comments: *To receive 10 strips of 1 800 mm, you have to order 18 times the reference* ***W000XXXXXX*** *corresponding to the colour you need.*

**** Means items defined but not on stock. Normal delivery 2 weeks.***

Standard punching for strip



By set

Number of strips	Width	Thickness	Colour	Height	Comments	Catalogue n°
4 strips of 570 mm width	2 000 mm	1 mm	Orange CE	1 600 mm	Dedicated to PROTECTLITE frame. Delivered with a set of 13 hooks Cat n° **W000010483** For TRYPTICAL: 2 sets of strips and 2 sets of hooks.	W000010261
	2 000 mm	1 mm	Green S6	1 600 mm		W000010484
	2 000 mm	1 mm	Green S9	1 600 mm		W000010487
	2 000 mm	1 mm	Orange CE	1 800 mm	Dedicated to HORUS frame. Delivered with a set of 13 hooks Cat n° **W000010483**	W000010262
	2 000 mm	1 mm	Green S6	1 800 mm		W000010485
	2 000 mm	1 mm	Green S9	1 800 mm		W000010488
	2 000 mm	1 mm	Orange CE	2 000 mm		W000010263
3 x 4 strips of 300 mm width	2 100 mm	2 mm	Orange CE	1 800 mm	Dedicated to UNIVERSAL frame (3 sets). Order also a kit of 11 hooks Cat n° **W000010459**	W000010333
	2 100 mm	2 mm	Green S9	1 800 mm		W000010335
7 strips of 300 mm width	1 860 mm	2 mm	Orange CE	1 750 mm	Dedicated to OPTILAM frame.	W000010257
	1 860 mm	2 mm	Green S9	1 750 mm		W000010256

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Welding curtains

The welding curtains are manufactured in accordance with the EN 1598 Standard.

They are flame-retardant, with a width of 1 400 mm.

To prevent a tearing of the material, the four sides are hemmed.

Made from PVC with a thickness of 0.4 mm (0.5 mm for the Green S9).

They are supplied with 7 eyelets across the width completed with 7 metal hanging rings.

The curtains can be joined by the snap fasteners fitted on the height side (12 cm from the border and 40 cm between the two curtains).

3 colours are avalaible:

Orange CE **Green S6** **Green S9**



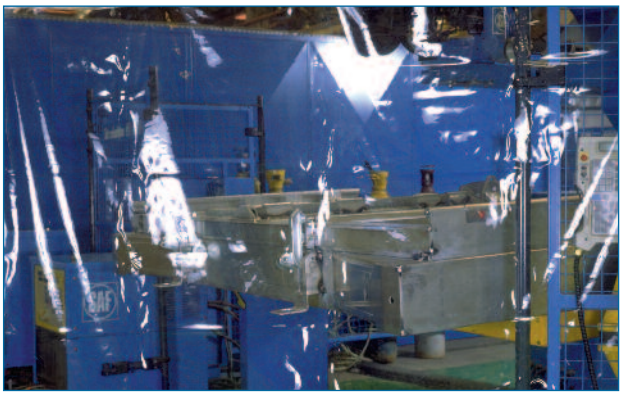
Clear curtains

Clear curtains are designed to protect against draught, moisture, cold, dust, and grinding debris.
They are flame-retardant with a width of 1 400 mm.

To prevent a tearing of the material, the four sides are hemmed.

Made from PVC material which is 0.4 mm thick.
They are supplied with 7 eyelets across the width completed with 7 metal hanging rings.

The curtain's juxtaposition is provided by snap fasteners on the height side (12 cm from the border and 40 cm between two curtains).



Thickness	Width	Height	Colour	Catalogue n°	Comments
0.4 mm	1 400 mm	1 400 mm	Orange CE	W000010354	
			Green S6	W000010350	
			Green S9	W000010358	
			Clear	W000010466	
		1 600 mm	Orange CE	W000010355	For PROTECTLITE 2 curtains and TRiPTYCAL 3 curtains
			Green S6	W000010351	
			Green S9	W000010359	
			Clear	W000010467	
		1 800 mm	Orange CE	W000010356	For curtain support (1 curtain) and for UNIVERSAL (2 curtains)
			Green S6	W000010352	
			Green S9	W000010360	
			Clear	W000010468	
		2 000 mm	Orange CE	W000010357	
			Green S6	W000010353	
			Green S9	W000010361	
			Clear	W000010469	
	1 700 mm	2 000 mm	Orange CE	W000370400	**ONLY for PREMIUM (screen)**
			Green S6	W000371216	
			Green S9	W000370401	
0.4 mm	3 420 mm	1 300 mm	Orange CE	W000010174	**ONLY for MODULABLE (screen)**
			Green S9	W000010173	

Other curtains:

On request under 15 days: height of 2 200 mm, 2 400 mm, 2 600 mm, 2 800 mm, 3 000 mm.

Special dimensions for curtain on request:

Price per m^2 with eyelets on the width side, click-in buttons on the height side and metallic handling rings.

Clear
Catalogue n°: W000010470

Colored (Orange CE, S6, S9)
Catalogue n°: W000010465

For example to order 2 curtains

Width 1.80 m x height 3.00 m = 5.4 m^2, so for 2 curtains, needs = 10.8 m^2 = 11 m^2.

Eyelets on the width and clicking buttons on the height.

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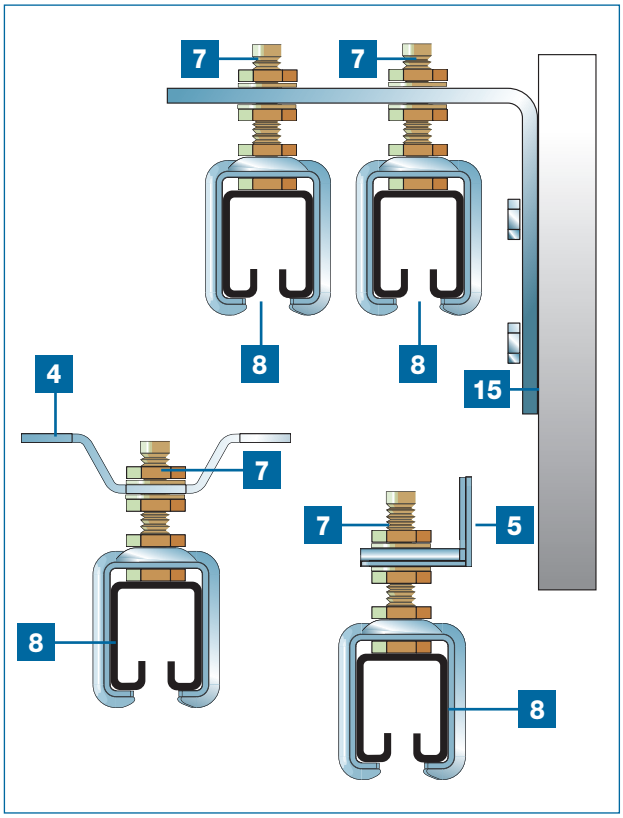
Accessories *(for curtains and strips)*

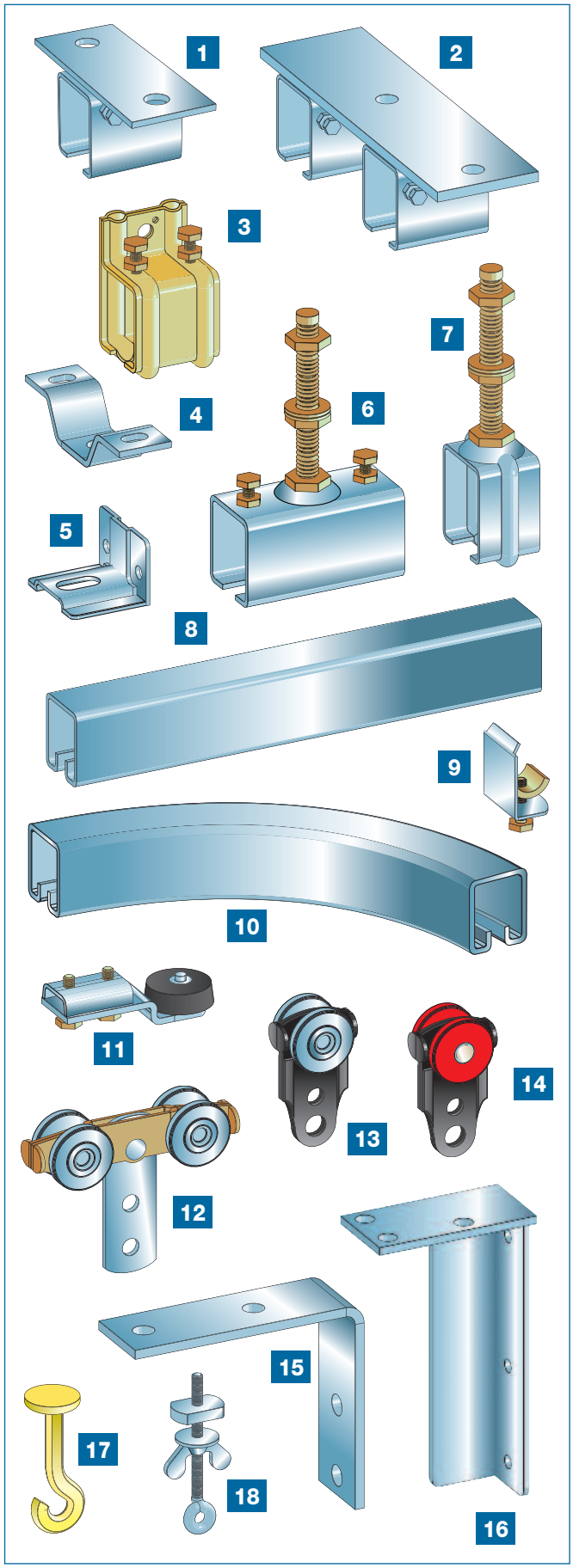
WELDLINE

Rail 30 x 35

(between 2 supports - maximum length 2 meters - maximum weight 57 kg)

	Designation	Catalogue n°
1	Ceiling rail connector single rail	W000010209
2	Ceiling rail connector double rail	W000010210
3	Side wall rail connector	W000010208
4	Ceiling support for rail support	W000010214
5	Wall support for rail supports part	W000010213
6	Rail connector for 2 rails long bolt M10	W000010212
7	Rail support with long bolt M10	W000010211
8	Rail 3 000 max (30 x 35 mm) - 1 meter - 2 meters - 3 meters	W000010199 W000010200 W000010201
9	End piece	W000010215
10	Rail 90° elbow, radius 500 mm	W000010205
11	Rail stop with buffer	W000010216
12	Four-wheel runner	W000010178
13	Two-wheel runner	W000010177
14	Plastic two wheel runner (for curtains)	W000010176
15	Side wall support for double rail or pipe	W000010207
16	Universal support	W000010218
17	Sliding hook, plastic	W000010221
18	Extremity rail support for curtains	W000010217



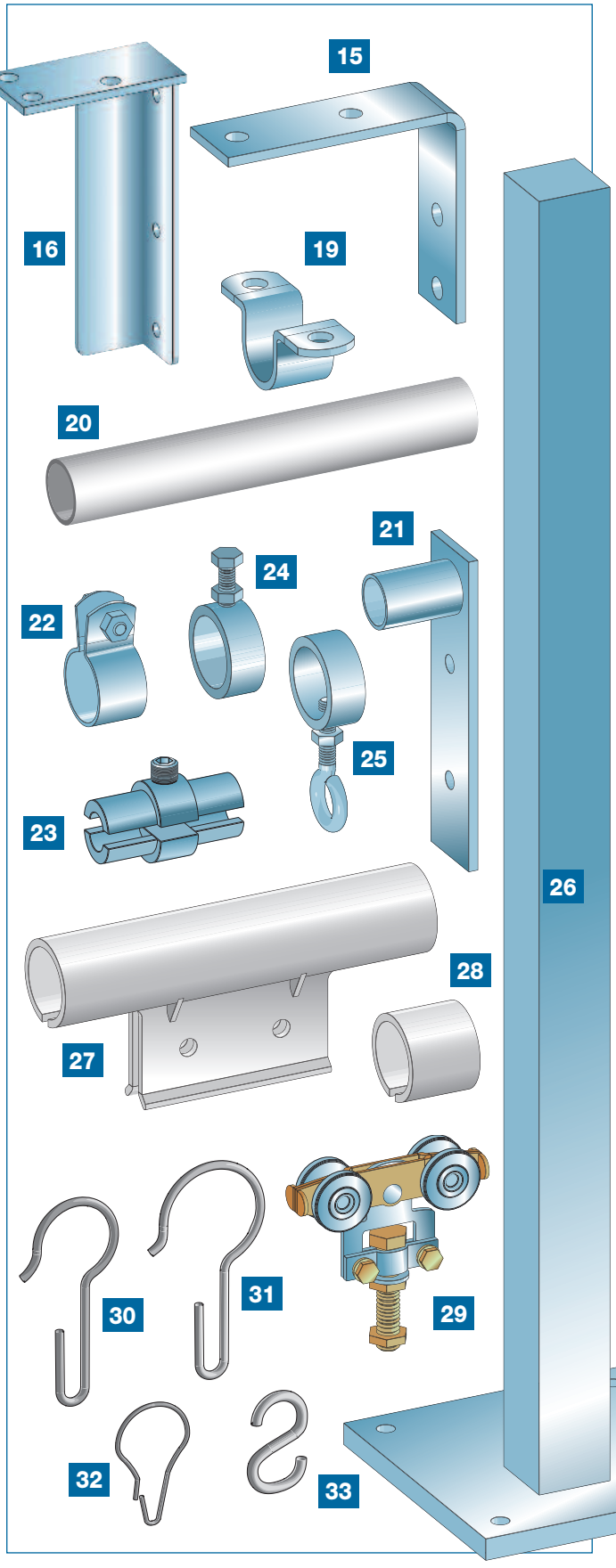


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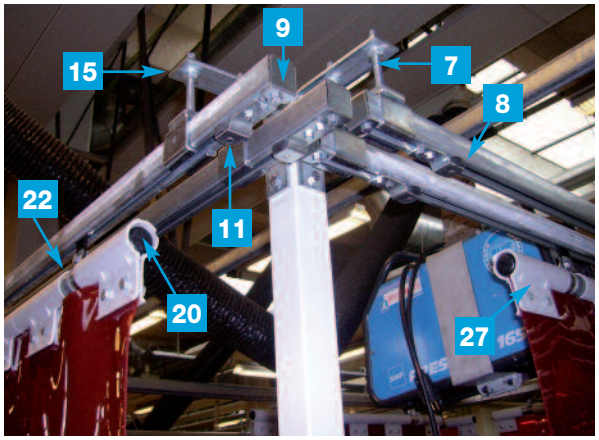
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Tube 33.7 mm and accessories



	Designation	Catalogue n°
15	Side wall support for double rail or pipe	W000010207
16	Universal support	W000010218
19	Ceiling support for rail support	W000010182
20	Pipe Ø 33.7 mm - 1 meter - 2 meters - 3 meters	 W000010187 W000010188 W000010189
21	Flange for connecting pipe	W000010183
22	Pipe support	W000010181
23	Pipe connector	W000010185
24	Pipe support for long dimension	W000010184
25	Opening ring	W000010223
26	Poles - 50 x 50 x 2 250 mm - 50 x 50 x 2 500 mm - 50 x 50 x 2 700 mm - 50 x 50 x 3 000 mm - 80 x 80 x 2 500 mm - 80 x 80 x 3 000 mm	 W000010194 W000010196 W000010197 W000010198 W000010195 W000010193
27	Suspension clip plastic	W000010238
28	Ring (33 %)	W000010237
29	Four wheel runner with tunable thread	W000010179
30	10 open rings 5 mm Ø 50	W000010220
31	10 open rings 4 mm Ø 40	W000010219
32	7 curtain's rings	W000010170
33	10 S rings	W000010206



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Opening system

Curtain's swivel winch

- Winch with wire strainer
- Cable
- Maximum gap 8 000 mm
- Delivered without curtain.

Catalogue n°: W000010301



Swivel arm with indexing position for curtains or strips

Suitable for 50 x 50 mm column

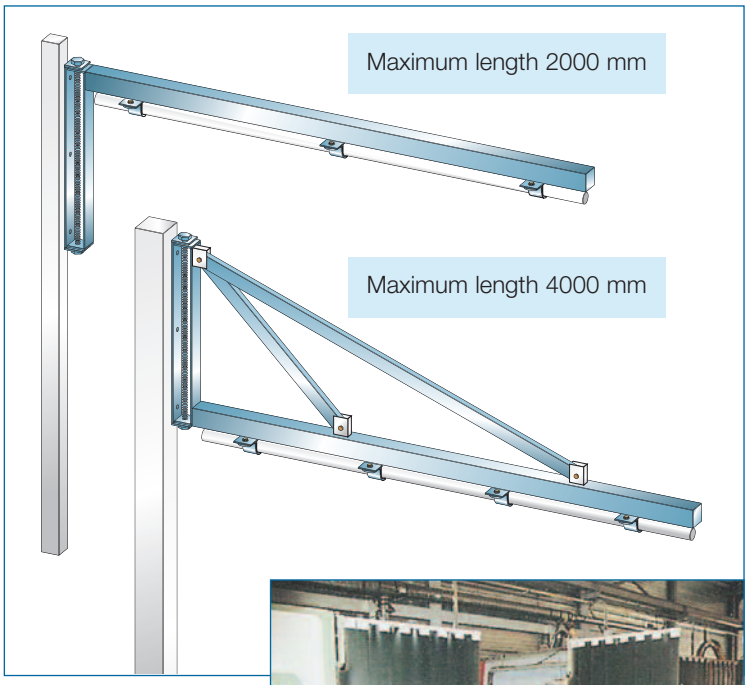
- Indexing position: - 90°, 0, + 90°
- Length 1 000 to 2 000 mm, to be indicated when ordering

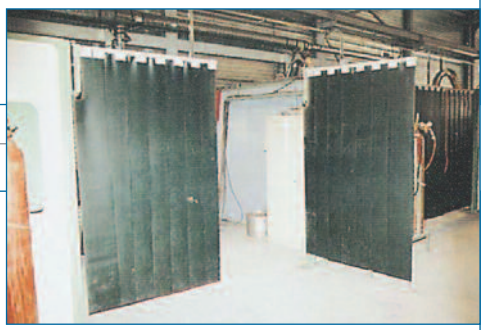
Catalogue n°: W000010298

Suitable for 80 x 80 mm column

- Indexing position: - 90°, 0, + 90°
- Length 2 000 to 4 000 mm, to be indicated when ordering

Catalogue n°: W000010299



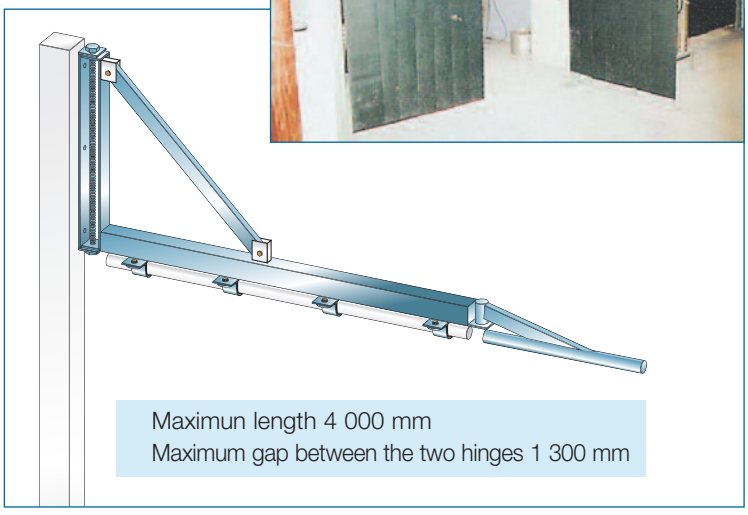


Swivel arm with indexing position for curtains or strips

Suitable for 120 x 120 mm column or a wall, with double hinges

- Indexing position: - 90°, 0, + 90° on the two hinges
- Length 2 000 to 4 000 mm, to be indicated when ordering

Catalogue n°: W000010300



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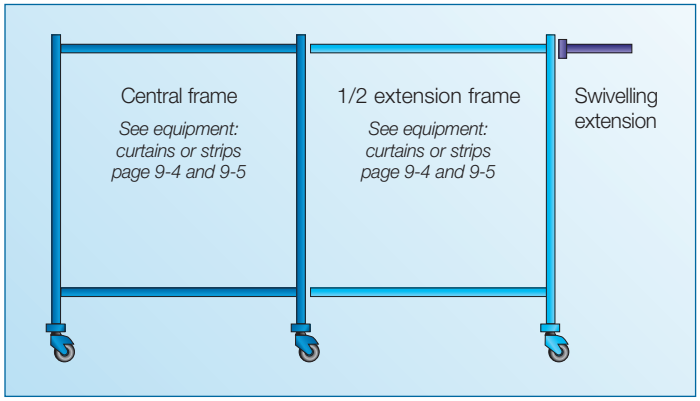
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Opening system

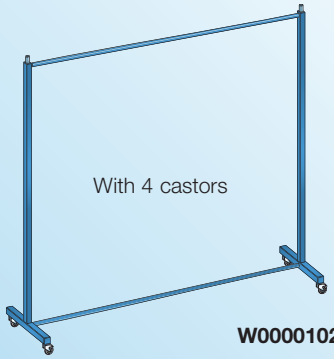
Modular components TRYPTICAL

- Central frame: length 1 900 mm, height 2 000 mm.
  Catalogue n°: W000010224
- Extension frame: length 1 900 mm, height 2 000 mm.
  Catalogue n°: W000010225
- Set of 2 swivelling support for 1/2 extension frame.
  Catalogue n°: W000010227
- Set of 2 extension frames 800 mm.
  Catalogue n°: W000010226
- Set of 2 castors spares, one with brakes.
  Catalogue n°: W000010497



Modular components UNIVERSAL

Central frame alone 2 100 mm

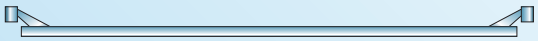


W000010269

Swivelling link alone, swivelling with 2 frames



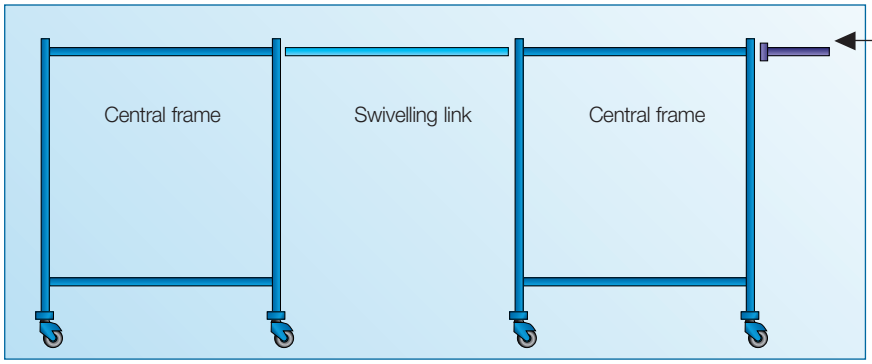
2.1 m length. **W000010272**



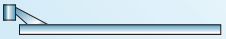
1.7 m length. **W000010271**



1.3 m length. **W000010270**



Swivelling link



0.7 m length.
W000010273



1.1 m length.
W000010274

Strip's handing hook



W000010238

How to complete the frames?

Width in meter	Nb of strips	Nb of curtains
0.7	3	1
1.1	5	1
1.3	6	1
1.7	8	2*
2.1	10	2

** take in account the total length of the structure*



4 screens fitted together with swivelling links could make a full separation without sealing:

= 4 x W000010269

+ 2 x W000010272

+ Strips and hooks

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Curtains and heat resistant fabrics

WELDLINE

Insulating products

This kind of product is used either to cool down parts in a controlled way or to protect people from hot particles.

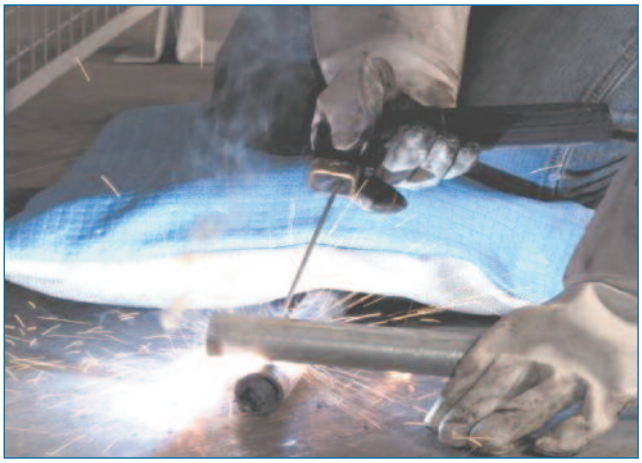
New finishing:
- Stainless steel wire coated with Kevlar
- Seams strengthened
- Grid fabrics

Welding cushions

Prevent welders from injuries due to hot particles and/or offer them a better and more comfortable welding position. Cushions are filled with glass fibre.

Cushions	Thickness	Catalogue n°
500 mm x 500 mm	80 mm	W000010541
1 000 mm x 1 000 mm	80 mm	W000010542

Temperature: 550 °C, peak at 600 °C.



Insulating sleeves

Specially designed for control cooling down of just welded pipes.

They can be adapted to different diameters and size of the surrounded parts.

Insulating sleeves	Diameter	Catalogue n°
1 000 mm x 500 mm	280 mm	W000010543
1 500 mm x 500 mm	440 mm	W000010544
2 000 mm x 500 mm	610 mm	W000010545

Temperature: 550 °C, peak at 600 °C.



Insulating blankets

Specially designed to control cooling down of just welded parts.

Insulating blankets	Thickness	Catalogue n°
1 000 mm x 2 000 mm	30 mm	W000010546
2 000 mm x 2 000 mm	30 mm	W000010547
1 000 mm x 2 000 mm	60 mm	W000010548
2 000 mm x 2 000 mm	60 mm	W000010549

Temperature: 550 °C, peak at 600 °C.



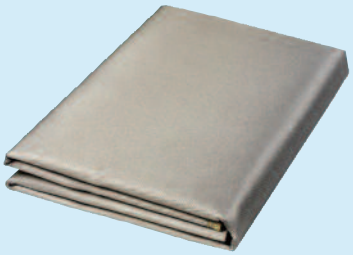
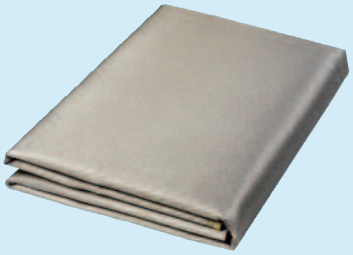
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Curtains and heat resistant fabrics

WELDLINE

Name	Base	Application	Temp. (°C)	Weight (gr/m²)	Finition	Dimensions (mm)	Catalogue n°
VULCAIN Curtain (1) 	Glass fiber 2 sided PU	Horizontal and vertical, lightwelding and grinding	Peak: 600 / Continuous: 550	720	Grey	1600 x 1500	**W000010316**
						1800 x 1500	**W000010317**
						2000 x 1500	**W000010318**
CHRONOS 	Glass fiber 1sided PU	Horizontal and vertical, lightwelding and grinding	Peak: 600 / Continuous: 550	690	Grey	1000 x 2000	**W000274163**
						2000 x 2000	**W000274164**
						2000 x 3000	**W000274165**
						3000 x 3000	**W000274166**
						4000 x 4000	**W000274168**
						1000 x 25 m *	**W000274169**
VULCAIN BLANKET (2) 	Glass fiber 2 sided PU	Horizontal and vertical, lightwelding and grinding	Peak: 600 / Continuous: 550	720	Grey	2000 x 1000	**W000010319**
						2000 x 2000	**W000010320**
						3000 x 2000	**W000010321**
						3000 x 3000	**W000010322**
						4000 x 3000	**W000010323**
						4000 x 4000	**W000010324**
						1000 x 25 m*	**W000010498**

**full roll not hemmed*
(1): on request, height 2200 mm / 2400 mm / 2800 mm / 3000 mm delivered under 3 weeks
(2): on request, per square meter W000010528
(3): on request, per square meter W000010332





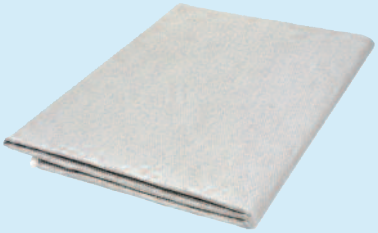

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Curtains and heat resistant fabrics

WELDLINE

Name	Base	Application	Temp. (°C)	Weight (gr/m²)	Finition	Dimensions (mm)	Catalogue n°
VESUVIO 	Glass fiber (filament) 2 sided calcium silicate	Horizontal and vertical, welding and grinding	Peak: 750 / Continuous: 700	690	Dark grey	1000 x 1000	W000010529
						2000 x 1000	W000010530
						2000 x 2000	W000010531
						3000 x 2000	W000010532
						3000 x 3000	W000010533
						4000 x 3000	W000010534
ETNA "3" 	Glass fiber (texturized), HT - 2 sided PU	Horizontal heavy duty welding	Peak: 900 / Continuous: 750	1220	Grey	1000 x 1000	W000010325
						2000 x 1000	W000010326
						2000 x 2000	W000010327
						3000 x 2000	W000010328
						3000 x 3000	W000010329
						4000 x 3000	W000010330
						4000 x 4000	W000010331
SIRIUS 	Glass fiber (texturized)	Horizontal heavy duty welding work, very high flame resistant	Peak: 1000 / Continuous: 700	1035	Lignt brown	1000 x 2000	W000274170
						2000 x 2000	W000274171
						2000 x 3000	W000274172
						3000 x 3000	W000274173
						1000 x 25 m*	W000274174
STROMBOLI 	Silicate fiber filament 2 sided vermiculite	Horizontal, heavy duty work, resistant to very high temperature	Peak: 1300 / Continuous: 1000	1220	Light brown	1000 x 900	W000010535
						2000 x 900	W000010536
						2000 x 1800	W000010537
						3000 x 1800	W000010538
						3000 x 2700	W000010539

MO CERTIFICATE

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

PHONIC 60 range

This modular system allows to compose a welding booth system, providing a confortable protection against light and noise when welding or grinding.

Customer benefits:

- **Very strong structure**
- **Very good sound insulation**
- **Easy mounting**

Panel's height is 2 010 mm or 2 510 mm with 510 mm or 1 010 mm width.
Bottom space is generally 140 mm for 2 010 mm panels and the wall can also be delivered without free space.



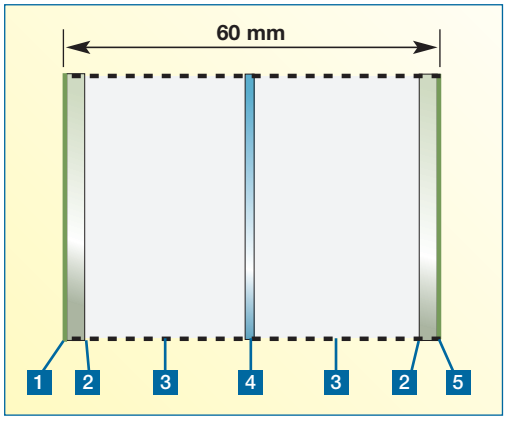


Technical characteristics

Thickness of the panel 60 mm.

Made with 7 sandwiched layers that guarantee their efficiency:

1. Perforated steel plate or full steel plate (for external face) 0.8 mm thick.
2. Wool and glass fibre with anti-dust treatment
3. Sound absorbing rock wool 25 mm
4. Steel plate 1.0 mm thick
5. Perforated steel plate (for internal face) 0.8 mm thick.

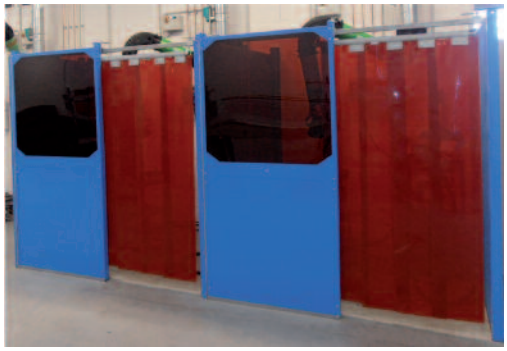


Panels and frames are painted internally and externally with U.V. absorbing paints (RAL 5015 blue or RAL 6011 green).

The panels are resistant to welding or grinding spatters.

They are flame-resistant.

They make your workshop safe and comfortable.



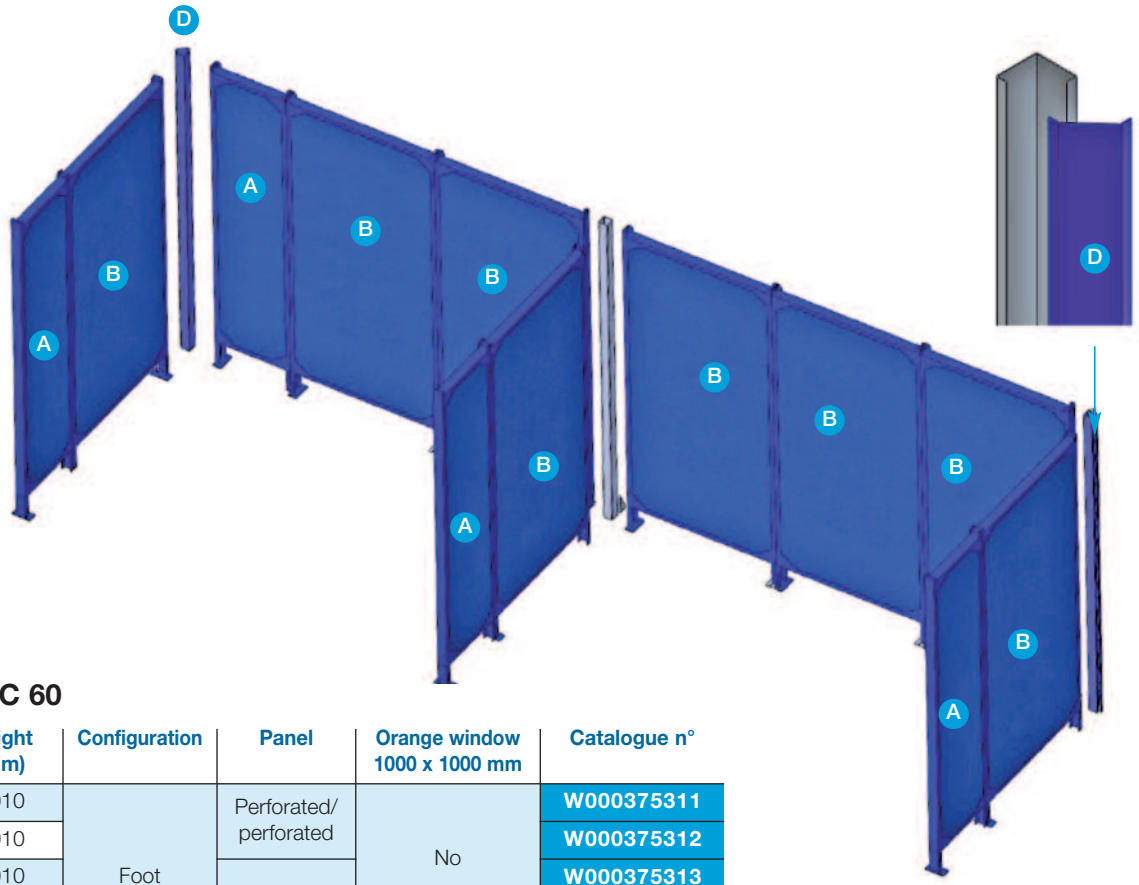
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Sound insulating walls

WELDLINE



Panel PHONIC 60

Width (mm)	Height (mm)	Configuration	Panel	Orange window 1000 x 1000 mm	Catalogue n°
510	2010	Foot	Perforated/ perforated	No	W000375311
1010	2010				W000375312
510	2010		Perforated/ full		W000375313
1010	2010				W000375314
1010	2010			Yes	W000375315
510	2010	Floor fitting	Perforated/ perforated	No	W000375321
1010	2010				W000375322
510	2510				W000375323
1010	2510				W000375324
510	2010		Perforated/ full		W000375325
1010	2010				W000375326
510	2510				W000375328
1010	2510				W000375329
1010	2010			Yes	W000375327
1010	2510				W000375330
1010	2010	On wheels	Perforated/ perforated	No	W000375337
2010	2010				W000375338

Example for the construction of a PHONIC grinding booth

- A 4 panels on foot (height 2010 mm - width 510 mm)
- B 8 panels on foot (height 2010 mm - width 1010 mm)
- C 1 tube for assembly in T
- D 2 corner posts

Accessories for assembly

	Catalogue n°
Corner post 2200 mm height	W000375316
Corner post 2500 mm height	W000375331
Tube 2200 mm long for T or cross panel assembly	W000375319
Tube 2500 mm long for T or cross panel assembly	W000375332
Floor bracket 60 x 60 for tube T or cross panel assembly	W000375320
U profil for floor mounting, length 2850 mm	W000375333
Wall U profil for panel on foot height 2010 mm	W000375334
Wall U profil for panel on floor fitting height 2010 mm	W000375335
Wall U profil for panel on floor fitting height 2510 mm	W000375336

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

PHONIC 60 - Grinding booths

PHONIC 60 grinding booths are made with 2500 mm high PHONIC panels, roof and side panels. In standard the panels come in blue color (RAL 5015). On request other colors are possible.

Panels are sound absorbing with a sandwich structure perforated inside and full outside.

Depending on their size, the booths will be equipped of one single door or a double door.

The single door includes a translucent oculus and opens on the right side.

Inside the door is equipped with an anti panic opening device.

The double doors are identic with an oculus and an anti panic device on each.

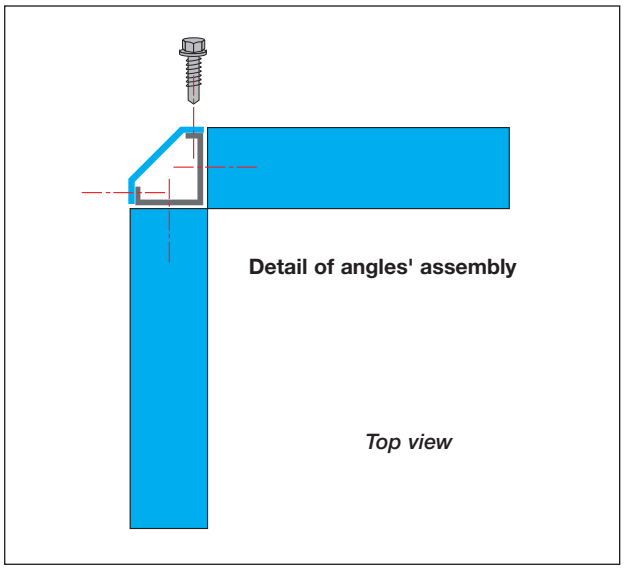
The booths lie on the ground on a “U” profile which will be screwed. Under the “U” profile a seal will be better to compensate for unevenness.

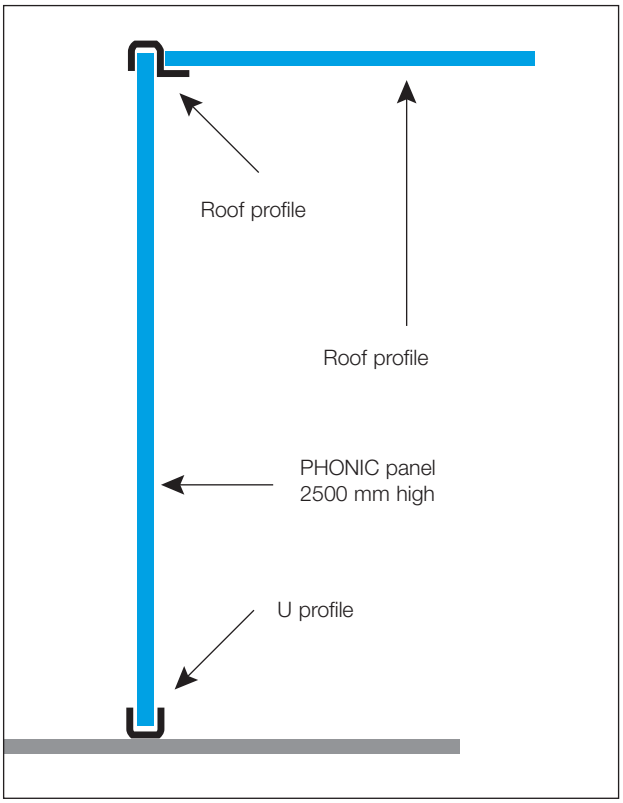
Every closed room where somebody can stay has to be equipped with ventilation. For one worker this ventilation has to be at least 30 m^3/h.

To satisfy this requirement, the roof includes an opening 200 x 200 mm to fit general ventilation.

This is completed by a sound absorbing air inlet at the bottom.

This ventilation is independent of the eventual pollution extraction which can be necessary.





Standard booths' dimensions

Length	Width	Simple door	Double doors	General ventilation	Air inlet (acoustic)	Overall dimensions	Catalogue n°
2000 mm	2000 mm	Yes	-	Included 60 m^3/h	Yes	2 144 x 2 144 mm	**W000010550**
3000 mm	2000 mm	Yes	-	Included 90 m^3/h	Yes	3 156 x 2 144 mm	**W000010551**
2500 mm	2500 mm	Yes	-	Included 90 m^3/h	Yes	2 656 x 2 656 mm	-
3000 mm	2500 mm	Yes	-	Included 120 m^3/h	Yes	3 156 x 2 656 mm	-
4000 mm	2500 mm	-	Yes	Included 150 m^3/h	Yes	4 168 x 2 656 mm	-
5000 mm	2500 mm	-	Yes	Included 180 m^3/h	Yes	5 180 x 2 656 mm	-
6000 mm	2500 mm	-	Yes	Included 200 m^3/h	Yes	6 192 x 2 565 mm	-

For other dimensions consult us

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Sound insulating elements

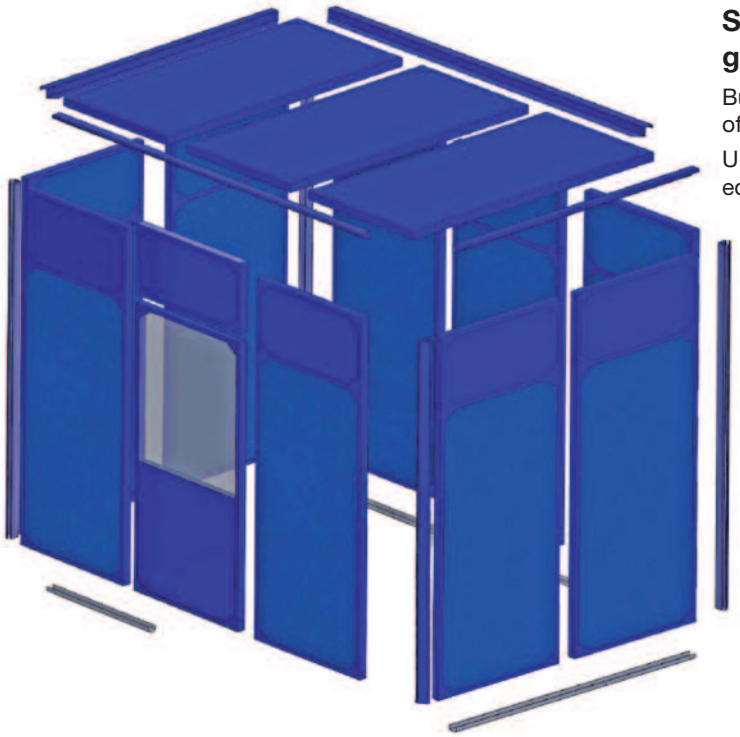
WELDLINE



Grinding booth:
L = 7 000 mm, W = 4 500 mm, H = 2 500 mm



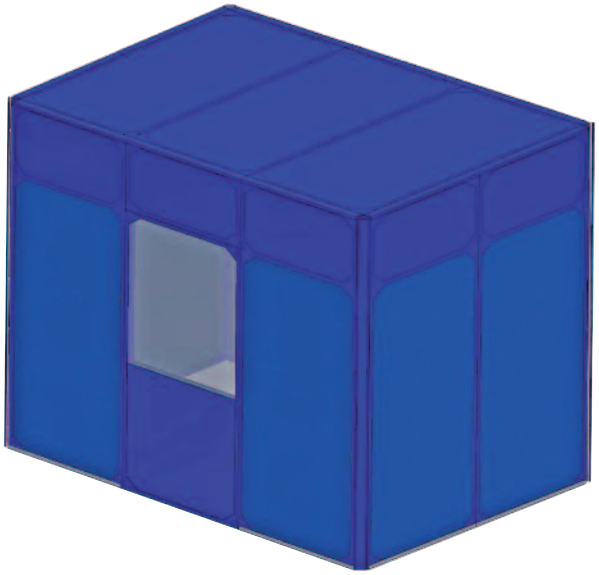
Grinding booth 2 500 x 4 000, H 2 500, with 4 grinding tables. Automatic starting of the air extraction by detection of the operator in front of the table. Reintroduction of air into the booth after dusts' filtering. General ventilation of the cabin and lighting.



Standard PHONIC 60 grinding booths

Building details
of a 2000 x 3000 mm booth.

U profile on the ground and door equipped with a window.



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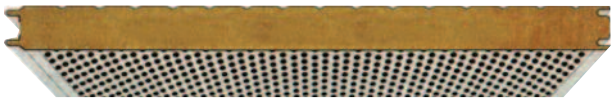
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Sound insulating booths PROPHONIC 100

PROPHONIC 100 panels

The panels, which are the base of the ALW insulating booths, were made to answer to increasing requests for performance of the sandwiches panels, in terms of acoustic absorption. The panels are also flame-retardant.



The rock-wool sandwiches panels PROPHONIC 100 are isolated, dividing up and free-standing elements.
They contain a rock-wool nucleus with very high density oriented fibers. The fibers are vertically disposed on the surface and unrolled in loops, longitudinally moved and transversally compacted.

Metal supports

- Sendzimir galvanized steel sheets (UNI EN 10326 - UNI EN 10327).
- Pre-lacquered galvanized steel sheets, with the Coil-Coating process.
- Aluminum alloy sheets, with natural finish, stucco and pre-lacquered (EN 485 norm).
- Pre-lacquering made by continuous process, with a width of micrometers and 20 micrometers of painting on the visible side.
- Perforated sheet: diameter of the holes : 3 mm, center distance: d = 5 mm.

Isolating mass

- Isolating coat realized thanks to high density mineral fibers (**75 kg/m³,** m = 0,040 W/mK at 10°C).

Useful charge

- Deformation: an arrow equal or inferior to 1/200 of reach is admitted.
- Flexion: we supposed the effort of flexion was completely absorbed by the support sheets.
- Cutting: we supposed the sharp effort was absorbed partially by the support sheets and partially by the insulator.
- The indicated data in the tables are to consider as purely indicative.

Panels' weight

- Width 100 mm: **17.32 kg/m².**

Acoustic insulation

- Rw = 35 dB - (for the panels of width 100 mm).

Acoustic absorption

- Weighed coefficient of acoustic absorption w = 1.

Fire resistance (circular N°91 of the 14/09/1961)

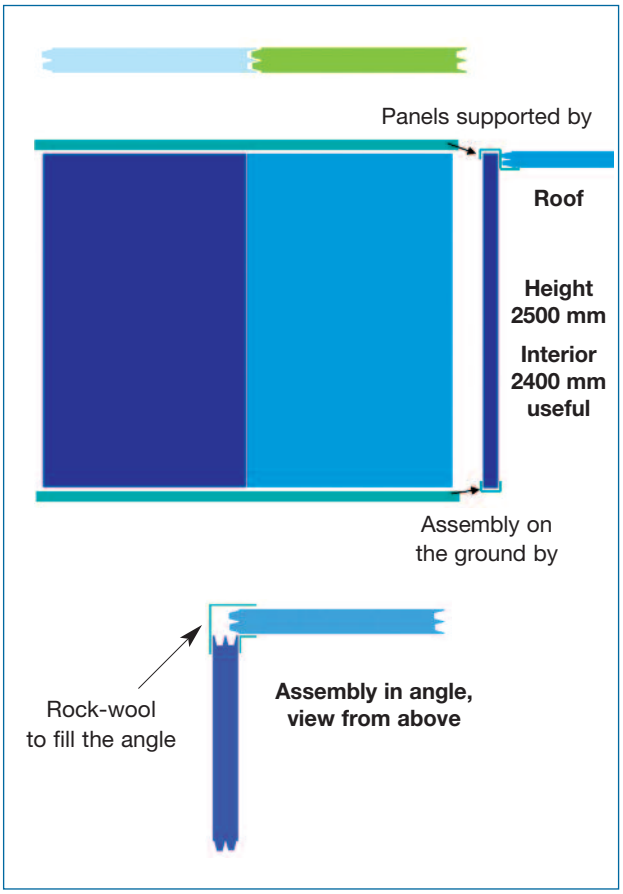
- The tested PROPHONIC 100 panels have obtained the following results:
  REI* 60 for a panel of width 100 mm.
  **REI = Resistance Water tightness Insulation*

Standard color of the booths: Cream



Construction detail of the PROPHONIC 100 booths

- Pannel of thickness 100 mm, width 1000 mm.
- Exterior: full sheet / Interior: perforated sheet.

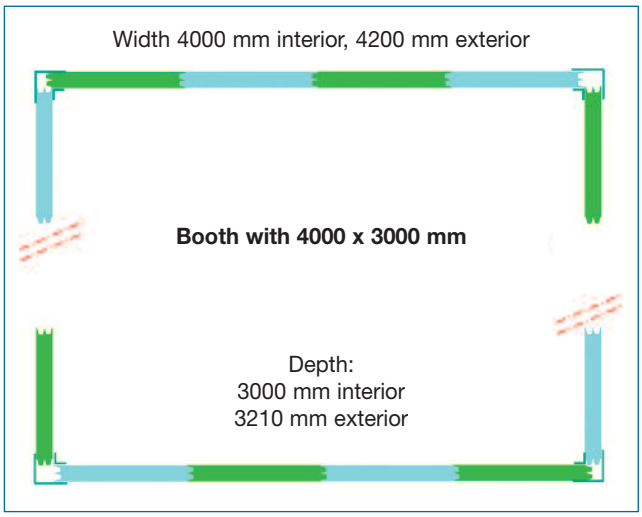


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Sound insulating booths

WELDLINE

Sizing of the PROPHONIC 100 booths with 1 000 mm panels







Composition of a PROPHONIC 100 booth

- A sound insulating Prophonic 100 booth can be chosen between 2 heights:
  - Panels height 2500 mm
  - Panels height 3000 mm
- It will be completed by one or several double thickness translucent oculus doors, realized in Polycarbonate thickness 6 mm. Simple width door 1000 mm or double width door 2000 mm. The doors are delivered with a handle on the exterior and an anti-panic bar on the interior.
  All of them are opening by "pushing from the inside" for security reasons.
- A general ventilation of 200 m^3/h single-phase 230 V - 50 Hz has been planned for a human presence. This ventilation has to be independent from the specific pollutants ventilation that can be implemented in the booth. This ventilation is composed by a ventilator on the roof of the booth and a low air inlet on one of the panels, with an acoustic plenum.
- The booth may have a maximal width of 6000 mm.
- Its length will depend on the client's need.
- As a complement, when the roof is entire, if a ventilation intended to get the specific pollutants is placed inside the booth, without recycling, we can provide air inlets of section 1 m^2, with acoustic plenum.
  - These inlets allow avoiding the depressurizing of the booth.
  - Generally, an air reintroduction speed close to 2 m/s is kept, namely 7200 m^3/h for 1 m^2.

Choice of a PROPHONIC 100 booth

Height of the booth	2 500 mm	3 000 mm
Length of the booth (in m)		
Width of the booth (in m)		
Air inlet (in m^2) to compensate specific ventilation		
General ventilation		
Simple door with oculus		
Double door with oculus		

To define the client need, it is necessary to know the parameters listed above.

The ALW commercial service will give you the price of your booth defined in this way, with or without the assembly realized by our team.


Acoustic air inlet


General ventilation

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

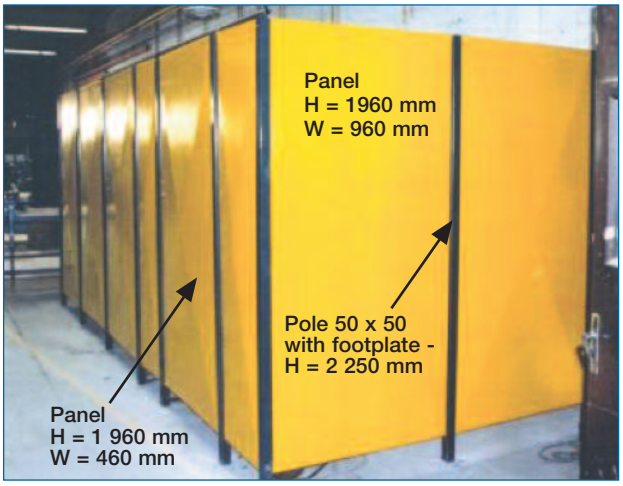
Welding booths with painted sheet (diamond point shape)

Welding booths or work booths can also be made with WELDLINE modular steel panels. These panels can be painted with any colour or galvanized. We recommand not to do clear painting or galvanized booths for welding environment.

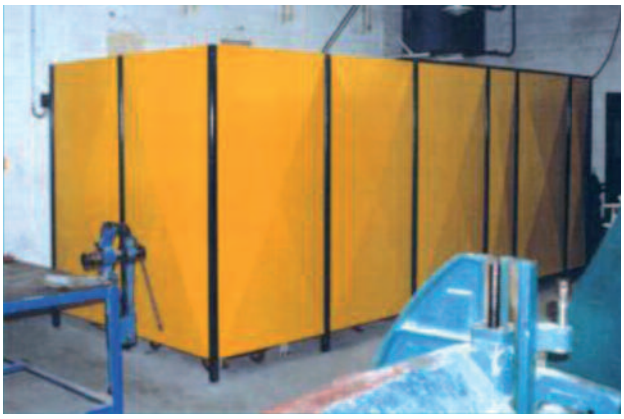
These panels are designed for a very strong structure diamond point shape. Two widths are possible 960 mm or 460 mm and a height of 1 960 mm.

They are fitted on 50 mm x 50 mm poles with a height of 2 250 mm, and a footplate.

The height of the booths will be identic to the poles (2 250 mm), with a free space at the bottom to make the cleaning easier.
The booth can be equipped either with strips or curtains.



Dimensions	Catalogue n°
Panel H = 1 960 mm, W = 460 mm	W000010302
Panel H = 1 960 mm, W = 960 mm	W000010303
Pole 50 x 50 H = 2 250 mm	W000010194







Booths closed with strips (300 mm x 2 mm) 33% overlap.

General views of welding booths built with partition steel panels in training welding center



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Welding tents

M2 CERTIFICATE

WELDLINE

Width 2 000 mm, length 2 000 mm, height on the sides 2 000 mm, on the middle 2 200 mm.

Canvas is made of white mat PVC (630 g/m²) certificated fire resistant M2.

2 openings: one in front, one in the back, closed with eyelets and staps.

All around a protection of 200 mm provides a full insulation against bad weather. The structure is made of galvanized tubes of 25 mm.



+ product:

- Self extinguishing canvas certificated M2.
- Resistant structure.
- Height of 2 200 mm in the middle.
- Good insulation.





	Catalogue n°
Canvas	W000274366
Structure	W000274367

Impact plates

ON REQUEST*



PVC plates 3 mm width. Comply with EN 1598.

Orange CE - Protection against welding light transmission.

Exist in 2 050 mm x 1 250 mm x 3 mm
1 025 mm x 1 250 mm x 3 mm
custom - mode product

EN 1598

	Catalogue n°
2 050 mm x 1 250 mm x 3 mm	W000274744
1 025 mm x 1 250 mm x 3 mm	W000274745

**** Means item defined but not on stock. Normal delivery 2 weeks***

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDING TOOLS AND ACCESSORIES

3 - MMA welding



- Electrode holders ..... 64 to 67
- MMA kits
  (electrode holder with cable + clamp with cable) 67
- Gouging torches ..... 68 to 69
- Ovens / Quivers ..... 70 to 73

For: clamps, connectors, cables, hammers, ceramic backings and others
*see chapter 5 "**Other arc welding**"*

WELDLINE

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.

EN 60974-11

- 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.

- Once the above criteria are established, the remaining choice is one of personal preference.

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.



Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Electrode holders

WELDLINE

Screw type electrode holders

Choice criteria

			Maximum mm	Maximum mm²
Screw type straight	TWIST 200	 2004-488	3.2	25
	TWIST 400		5.0	50
	VESTALETTE 250	 2011-033	4.0	35
	STUBBY 400	 2004-215	6.3	50
	MASTER 500	 2012-668	8.0	95
	VESTALE 500	 0947-68	8.0	95
Screw type curve	CURVA 400	 2004-497	5.0	50
	CURVA 600		6.3	70

Name	Cat N°	A (35%)	Ø cable (mm²)	Electrode diameter (mm)	Weight (g)	Customer's benefit
TWIST 200	W000010565	200	25	3.2	335	Economical electrode holders. Insulation class: A. Well balanced, rubber handle, left hand thread.
TWIST 400	W000010566	300	50	5.0	480	
VESTALETTE 250	W000010035 W000010883*	250	35	4.0	295	Light and totally insulated, fibre glass head long life duration, left hand thread. Insulation class: A.
STUBBY 400	W000010036 W000010879*	400	50	6.3	450	Well known, fibre glass single part head. Spare parts available, right hand thread. Insulation class: A.
MASTER 500	W000010037 W000010882*	500	95	8.0	530	Well known, fibre glass single part head. Spare parts available, right hand thread. Insulation class: A.
VESTALE 500	W000010038 W000010880*	500	95	8.0	470	THE heavy duty electrode holder. Insulation class: A. High resistance. Fibre glass head, left hand thread.
CURVA 400	W000010573	300	50	5.0	540	Curved electrode holders. Insulation class: B.
CURVA 600	W000010574	400	70	6.3	720	

** Cat. number for display*

Spare parts	Cat N°
MASTER - Head	W000011082
STUBBY - Head	W000260716
MASTER - Insulation	W000011083
STUBBY/MASTER - Spring	W000011084
STUBBY/MASTER - Handle	W000011077

Spare parts	Cat N°
STUBBY - Body	W000011085
VESTALE - Handle	W000011086
VESTALE - Head	W000011087

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

Lever type opened head electrode holders
Choice criteria

		Maximum (mm)	Maximum (Ø mm²)
CAÏMAN 200	 2004-491	3.2	25
CAÏMAN 400		5.0	50
CAÏMAN 600	 2004-648	6.3	70
SAMSON ECO 300		6.3	70

Name	Cat N°	A (35%)	Ø cable (mm²)	Electrode diameter (mm)	Weight (g)	Customer's benefit
CAÏMAN 200	W000010567	200	25	3.2	370	Economical electrode holders. Polyamide handle, fibre glass reinforced. Brass jaws. Insulation class: B.
CAÏMAN 400	W000010568	300	50	5.0	425	
CAÏMAN 600	W000010569	400	70	6.3	500	
SAMSON ECO 300	W000010622	300	70	6.3	450	Light version, well known SAMSON electrode grip. Insulation class: A.

Lever type closed head electrode holders
Choice criteria

		Maximum (mm)	Maximum (Ø mm²)
SEGURA 300	 2004-493	4.0	35
SEGURA 400		5.0	50
SEGURA 600		6.3	70
COBRA 300	 2011-0,32	6.3	50
OPTIMUS 300	 2004-647	6.3	70
OPTIMUS 400		8.0	95
OPTIMUS 500		8.0	95
TONG GRIP 400	 0947-67	6.3	70

Name	Cat N°	A (35%)	Ø cable (mm²)	Electrode diameter (mm)	Weight (g)	Customer's benefit
SEGURA 300	W000010570	300	35	4.0	415	Economical models. Nylon handle. Brass jaws. Insulation class: B.
SEGURA 400	W000010571	300	50	5.0	570	
SEGURA 600	W000010572	400	70	6.3	590	
COBRA 300	W000010039 W000010881*	300	50	6.3	420	Light and multi purpose. Insulation class: A.
OPTIMUS 300	W000010410	300	70	6.3	460	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 400	W000010411	400	95	8.0	560	
OPTIMUS 500	W000010412	500	95	8.0	620	
TONG GRIP 400	W000010040	400	70	6.3	500	High duty electrode holder

** Cat. number for display*

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Electrode holders

WELDLINE

Hobby and light duty electrode holders

Choice criteria

		Maximum mm	Maximum mm²
HOBBY 200	 2004-496	4.2	25
CAÏMY 200	 2004-486	3.2	25

Name	Cat N°	A (35%)	Ø cable (mm²)	Electrode diameter (mm)	Weight (g)	Customer's benefit
HOBBY 200	**W000268399**	200	25	4.0	135	An industrial design for light works
CAÏMY 200	**W000010576**	200	25	3.2	220	A small professional tool for light works. Insulation class: B.

MMA kits

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

Advantages:

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

The kits choice depends of several criteria:

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

The range:

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


2009-163

Cat N°	Kit	I max at 35%	Electrode holder	Cable length	Earth clamp	Cable length	Plug diameter	MMA power sources' types and applications
W000011138	**25C25**	200 A	CAIMAN 200	3 m	HIPPO 200	3 m	**9 mm**	Small intensity power sources for semi professional welding
W000260683	**25C25+**	300 A	SEGURA 300	3 m	HIPPO 400	2 m	**9 mm**	Small intensity power sources for working site up to Ø 4 mm
W000260684	**25C50**	300 A	SEGURA 300	3 m	HIPPO 400	3 m	**13 mm**	High intensity power sources for intensive use (up to Ø 4 mm) or work site
W000011139	**35C50**	300 A	SEGURA 300	4 m	HIPPO 400	4 m	**13 mm**	High intensity power sources for intensive use (up to Ø 4 mm) or work site
W000260681	**50C50**	300 A	SEGURA 400	4 m	HIPPO 400	4 m	**13 mm**	High intensity power sources for intensive use (up to Ø 5 mm) or work site
W000260682	**50C50+**	400 A	SEGURA 600	4 m	HIPPO 600	4 m	**13 mm**	High intensity power sources for intensive use (up to Ø 6.3 mm) or work site

WELDLINE

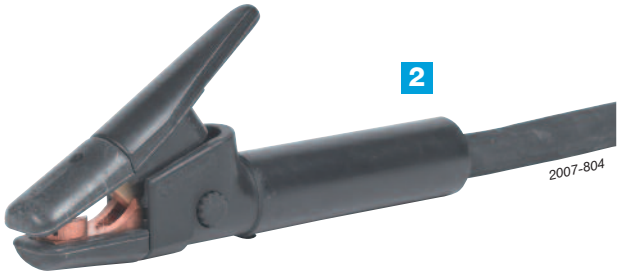
FLAIR®

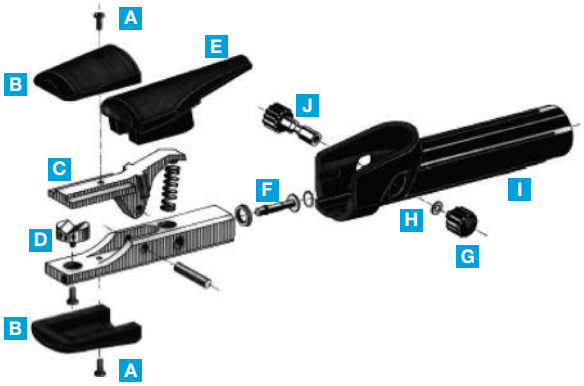
The FLAIR® gouging torch is a high quality torch.
The airflow can be regulated on the torch.
The recommended air pressure is 7 bar.

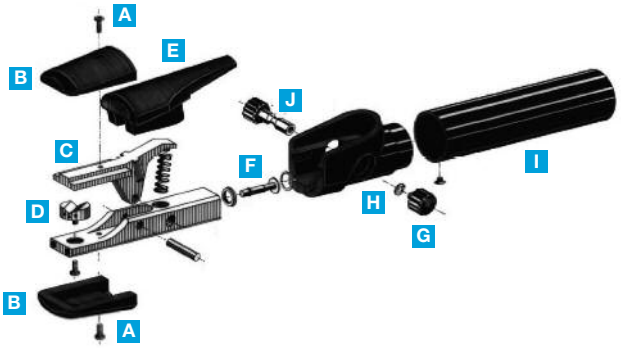
EN 60974-11 type B
EN 60245-6

	Current (A)	Electrode Ø max	Cat N°
1 **FLAIR 600**	600	10 mm - 3/8”	**W000010136**
2 **FLAIR 1600**	1600	19 mm - 3/4”	**W000010118**









Spare parts

Description	FLAIR® 600	FLAIR® 1600
A Screw MRX 4 x 10 mm (10 pieces)	W000010124	
B Insulation cap (2 pieces)	W000010125	
C Brass lever	W000010126	
D Injection nozzle complete with taptite	W000010127	W000011130
E Lever insulation	W000010128	
F Valve	W000010129	
G Push-button	W000010130	
H Safety ring (10 pieces)	W000010131	
I Handle	W000010132	W000011127
J Push-button and link	W000010133	
Monocable	W000010134	W000011128

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

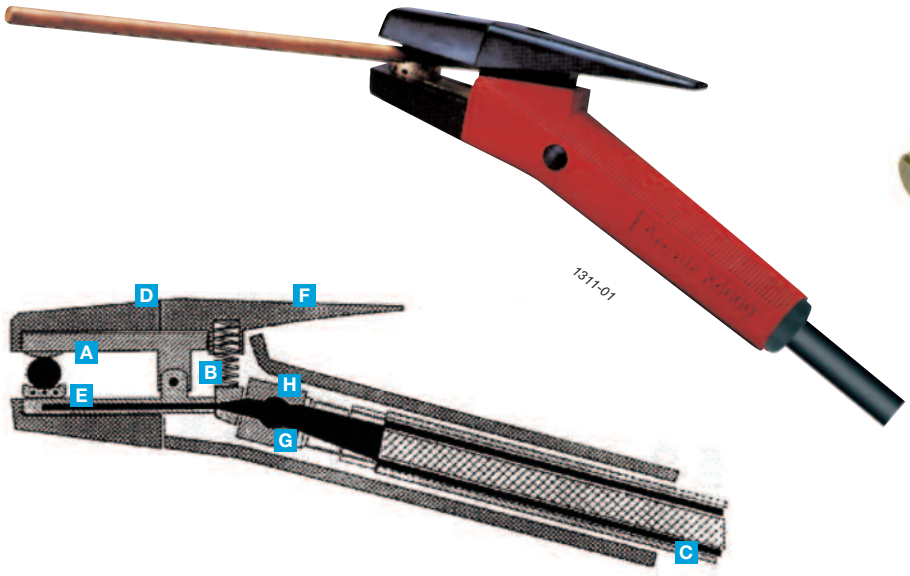
Gouging torches

ARCAIR K4000®

A well-known brand name in gouging process.

	Current (A)	Electrode Ø max	Cat N°
3 **K 4000**	1000	13 mm - 1/2”	W000010992
4 **Arcair adaptator**	-	-	W000370297

3



4



Spare parts

Description	K 2000	K 4000
A Jaw	W000011033	W000010991
B Spring	-	W000010990
C Cable 2.1 m	-	W000010993
D Shell	W000011030	W000010994
E Head	W000011031	W000010995
F Lever	W000011032	W000010996
G Body	-	W000010997
H Pushing kit	-	W000010998

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDRY PW8 / PW15 / 372 N INOX

Portable quivers

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

EN 61000-6-2
EN 61000-6-3
EN 60204-1

PREMIUM RANGE

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.



PW8

On request:
other models
- *without thermostat*
- *with thermometer*
- *with different power supply*
- *stainless steel or lacquered finishing*



PW15

MADE IN FRANCE

NEW



372 N - INOX

Technical data	WELDRY PW8	WELDRY PW15	WELDRY 372 N - INOX
Capacity (n. 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
Cat N°	W000120427	W000120428	W000383150
Cat N° (24 V)	W000371464	-	-

All WELDRY ovens are supplied with 2 m long cable

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDRY MW

Holding ovens for MMA electrodes

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

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.

EN 61000-6-2
EN 61000-6-3
EN 60204-1



MW2



2008-576

MW4

2008-577



MW6

2008-616

Technical data	WELDRY MW2	WELDRY MW4	WELDRY MW6
Shelves number	2	4	6
Capacity for each shelf	1500 electrodes	1500 electrodes	1500 electrodes
Temperature regulation thermostat	up to 200 °C		
Power	2.7 kW	2.7 kW	4.5 kW
Capacity *(weight and number of electrodes)*	135 kg - 3 000 el. Ø 3.25 mm	270 kg - 6 000 el. Ø 3.25 mm	405 kg - 9 000 el. Ø 3.25 mm
Power supply	Single phase 230 V - 50/60 Hz		Three phase 380 V - 50/60 H
Internal size	720 x 510 x 350 mm	720 x 510 x 620 mm	720 x 510 x 890 mm
External size	830 x 690 x 760 mm	830 x 690 x 1040 mm	820 x 690 x 1310 mm
Net weight	90 kg	123 kg	152 kg
Packaging dimension	850 x 710 x 780 mm	850 x 710 x 1420 mm	840 x 710 x 1330 mm
Gross weight	95 kg	135 kg	160 kg
Cat N°	W000120430	W000120431	W000120454

All WELDRY ovens are supplied with 2 m long cable

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

WELDRY CW

Re-baking ovens for MMA electrodes

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

On request: other models *(with fan ventilation system)*

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.

EN 61000-6-2
EN 61000-6-3
EN 60204-1



CW3

2008-569



CW6

2008-570



CW9

2008-571

Technical data	WELDRY CW3	WELDRY CW6	WELDRY CW9
Shelves number	3	6	9
Capacity (number of electrodes)	4 500 el. Ø 3.25 mm	9 000 el. Ø 3.25 mm	13 500 el. Ø 3.25 mm
Capacity	203 kg	404 kg	608 kg
Temperature regulation thermostat	up to 500 °C for heating element		
Number of resistance	3	6	9
Power	4.6 kW	9.1 kW	13.6 kW
Power supply	Three-phase 220 V / 380 V - 50/60 Hz		
Internal size	560 x 740 x 560 mm	560 x 740 x 980 mm	560 x 740 x 1430 mm
External size	800 x 880x 1030 mm	800 x 880x 1480 mm	800 x 880x 1880 mm
Net weight	140 kg	200 kg	266 kg
Packaging dimension	820 x 900 x 1050 mm	820 x 900 x 1500 mm	820 x 900 x 1900 mm
Gross weight	150 kg	215 kg	280 kg
Cat N°	W000120466	W000120467	W000120468

All WELDRY ovens are supplied with 2 m long cable

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDRY FW

Hopper ovens for flux

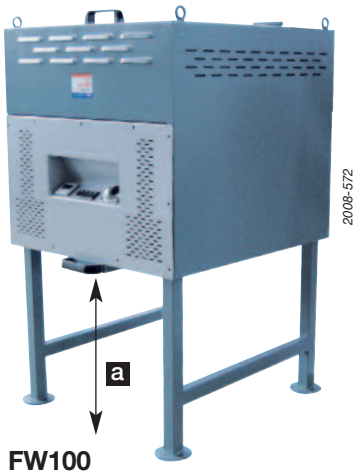
CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

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

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.



FW100



FW200



FW400

EN 61000-6-2
EN 61000-6-3
EN 60204-1

Technical data	WELDRY FW100	WELDRY FW200	WELDRY FW400
Load Capacity	60 kg	160 kg	320 kg
Temperature regulation thermostat	up to 500 °C for heating element		
Power	4 kW	4 kW	7.9 kW
Power supply	Three-phase 220 V / 380 V - 50/60 Hz		
Internal size	530 x 390 x 640 mm	690 x 690 x 740 mm	690 x 690 x 740 mm (each tank)
External size	670 x 709 x 1300 mm	825 x 819 x 1330 mm	1620 x 850 x 1340 mm
Net weight	90 kg	116 kg	210 kg
Height of the flap door for flux feeding	a = 500 mm	a = 450 mm	
Packaging dimension	690 x 750 x 1 320 mm	850 x 860 x 1 350 mm	1 640 x 870 x 1 360 mm
Gross weight	100 kg	130 kg	225 kg
Cat N°	W000120469	W000120470	W000120471

All WELDRY ovens are supplied with 2 m long cable

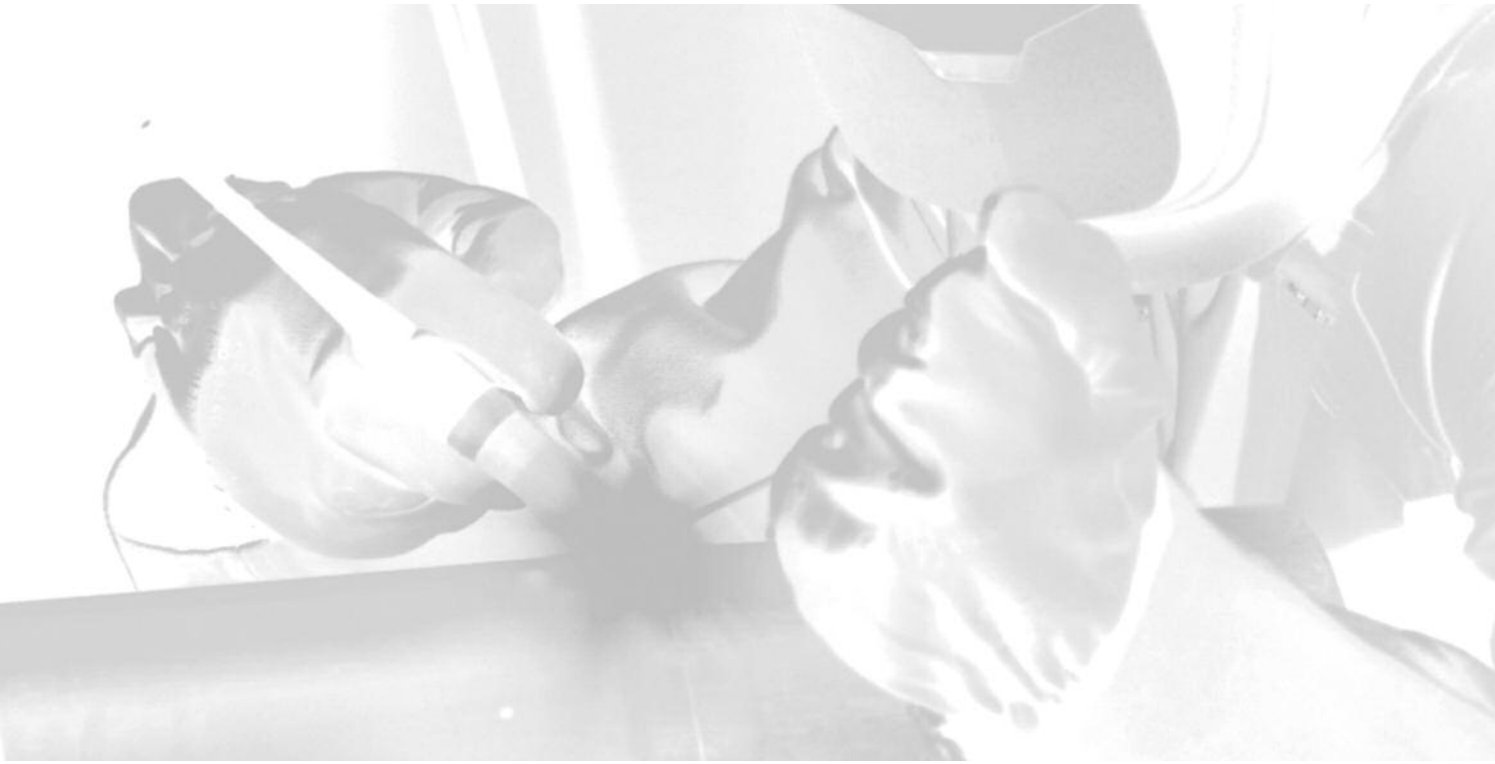
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDING TOOLS AND ACCESSORIES

4 - TIG welding



- Tungsten electrodes ..... 76 to 77
- Miscellaneous 78

For: clamps, connectors, cables, hammers, ceramic backings and others
*see chapter 5 "**Other arc welding**"*

WELDLINE

A complete range of tungsten electrodes:

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

ISO 6848
EN 26848

CAUTION:
before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

Choice criteria

Type	Metal		Arc stability	Striking	Lasting	Thermal resistance
	Light Alloys	Steel & Stainless steel				
WP Pure tungsten	⋆		⋆⋆	⋆	⋆	⋆
WC 20 Cerium 2%		⋆	⋆⋆	⋆	⋆⋆	⋆⋆
WL 20 Lanthanum 2%	⋆	⋆	⋆⋆	⋆⋆⋆	⋆⋆⋆	⋆⋆⋆
WS 20 Rare earths (1) 2%	⋆	⋆	⋆⋆	⋆⋆⋆	⋆⋆⋆	⋆⋆⋆

⋆⋆⋆ *Excellent* - ⋆⋆ *Good* - ⋆ *Average*

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

Since september 2014 Air Liquide Welding stopped to propose thorium electrodes

Benefits of Lanthanum Tungsten electrodes

Main criteria to select a tungsten electrode are: arc striking, arc stability and life duration.

To achieve this criteria we add oxides to tungsten, traditionally this was Thorium oxide.

We also know that under certain conditions (for example sharpening) **the thorium dust contains radioactive elements.**

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

Lanthanum is the best electrode if you consider the following:

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



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Tungsten electrodes

WELDLINE

WP - Pure tungsten
Light alloy (green tip)

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

WC 20 - Cerium 2%
Steel and stainless steel (grey tip)

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

WL 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
	Cat N°		
1.0	W000011144	W000010373	-
1.6	W000011145	W000010016	W000010385
2.0	-	W000010017	W000010386
2.4	W000011146	W000010018	W000010387
3.0	-	W000010019	-
3.2	-	W000010020	W000010388
4.0	-	W000010021	W000010389

WS 20 – Rare earths 2%
Light alloy (using AC current), steel and stainless steel (using DC current) (turquoise tip)

Ø mm	175 mm length
	Cat N°
1.0	W000335166
1.6	W000335167
2.0	W000335168
2.4	W000335169
3.0	W000335170
3.2	W000335171
4.0	W000335172

See the batch number on the tungsten electrode packaging and consult conformity certificate on www.weldline-alw.com



2006-528

Recommended welding intensities

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

TIG torch stand



Cat N°: W000010803

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

TIG POINT

Chemical sharpening of tungsten electrodes

Instructions for use:

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



Cat N°: W000011101

OPTICLEAN II

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

See page 100





Cat N°: W000011035

TIG SHARP

Portable electric tool for tungsten electrodes sharpening

Characteristics:

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

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

- **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.

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

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

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)* — **Cat N°: W000011037**
- **Spare blue head:** *(for tungsten electrodes Ø 1.6 / 2.0 / 2.4 / 3.2 mm)* — **Cat N°: W000011038**
- **Spare diamond disk:** — **Cat N°: W000011036**

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

WELDING TOOLS AND ACCESSORIES

5 - Other arc welding



- Cables and connectors ..... 80 to 81
- Clamps ..... 82 to 83
- Magnetic ground clamps ..... 84 to 85
- Hammers / brushes 86
- Miscellaneous 87
- Accessories 88

The different types of cable

● Primary cables:

Three core for single phase or four core for three phase requirement.

Standard: H07RN-F

The current indication is the maximum accepted to be conform to the 287 IEC recommendation.



2000-174

● Secondary cables:

Standard: H01N2-E extra flexible

Standard: H01N2-D flexible

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

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

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

Reference documents:

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

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Primary cables

H07RN-F

Ø mm²	A maxi *	Cat N° Linear meter
3 x 1.5 mm²	16 A	W000010098
3 x 2.5 mm²	20 A	W000010099
4 x 2.5 mm²	20 A	W000010100
4 x 4 mm²	30 A	W000010101
4 x 6 mm²	37 A	W000010102
4 x 10 mm²	52 A	W000010103
4 x 16 mm²	69 A	W000010104
4 x 25 mm²	92 A	W000010105
4 x 35 mm²	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	Ø mm²	A maxi	Cat N° Linear meter
Male	10-25 mm²	200 A	W000010559
	35-50 mm²	400 A	W000010560
	70-95 mm²	600 A	W000010561
Female	10-25 mm²	200 A	W000010562
	35-50 mm²	400 A	W000010563
	70-95 mm²	600 A	W000010564

Secondary cables

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

Ø mm²	A maxi *			Extra flexible (H01N2-E)	Flexible (H01N2-D)	
	@100%	@60%	@35%	Linear meter	Coil 50 m	Linear meter
16 mm²	135 A	139 A	150 A	W000010137	W000260274	W000260272
25 mm²	180 A	190 A	213 A	W000010138	W000260275	W000260273
35 mm²	225 A	243 A	279 A	W000010139	W000260276	W000260270
50 mm²	285 A	316 A	371 A	W000010140	W000260277	W000260271
70 mm²	355 A	403 A	482 A	W000010141	W000260278	W000260269
95 mm²	430 A	498 A	606 A	W000010142	W000260279	W000260268
120 mm²	500 A	587 A	721 A	W000010143	-	-

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

Cable lugs



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

Cat N°: W000010094



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

Cat N°: W000010096



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

Cat N°: W000010095



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

Cat N°: W000010640

Diameter : 16 mm
Cable : 70-100 mm²

Cat N°: W000335165

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

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.

EN 60974-13

Clamps for normal use

Choice criteria		Maximum amperage (A)	Jaw opening (mm)
HIPPO 200	 2004-634	200	38
HIPPO 400		400	50
HIPPO 600		600	50
CROCODILE 300	 2007-756	300	38
CROCODILE 600		600	38

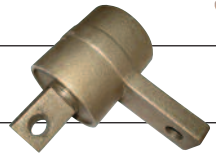
Name	Cat N°	A (35%)	Ø cable (mm^2)	Weight (g)	Customer's benefit
HIPPO 200	**W000010579**	200	25	208	Economical steel clamps.
HIPPO 400	**W000010580**	400	70	362	
HIPPO 600	**W000010597**	600	70	376	
CROCODILE 300	**W000010577**	300	50	405	Brass clamps. Brass jaws.
CROCODILE 600	**W000010578**	600	95	634	Very good contact surface.

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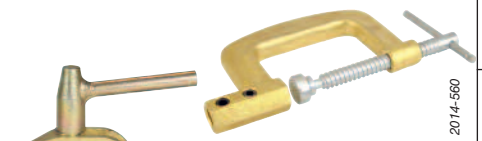
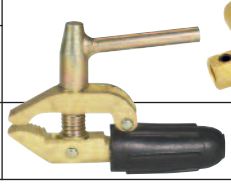
PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Clamps for bulky parts

Choice criteria		Maximum amperage (A)	Jaw opening (mm)
MAGNETIC 500	 2004-644	500	N/A
MAGNETIC 600		600	N/A
ROTARY 800	 2009-296	800	82
ECR 1500-1	 2014-541	1500	N/A

Name	Cat N°	A (35%)	Ø cable (mm²)	Weight (g)	Customer's benefit
MAGNETIC 500	**W000010553**	500	70	815	Large surface contact. Can be placed close to the welding position insuring good electrical contact.
MAGNETIC 600	**W000010554**	600	95	1722	
ROTARY 800	**W000010555**	800	2 x 95	3319	Brass clamps. Brass jaws.
ECR 1500-1	**W000374086**	1500 (100 %)	-	2614	Rotating clamps for heavy duty works in submerged arc welding

Clamps for heavy duty use

Choice criteria		Maximum amperage (A)	Jaw opening (mm)
MUSCLOR 300	 2004-638	300	38
MUSCLOR 600		500	38
SERRE-JOINT 500	 2014-560	500	60
SERRE-JOINT 800		800	75
DRAGON 600	 2004-640	600	38

Name	Cat N°	A (35%)	Ø cable (mm²)	Weight (g)	Customer's benefit
MUSCLOR 300	**W000010583**	300	50	480	Heavy duty brass clamps, powerful jaws giving excellent grip.
MUSCLOR 600	**W000010584**	500	95	762	
SERRE-JOINT 500	**W000010987**	500	95	744	Cable fixed with brass sleeve. Improved grip through clamp tightening capacity.
SERRE-JOINT 800	**W000010988**	800	95	1187	Cable fixed with brass sleeve. Improved grip through clamp tightening capacity. 3 positions of brass guide.
DRAGON 600	**W000010582**	600	95	816	Brass jaws, rubber sheath cable protection. Screw tightening giving excellent grip.

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

MAGSWITCH

Magnetic ground clamps and positioners

Warranty: 1 year

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*".

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

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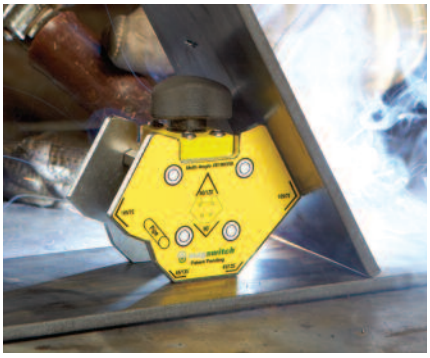
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

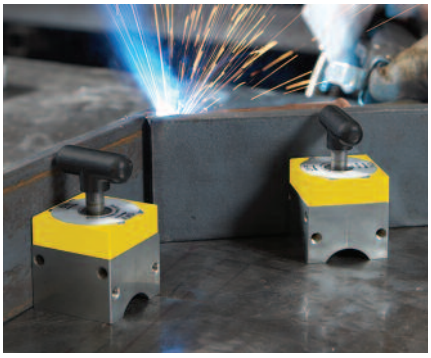
Magnetic ground clamps

WELDLINE


2012-485


2012-489


2012-492


2012-496


2012-504


2012-509



2012-602

1



2



2012-603

3



4



2012-604

5



6



7



2012-606



9

Pivot Angle 200

8



2012-605

2012-607

10



11



2012-608

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

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



Cat N°: W000010801

- Weight: 660 g
- Length: 315 mm

Steel head, red rubber grip



Cat N°: W000010800

- Weight: 240 g
- Length: 260 mm

Stainless steel hammer, red rubber grip



Cat N°: W000010556

- Weight: 230 g
- Length: 255 mm

Steel hammer G type, tubular handle



Cat N°: W000010646

- Weight: 410 g
- Length: 300 mm

Carbon steel English type, spring handle



Cat N°: W000335164

- Weight: 290 g
- Length: 265 mm

Wire brushes

4 rows brass coated steel wires



Cat N°: W000010162

4 rows steel wires



Cat N°: W000010163

2 rows stainless steel wires



Cat N°: W000010164

4 rows stainless steel wires



Cat N°: W000010165

Special brush for aluminium

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



Cat N°: W000010166

Rivet wire brush



Carbon steel
Cat N°: W000335161
Stainless steel
Cat N°: W000335160

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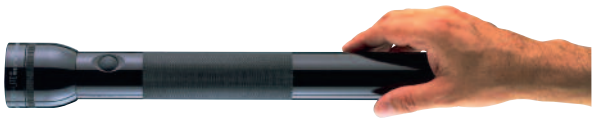
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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

MAGLITE®

Blister packed

Warranty: 10 years



0951-16

Name	AAA	AA	2D	3D	4D
Colour	Black	Black	Black	Black	Black
Composition	Torch, pen style, 2 batteries LR3	Torch, black nylon case, 2 batteries LR6	Torch	Torch	Torch
Weight	49 g	106 g	421 g	506 g	562 g
Diameter	13 mm	18 mm	-	-	-
Length	127 mm	145 mm	254 mm	307 mm	369 mm
Battery (type)	2 LR3	2 LR6	2 LR20	3 LR20	4 LR20
Cat N°	W000211966	W000211967	W000211968	W000211969	W000211970

Pack range





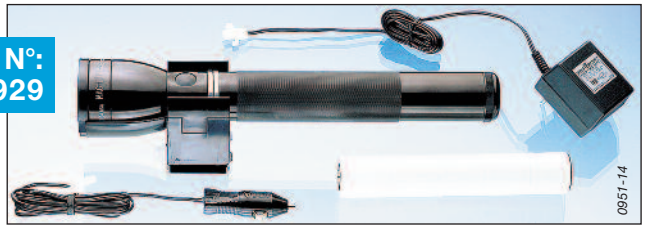


Designation	Cat N°
Solitaire	W000211978
AAA	W000211977
AA	W000211976

MAG Charger

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

Cat N°: W000211929



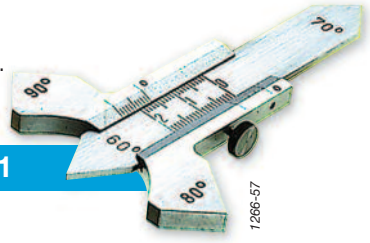
0951-14

Spare parts for MAGLITE® charger		Cat N°
Designation	Bulbs	W000211654
	Battery	W000211980
Spare bulbs		**Cat N°**
Designation	AAA	W000211653
	AA	W000211972
	2D	W000211973
	3D	W000211974
	4D	W000211975

Welding gauge

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

Cat N°: W000011041



1266-57

Temperature control stick

- Easy to use surface indicator
- ±1% accuracy



2005-270

Designation and temperature	Per pack of 12 pieces
100 (101 °C - 213 °F)	W000010156
120 (121 °C - 250 °F)	W000011042
150 (149 °C - 300 °F)	W000010157
177 (177 °C - 350 °F)	W000011045
200 (198 °C - 388 °F)	W000010158
232 (232 °C - 450 °F)	W000011044
250 (253 °C - 488 °F)	W000010159
300 (302 °C - 575 °F)	W000010160
350 (343 °C - 650 °F)	W000010161
370 (371 °C - 700 °F)	W000011043

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

MIG pliers (original FIX®)



Nozzle Ø 12-15 mm
Cat N°: W000010453
Nozzle Ø 15-18 mm
Cat N°: W000010454

Useful to:
- Cut the wire
- Clean the nozzles
- Unscrew the tips
- Unscrew the nozzles

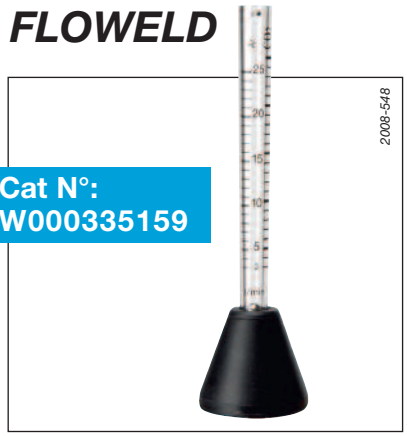
MIG torch stand



Cat N°: W000010802

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

FLOWELD



Cat N°: W000335159

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

Markers

NEW

Designation	Cat N°	Description
Paint Marker White	W000383103	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.
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 White	W000383110	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 risks
Paint Tube Red	W000383111	
Paint Tube Yellow	W000383112	
Paintstik White	W000383113	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.
Paintstik Yellow	W000383114	
Paintstik Red	W000383115	
Welding Chalk	W000383116	The soapstone welding crayon is resistant to heat up to 2000° C (3630° F) and will not contaminate welds.



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDING TOOLS AND ACCESSORIES

6 - Flame



- Hoses 90
- Automatic roller for oxygas hoses 90
- Quick action coupling 91
- Cutting nozzles and other flame 92

Hoses

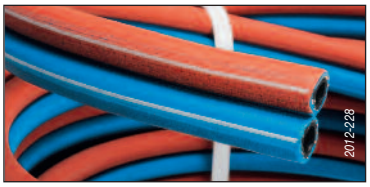
EN ISO 3824

WELDLINE

Gas	Ø (mm)	Maximum pressure (bar)	Coil length (m)	Cat N°
Single hoses				
Acetylene	6.3 x 12	10	5	W000010055
Oxygen	6.3 x 12	10	5	W000010056
Acetylene	6.3 x 12	10	10	W000010081
Oxygen	6.3 x 12	10	10	W000010057
Acetylene	6.3 x 12	10	20	W000010058
Oxygen	6.3 x 12	10	20	W000010059
Acetylene	6.3 x 12	10	40	W000010060
Oxygen	6.3 x 12	10	40	W000010061
LPG*	6.3 x 12	10	20	W000010052
LPG*	6.3 x 12	10	40	W000010062
Acetylene	10 x 16	20	10	W000010064
Oxygen	10 x 16	20	10	W000010065
Acetylene	10 x 16	20	20	W000010066
Oxygen	10 x 16	20	20	W000010067
Acetylene	10 x 16	20	40	W000010068
Oxygen	10 x 16	20	40	W000010069
LPG	10 x 16	20	20	W000010053
LPG/Acetylene*	10 x 16	20	40	W000010071
Oxygen	8 x 14	20	50	W000010079
Acetylene	8 x 14	20	50	W000010080
Argon	6.3 x 12	10	40	W000010072
Argon	10 x 16	20	40	W000010073
Twin hoses				
TWIN (Oxygen - Acetylene)	6.3 x 12	10	20	W000010077
TWIN (Oxygen - Acetylene)	6.3 x 12	10	40	W000010063
TWIN (Oxygen - Acetylene)	8 x 14	20	50	W000010078
TWIN (Oxygen - Acetylene)	10 x 16	20	20	W000010054
TWIN (Oxygen - LPG)*	10 x 16	20	40	W000010076

** Propylene excluded*

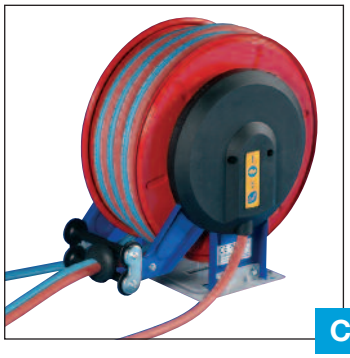




THE DATE PRINTED ON THE HOSE IS THE MANUFACTURING DATE

Automatic roller for oxygas hoses

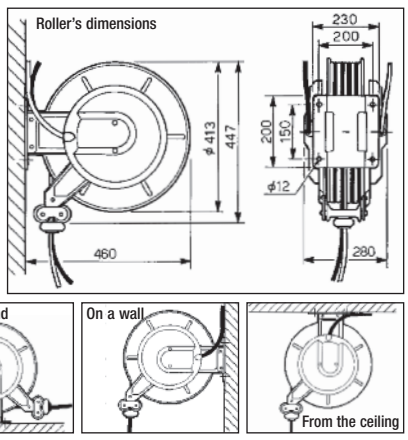
TUBEREEL



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

Cat N°: W000260575



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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

QUICKMATIC

Quick action couplings with auto-close

These couplings are available to fit for hoses or directly onto a regulator outlet.

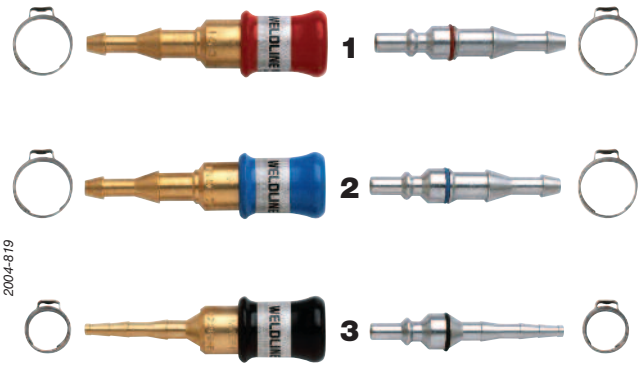
Providing a quick release coupling, the female side is always placed at the source side of the flow.

Opening during use is possible. Closing once disconnected.

Complies with the ISO 7289 - EN 561 standards.

ISO 7289 - EN 561

Hose connection

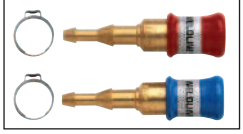


2004-819

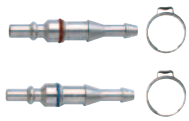
QUICKMATIC	Ø hoses (mm)	Cat N° female coupling	Cat N° male coupling
1 - fuel gases	6 and 10	**W000011002**	**W000011005**
2 - oxygen	6 and 10	**W000011001**	**W000011004**
3 - neutral gases (argon...)	4	**W000011003**	**W000011006**

Also exists in kits:

W000011015



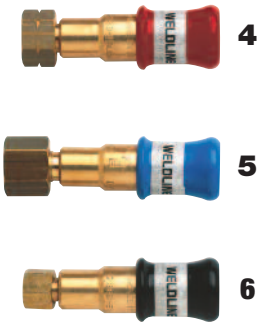
W000011016



W000011017



Regulator connection



2004-820

QUICKMATIC	Thread	Cat N° female coupling	Cat N° male coupling	Ø hoses (mm)
4 - fuel gases	M16x150L	**W000011008**	**W000011005**	6 and 10
	3/8"L	**W000011011**		
5 - oxygen	M16x150R	**W000011007**	**W000011004**	6 and 10
	3/8"R	**W000011010**		
	1/4"R	**W000011009**		
6 - neutral gases (argon...)	M12x100R	**W000011012**	**W000011006**	4

Blowpipe or torch connection



fuel gases	F16x150 L	**W000011014**	male coupling
oxygen	F16x150 R	**W000011013**	

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

G1 cutting nozzles and IC cutting nozzles

G1 profile	Gauge (mm)	Cutting thickness (mm)	IC profile
Acetylene			Acetylene
 0327-033			
W000262059	7/10	3-10	W000262089
W000262060	10/10	10-25	W000262091
W000262061	12/10	25-50	W000262093
W000262062	16/10	50-80	W000262094
W000262063	20/10	80-120	W000262095
W000262064	25/10	120-200	W000262096
W000262065	30/10	200-300	W000262097
 0327-031			
Propane / Tetren / Natural gas			Propane / Tetren / Natural gas
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

Asbestos free

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

PROTECFLAM

Single use

200 x 250 mm

Cat N°: W000271449

Blister pack of 3 shields



2006-397

PROTECFLAM TECH

No toxic fumes release

Very flexible (memory effect)

Long life duration

Both sides usable

200 x 250 mm

Cat N°: W000276078

Pack of 20 shields


2005-272R

Tip cleaners

Cat N°: W000290900


2009-294

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

Spark lighter

Cat N°: W000010978


0876-66

Traditional tool with five renewal flints.

Cat N°: W000211924


2012-116

Gun model with ten renewal flints.

Inspection mirrors

- **Mirror with magnetic stand**

Cat N°: W000010557


2004-643
2004-642

Cat N°: W000010558

Spare part: mirror.

- **Circular telescopic mirror**


2009-298
2009-297

Cat N°: W000273291

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDING TOOLS AND ACCESSORIES

7 - Liquids and sprays



- Anti-spatters ..... 94 to 95
- Anti-corrosion 95
- Sharpening of tungsten electrodes 95
- Heat protection 95
- Cracks detection ..... 96 to 97
- Cooling liquid for torches 98
- Leakage control 98
- Stainless steel treatment 99
- Cleaning, polishing and marking of stainless steels 100

CERASKIN

Welding anti-spatters spray with ceramic coating

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



2010-382

Product features:

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

Cat N°: W000277679

SPRAYMIG SIB

Anti-spatters spray

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



2007-394

Technical data:

- 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.

Cat N°: W000011093

SPRAYMIG H_2O

Anti-spatters spray and liquid

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



2007-394

Description:

- ***SPRAYMIG*** H_2O silicone-free water-based anti-spatters based on highly efficient water soluble substances.
- It prevents spatters from sticking to nozzles, tips, and work pieces robots, and extends nozzle life considerably.
- It permits rapid changing and cleaning of the nozzles.
- Painting, galvanizing, lacquering of parts is possible.
- A preliminary test is recommended.
- Very low consumption for a high effectiveness.

Physical and chemical properties

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

Spray (400 ml) - Cat N°: W000010001

Drum (20 liters) - Cat N°: W000011074

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

SPRAYMIG SVB

Anti-spatters spray

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



2007-394

Technical data:

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

Cat N°: W000011092

SPRAYMIG SVD

Anti-spatters spray

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



2009-250

Technical data:

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

Cat N°: W000271574

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Anti-spatters

REACH Ready

WELDLINE

NETMIG

Anti-spatters dip

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

Cat N°: W000011071



2009-293

Technical data:

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

Anti-corrosion

GALVASPRAY

- **Protection of welded joints**
- **Permits welded parts to be lacquered**

Technical data:

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



Instructions for use

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

Cat N°: W000011094



2007-395

Sharpening of tungsten electrodes

TIG POINT

Chemical sharpening of tungsten electrodes

Instruction for use:

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

Cat N°: W000011101



2006-528

Heat protection

THERMISHIELD

Heat shield gel

Description:

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

Cat N°: W000274839

Instructions for use:

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



2009-249

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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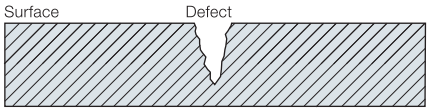
WELDLINE is an **Air Liquide Welding** trademark

PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

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).









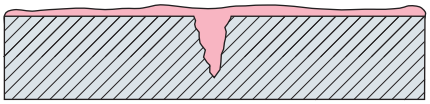


A wide range of materials:
Steel, ceramic, plastic, glass…

Many industries:
• Boilers maker • Founders • Petrochemical
• Railway • Nuclear • Shipyard • Automotive…

1 - Cleaning

Product: FLUXO S190 - CLEANER



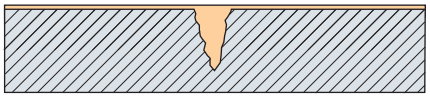


+ Product:
- Perfect cleaning without dry rest.
- Quick drying (evaporation).
- Spray: - Spraying in all positions.

Spray based on Butane (extremely flammable).
Solvant: Heptane.
Necessity for protection (petroleum based) solvant.

2 - Penetrant spray

Product: FLUXO P125 - PENETRANT



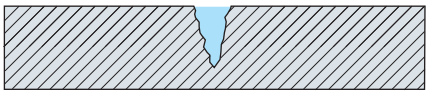


+ Product:
- Temperature of use: 0 °C to 50 °C. Easy to use even on hot plates.
- Good impregnation. A single spray lasts more than 30 min without drying.
- Powerful penetration. Due to its viscosity.
- Spray: works in all positions.
- Very good identification of cracks under white light.
- Easy to remove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

Butane/propane spraying (extremely flammable).

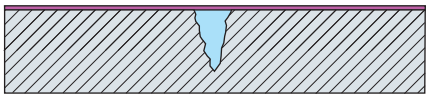
3 - Cleaning

Product: water



4 - Developer

Product: FLUXO R175 - DEVELOPER

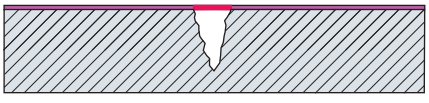




+ Product:
- Thin and uniform film and transparent film. After drying, the white surface appears.
- Very good surface coverage due to the thin granulometry.
- Quick drying of the solvent included in the developer.
- Spray: works in all position.
- Very good identification of the cracks under white light.

Butane/propane spraying.

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).

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Non destructive cracks detection

EDF Electricité de France PMUC APPROVED

WELDLINE

FLUXO S190 - CLEANER

Piece degreasing
& cleaning of penetrant excess.

Direction for use:

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

- Propellant: Butane / Propane.
- Volume : 500 ml (net) - 650 ml (nominal).



2012-279

Cat N°: W000374827

FLUXO P125 - PENETRANT

Non destructive testing.

Direction for use:

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.
Control with FLUXO R175 - DEVELOPER.

- Propellant: Butane / Propane.
- Volume : 500 ml (net) - 650 ml (nominal).



2012-277

Cat N° W000374825

FLUXO R175 - DEVELOPER

Detection of cracks and surface faults.

Direction for use:

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).



2012-278

Cat N°: W000374826

Also available: ARDROX

• *ARDROX 9PR5 CLEANER*	**Cat N°: W000374531**
• *ARDROX 9VF2 PENETRANT*	**Cat N°: W000374818**
• *ARDROX NQ1 DEVELOPER*	**Cat N°: W000374532**

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Cooling liquid for torches

FREEZCOOL (red)

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



2004-216

General use:

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

Product benefits:

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

Cat N°: W000010167 (9.6 L)
Cat N°: W000010168 (20 L)

Controls:

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

Physical properties:

- Physical form: red liquid
- Base: monopropylen glycol and water
- Specific gravity: 1.04 at 20 °C
- pH: 7+/-2
- Freezing point: -27 °C
- Resistivity: 10^5 ohm.cm-1

Packaging:

FREEZCOOL is delivered in 10 or 20 kilos net weight, polyethylene drums. For any other type of packaging, please contact us.

Caution:

Before use, carefully read and understand the safety datasheet.

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

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



2007-794

Cat N°: W000010963

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



2000-228

Cat N°: W000011090

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Stainless steel treatment

REACH Ready

WELDLINE

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.

CLEANOX L (liquid) 6 kg	**W000266423**
CLEANOX L (liquid) 30 kg	**W000266425**

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.

Mandatory safety tools

Protection kit

Working with acid products, the user should use protective clothing carefully.
The protection kit includes:
- 10 pairs of acid resistant gloves,
- a pair of closed goggles,
- a facial protection respirator against acid vapours,
- a full chemical protective suit.

Cat. N°: W000267118



Paintbrush

Compatible with acid.

Cat. N°: W000267116



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.

PICKLINOX G (gel) 2 kg	**W000266426**
PICKLINOX G (gel) 10 kg	**W000266427**
PICKLINOX P (paste) 2 kg	**W000266428**
PICKLINOX P (paste) 10 kg	**W000266429**
PICKLINOX L (liquid) 30 kg	**W000266422**

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.

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.

RESTORINOX G (gel) 2 kg	**W000266430**
RESTORINOX G (gel) 10 kg	**W000266431**
RESTORINOX L (liquid) 30 kg	**W000266424**

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.

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WELDLINE is an **Air Liquide Welding** trademark

WELDLINE

OPTICLEAN II

NEW

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



OPTICLEAN II	To order
Machine OPTICLEAN II including :	W000382322
Torch	W000275260
Support torch	W000382323
Supporte torch 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
Tig Bond pad 90°	W000272348
Narrow Tig Bond pad 90°	W000272351
Brill Bomar solution	W000272347
Neutral Bomar solution	W000272038
Neutralizing solution Inox Fit 500 ml	W000274842
Operating manual	-

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

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

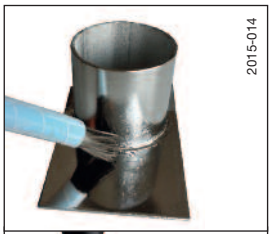
You can simply order the marking kit and a cliché, providing us with your logo or any other writing: you can mark the product at least 500 times !

CAUTION: before use, carefully read and understand the safety datasheet available on www.weldline-alw.com

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.



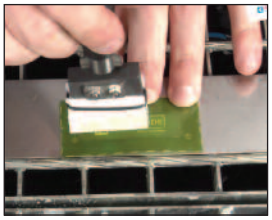
2 - Polishing

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.



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WELDLINE is an **Air Liquide Welding** trademark

PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDING TOOLS AND ACCESSORIES

8 - Cutting and grinding disks



• Cutting and grinding disks ..... 102 to 105

Cutting and grinding disks

WELDLINE

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

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

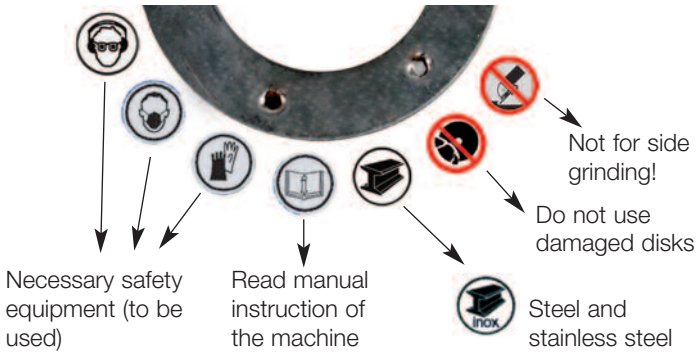
EN 12413

EN 13743

When buying such products, always ask for OSA certification.

The guarantee 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

Other dimensions are also available:

Dimensions	Shape	Use	Specification	Unit / box	Catalogue N°
DUCTIFLEX PRO					
100 x 2.5 x 16 mm	Flat	Carbon/steel	1A36S7	25	**W000273946**
DUCTIFLEX					
100 x 3.5 x 16 mm	Depressed	Carbon/steel	1A36S7	25	**W000273945**
100 x 6 x 16 mm	Depressed	Carbon/steel	1A36S7	10	**W000273947**

Specially dedicated to Oil & Gas segments.

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

Cutting and grinding disks

WELDLINE

DUCTIFLEX PRO

Top quality cutting disks for professional use

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



2007-111

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

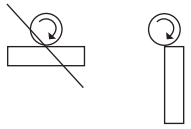
Dimensions	Shape	Use	Specification*	Unit / box	Catalogue N°
115 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261930
125 x 1 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000261931
115 x 1.6 x 22 mm	flat	steel/stainless steel	61A 60 S7 BF	50	W000335001
125 x 1.6 x 22 mm	flat	steel/stainless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

Tel.: + 33 134 213 333 - Web: www.weldline-alw.com

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WELDLINE is an **Air Liquide Welding** trademark

PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

WELDLINE

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



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Dimensions	Shape	Use	Specification	Unit / box	Catalogue N°
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 specification

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

Abrasive type

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

Grit size

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

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

Hardness grade

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

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

Structure

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

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

Bond

V	B	BF
Vitrified bonded	Resinoid bonded	Glass fibre

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

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PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

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%.



2009-010



2009-011

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

Personnal 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.

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WELDLINE is an **Air Liquide Welding** trademark

PROFESSIONAL WELDING PRODUCTS BY AIR LIQUIDE WELDING

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

Article 1: Overview

The General Terms and Conditions of Sale described hereinafter set forth the rights and obligations of ALWF and its customer in connection with the sale of products, processes, systems, solutions and related services for welding and cutting equipment.

All the services offered by ALWF are directed at business customers.

Any order placed with ALWF implies that the customer has read and fully accepted the General Terms and Conditions of Sale.

Under no circumstances whatsoever shall the customer be entitled to claim that it was unaware of the General Terms and Conditions of Sale hereunder and there shall be no derogation therefrom. In the event that the General Terms and Conditions of Sale contradict the customer's general terms and conditions of purchase, ALWF's terms and conditions shall prevail.

The research, documents and any kind of information provided by ALWF, other than publicity leaflets and user instructions, shall remain the property of ALWF and they shall be deemed to be confidential. They shall not be forwarded to third parties or used by the customer for purposes other than the use of the relevant product supplied, without ALWF's written authorization. Our commercial offers shall also be confidential.

Article 2: Order

Orders shall be final once received in writing by ALWF. 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 status of order. Orders shall not be amended without Supplier's prior consent.

Article 3: Price

The prices of the products being sold shall be those that are current on the date on which the order is placed. For catalogue items that are deliverable when available or within a short time, the prices that apply shall be those at ALWF's current rates, excluding packaging. They shall be expressed in euros and calculated net of VAT. For other items, the prices shall be set in accordance with the Parties' written agreement. For export, unless otherwise stipulated, prices shall be deemed to be EXW. ALWF grants itself the right to amend its rates at any time. However, it undertakes to invoice the items ordered at the prices stated when the order is logged.

Recycling costs (collection):

In accordance with Article R 543-172 and following ones of French Environmental Code, ALWF and the customer undertake to pool their resources in order to finance and arrange the disposal of electrics and electronics equipments' waste, in particular the cost of waste processing. ALWF shall invoice the cost of collecting waste and shall show the relevant cost on the invoice. The customer shall be responsible for taking the equipment or used material to the collection points.

Article 4: Delivery

Delivery shall be effected by providing the goods directly to the customer, by sending notice for the customer's attention that the goods are available in the shop or by delivery to the place stated by the customer on the purchase order.

The delivery deadline stated when the order is logged shall be intended for guidance purposes alone, and shall not be guaranteed in any manner whatsoever.

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

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

Article 5: Force majeure

ALWF shall not be held liable if its failure to perform any of its obligations described herein or late performance thereof arises from a case of force majeure. In that respect, force majeure shall mean any unforeseeable and irresistible external event within the meaning of Article 1148 of the French Civil Code (Code Civil).

Article 6: Acceptance. Transfer of risks

There shall be no formal acceptance of the catalogue items, except in special cases. The risks relating to the products shall be transferred to the customer on dispatch, save for deliveries abroad; in this case, the transfer of risks shall be linked to the incoterm used by ALWF.

Article 7: 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, by bank transfer, under the terms and conditions stipulated in the order or by irrevocable, confirmed letter of credit, under the terms and conditions stipulated in the order. For French customers, pursuant to article L 441-6 of commercial code, the delay agreed by the parties to pay any invoice shall not exceed 45 days from the date of issuance of such invoice. Unless otherwise stipulated, the method of payment will be the bill of exchange on magnetic media. 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 without need for any formality or formal demand for payment, and it shall render any monies owed to ALWF, even those that are not yet payable, immediately payable. In the event of failure to pay on the due date, the will be automatically subject to a penalty equivalent to the applicable legal interest rate plus 3 points, on the monies owed, without prejudice to the payability of the debt and ALWF's rights of recourse. Besides, a fixed compensation of 40 € will be borne by the customer for recovery costs. If these charges should be superiors, ALWF could charge a superior compensation for the real amount of recovery costs, on justification. Customer is not allowed to offset without the prior consent of ALWF. All payment should be received from the customer legal entity which passed the order.

Article 8: Warranty

The warranty given by ALWF shall apply to all part of manual or automatic equipment. Said warranty shall apply to all parts that are acknowledged to be faulty as a result of a defect in manufacturing, assembling or raw material. The warranty shall cover the repair or replacement of defective parts by ALWF, at its expense. The defective parts that are replaced free of charge shall be the property of ALWF. The warranty shall not apply to wearing parts. Neither shall the warranty apply to improper use, failure to maintain or supervise, negligence, modifications or repair using parts that are not intended for the model, nor to parts that are not manufactured by ALWF. Duration of this contractual warranty is as stated in commercial documentation or on company's web site, and depends on type of product; the warranty period start from the invoice issued by ALWF. ALWF shall not be committed to any other warranty than those stated in this article. No specific customer's requirement shall entail any liability on the part of ALWF. In the absence of specific written stipulations, no guarantee to produce a specific result or in respect of the product's performance shall be given to the customer.

Article 9: ALWF's liability. Damages

ALWF's liability shall be strictly limited to the obligations set forth above. It shall consist solely of granting the customer a contractual warranty, defined in clause no. 8 herein. Under no circumstances whatsoever shall it be liable to compensate the customer, including in respect of non-pecuniary losses or indirect losses, such as loss of earnings, loss of production or loss of use. In the event that ALWF is held liable, the damages owed to the customer shall not exceed the amounts that the customer has paid under the agreement, including all items, within the limits allowed by applicable regulations.

Article 10: Proprietary Rights

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

Article 11: Retention of title clause

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

Article 12: Code of conduct/ restrictive sales:

Customer undertakes to respect the Air Liquide Code of Conduct available on the following link: www.airliquide.com/en/company/ethics/code-of-conduct.html **Dual Use:** Customer undertakes to respect the European Trade Policy and Dual-Use Export Regulations (http://ec.europa.eu/trade/import-and-export-rules/export-from-eu/dual-use-controls/index_en.htm). **Prohibited parties:** Direct or indirect sales are strictly forbidden to the following countries: Iran, Cuba, North Korea, Sudan and Syria. **Restrictive measures:** The customer is aware that transactions with parties that are published on governments Restricted Parties Lists are prohibited. Any EU, UN or US export, import or payment restrictive measures (such as embargoes, black lists, restricted parties lists) whether foreseeable or not and affecting, directly or indirectly, the Customer, its personnel, its bank, the commercial and financial intermediaries and the End-Users will automatically suspend the fulfillment of the relevant sales contract obligations. This shall be regarded as a force majeure event, allowing ALWF to terminate forthwith the contract at its sole discretion, without any prior notice and without any liability towards the customer. **Anti-corruption:** The customer undertakes to respect the applicable laws and regulations in performing its obligations particularly regarding anti-corruption laws (http://www.airliquide.com/en/company/ethics/anti-corruption-code-of-conduct.html.)

Article 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.

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LAS- EN GASTECHNIEK®
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